

## Metrology & Conformity Assessment

Leslie Pendrill, EURAMET Chairperson



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The scope of today's major "Global Challenges" can only be met by multinational cooperation, for instance in the EURAMET association. These challenges, such as in Energy and the Environment, are leading to increased attention being paid to conformity assessment of products and processes of all kinds. Decisions in industry as well as in the public sector are often based on measurements of products and processes. Product quality is determined by measurement quality, so decisions of compliance are only as reliable as the measurements themselves. Although calibration<sup>1</sup> is not itself conformity assessment, metrology does provide essential support at various stages in product conformity assessment.

EURAMET is happy to join our colleagues in Regulation, Standardisation, Legal Metrology and Accreditation, in providing the necessary technological Quality Infrastructure for modern

society. One example of EURAMET's increased engagement in Conformity Assessment is our closer ties with WELMEC, the European Cooperation in Legal Metrology. Early in May, we joined WELMEC's 20th Anniversary celebrations at Bled (SLO), where we signed a new Memorandum of Understanding between EURAMET and WELMEC. In this newsletter, a report is also given of a joint WELMEC-EURAMET seminar on Metrology & Conformity Assessment, with the support of TAIEX, the Technical Assistance Information Exchange Instrument of the European Commission, and for the benefit of European Neighbourhood Policy (ENP) countries and Russia.

<sup>1</sup> CGPM 2003 "Relationship between National Metrology Institutes and Nationally Recognized Accreditation Bodies", Resolution 11, 22nd General Conference of Weights & Measures (CGPM), <http://www.bipm.org/en/CGPM/db/22/11/>



Nataša Mejak Vukovi, Chairperson of WELMEC and Leslie Pendrill, EURAMET Chairperson, sign the MoU.

### WELMEC & EURAMET MoU Signed May 6th 2010 Bled

EURAMET and WELMEC realise the importance of increased collaboration within the field of metrology in Europe. Both organisations have been strengthening their ties in recent years and this has been underlined by the signing of a Memorandum of Understanding between the two organisations at the recent WELMEC Committee meeting in Bled, Slovenia on 6th May last. The MoU recognises the role played by each organisation in European metrology and the intention to collaborate closely in the future to the benefit of European metrology.

### EURAMET welcomes "new" member.

Institute of Metrology of Bosnia and Herzegovina (IMBiH) becomes 34th EURAMET Member

### World Metrology Day – 20<sup>th</sup> May 2010

See Page 4 for full details

## EMRP Call 2010 – Metrology for Industry and Metrology for Environment

EURAMET e.V. announces the launch of the EMRP Call 2010 for the following topic areas within the European Metrology Research Programme (EMRP), jointly funded by the European Commission and the participating countries:

- Metrology for Industry
- Metrology for Environment

The Call encompasses a two-stage process for joint research projects and includes opportunities for Researcher Grants.

- **Stage 1** of the call was for potential research topics and was open to any interested party. The call opened on 12 February 2010 and closed at the end of March 2010.
- **Stage 2** of the call is for joint research projects and associated researcher grants and is subject to eligibility criteria, and opens on 21 June 2010: **Deadline 23:59 CET, 11 October 2010.**

The Call is jointly funded by the European Commission and the participating National Metrology Institutes (NMIs) and Designated Institutes (DIs) and has an indicative total budget for the JRPs of EUR 82.56 M plus a further EUR 9.6 M available for the associated EMRP Researcher Grant schemes.

In conjunction with the research calls EURAMET has also launched the following EMRP Researcher Grants:

- Researcher Excellence Grants (REG) which aims to enlarge the number of organisations with capacities closely relating to metrology within the EU Member States and FP7 associated countries.
- Researcher Mobility Grants (RMG) which aims to develop the capacity of individuals in Metrology.

More details are available at [www.emrponline.eu/energycall/stage3.html](http://www.emrponline.eu/energycall/stage3.html)

Further details on the EMRP and Call details, in particular further information on deadlines, Call scope, eligibility, funding, application forms etc., can be found on the dedicated website: [www.emrponline.eu](http://www.emrponline.eu)

## EURAMET expresses its thanks and bids farewell to Luc Erard

EURAMET expresses its gratitude and best wishes to Luc Erard following his retirement from LNE and consequently from EURAMET. Luc was an ever-present member of EURAMET from its establishment and made a significant contribution to its evolution and development over the years.

Luc graduated from the High School of Electricity (Ecole Supérieure d'Electricité (SUPELEC)) in 1967 and immediately got involved in the field of metrology by studying in the US, which culminated in a one-year assignment at the National Bureau of Standards.

He joined the Laboratoire Central des Industries Electrique (LCIE) in 1970 becoming the head of the RF and microwave department and in 1982.

He became active in international activities and cooperation with other NMI's either in the frame of CIPM or within Europe. He served as chairperson of the GT-RF (Groupe de Travail sur les Radio-Fréquences) of the CC-EM for 13 years. He was rapporteur (now TC-Chair) of the Euromet Electricity-Magnetism Technical Committee from 1992 to 1995.

Considering his increasing activity at the international level, he was designated as French delegate to EUROMET in 1995 and became EUROMET Chairperson in 1998. This was a particularly important time for EUROMET where Luc was centrally involved with discussions with BIPM and other RMO's in negotiating and finalising the CIPM MRA.



*EURAMET Chairperson makes a presentation to Luc Erard to mark his retirement from EURAMET activities.*

In 2006, he took the responsibility of the technical Committee for Quality (TC-Q) a position he held up to the end of 2009.

In 2005, he became member of the CIPM, and in 2007, President of the CC-TF.

In 2007, with the creation of EURAMET e.V. as a legal entity and the formulation of the European Metrology Research Programme, he was elected as EMRP Chair and oversaw the creation, development and evolution of the programme.

Over the life of EUROMET and EURAMET, Luc served a number of terms as a member of the EUROMET executive committee and the EURAMET BoD.

Luc Erard has been central to the development of EURAMET, and has been critical to the success of many of the key EURAMET initiatives from strategy development, CIPM MRA structures, NMI quality system review and metrology research in Europe.

## EURAMET General Assembly 2010

The 2010 General Assembly will take place in Lisbon from 25th to 27th May 2010. This year the General Assembly will be enhanced by the inclusion of a one-day symposium. The symposium will comprise two sessions addressing aspects of the EMRP and Metrology & Conformity Assessment. The programme for the 2010 GA and associated symposium can be found on the EURAMET Website.

# Seminar on Metrology & Conformity Assessment



Participants of the WELMEC-EURAMET TAIEX Seminar on Metrology & Conformity Assessment for ENP Countries, Brussels 1 – 2 March 2010

Metrology and conformity assessment for the benefit of European Neighbourhood Policy (ENP) countries<sup>1</sup> and Russia were addressed in a seminar jointly organised by the European metrology organisations EURAMET and WELMEC in Brussels in March 2010 for Ministry of Trade and National Metrological Institute representatives from 16 countries.

Metrology – quality-assured measurement – is a key element in conformity assessment since measurement quality determines product quality. During the seminar, lectures were given by both EURAMET and WELMEC on such topics as

- Harmonised Measurements and their International Recognition
- Operation of National Metrology Institutes - the European experience
- Directive on Measuring Instruments – the experiences of Member States
- Free movement of goods in non-harmonised area - Mutual Recognition Principle and The Future of Services in the Internal Market
- Role of quality-assured measurement (traceability, uncertainty) in Conformity Assessment
- Example of Metrology Infrastructure Development: South-East Europe – current status and future developments
- Market Surveillance: Checking compliance with conformity regulations

A lecture on the 'Possibility for Neighbouring Countries to prepare for an ACAA (Agreement on Conformity Assessment and Acceptance of Industrial products)' was presented by Mr. Daniel Hanekuyk (EC DG Enterprise and Industry),

Reports on behalf of participants were presented by Mr. Osama Melhem from Euro – Mediterranean Legal Metrology Forum (EMLMF) and Mr. Nikolai Zhagora from Euro Asian Cooperation of National Metrology Institutions (COOMET).

An important final session of this Seminar consisted of group discussions where the participants themselves considered, debated and formulated recommendations about their needs and mechanisms to meet these needs in strengthening metrological and quality infrastructures in these European Neighbourhood Policy countries, including alignment to EU requirements where appropriate.

The feedback to the seminar was very positive and a recommendation would be to continue with the activities supporting ENP countries on a more systematic basis in this area of Conformity Assessment and Metrology. An initial task will be to prepare a 2nd workshop to tackle some of those issues which are of special interest to ENP countries.

Support for the meeting (INT MARKT 34468) has been provided by TAIEX, the Technical Assistance Information Exchange Instrument of the European Commission. All the presentations of the seminar can be found at [http://ec.europa.eu/enlargement/taix/dyn/taix-events/library/detail\\_en.jsp?EventID=34468](http://ec.europa.eu/enlargement/taix/dyn/taix-events/library/detail_en.jsp?EventID=34468)

<sup>1</sup> Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, Palestinian Authority, Syria, Tunisia and Ukraine

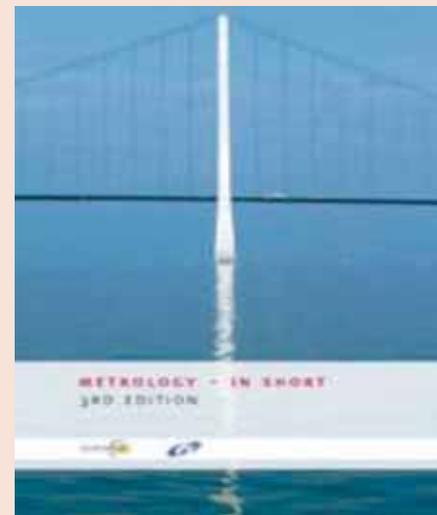
## EURAMET updates Calibration Guide

EURAMET is pleased to announce the revision of its Calibration Guide No. 4 'Uncertainty in Force Measurement'. The Guide was revised by the EURAMET Technical Committee for Mass.

The Calibration Guides can be viewed and downloaded from the EURAMET website.

## AFRIMETS publish 'Metrology in Short'

AFRIMETS has published a version of EURAMET's 'Metrology in Short'. The version of the publication, which is available to all its members and associates, has been adapted to include the metrological system and structure within the African region.



## New EMRP Programme Manager

Andy Henson has left NPL and consequently his role as Programme Manager for the EMRP, to take up a new position of International Liaison Officer at the BIPM. His successor as Programme Manager for the EMRP is Dr. Duncan Jarvis of NPL. ([emrp-pm@euramet.org](mailto:emrp-pm@euramet.org))

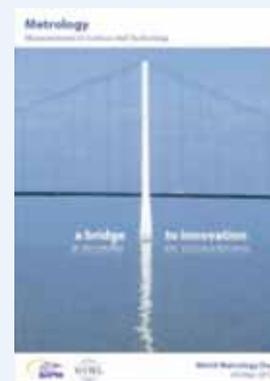
# Metrology - measurements in Science and Technology

## *a bridge to innovation*

During World Metrology Day more than eighty States celebrate the impact of measurement on our daily life, no part of which is untouched by this essential, and largely hidden, aspect of modern society. Previous themes have included topics such as measurements in sport, the environment, medicine, and trade. The 2010 theme concentrates on how measurement influences science and stimulates innovation.

This year, in his message to the world of metrology, Governments, companies, academics - and the man in the street - the Director of the International Bureau of Weights and Measures highlights the role played by precise measurement.

The Director's address, as well as the posters and other material can be found at the dedicated web site; [www.worldmetrologyday.org](http://www.worldmetrologyday.org)



## *EURAMET's Newest Member*

### Institute of Metrology of Bosnia and Herzegovina



EURAMET extends a warm welcome to its newest member, the Institute of Metrology of Bosnia and Herzegovina (IMBIH).

IMBIH was established as an independent institution in 2007. Prior to that it acted as a National Measurement Institute of Bosnia with its history extending back to the Austro- Hungarian Empire.

Nowadays, IMBIH has 46 employees and has responsibility for the realization of the basic standards in B&H, developing, creating, declaring and maintaining the National standards of legal (SI) units of measurement and providing traceability of these National Standards. It also has responsibility for the Issuing of metrological regulations in the country.

IMBIH is a corresponding Member of OIML and an Associate Member of WELMEC.

The Institute of Metrology of Bosnia and Herzegovina has 7 contact persons in several Technical Committees in EURAMET (quality, flow, interdisciplinary metrology, chemistry, time and frequency, electricity and magnetism, mass and related quantities) and has been active in EURAMET activities participating in several EURAMET intercomparison projects. IMBIH has also been active in organization and planning specific activities in EURAMET's Focus Group on Facilitating National Metrology Infrastructure Development. During 2009 the Focus Group was co-chaired by IMBIH, and the second meeting of the Focus Group took place in Sarajevo. The Focus Group website is also maintained by IMBIH.

The Institute is preparing a document "Proposal for Strategy of Metrology of Bosnia and Herzegovina". This Instrument of pre-accession (EC assistance instrument – IPA 2007) "Strengthening of the B&H Metrology system" is the first direct project for metrology in Bosnia and Herzegovina and will help to strengthen the development of IMBIH.

Key elements of future plans of IMBIH are:

- Development of the distributed system of metrology according to the existing models in some EU members states and strong demands for internationally recognized quality;
- Recognition of National measurement standards;
- Sign the CIPM MRA, declare CMC's and meet the requirements concerning the Quality Management Systems;
- Achieve full membership in BIPM, WELMEC, OIML;

With the necessary equipment and well trained employees, IMBIH plan to grow into a well-organized Institute that will be able to respond to the needs not only within the own county but also the wider region.

### New EURAMET Vice-Chairperson (EMRP)



Jörn Stenger (PTB) was elected as the new EMRP Chairperson, replacing Luc Erard who retired from that position. Jörn worked in the fields of high-energy particle physics and quantum optics such as in Bose-Einstein Condensation at MIT. He joined PTB in 1999 and has been a member of the Presidential Board of PTB since 2009.

Here, in an interview for the EURAMET Newsletter, he outlines the objectives and challenges during his term of office.

#### *Interview:*

**EURAMET:** what will your term as EMRP Chairperson bring?

**JS:** I expect the three years of my term 2010 – 2012 to be very intense and challenging. This period is the one with the highest workload for the EMRP committee. In 2010 the first projects in TP energy start, in parallel we launch the TP Environment and TP Industry call and we need to prepare the 2011 call. The term ends in 2012 with preparation of the 2013 call which will be the last one of the article-169 EMRP. Additionally, we will have the mid-term evaluation by the Commission and Parliament and finally, not too far in the future, we need to explore options for a possible successor programme of the EMRP.

**EURAMET:** what makes you confident to achieve the goals?

**JS:** The successfully running iMERA-plus programme has demonstrated that the governance structures, the decision making and responsibilities are well defined and robust, and we have a very efficient Management Support Unit. The EMRP committee builds on confidence among the members built up in many years of cooperation in Euromet/Euramet.

**EURAMET:** what challenges do you see beyond?

**JS:** The EMRP is far more than a collection of 3-years projects. It deeply impacts the core activities of many NMIs and DIs and does not only lead to an integration of scientific work but also will be influential to all related wider activities such as in the fields of standardisation, conformity assessment, knowledge transfer and policy advice. My hope is that the metrologist's community takes this opportunity and fully exploits it.

### New TC-Quality Chair

Pavel KLENOVSKY (CMI, Czech Republic) is the new chair of EURAMET's Technical Committee for Quality (TC-Q), replacing Luc ERARD (LNE, FR) who retired from that position.

### New TC-Interdisciplinary Metrology Chair and RoP

Maguelonne CHAMBONNE (LNE, FR) is the new chair of EURAMET's Technical Committee for Interdisciplinary Metrology, replacing Attilio SACCONI (INRIM, IT) who retired from that position. In a revamp of TC-Interdisciplinary Metrology, a set of new Rules of Procedure for TC-IM have been approved recently.

### New EURAMET Financial Officer

Jane Welsch was appointed as of the first week of May 2010 as new Financial Officer at the EURAMET Secretariat. She is British but has lived in Germany for 20 years. She will be attached to EURAMET's Braunschweig office.

## EURAMET Key Comparison

A central element of EURAMET activities is the coordination of matters for NMI's with respect to the CIPM MRA. One of the main pillars of the CIPM MRA is that of Key and Supplementary Comparisons. EURAMET develops and coordinates comparisons in all fields.

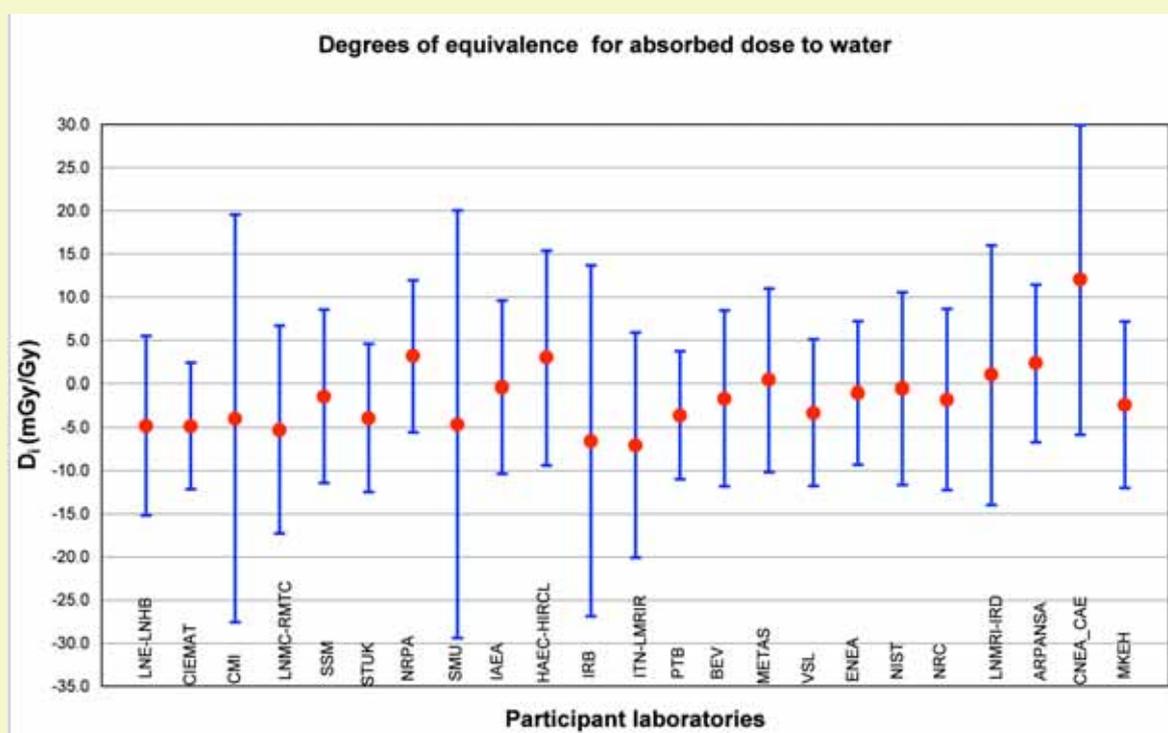
In the frame of the CIPM MRA the Medical Application of Ionization Radiation has been supported by a double dosimetry key comparison titled "Comparison of air kerma

and absorbed dose to water measurements of Co-60 radiation in radiotherapy". The calibration coefficients of high-quality therapy dosimeters, as transfer instruments with detailed uncertainty budgets of the conventional true values, delivered realistic results for the realization of the two fundamental dosimetry quantities and verified the calibration capabilities of the participating laboratories. The Key Comparison Reference Values for both

quantities are established by the stable BIPM reference standards in the BIPM Co-60 beam.

All the results support the relevant CMC claims of all the participants. The graph below summarises the results of the comparison.

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(Note: Although this graph is taken directly from the report of these comparisons, this represents a snapshot in time, the formal results under the CIPM MRA are those available in the key comparison database (KCDB)).

## BIPM KCDB Newsletter

The KCDB newsletter is published by the BIPM and highlights some activities related to the CIPM MRA, the JCRB, the contents of the KCDB and some events organized by the BIPM.

The newsletter can be accessed from [http://kcdb.bipm.org/NL/12/NL\\_12\\_Dec09\\_Content.html](http://kcdb.bipm.org/NL/12/NL_12_Dec09_Content.html)

## EURAMET Chairperson and Secretariat

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