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The Fourth Pillar of the OIML:
International engagement



BULLETIN

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THE OIML BULLETIN IS THE
JOURNAL OF THE
ORGANISATION INTERNATIONALE
DE MÉTROLOGIE LÉGALE

The Organisation Internationale de Métrologie Légale (OIML), established 12 October 1955, is an inter-governmental organization whose principal aim is to harmonize the regulations and metrological controls applied by the national metrology services of its Members.

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Bonne année !

À l'aube de la nouvelle année, je suis convaincu que 2023 sera une très bonne année pour l'OIML, et je suis persuadé que nous pouvons espérer de nombreux échanges personnels et des résultats de travail positifs dans nos différents domaines d'activités.

Cela inclut notamment la 58ème Réunion du CIML, qui devrait se dérouler sous forme de réunion en personne à Chiang Mai, en Thaïlande, en octobre 2023. Elle fera suite à trois réunions consécutives du CIML en ligne, et j'espère d'autant plus que la 58ème Réunion du CIML pourra se dérouler en présentiel qu'il s'agira de ma dernière en tant que votre Président du CIML. Je suis également très heureux que le CIML ait déjà élu mon successeur, et je profite de cette occasion pour féliciter une nouvelle fois le Dr Bob Joseph Mathew pour son élection unanime en tant que prochain président du CIML à partir d'octobre 2023.

Selon l'Organisation Mondiale de la Santé (OMS), la fin de la pandémie de COVID-19 est en vue. C'est une très bonne nouvelle pour toutes les organisations qui opèrent à l'échelle internationale, car à long terme, nous ne pouvons pas nous passer de réunions en personne. J'espère donc que nous pourrions revenir à la « normalité » cette année, c'est-à-dire à de nombreuses réunions en personne. Bien sûr, cela ne signifie pas que nous devons abandonner les outils numériques extrêmement utiles que nous avons développés et auxquels nous nous sommes habitués au cours des trois dernières années, mais il est évident que la coopération internationale bénéficie grandement du fait de se connaître personnellement et de tenir des réunions régulières en face à face, ce qui nous a cruellement manqué pendant presque trois ans.

Dans ce contexte, la devise « Engagement international » s'accorde très bien avec cette première édition du Bulletin

de l'OIML en 2023. Il rapporte que le Directeur et les Adjoints au Directeur du BIML ont participé à un grand nombre d'événements d'importance stratégique impliquant des organisations internationales partenaires au cours des derniers mois, tels que la 27ème CGPM à Versailles, le WP6 de la CEE-ONU à Genève, le partenariat OI de l'OCDE à Paris, la semaine SIM à Sainte-Lucie, la réunion OTC de l'OMC à Genève et le TC Métrologie Légale du GULFMET (en ligne). Il fournit également des informations sur deux importantes conférences internationales qui auront lieu cette année et qui sont préparées avec la participation de l'OIML, à savoir le Congrès de la CIM en mars 2023 à Lyon et la Conférence Internationale du Pesage (ICW) en avril 2023 à Hambourg.

Mon objectif personnel était (et est toujours) la coopération internationale dans le domaine de la transformation numérique. Je suis heureux qu'avec la signature de la Déclaration Commune d'Intention (JSI), une étape très importante ait été franchie vers la transformation numérique de l'infrastructure de qualité et de la métrologie. Une première réunion des neuf organisations internationales qui ont signé la JSI aura lieu en février 2023. Je suis heureux de pouvoir représenter l'OIML et les intérêts de la métrologie légale internationale lors de cette réunion, avec le président du nouveau Groupe de Travail sur la Numérisation de l'OIML (DTG) fondé l'année dernière.

Pour conclure, je voudrais remercier tous nos Membres, les parties prenantes, et le personnel du BIML pour leur soutien et leurs efforts dans la promotion de l'harmonisation mondiale de la métrologie légale. Je me réjouis de rencontrer personnellement de nombreux collègues lors de la 58ème Réunion du CIML à Chiang Mai et vous souhaite une année pleine de succès, de paix et de bonheur. ■



Happy New Year!

As we enter the New Year, I am optimistic that 2023 will be a very good year for the OIML, and I am confident that we may look forward to many personal exchanges and positive work results in our various fields of activities.

This especially includes the 58th CIML Meeting, which is scheduled to take place as a face-to-face meeting in Chiang Mai, Thailand in October 2023. It will come in the wake of three consecutive CIML online meetings, and I hope all the more that the 58th CIML Meeting will be able to take place as an in-person meeting as it will be my last one as your CIML President. I am also very pleased that the CIML has already elected my successor, and I take this opportunity to congratulate Dr Bob Joseph Mathew once again on his unanimous election as the next CIML President from October 2023.

According to the World Health Organization (WHO), the end of the COVID-19 pandemic is in sight. This is really good news for all organisations that operate internationally, as in the long run we cannot manage as well without in-person meetings. I therefore hope that we will be able to return to “normality” this year, i.e. to many in-person meetings. Of course this does not mean that we should abandon the extremely useful digital tools we have developed and become accustomed to over the last three years, but it is obvious that international cooperation greatly benefits from getting to know each other personally and holding regular face-to-face meetings, which we have sorely missed for almost three years.

In this context, the motto “International Engagement” fits in very well with this first edition of the OIML Bulletin

in 2023. It reports that the BIML Director and Assistant Directors have participated in a large number of strategically important events involving international partner organisations in recent months such as the 27th CGPM in Versailles, UNECE WP6 in Geneva, OECD IO Partnership in Paris, SIM Week in Saint Lucia, WTO TBT meeting in Geneva, and GULFMET TC Legal Metrology (online). It also provides information on two important international conferences taking place this year, which are being prepared with OIML participation, namely the CIM Congress in March 2023 in Lyon and the International Conference of Weighing (ICW) in April 2023 in Hamburg.

My personal focus was (and still is) on international cooperation in the field of digital transformation. I am pleased that with the signing of the Joint Statement of Intent (JSI), a very important step has been achieved towards the digital transformation of the Quality Infrastructure and metrology. A first meeting of all nine international organisations that have signed the JSI will take place in February 2023. I am pleased to be able to represent the OIML and the interests of international legal metrology at this meeting, together with the Chairman of the new OIML Digitalisation Task Group (DTG) founded last year.

In closing, I would like to thank all our Members, stakeholders and the staff at the BIML for their support and efforts in promoting the global harmonisation of legal metrology. I look forward to meeting many colleagues personally at the 58th CIML Meeting in Chiang Mai and wish you a successful, peaceful and happy year. ■

57TH CIML MEETING

Online 57th CIML meeting

18–20 October 2022

BIML

Summary report

Fifty-seventh meeting of the International
Committee of Legal Metrology

18–20 October 2022 (Online)

The Fifty-seventh meeting of the International Committee of Legal Metrology (CIML) was held on 18–20 October 2022, again as an online meeting due to the COVID-19 pandemic. There were over 160 participants from OIML Member States, OIML Corresponding Members, and organisations in liaison.

The CIML President, Dr Roman Schwartz, reported on the key activities that had taken place during the year, including the signing by eight international organisations of a Joint Statement of Intent (JSI) “On the digital transformation in the international scientific and quality infrastructure”, and the establishment of a new and very successful OIML Digitalisation Task Group (DTG). He also announced that an internal financial audit of salaries and other operational expenses had been carried out, and a suite of internal documents had been established which clearly define the roles and responsibilities for various internal financial processes and procedures.

The BIML Director, Mr Anthony Donnellan, reported on the various activities and achievements of the BIML and its staff. He particularly noted the continued efforts to improve the effectiveness of OIML technical work and activities in favour of Countries and Economies with Emerging Metrology Systems (CEEMS), the OIML Certification System (OIML-CS), World Metrology Day in close cooperation with the BIPM (including ongoing direct liaison with UNESCO and the relevant UNESCO Member States and permanent missions to advance the OIML and BIPM joint bid for a UNESCO World Day of Metrology), and work with other liaison organisations. Mr Donnellan emphasised the continued initiatives by the BIML to minimise the impact of the pandemic and to ensure business continuity, and also presented the efforts that are ongoing to encourage new economies to

join the Organisation, which currently has 126 Members. As a result of the significant efforts and resources deployed to manage Member debt, no OIML Member States nor Corresponding Members were delisted this year.

Mr Donnellan also reported on the very successful modernisation and partial recoding of the OIML website, which was relaunched in January 2022 and which is constantly being improved to cater for the Organisation’s growing online needs.

The accounts for 2021 were presented and were approved by the CIML. Mr Donnellan reported that the Organisation continues to be in a strong financial position, although late payments still present an underlying risk to the OIML and rising inflation continues to be a challenge. He stated that expenses remain generally within expectations, and the OIML Operating Reserve was not accessed during this period. Information was also given concerning the external auditor.

A summary of the detailed discussions held during the Regional Legal Metrology Organisations (RLMO) Round Table held on 27 September 2022 was presented by its Chairperson, Dr Charles Ehrlich. Organisations in liaison (BIPM, CECIP, EURAMET, IAF, ICUMSA, IEC, ILAC, ISWIM, and MARCOGAZ) submitted written reports on their activities.

The BIML gave a report on the progress of the technical work of the Organisation, and lists of high-priority projects and publications were approved by the CIML.

The following publications were approved by the CIML:

- Revision of B 8:2012 *OIML Financial Regulations*;
- Revision of B 12:2004 *Policy paper on liaisons between the OIML and other bodies*;
- Revision of B 18:2018 *Framework for the OIML Certification System (OIML-CS)*;
- Revision of B 19:2017 *Terms of Reference for the Advisory Group on matters concerning Countries and Economies with Emerging Metrology Systems (CEEMS)*;
- Revision of D 5:1982 *Principles for the establishment of hierarchy schemes for measuring instruments*;
- Revision of D 10:2007 *ILAC-G24/OIML D 10 Guidelines for the determination of recalibration intervals of measuring equipment used in testing laboratories*;
- New Document (D 37:2022) *Guide for the application of ISO/IEC 17020 to the assessment of OIML Issuing Authorities under the OIML CS*;
- Update of V 1:2013 *International vocabulary of terms in legal metrology (VIML) (bilingual French-English) / Vocabulaire international des termes de métrologie légale (VIML) (bilingue français-anglais)*.

The following publication was reconfirmed by the CIML:

- R 139:2018 *Compressed gaseous fuel measuring systems for vehicles*.

The following new projects were approved by the CIML:

- Revision of B 6:2019 *Directives for OIML technical work. Part 1: Structures and procedures for the development of OIML publications and Part 2: Guide to the drafting and presentation of OIML publications*;
- Revision of D 11:2013 *General requirements for measuring instruments - Environmental conditions*;
- Revision of R 75:2002 *Heat meters*;
- Revision of R 137:2012 *Gas meters*.

The CIML President spoke about communication with OIML stakeholders. He notably mentioned the OIML Bulletin and the ongoing need for contributions from Members in the form of articles. The concept of “Mentors” to manage specific topics or themes, launched in 2020, has been very successful again in 2022 with two feature editions: ‘Measurement related to traffic’ (April 2022) and ‘Metrology for a sustainable environment’ (July 2022). The theme for the October 2022 edition, currently being prepared, will be centred around e-Learning and training.

Dr Roman Schwartz confirmed that he will step down as CIML President at the beginning of the 58th CIML Meeting. In a secret ballot, the CIML elected Dr Bob Joseph Mathew, CIML Second Vice-President and CIML Member for Switzerland, as CIML President for a six-year term starting at the beginning of the 58th CIML Meeting.

The OIML-CS Management Committee Chairperson, Mr Mannie Panesar, reported on the activities of the OIML-CS, including the online MC meeting held in March 2022. He reported that despite the impact of the pandemic, the OIML-CS continues to function well with OIML Issuing Authorities and Test Laboratories continuing to extend their scopes to include additional instrument categories and new editions of OIML Recommendations. As referenced above, the CIML approved the revision of B 18:2018 *Framework for the OIML Certification System (OIML-CS)* which implements the CIML decision to allow OIML Issuing Authorities to use ISO/IEC 17020 (with additional requirements) as an alternative to ISO/IEC 17065 to demonstrate competence.

Mr Peter Mason, CEEMS Advisory Group (CEEMS AG) Chairperson, gave an update on the activities of the

CEEMS AG. He described changes in AG membership, requesting that Members consider joining the AG.

Mr Jaco Marneweck was appointed CEEMS AG Chairperson and Mr Han Jianping was appointed CEEMS AG Vice-Chairperson by the CIML.

Mr Mason also highlighted the revision of B 19 *Terms of Reference for the Advisory Group on matters concerning Countries and Economies with Emerging Metrology Systems (CEEMS)*, and the development of a new publication on *CEEMS activities in a post-COVID world*, which would soon be published as an OIML Guide. He also discussed some points from the CEEMS AG Work Plan, including particularly

- a collaboration with the BIPM to develop an e-Learning package and other materials on D 1 *National metrology systems – Developing the institutional and legislative framework*,
- an event on prepackages being planned for July 2023 in Germany, and
- the restarting of the CEEMS/p 1 project on the revision of D 14 *Training and qualification of legal metrology personnel*.

Dr Sascha Eichstädt was appointed Chairperson of the OIML Digitalisation Task Group (DTG) and Dr Ping Yang was appointed Deputy Chairperson. Dr Eichstädt described four current areas of work:

- Support of the IMEKO TC6 Conference *Metrology and digital transformation*;
- Support for OIML technical work regarding “SMART”;
- Strategic items on the OIML’s role in an international digital metrology system; and
- Support for the CEEMS AG *Online technology* project.

An OIML medal was awarded to Mr Peter Mason for his contribution to the work of the OIML. Letters of Appreciation were presented to Dr Matthijs H.D. van der Wiel and the core project development team of TC 12/p 3, Mr Xie Jun, Mr Alexander Winchester, and Dr Harry Stoltz for their contribution to the work of the OIML.

The 2022 OIML CEEMS Award was awarded to the Guyana National Bureau of Standards (GNBS) for their outstanding contributions to the work of the OIML.

It is planned to hold the 58th CIML Meeting in Chiang Mai, Kingdom of Thailand, in October 2023.

The 57th CIML Meeting Resolutions, documents, and presentations can be found on the OIML website at <https://www.oiml.org/en/structure/ciml/sites>. ■

Rapport succinct

Cinquante-septième Réunion du Comité International de Métrologie Légale

18–20 octobre 2022 (en ligne)

La cinquante-septième Réunion du Comité International de Métrologie Légale (CIML) s'est tenue du 18 au 20 octobre 2022, toujours sous forme de réunion en ligne en raison de la pandémie de COVID-19. Il y avait plus de 160 participants des États Membres de l'OIML, des Membres Correspondants de l'OIML et des organisations en liaison.

Le Président du CIML, le Dr. Roman Schwartz, a rendu compte des principales activités qui ont eu lieu au cours de l'année, notamment la signature par huit organisations internationales d'une déclaration commune d'intention (JSI) « sur la transformation numérique de l'infrastructure internationale scientifique et de qualité », et la création d'un nouveau Groupe de Travail OIML sur la Numérisation (OIML DTG), qui connaît un grand succès. Il a également annoncé qu'un audit financier interne des salaires et autres dépenses opérationnelles avait été réalisé, et qu'une série de documents internes avait été établie, définissant clairement les rôles et responsabilités pour divers processus et procédures financiers internes.

Le Directeur du BIML, M. Anthony Donnellan, a présenté un rapport sur les diverses activités et réalisations du BIML et de son personnel. Il a particulièrement noté les efforts continus pour améliorer l'efficacité du travail technique de l'OIML et les activités en faveur des Pays et les Economies dotés de Systèmes de Métrologie Emergents (CEEMS), le Système de Certification de l'OIML (OIML-CS), la Journée Mondiale de la Métrologie en étroite collaboration avec le BIPM (y compris la liaison directe en cours avec l'UNESCO et les Etats Membres et missions permanentes de l'UNESCO concernés pour faire avancer la candidature commune de l'OIML et du BIPM pour une Journée Mondiale de la Métrologie de l'UNESCO), et le travail avec d'autres organisations de liaison. M. Donnellan a souligné les initiatives continues du BIML pour minimiser l'impact de la pandémie et assurer la continuité des activités, et a également présenté les efforts en cours pour encourager de nouvelles économies à rejoindre l'Organisation, qui compte actuellement 126 Membres. Grâce aux efforts et aux ressources considérables déployés pour gérer la dette des Membres, aucun État Membre de l'OIML ni aucun Membre Correspondant n'a été radié cette année.

M. Donnellan a également rendu compte de la modernisation très réussie et du recodage partiel du site web de l'OIML, qui a été relancé en janvier 2022 et qui

est constamment amélioré pour répondre aux besoins en ligne croissants de l'Organisation.

Les comptes pour 2021 ont été présentés et approuvés par le CIML. M. Donnellan a indiqué que l'Organisation continue d'être dans une position financière solide, bien que les retards de paiement présentent toujours un risque sous-jacent pour l'OIML et que l'inflation croissante continue d'être un défi. Il a déclaré que les dépenses restent généralement conformes aux attentes et que la réserve opérationnelle de l'OIML n'a pas été utilisée au cours de cette période. Des informations ont également été données concernant l'auditeur externe.

Un résumé des discussions détaillées tenues lors de la Table Ronde des Organisations Régionales de Métrologie Légale (RLMO), qui s'est tenue le 27 septembre 2022, a été présenté par son président, le Dr. Charles Ehrlich. Les organisations en liaison (BIPM, CECIP, CEI, EURAMET, IAF, ICUMSA, ILAC, ISWIM et MARCOGAZ) ont soumis des rapports écrits sur leurs activités.

Le BIML a présenté un rapport sur l'état d'avancement des travaux techniques de l'Organisation, et des listes de projets et de publications hautement prioritaires ont été approuvées par le CIML.

Les publications suivantes ont été approuvées par le CIML :

- Révision du B 8:2012 *Règlement financier de l'OIML* ;
- Révision du B 12:2004 *Document de politique générale sur les liaisons entre l'OIML et les autres organismes* ;
- Révision du B 18:2018 *Cadre pour le Système de Certification OIML (OIML-CS)* ;
- Révision du B 19:2017 *Termes de référence pour le Groupe Consultatif sur les questions concernant les pays et économies dont le système de métrologie est émergent (CEEMS)* ;
- Révision du D 5:1982 *Principes pour l'établissement des schémas de hiérarchie des instruments de mesure* ;
- Révision du ILAC-G24/OIML D 10 *Conseils pour la détermination des intervalles de réétalonnage des équipements de mesure utilisés dans les laboratoires d'essais* ;
- Nouveau document (D 37:2022) *Guide pour l'application de l'ISO/CEI 17020 à l'évaluation des Autorités de délivrance de l'OIML dans le cadre de l'OIML-CS* ;
- Mise à jour de V 1:2013 *Vocabulaire international des termes de métrologie légale (VIML) (bilingue français-anglais) / International Vocabulary of Terms in Legal Metrology (VIML) (Bilingual French-English)*.

La publication suivante a été reconfirmée par le CIML :

- R 139:2018 *Ensembles de mesure de gaz, comprimé pour véhicules*.

Les nouveaux projets suivants ont été approuvés par le CIML :

- Révision de l'OIML B 6:2019 *Directives pour les travaux techniques de l'OIML. Partie 1: Structures et procédures pour le développement des publications de l'OIML*, et Partie 2: *Guide pour la rédaction et la présentation des publications de l'OIML* ;
- Révision du D 11:2013 *Exigences générales pour les instruments de mesure - Conditions environnementales* ;
- Révision de la R 75:2002 *Compteurs d'énergie thermique* ;
- Révision de la R 137:2012 *Compteurs de gaz*.

Le Président du CIML a parlé de la communication avec les parties prenantes de l'OIML. Il a notamment évoqué le Bulletin de l'OIML et le besoin permanent de contributions des Membres sous forme d'articles. Le concept de « Mentors » pour gérer des sujets ou des thèmes spécifiques, lancé en 2020, a connu un grand succès à nouveau en 2022 avec deux éditions de fond : « Les mesures liées au trafic » (avril 2022) et « La métrologie pour un environnement durable » (juillet 2022). Le thème de l'édition d'octobre 2022, actuellement en préparation, sera centré sur l'apprentissage en ligne et la formation.

Dr. Roman Schwartz a confirmé qu'il quittera son poste de Président du CIML au début de la 58ème Réunion du CIML. Lors d'un vote à bulletin secret, le CIML a élu le Dr. Bob Joseph Mathew, Second Vice-Président du CIML et Membre du CIML pour la Suisse, comme Président du CIML pour un mandat de six ans à compter du début de la 58ème Réunion du CIML.

Le Président du Comité de Management de l'OIML-CS, M. Mannie Panesar, a rendu compte des activités de l'OIML-CS, notamment de la réunion en ligne du Comité de Management qui s'est tenue en mars 2022. Il a indiqué que, malgré l'impact de la pandémie, l'OIML-CS continue de bien fonctionner, les Autorités de Délivrance OIML et les laboratoires d'essai continuant à étendre leurs champs d'application pour inclure des catégories d'instruments supplémentaires et de nouvelles éditions des Recommandations OIML. Comme mentionné ci-dessus, le CIML a approuvé la révision du B 18:2018 *Cadre pour le Système de Certification OIML (OIML-CS)* qui met en œuvre la décision du CIML de permettre aux Autorités de Délivrance de l'OIML d'utiliser la ISO/CEI 17020 (avec des exigences supplémentaires) comme alternative à la ISO/CEI 17065 pour démontrer la compétence.

M. Peter Mason, Président du Groupe Consultatif des CEEMS (CEEMS AG), a fait le point sur les activités du CEEMS AG. Il a décrit les changements dans la composition du AG, en demandant aux Membres d'envisager de rejoindre l'AG.

M. Jaco Marneweck a été nommé Président du CEEMS AG et M. Han Jianping a été nommé Vice-Président du CEEMS AG par le CIML.

M. Mason a également souligné la révision de l'OIML B 19:2017 *Termes de référence pour le Groupe Consultatif sur les questions concernant les pays et économies dont le système de métrologie est émergent (CEEMS)*, et le développement d'une nouvelle publication sur les activités des CEEMS dans un monde post-COVID, qui sera bientôt publié comme un Guide OIML. Il a également abordé certains points du plan de travail du CEEMS AG, dont notamment

- une collaboration avec le BIPM pour développer un paquet d'apprentissage en ligne et d'autres matériels sur D 1 *Systèmes de métrologie nationaux – Développement du cadre institutionnel et législatif*,
- un événement sur les préemballages est prévu pour juillet 2023 en Allemagne, et
- le redémarrage du projet CEEMS/p 1 sur la révision de la norme D 14 *Formation et qualification des personnels de métrologie légale*.

Le Dr. Sascha Eichstädt a été nommé Président du Groupe de Travail OIML sur la Numérisation (OIML DTG) et le Dr. Ping Yang a été nommé Vice-président. Le Dr. Eichstädt a décrit quatre domaines de travail actuels :

- Soutien de la conférence IMEKO TC6 « *Métrologie et transformation numérique* » ;
- Soutien aux travaux techniques de l'OIML concernant « SMART » ;
- Points stratégiques sur le rôle de l'OIML dans un système international de métrologie numérique ; et
- Soutien au projet du CEEMS AG *Technologique en ligne*.

Une Médaille OIML a été décernée à M. Peter Mason pour sa contribution aux travaux de l'OIML. Des Lettres d'Appréciation ont été présentées au Dr. Matthijs H.D. van der Wiel et à l'équipe de développement du projet central du TC 12/p 3, à M. Xie Jun, à M. Alexander Winchester, et au Dr. Harry Stoltz pour leur contribution aux travaux de l'OIML.

Le prix OIML CEEMS 2022 a été décerné au Guyana National Bureau of Standards (GNBS) pour sa contribution exceptionnelle aux travaux de l'OIML.

Il est prévu d'organiser la 58ème Réunion du CIML à Chiang Mai, Royaume de Thaïlande, en octobre 2023.

Les résolutions, documents et présentations de la 57ème Réunion du CIML sont disponibles sur le site de l'OIML à l'adresse

<https://www.oiml.org/fr/structure/ciml/sites> ■



The German delegation, the supporting PTB team, and BIML representatives during the one-week OIML event, which was managed from PTB Braunschweig. From left to right:

Frank Lienesch (Head of Division “Legal and International Metrology”), Paul Dixon (BIML Assistant Director), Bob Joseph Mathew (Vice Director, Head of Legal Metrology, Federal Institute of Metrology (METAS) and CIML Second Vice-President, Anthony Donnellan (BIML Director), Uta Schulze (Assistant, Department Legal Metrology and Conformity Assessment), Roman Schwartz (CIML President), Katharina Gierschke (Federal Ministry for Economic Affairs and Climate Action), Ian Dunmill (BIML Assistant Director), Susanne Ludwig (OIML Office at PTB), Harry Stolz (Head of Working Group Office of the Conformity Assessment Body)

OIML Awards

presented at the Online 57th CIML Meeting

At its Online 57th Meeting,
the Committee made the following awards:

- An **OIML Medal**, for his contribution to the work of the OIML, to Mr Peter Mason



- OIML **Letters of Appreciation**, for their contribution to the work of the OIML, to:

- Dr Matthijs van der Wieland the core project development team of TC 12/p 3,
- Mr Xie Jun,
- Mr Alex Winchester,
- Dr Harry Stolz (pictured, right)



Presentation of the OIML Letter of Appreciation to Dr Harry Stolz by the CIML President, Dr Roman Schwartz (screenshot)

- The 2022 OIML **CEEMS Award** to:
- The Guyana Bureau of Standards (GNBS)



RLMO RT

Report on the RLMO Round Table Meeting

27 September 2022

DR CHARLES EHRLICH, RLMO CHAIRPERSON
AND BIML

This report for the January 2023 OIML Bulletin is a transcript of the presentation given by Dr Charles Ehrlich under item 21.1 of the 57th CIML Meeting:

Report by the RLMO Round Table Chairperson

Dr Ehrlich was pleased to report that the RLMO Round Table continued to be very active, having held two interim meetings during 2022, in addition to the annual meeting. All these meetings had been held online, and he thanked the BIML for hosting them. He stated that the interim meetings had been held primarily to exchange information and ideas, which each RLMO could then take back to their region as appropriate. Short update presentations from each RLMO on matters of particular urgency or interest were also permitted at these meetings, but were not required. These interim meetings were also used for presentations on topics of interest, and as indicated on his slide, Dr Ehrlich stated there had been two presentations on smart meters during 2022. One of these had been given by Dr Pavel Klenovský, CIML Member for the Czech Republic and WELMEC Chairman. The other had been given by Juan Carlos Mateus Sánchez from INMETRO, Brazil.



Dr Charles Ehrlich - RLMO Round Table Chairperson

Dr Ehrlich reported that the annual Round Table meeting had been held on 27 September 2022, three weeks prior to the 57th CIML Meeting, and he said that at this meeting, each of the RLMOs had reported on the activities and developments in their Regions over the past year. The plans for the following year's Round Table meeting and activities had also been discussed, and Dr Ehrlich said he would elaborate on this later in his presentation.

At this point, Dr Ehrlich reminded delegates about the RLMO Round Table web page on the OIML website, and he thanked Mr Pulham for maintaining this up to date. He explained that the logos of each of the six RLMOs on this page provided a link to the home page of that RLMO. A new workspace for the RLMO Round Table had also been set up on the OIML website, and he thanked Mr Mussio and the BIML team for keeping this up to date, and for having produced an easier to use version during the current year. Dr Ehrlich also thanked Mr Richter for his assistance during the year.

Dr Ehrlich's next slide showed delegates how to access the presentations and other public documents from the annual Round Table meetings for the last three years, by clicking on "Structure" on the menu bar of the OIML website. He reminded delegates that the RLMO Round Table had been meeting annually since 2007, although the meetings had been held online for the last three years due to the COVID pandemic.

Dr Ehrlich's next slide indicated the first six items of the latest Round Table meeting, and he thanked all the RLMO presenters, who were displayed under agenda item 4 on his slide. There had been three new presenters at this latest meeting from SIM, GULFMET, and COOMET. Dr Ehrlich said he would discuss the highlights from each of the six RLMOs presentations later, adding that these had also been posted on the Round Table website, and he encouraged all delegates to take a look at them, as they contained reports of the many interesting activities and events happening in the regions, and he would not have time to elaborate on these during this current presentation.

Dr Ehrlich reported that the open forum discussion topics in 2022 had been on "digitalisation" and "smart meter" activities in the regions, as indicated under agenda item 5. He said that these topics would be continued in the coming year because there were still many ongoing activities in these areas.

A new item on the agenda for the RLMO Round Table had been item 6, which delegates would have heard about the previous day from Mr Pulham. This was that the April 2023 OIML Bulletin would be focused on the RLMOs, and would include the treatment of prepackaged products in the regions. Dr Ehrlich remarked that he was serving as Mentor for that issue, and thanked in advance the authors of the articles.

Dr Ehrlich showed delegates the rest of the agenda for the 2022 RLMO Round Table annual meeting. Under agenda item 7, Mr Peter Mason had provided an update on the activities of the CEEMS AG, and under agenda item 8, Mr Mannie Panesar and Mr Paul Dixon had provided an update on the OIIML-CS. Dr Ehrlich stated that delegates would have already heard updates on both of these at the CIML meeting the previous day. He did not intend to repeat the information that had been given then, but added that these updates were very valuable and much appreciated by the representatives from the regions. The updates provided a good opportunity for the regional representatives to ask questions and obtain useful information, helping to facilitate further participation in the OIIML-CS in individual regions.

Under agenda item 9, a number of issues had been covered, and Dr Ehrlich would describe the outcome of these discussions in his presentation. It had been decided to continue to hold two interim meetings each year, which would be in January and May 2023. Talks on two new topics would be given in 2023, on “Electric Vehicle Supply Equipment (EVSE)” and “measurements in law enforcement”. At each Round Table meeting, an open forum discussion was held to discuss any questions that had arisen on the special topics, and it had been decided at the most recent Round Table meeting to keep the two existing discussion topics, “digitalisation” and “smart meters”, and to add the two new topics which he had mentioned. All four of these would be on the Round Table interim and annual agendas for 2023, and Dr Ehrlich encouraged all delegates who were interested to attend and to take part in those discussions.

As discussed the previous day at the CIML meeting, Dr Ehrlich stated that the revision of OIIML Basic publication B 12 *Policy paper on liaisons between the OIIML and other bodies* had been approved. This revision had included an amendment to reflect the OIIML’s policy concerning coordination with RLMOs, which would be considered annually at RLMO Round Table meetings. Dr Ehrlich reminded delegates that the previous year, the RLMOs had agreed that they should remain independent of the OIIML and from each other, but that interactions through the Round Table should continue, so as to facilitate effective communication channels. At the 2022 Round Table meeting, this position had been discussed, and had been maintained with no change. However, Dr Ehrlich reported that through the Round Table, several of the RLMOs had developed bilateral interactions for their own mutual benefit, which he remarked was great to hear.

Dr Ehrlich stated that delegates had heard from Mr Dunmill the previous day about the current status and plans of the OIIML regarding e-Learning and online training, adding that Mr Dunmill had provided a similar

report to the September meeting of the Round Table. Dr Ehrlich stated that the hardware was now in place at the BIML, and the software was under development. Ways of incorporating the extensive e-Learning materials from the APLMF were being considered.

Regarding CEEMS, Dr Ehrlich said that encouraging more participation by CEEMS in the Round Table discussions was always a consideration by the regions, since CEEMS are typically more involved in the individual RLMOs than they are in the Round Table.

Dr Ehrlich said he would now provide delegates with some of the highlights from the individual presentations the RLMO representatives had given at the annual Round Table meeting. These would be in alphabetical order, starting with AFRIMETS, which had been represented by Mr Jaco Marneweck (South Africa), but he firstly congratulated Mr Marneweck on his selection as Chairperson of the CEEMS AG, which had not yet taken place at the time of the annual Round Table meeting.

AFRIMETS

Mr Marneweck had reported that the recent 15th AFRIMETS General Assembly had focused on AFRIMETS’ self-sustainability. An AFRIMETS Technical Committee (TC) Legal workshop, which had taken place around the same time, had focused on the regulation of smart electricity meters, with presentations by the three speakers indicated on his slide: Dr Pavel Klenovský (Czech Republic), Dr Juan Carlos Mateus Sánchez (Brazil), and Ms Sowmya Ramakrishnan (Australia). Afterwards it had been decided that this workshop would be followed up by similar workshops.

APLMF

Dr Ehrlich stated that the APLMF President, Dr Osman Zakaria (Malaysia), had provided the APLMF report. He had reported that there were currently 27 APLMF member economies. He had also informed the meeting that besides the training courses and e-Learning modules on NAWIs and the verification of fuel dispensers, the APLMF was planning new workshops and training courses on software used in measuring instrument transactions, belt weighers (based on OIIML R 50), and weighing-in-motion technology (based on OIIML R 134). These would probably continue to be conducted online, but the last two workshops might be held in person. Dr Zakaria had also reported that the APLMF had six active Working Groups, and was in the process of adding two more on “measurement of fuel” and “medical measurement”. Dr Ehrlich stated that the

details of these could be found in Dr Zakaria's PowerPoint report, which had been posted on the OIML website.

COOMET

Dr Ehrlich said that the COOMET report had been supplied by the COOMET President, Dr Valery Hurevich (Belarus). Dr Ehrlich remarked that the report had been very comprehensive, and he would be reporting on a few key highlights. Dr Hurevich had reported that there were currently fourteen full members, and five associate members. COOMET had translated a number of OIML publications (D 1:2020, D 10, D 30, D 32, R 75, G 14) and the UNIDO-OIML brochure *Certification of measuring instruments*. Dr Ehrlich then explained that in 2022 and 2023, COOMET TC 2 expected to complete more translations and implement two projects on "Development of rules for setting up reverification and recalibration intervals for measuring instruments used in the field of legal metrology" and "Review of approaches to the metrological support of medical measuring instruments". Dr Ehrlich reported that COOMET had conducted a survey on the regulation of smart meters, which would continue to be discussed in TC 2. A COOMET Task Group on the issues of digital transformation in metrology had been established, which had developed a roadmap on the implementation of the concept. Dr Ehrlich ended the COOMET report by saying that the COOMET Committee meeting would be held from 25–27 October 2022.

EURAMET

Dr Ehrlich said that the EURAMET chairman, Dr Jörn Stenger, had made a presentation at the interim meeting in May 2022, where he had invited the RLMOs to collaborate with EURAMET on projects of mutual interest. At the recent annual Round Table meeting in September, it had been reported that GULFMET had pursued this, and WELMEC had reported that it routinely interacted with EURAMET, although less in recent times due to the COVID pandemic.

GULFMET

Dr Ehrlich said that the GULFMET report had been given by the TC Legal Metrology chair, Eng. Amina Al Bastaki, who reported that GULFMET had been working towards participating in the OIML-CS, and had nominated two people for membership of the CS

Management Committee. GULFMET had also developed a proposal to form its own certification scheme based on the OIML-CS. She had also reported that GULFMET TC Legal Metrology had formed a working group to update the GCC common metrology law, and had put this forward for approval by the Ministerial Committee. GULFMET had participated in the CEEMS AG meeting in July 2022, and had been planning a GULFMET TC Legal Metrology meeting and GULFMET week event in December of 2022. GULFMET had also participated in-person at the IMEKO Conference on "Metrology and Digital Transformation" which had been held in Berlin in September 2022.

SIM

Dr Ehrlich stated that the SIM report had been provided by the Vice-Chair of the SIM Legal Metrology Working Group (LMWG), Ms Sandra Rodríguez (Costa Rica), who had reported on a template being developed in the SIM LMWG to keep track of the metrological verification of prepackaged products in SIM countries. She had also said that the SIM web page on legal metrology had been updated, and that meetings of the SIM LMWG were being held every three months. Dr Ehrlich remarked that he had been invited to participate in these. The SIM LMWG had identified as key needs in SIM countries the development of training courses in the areas of energy meters, nonautomatic weighing instruments, fuel dispensers, and software, and the four bodies Dr Ehrlich had highlighted on his current slide had been particularly active working on digitalisation systems: SIMEL (Colombia), RBMLQ-I (Brazil), SICOMET (Argentina) and, recently, INACAL (Peru). Ms Rodríguez had also reported that the regulation of smart electricity meters was also becoming a priority in some SIM countries.

WELMEC

Dr Ehrlich stated that the WELMEC Chairman, Dr Pavel Klenovský, had reported that future WELMEC Committee meetings would feature short (10 minute) talks on "hot issues" in legal metrology through a "technical exchange". He had also reported that WELMEC was launching regular webinars on new developments in WELMEC activities and that the first one would be on 23 November 2022 on the fitness-for-purpose of the European Directives on metrology. Delegates could see from the bottom of his current slide that the WELMEC Committee had been very active during the current year, having approved nine revised Guides, two new Guides and one corresponding table, and would be holding its

next meeting in May 2023 in Braunschweig, Germany. Dr Klenovský had reported that WELMEC continued to be active in the area of active electrical energy meters and digitalisation, and that a new WELMEC Working Group had been established on digital transformation. The WELMEC Chairman and executive board members had published an article on legal metrology for the magazine *Nature Physics*. Dr Ehrlich stated that the link for this article, as well as much more information, could be found in the individual WELMEC PowerPoint report on the Round Table web page. Dr Ehrlich again highlighted this on his next slide as an encouragement to all delegates to read the article.

Closing remarks

Dr Ehrlich stated this had been a brief overview of the Round Table discussions and presentations, and encouraged all delegates to go to the Round Table web page and look at all six of the individual RLMO presentations from the recent Annual Round Table where there was much more detail than he had been able to report in the time available. He thanked delegates for their attention. ■

INTERNATIONAL ENGAGEMENT

SIM Week, Saint Lucia

31 October –
4 November 2022

Saint Lucia

ANTHONY DONNELLAN
BIML Director



Anthony Donnellan delivering his presentation.
Photo: Saint Lucia Bureau of Standards

The BIML Director, Anthony Donnellan, was delighted to accept the invitation from Sistema Interamericano de Metrología (SIM) to the SIM Week comprising of the General Assembly and other technical discussions from 31 October to 4 November 2022 in Saint Lucia.

The General Assembly and break-out sessions enabled the OIML, represented by the BIML Director to have deep and engaging discussions with most SIM member countries and a number of SIM economies who are actively working to accede to the OIML Convention to become a full Member State of the OIML.

The SIM Steering Council was delighted that the OIML could be present at the SIM Week in 2022 in person. In recognition of the effort made by the OIML to participate, the SIM Steering Council seized upon the opportunity to have a dedicated separate session with the BIML Director to discuss a diverse array of subjects related to international legal metrology, to discuss ways of forging better and deeper collaborative relationships, and to enhance the integration of the work of the OIML and legal metrology in all SIM member economies. This was in addition to the presentation which was given by the BIML Director at the SIM General Assembly itself.

As the SIM Week in 2022 was held in Saint Lucia it also permitted the BIML Director to publicly congratulate Saint Lucia and to welcome the OIML's newest member. It also facilitated the discussion of a

number of strategic and operational matters that were of importance to Saint Lucia and the Saint Lucia Bureau of Standards (SLBS).

In addition to all of the above, participation also permitted the BIML Director to directly and publicly acknowledge the excellent work of the Co-operative Republic of Guyana in implementing and enforcing their legal metrology framework and the progress that has been made in Guyana by the Guyana National Bureau of Standards (GNBS) with regard to protecting consumers and developing new and innovative ways of ensuring a robust and rigorous legal metrology framework. This acknowledgement and recognition built upon Guyana receiving the OIML CEEMS award at the 57th CIML Meeting.

The meeting was also an excellent opportunity for the BIML Director to personally thank the outgoing SIM President Claire Saundry (United States). It also offered an opportunity for the BIML Director to congratulate and importantly, to discuss, the collaborative ways that the OIML can work with SIM with the incoming SIM President Javier Arias Real (Panama).

The BIML acknowledges and thanks the SIM Steering Council and the SIM Week Organising Committee in conjunction with the host country, Saint Lucia, and the SLBS for organising an excellent SIM Week in 2022. ■

INTERNATIONAL ENGAGEMENT

27th CGPM Meeting

15–18 November 2022

Versailles, France

ANTHONY DONNELLAN
BIML Director



The 27th CGPM Meeting was held in Versailles (Photo: BIPM)

The 27th Conférence Générale des Poids et Mesures (CGPM) Meeting at Versailles, France from 15–18 November 2022 saw the OIML, represented by the BIML Director, Anthony Donnellan, provide a strategic presentation on the future of key matters of relevance to the OIML, which impact the international legal metrology community and how the OIML and the BIPM collaborate.

The presentation provided an overview of a number of strategic areas. These included:

- how the OIML is preparing for the future landscape of legal metrology;
- how the OIML is orientating itself to develop and implement more adaptive, flexible, contemporary, and responsive technical regulations / standards;
- the need to reflect on consumer and industry trends and the need to incorporate technological improvements in the OIML's technical regulations / standards;



Anthony Donnellan giving his presentation to the CGPM (Photo: BIPM)

- the need for a higher frequency review, revision and renewal of the OIML's publications in order to ensure all of the Organisation's work is fit-for-purpose and reflects our rapidly digitalised world;
- the ongoing but renewed emphasis to assess the true impact of the work that the OIML undertakes as an international standard-setting organisation;
- the need to consider and assess the impacts, both pre- and post-production, of the flow through to economic impacts and quality of life metrics of the OIML's technical regulations / standards;
- the need for better integration and alignment between metrology and industry policy at all levels; and
- metrology's ability to contribute to and shape policy, legislation, and international rules and to be an active, assertive and trusted participant in this dialogue.

The BIML Director's presentation also enabled him to introduce the CIML President elect, Bob Joseph Mathew (Switzerland) and for him to make some closing remarks to CGPM delegates.

The CGPM audience was interested in the topics covered and the work undertaken by the OIML. This was especially evident regarding the ongoing and strategic work to elevate the profile of metrology as an integral part of the international Quality Infrastructure. This is exemplified by the significant effort extended by the BIML to successfully progress a *World Day of Metrology* with UNESCO to this point, in conjunction with the BIPM, and the strategic work also undertaken by the BIML to better align the Organisation's activities with the UN Sustainable Development Goals (SDG), and lastly the work with the IO Partnership of the OECD.

A number of parallel meetings were held with delegates to the CGPM to discuss various matters concerning the OIML.

The OIML appreciated the opportunity to be part of the 27th CGPM Meeting, and to share with delegates the vision and progress made by the OIML. ■



Photo: BIPM

11:00 Reconvene / Reprise de la séance	
Report on BIPM Finance Rapport sur les finances du BIPM <i>Questions/Discussion</i>	P. Richard
Presentation of the BIPM Work Programme for 2024-2027 Présentation du programme de travail pour les années 2024 à 2027 <i>Questions/Discussion</i>	M. Milton
Report on liaison activities from the OIML Rapport de l'OIML sur les activités de liaison <i>Questions/Discussion</i>	A. Donnellan (OIML)
Invited talk - Présentation invitée "Standardization, industrialization, and the UN Sustainable Development Goals" <i>Questions/Discussion</i>	Y. Yasunaga (UNIDO/ONUDI)
Report on progress towards the recognition by UNESCO of World Metrology Day Rapport sur les progrès effectués concernant la reconnaissance par l'UNESCO de la Journée mondiale de la métrologie <i>Questions/Discussion</i>	To be confirmed, à confirmer
Introduction to Draft Resolution F (Universal adherence to the Metre Convention) Présentation du Projet de résolution F (Adhésion universelle à la Convention du Mètre) <i>Questions/Discussion</i>	A. Steele A. Samuel (NMIA)

27th CGPM Programme: Day 2 listing the presentation by Anthony Donnellan

Cooperation with the BIPM

The OIML cooperates with the BIPM on many subjects, including:

- Collaboration with organisations in liaison;
- Shared messaging, representation, and resourcing;
- World Metrology Day and the UNESCO bid for a World Day of Metrology;
- Digitalisation and the digital transformation of our Organisations;
- The Joint Statement;
- Organisational, corporate and governance matters.

Additionally, Joint Task Group meetings have been convened and strategy established.

CGPM



The OIML engages in cooperation with the BIPM on many subjects

INTERNATIONAL ENGAGEMENT

27th CGPM Meeting

15–18 November 2022

Versailles, France

BOB JOSEPH MATHEW AND LUIS MUSSIO



The 27th meeting of the Conférence générale des poids et mesures (CGPM), took place in Versailles on 15–18 November 2022. The OIML was invited to give a presentation, a summary of which is published in this edition of the Bulletin. Many institutional and scientific issues were discussed, and of all the resolutions taken during the meeting, Resolutions 2 and 3 are of particular significance for the OIML. The full text of all the resolutions can be found at:

<https://www.bipm.org/en/cgpm-2022>

27th CGPM Resolution 2:

On the global digital transformation and the International System of Units

Resolution 2 of the 27th CGPM Meeting recognises the fact that maintaining and building confidence in the global accuracy and comparability of measurements will require the development of a comprehensive digital representation of the SI.

This will include robust, unambiguous, machine-readable digital representations of measurement units, values and uncertainties. Such a digital transformation in the field of metrology will require the collaboration of many stakeholders such as the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), the Committee on Data (CODATA), the International Laboratory Accreditation Cooperation (ILAC) and also the OIML.

Resolution 2 thus encourages the CIPM to continue its efforts in order to ensure that the role of the Metre Convention, as a basis for confidence in metrology, is accepted also in the digital era. In this context, Resolution 2 encourages the CIPM to start developing and promoting a “digital framework for the SI”.

Finally, Resolution 2 notably invites NMIs, RMOs and other stakeholders to maintain and, if possible, increase their current level of engagement and collaboration with the CIPM in order to continue to develop, promote and implement the “digital framework of the SI”.

This resolution is also very important from an OIML perspective. It is in line with the Joint Statement of Intent (JSI) “On the digital transformation in the international scientific and quality infrastructure”, signed on 30 March 2022. The signatory organisations are the BIPM, the International Measurement Confederation (IMEKO), the International Science Council (ISC), CODATA, IEC, ILAC, ISO and the OIML. Further, it underlines the importance of the OIML Digitalisation Task Group and the significance of its work, and emphasises the intent and necessity of collaboration across international organisations.

27th CGPM Resolution 3:

On the extension of the range of SI prefixes

Resolution 3 of the CGPM extends the range currently covered by the existing SI prefixes. The range now covers the multiplying factors from 10^{-30} to 10^{30} . To achieve this extended range, four new prefixes were approved:

Multiplying factor	Name	Symbol
10^{27}	ronna	R
10^{-27}	ronto	r
10^{30}	quetta	Q
10^{-30}	quecto	q

The names chosen for the prefixes continue the series of names related to powers of 10^3 – for example, the prefix exa comes from the Greek word for six, as exa is $(10^3)^6$. Among other reasons, the extension is due to “the needs of data science in the near future to express

quantities of digital information using orders of magnitude in excess of 10^{24} ”. Below is a table listing all the SI prefixes and the etymological origin of their names. ■

Prefix	Symbol	Factor	Etymology	Origin
quetta	Q	$10^{30} = (10^3)^{10}$	ten	Latin
ronna	R	$10^{27} = (10^3)^9$	nine	Greek
yotta	Y	$10^{24} = (10^3)^8$	eight	Latin
zetta	Z	$10^{21} = (10^3)^7$	seven	Latin
exa	E	$10^{18} = (10^3)^6$	six	Greek
peta	P	$10^{15} = (10^3)^5$	five	Greek
tera	T	10^{12}	monster	Greek
giga	G	10^9	giant	Greek
mega	M	10^6	big	Greek
kilo	k	10^3	thousand	Greek
hecto	h	10^2	hundred	Greek
deca	da	10	ten	Greek
deci	d	10^{-1}	tenth	Latin
centi	c	10^{-2}	hundredth	Latin
mili	m	10^{-3}	thousandth	Latin
micro	μ	10^{-6}	small	Greek
nano	n	10^{-9}	dwarf	Greek
pico	p	10^{-12}	tiny bit	Spanish
femto	f	10^{-15}	fifteen	Dano-Norwegian
atto	a	$10^{-18} = (10^3)^{-6}$	eighteen	Dano-Norwegian
zepto	z	$10^{-21} = (10^3)^{-7}$	seven	Latin
yocto	y	$10^{-24} = (10^3)^{-8}$	eight	Latin
ronto	r	$10^{-27} = (10^3)^{-9}$	nine	Greek
quecto	q	$10^{-30} = (10^3)^{-10}$	ten	Latin

Source: SI Brochure and CIPM minutes

INTERNATIONAL ENGAGEMENT

The United Nations Economic Commission for Europe (UNECE) Steering Committee on Trade Capacity and Standards

Thirty-second Annual Session of the Working Party on Regulatory Cooperation and Standardization Policies (WP.6)

8 November 2022
Geneva, Switzerland

ANTHONY DONNELLAN
BIML Director

Session Panel: Digital and green transformations and their relation to regulatory cooperation and standardization policies

Background

The role of metrology, digital transformation and sustainability principles and practices were explored and discussed in detail at a Session Panel of the United Nations Economic Commission for Europe (UNECE) Steering Committee on Trade Capacity and Standards Working Party on Regulatory Cooperation and Standardization Policies (WP.6) in November 2022.

The Session Panel explored a number of different aspects concerning the digital transformation and environmental sustainability of Quality Infrastructure and the work performed within the United Nations system and specialised international and regional organisations. The Session Panel also considered the opportunities and challenges associated with the harmonisation of international technical regulations, the international trading systems (including Technical Barriers to Trade) and the critical and increasingly prominent role of standardisation, digitalisation, environmental sustainability, and the Circular Economy.

The BIML Director, Anthony Donnellan, accepted the invitation from the UNECE to join the Session Panel along with other presenters from CEN/CENELEC, Cotechna and other members of the UNECE Working Party on Regulatory Cooperation and Standardization Policies concerning matters such as Risk Management in Regulatory Systems and the Gender-Responsive Standards Initiative (GRSI). The Session Panel built upon a Pre-session Panel: *Back to basics - Quality Infrastructure* in Working Party 6 the previous day. The Pre-session Panel focused on some of the first principles associated with metrology and Quality Infrastructure.

Synopsis

The presentation given by the BIML Director explored how technology and digitalisation are transforming metrology and how metrology is influencing and advancing digital transformation. The presentation also explored how the international Quality Infrastructure is evolving in response to changing industry and consumer trends and expectations.

An overview of the metrology ecosystem and its digital evolution was also provided, which explored



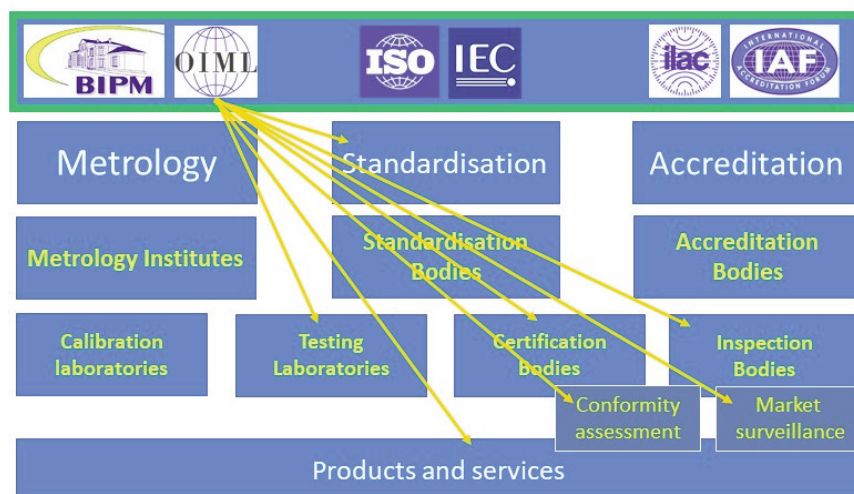


Figure 1: Metrology as part of the Quality Infrastructure

embedded and interoperable networks. Additionally, the presentation described the link between digitalisation, digital transformation and environmental sustainability. In doing so, it referenced how metrology advances the ‘three P’ priorities of People, Planet, and Prosperity of the United Nations Sustainable Development Goals.

What follows is an overview of the presentation delivered to the UNECE Session Panel. It summarises some of the key discussion topics and discusses how metrology could orientate itself when considering digitalisation, environmental sustainability and the Circular Economy. It approaches the topics and associated concepts from a technology-conscious and product-conscious perspective to explore the ways that metrology, digitalisation and environmental sustainability interact to complement and not to compete with each other.

Introduction

The OIML directly contributes to the realisation of the United Nations 2030 Sustainable Development Goals (SDGs) through developing and harmonising international standards on a multilateral basis to reduce Technical Barriers to Trade (TBT). To achieve this, and to realise its objectives, the OIML works collaboratively with many International Organisations and international standard-setting bodies.

Quality Infrastructure (metrology, accreditation, standardisation and conformity assessment) facilitates trade for fairer market access and for the development of safer products and services in a sustainable society. The accelerating proliferation of digital technologies presents both opportunities and challenges. Similarly, Artificial Intelligence may help improve risk assess-

ments and expedite conformity assessment processes, and Enterprise Resource Planning (ERP) tools can help the management of standardisation and accreditation processes. The embedding of technologies into products also has the potential to complicate the testing and analysis of a product’s conformity and safety. Furthermore, technologies not based on internationally recognised standards also have the potential to create TBTs.

Metrology and Quality Infrastructure

Metrology, the science of measurement, both directly contributes to technological advancement and digital transformation, yet it is also influenced by digital transformation and technological advancement. One focus of international metrology is to advance internationally recognised global priority areas through science and effective and appropriate standard development. For example, these include environmental sustainability, food systems, health, inclusivity through digital transformation, and trade by focussing on the three P’s of the SDGs.

Metrology’s place within the Quality Infrastructure is integral. It works closely with Conformity Assessment Bodies (CABs), test laboratories and puts all of this into practice through market surveillance and enforcement (Figure 1).

Technology and a product-conscious perspective

Products and services are often the driving force behind market innovations. Digitalisation enhances these products and services and facilitates institutional,

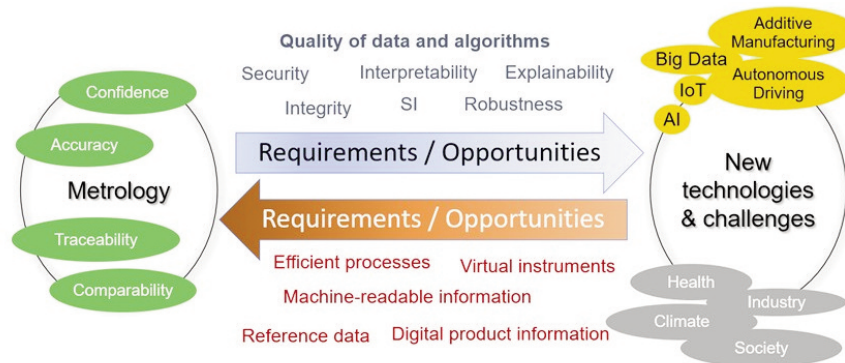


Figure 1 Mutual requirements and opportunities in the interplay of metrology and digital transformation

Source: "Digital Transformation in the Quality Infrastructure - Challenges and Opportunities" – SASCHA EICHSTÄDT, PTB Germany, OIML Bulletin, July 2022

Figure 2: Overview of the current operating environment and context which is impacting on metrology

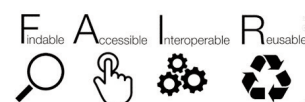
product and service responses to the Circular Economy. Therefore, it is essential that metrology responds to technology and innovation challenges through digitalisation by embedding Circular Economy and sustainability principles. While each industry, and often individual organisations, will have their own digital transformation agendas, it is important not to overlook external innovations and advancements that directly influence and improve the way we operate.

These challenges are depicted in Figure 2, which provides an overview of the current operating environment and context which impacts on metrology including a number of advancements and disruptions to the regulatory, industrial and scientific landscape.

Overlaying this innovative, digitally realised, product-conscious perspective onto metrology and other aspects of the Quality Infrastructure, it can be seen (Figure 3) how the product life-cycle and the instrument often drive the way we need to consider, respond to and implement regulatory strategies to address these challenges and opportunities. If a product-conscious perspective is incorporated when developing documentary standards and technical regulations, it may enable organisations such as the OIML to be more aware, responsive and flexible to technological advancements, societal trends, consumer preferences, shifts in expectations within the operating environment and the Quality Infrastructure and how to appropriately respond to them. This relationship is depicted in Figure 3. Using a product-conscious perspective may assist in contextualising some aspects of digital transformation by focussing future efforts concerning documentary standards, technical regulations, conformity assessment, market surveillance and regulatory approaches at an international and at nation state level.

A framework for a data-rich environment

A carefully considered and constructed framework for operating in a data-rich environment assists the digital transformation of organisations and the broader Quality Infrastructure ecosystem. One such framework is the FAIR (Findable, Accessible, Interoperable and Reusable) framework (Figure 4). The principles of the FAIR framework were referenced in a statement by G20 leaders at the 2016 summit.



The FAIR framework provides clear guidance for the OIML's digital transformation initiatives. This was acknowledged in the signing of the Joint Statement of Intent *On the digital transformation in the international scientific and quality infrastructure* in March 2022 by the OIML. Current signatories to the Joint Statement of Intent include the International Bureau of Weights and Measures (BIPM), the International Commission on Illumination (CIE), the Committee on Data of the ISC (CODATA), the International Electrotechnical Commission (IEC), the International Laboratory Accreditation Cooperation (ILAC), the International Measurement Confederation (IMEKO), the International Science Council (ISC), and the International Organization for Standardization (ISO).

This framework assists documentary standards and technical regulations to incorporate these principles from their inception and in their future revisions. It lays the foundations of how the international Quality Infrastructure organises itself in an intertwined, cross-referenced data-rich landscape.

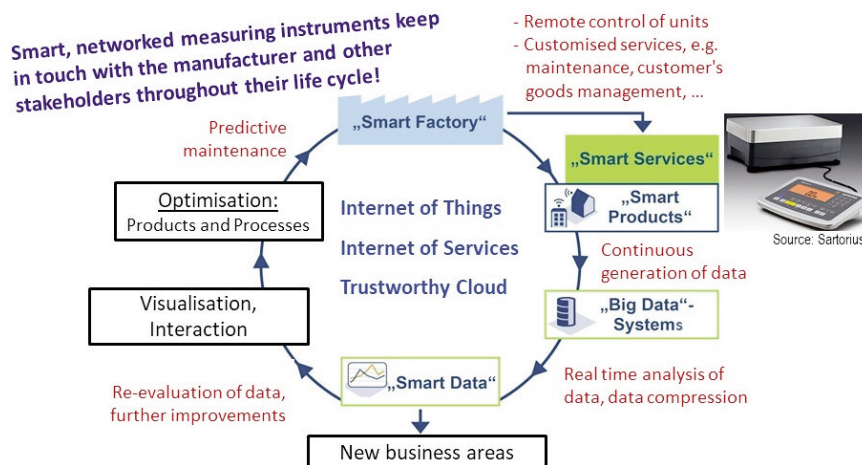


Figure 3: Life cycle of smart, networked instruments

Incorporating the framework's principles and implementing them in an institutionally practical way, not only encourages fairness and openness concerning the use of documentary standards and technical regulations but also establishes a framework and principals regarding documentary standards and their interaction with machines, in machine readable formats for machine actionable activities. Moreover, establishing a clear and transparent framework and incorporating these principles guides the strategic planning and operations across all aspects of the legal metrology landscape and ecosystem.

Furthermore, applying the FAIR principles across the range of institutional frameworks operating within the Quality Infrastructure and, in particular metrology, alters the perspective on how we develop documentary standards and technical regulations and their application. When combined with a product-conscious perspective, as a society involving consumers, manufacturers and researchers, we benefit from a more metrologically robust product and user experience.

This perspective, and specifically how it applies to the legal metrology landscape, is reflected in Figure 5.

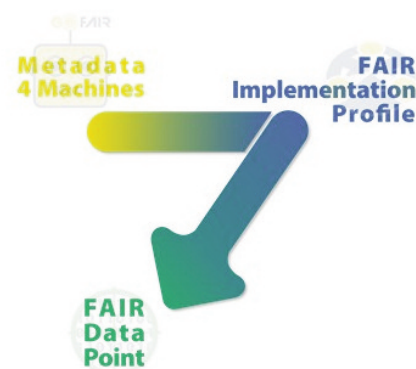


Figure 4: The FAIR (Findable, Accessible, Interoperable and Reusable) framework

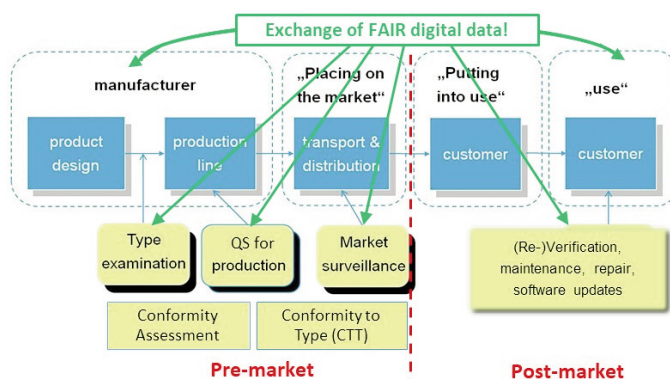


Figure 5: Challenge for legal metrology: Digital transformation of the various processes during the life cycle of a product

Digital transformation and environmental sustainability

It is important to recognise the linkages between advances in digitalisation, metrology and their ability to positively contribute to sustainable development principles and practices. Similarly, it is important not to decouple these somewhat disparate topics as they both complement each other. The transition to elevated levels of digitalisation directly contributes to more efficient, effective, less resource intensive and less carbon intensive activities in the economy.

Putting the product, its design, user, owner, and the technical and regulatory needs and expectations as a central conscious focus is likely to result in better experiences, contributes to conformity and transparency, and can encourage better interaction between industry and regulators.

One example currently being explored is a Digital Certificate of Conformity for measuring instruments.

A Digital Certificate of Conformity has the potential to increase transparency and efficiency which enables faster time to market, and also has the potential to enhance the range of instruments available in economies and to reduce the period of time an instrument is inoperative. A digital twin offers even more possibilities for improvements in efficiency, troubleshooting, and general awareness and transparency.

Digital transformation can directly contribute to sustainability principles by reducing waste, incorporating reusability in new product design, minimising unnecessary repetitive procedures, which are often energy and resource intensive, encouraging the repair of existing instrumentation and machinery and ultimately, where appropriate, the recycling of equipment. The challenge is to ensure that these principles are adopted and embedded as part of quality management systems across industry and manufacturers and for organisations such as the OIML (and other partners in the Quality Infrastructure) to embed and drive such principles and practices. ■



INTERNATIONAL ENGAGEMENT

World Trade Organization Technical Barriers to Trade Agreement and the WTO TBT Committee

16–18 November 2022

Geneva, Switzerland

IAN DUNMILL
BIML Assistant Director

The WTO Technical Barriers to Trade (TBT) Agreement

Technical regulations and standards are important, but they vary from country to country. Having too many different standards makes life difficult for producers and exporters. If the standards are set arbitrarily, they could be used as an excuse for protectionism. Standards are necessary for a range of reasons, from environmental protection, safety, and national security to consumer information. They can help trade, but can also become obstacles to trade. It is therefore important to ensure that standards are genuinely useful, and not arbitrary, or an excuse for protectionism.

The TBT Agreement tries to ensure that technical regulations, standards, and conformity assessment procedures are non-discriminatory and do not create unnecessary obstacles to trade. At the same time, it recognises WTO members' right to implement measures to achieve legitimate policy objectives, such as the protection of human health and safety, or protection of the environment. The TBT Agreement strongly encourages members to base their measures on appropriate international standards as a means of facilitating trade (see insert, Article 2.4). However, unlike the WTO *Agreement on the Application of Sanitary and Phytosanitary Measures* (SPS Agreement), it does not give a list of specific international standard-setting bodies. This places a stronger obligation on WTO members to make use of OIML Recommendations as the basis for their legal metrology regulations than the "moral obligation" in Article VIII of the OIML Convention

(OIML B 1:1968). It is worth noting that the TBT Agreement also says that WTO members shall participate as far as possible in the development of international standards (see insert, Article 2.5).

The TBT Agreement also sets out a code of good practice for both governments and non-governmental or industry bodies to prepare, adopt and apply voluntary standards. Over 200 standards-setting bodies apply the code. Manufacturers and exporters need to know the latest standards in their prospective markets, and to help ensure that this information is made available, all WTO members are required to establish national enquiry points and to keep each other informed through the WTO – around 900 new or revised regulations are notified each year.

The TBT Agreement says that conformity assessment procedures have to be fair and equitable. It discourages any methods that would give domestically produced goods an unfair advantage (see insert, Article 5.4). The Agreement also encourages countries to recognise each other's conformity assessment procedures. Without such recognition, products might have to be tested twice, first by the exporting country and then by the importing country.

Transparency is a cornerstone of the TBT Agreement, and is used to create a predictable trading environment. The approach consists of three core elements:

- notifications;
- establishment of enquiry points; and
- publication requirements.

The WTO has developed a toolkit which contains information on the transparency obligations and procedures, and related work in the Committee, as well as other resources.

The WTO TBT Committee

The WTO TBT Committee meets formally three times each year, as well as holding other informal meetings. Workshops or thematic sessions on topics of interest to members are frequently held in association with the formal meetings. Formal meetings are open to all WTO members and observer governments, and a number of international intergovernmental organisations also participate as observers in the Committee, including the OIML and the BIPM. The work of the TBT Committee involves two broad areas:

- **Review of specific trade concerns (STCs)** – WTO members are required to notify all other members of proposals for changes to their laws, regulations or procedures which might affect trade. Members then raise STCs to find out more about the scope and

implementation of each other's regulations in light of the core TBT obligations. The discussion is mostly in response to notifications about measures in the pipeline, but can also be about the implementation of existing measures. To date, more than 750 STCs have been raised, which can be accessed through the WTO's ePing service (<https://eping.wto.org/>).

- **Strengthening implementation of the TBT Agreement** – WTO members exchange experiences on the implementation of the Agreement with a view to making implementation more effective and efficient. This discussion revolves around generic, cross-cutting themes, including transparency, standards, conformity assessment and good regulatory practice.

The OIML was admitted as an observer to the WTO TBT Committee in November 1997. The BIML tries to attend Committee meetings when possible, and has taken part in two meetings in 2022 since in-person participation has again been possible. At these meetings, all observers may provide a written report to the Committee on current items of their work which are of interest to the Committee. There is also an opportunity to provide a concise oral report on highlights of their work and for discussion between members and observers on any relevant issues.

Reviewing the activities of the TBT Agreement and the TBT Committee

The TBT Committee is mandated to conduct an annual review of activities relating to the implementation and

operation of the TBT Agreement, including notifications, specific trade concerns, technical assistance activities, and TBT related disputes. The latest Annual Review report was circulated in March 2022.

Every three years, WTO members are mandated to review the work of the TBT Committee, taking into consideration changes and new challenges in the area of standards and regulations. The Ninth Triennial Review of the Operation and Implementation of the TBT Agreement was completed at the 10–12 November 2021 meeting of the TBT Committee.

Additionally, over the years the Committee has made many decisions and recommendations intended to facilitate implementation of the TBT Agreement.

For more information

Details of all reviews, decisions and recommendations, as well as the transparency toolkit mentioned above can be found on the *Technical Barriers to Trade* page of the WTO website at

https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm

A useful handbook, *Technical Barriers to Trade - Third Edition* in the WTO Agreements Series is also available from this website. This handbook sets out the key principles of the TBT Agreement and discusses how these have been addressed in recent disputes brought under this Agreement. The publication looks into requirements on transparency, a cornerstone of the TBT Agreement, and describes the mandate, role and work of the TBT Committee. ■



Delegates attending the WTO TBT Committee meeting in November 2022 (Photo: ©WTO)

Technical regulations (Article 2.4)

Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems.

Standards (paragraph F of Annex 3, under “substantive provisions”)

Where international standards exist or their completion is imminent, the standardizing body shall use them, or the relevant parts of them, as a basis for the standards it develops, except where such international standards or relevant parts would be ineffective or inappropriate, for instance, because of an insufficient level of protection or fundamental climatic or geographical factors or fundamental technological problems.

Participation in international standards development (Article 2.6)

With a view to harmonizing technical regulations on as wide a basis as possible, Members shall play a full part, within the limits of their resources, in the preparation by appropriate international standardizing bodies of international standards for products for which they either have adopted, or expect to adopt, technical regulations.

Conformity assessment procedures (Article 5.4)

In cases where a positive assurance is required that products conform with technical regulations or standards, and relevant guides or recommendations issued by international standardizing bodies exist or their completion is imminent, Members shall ensure that central government bodies use them, or the relevant parts of them, as a basis for their conformity assessment procedures, except where, as duly explained upon request, such guides or recommendations or relevant parts are inappropriate for the Members concerned, for, inter alia, such reasons as: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment; fundamental climatic or other geographical factors; fundamental technological or infrastructural problems.



Delegates attending the WTO TBT Committee meeting in November 2022 (Photo: ©WTO)

INTERNATIONAL ENGAGEMENT

9th Annual Meeting of the OECD Partnership of international organisations for effective international rulemaking (IO Partnership)

5–6 December 2022

Paris, France

ANTHONY DONNELLAN
BIML Director

► OECD IO Partnership:

“International organisations (IOs) respond to the specific mandates they were created to address, by developing instruments that promote well-being for all. To continue delivering on their mandate in the midst of global transformations, most IOs have continuously needed to adapt their governance and rulemaking.”



“Countries create and become members of international organisations to serve their global policy needs. The climate crisis, disruptions in food safety, vulnerable energy markets and the persisting Covid-19 pandemic are creating a plethora of policy challenges where IOs are especially crucial, as global experts as well as enablers of collective action.”

The BIML Director, Anthony Donnellan represented to OIML, among 50 other International Organisations at the 9th Annual Meeting of the OECD Partnership of international organisations for effective international rulemaking on 5–6 December 2022.

The OIML was one of the initial members of the IO Partnership and the case study published on the OIML was one of the earliest (of which there are now many) case studies released by the OECD as part of the IO Partnership. The IO Partnership now consists of approximately 50 international organisations located throughout the world to advance understanding, develop better techniques, and share best practice among participants.

Anthony Donnellan has regularly reported on the ongoing strategic and high-priority nature of the work of the OECD IO Partnership for many years. Increasingly, this work is becoming more interconnected, interdependent on other IOs and acts as a guiding and strategic gauge for the OIML as it transforms into becoming a more agile, responsive and consultation-driven IO.

The members of the IO Partnership, including the work undertaken by the BIML for the OIML, worked very hard and orientated themselves strategically throughout the prolonged COVID-19 pandemic to progress a number of matters of importance to IOs. This work has now entered a new biennium work programme which is focused on the key strategic matters of importance to IOs. A summary of the work programme, sourced from the agenda of the Ninth Annual IO Partnership Meeting, is provided below.

Session 1: Working towards common goals with more agile, effective and inclusive international solutions

The IO Partnership has brought IOs together to reflect collectively on the quality of their rulemaking and the need to work collectively, in order to best serve their members. The IO Compendium sets key building blocks for more effective, efficient and transparent international instruments, and showcases the general trends and individual IO efforts in this regard.

Global crises in recent years have confirmed the need for collective action, not only across countries but also across IOs. Many international actors of different natures have set themselves common goals that direct their specific work plans towards broader strategic priorities. High-level objectives such as mitigating and adapting to climate change, supporting a “One Health” approach, or the achievement of sustainable development goals transcend IOs’ specific policy mandates and

create strong incentives for IOs to be more agile, inclusive, and to better evaluate their impact.

The three successive high-level panels will bring together government and IO representatives to discuss how their recent experiences have taught them to develop better international instruments, and what their priorities are going forward to address global goals.

Session 2: Evolving global governance: Breaking siloes for effective results

Global governance has increasingly evolved towards a diverse set of actors. International organisations are created with many different legal natures and governance structures, as visible in the IO Partnership. But many other actors are also playing an increasingly important role on the global scene, be they philanthropic, non-governmental, or business organisations.

This session will include presentations from actors leading coordination initiatives that emerged to address specific policy issues and share the perspective of actors with key roles in global governance, beyond IOs.

Session 3: The multilateral rules-based system in the face of uncertainty

International organisations provide platforms to discuss science and technology, share best practices and common approaches among members, and develop

international instruments. They are usually consensus-based and provide an opportunity to collect evidence and gather expertise on issues of common interest, and influence international rulemaking. While IOs' international nature helps bring countries with different views together, it also makes them vulnerable to global disruptions in geopolitics, economics and innovation, tainting international rulemaking with a certain level of uncertainty.

This session will seek to explore the remedies that can help secure the continuity of a multilateral rules-based system, and help regain trust in international organisations. It will identify scenarios where more co-ordination and well-thought governance frameworks will need to be in place to ensure countries – with the support of existing IOs and in close engagement with public and private international actors – will be well-placed to maintain a rules-based international order protecting citizens and preserving a peaceful, healthy and safe environment for all.

Conclusion

It was a productive Annual Meeting of the OECD IO Partnership, and the OIML looks forward to continued engagement with the OECD, the OECD IO Partnership, and bilaterally with the members of the OECD IO Partnership as priority areas for the OIML's Fourth Pillar - International Engagement for many years to come, which forms the central theme of this edition of the OIML Bulletin. ■



INTERNATIONAL ENGAGEMENT

Brazilian delegation meets with the OIML

16 November 2022

BIML, Paris

ANTHONY DONNELLAN
BIML Director



The International Organization of Legal Metrology (OIML) and Brazil continue to deepen and expand their relationship and collaboration. The BIML Director, Anthony Donnellan (pictured fourth from the right) met with a high-level delegation from INMETRO - Instituto Nacional de Metrologia, Qualidade e Tecnologia, led by Marcos Heleno Guerson de Oliveira Junior, President (pictured third from the right) on 16 November 2022 to discuss a number of strategic matters, including digitalisation and mutual recognition.

The BIML Director, Anthony Donnellan, was scheduled to meet with His Excellency, Mr Endalew Mekonen Alemay, Ethiopian State Minister, Ministry of Trade and Regional Integration (MoTRI) and Mr Getachew Wollel Tiruneh, Ethiopian CIML Member, at the BIML in Paris on 24 January 2023. The meeting has been postponed to 1 February 2023 for logistics reasons, and a short account and photo will therefore be published in the April 2023 OIML Bulletin.

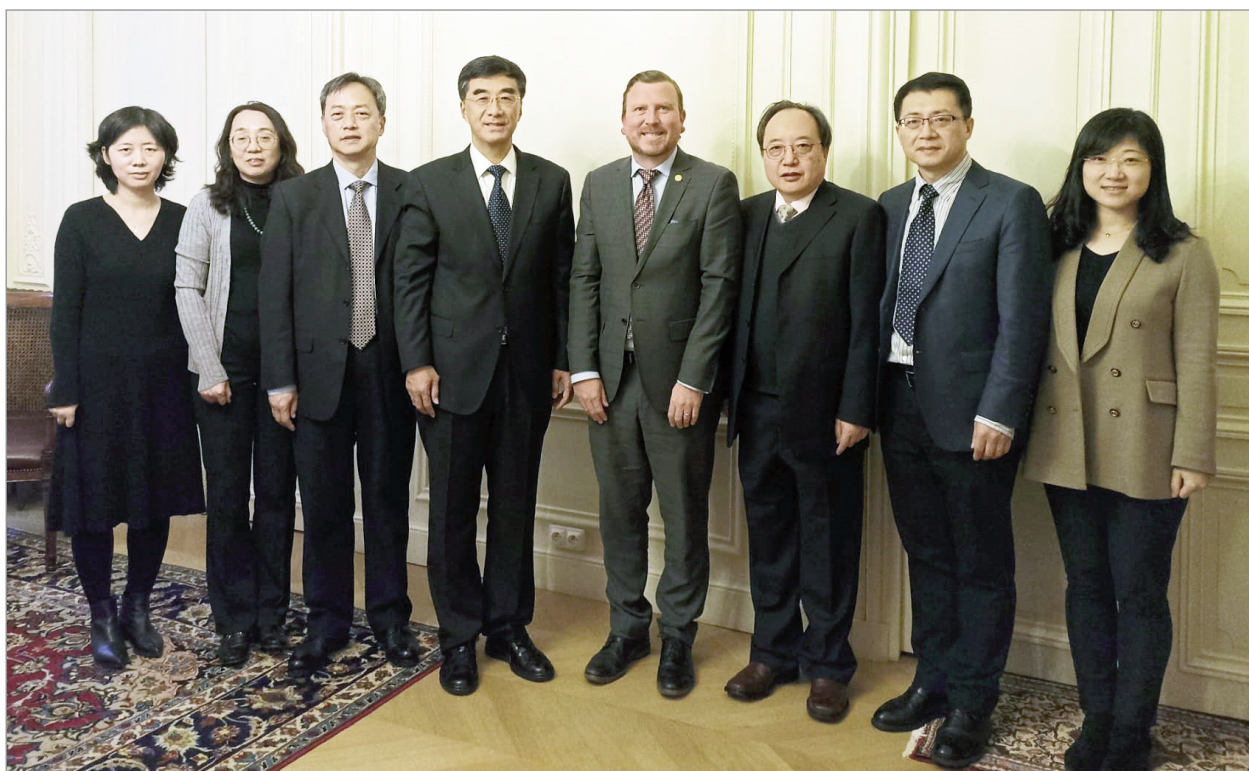
INTERNATIONAL ENGAGEMENT

Delegation from the People's Republic of China meets with the OIML

21 November 2022

BIML, Paris

ANTHONY DONNELLAN
BIML Director



The International Organization of Legal Metrology (OIML) and a high-level delegation from The People's Republic of China, led by Vice Minister Yizhi Qin (pictured fifth from the right) met the BIML Director, Anthony Donnellan (pictured fourth from the right), in Paris on 21 November 2022 to advance a number of strategic matters and to build on the excellent long-standing levels of cooperation and collaboration with the State Administration for Market Regulation (SAMR) and the National Institute of Metrology of China (NIM).



Representatives from The People's Republic of China were elected in October by the CIML at its 57th meeting as the Vice-Chairperson of the OIML CEEMS AG (Advisory Group on Countries and Economies with Emerging Metrology Systems) and the Deputy Chairperson of the OIML DTG (OIML Digitalisation Task Group).

INTERNATIONAL ENGAGEMENT

GULFMET TC Legal Metrology Meeting

22 November 2022

Online

PAUL DIXON
BIML Assistant Director

Introduction

GULFMET is a Regional Metrology Organisation (RMO) established under the auspices of the GCC* Standardization Organization (GSO), bringing together the National Metrology Institutes of the United Arab Emirates, the Kingdom of Bahrain, the Kingdom of Saudi Arabia, the Sultanate of Oman, the State of Qatar and the State of Kuwait.

GULFMET assumes a coordinating role for legal metrology in order to facilitate intra-regional and international trade, to ensure consumer protection, to safeguard health and the environment, and to maintain contacts with the OIML.

GULFMET TC Legal Metrology

As part of its organisational structure GULFMET has a number of Technical Committees, with each one having responsibility for a different aspect of metrology. One of these Technical Committees is the Technical Committee Legal Metrology, sometimes also referred to as "TC Legal".

TC Legal Metrology was established in 2020 and the OIML is represented by Mr Paul Dixon, BIML Assistant Director. Mr Dixon participated in the Seventh TC Legal Metrology Meeting which was held online on 22 November 2022, and he provided an update on OIML activities including feedback from the 57th CIML Meeting.

At the meeting there was an update on the latest developments regarding the revision and updating of the metrological guidelines, a discussion on the development of a GCC Certification Scheme for the type approval of measuring instruments, and a discussion on the training needs for the region.

Future activities

Following the discussion on training needs, an outcome from the Seventh TC Legal Metrology meeting was the agreement for the OIML to run a Workshop on the OIML Certification System and OIML D 1 *National metrology systems – Developing the institutional and legislative framework* for GULFMET in February 2023.

The OIML is grateful to GULFMET for being given the opportunity to participate in GULFMET TC Legal Metrology meetings which provide an excellent opportunity to support GULFMET with their legal metrology requirements and to provide GULFMET with regular updates on OIML activities. ■



* States of the Cooperation Council for the Arab States of the Gulf (GCC)

World Metrology Day



Instituto
Nacional
de Tecnología
Industrial



**Measurements supporting
the global food system**

Bureau
International des
Poids et
Mesures



20 May 2023
www.worldmetrologyday.org

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Measurements supporting the global food system

Release:

May 20 is World Metrology Day, commemorating the anniversary of the signing of the Metre Convention in 1875. This treaty provides the basis for a worldwide coherent measurement system that underpins scientific discovery and innovation, industrial manufacturing and international trade, as well as the improvement of the quality of life and the protection of the global environment.

The theme for World Metrology Day 2023 is **Measurements supporting the global food system**. This theme was chosen because of the increasing challenges of climate change, and global distribution of food in a world whose population reached 8 billion at the end of 2022.

Across the world, national metrology institutes continually advance measurement science by developing and validating new measurement techniques at the necessary level of sophistication. The national metrology institutes participate in measurement comparisons coordinated by the *Bureau International des Poids et Mesures* (BIPM) to ensure the reliability of measurement results worldwide.

The *International Organization of Legal Metrology* (OIML) develops International Recommendations, which aim to align and harmonize requirements worldwide in many fields. The OIML also operates the OIML Certification System (OIML-CS) which facilitates international acceptance and global trade of regulated measuring instruments.

These international metrology systems provide the necessary assurance and confidence that measurements are accurate, providing a sound basis for global trade today and helping us to prepare for the challenges of tomorrow.

World Metrology Day recognizes and celebrates the contribution of all the people that work in intergovernmental and national metrology organizations and institutes throughout the year.

Further information, including a message from the Directors, posters, and a list of events, is available at www.worldmetrologyday.org – Contact: wmd@worldmetrologyday.org

Notes for Editors:

World Metrology Day is an annual event during which more than 80 countries celebrate the impact of measurement on our daily lives.

This date was chosen in recognition of the signing of the Metre Convention on 20 May 1875, the beginning of formal international collaboration in metrology. Each year World Metrology Day is organized and celebrated jointly by the International Bureau of Weights and Measures (BIPM) and the International Organization of Legal Metrology (OIML) with the participation of the national organizations responsible for metrology.

The international metrology community which works to ensure that accurate measurements can be made across the world endeavours to raise awareness each World Metrology Day through a poster campaign and web site. Previous themes have included topics such as measurements for the global energy challenge, for safety, for innovation, and measurements in sport, the environment, medicine and trade.

About the BIPM

The signing of the Metre Convention in 1875 created the BIPM and for the first time formalized international cooperation in metrology. The Convention established the International Bureau of Weights and Measures and laid the foundations for worldwide uniformity of measurement in all aspects of our endeavours, historically focusing on and assisting industry and trade, but today just as vital as we tackle the grand challenges of the 21st Century such as climate change, health, and energy. The BIPM undertakes scientific work at the highest level on a selected set of physical and chemical quantities. The BIPM is the hub of a worldwide network of national metrology institutes (NMIs) which continue to realize and disseminate the chain of traceability to the SI into national accredited laboratories and industry.

About the OIML

In 1955 the International Organization of Legal Metrology (OIML) was established as an Intergovernmental Treaty Organization in order to promote the global harmonization of legal metrology procedures with the Bureau International de Métrologie Légale (BIML) as the Secretariat and Headquarters of the OIML. Since that time, the OIML has developed a worldwide technical structure whose primary aim is to harmonize the regulations and metrological controls applied by the national metrological services, or related organizations.

A message from the Directors of the BIPM and the BIMP



Dr Martin Milton
Director of the BIPM



Mr Anthony Donnellan
Director of the BIMP

World Metrology Day - 20 May 2023 Measurements supporting the global food system

Food is a major concern for every one of us. Providing access to safe and affordable food remains one of the major challenges for governments worldwide. This is also the goal of farmers and food producers who trade products through distributors and retailers to consumers at international, national and local levels. In 2021, this trade was worth 22 trillion USD and accounted for approximately 20 % of all global trade.

To trade internationally and to access markets for high-value products, producers must be able to show that they meet food standards. Additionally, governments need to ensure safety and fair trade especially in local markets for food. All of this is supported by reliable measurements of the quantity and quality of the primary and processed food products involved.

Our focus for World Metrology Day in 2023 is on the many measurement challenges that must be addressed to make the global food system work. For example:

- the quantity of food bought and sold is measured according to its **mass** or **volume**. These measurements range from the large volumes of grain and wheat traded internationally down to rapid online weighing measurements to ensure pre-packaged goods are labelled correctly;
- the effective storage and packaging of food depends on the accurate control of the **temperature** and **humidity** of its storage environment;
- the quality and authenticity of food is determined by measuring its **chemical composition**. This requires measurements to ensure that it contains the stated levels of vitamins through to measurements of its **isotopic composition** to validate the origin of high-value foods such as honey or wine; and
- the safety of food is ensured by careful measurement to detect the presence of **chemical contamination** such as pesticide residues and heavy metals or **biological contamination** such as mycotoxins.

It is now recognised that the depletion of natural resources and the impact of climate change pose major challenges to the global food system such that the goal of a world with zero hunger and universal access to clean water was included amongst the Sustainable Development Goals set by the United Nations.

We again look forward to celebrating World Metrology Day with our stakeholders around the world.

OIML Certification System (OIML-CS)



Introduction

The OIML-CS is a system for issuing, registering and using OIML Certificates and their associated OIML type evaluation reports for types of measuring instruments (including families of measuring instruments, modules, or families of modules), based on the requirements of OIML Recommendations.

The OIML-CS comprises two Schemes: Scheme A and Scheme B. Competence of the OIML Issuing Authorities and their Test Laboratories is demonstrated through self-declaration under Scheme B and accreditation or peer assessment under Scheme A.

The aim of the OIML-CS is to facilitate, accelerate and harmonize the work of national and regional bodies that are responsible for type evaluation and approval of measuring instruments subject to legal metrological control. In the same way, instrument manufacturers, who are required to obtain type approval in some countries in which they wish to sell their products, should benefit from the OIML-CS as it will provide evidence that their instrument type complies with the requirements of the relevant OIML Recommendation(s).

It is a voluntary system and OIML Member States and Corresponding Members are free to participate. Participating in the OIML-CS commits, in principle, the signatories to abide by the rules of the OIML-CS that are established in OIML B 18:2018 *Framework for the OIML Certification System (OIML-CS)*. Signatories voluntarily accept and utilize OIML type evaluation and test reports, when associated with an OIML Certificate issued by an OIML Issuing Authority, for type approval or recognition in their national or regional metrological controls.

The OIML-CS was launched on 1 January 2018 and has replaced the former OIML Basic Certificate System and the OIML Mutual Acceptance Arrangement (MAA).

OIML certificates

OIML certificates issued under Scheme A and Scheme B can be downloaded from the database on the OIML website at https://www.oiml.org/en/oiml-cs/certificat_view.

The database also includes certificates issued under the former OIML Basic Certificate System and the MAA. Although these two systems are no longer in operation, the certificates remain valid.

OIML Issuing Authorities, Utilizers and Associates

A summary of the approved OIML Issuing Authorities is published on the next page, followed by a summary of those Utilizers and Associates that have declared that they will accept OIML certificates and/or OIML type evaluation reports as the basis for a national or regional approval.

Transition update

OIML R 150:2020 *Continuous totalizing automatic weighing instruments of the arched chute type* transitioned from Scheme B to Scheme A on 1 January 2023. This means that all of the Recommendations included in the scope of the OIML-CS are now in Scheme A.

Upcoming OIML-CS events

The Eighth OIML-CS Management Committee Meeting will be held at METAS, Bern-Wabern, Switzerland on 16–17 March 2023. Meetings of the Review Committee, Maintenance Group, Promotion and Awareness Raising Working Group, and Assessment Requirements Working Group will also be held on the preceding day.

More information

For enquiries regarding the OIML-CS, please contact the OIML-CS Executive Secretary Mr Paul Dixon (executive.secretary@oiml.org). Visit the OIML website:

<https://www.oiml.org/en/oiml-cs>

OIML Certification System (OIML-CS)

List of OIML Issuing Authorities and their scopes

Updated: 2023-01-17



*The list of OIML Issuing Authorities is published in each issue of the OIML Bulletin
and can be downloaded at www.oiml.org/oiml-cs/oiml-issuing-authorities*

		R 21:2007	R 46:2012	R 49:2006	R 49:2013	R 50:2014	R 51:2006	R 60:2000	R 60:2017	R 61:2004	R 61:2017	R 75:2002	R 76:1992	R 76:2006	R 85:2008	R 99:2008	R 106:2011	R 107:2007	R 117:1995	R 117:2007	R 117:2019	R 126:1998	R 126:2021	R 129:2000	R 134:2006	R 137:2012	R 139:2014	R 139:2018
AU1	National Measurement Institute Australia (NMLA)					■							■	■														
CH1	Federal Institute of Metrology (METAS)							■						■			■								■			
CN2	National Institute of Metrology, China (NIM)						■	■	■	■	■		■	■														
CZ1	Czech Metrology Institute (CMI)				■		■				■			■	■					■	■				■	■		■
DE1	Physikalisch-Technische Bundesanstalt (PTB)				■		■	■	■	■		■		■														
DK2	FORCE Certification A/S				■	■	■	■	■	■	■			■			■	■						■	■	■	■	■
FR2	Laboratoire National de Métrologie et d'Essais (LNE)			■	■		■	■	■					■								■	■					
GB1	Office for Product Safety and Standards (OPSS) (formerly NMO)				■		■	■	■				■	■						■	■							
JP1	NMIJ/AIST							■	■				■	■					■	■	■							
NL1	NMI Certin B.V.	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■		■	■	■	■	■	■
SE1	Research Institutes of Sweden (RISE)						■	■	■	■	■			■	■				■	■	■							
SK1	Slovak Legal Metrology (SLM)			■	■									■														

OIML Certification System (OIML-CS)

List of Utilizers, Associates and their scopes

Updated: 2023-01-17



The list of Utilizer and Associate scopes is published in each issue of the OIML Bulletin
and can be downloaded at www.oiml.org/oiml-cs/utilizers-and-associates

1 = Scheme A only
2 = Scheme A and MAA
3 = Scheme A and B
4 = Scheme A, B and MAA
5 = Scheme B only

		R 21:2007	R 35:2007	R 46:2012	R 49:2006	R 49:2013	R 50:2014	R 51:2006	R 58:1998	R 59:2016	R 60:2000	R 60:2017	R 61:2004	R 61:2017	R 75:2002	R 76:1992	R 76:2006	R 81:1998	R 85:2008	R 88:1998	R 93:1999	R 99:2008	R 102:1992	R 104:1993	R 106:2011
AU	National Measurement Institute, Australia (NMIA)				1	1	1				1					1	1								
BE	Federal Public Service Economy	3		3		3	3	3			1		3		3		1		3			3			3
CA	Measurement Canada										2	1			1		2								
CH	Federal Institute of Metrology (METAS)			1	2	2	1	1			2		1		1		2								1
CN	State Administration for Market Regulation (SAMR)							1			2	1	1	1		2	2								
CO	Superintendencia de Industria y Comercio (SIC)	3		3	4	4	3	3			2		3		3	2	2		3			3			3
CU	Oficina Nacional de Normalización (NC)	3	3	1		1	3	1	3	3	1	1	3	3	3		1	3	3	3	3	3	3	3	3
CZ	Czech Metrology Institute (CMI)					1		1						1			1		1						
DE	Physikalisch-Technische Bundesanstalt (PTB)	5		3	3	4	3	3			2		3		3		2					5			1
DK	FORCE Certification A/S				2	2	1	1			2	1	1	1			2								1
FR	Laboratoire National de Métrologie et d'Essais (LNE)	1		1	1	1	1	1			1		1		1	1	1		1			1			1
GB	Office for Product Safety and Standards (OPSS) (formerly NMO)	3				4	3	3			2	1	3			1	1		3						3
IN	Legal Metrology Division, Department of Consumer Affairs	3		3		4	3	3			2		3		3		2		3						1
IR	Iran National Standards Organization (INSO)				4	4					2	1				2	2								
JP	NMIJ/AIST										2	1				2	2								
KE	Weights and Measures Department		3	3	4	4		3			4	4	3	3		4	4		3						3
KH	National Metrology Centre (NMC)	3		3	3	3	3	3			1		3		3	1	1		3			3			3
KI	Ministry of Commerce, Industry and Cooperatives	5	5	5	1	1	5	1		5	1	1	5	5	5	1	1	5	5						5
KR	Korea Testing Certification (KTC)															2	2								
LV	LNMC Ltd. Metrology Bureau																								
NA	Namibian Standards Institution			3	4	4	3	3			2		3			2	2		3						3
NL	NMI Certin B.V.	3		3	3	4	3	3			2	1	3	3	3	1	2		3			3			3
NZ	Trading Standards (Ministry of Business, Innovation and Employment) (MBIE)				4	4	3	3			2					2	2		3						3
PH	National Metrology Laboratory	3	3	3		3				3							3		3			3			3
RU	VNIIMS																								
RW	Rwanda Standards Board	3	3	3	3	3		3	3	3	1	1	3	3		1	1					3	3	3	3
SA	SASO (Saudi Standards, Metrology and Quality Organization)			3		1						1				1									
SE	RISE Research Institutes of Sweden AB							3			2	1	3				2		3						
SK	Slovak Legal Metrology (SLM)				2	2											2								
TN	National Agency of Metrology (ANM)	3		3	2	2	3	3			2		3				2		3			3			3
UG	Uganda National Bureau of Standards (UNBS)			3	1	3					1	1				1	1								
US	National Conference on Weights and Measures (NCWM)										2														
ZA	NRCS: Legal Metrology				3	3		3			1					1	1		3						3
ZM	Zambia Metrology Agency	3		3	3	3	3	3			1		3		3	1	1		3			3			3

OIML Certification System (OIML-CS)

List of Utilizers, Associates and their scopes (Cont'd)

Updated: 2023-01-17



The list of Utilizer and Associate scopes is published in each issue of the OIML Bulletin
and can be downloaded at www.oiml.org/oiml-cs/utilizers-and-associates

1 = Scheme A only
2 = Scheme A and MAA
3 = Scheme A and B
4 = Scheme A, B and MAA
5 = Scheme B only

		R 107:2007	R 110:1994	R 117:1995	R 117:2007	R 117:2019	R 122:1996	R 126:1998	R 126:2021	R 128:2000	R 128:2000	R 128:2020	R 133:2002	R 134:2006	R 136:2004	R 137:2012	R 139:2014	R 139:2018	R 143:2009	R 144:2013	R 145:2015	R 146:2016	R 148:2020	R 149:2020	R 150:2020
AU	National Measurement Institute, Australia (NMI)																								
BE	Federal Public Service Economy	3			3						3					3	3								
CA	Measurement Canada																								
CH	Federal Institute of Metrology (METAS)	1						1		1				1		1									
CN	State Administration for Market Regulation (SAMR)																								
CO	Superintendencia de Industria y Comercio (SIC)	3		3	3			3		3				3		3	3								
CU	Oficina Nacional de Normalización (NC)	3	3		3		3	3		3	3		3	3	3	3	3	3	3	3	3	3			
CZ	Czech Metrology Institute (CMI)				1	1								1		1		1							
DE	Physikalisch-Technische Bundesanstalt (PTB)	3			3	1				3				1	5	3									
DK	FORCE Certification A/S	1			1	1				1	1		3		1	1	1								
FR	Laboratoire National de Métrologie et d'Essais (LNE)	1			1			1		1			1		1	1									
GB	Office for Product Safety and Standards (OPSS) (formerly NMO)	3		3	3	3				3			3												
IN	Legal Metrology Division, Department of Consumer Affairs	3			3					3			1		3	3									
IR	Iran National Standards Organization (INSO)																								
JP	NMI/AIST			1	1	1																			
KE	Weights and Measures Department			3	3			3						3	3	3	3	3							
KH	National Metrology Centre (NMC)	3		3	3			3		3				3		3	3								
KI	Ministry of Commerce, Industry and Cooperatives			5	1	1							5	5		5	5	5							
KR	Korea Testing Certification (KTC)																								
LV	LNMC Ltd. Metrology Bureau							3						3											
NA	Namibian Standards Institution	3		3	3			3		3				3											
NL	NMI Certin B.V.	3		3	3	1		3		3				3		3	3	3							
NZ	Trading Standards (Ministry of Business, Innovation and Employment) (MBIE)	3		3	3					3				3											
PH	National Metrology Laboratory					3			3					3									3	3	
RU	VNIIMS			3	3																				
RW	Rwanda Standards Board		3	3	3		3	3		3		3	3			3			3	3		3			
SA	SASO (Saudi Standards, Metrology and Quality Organization)					3																			
SE	RISE Research Institutes of Sweden AB			3	3																				
SK	Slovak Legal Metrology (SLM)																								
TN	National Agency of Metrology (ANM)	3		3	3			3		3				3		3	3								
UG	Uganda National Bureau of Standards (UNBS)			1	1	1								3		3									
US	National Conference on Weights and Measures (NCWM)																								
ZA	NRCS: Legal Metrology	3		3	3			3		3				3		3	3								
ZM	Zambia Metrology Agency	3		3	3			3		3				3		3	3								

ICW INTERNATIONAL
CONFERENCE
OF WEIGHING

WEIGHING IN A GLOBAL DIGITAL WORLD!

24.–26. April 2023
Hotel Hafen Hamburg,
Germany



ICW

INTERNATIONAL
CONFERENCE
OF WEIGHING

The first International Conference of Weighing (ICW) will take place from 24 to 26 April 2023 in Hamburg, Germany

Hosted by CECIP, the European Weighing Industry Association, the ICW is a three-day event that proposes state-of-the-art presentations from a wide range of leading representatives from the weighing industry. The Conference will facilitate networking with stakeholders from all over the world, and is organised by a partnership of weighing industry associations from Argentina, Australia, Brazil, China, Europe, Japan and the Republic of Korea, together with the International Organization of Legal Metrology (OIML) and the International Bureau of Weights and Measures (BIPM).

The programme will be of interest to all stakeholders in the weighing industry. It will include presentations on **legal, scientific, and applied metrology** and there will be a wide range of discussions and plenary sessions with senior executives from national metrology institutes and major weighing instrument manufacturers.

The presentations and discussions will focus on the theme *Weighing in a Global Digital World*. There will also be a social programme with a welcome reception, gala dinner, and a technical visit to the Airbus factory in Hamburg. The full programme is a combination of opportu-

nities to listen to the latest developments in weighing, and also network with colleagues. The preliminary programme can be found on the conference website and a final programme will be available soon.

Registration is now open and all stakeholders in the weighing industry may register via the conference website: www.weighingconference.com. More information on the venue, fees, sponsoring options and programme is also available there. If you have any questions or comments, please do not hesitate to contact the Organising Committee.

We look forward to welcoming you at the first ICW

Partners



OIML
International Organization
of Legal Metrology



CECIP
European weighing
industry association



CAFIPEM
Chamber of Manufacturers
of Weighing and Measuring Instruments
Argentina



CWIA
China Weighing
Instrument Association



JMIF
Japan Measuring
Instrument Federation



KASTO
Korea Association of
Standards & Testing Organization

Associated partners



BIPM
Bureau International
des Poids et Mesures



REMESP
Metrological Network of the State
of São Paulo from Brazil



WIAA
Weighing Industry Association
of Australia

Associations interested in joining the partnership are always welcome to contact CECIP (info@cecip.eu)

21st INTERNATIONAL METROLOGY CONGRESS

CIM 2023

07
10
MARCH
LYON
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INNOVATION

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Where measurement meets innovation: **The International Metrology Congress** **CIM2023 – Limitless metrology at your fingertips**

Introduction and structure

The Congrès International de Métrologie (CIM) is the one event where metrology meets science, industry and Quality Infrastructure bodies. It promotes the development of solutions to respond to global key challenges, especially by ensuring that we can trust in measurements.

The Congress will take place under three key themes: **Industry 4.0**, **Health**, and **Climate Challenges**. It will include 200 conferences divided up into technical sessions, poster presentations, and Round Tables.

From the Industry 4.0 transformation

The CIM2023 programme will highlight cutting-edge science and development in metrology for Industry 4.0. Two sessions will be dedicated to digitalization and one to machine learning and AI. The sessions will cover topics such as software tools for Digital Calibration Certificates, assessment of Artificial Intelligence against regulations, metrological characterization of AI in health, sensor networks in Smart Cities, virtual sensors, and virtual experiments. Two Round Tables will complete the programme, dealing with *The impact of metrology in digital transformation* and *Offline to inline measurements within Industry 4.0*.

To tackle the Climate challenges

Looking at Climate Challenges, the CIM2023 programme is composed of two Round Tables:

- *Can metrology keep up with hydrogen revolution*, and
- *Metrology in the loop of the circular economy*.

The first Round Table will focus on the development of measurements and standards to analyze the quality of hydrogen for fuel cell vehicles. It will also look at the provision of traceability for flow metering and the demonstration of compliance with legal metrology requirements for the type approval of hydrogen refueling stations.

The second Round Table will tackle the following questions:

- How can metrology help to achieve compliance with the Water Framework Directive requirements?
- What are the related European regulations?
- How is metrology a relevant technical and scientific discipline for monitoring endocrine disruptors, drugs, and microplastics in water?
- How can metrology support the development of even more accurate methodologies?

In addition, a gas analysis session is planned in order to consider topics such as the remote sampling technique for atmospheric pollutants, a combination of different methods for impurities measurement in hydrogen production, and storage of reference materials for gaseous mixtures.

And more!

The CIM2023 programme will also cover health challenges through the Round Table *Metrology challenges in medical measurements: detection, diagnosis and digitalization* and two conference sessions on biology and quality, and accreditation. The Round Table will focus on:

- How do we coordinate the promotion of the benefits of metrology in medical measurements?
- What challenges will the sector face in the future?
- Where should metrologists be focusing their efforts?

The biology session will address topics around milk protein allergens quantification, the effects of particles on lung cells, and challenges in intracellular delivery.

In addition, the Congress aims to present recent developments and methods on fundamental subjects with sessions dedicated to mechanics, thermometry and hygrometry, dimensional, RF or AC/DC electricity, uncertainties, and others. For this 21st edition, several sessions will be dedicated to new technologies: nanotechnologies, quantum technologies, and a special focus on the ELENA project which has the objective of establishing a European metrology infrastructure for the realization of electrical measurement on the nano-scale. ■

Promotion of the OIML Bulletin: Become a Mentor



The OIML Bulletin is one, if not the only, international publication dedicated to legal metrology topics.

In accordance with CIML Resolutions 2019/30 and 2020/21, there is a clear desire for the Bulletin to be an attractive publication for legal metrology worldwide, and for it to be an excellent advertisement for our Organisation.

This can be achieved through long-term planning of the future editions and identification of key topics of high interest, for instance, legal control of measuring instruments in the fields of energy, health and the environment, where important aspects such as new technology, legal requirements, or test/verification procedures will be addressed.

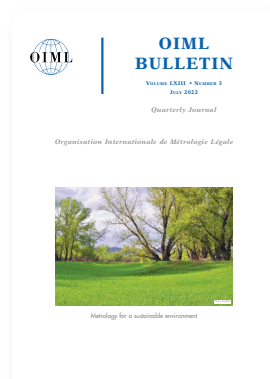
In addition, support is sought from CIML Members and Corresponding Member Representatives who are ready to take on the responsibility of acting as “**Mentors**” for certain key topics / editions and technical articles. These are not necessarily expected to be written by the “**Mentors**” themselves, but by experts that a “**Mentor**” has identified and contacted.

In order to identify key topics of significant interest and “**Mentors**” to lead them, it was proposed by the CIML President that the BIML prepares, and makes publicly available on the OIML website, a plan for the upcoming eight to ten editions of the Bulletin.

The table on the following page is intended to be “dynamic”, i.e. proposed key topics may be moved to other editions depending on available “**Mentors**” and authors for technical articles. The table can also be found at www.oiml.org/en/publications/bulletin/future-editions.

All CIML Members and Corresponding Member Representatives are encouraged to support the OIML Bulletin, to share their legal metrology experiences with the legal metrology community worldwide, and to take responsibility either as a “**Mentor**” for one of the next editions of the Bulletin, or by promoting it at TC/SC/Project Group meetings, RLMO meetings, CEEMS AG meetings, and other opportunities.

CIML Members and Corresponding Member Representatives who would like to be a “**Mentor**” for a specific edition / key topic, or who would like to suggest that a new key topic be added to the list, are asked to contact the BIML (chris.pulham@oiml.org).



Edition	General key topic	Mentor	Proposed article submissions
January 2023	The fourth OIML pillar - International Engagement	BIML	<ul style="list-style-type: none"> 57th CIML Meeting: Summary Reports, Reports by the CIML President and the BIML Director, Resolutions, Medals, Letters of Appreciation, CEEEMS Award OIML presentations to the CGPM, SIM, UNECE WP6 and the OECD IO Partnership
April 2023	Feature on Regional Legal Metrology Organisations (RLMOs) + Prepackages / Statistical control	Dr Charles Ehrlich RLMO RT Chair	<ul style="list-style-type: none"> TC 6 Prepackage control template Highlights of the status of legal metrology systems in the various Regions Information on prepackaging in the various Regions Type approval in the various Regions Prepackaging in the various Regions
July 2023	Renewable energy/energy efficiency	Mr Yizhi Qin CIML Member P.R. China	<ul style="list-style-type: none"> E.g. hydrogen measurement, smart meters, electric vehicle supply equipment (EVSE), etc.
Future editions	International, National and Regional Metrology Systems		<ul style="list-style-type: none"> Report on the OTE (July 2023) in Bad Reichenhall (DE) MID, fit for purpose? European, American and Asia-Pacific approaches to metrology systems OIML D 1 and its relevance to national legal metrology legislation OIML-BIPM joint D 1 project
	Legal metrology compliance and enforcement		<ul style="list-style-type: none"> Ways legal metrology legislation is enforced in various OIML Member economies, sanctions and other information
	Intellectual property		<ul style="list-style-type: none"> Role of patents in legal metrology

2022-12-01

info

The OIML is pleased to welcome the following new

■ CIML Members

■ Republic of Korea:

Dr Jinseok Bae

■ Morocco:

Mr Rachid Sarrakh

■ Zambia:

Mr Humphrey Nkoben

■ India:

Mr Ashutosh Agarwal

■ OIML meetings

16-17 March 2023

Eighth OIML-CS Management Committee Meeting

METAS, Bern-Wabern, Switzerland

15-19 October 2023

58th CIML Meeting

Chiang Mai, Thailand

■ Committee Drafts

Received by the BIML, 2022.11 – 2023.01

Revision of OIML R 46:2012: <i>Electrical Energy Meters - Alternating Current (a.c.) - Parts 1, 2, 3 and 4</i>	1 CD	TC 12/p 1	AU	2022-12-20
Revision of OIML R 142:2008: <i>Automated refractometers - Parts 1 and 2</i>	1 CD	TC 17/SC 2/p 4	IR	2022-12-19
Revision of OIML B 6-1 and -2: <i>Directives for OIML technical work</i>	1 CD	BIML/SC 3/p 2	BIML	2022-12-12
Revision of OIML R 49:2013: Water meters intended for the metering of cold potable water and hot water - Parts 1 and 2	1 CD	TC 8/SC 5	UK	2022-11-19

www.worldmetrologyday.org

World Metrology Day Website

2023 Theme: Measurements supporting the global food system



Bulletin online

**Download the OIML Bulletin
free of charge**

www.oiml.org/en/publications/bulletin



OIML BULLETIN

VOLUME LXIV • NUMBER 1
JANUARY 2023

Quarterly Journal

Organisation Internationale de Métrologie Légale



The Fourth Pillar of the OIML:
International engagement

Call for papers

OIML Members

RLMOs

Liaison Institutions

Manufacturers' Associations

Consumers' & Users' Groups, etc.



OIML BULLETIN

VOLUME LXIII • NUMBER 4
OCTOBER 2022

Quarterly Journal

Organisation Internationale de Métrologie Légale



Developing metrology systems: Adapting to change

- Technical articles on legal metrology related subjects
- Features on metrology in your country
- Accounts of Seminars, Meetings, Conferences
- Announcements of forthcoming events, etc.

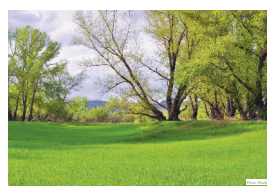


OIML BULLETIN

VOLUME LXIII • NUMBER 3
JULY 2022

Quarterly Journal

Organisation Internationale de Métrologie Légale



Metrology for a sustainable environment

The **OIML Bulletin** is a forum for the publication of technical papers and diverse articles addressing metrological advances in trade, health, the environment and safety - fields in which the credibility of measurement remains a challenging priority. The Editors of the Bulletin encourage the submission of articles covering topics such as national, regional and international activities in legal metrology and related fields, evaluation procedures, accreditation and certification, and measuring techniques and instrumentation. Authors are requested to submit:

- a titled, typed manuscript in Word or WordPerfect either on disk or (preferably) by e-mail;
- the paper originals of any relevant photos, illustrations, diagrams, etc.;
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