



# **Forum: Metrology – Trade Facilitator**

*25 October 2004, Berlin, Germany*

## **POSTERS**

**Offers of support**





**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Asia-Pacific Legal Metrology Forum**

**What can be offered:**

**Seminar and Training Courses in Legal Metrology**

**Brief explanation of the program**

This support program is to promote seminar and training courses that are urgent and prioritized for developing economies in the APEC region from the standpoint of technical trade facilitation in Legal Metrology. There are many demands for capacity building in technical competence concerning reliability of values listed on labels and consequently for legally controlled measurements such as weighing instruments. There are also demands in energy trade and consumption control such as fuel dispensers, and electricity meters. This program started from the year of 2004 with the aid of the APEC-TILF fund and is expected to continue several years.

**Plan for 2005**

In the year 2005, there are proposed four courses of seminar and training for mainly APEC member economies to build their capacities of the legislative and technical competences in verification, calibration, and certification of Measuring Instruments under legal control. We are targeting on prioritized specific fields in this program, such as:

1. Pre-packaged Goods; Seminar for acquiring newest information of other region and international rule making.
2. Non-automatic Weighing Instruments; Training for acquiring technical competence and skill in testing and verification procedures.
3. Fuel Dispensers; Training for acquiring technical competence and skill in testing and verification procedures.
4. Electricity Meters; Seminar for acquiring ways of how to harmonize to the International Regulation.

**Expected contributors and participants**

Pilots (Co-sponsors): Japan, New Zealand, Australia, Canada

Hosts (Co-sponsors): Malaysia, Thailand, Vietnam, PR. China

Participants (expected candidates): all APEC economies, especially nominated members, Thailand, Chinese Taipei, Vietnam, PR China, Indonesia, Korea, Hong Kong China, Singapore, Malaysia, Brunei, Russia, Australia, Canada, Japan and others.

**Methodology of the program**

The seminar and training courses will be arranged in such a way by selecting four factors of each training program so as to achieve the largest benefits for member economies. The factors are as follows:

1. Technical Contents; being mentioned above, Pre-packaged goods, NAWI, Fuel Dispensers, and Electricity Meters.
2. Host; which provides facilities, place of the training.
3. Instructors; who provide technical detailed lecture, technical skill, and information.
4. Participants; who need such technical competence and support for participation.

The APEC-TILF funding will be used mainly to support the travel expenses to attend the seminar, and to dispatch instructors to the training courses. The hosting economy should provide facilities and services to host all the participants. The APLMF will provide technical materials such as technical manuals, demonstration video, and necessary documentations. The APLMF will also support to dispatch specialists from private sectors if necessary.

**2005 Plans of Seminar and Training**

Course title	Duration	Host	Source of Trainers	Timing
<b>Prepackaged Goods</b> B. Implementation of legislation	2-3 days	TBA	New Zealand	Early 2006
<b>Fuel Dispensers</b> A. Verification - not LPG B. Verification of LPG Dispensers	5 days 6 days	Thailand Thailand	Australia Australia	August 2005 August 2005
<b>Electricity Meters</b> B. Implementation of legislation	2-3 days	TBA	Canada	Early 2006
<b>NAWI</b> A. Pattern Approval B. Verification	2-3 days 2-3 days	TBA	Australia	Late 2005

**What are the prerequisites and conditions:**

Travel and staying expenses will be funded for participants from developing countries within the Asia-Pacific region, especially the APEC member economies through selection according to the APLMF fund rule. Language is English.

**Whom to address:**

**During the Forum:**

Dr. Akira OOIWA  
APLMF President

**After the Forum:**

Dr. Tsuyoshi MATSUMOTO  
APLMF Executive Secretary  
NMIJ/AIST Tsukuba Central 3-9  
1-1-1 Umezono  
Tsukuba, Ibaraki 305-8563, Japan  
Tel: +81-298-61-4362 Fax: +81-298-61-4393  
E-mail: [e.sec@aplmpf.org](mailto:e.sec@aplmpf.org) URL: <http://www.aplmpf.org>



**Forum: Metrology – Trade Facilitator**  
**Offer of support by:**



**Comité International des Poids et Mesures**  
 (CIPM, *International Committee for Weights and Measures*)

**Bureau International des Poids et Mesures**  
 (BIPM, *International Bureau of Weights and Measures*)

**What can be offered:**

Participation in the **Mutual Recognition Arrangement of the CIPM** (CIPM MRA)

The CIPM MRA creates the framework within which participating national metrology institutes (NMIs) can establish the degrees of equivalence of their national measurement standards as well as the mutual recognition of their calibration and measurement certificates. As at June 2004, the MRA has been signed by representatives of 59 institutes, which represent 44 Member States of the Metre Convention, 13 Associates of the General Conference on Weights and Measures, CGPM, and two international organizations. In addition, 85 other institutes are brought into the MRA because they are designated by the signatories as providing services that they themselves do not provide. Areas covered by the MRA include physics and engineering as well as chemistry with applications in environmental, food and medical analysis, among others.

The objectives of the CIPM MRA are:

- To provide greater confidence in, and knowledge of the measurement capabilities of NMIs, particularly for the **regulatory and accreditation** communities.
- To provide international recognition of, and to improve the realization of national standards by NMIs, **particularly for newer NMIs**.
- To provide the technical underpinning for acceptance between countries of measurements **used as the basis for traded goods and services** - "equivalent" calibration certificates which can be accepted world-wide without retesting or re-measuring.
- To **reduce Technical Barriers to Trade** arising from lack of traceability and equivalence.

**What are the prerequisites and conditions:**

The CIPM MRA is open to Member States of the Metre Convention and Associates of the CGPM.

To participate in the CIPM MRA, signatories and those on whose behalf they have signed the MRA commit to three conditions:

- Participate in the 'key comparisons' organized by the CIPM's Consultative Committees, which are chosen to typify the main activities and calibration services in a particular technical area.
- To declare the uncertainties associated with their calibration and measurement services and to have these validated by the relevant international experts.
- To install a quality management system that meets the criteria set out in the MRA and in its explanatory documentation. In all declarations currently made, the base international standard is ISO/IEC 17025 or ISO Guide 34 for producers of certified reference materials.

This has been a major activity for participants, and many have learned much about their techniques for realizing national standards and the International System of Units.

**Whom to address:**

**During the Forum:**

Dr. Ismael Castelazo

**After the Forum:**

Prof. Andrew Wallard  
 Director, BIPM  
 Pavillon de Breteuil,  
 F 92312 Sèvres Codex, France  
 E-mail: awallard@bipm.org



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**European Union – EuropeAid**

**European Union Funding Opportunities in the Mediterranean Region**

**What can be offered:**

The European Union and its Member States have long been financing and co-financing numerous activities in the Mediterranean region. The activities financed through EU channels are either directly funded from the EU budget or the European Investment Bank's (EIB) own resources allocated by the EU Member States. A large part of the activities financed by the EU budget is managed by the European Commission's EuropeAid Co-operation Office. Other Directorate-Generals of the European Commission also provide some funding opportunities. In this respect, the funding opportunities in this information note are organised as follows:

**EU activities financed from the EU budget and managed by EuropeAid – The MEDA Programme**

The establishment of the Euro-Mediterranean Partnership between the EU Member States and 12 Mediterranean Partners<sup>(1)</sup> in 1995 provided a comprehensive and cohesive framework of co-operation for the activities supported by the European Union in the Mediterranean. The MEDA programme (budget line 19080201), as the main financial instrument of the Euro-Mediterranean Partnership, supports a set of measures and objectives set by the Barcelona Process aiming at supporting economic transition, developing a better socio-economic balance, and fostering regional integration for free trade by the year 2010 through a multi-sectoral approach. The MEDA programme, currently in its second programming period (2000-2006) with a budget of € 5 350 million, consists of bilateral co-operation and regional co-operation instruments.

A large part of the resources are channelled through bilateral funding to the eligible Partners: Algeria, Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia and the Palestinian Authority. The rest of the resources are devoted to regional activities.

<sup>(1)</sup> Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Authority, Syria, Tunisia, and Turkey.

**What are the prerequisites and conditions:**

**Who might benefit from the MEDA projects?**

Beneficiaries may include States and regions as well as local authorities, public agencies, local or traditional communities, organisations supporting business, private operators, co-operatives, mutual societies, universities, associations, foundations and non-governmental organisations.

**How to benefit from the MEDA programme?**

The European Commission, in collaboration with the Mediterranean Partners, defines the priorities for each country in the Country Strategy Papers and in the National and Regional Indicative Programmes. For the region as a whole, a Regional Strategy Paper and a Regional Indicative Programme is also established. In accordance with the priority areas, the list of projects financed each year is included in the yearly National Financing Plan for each Partner and the Regional Financing Plan.

These projects are then announced regularly and throughout the year on the European Commission's EuropeAid Co-operation Office's website. The criteria for participating in each call for tender or call for proposals are included in the relevant documentation, also available from EuropeAid's website. After the announcement, the projects are managed by the European Commission Delegations in the Mediterranean countries.

**Whom to address:**

**Where to obtain additional information on this and other projects?**

➤ **EuropeAid Co-operation in the Middle East and the Southern Mediterranean Region:**

[http://europa.eu.int/comm/europeaid/projects/med/index\\_en.htm](http://europa.eu.int/comm/europeaid/projects/med/index_en.htm)

➤ **Information on the EU's Middle East and Mediterranean Policy:**

[http://www.europa.eu.int/comm/external\\_relations/med\\_mideast/intro/index.htm](http://www.europa.eu.int/comm/external_relations/med_mideast/intro/index.htm)

➤ **Information on the MEDA Programme:**

[http://europa.eu.int/comm/external\\_relations/euromed/MEDA.htm](http://europa.eu.int/comm/external_relations/euromed/MEDA.htm)

This programme is mainly co-ordinated by the EuropeAid Co-operation Office, Directorate B Southern Mediterranean and the Middle East, Unit B1 Co-ordination for the Mediterranean Region. E-mail: europeaid-info@cec.eu.int



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Bureau National de Métrologie (BNM), France**

**What can be offered:**

- Advice on the implementation of a National Metrology Institute: facilities, environmental conditions, equipment, qualification of the staff, etc.;
- Elaboration of medium-term and long-term strategy plan;
- Training in research and calibration laboratories of BNM and on-site:
  - research on the realisation of standards and calibration bench,
  - calibration activities,
  - calibration procedures,
  - uncertainty calculation,
  - quality procedures;
- Assessment of calibration laboratories in the scope of the accreditation.

**What are the prerequisites and conditions:**

- Written description of the project including the current metrological activity and the goals;
- Economic importance of the project with the proposed funding and contributions from partners;
- Governmental support (political, economical and technical);
- Qualification of the beneficiaries for the training;
- French and/or English language.

**Whom to address:**

**During the Forum:**

Luc ERARD, Maguelonne CHAMBON

**After the Forum:**

Maguelonne Chambon  
Bureau National de Métrologie  
1 rue Gaston Boissier  
75015 PARIS France



**Forum: Metrology – Trade Facilitator**  
**Offer of support by:**



**Ministère de l'économie, des finances et de l'industrie**  
**- DARPMI - Sous-direction de la métrologie (France)**

**What can be offered:**

La sous-direction de la métrologie (SDM) peut proposer des offres de coopération bilatérale dans le domaine de la métrologie légale. A titre d'exemple, des coopérations bilatérales ont été mises en place ou sont en cours de réalisation avec l'Algérie, le Maroc et la Tunisie, et des participations à des programmes européens de jumelage ont eu lieu (Pologne, Roumanie).

Compte tenu de ses ressources humaines, la SDM ne peut intervenir que rarement avec ses propres moyens. Le plus souvent, elle fait appel à des organismes spécialisés dans la formation, tels que:

- l'institut de la gestion publique et du développement économique,
- l'école des mines d'Alès,
- l'école des mines de Douai,
- le laboratoire national d'essais.

Par ailleurs, la sous-direction de la métrologie anime le Forum euro-méditerranéen de métrologie légale (EMLMF), forum destiné à favoriser la coopération entre les pays européens et les pays du pourtour méditerranéen. Ce forum peut également s'ouvrir à d'autres pays. Les candidats sont invités à se faire connaître.

*The French service of legal metrology is responsible for the animation of the Euro-Mediterranean Legal Metrology Forum (EMLMF), aiming at encouraging the co-operation between European countries and countries having a coast on the Mediterranean sea. This forum can also accept other countries. Candidacies would be welcome.*

**What are the prerequisites and conditions:**

La SDM ne disposant pas de moyens de financement propres, les actions de coopération sont conditionnées à l'acceptation du financement par un organisme extérieur, tel que:

- la Banque mondiale,
- l'Union européenne,
- des organismes français spécialisés dans la coopération: l'ADETEF (Assistance au développement des échanges en technologies économiques et financières) ou EGIDE.

Les demandes de financement auprès d'institutions autres que les organismes français doivent être recherchées par le demandeur de la coopération lui-même.

L'accord de financement par les organismes français peut être soumis à des conditions ou des limitations, notamment budgétaires.

**Sauf exception, les formations sont dispensées en français.**

Ces formations sont destinées à des ingénieurs ou des techniciens des organismes d'Etat chargés de la métrologie légale dans leur pays, et ayant déjà, en principe, une formation générale à la métrologie légale.

**Whom to address:**

**During the Forum:**

Gérard LAGAUTERIE  
French CIML Member

**After the Forum:**

Nicole RENARD  
Sous-direction de la métrologie  
20 avenue de Ségur 75353 PARIS 07 SP, France  
[nicole.renard@industrie.gouv.fr](mailto:nicole.renard@industrie.gouv.fr)



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Direction Générale des Douanes et Droits Indirects  
Gabon**

**What can be offered:**

In the framework of the South-South dialogue:

- Training in metrology / quality.
- Technical cooperation in the petroleum field.
- Consultancy / advice in:
  - Gauging of measuring containers (fixed storage tanks, tanker lorries);
  - Development of internal operating procedures;
  - Follow-up of measuring instrument verification operations.

**What are the prerequisites and conditions:**

- Up to date legislation.
- Definition of the aim and expectations of the project.
- Availability of teaching materials.
- Previous metrology training required for state and private sector personnel.
- Training language: French

**Whom to address:**

**During the Forum:**

**After the Forum:**

Direction Générale des Douanes et droits Indirectes  
Ministère de l'Économie, des Finances, du Budget et de la Privatisation  
BP 40 Libreville  
Gabon  
Tel.: +241 79 53 67  
+241 79 56 19



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Direction Générale des Douanes et Droits Indirects  
Gabon**

**What can be offered:**

Dans le cadre du dialogue Sud-Sud:

- Formations en métrologie / qualité.
- Coopération technique dans le secteur pétrolier.
- Expertise / Conseil en:
  - Jaugeage des récipients-mesures (bacs de stockages fixes, camions-citernes) ;
  - Elaboration des procédures internes d'exploitation ;
  - Suivi des opérations de vérification des instruments de mesure.

**What are the prerequisites and conditions:**

- Textes réglementaires à jour.
- Définition du but du projet et des attentes.
- Mise a disposition du matériel didactique.
- Qualification minimale pour la formation valable aussi bien pour les agents du secteur étatique ou privé: pré-requis en métrologie.
- Langue de formation: Français.

**Whom to address:**

**During the Forum:**

**After the Forum:**

Direction Générale des Douanes et droits Indirectes  
Ministère de l'Économie, des Finances, du Budget et de la Privatisation  
BP 40 Libreville  
Gabon  
Tel.: +241 79 53 67  
+241 79 56 19



**Forum: Metrology – Trade Facilitator**  
**Offer of support by:**



**Verification authorities of**  
**Baden-Württemberg and Berlin**  
**Germany**

**What can be offered:**

Used but functioning and traceable calibrated verification equipment

**Volume standards**



2 l, 5 l, 10 l, 20 l and 50 l standards for checking fuel dispensers, 9 sets

**Balances and weights**



capacity = 20 g, scale division = 0.01 mg  
4 pieces



capacity = 100 g / 160 g  
scale division = 0.1 mg  
5 pieces



50 kg weights, class M<sub>1</sub>  
about 600 pieces

**What are the prerequisites and conditions:**

Transport needs support by the recipient

**Whom to address:**

**During and after the Forum:**

PTB representatives

**Postal Address:**

Physikalisch-Technische Bundesanstalt  
POB 3345  
38023 Braunschweig  
Germany



**Forum: Metrology – Trade Facilitator**  
**Offer of support by:**



**Federal Ministry for Economic Cooperation and  
Development of the Federal Republic of Germany,  
(BMZ)**

**What can be offered:**

Support for establishing and strengthening systems of metrology, standardization, testing, quality, accreditation and certification (MSTQ-System). Corresponding programmes or projects can be realised in selected countries or regions. The support may consist of advice and expertise, training and internships, workshops and conferences, calibration of equipment, organization of intercomparisons and proficiency tests, delivery of equipment, reference materials and technical literature, depending on the assessment of the needs.

**What are the prerequisites and conditions:**

Proposals for support are to be submitted to the German Embassy via the competent ministry of the support seeking country. The request should contain details about the goal, results to be achieved and activities, the economic importance of the project, evidence of governmental support and partner contributions. The proposal will then be discussed within the framework of government negotiations and checked whether it complies with the defined areas of promotion and the development policy priorities. If the project proposal is in compliance with the German development policy a project assessment will be arranged. On the basis of the results achieved the BMZ decides on the suitability for promotion. If the results are positive the necessary agreements can be concluded to define the contributions of both parties. The BMZ entrusts, among other bodies, the PTB with the implementation of the German contribution to the project.

**Whom to address:**

**During and after the Forum:**

Ms. Evita Schmiege,  
Head of Division Trade, Globalisation, Investment  
Federal Ministry for Economic Cooperation and Development, BMZ  
Stresemannstraße 94  
10963 Berlin  
email: [evita.schmiege@bmz.bund.de](mailto:evita.schmiege@bmz.bund.de)  
Homepage: <http://www.bmz.de>



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Deutsche Akademie für Metrologie (DAM)  
German Academy of Metrology, Munich, Germany**

**What can be offered:**

**Training**

**Workshops**

- theory/practice;
- duration: 3 – 10 working days;
- course language: English/German or other (with interpreter);
- contents can be tailored to particular requirements.

**Topics (for example):**

- Verification of weighing equipment (non-automatic/automatic weighing instruments);
- Checking the net content in prepackages;
- Verification of volume meters (petrol stations, road tankers);
- Volume determination of fixed storage tanks;
- Medical measuring instruments;
- Taximeters;
- Basic concepts of measurement and uncertainties.

**Internships (at verification offices):**

- Duration: 2 weeks up to 3 months
- Language: German/English

**Acceptance on DAM-courses for German verification officers:**

- Course language: German only
- Contents according to Draft of OIML D 14

**What are the prerequisites and conditions:**

- Available project funds\*;
- Evidence of governmental support;
- Sufficient qualification of the participants;
- Written requests with details about the goals and results to be achieved;
- Participants must have sufficient knowledge of the course language;
- An important prerequisite for acceptance on DAM-courses for German Verification Officers is a good knowledge of the German language.

\* DAM, as an institution under public law, is obliged to work in a cost-effective way. This means that the costs arising from any training measure have to be paid by the purchaser or by a third party (e.g. funds of development projects).

**Whom to address:**

**During the Forum:**

Dr. Heinz Wallerus

**After the Forum:**

Dr. Heinz Wallerus  
Deutsche Akademie für Metrologie (DAM)  
Franz-Schrank-Str. 9, D - 80638 München, Germany  
Email: [dam@lmg.bayern.de](mailto:dam@lmg.bayern.de)  
Internet: [www.dam-germany.de](http://www.dam-germany.de)



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Physikalisch-Technische Bundesanstalt (PTB)  
Germany**

**What can be offered:**

Support for the build-up and strengthening of national and regional infrastructures in the area of Metrology, Standardization, Testing, Quality, Accreditation and Certification (MSTQ).

Typical support activities include training, advice or internships.

**What are the prerequisites and conditions:**

Requests containing details of the goals, activities and results to be achieved, their economic importance, evidence of governmental support, partner contributions in kind or money, qualification of beneficiaries and further details which are needed to check whether the necessary resources are available or can be mobilised and whether the support will be significant and most likely successful. internships.

**Whom to address:**

**During the Forum:**

**Region:**

Europe, Central and East Asia:  
Dr. Hans-Dieter Velfe



**Region:**

Africa, Near East and South-East Asia:  
Dr. Marion Stoldt



**Region:**

Central and South America:  
Mrs. Ursula Flach



**After the Forum:**

**Dr. Hans-Dieter Velfe**

Tel. + 49 531 592 8210,  
e-mail: Velfe@ptb.de

**Dr. Marion Stoldt**

Tel. + 49 531 592 8220  
e-mail: marion.stoldt@ptb.de

**Dieter Schwohnke**

Tel. + 49 531 592 8230  
e-mail: dieter.schwohnke@ptb.de

**Postal Address:**

Physikalisch-Technische Bundesanstalt  
POB 3345  
38023 Braunschweig  
Germany



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Japan International Cooperation Agency (JICA)**

**What can be offered:**

Founded in 1974, the Japan International Cooperation Agency is an implementation agency for technical assistance, focusing on systems building, organization strengthening and human resource development that will enable developing countries to pursue their own sustainable socio-economic development. JICA's work is broad in scope and reflects international concerns and changing needs in developing countries. To traditional sectors such as agriculture and social infrastructure, JICA has recently added assistance to combat infectious diseases such as HIV/AIDS and SARS, support to encourage free market economies or set up legal systems, and support for the peace-building and reconstruction efforts in countries such as Afghanistan and East Timor. In future programs, greater involvement on the part of Japan's local governments, NGOs, universities and ordinary citizens is planned.

Problems vary from region to region and country to country. To address the diverse development issues affecting particular regions or countries, JICA uses its network of overseas offices to formulate project implementation plans for individual countries and to decide on how these should proceed. JICA also participates in "ODA task forces," which are established locally in developing countries and involve the Japanese Embassy, the Japan Bank for International Cooperation, and other institutions. Furthermore, we modify our programs to suit local circumstances and work to ensure that local views are incorporated.

With full respect for the developing country's ownership, JICA uses an issue-based approach to comprehensively analyze issues to be resolved and to expedite the following types of programs:

**Technical Assistance Projects**

This is one of JICA's main types of overseas implementation. Japan and the developing country combine their resources in terms of knowledge, experience, and skills and work together to resolve an issue within a certain timeframe. This type of assistance is results-oriented, and to achieve the objectives, JICA may dispatch experts from Japan to provide technical support, invite personnel from the developing country to Japan for training, or provide necessary equipment, etc. By formulating and implementing customized plans that match circumstances on the ground, we respond efficiently and effectively to a broad spectrum of needs in developing countries.

**Acceptance of Trainees**

JICA invites engineers, technicians and administrative officials from developing countries to Japan and provide them with training in the skills and technology needed in their countries. This is done with the cooperation of central government bodies, local governments, private firms and universities. Please see the separate poster of "Group Training Course in Legal Metrology".

**Development Studies**

This assistance is for formulating development plans at the national or regional level in various social and economic fields. It includes drawing up master plans to act as blue-prints for medium- and long-term development programs, and also includes studying the technical, economic or environmental aspects of proposed project implementations as the basis for feasibility studies.

For more information, please refer to our website; <http://www.jica.go.jp/index.html>

**What are the prerequisites and conditions:**

**Application for JICA's Assistance**

JICA's technical cooperation is aimed at transferring technology and knowledge that can contribute to the socio-economic development of developing countries. However, JICA is not a funding agency and therefore, does not provide assistance in the form of cash grant.

**JICA's programs are available upon the government's request of the developing countries through the diplomatic channels** between the each government of developing countries and the Government of Japan (GOJ).

Inasmuch as the GOJ's assistance is extended in a government-to-government basis, **qualified implementing agencies are only limited to national government agencies, local government units, and State Colleges and Universities**, and all requests should be endorsed by those in the appropriate position.

**To implement the projects effectively, all recipient government agencies are required to provide local counterparts costs to the project.** This usually comes in the form of (1) provision of local counterparts personnel; (2) operation and maintenance cost for donated equipment and/or facilities; (3) administrative costs like personnel salaries and honoraria, gasoline, and office supplies; and, (4) import duties and Value Added Tax payments for locally produced equipment and materials.

**The Information booklets about JICA's assistance are distributed to major government agencies of each developing country every year. Application forms with detailed explanation how to apply for JICA's assistance are contained in the booklet.**

**Whom to address:**

**During the Forum:**

Ms. Hiroe SAKAI  
NMIJ International Metrology Cooperation Office

**After the Forum:**

For more practical information about the JICA's assistance, please contact the Embassy of Japan in your country:



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Japan International Cooperation Agency (JICA)**

**What can be offered:**

**Group Training Course in Legal Metrology**

- 1 **Course title:** Asia Pacific Legal Metrology System
- 2 **Cooperation Period:** 2003 FY-2007 FY
- 3 **Duration of Course:** 3 months
- 4 **Number of Participants:** 6 participants/FY
- 5 **Target Region:** ASEAN countries, mainly
- 6 **Overall Goal:** This course is organized for government officers working as senior verification officers responsible for verification and inspection of measuring instruments in the field of legal metrology. It will serve as a good opportunity (1) to acquire the knowledge about the principle and the structure of measurement instruments, and the procedures and technologies of verification/inspection methods in Japan through lectures, practical training and observation, and (2) to obtain the information about the central and local administrative organizations and their respective duties in measurement and the latest metrological technology of Japan.
- 7 **Qualification of Applicant:**
  - Currently, engaged in the practical work of verification/inspection or its supervision in the field of legal metrology at governmental or semi-governmental institute with at least three years' occupational experience,
  - University graduates
  - Between the age of 30 and 45
- 8 **Language:** English
- 9 **Training Institution:** National Institute of Advanced Industrial Science and Technology
- 10 **Example of Curriculum:**

<b>I. Japan's Measurement System in general</b>	
1	Outline of Japanese Measurement Law
2	The Japanese traceability / measurement system (primary standards, designated calibration organizations and accredited calibration laboratories)
3	Measurement systems stipulated by law: (1) System of Designated Manufacturer (2) System of proper on-site measurement control (3) System of certified measurers (4) System of measurement certification business
4	Roles, laws and ordinances relating to regional weights & measures verification institutes (2) Commodity net weight inspection (3) Verification work (4) Inspection work (5) Guidance work (6) On-the-spot inspection work
5	Others (1) Legal metrology with respect to watt-hour-meter (2) Present situation of measuring instrument industries (3) Outline of weights and measures training institute, METI
<b>II. International Metrological Organizations, Systems and Regulations</b>	
1	Systems of mutual recognition
2	Activities of the OIML and the APLMF
3	SI units, VIM and APMP
4	Collection of metrological information through internet and industrial standards
5	Uncertainty of measurement
6	ISO 9000, 14000 and ISO/IEC Guide 65 and ISO/IEC 17025 etc.
<b>III. Technical training programs</b>	
1	Measurement standards
2	Type approval
3	Verification and periodical inspection of 18 kinds of specified measuring instruments for use for trade or certification business stipulated by law
4	Inspection of verification standards
5	Measuring instruments not stipulated by legal metrology (1) Precision type length measuring instruments (calibration of gauge blocks, vernier calipers, dial gauges) (2) Length measuring instruments except taximeter (inspection) (3) Electricity meter (calibration of digital multimeters), electronic measurement (AC voltage, AC current, oscilloscope) (4) Chemical volumetric meter (5) Environmental measuring instruments (chromatographic analyzer)
<b>IV. Technical Tour</b>	
1.	Organizations, enterprises and manufacturing factories relating to measurement
2.	Research institutes, laboratories relating to measurement
3.	Others
<b>V. Other programs etc.</b>	
Oral presentations by participants, program orientations (JICA, NMIJ, TMIWM, HIIWM), evaluation meetings, Japanese language program, days of transfers	
<b>Time allocated in 2004:</b> Lectures 45 %, Practice, discussion & presentation 40 %, Technical tour 15 %	

**What are the prerequisites and conditions**

JICA's programs are available upon the government's request of the developing countries through the diplomatic channels between the each government of developing countries and the Government of Japan (GOJ).

The Government of Japan provides the following allowances and covers the following expenses through JICA in accordance with relevant laws and regulations: Round-trip air ticket between an international airport designated by JICA and Japan, accommodation allowance, living allowance, outfit allowance, book allowance, shipping allowance, expenses for JICA study tours, free medical care for participants who become ill after arrival in Japan (costs related to pre-existing illness, pregnancy and dental treatment are not included), etc.

**Whom to address**

<b>During the Forum:</b>	<b>After the Forum:</b>
Ms. Hiroe SAKAI, NMIJ International Metrology Cooperation Office	For more practical information about JICA's assistance, please contact the Embassy of Japan in your country:



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Legal Metrology Department  
South African Bureau of Standards**

**What can be offered:**

South Africa contributes in the following manner:

- 1 Offers training on:
  - Measuring practice mass and volume;
  - SADC MEL documents 1, 2, 3 and 4;
  - SANS specifications in Legal Metrology;
  - “e” mark principles;
  - Practical training.
- 2 Acts as technical advisors for assessment of Legal Metrology infrastructures in developing countries.
- 3 Assist in development of Legal Metrology Legislation in line with D 1.

**What are the prerequisites and conditions:**

**Whom to address:**

**During the Forum:**

Mr. Stuart Carstens  
Divisional Manager  
Legal Metrology Department; South African Bureau of Standards

**After the Forum:**

Mr. Stuart Carstens  
Divisional Manager  
Legal Metrology Department  
South African Bureau of Standards  
Private Bag X191  
Pretoria 0001  
South Africa



**Forum: Metrology – Trade Facilitator –  
Offer of support by:**



**Swiss State Secretariat for Economic Affairs (seco) /  
Swiss Federal Office of Metrology and Accreditation  
(metas)**

**What can be offered:**

For priority countries or regions of the Swiss Economic Development Cooperation:

- 1 Financing training and specific equipments.  
Consulting, calibration of standards (traceability).
- 2 Course instructors for on-site courses in selected metrological fields such as dimensional measurements (length) for calibration laboratory officers, temperature measurement technology for calibration laboratory officers, pressure measurement technology for calibration laboratory officers.
- 3 Course instructors for on-site courses in legal metrology such as weighing instruments for verification officers / measurement of liquids for verification officers.

**What are the prerequisites and conditions:**

- Governmental proposal in the context of clearly defined projects of economic development co-operation.
- Evidence of the need for specific knowledge transfer related to metrological infrastructure aimed at fostering economic and trade development.
- Laboratory conditions to use the equipment properly fulfilled.
- Staff with basic metrological knowledge.

**Whom to address:**

**During the Forum:**



Bruno Vaucher

**After the Forum:**

- For 1 Jean-Pierre Cuendet  
SECO, Effingerstrasse 1, 3003 Berne, Switzerland  
Tel.: +41 (0)31 324 01 45  
Fax.: +41 (0)31 322 86 30  
E-mail: jean-pierre.cuendet@seco.admin.ch
- For 2 Rudolf Thalmann  
METAS, Lindenweg 50, CH-3003 Bern- Wabern  
E-mail: rudolf.thalmann@metas.ch
- For 3 Hans-Anton Ebener  
METAS, Lindenweg 50, CH-3003 Bern-Wabern  
E-mail: hans-anton.ebener@metas.ch



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**Syrian Arab Organisation for  
Standardization and Metrology (SASMO)**

**What can be offered:**

SASMO intends to translate OIML publications into the Arabic language, in order to allow all OIML Members to benefit from the Arabic versions via the internet.

SASMO will translate the following:

- OIML Recommendations;
- OIML Documents;
- Other OIML publications.

**What are the prerequisites and conditions:**

Approval from the OIML to undertake this work.

**Whom to address:**

**During the Forum:**

Mr Khaled Osman  
Engineer and a metrological director

**After the Forum:**

Mr Khaled Osman  
Syrian Arab Organization for Standardization and Metrology (SASMO)  
PO Box 11836 Damascus – Syria  
Fax: +963 11 512 8214  
E-mail: [SASMO@net.sy](mailto:SASMO@net.sy)  
URL: [www.sasmo.org](http://www.sasmo.org)



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**National Weights and Measures Laboratory  
United Kingdom**

**What can be offered:**

**Training Courses**

NWML offers a range of training courses in the fields of legal metrology, measurement technology, quality assurance and accreditation. These courses are delivered by qualified and experienced metrologists and engineers.

Courses are available in the following subjects:

- Verification of non-automatic weighing instruments under European Directive 90/384/EC;
- Fuel pump verification;
- Verification of catchweighers;
- Mass metrology and the calibration of weights;
- Length metrology;
- Volume metrology;
- Testing in support of type approval;
- Pre-packaged goods;
- The Measuring Instruments Directive;
- Good laboratory practice;
- Quality assurance and accreditation;
- The role of legal metrology in the economic infrastructure.

All training courses can be designed and tailored to suit the needs of the customer.

**Consultancy Services**

NWML can provide technical assistance and consultancy services for the development of legal metrology infrastructures.

NWML's expertise, active role in European and world legal metrology, and proven track record makes the laboratory an ideal provider of consultancy services for all aspects of national metrology services, including:

- Analysis of regulatory requirements;
- Metrological standards laboratories;
- Recommendations on operational capability;
- Structure and development of legislation and advice on measuring instrument certification and enforcement services for verification and market surveillance.

NWML has provided consultancy services to countries including Poland, Bulgaria, Malaysia, Czech Republic, Saudi Arabia and Hong Kong.

NWML has close working relationships with many of the other key players in the wider UK metrology infrastructure, including the National Physical Laboratory (NPL) , United Kingdom Accreditation Service (UKAS), and Local Authority technical specialists.

**What are the prerequisites and conditions:**

NWML training courses are designed for managers and metrologists in national metrology organisations, enforcement officers and those responsible for national metrology legislation.

Consultancy services are available on request.

All services are provided in English.

**Whom to address:**

**During the Forum:**

Jeff Llewellyn and Martin Birdseye

**After the Forum:**

Robert Ivey  
Business Manager – Training and Consultancy,  
NWML, Stanton Avenue, Teddington, TW11 0JZ,  
United Kingdom  
E-mail: Robert.ivey @ nwml.gov.uk – [www.nwml.gov.uk](http://www.nwml.gov.uk)



**Forum: Metrology – Trade Facilitator  
Offer of support by:**



**United Nations Industrial Development Organization  
(UNIDO)**

**What can be offered:**

**UNIDO's contribution towards Trade Capacity Building**

**(a) Strengthening the regulatory framework for conformity**

A principal precondition for compliance with the TBT/SPS requirements is to have the necessary regulatory framework in place. This service therefore provides assistance to Governments with the development and effective application of a regulatory regime for standards, metrology, testing, accreditation and quality, and support for the development of an operational framework for the implementation of these regulations.

**(b) Strengthening the operational components of the conformity infrastructure**

The full implementation of the TBT/SPS agreements demands a functional standards setting organization, supported by calibration and testing capabilities. To assist developing countries and countries with economies in transition meet these requirements, this service module provides the following specific services:

**Standards:**

- The establishment or strengthening of existing standardization bodies through the provision of training, setting up of sub-sectoral technical committees, and pilot standards development exercises.
- Promotion of the adoption of standards at national and regional level, and assistance for the country's participation in regional and international standards-setting forums and networks.
- Assistance for the development of product conformity mark schemes.
- Pilot projects for capacity building related to both product standards and systems standards such as ISO 9000, ISO 14000 and HACCP.

**Metrology (Measurement):**

- The establishment or strengthening of laboratory capacities for industrial and legal metrology capabilities covering measurement and calibration requirements in accordance with the manufacturing and export needs of the country. This implies assisting in the physical set-up and start-up of laboratories, including upgrading measurement equipment, training technicians, providing assistance in networking, participating in inter laboratory comparisons, as well as providing support for accreditation.
- Implementation of the UNIDO software "Measurement and Control-Chart Toolkit" (MCCT) to meet the requirements related to metrological control of the ISO 9000:2000 standards.

**Testing Laboratories:**

- The establishment or strengthening of laboratory capacities for material and product testing, primarily for microbiological and chemical analysis, and secondarily for specialist laboratories for industrial sub-sectors with export potential.
- Assistance in specifying testing and equipment requirements, technical support for the harmonization of testing procedures, training of staff including assistance in networking, participating in inter-laboratory comparisons, as well as providing support for accreditation.

**Accreditation:**

- The establishment or strengthening of accreditation bodies for the accreditation of system certifiers and laboratories.
- Assistance to national accreditation bodies to obtain international recognition from the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC) through pre-peer evaluation mechanisms to achieve the signing of multilateral recognition agreements so that the national accreditation has global acceptance and can facilitate market access.

**What are the prerequisites and conditions:**

Technical cooperation services are designed and implemented to comply with UNIDO quality criteria, based on the following principles:

- **Relevance.** Services will meet mutually identified development constraints that UNIDO clients have in meeting the developmental requirements of their target groups;
- **Demand-orientation.** Programmes are based on comprehensive needs assessment and the full involvement of recipients in the programming exercise;
- **Effectiveness / efficiency.** UNIDO and its clients have analyzed the least-cost approach to fully solve their development constraints;
- **Sustainability / impact.** The design and implementation of services ensure sustained benefits for the client and significant improvements at the level of the target group.

**Whom to address:**

**During the Forum:**

Mr. Otto Loesener  
Industrial Development Officer Industrial Promotion and  
Technology Branch/ PTC – UNIDO

**After the Forum:**

Ms. Dan Liang  
Director  
Industrial Promotion and Technology Branch/ PTC – UNIDO  
Tel: +43-1/26026-3092  
Email: [D.Liang@unido.org](mailto:D.Liang@unido.org)

Mr. Otto Loesener  
Industrial Development Officer  
Industrial Promotion and Technology Branch/ PTC – UNIDO  
Tel: +43-1/26026-3518  
Email: [O.Loesener@unido.org](mailto:O.Loesener@unido.org)

# MetroTrade – Metrological Support for International Trade



## METROTRADE PROJECT

Global trade and commerce depend on measurements and tests that need to be reliable, trusted internationally and which do not form a barrier to trade. As fiscal barriers are removed, the impact of technical barriers to trade increases. Examples exist of both good and poor practice in terms of the impact on trade of the approach to measurement. The European Commission, in partnership with seven National Metrology Institutes, the European Commission's Joint Research Centre and the European Federation of National Associations of Measurement, Testing and Analytical Laboratories, is supporting the MetroTrade project, which addresses direct measurement issues related to trade between the regions.

The MetroTrade project (<http://www.metrotrade.dk/>) aims to identify and facilitate the removal of metrological impediments to international trade by addressing issues such as:

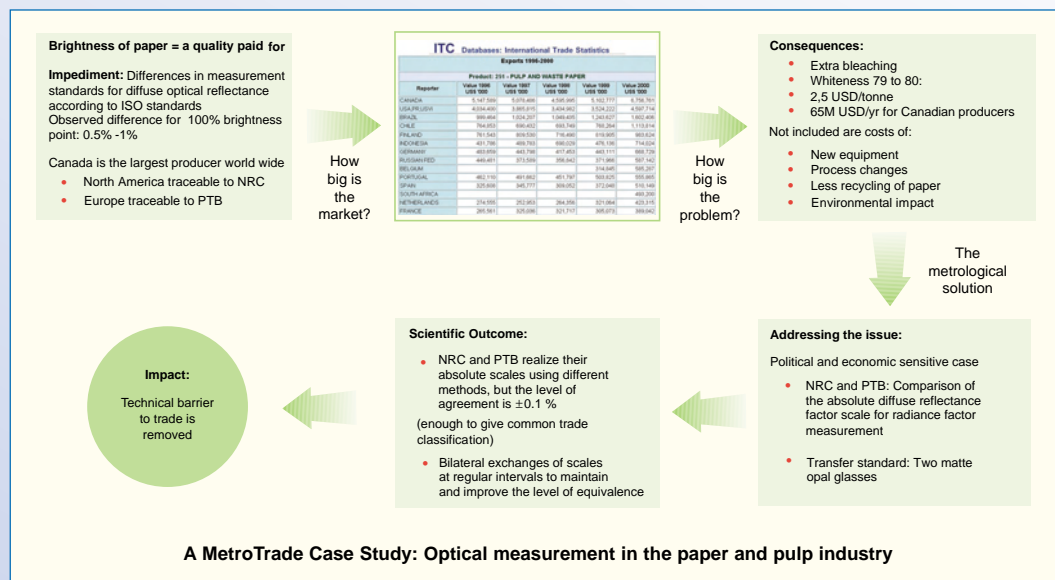
- Lack of knowledge of the degree of equivalence of national measurement capability
- Promotion of a framework for the mutual acceptance of calibration certificates
- De facto requirements to repeat traceable calibrations

## METROLOGICAL IMPEDIMENTS TO TRADE

Metrological technical barriers to trade arise for a variety of reasons, both real and perceived, including differences in regulations, legislation and mandated standards, differences in the implementation of existing legislation, de facto requirements for traceability to national standards in a specified country or institute, historical practices, differences between metrological standards in different countries, variations in technology between countries and the lack of harmonisation of test and calibration procedures.

A study is being conducted in Europe and beyond to identify areas where a lack of awareness of metrological issues or technical problems associated with measurements have led to technical barriers to trade. The project has identified cases where the appropriate application of metrology has successfully prevented or overcome these problems. Examples of either case include: the variation in instrument testing procedures between Directives, the classification of thermal insulation materials used in the construction industry, differences between US ASTM and ISO requirements for impact testing, optical measurement in the paper industry (see diagram), supply of natural gas, limited acceptance of EU calibrations within the US aviation sector.

The historical practice of specifying technical limits of 'below detectable levels', 'no detectable levels' or 'zero' can also cause barriers. As technology advances, detectable limits reduce and levels of contaminants or hazardous materials, which were previously undetectable, are detected. This can result in goods, that would previously have been accepted by many countries, now being rejected by those countries with the most modern detection technology, despite the fact that neither the quality of the goods on the market nor the legislation have changed. One specific example relates to the limits for chloramphenicol in food where the EC Directive 2377/90 includes 'antibiotic residues for which no maximum level can be fixed' and where the shipment was accepted by one country but rejected by another with a more sensitive technique.



If you are aware of any measurement related technical barriers to trade or experience difficulties, you can participate in the study, see <http://www.metrotrade.dk/> 'GOTO TBT SURVEY' for further details.

The results and findings will be analysed and lead to a series of recommendations to the appropriate authorities with the intention of contributing to the process of reducing technical barriers to trade.

### MetroTrade: (G7RT-CT2000-05004)

- Danish Institute of Fundamental Metrology project co-ordinator (Preben Howarth)
- Bureau National de Métrologie (Luc Erard)
- EUROLAB European Federation of National Associations of Measurement, Testing and Analytical Laboratories, (Anita Schmidt)
- Institute for Reference Materials and Measurements, (Philip Taylor)
- Metrology Institute of the Republic of Slovenia (Janko Drnovsek)
- National Physical Laboratory (UK), (Fiona Redgrave)
- National Research Council of Canada (Alan Robertson)
- Physikalisch-Technische Bundesanstalt (Kurt Guckelsberger)
- Swedish National Testing and Research Institute (Leslie Pendrill)

### For further information on the project, please contact:

Preben Howarth  
Danish Institute of Fundamental Metrology  
Matematiktorvet  
Bygning 307  
2800 Lyngby  
Denmark

Tel: +45 45 93 11 44  
Fax: +45 45 93 11 37  
E-mail: pho@dfm.dtu.dk



# RegMet – Improving dialogue between EU Regulatory Bodies and National Metrology Institutes



## REGMET PROJECT

The operation of the economy on a global scale and the quality of life for the individual citizen depends on reliable measurements and tests, which are trusted and accepted internationally. Although broadly harmonised, differences in measurement practice amongst regulators and associated bodies still exist even within the EU as the approach by the regulatory community is influenced by historical practice and awareness of measurement issues varies significantly. Equally, development of national measurement capability does not always take optimum account of the regulatory perspective. The European Commission, in partnership with nine European National Metrology Institutes, the European Commission's Joint Research Centre and the European Organisation for Conformity Assessment is supporting the RegMet project to address these issues. The RegMet project (<http://www.regmet.dk/>) aims to improve the effectiveness of the European regulatory infrastructure concerning measurement aspects of regulation by:

- Promoting a greater understanding of metrological issues and utilisation of the metrological, accreditation and conformity assessment infrastructure amongst regulators
- Promoting a systematic harmonised best practice approach by regulators to metrology policy and implementation
- Identifying more precisely the metrological needs of regulatory bodies within the EU, including enhancing the on-going capture of future regulatory measurement needs



## CONSULTATION WITH THE REGULATORY COMMUNITY

Consultation has been undertaken with over 100 regulators across Europe from sectors including avionics, EMC, environment, food, health and safety at work, legal metrology, medical devices and transport. The project has highlighted the diverse range of metrological challenges facing the regulatory community in the development and enforcement of regulatory legislation including:

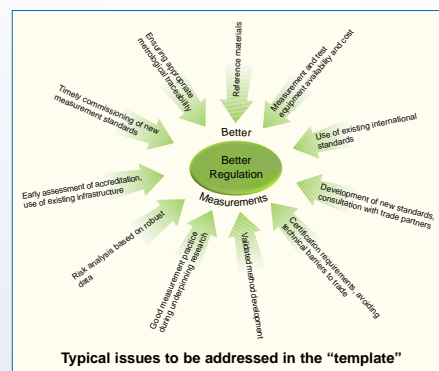


- Regulatory requirements that are difficult to test in practice
- Standards allowing the use of a range of methods which have not been cross-validated and provide different results
- A lack of suitable certified reference materials
- Insufficient reliable data to undertake scientifically rigorous risk assessments
- Requirements for dynamic and real-time measurements
- Specified limits close to the physical limits of detection
- Maximum permissible level specified in an ambiguous manner
- Inadequate assessment of the impact of the uncertainty of measurement on technical limits and the assessment of compliance

## THE REGMET TEMPLATE

The concept of a systematic cradle to grave guidance on measurement for regulators, with the dual aim of improving regulation and preventing measurement related barriers to trade before they occur, has evolved during the project. This template concept, conceived as voluntary and cross sectoral, has grown from the recognition that measurements are often required to underpin and to enforce regulation, that they must be appropriate, balance the cost of compliance against protection of the public and must be robust and defensible. In addition a common approach offers transparency and helps avoid trade barriers and unfair competition. Utilising and building on examples of current regulatory best practice, the template focuses on ensuring an appropriate approach to measurement when:

- Undertaking research that underpins and inputs to regulation
- Formulating regulations, legislation and supporting standards
- Undertaking market surveillance whilst ensuring optimum use of the metrological infrastructure.



Some of the issues to be addressed in the template are shown in the diagram, others include the impact of sampling, technical limits, and uncertainty of measurement.

The template is under development and comments and suggestions are welcome, please contact the project co-ordinator.

A condensed version of the template will be publicly available through the second edition of the booklet *Metrology in Short* to be published later in 2003.

### RegMet: (G7RT-CT2000-05005)

- National Physical Laboratory (UK) project co-ordinator (Fiona Redgrave)
- Bureau National de Métrologie (Luc Erard)
- Czech Metrology Institute (Frantisek Jelinek)
- Danish Institute of Fundamental Metrology (Preben Howarth)
- European Organisation for Conformity Assessment (John McDonald)
- Institute for Reference Materials and Measurements (Philip Taylor)
- Justervesenet (Hans-Arne Froystein)
- NMI Van Swinderen Laboratorium (Jacques Schmit)
- Physikalisch-Technische Bundesanstalt (Kurt Guckelsberger)
- Slovak Institute of Metrology (Stefan Dubnicka)
- Swedish National Testing and Research Institute (Harald Lundahl)

### For further information on the project, please contact:

Fiona Redgrave  
National Physical Laboratory  
Queens Road  
Teddington, UK  
TW11 0LW

Tel: +44 20 8943 6397  
Fax: +44 20 8943 6079  
E-mail: [fiona.redgrave@npl.co.uk](mailto:fiona.redgrave@npl.co.uk)

