



ASIA-PACIFIC LEGAL METROLOGY FORUM

SURVEY ON TRAINING

Legal metrology comprises all measurements carried out for any legal purpose and includes measurements that are subject to regulation by law or government decree. In addition to those measurements administered by the weights and measures authorities, it also includes trade measurement of electricity, gas, water, telephone and taxi meters as well as measurements in areas such as occupational health and safety (e.g. acoustic power and ionising radiation) and traffic control (vehicle speed and breathalysers).

In 1987 OIML published a document on "Metrology Training" which provided on courses and resource material available at that time for legal metrology training. Much of that material is now out of date and in addition the philosophy of training has changed in a number of countries from traditional training courses to an emphasis on developing specific defined competencies.

The APLMF meeting in November 1994 identified training as an important Forum program element. Other regional metrology organisations are similarly supporting training as an important pre-requisite for developing regional confidence in measurement and testing. The APEC Standards and Conformance Working Group has also recognised the importance of training.

This survey aims to identify both the need for training in Forum economies and the facilities and resources available to support training programs.

A survey questionnaire was circulated in July and responses has been received from the following member economies: Australia, Canada, People's Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

The information is given in the following pages with responses of the economies grouped accordingly to facilitate analysis.

SURVEY ON TRAINING

1. *Name of Economy.*

The following economies have responded to the survey:

Australia, Canada, People's Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

2. *Types of training courses.*

What are the types of courses currently conducted - e.g.

- *Measurement and calibration skills training.*
- *Pattern approval testing training.*
- *Verification testing training.*

AUSTRALIA

- National Technical and Further Education (TAFE) Certificate and Associate Diploma for Calibration Technician Courses.
- National TAFE Correspondence Certificate Course for Trade Measurement Inspectors.

The National Standards Commission also provides a one week training course for standards laboratory officers from the State and Territory trade measurement and surveying authorities.

CANADA

Canada currently offers technical training for all levels of field inspection staff. The training is designed to move the inspector through the various phases of technical development, including a comprehensive understanding of legislation, inspection procedures, principles of measurement, compliance and the test procedures involved in the various devices which the inspector is required to verify and calibrate.

Under the Legal Metrology Branch Accreditation Program for Initial Factory Inspections, Branch trainers conduct courses on legislation and inspection procedures for companies seeking to be accredited for initial inspections on certain device classes. These classes are run at a Legal Metrology Branch training centre and are usually four days in length. Companies attending are charged a training fee.

REPUBLIC OF CHINA

- Measurement and calibration skills training.

- Verification testing training.

INDONESIA

In Indonesia training courses in metrology are conducted by the Metrology Training Centre under the Trade Training Centre, Ministry of Trade.

The training courses are as follows:

- **Regular training course.**

This course is conducted in stages:

- **First stage - Training Course for Metrology Controller.**
Duration of the course is about 12 months.
Senior High School graduates are admitted to this course.
Curriculum emphasized to produce skilled officials for the field of metrology supervision and information.
- **Second stage - Training Course for Metrology Inspector.**
Duration of the course is about 12 months.
Metrology Controller Course graduates admitted to this course.
Curriculum is emphasized to produce skilled officials to undertake periodic verification for (legal metrology) measuring instruments.
- **Third Stage - Training Course for Verification Officer.**
Duration of course is about 12 months.
Metrology Inspector Course graduates are admitted to this course.
Curriculum is emphasized to produce skilled officials to undertake verification on legal metrology measuring instruments.

- **Irregular Training Course.**

This course is conducted for metrology officials to upgrade and increase their skills in specific areas of expertise.

JAPAN

There is one training course designed for foreign legal metrology practitioners from developing countries. This five-month course covers from legal metrology system in Japan to technical training for verification. Following are the main subjects of the whole training course:

- Legal requirements for measurement in Japan;
- Type approval testing training;
- Verification testing training;
- Verification standards testing and calibration training; and
- Sampling training for packaging control.

REPUBLIC OF KOREA

- Measurement and Calibration skills training; and
- Verification testing training

MALAYSIA

Training on measurement and calibration skills is conducted by SIRIM and representatives of manufacturers of measuring instruments. However the number of such training courses is limited. No courses are conducted specifically for pattern approval testing.

Training courses on verification testing are conducted at least once a year by the Ministry of Domestic Trade and Consumer Affairs for Inspectors of Weights and Measures. The training is usually for two weeks and lectures on measurement, calibration skills, legislative requirements, enforcement, testing and verification and general information on pattern approval is provided.

NEW ZEALAND

- (a) Pattern approval testing training
- (b) Verification/Certification testing training

SINGAPORE

The Weights and Measures Office only conducts on-the-job verification testing training for its newly appointed Artificers or Inspector of Weights and Measures. They are taught on the testing methods and procedures, position of test loads, tolerances to be applied etc. on the verification testing.

CHINESE TAIPEI

- Measurement and calibration skills training
- Pattern approval testing training
- Verification testing training
- Law and regulation training
- Laboratory quality management training
- Laboratory assessor training

THAILAND

- Mass calibration
- Truck scale verification
- Loading rack flowmeter verification
- Prepackaged goods inspection

UNITED STATES OF AMERICA

Types of Training

- a. The National Institute of Standards and Technology (NIST) Weights and Measures Program provides metrology training at the basic, intermediate, and advanced levels at its Gaithersburg, Maryland location. The classes are available in English and Spanish.
- b. Pattern Approval - The NIST Weights and Measures Program manages the National Type Evaluation Program and provides training to equipment evaluators on a periodic basis.
- c. The NIST Weights and Measures Program (OWM) manages the National Conference on Weights and Measures (NCWM) National Training Program. This work includes the development of weights and measures short courses culminating in the publication of "modules" of trainer and student manuals for 3 to 5 day courses. OWM also provides training in weights and measures laboratory metrology, and specialized training such as liquid propane gas meter testing, packaged commodity training. State weights and measures agencies provide their own training to their staff, and contract for training from their sister agencies, local colleges, and management training providers. The following table lists the modules available from the National Training Program:

<u>Module No.</u>	<u>Subject</u>
2	Electronic Computing Scales
4	Medium-Capacity Scales
5	Vehicle and Axle-Load Scales
6	Meat Beams and Monorail Scales
7	Livestock and Animal Scales
8	Retail Motor-Fuel Dispensers
10	Package Checking
13	Hopper Scales
19	Loading-Rack Meters
20	Vehicle-Tank Meters
21	Liquefied Petroleum Gas - Liquid-Measuring Devices
22	Commodity Regulations
23	Intro. to W & M Regulation
24	Introduction to NIST Handbook 44
27	Electronic Weighing and Measuring Systems

VIETNAM

The main types of training courses on metrology are the following:

- Training course on legal metrology;
- Basic training course on different kinds of measurement (mass, length, pressure, volume, etc.);
- Follow-up training course;
- Measurement and calibration skills training; and
- Verification testing training.

3. ***Organisations involved in training.***

3.1 *Which are the organisations involved in conducting the above training courses?*

3.2 *Does any of these or other organisations prepare training manuals or training material for use by the organisations conducting the training? List the organisations and their addresses.*

AUSTRALIA

3.1 Most formal courses are provided through the Australian Technical and Further Education system with colleges in most large to medium centres of population.

3.2 Training material has been prepared for the TAFE correspondence course for Trade Measurement Inspectors.

The Calibration Technician Training Course comprises about thirty individual modules covering most aspects of metrology. The modules are related to measurement skills competency standards.

CANADA

Technical training is the responsibility of the National Technical Training Committee. The Committee is mandated to ensure that measurement competency standards are applied consistently throughout the organization.

3.1 The majority of the technical training involved within the Legal Metrology Branch is carried out by specially trained internal inspection staff. Training has been developed for staff on measurement uncertainties, on net quantity measurement and on quality assurance and auditing techniques. When in-house expertise is not available, contracts are developed with recognized training institutions. These training contracts are developed on an as needed basis.

3.2 Modules have been developed in-house for the ongoing training. There is presently an extensive set of training materials for Weights and Measures training requirements. Similar materials are in the draft form for Electricity and Gas requirements.

Any other training materials are usually supplied by the training organization when we contract their services. We do not have an established list of suppliers.

REPUBLIC OF CHINA

3.1 Organisations.

China State Bureau of Technical Supervision (CSBTS)
No.4 Zhichunlu Haidian
PO Box 8010
Beijing 100088

National Institute of Metrology (NIM)
No. 7 District 11, Hepingli
Beijing

3.2 Training manuals or training material - Yes, as in 3.1

INDONESIA

3.1 Organisations.

- The Trade Training Centre,
- The Directorate of Metrology, and
- The Bandung Institute of Technology.

Address: The Directorate of Metrology
Jl. Pasteur No. 27, Bandung.
The Bandung Institute of Technology
Jl. Ganeca No. 10, Bandung.

3.2 Training manuals or training material - Yes

JAPAN

3.1 Organisations

The training course is coordinated by the Japan International Cooperation Agency (JICA). Lectures and practical training are provided by the following organisations:

Tsukuba International Center,
Japan International Cooperation Agency (JICA)
3-6 Koyadai, Tsukuba, Ibaraki 305, JAPAN

National Research Institute of Metrology (NRLM)
1-4-1- Umezono, Tsukuba, Ibaraki 305, JAPAN

Tokyo Metropolitan Inspection Institute for Weights and Measures
1-7-4 Kaigan, Minato-Ku, Tokyo 108, JAPAN

Japan Electric Meters Inspection Corporation (JEMIC)
4-15-7 Shibaura, Minato-Ku, Tokyo 108, JAPAN

Japan Quality Assurance Organisation (JQA)
1-21-25 Kinuta, Setagaya-Ku, Tokyo 157, JAPAN

3.2 Training Manuals and Materials

The course is designed specifically for the Japanese legal system and facility. Course materials are hardly of general use for training in the region.

REPUBLIC OF KOREA

- Measurement and Calibration skills training.
24 Training Organizations designated by KIAA including Korea Research Institute of Standards and Science (KRISS) and Korea Association of Standards and Testing Organizations (KASTO);
- Verification testing training.
Korea Association of Standard and Testing Organizations (KASTO).

The training manuals or training material are prepared by KIAA or each of the above training organizations.

MALAYSIA

3.1 Organisations

SIRIM and private companies conduct courses on measurement and calibration skills.

Ministry of Domestic Trade and Consumer Affairs and SIRIM conduct courses on verification.

SIRIM, Persiaran Dato Menteri, Peti Surat 7035, 40911 Shah Alam, Selangor, Malaysia.	Enforcement Division, Ministry of Domestic Trade and Consumer Affairs, 24th Floor, Putra Place, 100 Jalan Putra, 50622 Kuala Lumpur, Malaysia.
--	--

3.2 Training manuals or training material

The above training material on verification is prepared by SIRIM and the Ministry of Domestic Trade.

NEW ZEALAND

- Pattern approval testing training
- Verification/Certification testing training

Trade Measurement Unit (TMU)

- Verification testing training.

Ministry of Consumer Affairs
Trade Measurement Unit
PO Box 1473
Wellington
New Zealand

SINGAPORE

The Weights and Measures Office conducts on-the-job verification testing training for its newly appointed Artificers or Inspector of Weights and Measures.

CHINESE TAIPEI

3.1 Organisations involved in conducting the training courses:

- National Bureau of Standards(NBS);
- National Measurement Laboratory (NML); and
- Weights & Measures Verification Offices

3.2 Each training course is conducted on a case-by-case basis, thus the training material is prepared for every course, but not the training manual.

THAILAND

3.1 Organisations

Weights and Measures Division
Department of Commercial Registration
Ministry of Commerce

3.2 Yes, the Weights and Measures Division prepares all training manuals and materials used for conducting the training.

UNITED STATES OF AMERICA

3.1. Organisations

Federal, State, and Local weights and measures programs are involved in providing the training in addition to the NIST Weights and Measures Program.

3.2. Most use the modules listed in 2 as the basis for training courses.

VIETNAM

3.1 The Training Center for Standardization Metrology and Quality (TC) belong to STAMEQ;

Vietnam Metrology Institute (VMI) under STAMEQ; and
Quality assurance & testing centre 3 (QUATEST 3) under STAMEQ.

3.2 Yes, there are some organizations that prepare training manuals and materials including the training center. They are:

- Training Center under STAMEQ.
Address: Nghia Do, Tu Liem, Ha Noi
- Vietnam Metrology Institute (VMI) under STAMEQ
Address: Nghia Do, Tu Liem, Ha Noi
- STAMEQ headquarters
Address: 70 Tran Hung Dao Str., Ha Noi
- Quality assurance & testing centre 3 (QUATEST 3) under STAMEQ
Address: 49 Pasteur Str., Ho Chi Minh City

4. *Course duration.*

What is the duration of the courses in terms of weeks or months?

AUSTRALIA

The Correspondence Course for Trade Measurement Inspectors is a four year part-time course.

CANADA

The technical training for inspection staff is usually covered in two phases of training. The introductory phase and an advanced phase. Both phases are five weeks in length, broken into two and three week sessions. These sessions are conducted at various in-house training schools which have been equipped with the devices, standards and projection equipment required to deliver the training.

Other specialized training sessions usually run from several days to a week in length.

REPUBLIC OF CHINA

Three days to one week.

INDONESIA

About 12 months for each stage of training course.

JAPAN

The course duration is five months.

REPUBLIC OF KOREA

From 2 days to three weeks

MALAYSIA

Measurement and calibration skills - one week or less.

Verification - 2 weeks.

NEW ZEALAND

- (b) Criterion Referenced Instruction (CRI) (Mager and Pipe)
Self paced training, time dependent on trainee.

Under Section 26(3) Weights and Measures Act 1987 trainee inspectors are appointed for a period of 2 years. They are therefore expected to complete the courses within this time frame.

SINGAPORE

From one week to one month.

CHINESE TAIPEI

Duration is not fixed, normally less than a week.

THAILAND

The duration of each course stated above is about 1 week.

UNITED STATES OF AMERICA

Course durations vary by course but typically last 5 to 10 days.

VIETNAM

Training course on legal metrology (2-3 days);
Basic training courses (1-4 weeks);
Follow-up training course (1 week);
Measurement and calibration skills (1-4 weeks); and
Verification testing training (1-2 weeks).

5. *Training Material*

Would you participate in the preparation of common training material for use in Asia-Pacific economies?

AUSTRALIA

Measurement skills are the most important factor in the measurement process. Mutual confidence in measurement capability will depend on the development of harmonised training. Common training material based on agreed measurement competency standards will support regional mutual recognition agreements, and Australia will support the preparation of common training material.

CANADA

Yes, Canada would be willing to participate.

REPUBLIC OF CHINA

It depends.

INDONESIA

We will consider it.

JAPAN

We are interested in making the common material.

REPUBLIC OF KOREA

Yes. We are interested in making the common material.

MALAYSIA

Yes.

NEW ZEALAND

Depends on resources available at the time the program is developed.

SINGAPORE

We would not participate in the preparation of common training material for use in the Asia-Pacific economies.

CHINESE TAIPEI

Yes.

THAILAND

Yes, we would participate in the preparation of common training material for use in Asia - Pacific economies.

UNITED STATES OF AMERICA

Our participation would depend on the scope of the activity. However, we would be prepared to provide resource materials and technical assistance in this project.

VIETNAM

We would like to.

6. ***Educational requirements.***

Are there any special educational requirements for participants for the various courses - e.g.

- *Post secondary level.*
- *College level.*
- *University level.*

AUSTRALIA

The courses described above are post secondary, i.e. we follow on from six years of secondary education.

CANADA

Inspectors coming into the Legal Metrology Branch have a technical college level certificate in electronic or electrical engineering or other suitable metrological discipline.

REPUBLIC OF CHINA

College level or experiences.

INDONESIA

Senior High School level for the First Stage Course e.g. Training Course for Metrology Controller.

JAPAN

University graduates or equivalent with English proficiency.

REPUBLIC OF KOREA

Senior High School level or experiences.

MALAYSIA

Most participants for the above two courses have secondary or post secondary level education.

NEW ZEALAND

Yes, completion of college level.

SINGAPORE

The minimum education requirement for an Inspector of Weights & Measures is secondary education (GCE "O" Level).

CHINESE TAIPEI

The minimum educational requirement is post secondary level.

THAILAND

Yes, there are. The participants must have education of at least to college level.

UNITED STATES OF AMERICA

Federal, State, and Local weights and measures programs may establish educational requirements according to the needs of their programs. The NIST Weights and Measures Program does not establish educational requirements.

VIETNAM

Yes, college level or experiences.

7. ***Overseas training.***

7.1 *Has training been provided by your organisation to officials from other countries?*

7.2 *Have officers of your organisation received training overseas?*

AUSTRALIA

7.1 The National Standards Commission in association with State and Territory Trade Measurement authorities have over the last decade provided training for 1-3 months for inspectors from economies in the Asian and Indian-Pacific Ocean regions.

7.2 No.

CANADA

7.1 Canada has provided training for inspection staff from other countries and has in the past sent a trainer to another country to provide training to their staff.

7.2 A number of our laboratory calibration technologists have been able to take advantage of technical training offered in the United States by the National Institute of Standards and Technology.

REPUBLIC OF CHINA

7.1 Yes.

7.2 A few persons.

INDONESIA

- 7.1 No, we have not provided training to officials from other countries.
- 7.2 Yes, officers from our organisation have received training overseas.

JAPAN

- 7.1 The course is available to the legal metrology practitioners from developing countries.
- 7.2 No Japanese official has received overseas training so far.

REPUBLIC OF KOREA

The Korean International Cooperation Agency (KOICA) training program has covered the legal metrology area since 1983. The training period is about two weeks, accepting 13 trainees per year from 18 countries including Asian, South American and Eastern European countries. Trainees will have lectures and in-laboratory practices in selected fields of measurement standards at KRISS. Applicants must have enough English proficiency and experience in legal metrology. More than 250 trainees have completed these courses so far.

MALAYSIA

- 7.1. Training has been provided to officers from Brunei Darussalam.
- 7.2. Yes, our officers have received training in England and Germany in the last 2 years.

NEW ZEALAND

- 7.1 Yes
- 7.2 Yes

SINGAPORE

- 7.1 No training been provided to officials from other countries.
- 7.2 No.

CHINESE TAIPEI

7.1 No.

7.2 Yes.

THAILAND

7.1 No, our organisation has not provided training courses to officials from other countries.

7.2 Yes, our officers have received overseas training.

UNITED STATES OF AMERICA

7.1. Yes

7.2. Yes

VIETNAM

7.1 Yes, we have provided some training courses on metrology for Laos.

7.2 Yes, but not all.

8. *Measurement Competencies.*

Measurement Competency Standards define the skills necessary to carry out the measurement and calibration tasks performed within an industry or professional group. These competency standards are developed when the required level of skills expected in specific employment are identified.

Once the competency standards have been identified they can then be used to develop training courses. The training courses are designed to first develop the knowledge and skill required by the competency standard and then to give the opportunity to demonstrate achievement of the competency.

If this approach to training is established within trade measurement/legal metrology in the region it would ensure that:

- the skill needs across the region are being identified and met in a consistent way;
- a consistent training program to the required standard is established;
- individual differences could be catered for without a loss of consistency; and
- training can be developed to meet the specific competency needs in legal metrology.

8.1 Have measurement competencies been established within your organisation?

8.2 If yes, in what measurement areas have they been developed?

(see also No. 2).

8.3 *Would you participate in the establishment of a working group to develop competency standards in legal metrology for use in the region?*

AUSTRALIA

The National Standards Commission believes there is a need for a more integrated approach to the development of measurement skills. The traditional and/or established areas of metrology e.g. surveying, trade measurement, calibration and testing laboratories, analytical chemistry laboratories, and primary standards laboratories have each developed distinctive "cultures" of metrology. In addition, there are further differences within each category between different economies.

Globalisation, mutual recognition and market place reform will require these diverse approaches to measurement to be replaced by a single international system. Such an approach can be facilitated by development of measurement skills competency standards and associated training modules.

8.1 Yes, competency standards are being developed in many industrial and manufacturing areas to inform the development of more effective training. The National Standards Commission is actively liaising with Industry Training Advisory Bodies to ensure the measurement and calibration skills receive an appropriate emphasis when competency standards are being developed.

8.2 To date measurement competencies have been developed by:

- the metals and engineering industries which covers dimensional metrology, instrumentation and process control, electric/electronic to the technician level.
- the chemical industry to cover analytical chemical metrology skills to the technician level. Preliminary work has commenced to develop chemical metrology skills to the profession level.

It is also planned to develop measurement competencies in trade measurement in the near future.

8.3 Yes, to establish a set of regional competency standards in legal metrology is the first step in ensuring consistency in trade measurement and legal metrology training across the region. This will then lead to greater confidence in the consistency of measurement for trade purposes across the region.

CANADA

8.1 Measurement Competency Standards have not been established.

8.3 Yes, Canada would be willing to participate.

REPUBLIC OF CHINA

8.1 and 8.2 China has a collection used for the examination of the persons who engage in verification of all kinds of common measuring instruments. But these are not the competencies standard and in Chinese.

8.3 Yes

INDONESIA

8.1 Yes, we have established measurement competencies within our organisation.

8.2 In the measurement areas of verification of mass and balances, volume measurement and flow measurement.

8.3 Yes, we will consider participation in the establishment of competency standards.

JAPAN

8.1 There is no distinct measurement competency standard in Japan.

8.3 Establishing competency standards should be very beneficial not only for the regional training but also for the restructuring of domestic training system in each member economy including our country. We are interested in the establishment of competency standards.

REPUBLIC OF KOREA

8.1 No. At present there are no measurement competency standards in Korea.

8.3 Yes

MALAYSIA

8.1 Measurement competencies have been established in the areas of mass, length, volume and flow (limited).

8.2 At the primary standards level, competencies have been well established in SIRIM.

NEW ZEALAND

8.1 Yes as a part of the CRI program.

8.2 The CRI training program e.g. Standards, Inspection.

8.3 Depends on resources available at the time the program is developed.

SINGAPORE

I think measurement competencies has been established within Weights & Measures Office as far as verification testing is concerned.

CHINESE TAIPEI

8.1 and 8.2

At present, the Laboratory Head and Laboratory Assessor training courses are designed to establish measurement competencies standard. A comprehensive competency standard is expected to be included in the metrologist licensing system which is currently under debate to be adopted in the revision of Weights and Measures Law.

8.3 Yes.

THAILAND

8.1 Yes, our organisation has established measurement competencies.

8.2 Mass calibration;
Truck scale verification;
Loading rack flow meter verification; and
Prepackaged goods inspection.

8.3 Yes, we would participate in the establishment of a working group to develop competency standards in legal metrology for use in the region.

UNITED STATES OF AMERICA

8.1. The NIST Weights and Measures Program has not established the type of "measurement competencies" described in this question.

8.2. Not applicable

8.3. Not at this time. We may consider participation after the scope of the program is more clearly defined.

VIETNAM

8.1 Measurement competency standards have not been established.

8.3 Yes, but depends on resources available at the time the program is developed.

9. ***Program for staff exchange.***

Would you participate in a program of staff exchange among members of the Asia-Pacific economies?

AUSTRALIA

Staff exchanges can be valuable in specialised testing areas e.g. EMI, load cell testing and the National Standards Commission would support this form of staff exchange.

CANADA

Yes, Canada would be willing to participate.

REPUBLIC OF CHINA

Yes.

INDONESIA

Yes, but we have budget problems.

JAPAN

We are interested in participating in the exchange program.

REPUBLIC OF KOREA

Yes, Korea would be willing to participate.

MALAYSIA

We would participate in a program of staff exchange.

NEW ZEALAND

Depends on resources available at the time the program is developed.

SINGAPORE

Not sure.

CHINESE TAIPEI

Yes.

THAILAND

Yes, we would participate in a program of staff exchange among members of the Asia - Pacific economies.

UNITED STATES OF AMERICA

Participation in a program of this type would be considered.

VIETNAM

Yes, Vietnam would be willing to participate.

10. ***Organising/hosting of training courses.***
Would you participate in organising or hosting training courses for members of Asia-Pacific economies?

AUSTRALIA

The National Standards Commission is prepared to continue to offer training courses in Australia for legal metrology officers in the region. However we believe this is only appropriate for specialised areas of metrology or for small island state economies. Most training would be best conducted in-country and on a continuing basis.

CANADA

Canada is not able to participate at this time.

REPUBLIC OF CHINA

It depends on funds. Sometimes our government provides the funds for training.

INDONESIA

Yes, but we have budget and language problems.

JAPAN

As we have described, the JICA training course has been provided to trainees from developing countries all over the world. Our contribution to the legal metrology training in the region would be based on this course and on our experiences from this course. When detailed training needs in the region become clearer, we would respect such needs and like to reflect them into the revision of our course curriculum.

REPUBLIC OF KOREA

The KOICA training course has been provided to trainees from developing countries all over the world. Our contribution to the legal metrology training in the region would be based on this course and on our experiences from this course. When detailed training needs in the region become clearer, we would respect such needs and like to reflect them into the revision of our course curriculum.

MALAYSIA

In principle would be interested in organising or hosting training courses if further details could be provided.

NEW ZEALAND

Depends on resources available at the time the program is developed.

SINGAPORE

No.

CHINESE TAIPEI

Yes.

THAILAND

We are not ready to Organise or host training courses for members of the Asia - Pacific economies.

UNITED STATES OF AMERICA

Yes.

VIETNAM

Yes, we would like to.

11. **Funding**

Would your organisation be able to sponsor or host training courses to cater to the needs of Asia-Pacific economies?

AUSTRALIA

All training courses and staff exchanges would need to be funded from the Australian Overseas Development Assistance administered by AUSAID. Such training assistance normally requires a request from the government requiring assistance.

CANADA

Canada is not able to participate at this time.

REPUBLIC OF CHINA

-

INDONESIA

No, we are unable to.

JAPAN

At this moment we do not have any financial resource to sponsor or host training courses in addition to the JICA training course described above. For many years, the basic principle of our economic aid could be described as "bilateral support based upon request". It is thus difficult to sponsor such a multilateral training project as long as this principle is kept unchanged. Recent APEC discussions have made the Japanese aid officials note the emerging needs to support, by various means, multilateral projects in the region. This may result in some change in the basic principle.

REPUBLIC OF KOREA

We have no financial resources to sponsor or host training courses in addition to the KOICA training course.

MALAYSIA

It may be possible to sponsor or host training courses if sufficient details regarding cost, type of training, number of participants and the countries they represent could be supplied in advance.

NEW ZEALAND

Dependent on availability of funds from organisation(s) within New Zealand to provide foreign aid.

SINGAPORE

No.

CHINESE TAIPEI

Yes, to our maximum possible extent.

THAILAND

Currently our organisation would not be able to sponsor or host training courses to cater to the needs of Asia - Pacific economies.

UNITED STATES OF AMERICA

No.

VIETNAM

We are able to host training courses and sponsor partly, depending on the circumstances.