ASIA–PACIFIC LEGAL METROLOGY FORUM

AGENDA

Fifth Asia–Pacific Legal Metrology Forum
25 – 27 October 1998

Duksu Hall, Radisson Seoul Plaza Hotel
REPUBLIC OF KOREA

REGISTRATION OF DELEGATES

24 October 1998 (Saturday)  13:00 – 18:00
25 October 1998 (Sunday)    08:00 – 08:50

FORUM MEETING

14:00 – 17:30    Monday 26 October 1998
09:00 – 17:30    Tuesday 27 October 1998

Chairman of Forum meeting:
Dr. Myung-Sai Chung
President, Korea Research Institute of Standards and Science (KRISS)

1. Welcome by Dr. Myung-Sai Chung
   President, Korea Research Institute of Standards and Science (KRISS)

2. Opening Remarks by Mr John Birch AM
   Convenor of APLMF

3. Confirmation of the Report of the Fourth Forum held in Tsukuba, Japan from 22
   September–3 October 1997.

4. Attendance/apologies of members at Forum meeting.

5. Report of the APLMF by the Convenor, Mr John Birch AM, including report by the
   APLMF Executive Committee.

6. Introductory discussion on the “Memorandum of Understanding” for members of the
   Asia–Pacific Legal Metrology Forum
   7.1 Working Group on Mutual recognition arrangements;
   7.2 Working Group on Goods packed by measure;
   7.3 Working Group on Intercomparison testing;
   7.4 Working Group on Rice moisture measurement;
   7.5 Working Group on Utility meters;
   7.6 Working Group on Training.

8. Report on training workshops/seminars held in Shanghai, PR China:
   8.1 Introduction to High Capacity Weighing held on 31 August–2 September 1998;
   8.2 Implementation of OIML R 76 held on 3–10 September 1998 in Shanghai.

9. Report on progress of the Forum Work Plan:
   • Publication of *Directory of Legal Metrology in the Asia-Pacific, Second Edition*;
   • Working Group on Rice Moisture Measurement;
   • Working Group on Medical Measurements with a project on sphygmomanometers (blood pressure meters);
   • Translation of the legislation into English for those economies where their legislation is currently not in English;
   • Survey on involvement of consumers with the Forum and to determine ways in which they can participate in Forum activities;
   • Intercomparison on Load cells and Mass;
   • Workshop on Implementation of R 76 in Shanghai;
   • Translation of the R 76 video into languages other than English (Indonesian, Spanish, French and others);
   • Development of a Train-the-Trainer course on Verification and Reverification of Non-automatic Weighing Instruments;
   • Extend the survey on Goods Packed by Measure by obtaining information from other economic areas;
   • Contact CIML on the establishment of an international system of certification of packers of goods packed by measure and accreditation applied to such certification;
   • Finalization and publication of resource document on modernisation of legislative and administrative systems;
   • Revision of survey on Utility Meters to include heat meters and on refurbishment/reconditioning of utility meters;
   • Approach CIML to give high priority to utility meter recommendations and their incorporation in the OIML Certificate System;
   • Approach CIML to develop International Recommendations on statistical sampling plans;
   • Secretariat to circulate information on metrological control of telephone meters and consideration be given to a presentation on this issue at the Forum meeting in 1998;
• Development of a workshop/seminar on Introduction to High Capacity Weighing;
• Secretariat to circulate proposed elements on mutual recognition agreements together with outcomes of APEC SCSC Round Table on Mutual Recognition and WELMEC Type Approval Agreement;
• Facilitate access of members to APLMF internet web site;
• Establish a program on analysing the economic impact of legal metrology within member economies and the region;
• Secretariat to notify all members of their APEC SCSC representative and provide information on APEC issues relevant to legal metrology;
• Secretariat to liaise with OIML in making submission to the World Trade Organisation (WTO) on harmonisation of metrological regulations;
• Secretariat to facilitate the entry of OIML and other regional legal metrology organisations as Corresponding Members of APLMF.

10. Discussion on temperature correction of petroleum sales.

11. Development of programs in other areas of legal metrology e.g. telephone metering.

12. Discussion on APEC Standards and Conformance issues and report of meeting between Specialist Regional Bodies (SRBs) (APLAC, APLMF, APMP, PAC, PASC) and APEC Standards and Conformance Sub-Committee held on 7–8 September 1998 in Kuantan, Malaysia.

13. Discussion on OIML issues.

14. Discussion on liaison with other regional legal metrology organisations.

15. Discussion on bilateral and multilateral assistance for development of legal metrology in the region.


17. Final consideration of "Memorandum of Understanding" for members of the Asia-Pacific Legal Metrology Forum and endorsement by APLMF members.

18. Discussion on elections for Convenor and Secretariat for APLMF in the next four year term.

19. Date and location of next Forum meeting in 1999.
REPORT OF THE FIFTH APLMF MEETING

1. Welcome by Dr. Myung-Sai Chung, President, Korea Research Institute of Standards and Science (KRISS)

Dr. Myung-Sai Chung, the Chairman for the fifth Forum welcomed delegates to the Forum in Seoul, Korea.

He stressed the importance of harmonisation of metrological activities at the regional and international levels and stated that closer cooperation amongst the Forum members was essential for its success.

He was confident the Forum’s deliberations over the next few days will result in a program of activities for the benefit of the Forum and the Asia–Pacific region.

He thanked the Convenor, Mr John Birch, Mr Seung-Bae Lee, Director General of KNITQ and staff at KNITQ for their efforts in the preparation for the meeting and officially declared the meeting open.

2. Opening Remarks by Mr John Birch AM, Convenor of APLMF

Mr Birch welcomed delegates to the Forum meeting.

He thanked the Chairman, Dr Chung and the organising committee and staff members from KNITQ for their efforts in the organisation and hosting of the Forum meetings in Seoul, Korea.

He was pleased that a very large number of representatives from industry and other organisations were attending the Forum and many had also attended the Working Groups meetings. The APLMF had provided simultaneous translation of the proceedings into the Korean language to facilitate ease of understanding.

He informed members that the Working Groups on Mutual recognition arrangements, Goods packed by measure, Intercomparison testing, Rice moisture measurement, Utility meters and Training held meetings and the respective Chairman of the Working Groups will present recommendations to the Forum.

2.1 Roll call

A roll call of economies present was taken. The roll call confirmed a total of sixteen member economies present. The following international and regional organisations attended as observers, namely OIML, SALMEC and WELMEC. Mrs Annabi Ghaiet El Mouna from the Republic of Tunisia and Dr K Birkeland also attended as observers.

A list of delegates and observers attending the Forum is attached in Appendix 1.
3. Attendance/apologies of members at Forum meeting.

The Forum noted that:

3.1 Brunei Darussalam and INDECOPI, Peru had conveyed apologies for inability to attend the Forum.

3.2 The following organisations have been accepted as corresponding members of APLMF, namely OIML, WELMEC, SALMEC, SIM, IOLMF and the specialist regional bodies namely APLAC, APMP, PAC and PASC.

3.3 The national measurement standards organisation in Columbia, Industria y Comercio, Centro de Control de Calidad y Metrologia (CCCM) had applied to join the Forum as a member.

Dr S. Chappell (USA) seconded Colombia’s application and the Forum agreed to invite Colombia to join the Forum.


The Report of the fourth Forum held in Tsukuba, Japan was confirmed and accepted by the Forum.

5. Report of the APLMF by the Convenor, Mr John Birch AM, including report by the APLMF Executive Committee.

Mr Birch presented the Report to the members. The report noted that:

- Since the establishment of the Forum four years ago, the program activities have shown rapid expansion. This was made possible through the strong commitment of members and he thanked them for their cooperation.

- During the year, the Forum’s main focus was on enhancing technical capability through development and conducting of training courses, the raising of the profile of legal metrology and developing policies for modernisation of legal metrology in the region.

- Mutual recognition will be a major focus of the 1998 Forum and CIML meetings and legal metrology authorities have a major responsibility in this regard in coordinating their national measurement system particularly through harmonisation of legislative provisions.

- A more formal structure for the Forum was appropriate and the Forum consider the finalisation of the draft MoU at this meeting.

- The Executive Committee which was established last year was valuable in providing advice on a range of issues.

The Convenor’s Report is attached in Appendix 2.
6. **Introductory discussion on the “Memorandum of Understanding” for members of the Asia-Pacific Legal Metrology Forum**

Mr Birch informed members that there has been significant progress on the drafting of the MoU and that additional comments on the fifth draft had been received from members. The main issues to be considered by members on the MoU were:

### 6.1 Fee structure

The members noted the proposal on the fee structure circulated by the secretariat in Circular 20 in August and that the fees proposed will only partially subsidise the cost of the operation of the secretariat.

Mr Birch informed members that two other regional bodies, the APMP and APLAC, had also proposed the introduction of membership fees. The APLMF formula comprises a three category fee structure with economies categorised into one, two or four units, where one unit equals $US588 which would raise a total of $US20,000 among the current membership of twenty-two economies.

### 6.2 Term of the Convenor

Currently, the draft MoU specifies a four-year term. It was proposed that this term be reduced to two years, with provision for a further two years, to minimise the initial commitment of the responsible economy and provide greater flexibility.

### 6.3 Convenor and Secretariat

Currently, the economy providing the Convenor also provides the Secretariat. Members were requested to consider the existing arrangement or the option of establishing a separate full time secretariat for the APLMF.

### 6.4 Views of members

Member economies considered the above and the following views were expressed:

- **Australia**
  - Support fee structure proposal (raising US$20,000)
  - Support a two-year term (with provision for extension of another two years)
  - Secretariat to remain with economy providing the Convenor

- **Canada**
  - Support fee structure proposal
  - Support a two-year term
  - Secretariat to remain with economy providing the Convenor

- **China**
  - Support fee structure proposal
  - Support Mr Birch for a further one year term
<table>
<thead>
<tr>
<th>Country</th>
<th>Support</th>
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<tbody>
<tr>
<td>Hong Kong China</td>
<td>Support a two year term</td>
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<tr>
<td>Indonesia</td>
<td>Support the proposals</td>
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<tr>
<td>Japan</td>
<td>Support a two-year term</td>
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<td>Korea</td>
<td>Support the proposals</td>
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<td>Mongolia</td>
<td>Support the proposals</td>
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<td>New Zealand</td>
<td>Support the MoU</td>
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<td>Support a two + two year term</td>
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<td>Secretariat to remain with economy providing the Convenor</td>
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<td>Papua New Guinea</td>
<td>Support the MoU</td>
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<td>Russia</td>
<td>Support the MoU</td>
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<td>Chinese Taipei</td>
<td>Support the proposals</td>
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<td>Thailand</td>
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<td></td>
<td>Support fee structure proposal No. (ii)</td>
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<tr>
<td>USA</td>
<td>Support John Birch as Convenor</td>
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<td></td>
<td>Support a two + two year term</td>
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<td>Secretariat to remain with economy providing the Convenor</td>
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<td>Support the supplementary budget proposal</td>
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<td>Vietnam</td>
<td>Support the MoU</td>
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<td>Support a two + two year term</td>
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<td>Secretariat to remain with economy providing the Convenor</td>
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The Forum agreed that a Working Group comprising members of the Executive Committee (Australia, Canada, Japan, Malaysia) and other member economies wishing to contribute, finalise the details of the MoU and report to the Forum meeting. Members of the Executive Committee and New Zealand and USA met and prepared a sixth draft MoU which was discussed under Item 17 of the agenda.


7.1 **Working Group on Mutual recognition arrangements**

Mr Birch who chaired the Working Group on Mutual recognition presented the Report of the WP. The Forum thanked Dr Chappell for the presentation of the comprehensive report on the development of mutual recognition agreement on pattern evaluations at the WP meeting.
The Forum endorsed the recommendations of the Working Group and adopted the following resolutions:

**Resolution 1:**
APLMF supports the development of an Asia-Pacific Mutual Recognition Agreement on Pattern Evaluation which is complementary to the OIML Agreement but allowing recognition of capability in individual tests and to be open to all Forum members.

**Resolution 2:**
APLMF recognises that Mutual Recognition Agreement would have significant impact on industry and urged that Forum members discuss these issues with industry in their economy.

**Resolution 3:**
Member economies be asked to prepare a profile of their pattern approval capability to improve confidence between Forum members.

The text of the report is attached in Appendix 3.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.

### 7.2 Working Group on Goods packed by measure

Mr John Barker (New Zealand) who chaired the meeting of the Working Group presented the report to the Forum.

The Forum considered the report and recommendations of the Working Group and adopted the following resolutions:

**Resolution 4:**
The Secretariat finalise the survey to other regions, on prepacked goods particularly relating to requirements for standard sizes, permitted deficiencies due to dehydration and drained weights.

**Resolution 5:**
APLMF requests the OIML to give priority to extending the OIML recommendation on nett contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.

**Resolution 6:**
APLMF requests OIML to consider developing an international system of marking of labelled measurement to facilitate international trade in prepacked goods (this would be an extension of the European E mark system).

The text of the report is attached in Appendix 4.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.
7.3 Working Group on Intercomparison testing

Mr Birch who chaired the Working Group meeting presented the report of the WP.

The Forum received the reports on progress of the intercomparisons of Non-automatic weighing instruments and Load Cells and adopted the following resolutions:

Resolution 7:
APLMF secretariat to circulate the results of the intercomparisons to participants for their comments before finalisation of the report.

Resolution 8:
The Secretariat to investigate if there are other members of the Forum who now wished to participate in the intercomparisons and if so to accommodate them in a supplementary round of intercomparisons.

Resolution 9:
The Secretariat to circulate a questionnaire to members requesting them to indicate their interest in participating in a mass intercomparison, following the report of the mass intercomparison conducted by the APMP.

Resolution 10:
The Forum to consider organising an intercomparison on master meters to identify flow measurement capability.

The text of the report is attached in Appendix 5.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.

7.4 Working Group on Rice moisture measurement

Ms Kerry Marston (Australia) who chaired the WP meeting presented the report. A report on progress of the investigation if rice moisture measurement was presented to the WP and suggestions for future work for 1999 were proposed.

The Forum considered the report and adopted the following resolutions:

Resolution 11:
The Forum continues to seek a suitable expert to conduct a study within Thailand and Vietnam on the rice moisture measurement problem.

Resolution 12:
The Forum contacts the manufacturers of the most commonly used instruments regarding the specifications.
Resolution 13:
The Forum encourages those economies that have not yet replied to the questionnaire on rice moisture measurement, to do so.

The text of the report is attached in Appendix 6.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.

7.5 Working Group on Utility meters
Mr Rene Magnan (Canada) who chaired the WP meeting presented the report.

The Forum considered the report of the WP and adopted the following resolutions:

Resolution 14:
APLMF to finalise the survey report with the inclusion of information on heat meters and the refurbishment or reconditioning of utility meters.

Resolution 15:
The Forum noted the progress in developing an OIML recommendation on Water Meters and requested CIML to give priority to developing an International Recommendation for electricity meters that would allow their incorporation in the OIML certificate system.

Resolution 16:
APLMF to request CIML to give priority to developing statistical sampling plans that may be applied for the reverification of utility meters.

The text of the report is attached in Appendix 7.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.

7.6 Working Group on Training
Ms Kerry Marston (Australia) who chaired the WP meeting presented the report. A report of the training activities for 1998 was presented and suggestions for the training program for 1999 were proposed.

The Forum considered the report and adopted the following resolutions:

Resolution 17:
APLMF completes the train the trainer course for the verification of non-automatic weighing instruments to be trialed in the first half of 1999 and organise a full course in the second half of the year.
Resolution 18:  
APLMF develops the train the trainer course for the pattern approval and verification of driveway petroleum and LPG dispensers.

Resolution 19:  
APLMF develops a regional Directory of Training and a regional network of metrology training providers.

Resolution 20:  
APLMF promotes the training module on Pattern Approval of Non-automatic Weighing Instruments and that further workshops be organised as requested.

The text of the report is attached in Appendix 8.
The list of delegates and observers to the Working Group meeting is attached in Appendix 9.

7.7 Recommendations for Additional Working Group Activities

In considering additional working group activities for 1998/99, the Forum adopted the following resolutions:

Resolution 21:  
The activities of the Working Group on Medical Measurements be activated.

Resolution 22:  
APLMF establish the following new Working Groups on:

i).  Taximeters;
ii). Metrological control of measurements in international trade of bulk commodities; and
iii). Environmental measurements.

The Secretariat will prepare the scope, functions and target outcomes of the proposed Working Groups and circulate to members to indicate their interest in participation.

8. Report on training workshops/seminars held in Shanghai, PR China:

8.1 Introduction to High Capacity Weighing held on 31 August–2 September 1998

Ms K Marston presented the report of the introductory workshop on high capacity weighing which was held recently at the Shanghai International Training Center. The course was very well received with twenty-four participants from fourteen member economies and one economy outside the Region attending the course.

The Forum acknowledged the contribution from the NSC and the CSBTS which jointly organised and funded the workshop and presentations of the technical
experts Mr Ian Hoerlein from the NSC and Mr Wang Xingfang from the China National Rail Transport Supervision Metrology Centre.

The course concluded with a technical visit to a major steel manufacturer where the participants saw the use of many different types of high capacity weighing instruments.

8.2 Implementation of OIML R 76 held on 3–10 September 1998 in Shanghai.

Ms K Marston presented the report of the train the trainer module for the Implementation of OIML R 76 which was held recently at the Shanghai International Training Center. This module was developed as a collaborative project between NSC and the CSBTS using the competency based training approach and consists of a Procedure Manual, Trainers Manual and Training Video.

The course was very well received with thirty participants from fifteen member economies and one economy outside the Region attending the course.

The Forum acknowledged the contribution from the NSC and the CSBTS which jointly organised and funded the workshop and presentations of the technical experts Mr Keith Mann from the NSC, Prof. Shi Changyan from NIM and Mr Wang Zhenwen from Qingdao National Weighing Instrument Testing Center, CSBTS.

8.3 Mr B Athane congratulated the APLMF on the work done on the development of training modules and conducting training workshops and proposed establishing closer cooperation between OIML and APLMF to further the development of training.

Resolution 23:
APLMF to investigate the establishment of closer cooperation with OIML in the development of training courses.

8.4 Mr John Barker proposed a vote of thanks to the APLMF on behalf of all the participants who attended the training courses in Shanghai.

9. Report on progress of the Forum Work Plan:

The Forum discussed the various activities under the Work Plan and noted the following actions were taken:

- Publication of Directory of Legal Metrology in the Asia-Pacific, Second Edition. The Directory was published in June this year and copies were circulated to all members. The Directory has provided valuable information on the legal
metrology systems in member economies and in this second edition, twenty-two member economies provided entries to the Directory for publication.

- Working Group on Rice Moisture Measurement.
  *This is discussed in Clause 7.4.*

- Working Group on Medical Measurements with a project on sphygmomanometers (blood pressure meters).
  *This is discussed in Clause 7.7.*

- Translation of the legislation into English for those economies where their legislation is currently not in English.
  *Funding was not available for this translation activity, however the Convenor would explore other sources of funding further. The Forum acknowledged the provision of simultaneous translation into Korean for the Korean delegates and observers from industry and other organisations.*

- Survey on involvement of consumers with the Forum and to determine ways in which they can participate in Forum activities.
  *The above survey will be implemented by the Secretariat in the next few months.*

- Intercomparison on Load cells and Mass.
  *The Intercomparison on load cells; mass and non-automatic weighing instruments were discussed in Clause 7.3.*

- Workshop on Implementation of R 76 in Shanghai.
  *The workshop was held in Shanghai in 3—10 October. Reports are given in Clauses 7.6 and 8.2.*

- Translation of the R 76 video into languages other than English (Indonesian, Spanish, French and others).
  *The Forum noted that the video has been translated into the following languages, namely Chinese, Bahasa Indonesian, French, Spanish, Thai and Vietnamese and that Russia had translated it to Russian.*

- Development of a Train-the-Trainer course on Verification and Reverification of Non-automatic Weighing Instruments.
  *Funding has been obtained by the APLMF for the development of the above course. The NSC is currently developing the course contents in collaboration with the New South Wales State measurement authority. It is planned to have the module ready for trialing in early 1999, with a full train the trainer course to be conducted towards the end of the year.*
- Extend the survey on Goods Packed by Measure by obtaining information from other economic areas

  *This was discussed in Clause 7.2.*

- Contact CIML on the establishment of an international system of certification of packers of goods packed by measure and accreditation applied to such certification.

  *This was discussed in Clause 7.2.*

- Finalization and publication of resource document on modernisation of legislative and administrative systems.

  *The Forum noted that the document is currently being finalised.*

- Revision of survey on Utility Meters to include heat meters and on refurbishment/reconditioning of utility meters.

  *This was discussed in Clause 7.5.*

- Approach CIML to give high priority to utility meter recommendations and their incorporation in the OIML Certificate System.

  *This was discussed in Clause 7.5.*

- Approach CIML to develop International Recommendations on statistical sampling plans.

  *This was discussed in Clause 7.2.*

- Secretariat to circulate information on metrological control of telephone meters and consideration be given to a presentation on this issue at the Forum meeting in 1998.

  *The Secretariat had circulated two documents on metrological control of telephone meters, by Ian Hoerlein of NSC, Australia and ML Junttila of Finland, for information of members. However, Mr Hoerlein was unable to attend the Forum to provide a presentation.*

- Development of a workshop/seminar on Introduction to High Capacity Weighing.

  *The Forum noted that the above workshop has been developed and presented in Shanghai. This was discussed in Clauses 7.6 and 8.1.*

- Secretariat to circulate proposed elements on mutual recognition agreements together with outcomes of APEC SCSC Round Table on Mutual Recognition and WELMEC Type Approval Agreement.

  *The Secretariat had circulated the above documents to members with the Circulars.*
• Facilitate access of members to APLMF internet web site.

The Forum noted that the APLMF had established a web site at www.aplfm.org, and in order to facilitate access of members to the internet site, the Convenor would explore the possibility of obtaining funding for this activity.

• Establish a program on analysing the economic impact of legal metrology within member economies and the region.

The Forum noted:

- That the economic impact of legal metrology is an important issue as it measures the economic transactions involving measurement activities and the economic terms of any error measurements.
- That the APEC SCSC will now consider funding of projects proposed by the Specialist Regional Bodies and recommended that the APLMF investigate the possibility of obtaining funding from the APEC SCSC for the economic analysis.
- That the APLMF make reference to the report of the conference held in Braunschweig in June that focussed on the “Role of metrology in economic and social development.”

Resolution 24:

Noting the importance of the economic impact of legal metrology, APLMF investigates the possibility of obtaining funding from the APEC SCSC for conducting an economic impact analysis.

• Secretariat to notify all members of their APEC SCSC representative and provide information on APEC issues relevant to legal metrology.

Information detailing APEC matters of relevance to APLMF as well as APEC SCSC representatives were circulated to all members in the Circulars as and when they became available.

• Secretariat to liaise with OIML in making submission to the World Trade Organisation (WTO) on harmonisation of metrological regulations.

The Forum noted the information provided by Mr B Athane on the WTO and that OIML was accepted as an observer to the TBT committee (Technical Barriers to Trade) from the beginning of the year and adopted the following resolutions:

Resolution 25:

APLMF supports the OIML in its efforts to reduce barriers to trade in the field of legal metrology at the WTO.

Resolution 26:
APLMF recommends that Forum members contact their representatives to the WTO in their own economies directly to inform them on how best to reduce TBT in the field of legal metrology.

- Secretariat to facilitate the entry of OIML and other regional legal metrology organisations as Corresponding Members of APLMF.

*This was discussed in Clause 3.1. The corresponding members are OIML, WELMEC, SALMEC, SIM, IOLMF and the specialist regional bodies namely APLAC, APMP, PAC and PASC.*

10. **Discussion on temperature correction of petroleum sales.**

The subject of temperature compensation is an important issue which affects petroleum sales in many countries and this issue has recently captured headlines of newspapers in Korea.

There were presentations from the following delegates:

i). Dr Ki-Won Lim, KRISS, Korea;
ii). Mr Jim Truem, National Conference of Weights and Measures, USA;
iii). Mr Alan Johnston, Measurement Canada, Canada; and
iv). Mr John Birch, National Standards Commission, Australia.

The Forum thanked the speakers for their presentations and discussions on various aspects of temperature compensation followed each speaker.

11. **Development of programs in other areas of legal metrology eg. telephone metering.**

The Forum made reference to the paper on telephone metering by Ian Hoerlein published in the OIML Bulletin. Dr S Bennett informed the Forum on the survey on telephone metering conducted by ML Junntila of Finland for WELMEC.

Mr Birch also referred to the issue on measurement of gas in the pipeline (the Trans Pacific Pipeline) and stated that the workshop in Tsukuba on Flowmeters was conducted at an appropriate time in view of the importance of developing measurement for gas as there was a general lack of calibration facilities for this area.

**Resolution 27:**
The Forum will investigate the development of programs in other areas where legal metrology has impact, in order to promote cooperation and harmonisation.

12. **Discussion on APEC Standards and Conformance issues and report of meeting between Specialist Regional Bodies (SRBs) (APLAC, APLMF, APMP, PAC, PASC) and APEC Standards and Conformance Sub-Committee held on 7-8 September 1998 in Kuantan, Malaysia.**
Mr Birch reported that representatives from the five SRBs attended the APEC SCSC meeting held in Malaysia.
The Forum noted that:

- Mr Birch presented the Report of the APLMF to the APEC SCSC members and the specific contribution that the APLMF programs are making to the objectives of the SCSC Collective Action Plan, particularly in the areas of alignment, mutual recognition of conformity assessment, technical infrastructure development, transparency, development of closer links with the business sector, closer cooperation with the APEC fora, European dialogue and interfacing with other international institutions.

- New Zealand will provide the APEC SCSC Chairman in 1999 and will host the meetings next year.

The Forum thanked Mr Birch for the report and adopted the following resolution:

**Resolution 28:**
APLMF urges members to maintain contact with the SCSC representatives in their respective economies in order to keep abreast of developments of APEC programs and the relevance of legal metrology to them.

13. **Discussion on OIML issues.**

Mr Athane presented a report on the OIML activities.

The Forum noted:

- The OIML long term policy and strategy that is currently being reviewed by OIML.

- The Braunschweig conference that was held in June was a success and the Report of legal metrology in the 21st century by Dr Birkeland. Issues arising from these Reports will be discussed in detail at the Development Council and CIML meetings.

- The work of OIML and its close cooperation with the WTO in the important role of removal of barriers to trade.

- The proposal by the OIML to increase the participation of Corresponding Members in the work of the TC/SC by inviting them to attend meetings as observers.

- The close cooperation of OIML with the regional legal metrology bodies.

The Forum expressed its appreciation to Mr Athane for the comprehensive account of OIML activities.

14. **Discussion on liaison with other regional legal metrology organisations.**

Mr Birch reported on the liaison with the other regional organisations.
The Forum:

- Noted the report of the activities of the four SRBs namely APLAC, APMP, PAC and PASC presented by Mr Birch.

- Noted and thanked Dr S Bennett for his presentation on the activities of WELMEC.

- Noted and thanked Mr B Beard for his presentation on the activities of SALMEC.

- Noted and thanked Dr L Issaev on the presentation of the activities of CORMET (Cooperation in Legal Metrology) with Dr A Astashenkev, Director VNIIMS as Secretariat.

- Acknowledged the contribution of Mr Birch to the establishment of the Indian Ocean Legal Metrology Forum (IOLMF) as well as its Interim Convenor and the programs and activities of the IOLMF.

- Noted the concerns on the need for coordination of the regional bodies for efficient and flexible cooperation and proposed the setting up of a body to coordinate the activities of the regional bodies or that OIML establish structures for this purpose.

**Resolution 29:**
The Forum agreed that APLMF continues the close cooperation and liaison activities between the APLMF and other regional organisations namely APLAC, APMP, PAC, PASC, CORMET, IOLMF, SALMEC, SIM and WELMEC.

**Resolution 30:**
APLMF agreed to invite CORMET to join APLMF as a corresponding member.

**Resolution 31:**
The Forum noted that it would be appropriate for the establishment of a body to coordinate the activities of all the regional bodies and requested OIML to investigate the setting up of such a body or to set up structures to coordinate the activities of the regional bodies.

15. **Discussion on bilateral and multilateral assistance for development of legal metrology in the region.**

The Forum noted that the Australian government had funded the activities of the APLMF secretariat since 1994. However, there was a need to seek funding from other agencies as well for implementation of the various projects of the Forum.

The Forum noted the following agencies ADB, APEC, UNDP and UNESCO could be approached to provide funding and Mr Athane informed the Forum on the availability of UNIDO funding for legal metrology activities and adopted the following resolution.
Resolution 32:
APLMF to investigate the possibility of obtaining funding from funding agencies such as APEC, ADB, UNDP, UNESCO and UNIDO for the implementation of the Forum's projects.


The Forum considered and adopted the following work program for 1998/99.

Work Program for 1998/99

- Working Group on Medical Measurements with a project on sphygmomanometers (blood pressure meters).
- Translation of the legislation into English for those economies where their legislation is currently not in English.
- Survey the involvement of consumers with the forum and to determine ways in which they can participate in Forum activities.
- Finalize and publish the resource document on the modernisation of legislative and administrative systems.
- Establish a program on analysing the economic impact of legal metrology within member economies and the region.
- Circulate the results of the intercomparisons to participants for their comments before the finalisation of the report.
- Organise a supplementary round of intercomparisons for other members who now wish to participate in the intercomparison following the discussion on the Mutual Recognition Arrangement and participation of training courses on pattern approval.
- Circulate a questionnaire to members to indicate their interest in participating in a mass intercomparison.
- Consideration be given to organising an intercomparison on master meters to identify flow measurement capability.
- Finalise the survey on prep的心态 goods by obtaining information from other regions, particularly relating to the requirements for standard sizes, permitted deficiencies due to dehydration and drained weights.
- Request OIML to give priority to extending the OIML recommendation on nett contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.
- Request OIML to consider the development of an international system of marking for labeled measurement to facilitate international trade in prepetailed goods (this would be an extension of the European E mark system).
- New Working Groups to be formed on:
  - Taximeters;
- Metrological control of measurements in international trade of bulk commodities; and
- Environmental measurements, particularly air pollution.

- Finalise the survey report on utility meters to include information on heat meters and the refurbishment or reconditioning of utility meters.
- Request CIML to give priority to:
  - Developing an International Recommendation for electricity meters that would allow their incorporation in the OIML certificate system; and
  - Developing statistical sampling plans that may be applied for the reverification of utility meters.
- Complete the train the trainer course for the verification of non-automatic weighing instruments with a trial in the first half of 1999 and run as a full course in the second half of the year.
- Develop a train the trainer course for the pattern approval and verification of driveway petroleum and LPG dispensers.
- Develop a Regional Directory of Training and a regional network of metrology training providers.
- Promote in cooperation with OIML the use the Pattern Approval of Non-automatic Weighing Instruments training module and run further workshops as requested.
- Continue to seek a suitable expert to conduct a study within Thailand and Vietnam about the rice moisture measurement problem.
- Contact the manufacturers of the most commonly used rice moisture instruments regarding their specifications.
- Encourage those economies that have not yet replied to the rice moisture measurement questionnaire to do so.
- Support the development of an Asia-Pacific Mutual Recognition Agreement on Pattern Evaluation to be complementary to the OIML Agreement but allowing recognition of individual tests and open to all Forum members.
- Recognise that the Mutual Recognition Agreement would have significant impact on industry and request Forum members to discuss these issues with industry in their economy.
- Recommend that a profile of pattern approval capability to prepared by member economy to improve confidence between forum members.

17. **Final consideration of "Memorandum of Understanding" for members of the Asia–Pacific Legal Metrology Forum and endorsement by APLMF members.**

The Forum endorsed in principle the Sixth Draft of the Memorandum of Understanding and set the following timetable for finalisation and signing.

- Any non-substantive (including editorial) amendments to be notified by 31 December and considered by the Executive Committee.
• Any substantive amendments i.e. on issues that could impede signing should be notified to the secretariat by 31 March and considered by the Executive Committee who will decide if a postal vote is necessary.

• The Memorandum of Understanding will be finalised and circulated to all Member organisations by 1 July. The signed document is to be returned to the secretariat. The starting date for the Memorandum of Understanding will be when ten (10) economies have signed it.

• If the Memorandum of Understanding is in force at the next Forum meeting, members who have not signed may attend as observers.

Membership Fees
The Forum endorsed the principle of introducing a membership fee to subsidize the operation of the secretariat.

The fee to be set using a modified OIML Formula as set out in APLMF Circular 20 with the aim of raising $US 20,000.

The details of the proposal are as follows:

The OIML formula is based on four categories and the fee for each category is twice the fee for the next lowest category. It is suggested that APLMF have three categories based on the OIML formula of population and economic development. This could result in the following annual fee structure.

**Category 1** - one unit each
Chile, Hong Kong China, Indonesia,
Laos PDR, Malaysia, Mexico, Mongolia,
New Zealand, Papua New Guinea, Peru,
Philippines, Singapore,
Thailand, Vietnam (14) 14

**Category 2** - 2 units each
Australia, Canada, People’s Republic of China,
Republic of Korea, Russia,
Chinese Taipei (6) 12

**Category 3** - 4 units each
Japan, USA (2) 8

Total: 34 units

**Calculation**
34 units for $US20,000
One unit equals $US588.24

14 economies in Category 1 of 1 unit $US588.24 $US8235.36

Fifth Asia–Pacific Legal Metrology Forum 23
6 economies in Category 2 of 2 units  $US1176.48  $US7058.88
2 economies in Category 3 of 4 units  $US2352.96  $US4705.92
Total:  $US20,000.16

The membership fee is to be charged on an economy basis.
A resolution on this will be considered by the 1999 Forum for a membership fee for the calendar year 2000.

The Forum adopted the following resolution on the MoU.

Resolution 33:
The Forum endorsed in principle the sixth draft of the MoU and the timetable of dates for the finalisation of the MoU. The Forum also endorsed the principle of introducing a membership fee to subsidise the operation of the Secretariat.

18. Discussion on elections for Convenor and Secretariat for APLMF in the next two-year term.

Mr Birch requested member economies to consider accepting responsibility for the positions of Convenor and Secretariat as his term of office as Convenor would end in 1999. He requested member economies to send in their proposals/nominations to the Secretariat, preferably before 30 June 1999. Should there be more than one nomination, a postal ballot will be conducted.

Resolution 34:
The APLMF urges members to send their proposals for the post of Convenor to the Secretariat before 30 June 1999 and recommends that the Secretariat conduct a postal ballot among Forum members should more than one nomination be received.

19. Presentation of Country Reports

The Forum noted the presentations on recent developments on legal metrology in their respective economies by delegates from all the member economies present.

20. Date and location of next Forum meeting in 1999.

The Forum noted the association of APLMF meetings with the OIML meetings in previous years, viz. Beijing 1995 and Vancouver 1996. The Forum was informed by Mr Athane on the location of the future meetings of the OIML, i.e. in Tunisia in 1999, in Western Europe in 2000 where the 35th CIML and a conference will be held, and in Moscow or St Petersburg in 2001.

Mr Birch informed the Forum that the year 2001 was the centenary of the Federation of Australia and offered Sydney as a venue for the 2001 CIML meeting. The choice of the venue will be discussed at the CIML meeting.
The Forum noted that as Tunisia is not an APEC economy, the APLMF meeting will need to be held in some other venue. In view of this, it was proposed that member economies consider the hosting of the next Forum and inform the Secretariat.

21. Any Other Matters

The Chairman, Dr Chung thanked the Convenor and delegates to the Forum and their contributions to the discussions of the meetings.

Mr Birch expressed his appreciation to the Chairman for chairing and conducting the Forum meetings and the organising committee and staff of KNITQ and KRISS for the very excellent organisation of the Forum and Working Groups meetings.
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REPORT BY THE CONVENOR

MR JOHN BIRCH AM

To delegates to the Fifth APLMF meeting
in Seoul, Republic of Korea

In the four years since the Forum was established the program activities have shown a rapid expansion. This has been possible because of the strong commitment that members have made to support the Forum activities. Whilst enhancing technical capability through training courses has been a major focus, of equal importance have been the raising of the profile of legal metrology and developing policies for modernisation of legal metrology in the region.

Following on from the training courses held in Tsukuba in 1997, further training courses were held in Shanghai in September this year, on Introduction to High Capacity Weighing and a train-the-trainer course on the Pattern Approval of Non-automatic Weighing Instruments, in accordance with OIML R76. These courses were attended by 27 officials from 16 economies. In addition, a further train-the-trainer course on the verification and reverification of non-automatic weighing instruments is currently being developed.

Mutual recognition will be a major focus of the 1998 Forum and CIML meetings. A meeting in Washington in April this year that developed a draft agreement on mutual recognition of pattern approval tests results has provided a framework to finalise an agreement on this issue which will complement the OIML Certificate System.

Mutual recognition is being driven by globalisation and highlights the important role that measurement will play in that process. The great virtue of physical measurement is its ability arising from its objective and numerical characteristics. Trust on the national measurement system is provided by governments legislating the requirements and ensuring that they are met. Globalisation requires this trust to be extended beyond national borders and the Forum programs on Legislation and Administration aims to contribute to this process.

Legal metrology's responsibility for mutual recognition is very broad and includes:

- measurement for international trade in bulk commodities. This is an area where disputes still occur between exporters and importers;

- testing of measuring instruments for approval and certification;

- measurement labelling of pre-packed goods that are traded internationally. This is a rapidly expanding area of international trade;

- regulatory measurements conducted to meet international treaty requirements.

Greenhouse gas emissions is just one example where nations will need to show they are
meeting treaty obligations. Such measurements are also fundamental to any emission treaty scheme.

However success in this process of globalisation will only be possible if national measurement systems are sufficiently integrated and coherent. Legal metrology authorities have a major responsibility in this regard in coordinating their national measurement system, particularly through legislative provisions.

Dr Birkeland, who conducted the Review of Technical Infrastructure for the Forum has recently completed a discussion document for CIML on the challenges facing the Global Measurement System I am sure that discussion on this document will stimulate new programs within the Forum.

Having reached our fourth year it is appropriate that we consider a more formal structure for the Forum. The draft MoU to be discussed at this Forum meeting has drawn on the experience of other regional organisations (APMP, APLAC) and a number of important issues still need to be finalised by this Forum meeting.

Last year the Forum established an Executive Committee and whilst there is still much to be done in developing the operation of this committee, I have found it very valuable to be able to contact the members to obtain their advice on a range of issues.

Finally I would like to express my appreciation of the contribution that Mrs Loon Khoo continues to make to the effective functioning of the Forum.

John Birch    AM
Convenor

20 October 1998
REPORT OF THE APLMF
WORKING GROUP ON MUTUAL RECOGNITION ARRANGEMENTS
HELD ON 25 OCTOBER 1998 AT SEOUL, KOREA

The Working Group met in Seoul on 25 October 1998 and was chaired by Mr John Birch (Australia) and delegates from the following economies attended.

Australia, Canada, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, United States of America and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

Dr Sam Chappell (USA) gave a comprehensive report on the development of the Mutual Agreement on Pattern Evaluations.

The Working Group:

- Recommended that the APLMF support the development of an Asia–Pacific Mutual Recognition Agreement on Pattern Evaluation and be complementary to the OIML Agreement but allowing recognition of capability in individual tests and be open to all Forum members.

- Recognised that this Mutual Recognition Agreement on Pattern Evaluation was the first step in eventually mutually recognising measurement used in external trade of bulk commodities and pre-packed goods and legal measurements used for regulatory purposes.

- Recognised that the Mutual Recognition Agreement on Pattern Evaluation may make changes in the practice of legal metrology, particularly in the verification of instruments, and checking pattern compliance of production instruments with the pattern and national legislation structures that support legal metrology (e.g. Evidence Acts).

- Recognised that the Mutual Recognition Agreement would have significant impact on industry and that Forum members discuss these issues with industry in their economy.

- Recommended that a profile of pattern approval capability be prepared by each member economy to improve confidence between Forum members.
REPORT OF THE APLMF
WORKING GROUP ON GOODS PACKED BY MEASURE
HELD ON 25 OCTOBER 1998 AT SEOUL, KOREA

The Working Group meeting was held on 25 October and was chaired by Mr John Barker (New Zealand) and attended by delegates from the following economies:

Australia, Canada, Hong Kong China, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, USA and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

The Working Group recommended that:

- The survey on prepacked goods to other regions, particularly relating to requirements for standard sizes, permitted deficiencies due to dehydration and drained weights, be finalised.

- OIML give priority to extending the OIML recommendation on nett contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.

- Consideration also be given to developing an international system of marking of labelled measurement to facilitate international trade in prepacked goods (this would be an extension of the European E mark system).
The Working Group meeting was held on 25 October and was chaired by Mr John Birch and attended by delegates from the following economies:

Australia, Canada, Hong Kong China, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, USA and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

The Working Group received the reports on progress of the intercomparisons of Non-automatic weighing instruments and Load Cells and recommended:

- That the results of the intercomparisons would be circulated to participants for their comments before finalisation of the report.

- That following the discussion on the Mutual Recognition Arrangement and the organisation of the training courses on pattern approval, that if other members now wished to participate in the intercomparison, they would be accommodated in a supplementary round of intercomparisons.

- That a questionnaire be circulated to members to indicate their interest in participating in a mass intercomparison.

- That consideration be given to organising an intercomparison on master meters to identify flow measurement capability.
The Working Group met in Seoul on 25 October 1998 and was chaired by Ms Kerry Marston (Australia) and delegates from the following economies attended.

Australia, Canada, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, United States of America and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

A report on progress into the investigation in rice moisture measurement during 1998 was presented and suggestions for future work in 1999 discussed.

The Working Group recommended that APLMF:

- Continue to seek a suitable expert to conduct a study within Thailand and Vietnam about the rice moisture measurement problem.

- Contact the manufacturers of the most commonly used instruments regarding the specifications.

- Encourage those economies that have not yet replied to the questionnaire to do so.
REPORT OF THE APLMF
WORKING GROUP ON UTILITY METERS
HELD ON 25 OCTOBER 1998 AT SEOUL, KOREA

The Working Group meeting was held on 25 October and was chaired by Mr Rene Magnan (Canada) and attended by delegates from the following economies:

Australia, Canada, Hong Kong China, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, USA and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

The Working Group:

- Agreed to finalise the survey report with the inclusion of information on heat meters and the refurbishment or reconditioning of utility meters.

- Noted the progress in developing an OIML recommendation on Water Meters and requested CIIML to give priority to:

  - Developing an International Recommendation for electricity meters that would allow their incorporation in the OIML certificate system; and

  - Developing statistical sampling plans that may be applied for the reverification of utility meters.
REPORT OF THE APLMF
WORKING GROUP ON TRAINING
HELD ON 25 OCTOBER 1998 AT SEOUL, KOREA

The Working Group met in Seoul on 25 October 1998 and was chaired by Ms Kerry Marston (Australia) and delegates from the following economies attended.

Australia, Canada, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Russia, Chinese Taipei, Thailand, United States of America and Vietnam. Observers from the following international and regional organisations OIML, SALMEC, SWEDAC and WELMEC also attended as observers.

A report of the training activities for 1998 was presented and suggestions for the training program for 1999 discussed.

The Working Group recommended that:

- The train the trainer course for the verification of non-automatic weighing instruments be completed, trialed in the first half of 1999 and run as a full course in the second half of the year.

- An APLMF train the trainer course for the pattern approval and verification of driveway petroleum and LPG dispensers be developed.

- A Regional Directory of Training and a regional network of metrology training providers be developed.

- Use of the Pattern Approval of Non-automatic Weighing Instruments training module be promoted in cooperation with OIML and that further workshops be run as requested.