Regional Efficient Lighting Policy Workshop
Jakarta, Indonesia
19 – 21 August 2014

Meeting Report

The UNEP/lites.asia Regional Efficient Lighting Policy Workshop was held in Jakarta, Indonesia from 19 - 21 August 2014 and brought together close to 40 delegates. Participants included policy makers from ministries of energy and environment and representatives from standards bodies, laboratories and industry organizations from 18 countries within Southeast Asia, South Asia, the Pacific and Europe. The workshop engaged participants in building capacities for the development and strengthening of effective legislative frameworks for efficient lighting monitoring, verification and enforcement (MVE). It also provided a discussion platform on the experiences, benefits and potential avenues for the development and harmonization of performance standards for efficient lighting products in the ASEAN region.

This workshop was hosted by the United Nations Environment Programme (UNEP) – Global Environment Facility (GEF) en.lighten initiative, the government of Australia and the Ministry of Energy and Mineral Resources of Indonesia. It was held as part of the Australian government sponsored “Securing the climate change benefits of efficient lighting in South East Asia and Pacific economies via monitoring, verification and enforcement capacity building activities” project which is being implemented by UNEP under the en.lighten initiative. UNEP has also assumed responsibility for the lites.asia secretariat as part of this project.

Presentations over the two days were delivered by the Indonesian Ministry of Energy and Mineral Resources, the Australian government, UNEP and UNEP partner countries, the ASEAN Centre for Energy, the Global Lighting Association, the International Institute for Energy Conservation (IIEC), the Global Efficient Lighting Centre (GELC), and the Chinese National Institute of Standards (CNIS).

Countries were also briefed on upcoming opportunities for participation in the enlighten project including country market surveys, lamp quality testing and inter-laboratory comparisons.

The workshop also included a half-day visit at the Ministry of Energy and Mineral Resources-certified lighting testing laboratory P3TEK to observe the operation and procedures for lamp testing.

Workshop Presentation Summaries

Tuesday, 19 August, 2014

Day one of the regional efficient lighting workshop focused on the regional harmonization of efficient lighting policies.

Session 1: Welcome from Host Country and Opening Remarks

The meeting was formally opened by Maritje Hutapea, Director, Energy Conservation, Ministry of Energy and Mineral Resources, Indonesia. Hutapea set the agenda by highlighting the country's mission and future objectives for energy efficiency. Indonesia currently has $53 million in electricity subsidies provided by the government and the country accounts for 75% of the energy consumption in Southeast Asia and 77% of the CO2 emissions. The government has set the objective of reducing greenhouse gas (GHG) emissions by 1.6 million tonnes. When it comes to efficient lighting policies, Indonesia is currently preparing a new regulation on labeling, and developing energy efficiency standards for LED lamps.

Laura Fuller, Communications Officer, UNEP en.lighten initiative welcomed delegates and thanked the Australian government and Indonesian hosts. She highlighted UNEP's role as a center of excellence to support efficient lighting MVE schemes in the region and encouraged collaboration across the countries. Fuller highlighted the en.lighten integrated policy approach to efficient lighting and provided an overview of the professional and technical services that are made available to countries.

David Boughey, Assistant Manager, Lighting and Equipment Energy Efficiency, Australia Department of Industry gave an introduction to lites.asia from its inception in October 2009, until today. He made reference to lites.asia's ten point plan which includes increasing technical knowledge, capacity building and the development of standards and labels in Southeast Asia and the Pacific.

Session 2: Draft MVE Policy Status Report Presentation and Discussion

Marie Leroy, UNEP en.lighten Liaison to Southeast Asia and Pacific Countries, presented a draft Status Report on MVE Activities and Programmes in Cambodia, Indonesia, Lao PDR, the Philippines, Thailand and Vietnam**.** The presentation revealed that while all countries have taken steps toward efficient lighting MVE, the level of advancement varies significantly from one country to the other. Barriers to MVE were classified in three main categories: infrastructure capacity, system capacity and professional capacity. Recommendations included training for policy makers, MVE programme managers and testing laboratory staff; round robin testing and market research and surveillance exercises; and joining the en.lighten Global Partnership Programme to help leverage international resources and find opportunities to exchange global best practices. Exploring opportunities for sharing testing capacity through mutual recognition agreements and infrastructure and identifying possible sources of donor funding was also discussed.

Session 3: Panel Presentation - Perspectives on Processes to Harmonize MEPS and MVE Practices

A panel session addressing the issue harmonization of efficient lighting efficiency requirements and surveillance systems was hosted by Mark Radka, Chief, Energy Branch, UNEP Division of Technology, Industry and Economics (DTIE). The panel was comprised of representatives from the ASEAN Centre for Energy, the Global Lighting Association, the government of Australia and the Ministry of Energy, Thailand.

Each panelist began with a brief presentation:

David Boughey – Assistant Manager, Lighting and Equipment Energy Efficiency, Australian Government affirmed that lites.asia has recognized the need for a harmonised approach to standards and requirements for lighting energy efficiency testing and performance in the region. Current opportunities for collaboration and knowledge sharing in the region include: Australian previous proposal for CFL performance technical specification could serve as a model for regional harmonization of CFL MEPS; the International Commission on Illumination (CIE) Test Method for LED lamps, luminaires and modules is close to finalization and will become an international LED test method; tropical performance criteria for LEDs already agreed to by *lites.asia;* performance levels for LED lighting products developed by the IEA 4E SSL; lamp sampling and testing and inter-laboratory comparison activities through en.lighten; and, APEC cooperation on MVE. David also outlined the Australia-New Zealand harmonized product registration system (also used by Fiji for some products) and compliance data base and suggested this could be of use to other countries in the region.

Rio Jan Piter Silitonga, Technical Officer, ASEAN Centre for Energy presented the standards and labeling programs of the ASEAN Standard Harmonization Initiative for Energy Efficiency (ASEAN-SHINE) and the ASEAN - Japan Pilot Project on Energy Efficiency Market Transformation with Information Provision Scheme (AJ-EMTIPS). The ASEAN SHINE work packages, currently focused on air conditioners, include harmonized standards for testing methods; regional and national policies for MEPS and HEPS; capacity building for testing laboratories and AC manufacturers; and raising consumer awareness.

Aswain Asawutmangkul, Engineer, Senior Professional Level from the Ministry of Energy, Thailand gave further perspectives on the process for harmonizing MEPS and MVE practices under the ASEAN SHINE program. He presented in details the work package 2 about the harmonization of testing methods, and work package 3, which focuses on a regional policy roadmap. Current work of ASEAN SHINE focuses at air conditioners but other appliances will be considered in the near future and could include lighting products.

Jürgen Sturm, Secretary General of the Global Lighting Association (GLA) presented on the industry perspective on the establishment of strong MVE structures. He stated that the GLA advocates for reasonable regulatory limits for energy performance of lighting products to ensure product availability in the market. These should be established by governments based on consultation with all regional stakeholders and offer a level playing field to the private sector. The industry offers support to policy makers through technical expertise, sharing market data and good practices. Mr. Sturm also stated that

MEPS should be defined for LED products in order to maintain the performance quality of the products thus, ensuring consumer confidence.

The meeting discussed opportunities for progressing lighting harmonization, including providing relevant work developed by lites.asia and en.lighten for consideration by the ASEAN SHINE program, and proposing that the program take on lighting as one of the next priority products. It was also suggested that the ASEAN Shine program be asked about opportunities for other interested countries in the region to follow this work.

Session 4: Benchmarking as a Means to MEPS

Steve Coyne, UNEP en.lighten consultant, presented on the need to develop a national baseline for chosen lighting products to assist with calculating energy consumption and potential savings; to determine the appropriate replacement technologies; and to evaluate the effectiveness of any program that has been implemented. Engagement with stakeholders such as customs officials, government agencies, retailers, and industry and consumer associations is a very important aspect of the process. Obtaining quality data right from the start of a program will assist policymakers with understanding the issues, justifying decisions, and delivering the necessary information to critically assess the outcomes. A variety of different tools should be used to conduct the market benchmark, including market questionnaires, audits and products testing.

Session 5: Case Study: Australia Benchmarking for Incandescent and Compact Fluorescent Lamps

David Boughey presented how benchmarking is used under the Greenhouse and Energy Minimum Standards Act 2012 (GEMS Act), established by the Australian government for MEPS and labelling requirements for consumer products. The presentation identified why product benchmarking is useful for understanding the market, developing regulation and monitoring, verification and enforcement. The presentation also outlined preferred approaches to collecting benchmark data and gave a number of specific examples of how import, survey, registration and compliance test data has been useful in development and administration of lighting energy efficiency regulation in Australia. In order to promote the purchase of energy efficient products, the Australian government has released an Energy Ratings app designed to help consumers select energy efficient appliances by providing performance data and labelling information. www.energyrating.gov.au

Session 6: Benefits of the Harmonization of MEPS

Sommai Phon-Amnuaisuk, Project Director, International Institute for Energy Conservation (IIEC), presented the objectives, expected results and milestones of the UNEP en.lighten lamp sampling and testing project for six countries in Southeast Asia (Cambodia, Lao PDR, Indonesia, Philippines, Thailand and Vietnam). 100 models of CFL and LED lamps (80 and 20 models, respectively) will be sampled from national markets by IIEC and national government representatives, according to specific sampling requirements and instructions. The lamps will then be shipped to the Global Efficient Lighting Center in China and tested for performance parameters and mercury content.

Session 7: Inter -laboratory Comparison and Proficiency Testing

Jing Wang, Project Engineer, Global Efficient Lighting Center (GELC), began her presentation with an overview of CFL and LED lighting technology. She highlighted the work that GELC is doing to provide technical assistance to UNEP en.lighten partner countries, including Tunisia, Jordan and Vietnam. Support activities include the evaluation of product performance against pre-established criteria by means of inter-laboratory comparisons.

The upcoming CFL and LED lamp quality testing with countries in the Southeast Asia region will run from August 2014 to June 2015 when UNEP will release a final report that summarizes the results from all countries that participated in the lamp testing activity. Inter-laboratory comparison tests will begin in in the next few months with the pre-testing and selection of samples. In April or May 2015 a summary report will detail the comparison tests that have been carried out in participating laboratories. These laboratories will then be able to compare results of product testing in their labs with each other and with GELC.

Wednesday, 20 August, 2014

Day two of the policy workshop began with country case studies and a review of the MVE infrastructure status report, which is currently in production. The larger group then divided into smaller breakout groups to address the topic of MVE legislative framework development.

Session 1: Legislation for MVE: Infrastructure Status Report Overview

In order for MVE to function, there needs to be an effective testing laboratory infrastructure. Mr. Coyne discussed the fact that performance parameters and test methods need to be developed and that products should be tested through accredited labs based on national and/or international standards. Test laboratories must have appropriate equipment and trained staff. The test equipment must be capable of accommodating the scope of products and measuring the performance parameters specified in the regulations. Laboratory staff must be capable of operating and maintaining equipment, as well as understanding test procedures conducting sensitivity and uncertainty analysis. Where countries do not have testing laboratories or the necessary equipment, they should utilize the facilities available in neighboring countries.

Session 2: Energy Monitoring, Verification and Enforcement on Energy Efficiency Standards and Labelling in China

Zhang Shaojun, Vice-General Manager, Manager of Energy Efficiency Laboratory, Chinese National Institute of Standardization (CNIS), outlined the Chinese energy efficiency standards and labeling programs which include standards for over 50 products (11 of which are related to lighting). Implementation modes for labeling range from manufacturer self-declaration to national market supervision. Lighting products subject to minimum energy performance requirements must be registered in advance of sale, with test reports from an accredited third party laboratory provided. MEPS requirements only apply to products for domestic sale. The General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) monitors product quality; CNIS has a research laboratory for round-

robin testing. The CNIS-China Standard Certification Co. Ltd. (CSC) Energy Efficiency Laboratory is the reference laboratory on energy efficiency in China. Due to stricter parameters, the total number of registered laboratories has gone from 142 in 2008 to 90 labs today. The scope of efficient product testing is very large - every year, 8700 manufacturers request testing for 520,000 models on 28 different products, including compact fluorescent lamps. More information can be found at www.energylabel.gov.cn/en/

Session 3: Case Study- Philippines "Switch Asia" MVE Programme

Ronald O. Tahanlangit, Senior Science research specialist, Department of Energy, presented the Philippines draft guidelines for MVE developed under the EU-funded "Switch Asia" Programme. The guidelines were developed based on the results of market studies and meetings. Current spot market monitoring has uncovered 1) labels with incorrect or inaccurate information due to errors in computing energy efficiency and 2) energy performance rating below the MEPS set for products.

Session 4: Breakout Groups: - MVE Legislative Framework Development

Two groups were formed with the participating delegates, according to the level of development of MVE in their countries. The discussions revolved around commonalities between countries with regard to efficient lighting MEPS and MVE such as: key resources available; main barriers to strong MVE legal schemes; trade and mutual recognition agreements; similar forms of governance; and the greatest needs for transition to efficient lighting. The groups also identified opportunities for the development of shared resources that could include: MEPS and/or MVE legal framework harmonization between countries; collecting market information and comparing results; establishing regional products registry; sharing testing laboratory capacities; sharing check testing compliance data; and establishing mutual recognition agreements.

Breakout Group Summaries and Opportunities

Group A included representatives from India, Indonesia, Pakistan, Philippines, Sri Lanka, Thailand, Australia and Vietnam. Country delegates agreed on the need to harmonize or coordinate:

- custom codes, including cooperation on engagement with the World Customs Organisation on LED classification,
- compliance checking processes,
- product registration systems.
- check testing data

Group B included representatives from Bhutan, Cambodia, Fiji, Lao PDR, Maldives, Myanmar, Nepal and China. Proposed avenues for regional cooperation included:

- development of market baseline assessment and sharing of results;
- harmonization of existing legal MVE frameworks through coordinated enhancement of electricity laws and consumer protection regulations;
- sharing of products database and custom codes.

Meeting Outcomes

1. Countries are willing to work together to strengthen MVE frameworks. Collaboration could include: shared product performance databases, shared product efficiency checklists for customs authorities and mutual recognition agreements for lamp test results. Australia will provide further information on the Australia-New Zealand product registration system and investigate and outline opportunities for other countries to also make use of this registration system. Lighting Europe could provide check list for customs. Australia and CNIS are also willing to support regional cooperation by developing arrangements for sharing their check-testing database with countries for purpose of compliance with regulation.

2. ASEAN SHINE project, with its current work air conditioner efficiency standards harmonization, provides a model for future regional work on efficient lighting standards. Lighting could possibly be considered as one of the next appliances to tackle, in conjunction with refrigerators. Coordination must be established between country focal points and energy efficiency and conservation subsector network (EEC-SSN) counterparts. Relevant work already undertaken by lites.asia and en.lighten will be offered to the ASEAN SHINE project.

3. Future MVE strengthening activities under the project implemented by UNEP en.lighten in the region as part of the regional project supported by the Australian Government will include: lamp sampling and testing, inter-laboratory comparison exercise, targeted training sessions and manuals, two more regional lites.asia meetings, development of project funding proposals to the Global Environment Fund for interested countries.