PACIFIC APPLIANCE LABELLING AND STANDARDS PROJECT STEERING COMMITTEE MEETING & LIGHTING WORKSHOP
Nadi, Fiji

27–28 May 2014
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# PALS PROJECT STEERING COMMITTEE MEETING & LIGHTING WORKSHOP

**Nadi, Fiji**  
**27 – 28 May 2014**

## DAY 1 : PALS PROJECT STEERING COMMITTEE MEETING

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Summary of proceedings

The Energy Programme of the Secretariat of the Pacific Community (SPC) convened the fourth Project Steering Committee meeting of the Pacific Appliance Labelling and Standards (PALS) programme. This was followed by a lighting workshop. The two events took place on 27-28 May in Nadi, Fiji.

The workshop was an outcome of commitments made at the Pacific Regional Energy and Transport Ministers’ Meeting in April this year, when the ministers endorsed concept notes for regional energy efficiency proposals on the phasing out of incandescent lamps, energy efficiency in water supply, building energy codes development and application, and sustainable cities.

The Ministers also endorsed SPC's and UNEP's effort to develop a detailed regional strategy for the transition to efficient lighting in Pacific Island countries and territories (PICTs).

Delegates at the Steering Committee meeting discussed progress, challenges and next steps in the implementation of the PALS programme in participating countries and also the proposed Pacific regional efficient lighting strategy.

Improving energy efficiency offers the Pacific region multiple benefits, including reduced dependence on imported petroleum fuels, increased energy security, lower energy bills and reduced greenhouse gas emissions.

The meeting was attended by about 30 participants, including PALS national coordinators from Cook Islands, Fiji, Kiribati, Republic of Marshall Islands (RMI), Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Representatives of the following key stakeholders were also in attendance: Department of Commerce, Industry and Trade, Nauru; Department of Industry, Australia; Environmental and Energy Consultants Fiji, International Union for Conservation of Nature (IUCN), Pacific Power Association (PPA), SPC, and United Nations Environment Programme (UNEP).

A list of participants is attached as Annex 1.

Session 1: registration and opening

Welcome remarks and introduction
Makereta Lomaloma, Energy Efficiency Adviser/PALS Programme Manager with the Energy Programme of SPC’s Economic Development Division (EDD), welcomed all delegates followed by an opening prayer from Alfred Joel, PALS Support Officer, Vanuatu.

Tim Farrell from Australia’s Department of Industry delivered the opening remarks. In his opening remarks, he highlighted the importance of sharing experiences and congratulated the delegates on the recognised success of the programme. The evaluation of PALS Project by Australia’s Department of Foreign Affairs and Trade has provided good feedback and they were impressed with the progress made. He also highlighted that Fiji has been implementing standards and labelling since January 2012, and five other PICTs are on track to have legislation in place by 2015.
Tim Farrell will be joining UNEP (thematic hub on energy efficiency in the SE4ALL initiative) in mid June and will be promoting the success of the PALS Program and maintain links with the Pacific.

The meeting noted an apology from Solomone Fifita – who was on duty travel to the Federated States of Micronesia and Palau.

**Session 2: Project implementation**
This session was facilitated by Tim Farrell from Australia.

**Progress update and next steps for each PICT**

**Cook Islands**
Mr Tangi Tereapi, Director of Cook Islands Renewable Energy Project Developer presented on behalf of the PALS national coordinator – Alex Henry, who was away on the outer islands and has sent his apology.

Summary of key progress included:
- The Office of the Prime Minister is working with the Ministry of Finance and Customs Office in implementing the PALS programme. It also works closely with the PEEP2 programme.
- There is a committee chaired by Mr Tangi and comprises of importers, PM’s Office, Ministry of Finance and Crown Law Office that discusses issues relating to labelling and standards
- Two parts of the Cook Islands Energy Act (1998) have been amended to incorporate labelling and standards. The amendment Act is likely to be submitted in Parliament in the 3rd or 4th quarter of this year
- The second draft of the Energy (Standards and Labelling) Regulations 2014 was received on 23 May. The final draft of the regulation will be given to Crown Law Office, noting the general election will be on 9 July.

Some of the challenges faced:
1. Limited drafters in country with expertise in standards and labelling program legislation – no one responded to tenders and managed to engage a company from NZ.
2. Cook Islands have small importers, who bring in sub-standards appliances and equipment.

Cook Islands requested for a training workshop at national level for their importers, customers and inspectors.

The meeting noted that the regulation will be approved by Crown Law Office, while the amendment Act will be approved by Parliament. As part of energy efficiency and labelling awareness, the department airs advertisement and promotional videos on television. It is envisaged that the amendment Act and regulations will be approved by September this year.

**Fiji**
Mr Peceli Nakavulevu, Director of Energy provided an update on Fiji’s Minimum Energy Performance Standards and Labelling (MEPSL) Program. Some of the achievements of the program are listed below:
- Successful implementation of program with continuous support from all stakeholders
- Shop floor audits conducted around Fiji
- Stakeholder Trainings – Retailers: sales and support staff, FRCA, Customs and Shipping agents
- All imports screened at Borders
- MEPSL unit formed within Fiji Department of Energy
• 99.6% overall compliance rate for 2012-2014 (Apr). Retailer compliance rate has been 100% since 2012. However individual compliance rate was on average 76%
• Public awareness is ongoing and a major part of the programme but is not cheap, for example one month TV advert costs around FJ$10,000. Have local and overseas adverts.

The main activities that they are looking at include the amendments of the trade standards order 2007, evaluation of MEPSL Program and expansion of the MEPSL Program to include other appliances.

Fiji has in place standard operating procedures (SOPs); it does not carry out any equipment testing. Fiji uses AUS/NZ registration system (www.energyrating.gov.au) and has also developed its own registration system to cater for “home brands” such as simmons, modyl, maxton and elite. This year, the Department of Energy received three new importers requests which are compliant with Australia and New Zealand standard.

One of the challenges faced by Fiji is the disposal of non-compliant appliances.

Kiribati
Mwaati Otten, Assistant Energy Project Officer provided an update on PALS activities as follows:
• Final draft legislation has been completed, public awareness is ongoing
• Some of the challenges faced include appointment of new Minister in April, Permanent Secretaries changed twice, AG’s Office slow in reviewing/vetting the legislation and few staff to carry out public awareness
• In terms of next steps, they are developing a cabinet paper to seek approval for AG’s Office to consider vetting the draft legislation as a priority and to be presented in parliament in August. A parliamentarian consultation workshop will be conducted one week before the August parliament meeting.
• There is a need to train customs officers, EPU staff and commerce inspectors; to collaborate with ODS working committee focussing on refrigerators, freezers and air conditioners; and to have a support officer to assist in labelling and standards work
• It is expected that by 2015 legislation will be effective

Samoa
Sione Foliaki, Assistant Chief Executive Officer (Energy) presented on PALS project progress. The appliances included in the draft legislation are refrigerators, air conditioning units and lights. The products are imported from Australia, New Zealand, Asian countries – Korea, China. Samoa expects to pass the legislation in the first week of June, and will have six months transition period before the legislation becomes effective from January 2015. Plans are to conduct training programmes and more awareness in primary and secondary schools.

Solomon Islands
John Korinihona, Director of Energy provided PALS update and challenges faced in the Solomon Islands. Status of the program:
• Cabinet approval for implementation was obtained in July 2013
• Currently no establishment of steering committee
• Ministry has a similar program (control of imports of ozone depleting substances)

Some of the challenges faced by Solomon Islands are commitment from stakeholders to form a committee, amendments to legislations & regulations, and too many parallel programs.
In terms of way forward they will form a committee; seek assistance from Fiji & SPC with regards to PALS; work with stakeholders – SIEA, Customs, IRD, Labour, Mines & Energy & importers; conduct survey & awareness programs; review legislations to address PALS – Electricity Act, Customs Act

The meeting noted that there is a legislative requirement in place to control the use of ODS through the Customs Act. A similar approach can be used for labelling and standards.

**Tonga**

Ofa Sefana, Tonga’s Energy Planner provided an update on PALS activities.

**Progress:**
- Public consultation workshops conducted in the two island groups, radio/TV programs and talk back shows were carried out and will continue throughout the year
- 3rd draft of the regulation has been produced, 4th draft (final draft) is expected to be produced in the 3rd quarter 2014
- New ministry of energy/environment/climate change to be established by July; EE/MEPSL section to be established within the new Ministry by the end of the year

**Challenges:**
- Institutional changes in Government Ministries; few major importers are not quite supportive; preference to buy cheap second hand appliances due to high cost of new energy efficient appliances

**2014 – 2015 Work Plans:**
- Public Awareness on the MEPSL program - Ongoing
- Exposure Visit to learn from Fiji Experiences – 3rd Quarter
- Continuous monitoring and assessment of imports through data collection 2nd & 3rd Quarter
- Stakeholder trainings – 3rd – 4th Quarter
- Implementation – 1st Quarter 2015
- Fully developed MEPSL website – 1st Quarter 2015
- Cabinet endorsement for adoption of current/future standards – Lighting Initiatives under en,lighten Initiative 1st or 2nd Quarter 2015

The meeting noted that the current version of the regulation does not include lighting component – lighting products was included in the first draft but got dropped off in the second and third drafts. But plans are underway to include it in the fourth draft.

**Tuvalu**

Kapuafe Lifuka, Acting Director of Energy presented on PALS programme progresses in Tuvalu.

**Current status:**
- Cabinet has supported the Regional PALS project and its implementation in Tuvalu
- Discussions on whether to seek Cabinet’s endorsement for development of legislation rather than awaiting for electrical appliances survey results
- Have been carrying out public awareness through radio every Friday
- Preparation of hiring of TA in process

**Next step:** public consultation; need cabinet approval to drafting regulations as per policy implications identified, training workshop and survey to be completed by August

**Planning way forward:** expect completion of regulation by January 2015, regulations to be effective by January 2016
Some of the challenges faced by Tuvalu are staff turnover, slow recruitment process for energy vacant posts, and unavailability of trainer to do the surveyors training workshop delays the program.

On a positive note, the PS for Energy Department is a lawyer by profession and has promised to assist the department in developing the legislation.

The meeting noted that Tuvalu Electricity Corporation (TEC) has submitted a proposal to IUCN for a loan financing scheme for energy efficient appliances through Tuvalu National Development Bank and are considering looking at refrigerators and air conditioning units. The loan financing scheme is an option that can be used by PICTs to use energy efficient appliances and equipment.

**Vanuatu**

Joseph Temakon, PALS National Coordinator provided Vanuatu’s PALS overview and update.

- Council of Ministers’ (COM) endorsement of project and Steering Committee: fifth ordinary COM meeting on 18 April 2013;
- Capacity building - recruitment of Support Officer in June 2013, and permanent Energy Efficiency Officer (currently PALS National Coordinator) in February 2014;
- Engagement of legal consultant to draft a new legislation for MEPS and Labeling – November 2013; 3rd draft legislation has been produced; 2 stakeholder consultations completed
- Awareness programs – involved schools & community consultations, newsletters and broadcasts, TV Adds, brochures – ongoing since June 2013 (15 public presentations in 2013, 8 public presentations in 2014, 3 radio live interviews, 1 three months TV advertisement, 9 newspaper article, and working on another TV advert).

Next step and recommendations:

- Plan to draft a policy document for Council of Ministers’ (COM) endorsement of AS/NZ standard for Vanuatu MEPS settings and energy rating label;
- Further consultation needed on achievability of projects success for Vanuatu;
- Introduction and distribution of the smart calculators;
- Continue to run awareness presentations in the Private and Public Institutions.

In responding to the use of multi-labels in Vanuatu it was pointed out that this is not a practical approach since there would be many different labels available and consumers/buyers would not be able to compare products of different labelling types. For example a two star A/NZ product could use less energy than a top-banded (overall rating of 1 being the best) Chinese product.

The use of 12V solar fridge is not covered under the AS/NZ standards and thus its use is not restricted.

**Palau**

Greg Decherong, Director of Energy provided an overview of their energy efficiency activities. Palau is currently developing an Energy Act which will be finalised by Congress in the second week of June. The Energy Act can be used to incorporate energy efficiency including labelling and standards.

Palau has three energy loan programs through the National Development Bank, which provides subsidies for energy efficient new and renovated homes, and including energy efficient equipment. The implementation of the loan program has facilitated the availability of energy efficient appliances in the local markets. Palau requested SPC to look at existing legislations and how we can include standards and labelling.
Republic of Marshall Islands
Angeline Heine, National Energy Planner provided an overview of RMI PALS programme. RMI’s energy priority is improved efficiency of energy use in 50% of households and businesses, and 75% of government buildings by 2020.

They are currently implementing a loan financing scheme for new energy efficient homes; the energy policy and action plan are being revised and waiting for PALS assistance in RMI.

Opportunities in the North Pacific
George Wilkenfeld, Advisor to PALS Program provided an update on opportunities for North Pacific: US DOE still willing to help north PICTs with appliance energy efficiency programs but depends on having existing US resources in place, i.e. people working on other programs. Palau and RMI are to provide contact details of US personnel.

Opportunities:
- UNEP en.lighten initiative offers opportunity for S&L program
- If North PICTs would like to develop regulations initially for lighting but usable for other products, PALS could assist.

It was noted that funds are available under the North Rep for RMI and Palau

Evaluation of Fiji Minimum Energy Performance Standards & Labelling (MEPSL) Program
Ravinesh Nand of Fiji Department of Energy presented on the evaluation of Fiji MEPSL Program.
- MEPSL – third successive year of implementation
- MEPSL Program Expansion – broad policy direction provided in the revised National Energy Policy
- Evaluation is an important element for further improvements of any program
- Independent Third Party Evaluation (Competitive Tender Process)

The overall goal of the program evaluation is to make recommendations that contribute to identifying the program’s strengths and aspects needing improvements for enabling the establishment of more efficient and improved delivery mechanisms. The duration of the evaluation will be eight weeks.

Progress:
- Terms of Reference drafting – February 2014
- Tender advertisements – March 2014
- Technical Evaluation Committee Meetings – April 2014
- Government Tender Board Deliberation – May 2014
- Contract Signing / Tender award – June 2014

Fiji advised that the prices of refrigerators in Fiji have increased since MEPSL implementation and part of the evaluation is to determine the extent of efficiency gains and tax levied since 15% is charged on fiscal duty and 15% on value added tax (VAT).

In terms of non-compliant refrigerators, the Department of Environment’s ODS team uses their own set of procedures to remove the gas from appliances. Fiji informed of a situation last year, whereby China Railway (a road upgrading company in Vanua Levu) brought in 20 non-compliant freezers. But as security, the company has deposited FJD 10,000 with the department and would be taking all refrigerators back to China once the road maintenance contract finishes.
Cook Islands advised the participants that as part of PEEP2 fridge replacement project, the retailer collects the old fridges, sends it to a recycling company for degassing and sends it to NZ to demolish the product. A similar approach could be explored and used for Fiji and other PICTs.

**Nadi Stores Survey**

Tim Farrell provided a snapshot of the surveys they conducted in Nadi to monitor the level of compliance for refrigerators and freezers. The results showed a high level of compliance and many of the unregulated products (TVs, clothes and dish washers) have A/NZ energy labels.

**Expansion of MEPS&L in Fiji and other PICTs**

George Wilkenfeld, Advisor to PALS Program presented on expansion of MEPSL in Fiji and other PICTs. Expanding the coverage of appliances in Fiji and other PICTs should be easier because regulations are already in place, administrative structure has been set up, stakeholders are familiar with principles and rules, and consumers already recognise the labels.

Fiji Department of Energy initiated the MEPS&L expansion with PALS assistance.

The objectives of the project are to propose decision criteria, identify up to 6 products that meet criteria, propose most cost-effective strategy: MEPS, energy labelling or both, carry out cost-benefit analysis, and identify any implementation issues. The project is in 4 stages and expected to be completed by August.

**PALS summary, 2014/15 work programme and budget estimate**

Makereta Lomaloma presented on PALS summary, 2014/15 work programme and budget estimate.

The meeting noted that Nauru has still not joined PALS programme and if they were interested in joining, they would need to let SPC know in writing.

The representative from Nauru advised the participants that he was not aware of Nauru’s non-involvement in the PALS Programme and he would inform his superiors and provide a feedback to SPC.

It was noted that there is flexibility in the allocation of funds to the participating countries. The PALS fund for any participating country depends on the funding requests received from countries and how well they are progressing in implementing their activities.

The meeting endorsed the 2014/15 work programme and budget estimates.

**Progress of energy efficiency activities of PEEP2**

Peter Johnston, consultant for PEEP2 project provided an overview of the PEEP2 Project. The project covers five PICs – Cook Islands, Papua New Guinea, Samoa, Tonga and Vanuatu. PEEP2 Project has four components:

(i) develop energy use databases; key activities include energy use surveys and developing energy end use database

(ii) develop energy efficiency policies and procedures; key activities include establishing energy efficiency targets in national energy policies and plans, developing energy efficiency guidelines for new construction, and conducting energy audit training

(iii) implement energy efficiency programs; key activities include street lighting, energy efficient lighting in residential, commercial & government sectors and energy efficiency in hotels, commercial sectors and in the public sector
energy efficiency information and public awareness; key activities include incorporating energy efficiency in school curricula in Tonga, public awareness and communication, and workshops

The objectives of the project are to implement energy efficiency measures to:

- Help governments reduce electricity consumption in residences, commerce & public sectors;
- Help establish policy & implementation frameworks to reduce petroleum fuel imports, reduce electrical energy use, and reduce GHG emissions

**Energy Efficiency Product Comparison tool**

Emily McQualter from Australia presented on energy rating mobile application (app). Each year energy rating label appears over seven million appliances sold across Australia, New Zealand and the South Pacific region. The label has been designed to encourage consumers to buy the most energy efficient models. Historically this label was a physical thing, something that manufacturers and suppliers were required to have stuck on their fridge, washing machine, television etc. From July this year, energy rating mobile app will be available for free on Smart phones. The app will enable users to enter in the local electricity price and be able to know the running cost of the appliance. The application is available on this website: energyratingapp@industry.gov.au.

**Open discussions and meeting summary**

- The initial objective of the PALS program was to have three PICTs with standards and labelling program legislation in place by June 2015. Fiji has been implementing standards and labelling since January 2012, and five other PICTs are on track to have legislation in place by 2015 (Kiribati, Samoa, Tonga, Vanuatu, and Cook Islands). Tier System is helpful to capture progress. The 2014/2015 work programme and budget estimates was endorsed

- The willingness to share and help other PICTs in the implementation of the project is key to the success of the project. There was a high level of engagement at the meeting between key stakeholders and with PICTs sharing knowledge and experiences. Healthy competition towards implementing regulations amongst the participating countries was encouraged. Samoa, Kiribati and Tonga are in a race to join Fiji while other countries are catching up.

- Vanuatu enquired about the possibility of using multiple labels on products (e.g. Australian/New Zealand Label and the Singapore Label). However the meeting was informed that it would be impractical to compare different labels and the benefits of a single label including consumer understanding and the reduced administrative burden were reiterated. A factsheet would be developed on the implications of multiple labelling.

- Benefits of PICTs joining an existing S&L program such as Australia and New Zealand Energy Efficiency program include learning from the existing compliance program.

- There were concerns that S&L could lead to increases in product prices. It was pointed out that analysis of product sales in Australia has shown that there has been no detectable increase in average prices following the introduction of S&L, or increases in MEPS levels.

- PICTs were encouraged to think about scheduling training activities on understanding the legislation/regulation and its requirements for key stakeholders (customs officers, government officials, suppliers, retailers, shop floor staff and the general public) ahead of commencement of implementation of legislation (2–3 days of training).
• Disposal of non-compliant products and the significant costs of storage was raised. For example, Fiji’s non-compliant refrigerators are costing significant funds to store in warehouses. The meeting was informed that the most appropriate solution is for the importer of the non-compliant products to be responsible for and bears the cost of re-export or safe disposal. But is essential that legislation/regulations currently drafted include this requirement. A draft standard clause on disposal will be provided to PICTs to include in their draft legislation/regulations.

• The electricity system in the North Pacific (generally 110 V) is different from that in the south. The Australian Government reported on the engagement with Gabby Dreyfus of USDOE. The US has shown some interest in working with the North Pacific, but requires US contacts within each north PICT (FSM, RMI, Palau) as points of contact for any assistance they may provide. Representatives from Palau and RMI who were present in the meeting were requested to provide these contacts to SPC.

• The North Pacific has the opportunity to utilise funding from the EU on energy efficiency programs and also utilise the technical assistance from the PALS program.

• The regulation in Fiji has been in place for over 2 years and the PALS Programme is working closely with Fiji Department of Energy in evaluating the impacts of the program.

• The PALS program has also commenced analyses to investigate the expansion and prioritisation of the PALS program beyond refrigerators and freezers. This analysis has commenced for Fiji, Kiribati, Samoa, Tonga, Vanuatu and the Cook Islands. The results will be relevant and applicable for the entire Pacific region.

• A generic Standard operating procedures (SOPS) or program manuals to be developed for use by officials involved in the program. The SOPS may be modified by PICTs to suit their local situations.

• The Smart phone comparison tool was demonstrated to participants. The comparison tool could be picked up immediately in some of the PICT countries where smart phone ownership is high.

Tim Farrell, Makereta Lomaloma and George Wilkenfeld thanked all participants including agencies for their active contribution during the meeting.
Regional Efficient Lighting workshop

Session 1: Opening
This session was facilitated by Makereta Lomaloma of SPC.

The workshop was opened by a prayer from Kitone Malugulevu of Solomon Islands followed by opening remarks from Tim Farrell, Australia and Marie Leroy of UNEP.

Tim Farrell mentioned that since June 2013 the Australian Government funded the UNEP enlighten program to focus on the Asia-Pacific region. Australia, UNEP and SPC established a collaboration to develop a regional strategy for efficient lighting in the Pacific. Today is the initial engagement workshop with PICTs on UNEP enlighten in the Pacific.

Marie Leroy highlighted that electricity for lighting accounts for approximately 15% of global energy consumption and 5% of worldwide greenhouse gas (GHG) emissions. The global transition to efficient lighting is already underway, and so it is in the Pacific. In 2014 80% of the world population live in countries which have phased-out incandescent lamps, or committed to do so. All Pacific countries need to be part of this global move if they do not want to become the dumping ground of incandescent lamps. The strategy document will be one comprehensive document for the region listing policy choices or options for a sustainable transition to efficient lighting. How detail this strategy will be, and what level or regional harmonization will be adopted, is totally up to the countries. The regional lighting strategy will be developed through a coordinated and integrated approach which has multiple benefits such as:

1. By sharing resources, participating countries will reduce the cost of their national transition to efficient lighting –for instance, by sharing one national testing laboratory
2. Having common rules will make it easier for producers to comply and bring high-quality, efficient products to the market
3. Putting forward a concerted and coherent approach at the regional level will make it easier for countries to justify their policy choices and therefore access international finance

Session 2: Where are we now?

The UNEP en.lighten initiative – objectives, approach and key achievements
Marie Leroy from UNEP presented on UNEP en.lighten initiative – objectives, approach and key achievements. Improving energy efficiency, reducing electrical demand, and lowering greenhouse gas emissions across Asia and the Pacific are among the key aims of the new partnership between UNEP and the Australian Government. Efforts focus on monitoring, verification and enforcement (MVE) activities and increased compliance, which are essential parts of ensuring a sustainable transition to efficient lighting. The project aims to increase regional co-operation on efficient lighting, including the sharing of information and harmonization of standards, as part of a regional quality control system to increase consumer confidence in energy-efficient products, and lower their cost. Further information about UNEP en.lighten initiative is available on the website: http://www.enlighten-initiative.org.

The meeting noted that Tonga is the only country in the Pacific that is a partner country of the UNEP en.lighten initiative and PICTs were encouraged to join this initiative with agreement through energy and environment ministers.

Palau has promoted the use of CFL by disseminating 20,000 CFL in the households, which will contribute to achieving their 33% energy efficiency target by 2033.
Lighting activities in Australia and New Zealand

Emily McQualter of Australia provided an update on Australia’s lighting project. Minimum energy performance standards (MEPS) programs are mandatory requirements for certain lighting products sold in Australia. Lighting MEPS specify efficacy levels for lamps in lumens (light output)/watt (energy input), and performance requirements. Lighting products subject to MEPS include incandescent lamps (tungsten filament and halogen), compact fluorescent lamps, linear fluorescent lamps, ballasts for linear fluorescent lamps, and transformers and converters for halogen lamps. Sales of filament lamps fell around 62% in Australia and 32% in New Zealand from 2002/2006 to 2013. Australia announced phase out of inefficient incandescent lamps in 2007 and introduced regulation in 2009 whereas NZ has not introduced regulation for incandescent lamps but has introduced MEPS for CFLs.

LEDs are becoming increasingly popular as a replacement for extra low voltage halogen lamps and have the potential to broaden the range of energy efficient lighting options available to consumers. However there is a wide variation in quality and efficacy of LEDs available in the markets.

The meeting raised a concern that Australia, being a developed country has challenges in disposing mercury containing lamps, therefore developing countries such as Kiribati, Niue and Tuvalu will be significantly challenged to dispose their mercury.

The meeting highlighted that those countries which are undertaking MEPSDL and those who are planning to include lights in their legislation should note that LEDs are not regulated in Australia.

Session 3: Developing a Pacific Regional Efficient Lighting Strategy

This session was facilitated by Rupeni Mario of SPC.

Developing a Pacific Regional Efficient Lighting Strategy

Marie Leroy of UNEP presented on developing a regional efficient lighting strategy. The goal of the strategy is to phase-out inefficient incandescent lamps in Pacific Island countries by 2016. The strategy will be developed through an integrated policy approach with four key components: (i) minimum energy performance standards, (ii) supporting policies, (iii) environmentally sound management, (iv) monitoring, verification & enforcement. The key steps for developing the strategy include preparation stage, stocktaking and assessment, strategy development and finalisation and adoption. Expert support provided by UNEP include technical experts (on demand support by email or phone), private sector partners (Osram, Phillips), UNEP collaborating centres (Global Efficient Lighting Centre, China; Ambilamp Academy, Spain), and enlighten pilot countries and region (available to share their experience and lessons learned).

Some of the discussion questions posed to the participants are:

- What do you think of the 2016 phase-out target date?
- What are the priority issues in terms of efficient lighting in the Pacific?
- On which specific topics would you like to receive technical support?
- In which areas would you like to adopt regionally harmonized policies (MEPS, MVE framework, environmentally sound management schemes)?
- Do you think establishing thematic working groups, bringing together representatives from different countries, would be a good way to work on the strategy development?
- Would you be able conduct national consultations in order to get feedback from national stakeholders ahead of the regional workshops?

The 2016 phase out target can be achieved for PICs whose legislation developed under the PALS Programme will be approved by 2016. These include Samoa, Kiribati, Tonga and Vanuatu. Fiji and
Palau are optimistic about phasing out by 2016. Lessons learnt from PALS programme, PEEP2 and North-REP can be used in the development of this phase-out strategy.

Priority issues for efficient lighting discussed include private sector engagement and awareness, statistics, lifetime, quality, markets and costs. In terms of regionally harmonised policies, Palau suggested environmentally sound management schemes as an area to be considered. Palau has strict law in place for disposal of lights. Palau’s environmental protection agency is shipping used batteries and tyres to South Korea for disposal. The use of bulb crusher that is successfully disposing off CFLs in the 5 PEEP2 countries can be used by other PICs.

Appointment of PALS national focal points and PALS steering committee on similar roles for lighting project
Makereta Lomaloma of SPC presented on national and regional coordination for the lighting project. She informed the participants that it would be logical to use the current PALS National Coordinators and Regional Steering Committee for the efficient lighting initiative. The following was endorsed:
(i) use the current PALS National Coordinators and Regional Steering Committee for the efficient lighting initiative;
(ii) changes to the regional steering committee members in particular the representatives from PICs (changed to Vanuatu, Tonga and Palau); and representatives from parallel EE projects (PEEP2 and IUCN). PEEP2 however indicated that their involvement would have to be cleared by their Team Leader.

All participants expressed their interest in participating in the regional lighting strategy however they requested SPC to prepare a circular letter, outlining the background information of the April energy ministers meeting outcome and clearly outlining the processes for lighting project and seek country endorsement for this new project. The meeting also suggested for the circular letter to also go through PICTs departments of energy together with ministry of foreign affairs.

PICTs were encouraged to also join the UNEP en.lighten initiative, which is without any financial commitment. The circular letter from SPC to also include the en.lighten partnership application form.

Draft Regional Efficient Lighting Status Report and discussion on data gathering
George Wilkenfeld of Australia presented on the status and opportunities of energy-efficient lighting in Pacific Island countries. The need to collect accurate and quality data was emphasised. The draft of the Regional Efficient Lighting Status Report is due in mid-June, while the final report is due towards the end of July. As part of data collection, George will be preparing a short questionnaire and will distribute to every country representative present at the workshop to get additional information on cost of lamp, etc.

Session 4: Sharing lighting experiences in PICs
This session was facilitated by Emily McQualter of Australia.

Country experiences

Fiji
Ravinesh Nand of Fiji shared Fiji’s lighting experiences – incorporation of energy efficiency into the National Building Code. The objectives of the study are:
• Review the existing Fiji National Building Code (FNBC) with particular emphasis on energy efficient designs and level of implementation.
• Provide a detail analysis on how the energy efficient designs and standards can be inculcated into the FNBC.
• Identify the provision under the existing legislation where the energy efficiency component can be included.
• Review the existing institutional arrangements and structure of the regulating agency and come up with recommendations on how the institution can be strengthened to ensure the effective implementation and enforcement of the energy efficiency component in the FNBC.
• Undertake a Cost-Benefit analysis of incorporating the energy efficient designs and standards into the FNBC.

Lighting efficiencies can be addressed through both the building code and MEPS. Having MEPS for lighting would also be beneficial and compliment the code requirements. Adoption of the energy code provisions as a component of the Fiji National Building Code represents a practical and feasible approach towards meeting the National Energy Policy goals vis-a-vis energy efficiency.

Fiji plans to finalise their study report by mid-June. The meeting noted that Fiji will be taking lead in national building code and Palau has a draft energy building code – this is an opportune time for Palau to discuss this further with Fiji.

**Republic of Marshall Islands**

Angeline Heine of RMI advised on their energy efficiency measures taken so far. Under the IUCN/RMI Retrofitting Streetlight Project, 800 streetlights were retrofitted from Mercury Vapour Lamp to LED Lightings in Majuro and Ebeye and 1000 CFL were distributed to households in Majuro.

Under the 2011 Import Duty Act, energy efficient appliances are exempted from import duty. These appliances include: air conditioning units, refrigerators, freezers, fluorescent and LED lightings, which have energy star or equivalent.

For the lighting component of the project, RMI plans to remove inefficient lightings (mercury vapour, inefficient fluorescent lightings, etc) through legislation; identify standard for lighting; review RMI tax system; and expand Import Duty Act to include standard for lighting.

For lighting products to be exempted, Energy Department does the necessary checks and sends to the Ministry of Finance for clearance.

In discussing whether an energy star label qualifies for exemption, it is important to check the label, the product if it is listed on the US EPA Energy Star website and documentation such as certificate of conformity.

**Palau**

Greg Decherong of Palau advised the participants that to achieve their energy efficiency targets for the National Energy Policy, they have procured 20,000 CFLs and this has been distributed to houses. Palau’s National Development Bank has a loan financing scheme for new and renovated houses, including replacing inefficient lights and air conditioning units.

**Lighting perspective and PEEP 2 lighting projects**

Peter Johnston, PEEP2 consultant presented on the development and implementation of PEEP2 energy efficient lighting projects in the Pacific Islands.

The ADB approved energy efficiency lighting projects are:
• Solar LED Lighting – Stand-alone (3 Projects): Cook Islands - Marina, Airport and Market
• LED Street Lighting (8 Projects > 1100 LED Luminaires): Cook Islands, Papua New Guinea, Samoa, Tonga, Vanuatu
• EE Lighting Public Buildings (8 Projects - T5s, LEDs, CFLs): Cook Islands, Papua New Guinea, Samoa, Tonga, Vanuatu
• EE Lighting Residential Sector (6 Projects): Cook Islands (1), Samoa (1), Tonga (2), Vanuatu (2)
• EE Measures Hotels, Public Buildings & Commerce (6 projects): Most with some EE lighting component

Lessons learned for LED Street Lighting Projects include decrease in costs over 20% in last 3 years, most projects had to be implemented through power utilities, and “bulb eaters” required for safe mercury disposal.

Challenges for LED street lighting projects include current PIC street lights do not meet international standards, installation costs are high, long delivery time to PICs (2-4 months due to high global demand), and customs clearance very slow in some PICs (from weeks to several months).

Lessons learned for residential and public sector EE lighting include:
• Most residential EE lighting to be installed by local utilities
• Building energy audits/inventories & household energy surveys are essential
• T5 retrofit sets can reduce installation time and costs for some projects

Challenges for residential and public sector EE lighting include limited interest from commercial sector, and conducting residential energy surveys in all PICs was essential.

Lighting experiences from IUCN
Anare Matakiviti of IUCN shared their experiences on financing energy efficiency in Palau and the street lights retrofitting in RMI. 48 energy efficient homes have been completed while 15 are under construction in Palau. 800 sodium/mercury vapour street lights were replaced with 689 LEDs in RMI. Some of the lessons learned include accurately recording the wattage of lamps removed and replaced, using calibrated kWh meters that meet the required standard, and checking of supplies to ensure compliance with technical specifications.

The presentation also looked at energy efficiency in the context of sustainable energy development for PICs. Leveraging energy efficiency for sustainable development requires good leadership, appropriate policy and regulations, long term funding, re-energizing energy efficiency, sustainable development pathway – low carbon, capacity building, reforms of the energy sector, and partnership approach.

Lighting experiences from North-REP
Rupeni Mario of SPC shared North-REP project’s lighting activities as follows:
• RMI – light retrofitting of all MOE premises – cost estimate USD 143,000; savings of USD 92,000
• FSM – light retrofitting of National Government buildings – estimated costs USD 60,000 with savings of 5% of power bill
• Palau – promotion of efficient lighting through the EE retrofitting loans programme at the National Development Bank of Palau – subsidies 50% of costs (105 HH registered), USD 156 yearly savings /HH

These activities contribute to achieving the countries energy efficiency targets.
Challenges faced include very small markets, high costs, lighting products may not be available locally, and quality of products. Working with PALS, the following was suggested:

- RMI — strengthening of the amended Section 206a of the Imports Act on import duties for RE and EE equipment
- Palau — review and re-submit the energy building codes (has a lighting component)

**Session 5: Collaborative projects**
This session was facilitated by Anare Matakiviti of IUCN.

**Lites.asia collaborative projects including monitoring, verification and enforcement capacity building activities**
Marie Leroy of UNEP presented on Lites.asia collaborative projects. Lites.asia stands for Lighting Information and Technical Exchange for Standards. It’s a forum to facilitate policy makers’ cooperation within the Asia region to:

- Improve knowledge of the standards in force and under development across the region.
- Increase participation of regional economies in the IEC standards development process to ensure resulting test methods and performance standards are appropriate to the region.
- Develop national and regional capacity for compliance in standards and labelling processes.

Support has been provided to six Southeast Asian countries including SPC to participate in lites.asia meetings and next meeting will be in August and PICTs willing to participate can contact UNEP.

**GEF 6 energy efficiency concepts and focusing on phasing out of incandescent lamps – how to take these proposals forward?**
Marie Leroy of UNEP provided an update on how to progress with GEF 6 energy efficiency concepts and focusing on phasing out of incandescent lamps. GEF 6 project duration/cycles is from July 2014–June 2018 with a budget of USD 4.43 billion. To access the GEF 6 resources, country stakeholders need to identify project ideas. Support provided by UNEP – UNDP:

- Definition of a project concept in line with the country’s needs and the GEF requirements and areas of interest – can be national or regional
- Project Identification Form (PIF) development and submission
- Project Preparation Grant (PPG) request development and submission
- Project Document Preparation
- Technical support throughout project implementation

Makereta Lomaloma of SPC presented on identified GEF 6 energy efficiency concept notes. In April this year, Pacific Energy Ministers endorsed the concept notes for regional energy efficiency proposals and direct SPC to seek donor funding for these proposals. Concept notes identified were:

1. Pacific Building Energy Codes & Standards (PACBUILD) Project
3. Promoting Energy-Integrated Development of Cities in the Pacific (PACCITY)
4. Pacific Region Energy Saving Lamp Promotion (PACLIGHT) Project

To move these concepts forward, it was proposed to the participants that SPC and UNEP work together to develop a regional proposal on efficient lighting and SPC and UNDP develop a regional proposal for energy efficiency in water systems. These proposals will be submitted to GEF 6 work programme in October. The meeting endorsed the proposals for the two regional efficiency projects on lighting and water.
Session 6: Open discussion and wrap up

- The workshop has been successfully conducted as an outcome of the participants’ requests for a lighting workshop (PALS Steering Committee Meeting 2013) and the endorsement by the Energy Ministers in April 2014 of the development of a regional efficient lighting strategy and energy efficiency concepts for GEF6.
- Phase out of incandescent lamps by 2016 may be possible for Samoa, Kiribati, Vanuatu and Tonga who have included lighting in their MEPSL legislations developed under the PALS Programme.
- All participants indicated their interest in the development of the regional efficient lighting strategies.
- SPC will work closely with the UNDP and UNEP to develop two regional proposals for the GEF 6 funding cycle on energy efficiency in water supply and efficient lighting.
- The draft of the Regional Efficient Lighting Status Report is due in mid-June, while the final report is due towards the end of July.

Tim Farrell and Makereta Lomaloma thanked all country representatives, regional and international partners together with SPC staff for their contribution towards the lighting workshop.
Annex 1: List of participants

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<tr>
<td><strong>LIST OF PARTICIPANTS</strong></td>
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</tr>
</tbody>
</table>

| **COOK ISLANDS** | 1. Mr. Tangi Tereapii  
Director  
Renewable Energy Project Developer  
Office Of The Prime Minister  
Renewable Energy Development Division  
Private Bag  
Rarotonga  
COOK ISLANDS  
Tel: [682] 25494 xtn 808  
E-mail: tangi.tereapii@cookislands.gov.ck |
|------------------|-----------------------------------------------------------------------------------|
| **FIJI DEPARTMENT OF ENERGY** | 2. Mr. Peceli Nakavulevu  
Director - Energy  
Energy & Rural Electrification Department (DOE - Fiji)  
GPO Box 2493  
Government Buildings  
Suva  
FIJI  
Tel: [679] 3386006  
Fax: [679] 3386301  
E-mail: PNakavulevu@fdoe.gov.fj |
| **FIJI DEPARTMENT OF ENERGY** | 3. Mr. Ravinesh Nand  
Senior Scientific Officer - MEPSL  
Energy & Rural Electrification Department (DOE - Fiji)  
GPO Box 2493  
Government Buildings  
Suva  
Fiji  
Tel: [679] 3386006  
Fax: [679] 3386301  
E-mail: ravinesh.nand@fdoe.gov.fj |
| **KIRIBATI** | 4. Ms Mwaati Oten Tomoron  
Assistant Energy Project officer  
Ministry of Public Works and Utilities  
PO Box 498  
Betio  
Tarawa  
KIRIBATI  
Tel: [686] 26143  
Fax: [686] 26172 |
<table>
<thead>
<tr>
<th>Country</th>
<th>Person</th>
<th>Position/Responsibility</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARSHALL ISLANDS</td>
<td>Ms Angeline C. Heine</td>
<td>National Energy Planner</td>
<td>E-mail: <a href="mailto:mwaati7@gmail.com">mwaati7@gmail.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Energy Planning Division</td>
<td>Republic of Marshall Islands</td>
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<td>Ministry of Resources &amp; Development</td>
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<tr>
<td></td>
<td></td>
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<td>Majuro, MH 96960</td>
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<tr>
<td>NAURU</td>
<td>Mr. Berrick Dowiyogo</td>
<td>Project Coordinator</td>
<td>E-mail: <a href="mailto:bdowiyogo@gmail.com">bdowiyogo@gmail.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrated Island Biodiversity</td>
<td>Republic of Nauru</td>
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<td>Department of Commerce, Industry and Trade</td>
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<td></td>
<td>Government House, Yaren District</td>
<td></td>
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<tr>
<td>PALAU</td>
<td>Mr. Gregorio Decherong</td>
<td>Director</td>
<td>E-mail: <a href="mailto:energy@palaunet.com">energy@palaunet.com</a></td>
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<td>Palau Energy Office</td>
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<td>Ministry of Infrastructure, Industries &amp; Commerce</td>
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<td>Koror, PALAU</td>
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<tr>
<td>SAMOA</td>
<td>Mr. Sione Foliaki</td>
<td>Assistant Chief Executive Officer (ACEO) – Energy</td>
<td>E-mail: <a href="mailto:sione.foliaki@mof.gov.ws">sione.foliaki@mof.gov.ws</a></td>
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<td>SAMOA</td>
<td>Ms Henryetta Wulf</td>
<td>PALS Support Officer</td>
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<td>SOLOMON ISLANDS</td>
<td>Mr. John Korinihona</td>
<td>Director of Energy</td>
<td>Ministry of Mines, Energy and Rural Electrification</td>
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<tr>
<td>SOLOMON ISLANDS</td>
<td>Mr. Kitone Malugulevu</td>
<td>Regulatory Manager</td>
<td>Solomon Islands Electricity Authority</td>
</tr>
<tr>
<td>TONGA</td>
<td>Mr. Ofa Sefana</td>
<td>Energy Planner &amp; National Coordinator</td>
<td>Ministry of Environment &amp; Climate Change</td>
</tr>
<tr>
<td>TONGA</td>
<td>Mr. Filimone Fifita</td>
<td>PALS Support Officer</td>
<td>Tonga Energy Road Map-Implementation Unit</td>
</tr>
<tr>
<td>TUVALU</td>
<td>Mr. Kapuafe Lifuka</td>
<td>Acting Director</td>
<td>Department of Energy</td>
</tr>
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<td>Country</td>
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</table>
| Vanuatu | 15.  | Mr. Joseph Temakon | Energy Efficiency & Conservation Officer  
Department of Energy, Mines & Minerals Resources  
PMB 9067  
Port Vila  
VANUATU  
Tel: [678] 25201 / 533 3840  
Fax: [678] 22324  
E-mail: itemakon@vanuatu.gov.vu |
| Vanuatu | 16.  | Mr. Alfred Joel | PALS Support Officer  
Department of Energy, Mines & Minerals Resources  
PMB 9067  
Port Vila  
VANUATU  
Tel: [678] 25201 / 533 3840  
Fax: [678] 22324  
E-mail: ajoel@vanuatu.gov.vu |
| Development Partners | | | 
| Energy Efficiency and Renewables Division – Australia | 17. | Mr. Tim Farrell | Manager  
Energy Efficiency and Renewables Division  
Residential Buildings Team  
Energy Efficiency and Renewables Division  
Department of Industry  
GPO Box 1564  
Canberra ACT 2601  
AUSTRALIA  
Tel: [61 2] 6159 3887  
Email: Tim.Farrell@industry.gov.au |
| Energy Efficiency and Renewables Division – Australia | 18. | Ms Emily McQualter | Energy Efficiency and Renewables Division  
Appliance Energy Efficiency Team  
Appliance & Industrial Energy Efficiency Branch  
Energy Efficiency and Renewables Division  
Nishi, Level 2  
2 Philip Law Street, Canberra City ACT 2601  
GPO Box 1564  
Canberra ACT 2601  
AUSTRALIA |
<table>
<thead>
<tr>
<th>Consultant</th>
<th>Mr. Peter Johnston</th>
</tr>
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<tr>
<td>Consultant</td>
<td>Consultant</td>
</tr>
<tr>
<td>Environmental &amp; Energy Consultants Fiji</td>
<td></td>
</tr>
<tr>
<td>P.O Box</td>
<td></td>
</tr>
<tr>
<td>Samabula</td>
<td>Fiji</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:johnston@unwired.com.fj">johnston@unwired.com.fj</a></td>
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<tr>
<th>IUCN</th>
<th>Mr. Anare Matakiviti</th>
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<tr>
<td>IUCN</td>
<td>Project Manager - Energy</td>
</tr>
<tr>
<td>Regional Office for Oceania</td>
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<td>Private Mail Bag</td>
<td></td>
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<tr>
<td>Suva</td>
<td>Fiji</td>
</tr>
<tr>
<td>Tel:</td>
<td>[679] 331 9084</td>
</tr>
<tr>
<td>Fax:</td>
<td>[679] 310 0128</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:anare.matakiviti@iucn.org">anare.matakiviti@iucn.org</a></td>
</tr>
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<thead>
<tr>
<th>George Wilkenfeld and Associates PTY LTD</th>
<th>Mr. George Wilkenfeld</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adviser</td>
<td>George Wilkenfeld and Associates Pty Ltd</td>
</tr>
<tr>
<td>PO Box 934 Newtown NSW 2042 Sydney</td>
<td>AUSTRALIA</td>
</tr>
<tr>
<td>Tel:</td>
<td>[61 2] 9565 2041</td>
</tr>
<tr>
<td>Fax:</td>
<td>[61 2] 9565 2042</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:geosanna@ozemail.com.au">geosanna@ozemail.com.au</a></td>
</tr>
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<th>PACIFIC POWER ASSOCIATION</th>
<th>Mr. Andrew Daka</th>
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<td>Executive Director</td>
<td>Pacific Power Association</td>
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<td>Tel:</td>
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<tr>
<td>Fax:</td>
<td>[679] 330 2038</td>
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<tr>
<td>Email:</td>
<td><a href="mailto:andrewd@ppa.org.fj">andrewd@ppa.org.fj</a></td>
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<tr>
<th>UNEP</th>
<th>Ms Marie Leory</th>
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<td>Liaison to Southeast Asia and Pacific Countries en.lighten initiative</td>
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<td>United Nations Environment Programme (UNEP)</td>
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<td>Tel:</td>
<td>+33 (1) 44 37 42 51</td>
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<tr>
<td>Fax:</td>
<td>+33 (1) 44 37 14 74</td>
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<tr>
<td>E-mail:</td>
<td><a href="mailto:Marie.Leroy.affiliate@unep.org">Marie.Leroy.affiliate@unep.org</a></td>
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