



Lamp Sampling Case Study:
*Cambodia, Indonesia, Lao PDR, Philippines,
Thailand and Vietnam*

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Outline

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- Objective and scope of the lamp sampling activities in the six Southeast Asian countries
- Summary of activities and findings from the implementation
- Lessons learned and recommendations

Objective and Key Activities

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Cambodia

Indonesia

Lao PDR

Philippines

Thailand

Vietnam

- **Objective:** To build capacity in the six countries for monitoring, verification and enforcement (MVE) which are the essential activities to ensure a sustainable transition to efficient lighting
- **Key activities**
 - Identify and sample energy efficient lamps (for indoor applications) in the six target countries
 - Pack and ship lamps to the Global Efficient Lighting Center (GELC) in Beijing for testing
 - Support each country in interpretation of test results

Scope of Lamp Sampling

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Only omnidirectional CF and LED lamps for general lighting service (GLS)



Implementation Approach

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Four major steps in the lamp sampling exercise

Preparation
(briefing on protocols
and planning of
activities)

**Retailer
surveys**

**Lamp sampling
and witnessing**

**Packing and
shipping**

Implementation of all steps requires 6 to 10 weeks per country. The exercises in all 6 countries completed within 3 months (September – November 2014).



Findings from Retailer Surveys

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- **Purpose:** To identify retailer characteristics and popular models of CF and LED lamps that need to be purchased in each country
- The surveys covered more than 90 retailers in the target countries.

Country	Most Common Type of Lamp Retailers	Most Popular Models	Popular Colour Temp.
Cambodia	Medium-sized electrical hardware shops	11W (CF), 5W (LED)	Daylight
Indonesia	Medium-sized specialised lighting shops	8W (CF), 7W (LED)	Daylight
Lao PDR	Small retailers	5W (CF), 7W (LED)	Daylight
Philippines	Hypermarkets	11W (CF), 7W (LED)	Daylight
Thailand	Hypermarkets	11W (CF), 5W (LED)	Daylight
Vietnam	Small specialised lighting shops	5W (CF), 7W (LED)	Daylight

The most popular wattage range of CF and LED lamps in these 6 target countries appear to be those for replacement of 25 – 60W incandescent lamps.

Sampling, Packing and Shipping

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- 80 models of CFLs and 20 models of LED lamps were purchased in the six target countries
 - Total CFL samples = 2,400 samples (30 samples/model)
 - Total LED samples = 400 samples (20 samples/model)
 - Each model accompanied by a lamp sampling sheet signed by at least two samplers
 - Packages from each country weigh around 60 kg with a total volume of around 1 to 2 cu.m.

Country	CFL Model	LED Model	Total No. of Lamp Models	Total No. of Samples
Cambodia	14	3	17	480
Indonesia	14	4	18	500
Lao PDR	11	2	13	370
Philippines	14	4	18	500
Thailand	14	4	18	500
Vietnam	13	3	16	450
Total	80	20	100	2,800

Lessons Learned and Recommendations

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1. Purchasing Lamp Samples
2. Identifying Lamp Models
3. Packing Lamp Samples
4. Shipping and Clearing Lamp Samples

Lessons: *Purchasing Lamp Samples*

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Lessons Learned

- Small retailers (even some large retailers) do not carry a sufficient number of lamps (under this exercise, all samples for a particular model, should be from the same batch number (i.e. same mfg date))
- Most samples were purchased from large retailers. (Protocols suggest 40% from large and 60% from small retailers)

Recommendation

- Lamp sampling protocols or guidelines should consider local market situations and allow sufficient flexibility in selection of sampling venues.



Lessons: *Identifying Lamp Models*

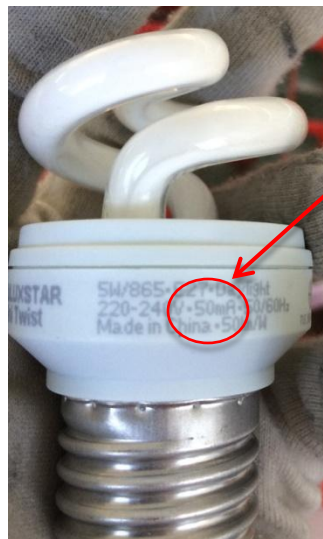
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Lessons Learned

- Lamps in the same product series, with the same rated wattage and same packaging may have different specifications

Recommendation

- Additional random checks at the point of purchase can be integrated into the lamp sampling guidelines



50mA

60mA



Lessons: *Packing Lamp Samples*

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Lessons Learned

- Packing a large quantity of fragile goods (lamp samples) requires preparation of appropriate materials, specific packages and packing methods
- Specifically for air freight, packing of fragile products must comply with the packing regulations imposed by courier companies

Recommendation

- Specialised shipping/packing companies should be considered if packing requirements are stringent



Lessons: *Shipping and Clearing Lamp Samples*

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Lessons Learned

- Shipping of fragile and hazardous materials by air freight (required for this exercise) can be complicated, and may not be allowed in some countries
- Import/Export Harmonized System (HS) Codes for lighting products are different from country to country – unnecessary customs duty and tax could be applied
- Customs duty and tax are the major concerns for the testing laboratory – in many cases this cost cannot be determined before the shipment

Recommendation

- Feasible shipping options should be discussed with the overseas testing facilities prior to commencement of the lamp sampling activities
- HS codes for lighting products under testing (e.g. CFLs or LED lamps) at the country of destination need to be determined before the shipping process
- If possible, a budget for customs duty and tax should be included in the testing fees, so that the clearance of the goods can be fast tracked

Thank you for your attention...

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