



Status Report on Monitoring, Verification and
Enforcement Activities and Programmes in
Cambodia, Indonesia, Lao PDR, the Philippines,
Thailand and Viet Nam

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(UNEP)*



Australian Government



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- Monitoring, verification and enforcement (MVE) activities
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Policy status report

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- Focuses on six countries:
 - Cambodia, Indonesia, Lao PDR, the Philippines, Thailand and Viet Nam
- Provides:
 - Overview of lighting related energy consumption and savings potential (on-grid and off-grid)
 - Estimated greenhouse gas emissions figures
 - Overview of policy context for energy efficient lighting products
 - Description of the monitoring, verification and enforcement (MVE) elements in place in each country
 - Assessment of the barriers and problems relating to MVE
 - Recommendations for overcoming these barriers

Lighting energy consumption

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Country	Electricity consumption in lighting* (TWh)	CO ₂ emission in lighting (Mt CO ₂)	Current cost in lighting (million\$)	Efficient lighting saving potential (TWh)	Efficient lighting saving potential (Mt CO ₂)	Efficient lighting cost savings potential (million\$)
Cambodia	0.32	0.36	28.99	0.10	0.12	9.57
Indonesia	22.19	17.03	1,961.93	9.35	7.17	650.60
Lao PDR	0.38	0.08	32.71	0.13	0.03	9.43
Philippines	8.34	3.95	1,885.89	3.51	1.67	760.96
Thailand	18.21	9.45	2,099.47	6.54	3.40	670.70
Viet Nam	12.03	4.70	1,123.34	4.26	1.66	337.62
Totals	61.47	35.57	7,132.33	23.89	14.05	2,438.88
Southeast Asia	84.65	50.00	9,951.15	31.66	18.86	3,249.18

Lighting policy context

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Country	National energy policy	National energy efficiency policy	Formal phase-out commitment	MEPS	Labelling	IEC member
Cambodia	Yes	Yes	No	No	No	Associate
Indonesia	Yes	Yes	No	Yes (under review)	Yes (under review)	Full
Lao PDR	No	Under development	Under consideration	No	No	Affiliate
Philippines	-	Yes	Yes	Yes	Yes	Full
Thailand	-	Yes	Yes	Yes (V)	Yes (V)	Full
Viet Nam	-	Yes	No	Yes (V)	Yes (V)	Associate

MVE activities

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Country	Entry requirements	Registration system	Product performance database	Market surveillance programme	Verification programme	Enforcement framework	Lighting test laboratories
Cambodia	Yes	Yes (V)	No	No	No	Yes	0
Indonesia	Yes	Yes	No	No	No	No	2
Lao PDR	n/a	No	No	Yes	No	No	0
Philippines	Yes	Yes (V)	Yes	Yes	No	Yes	1
Thailand	Yes	Yes (V)	Yes	Yes	Yes	Yes	2
Viet Nam	Yes	Yes (V)	No	Yes	Yes	Yes	2

Barriers to MVE

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- **System capacity**
- **Infrastructure capacity**
- **Intellectual capacity**

Barriers to MVE: System capacity

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- Registration system/product performance database
 - Specifying, implementing and maintaining a registration system
 - Linking this to (or as basis for) product performance database

- Market surveillance (monitoring activities)
 - Labelling display surveys and monitoring processes
 - Use of statistical tools
 - Experience of customs authorities on efficient lighting products

Barriers to MVE: Infrastructure capacity

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- Verification programme
 - Feasibility and cost-effectiveness studies on establishing, and maintaining, testing laboratories
 - Product selection and sampling procedures for verification testing
 - Laboratory staff knowledge on testing and interpretation of results
 - Laboratory comparison exercises

- Enforcement framework
 - Knowledge on enforcement frameworks and sanctions

Barriers to MVE : Intellectual capacity

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- Limited direct MVE experience amongst policy makers and regulators
- Lack of knowledge and experience on entry conditions
 - Baseline understanding of current lighting product market
 - Benchmarking the quality of efficient lighting
 - Impact assessment and making the case for MEPS and labelling
 - Developing MEPS
 - Specifying documentation required to demonstrate compliance

Recommendations

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- Developing training and training support materials
- Facilitating knowledge sharing
 - Round robin testing and market research and surveillance activities
 - Membership of the UNEP en.lighten Global Partnership
- Exploring opportunities for sharing testing capacity through mutual recognition agreements and infrastructure
- Identifying possible sources of donor funding

en.lighten materials in preparation

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- Guides
 - Lamp Product Selection and Procurement for Performance Testing
 - Registration systems and customs
 - Lamp Product Performance Tests and Interpretation of Results
 - Evidence gathering and application of Enforcement Measures

en.lighten materials in preparation (*cont...*)

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■ Webinars

- Benchmarking a Product Market to Determine an Energy Baseline for Change [past]
- Developing a Legislative Framework [past]
- Lamp Efficiency, Rated Life and Tolerances
- Sampling Procedures for Lamp Testing Programmes
- Communication of lighting product performance Standards and Labelling Programs to the Supply Chain Providers
- LED Lamp Test Method TC2-71

en.lighten materials in preparation (*cont...*)

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- Training sessions (and freely available support material)
 - Benchmarking Current Lamp Product Market and Determining Savings Potentials
 - Efficient Lighting Product Registration Systems and use of Customs sub-coding
 - Laboratory training: Performance testing for self-ballasted CFL and LED lamps
 - Understanding Light Technical Parameters required for Efficient Lighting programs
 - Laboratory Uncertainties Calculations for Lamp Performance Measurements
 - How to interpret laboratory test results and application of enforcement measures for efficient lighting programs



Thank you for your attention!

Any questions?



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