Introduction to EPR and Practical Applications in Southeast Asia

From Principle to Practice — Lessons from Southeast Asia and a Roadmap for Lesotho

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OUTLINE

What This Presentation Covers

What is EPR?

THE DEFINITION

Extended Producer Responsibility is an environmental policy approach that extends a producer's financial and operational responsibility for a product to the post-consumer stage of its lifecycle.

IN PLAIN TERMS

“If you make it and sell it, you are responsible for paying to clean it up, recycle it, or safely dispose of it.”

- Cost moves from public budgets to the producer
- Accountability spans the full product lifecycle
- Incentive rewards recyclable, low-waste design

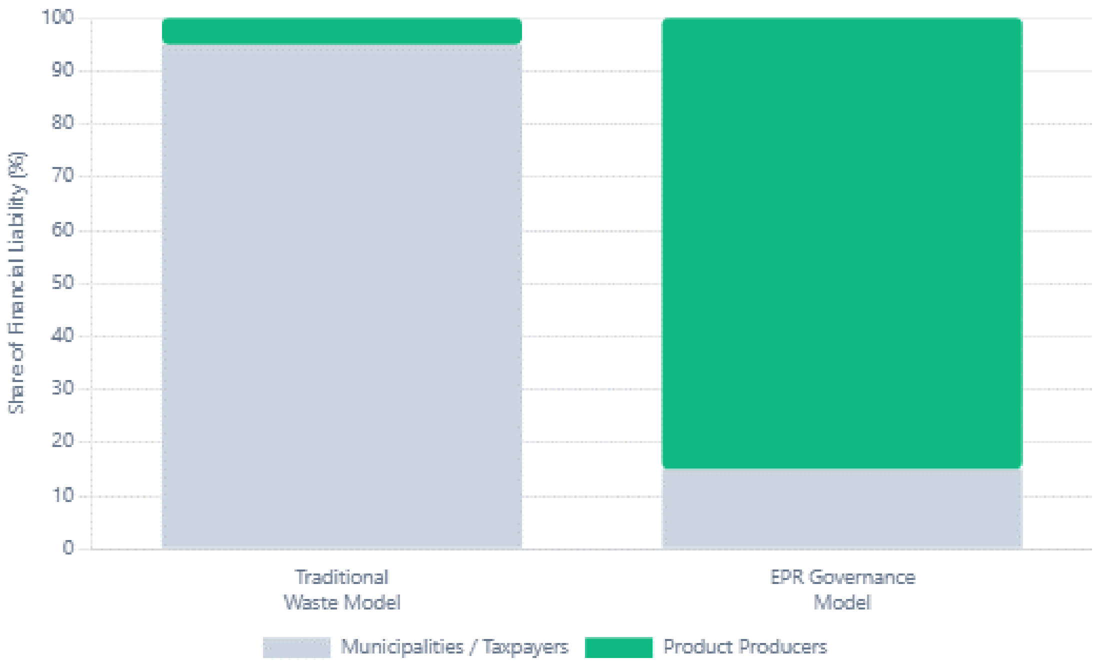
Source: OECD, 2022

Mechanisms of EPR

Mechanism I:

Polluter Pays Principle (PPP)

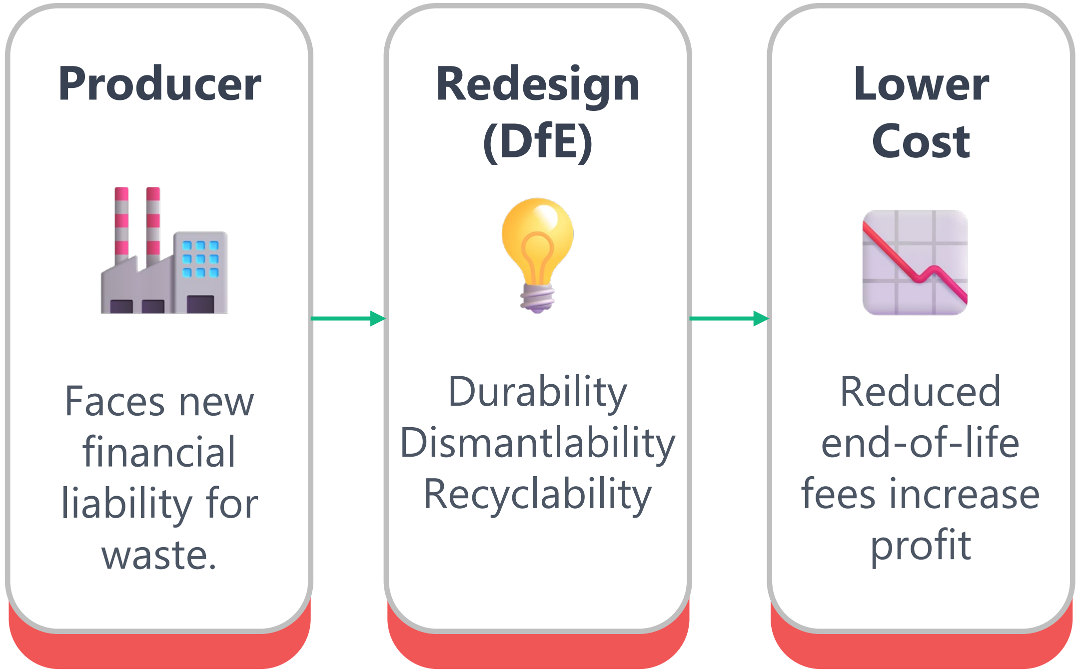
Visualizing the Fiscal Burden Shift



Historically, the cost of waste was invisible to the manufacturer, borne instead by public funds. The PPP explicitly shifts this financial burden.

Mechanism II:

Design for the Environment (DfE)



The shift isn't just fiscal; it's a structural feedback loop. By making end-of-life costs visible, producers are incentivized to innovate.

Traditional Model vs the EPR Framework

TRADITIONAL MODEL	EPR FRAMEWORK
FOCUS	FOCUS
State-centric pollution control	Market-based instruments
WHO PAYS	WHO PAYS
Municipalities, cities & taxpayers	Producers (cost internalised)
OUTCOME	OUTCOME
Externalised costs	Lifecycle accountability

Source: UNEP, 2024; World Bank, 2025

From a Linear Chain to a Circular System

THE LINEAR MODEL

Extract → Produce → Consume → Dispose

Value is lost at disposal – e.g. landfilled, dumped or burned.

THE CIRCULAR MODEL — ENABLED BY EPR

Produce → Consume → Collect → Recycle

Materials Re-enter production → Closing the Loop

Source: World Bank, 2025; UNEP, 2024

THE TOOLKIT – EPR VOCABULARY

Producer Responsibility Organization (PRO)

A collective entity established by producers to manage their EPR obligations efficiently, sharing the costs of collection and recycling networks. Can be single or multiple.

Financial PRO

Focuses on funding. It collects fees from producers to finance municipal or private waste management operations rather than doing it themselves.

Operational PRO

Takes direct, physical responsibility. It actively manages the collection, sorting, and recycling of waste on behalf of the obliged producers.

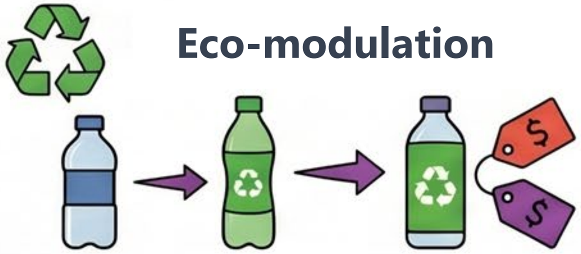
Obliged Enterprises

The entities mandated by law to take responsibility. Typically includes product manufacturers, importers, brand owners, or large retailers.

Free Riders

Companies that benefit from the overall EPR system but evade their financial or operational obligations, undermining the system's fairness.

Eco-modulation



Adjusting EPR fees based on environmental performance. Producers pay lower fees for highly recyclable designs and higher fees for harmful plastics.

Source: World Bank, 2025; WWF, 2020

Spotlight: the Producer Responsibility Organization

Obliged producers	PRO	Collection & recycling	Material recovery
Pay fees & delegate duties	Pools funds & coordinates	Operators and municipalities	Back into the economy

FINANCIAL PRO

Focuses on funding: collects producer fees to finance municipal or private waste operations, rather than running them itself.

OPERATIONAL PRO

Takes direct, physical responsibility: actively managing collection, sorting and recycling on behalf of obliged producers.

Source: World Bank, 2025

What EPR Covers Commonly?

Packaging waste

Plastics, paper, glass and metals: the priority stream for early schemes in Southeast Asia.

WEEE

Waste electrical and electronic equipment: from phones to appliances.

End-of-life vehicles & tires

Automobiles, batteries and rubber tires.

Southeast Asia's focus: Plastic packaging - the bulk of mismanaged waste and the most visible marine-pollution crisis.

Source: OECD, 2022

How EPR is Built on the Ground?

01 Design

Public agency develops a binding regulatory framework, sets targets and fees, and establishes the EPR registry.

Lead: Public agency in charge of EPR

02 Rollout

The mandatory scheme launches. Producers register; PROs, municipalities, collectors and recyclers operate; the informal sector is formalised.

Lead: Producers, PROs & public sector

03 Review

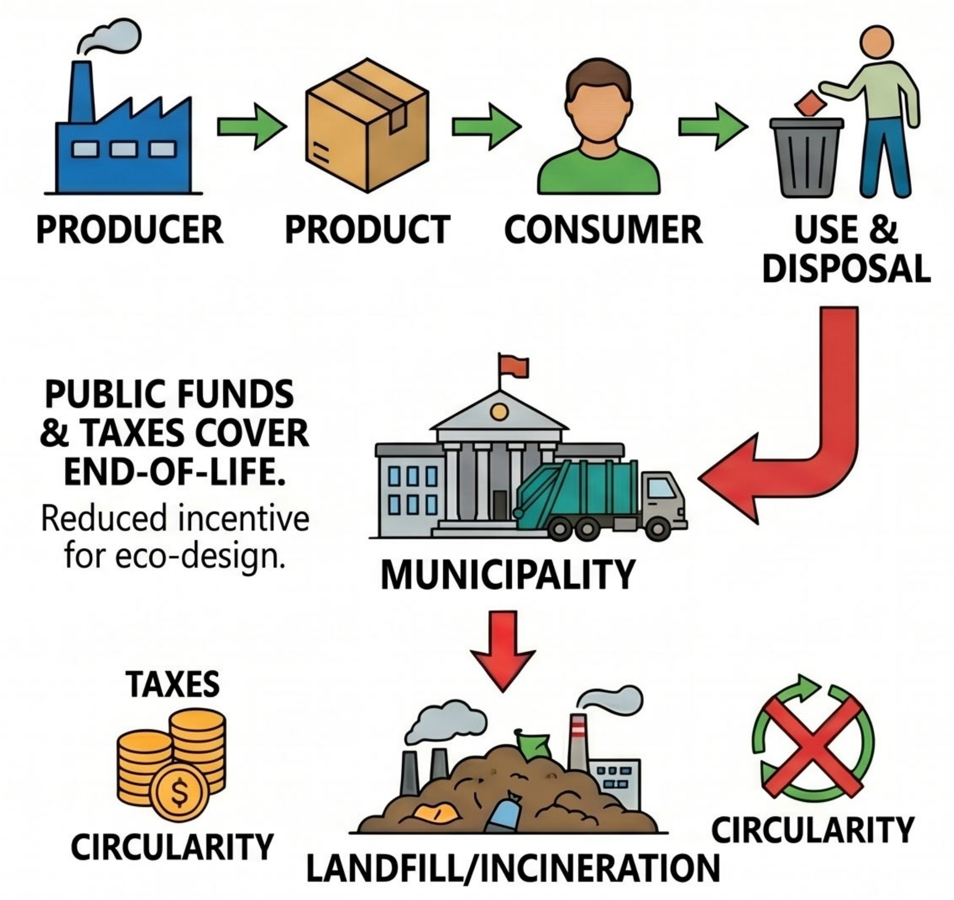
Producer responsibilities are monitored, penalties applied to non-compliance, and the whole system is reviewed and improved.

Lead: Registry agency / PRO

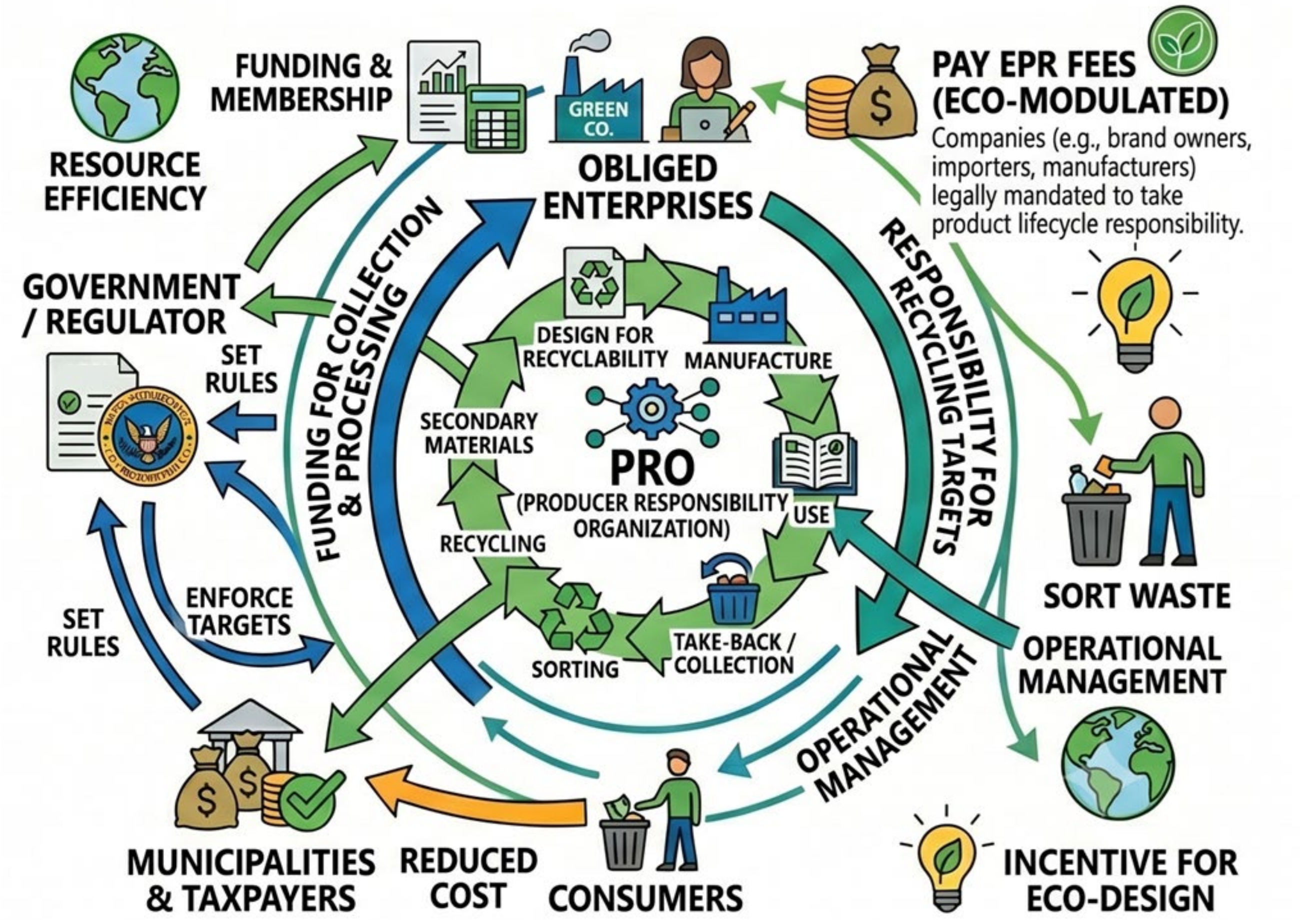
Source: World Bank, 2026

Traditional Model vs EPR Framework

Traditional Model (Linear)



EPR (Circular)



Source: World Bank, 2025; UNEP, 2024

Why Southeast Asia is Acting

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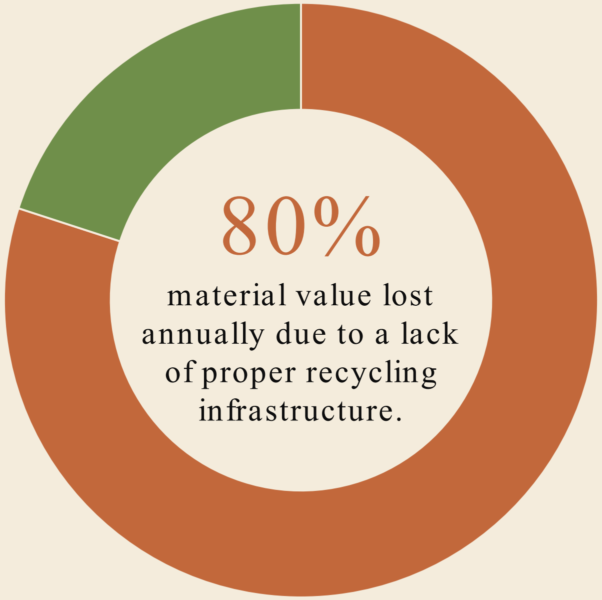
of the top 10 global ocean-plastic emitters are ASEAN member states.



THE REGIONAL RESPONSE

The ASEAN Regional Action Plan for Combating Marine Debris (2021–2025) names EPR a core regional strategy.

Initial implementations prioritise plastic packaging, the bulk of mismanaged waste and a highly visible crisis.

→ Southeast Asia is prioritizing plastic packaging for its initial EPR implementations since plastic packaging forms the bulk of mismanaged waste, causing severe marine and terrestrial pollution, and is a highly visible crisis.

Source: Jambeck, 2015; ASEAN Secretariat, 2021; World Bank, 2018; UNEP, 2019

EPR across Southeast Asia: a Patchwork of Progress

Mandatory	Voluntary → Mandatory	Planning / Proposed
• Philippines	• Indonesia	• Cambodia
• Vietnam	• Thailand	• Lao PDR
• Singapore	• Malaysia	• Myanmar
		• Brunei

Source: World Bank, 2025; ASEAN Secretariat, 2021

EPR across Southeast Asia: a Patchwork of Progress

MANDATORY

Philippines

Key Products:
Plastic packaging (rigid, flexible, polymer bags)
PRO Model:
"Plastic Neutrality" model; enterprises recover % of footprint via PRO or individually.
Policy:
EPR Act of 2022 (Republic Act No. 11898)

MANDATORY

Vietnam

Key Products:
Packaging (plastic, paper, glass, metal), batteries, lubricants, tires, electronics.
PRO Model:
Binary choice: Self-organization or contribution to VEPF Fund.
Policy:
Law on Environmental Protection 2020; Decree No. 08/2022/ND-CP

MANDATORY

Singapore

Key Products:
Regulated packaging; upcoming for beverage containers.
PRO Model:
Transitioning to collective responsibility scheme (bev containers).
Policy:
Resource Sustainability Act 2019

VOLUNTARY -> MANDATORY

Indonesia

Key Products:
Packaging (plastic, glass, paper, metal) in manufacturing, retail, food service.
PRO Model:
No centralized PRO mandated; voluntary coalitions (IPRO).
Policy:
Reg No. P.75/2019 (Waste Reduction Roadmap)

VOLUNTARY -> MANDATORY

Thailand

Key Products:
Plastic packaging and used packaging.
PRO Model:
Industry-led TIPMSE; draft Act proposes authorized organization.
Policy:
Draft Sustainable Packaging Management Act

VOLUNTARY -> MANDATORY

Malaysia

Key Products:
Plastic packaging and solid waste.
PRO Model:
Led by MAREA (industry-led initiative).
Policy:
Plastics Sustainability Roadmap 2021–2030

PLANNING/UNDER PROPOSAL

Cambodia, Lao PDR, Myanmar, Brunei

Challenges & Gaps (Indonesia)

Low participation

Because the scheme is voluntary, uptake is minimal, only 89 producers had registered waste-reduction plans by early 2024.

No penalties

There is no real penalty structure or enforcement mechanism for free-riders or non-compliant producers.

Unclear definitions

The roles and legal status of PROs, private waste actors and the informal sector are not formally defined.

Infrastructure gaps

Around 50% of waste remains uncollected amid vast geography and severe infrastructural constraints.

Source: World Bank, 2025; OECD, 2019

Challenges & Gaps (Philippines)

Unclear PRO framework

A distinct lack of clear, actionable rules to establish, approve and operate PROs leads to confusion on the ground.

SME exemption

Micro, small and medium enterprises are exempt from the mandate, significantly reducing the volume of plastic captured.

The co-processing trade-off

Heavy reliance on co-processing (e.g. cement kilns) can hit recovery targets while destroying genuine circularity.

Source: World Bank, 2021; World Bank, 2025

Challenges & Gaps (Vietnam)

The financial opt-out

Many producers simply pay into the VEPF as a "tax", discouraging actual physical recycling and hindering PRO formation.

Informal-sector gap

Despite their central role in recycling, informal waste actors are not clearly defined or integrated into the EPR law.

Infrastructure deficits

Domestic recycling for low-value plastics — flexible films and sachets — is severely lacking.

Missing definitions

Crucial terms (e.g. the legal definition of an "importer") remain unclear, causing compliance issues.

Source: World Bank, 2021; World Bank, 2025

Three Countries, Three Strategies

Dimension	Indonesia	Philippines	Vietnam
Policy stage	Voluntary (roadmap)	Mandatory (immediate)	Mandate (transitional)
Primary target	30% reduction by 2029	80% recovery by 2028	Variable by material (10–22%)
Core mechanism	Brand-led roadmaps	Plastic-neutrality offsets	PROs or state fund
Primary vulnerability	Lack of enforced funding	Co-processing destroys circularity	Complex data-auditing needs

Source: World Bank, 2021; World Bank, 2025

Three Lessons Learned

01

Target the leakage, not the value chain

Fund local infrastructure aimed at low-value, non-recyclable packaging that leaks into the environment, rather than disrupting high-value materials already collected informally.

02

Make the framework mandatory

Voluntary initiatives stay underfunded. A mandatory legal and financial basis, with clear definitions, realistic targets and strict penalties, drives structural change.

03

Close data gaps & include everyone

Transparent baselines hold producers accountable, paired with the formal, equitable integration of the informal sector and municipalities.

Source: World Bank, 2021; World Bank, 2025

Common Ground: Lesotho and Southeast Asia

WASTE-MANAGEMENT CHALLENGES

Rapid urbanisation and consumption growth outpace existing infrastructure, driving heavy reliance on open dumping, open burning and high volumes of uncollected waste in communities.

SOCIO-ECONOMIC FACTORS

Both face heavily constrained municipal budgets for solid-waste management, and both rely on an informal waste sector (waste pickers) to perform the bulk of material recovery and recycling.

Source: World Bank, 2025; UNEP, 2024

Why EPR Makes Sense for Lesotho

Budget relief

Eases the financial burden on municipalities for waste collection and safe disposal.

Economic growth

Stimulates local recycling infrastructure and creates new, formal green jobs.

Informal-sector integration

A funded mechanism to formally integrate, protect and support informal waste pickers.

Health & Environment

Cuts the environmental and health risks of open dumping and burning of plastics.

Source: UNEP, 2024

Adapting EPR for Lesotho: a Phased Path

1

Conduct a baseline study

Map current waste flows, prominent materials and the existing informal-sector landscape.

2

Engage stakeholders early

Open transparent dialogue with producers, importers, municipalities, NGOs and waste pickers.

3

Start simple & mandatory

A clear mandatory framework on priority streams first, PET bottles and plastic bags, before expanding.

4

Develop a PRO system

Encourage producers to form a collective PRO to build economies of scale nationwide.

5

Build capacity

Invest in public-awareness campaigns and the technical and regulatory capacity of municipalities.

Source: Synthesis of World Bank, 2025 & ASEAN Best Practice

A Phased Recommendation Roadmap

Near-term 0–12 months	Medium-term 1–3 years	Long-term 3–5 years
• Commission the baseline study • Convene a multi-stakeholder platform • Draft a mandatory law for PET & bags	• Stand up a collective PRO • Introduce eco-modulated fees • Formalise & fund waste pickers • Build materials-recovery capacity	• Expand to WEEE & multi-material • Enforce penalties for free-riders • Publish transparent data & review

Guiding principles: Mandatory by design · Fund the gaps · Include the informal sector · Measure everything

Source: Synthesis of World Bank, 2025 & ASEAN Best Practice

FROM PRINCIPLE TO PRACTICE

Lessons from Southeast Asia and a Roadmap for Lesotho

Thank you for your attention!