



# Towards the Circular Economy for the Asian Plastic Industry

31 OCTOBER 2024

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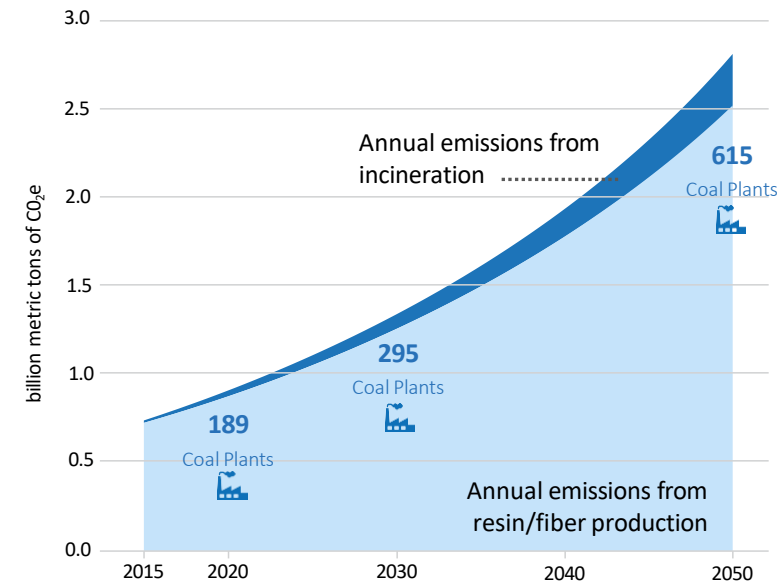
# MARINE PLASTICS ARE A GROWING DEVELOPMENT CONCERN GLOBALLY

## PLASTICS ARE EVERYWHERE

- Estimated plastic produced **367 million tons/year**
- Plastic in the world's oceans **150 million tons**
- Plastic waste entering oceans **8 million tons +/-year**
- New plastic waste with current consumption, urbanization and production **~250 million tons/yr**
- Estimated number of sea mammals, marine turtles and fish killed by plastic waste each year **100,000**

Source: Lebreton et al (2019) Future scenarios of global plastic waste generation and disposal ([link](#))

## PLASTICS ARE LINKED TO CLIMATE CHANGE



If plastic production and incineration grow as predicted, cumulative GHG emissions by 2050 will be > 56 gigatons CO<sub>2</sub>e, or **10–13 % of total remaining carbon budget**

## THE IMPACTS ARE SIGNIFICANT



### Economy

Losses in coastal tourism, transport, fisheries and aquaculture of USD\$10.8 bn for APEC region in 2015



### Biodiversity

Marine ecosystems and fish habitats impacted: at least USD 13 bn per year globally



### Food Security

Plastics found in 12 out of 25 most important species and genera that contribute to global marine fisheries

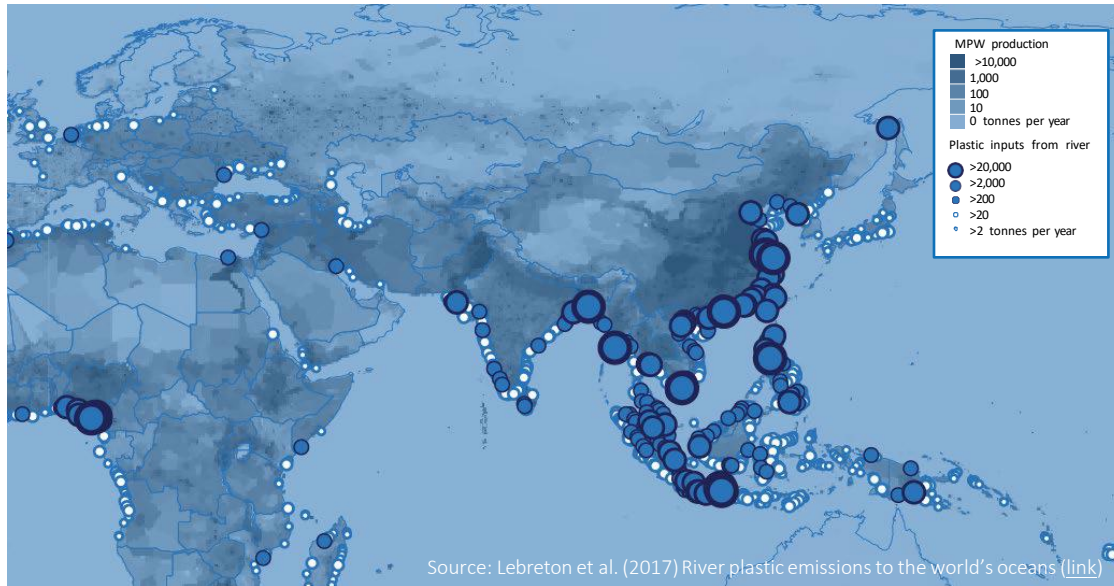


### Public Health

Micro-plastics detected in 80% of global freshwater, 81% of municipal tap water and 93% of bottled water

# EAP IS CRITICAL FOR COMBATING MARINE PLASTICS

## Plastic Waste Production and Inputs from Rivers\*



## EAP: HIGH PLASTIC PRODUCTION/POLLUTION, YET HIGH POTENTIAL

- 60 percent of all plastic reaching the world's oceans comes from EAP countries
- The top regional generators of mismanaged plastic waste are Southern Asia, Eastern Asia, and South-east Asia
- 90 percent of global marine plastic pollution is estimated to come from just 10 rivers, of which 8 are in Asia.

Source: Schmidt et al (2017) Export of Plastic Debris by Rivers into the Sea ([link](#))

## Regional Plastics Recycling Markets: Thailand, Malaysia, Philippines



**5 million tonnes**  
of plastics consumed each year

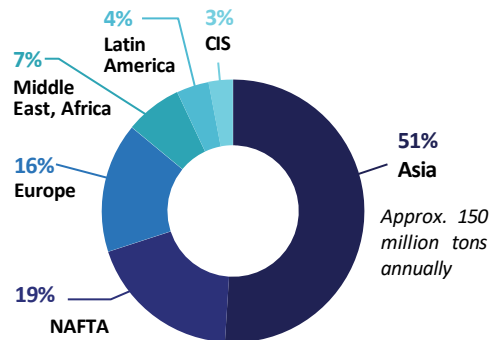


**18-28%**  
of key plastic resins are recycled

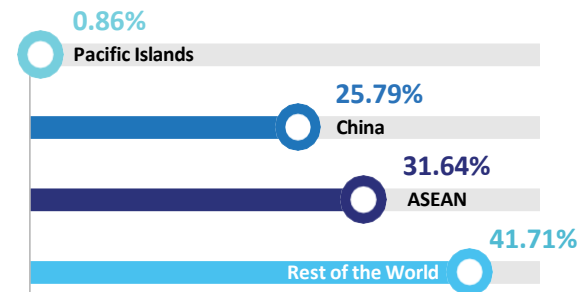


**6 billion USD**  
material value of plastics could be recovered with improved recycling capacity

### Share of global plastic production



### Projected share of global mismanaged waste in 2025



\*Note: The data presented might not reflect the most recent condition (which is why more granular and frequent monitoring is needed).

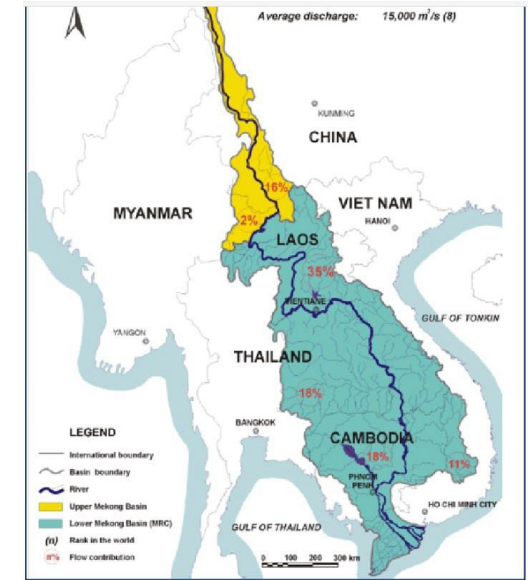
# Transboundary Nature of Marine Plastic Debris

Shared river systems and coastlines act as conduits for plastic waste



90% of global marine plastic pollution is estimated to come from just 10 rivers, **8 of them in Asia**

Common challenges require joint solutions!



## Regional waste trade

Requires harmonized quality standards for recycling practice and recycled plastics to ensure safety.



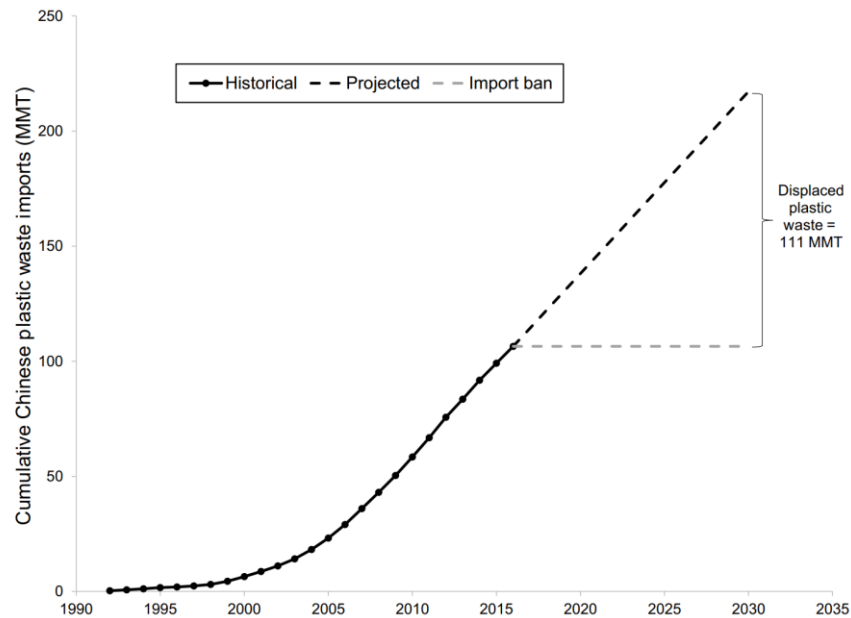
## Regional markets for plastics

Private sector companies call for regional standards for plastic packaging, labelling, biodegradability and compostability.



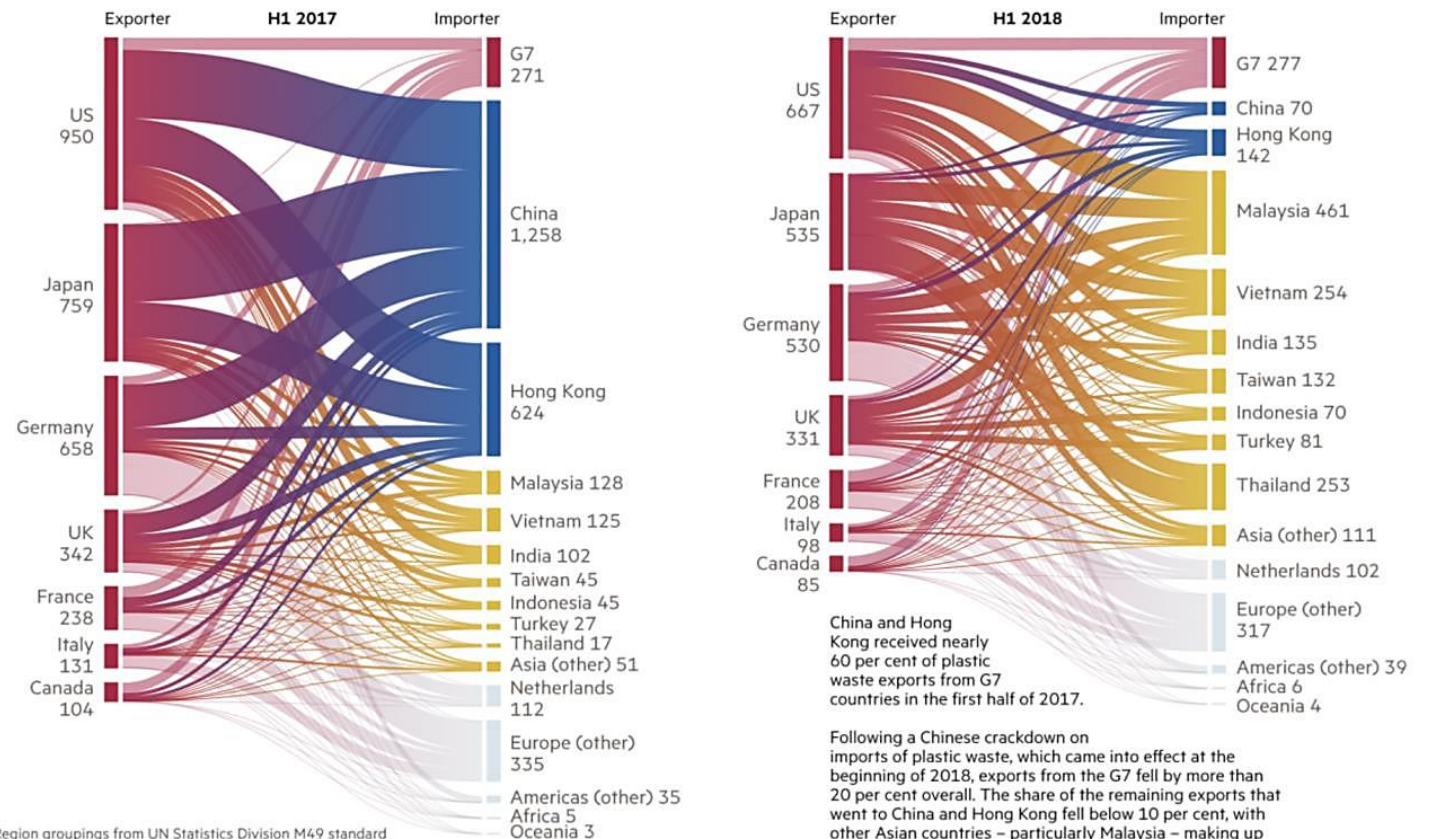
# Impacts of China import ban on plastic waste on global plastic trade

## Plastic waste market is still adjusting to China's plastic ban



## How the global river of plastic waste changed course in just 12 months

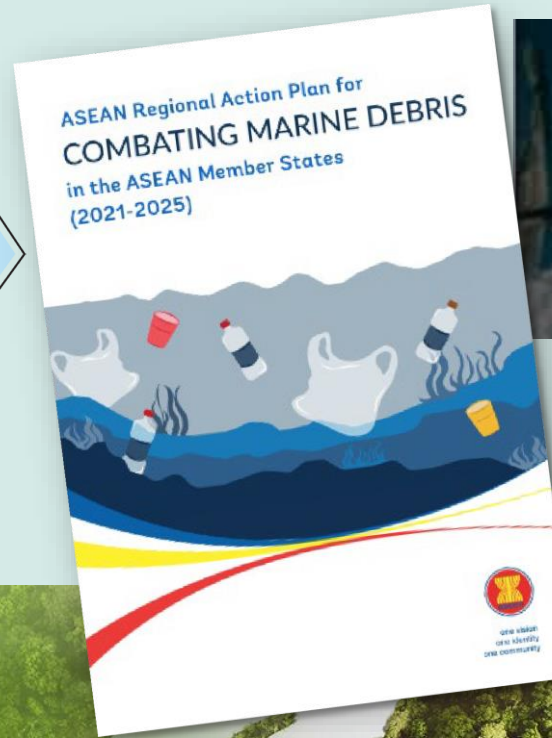
Exports of plastic waste, parings and scrap from G7 countries ('000 tonnes)



Region groupings from UN Statistics Division M49 standard  
 Data accessed Sep 19-Oct 1, 2018  
 Sources: US Census Bureau; Japan e-Stat; Eurostat; Statistics Canada  
 © FT

Visual journalism: David Blood, Liz Faunce, Andrew Rininsland

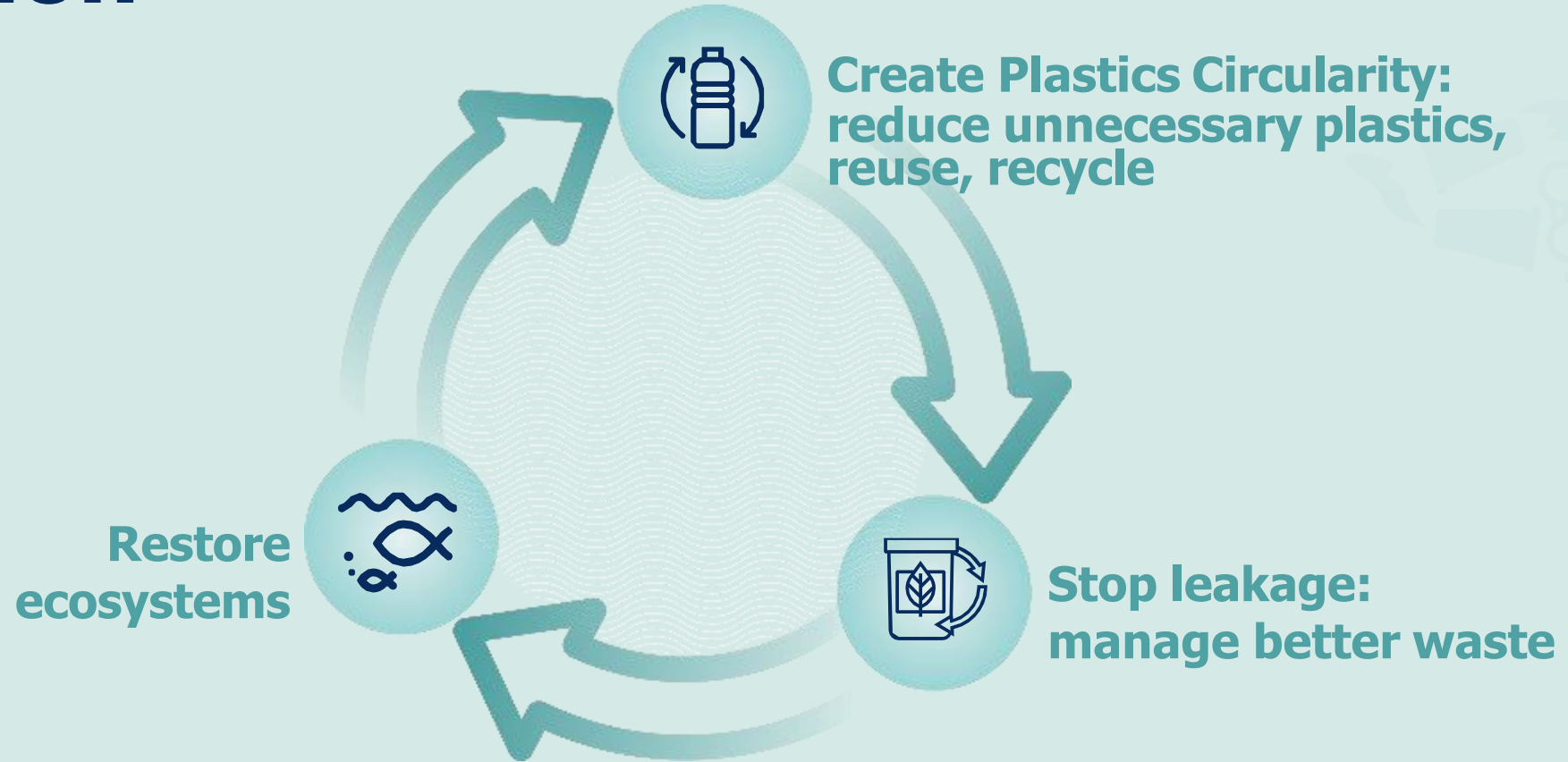
# Growing global & regional momentum towards ending plastic pollution



**KYOTO PROTOCOL**



# Supporting EAP efforts to transition to a new vision

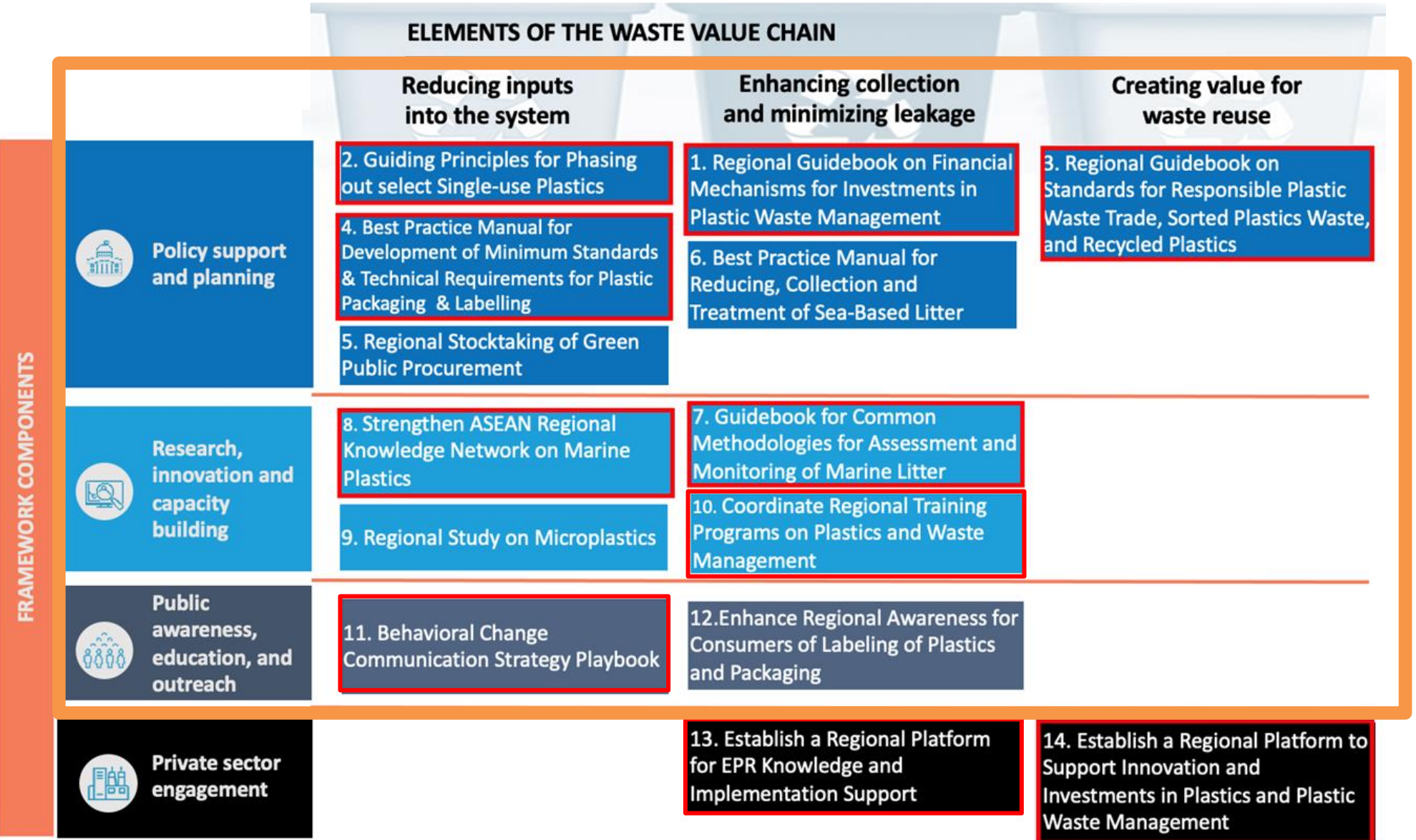


**It requires:**

**Innovations in Financing, Policies, Technologies,  
Public and Private Interventions (WB & IFC)**

# SEA-MaP's Support for the ASEAN Regional Action Plan for Combating Marine Debris (ASEAN RAP)

SEA-MaP address 10 of the 14 priority actions identified in the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (ASEAN RAP)

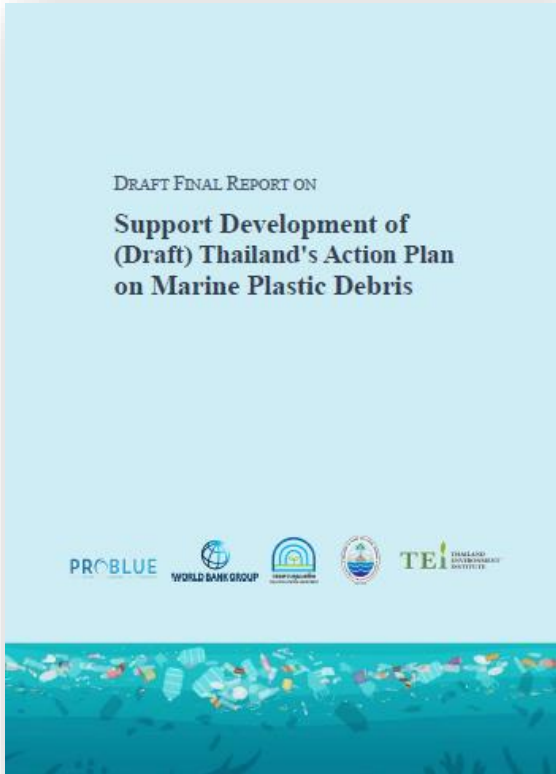




# Country Level Policy Action

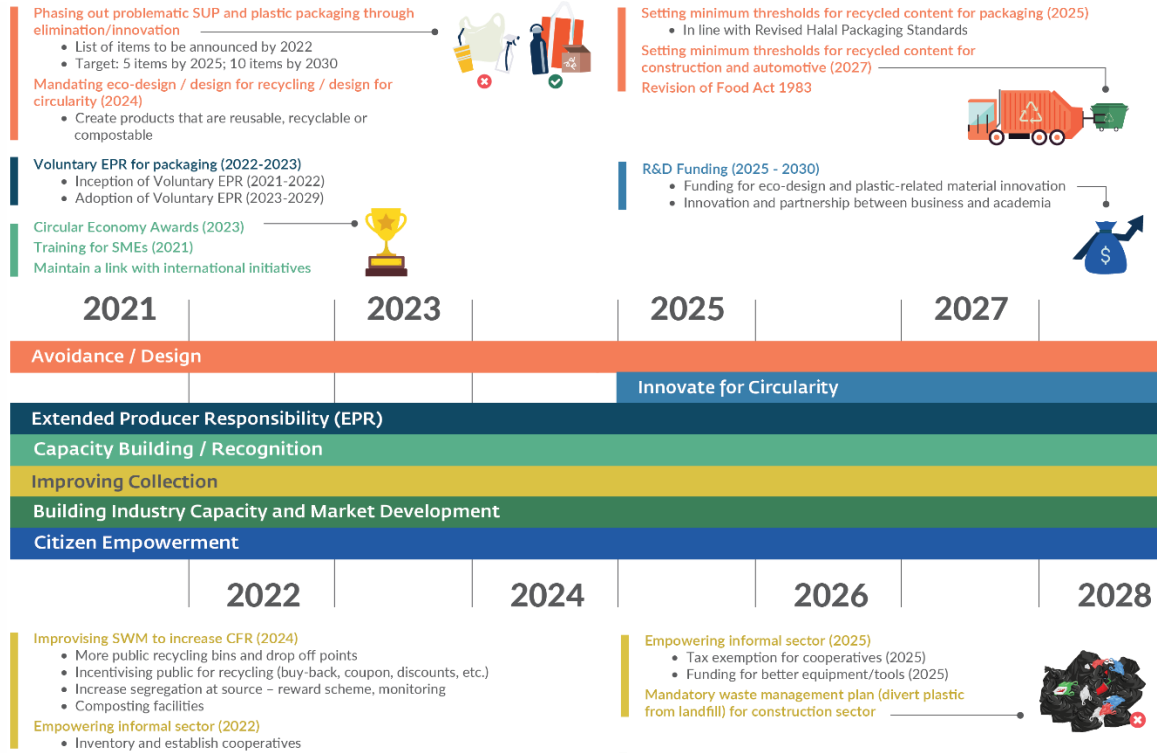
## DEVELOPING AND SUPPORTING NATIONAL POLICIES

### Thailand: Developing Marine Plastics Action Plan



### Indonesia, Vietnam: Supporting Policy Platform with WEF's NPAP

### Malaysia Preparing Circular Economy Roadmap for Plastics



### Philippines: Supporting Roadmap for Phasing out Single-Use Plastics

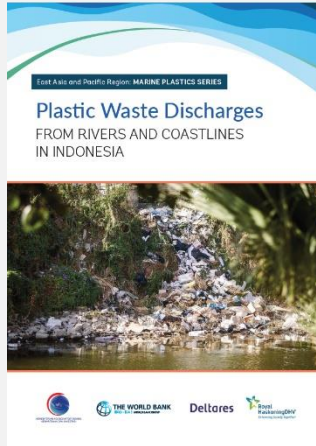
### Cambodia: Identifying policy options



# Filling Knowledge Gaps: Building Evidence Base Through Analytics

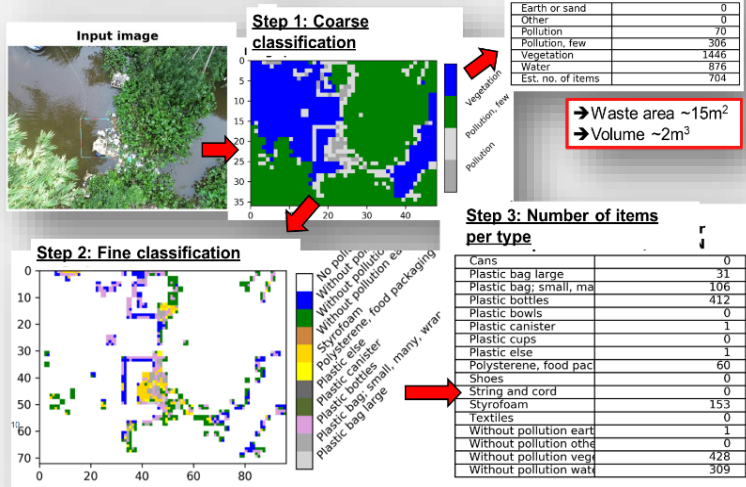
## METRICS

Pioneering Detailed Baseline Analytics in **Indonesia, Thailand**



Identifying Top 10 Plastics in **Cambodia, Myanmar, Laos, Vietnam, Philippines**

Exemplary result 2: Siem Reap River, Cambodia  
Scenario: Plastic items on water



## MARKET STUDIES

Undertaking Market Studies on Plastics Recycling in **Thailand, Malaysia, Philippines, Vietnam**



## TECHNICAL STUDIES

- Gender and Plastics in 6 countries (Cambodia, Lao, Myanmar, Vietnam, Philippines, Thailand)



- Technology Solutions for Plastic Waste on Small and Remote Islands (Malaysia)

- REGIONAL Plastics Leakage Methodologies for ASEAN

- Analysis of Riverine Technologies to capture Plastic Waste across ASEAN (multi-country)



# Leverage financing: IFC's First Blue Loan to Indorama Ventures

Recycling Facilities Worldwide Locations



**2025 GLOBAL COMMITMENT**

- Recycle **750,000 tons** of post-consumer PET materials as feedstock into our polyester production **per year**
- Recycle **50 billion bottles per year**
- Invest **USD 1.5 billion**

**INDORAMA VENTURES** Indorama Ventures Ltd. Thailand

- IVL is the largest producer of PET resin globally
- Company planning to increase global PET recycling capacity to 750,000 TPY by 2025
- **IFC mobilized \$300M green/blue loan to support recycling in Asia and Latin America**

New blue loan to help Indorama Ventures **Recycle 50 Billion PET Bottles a year by 2025**

**IFC** International Finance Corporation  
WORLD BANK GROUP  
Creating Markets, Creating Opportunities

Recycling PET resin to displace fossil-fuel based virgin materials **can reduce energy consumption by up to 79% and GHG emissions by up to 67% based on conservative industry estimates.** INDORAMA VENTURES (IVL) BLUE LOAN project specific emissions translate to at least **150,000 tCO2e/year emission savings.**

# Key WBG Achievements in EAP since FY19

## Building capacity & Policy



ASEAN Regional Action-Plan for combating marine debris  
Marine plastics action plans in Thailand, Indonesia, Vietnam

Roadmaps for phasing out SUPs in Philippines, and in Fiji, Vanuatu, Kiribati, Tonga, Samoa

Support to plastic pollution control options in China

Identifying policy options in Cambodia, Indonesia, Lao PDR and Myanmar

Plastic Policy Roadmap Indonesia NPAP & Pilot of the Plastic Policy Simulator in Indonesia



# Plastic pollution in EAP – looking forward



- ❖ Fill the gaps on analytics and capacity building
- ❖ Expand dissemination and knowledge sharing beyond ASEAN
- ❖ Support addressing plastic pollution as a global public good with benefits on climate and biodiversity
- ❖ Support regional investment and technical assistance to enhance national efforts on pollution, environmental risks and biodiversity



Thank You



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Environment, Natural Resources & Blue Economy