



# Securing a Sustainable Plastics Future for Southeast and East Asia

*Launch of the OECD Regional Plastics Outlook*



**Shardul Agrawala, Ruben Bibas, Elena Buzzi**  
Environment and Economy Integration Division  
OECD Environment Directorate

30 July 2025

**Join the conversation on X:**  
#GreenTalks  
OECD Environment on LinkedIn  
@OECD\_ENV on X



# WHY AN OUTLOOK ON SOUTHEAST AND EAST ASIA?



## FASTEST GROWING REGION

5.3% GDP growth 2023-2024

USD 26.6 trillion in combined GDP  
(31% of global share)

Almost one-third of global population



## CENTRAL TO GLOBAL PLASTICS LANDSCAPE

Almost one-third of global plastics use and waste

Crucial hub in global plastics production, manufacturing, recycling



## VULNERABLE TO IMPACTS OF PLASTIC POLLUTION

Reliant on ocean economy

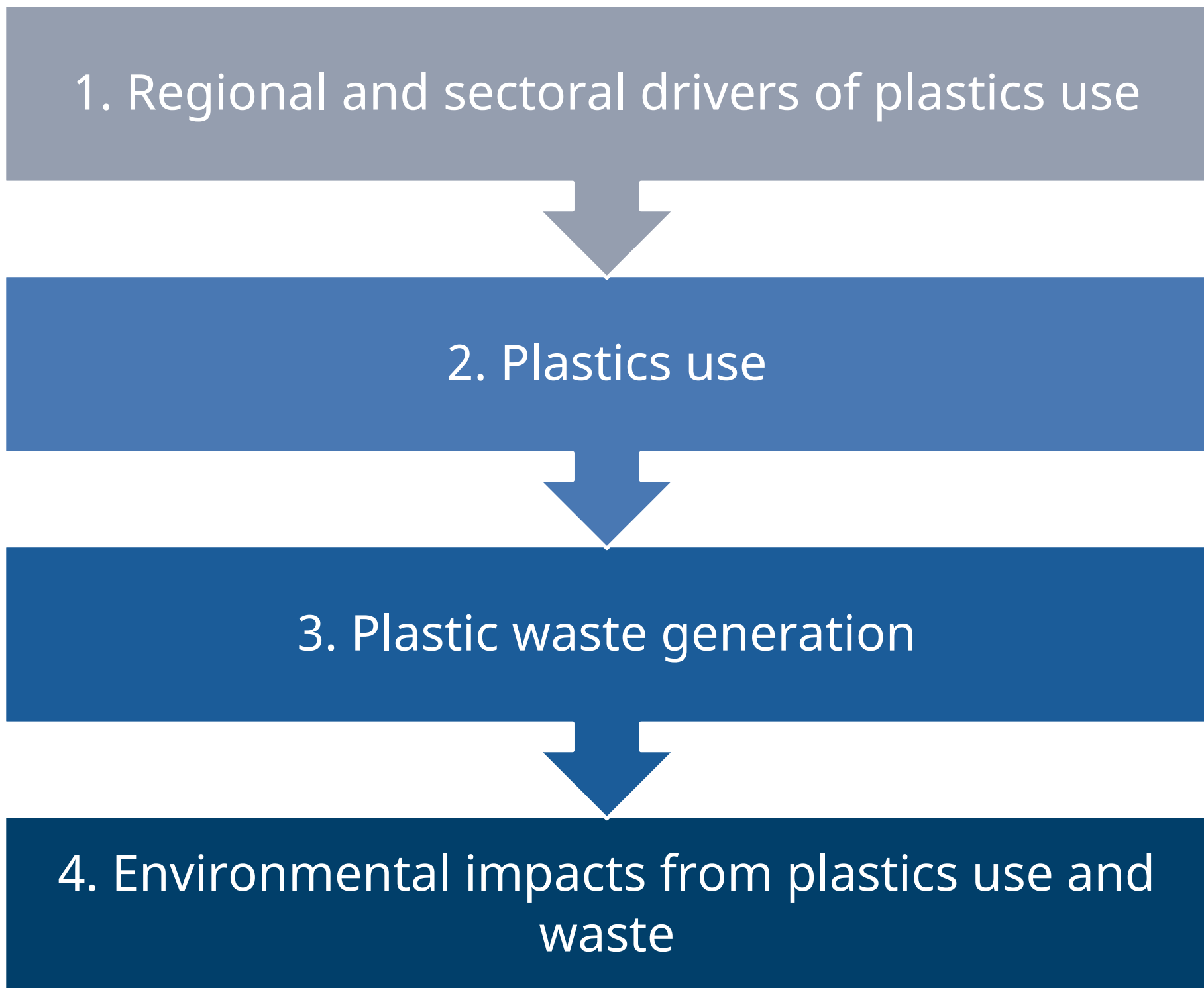
Over 150 000 km of coastline, strong risk of plastic leakage

# OUTLINE AND OBJECTIVES



- Comprehensive quantification of **plastics use, waste and leakage** for ASEAN Plus Three (APT) countries
- **Stocktake** of current policies
- **Baseline projections** to 2050
- **Comprehensive policy packages** to eliminate plastic leakage in the region
- **Policy roadmap** to turn ambition into action

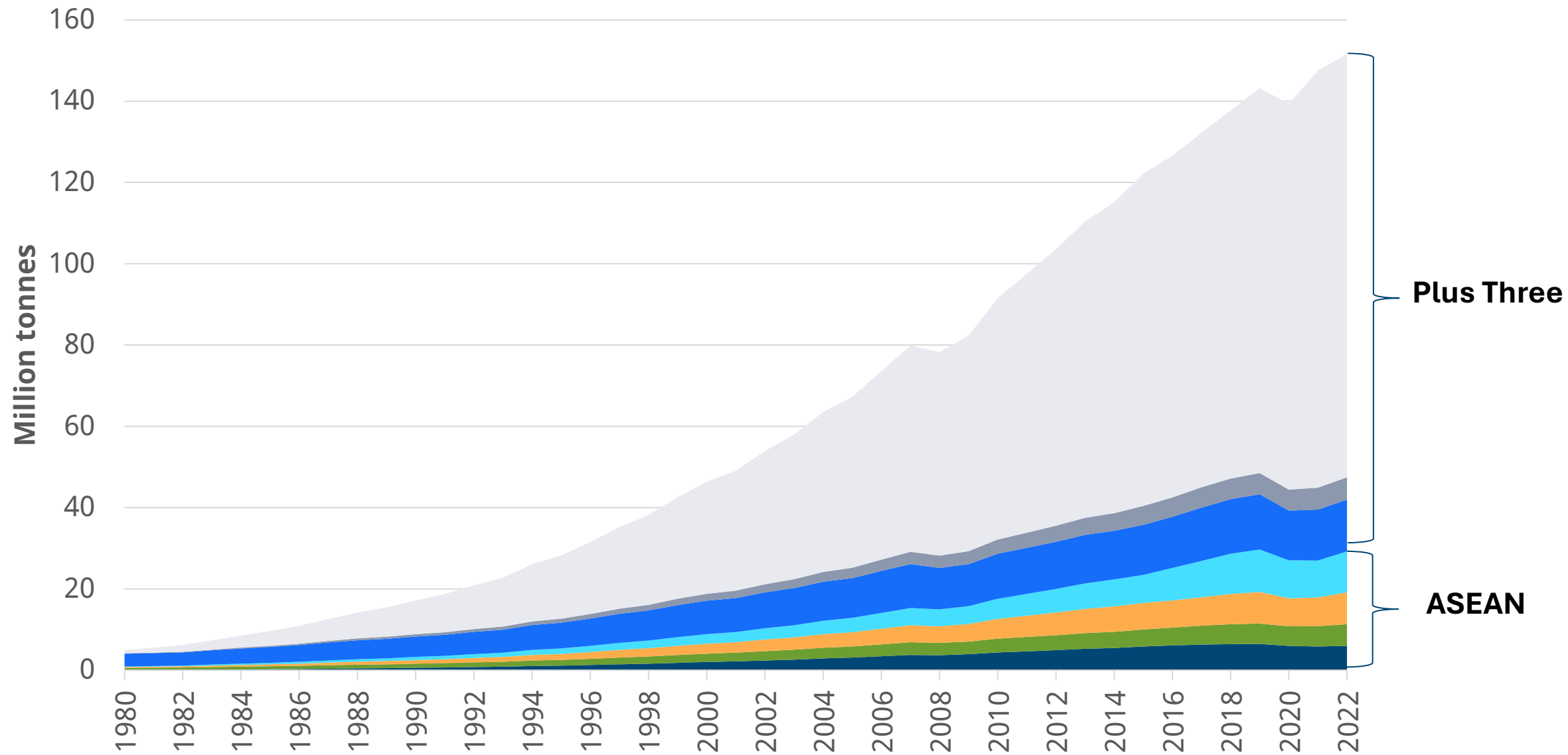
# MODELLING FRAMEWORK



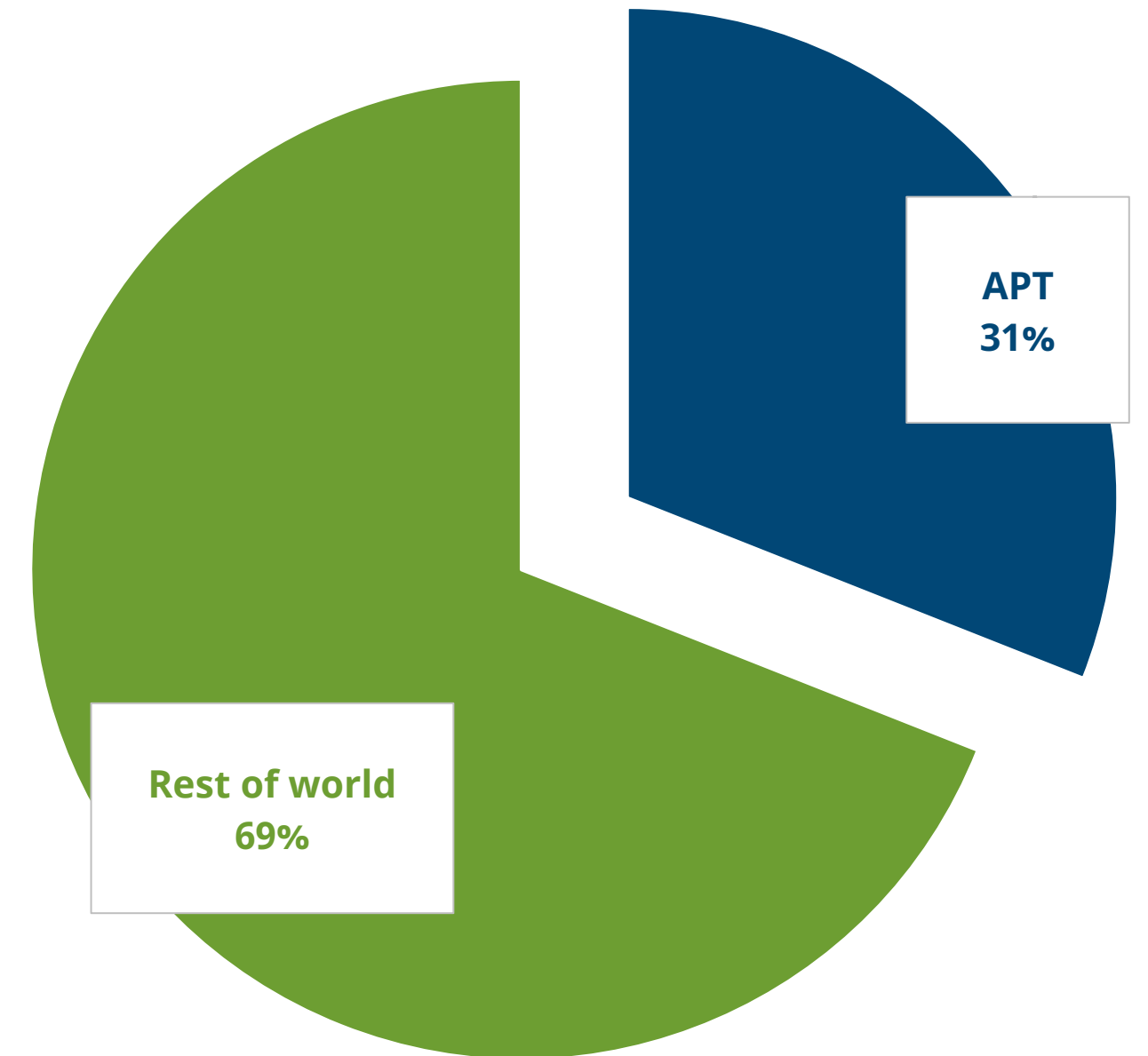
	Modelled region	Detail
ASEAN	Thailand	UMIC
	Rest of ASEAN - HIC and UMIC <i>(high and upper middle-income countries)</i>	<ul style="list-style-type: none"> <li>• Brunei Darussalam (HIC)</li> <li>• Malaysia (UMIC)</li> <li>• Singapore (HIC)</li> </ul>
	Indonesia	LMIC
	Rest of ASEAN – LMIC <i>(lower middle-income countries)</i>	<ul style="list-style-type: none"> <li>• Cambodia</li> <li>• Lao People’s Democratic Republic (Lao PDR)</li> <li>• Philippines</li> <li>• Viet Nam</li> <li>• Myanmar</li> </ul>
Plus Three	People’s Republic of China (China)	
	Japan	
	Korea	

Note: For the purposes of this modelling exercise, Myanmar is grouped with Timor Leste in the underlying economic data. It was not possible to exclude Timor Leste, but it represents 3% of the size of Myanmar, so the analysis remains valid. The People’s Republic of China includes Hong Kong

# PLASTICS USE IN THE REGION HAS SURGED...



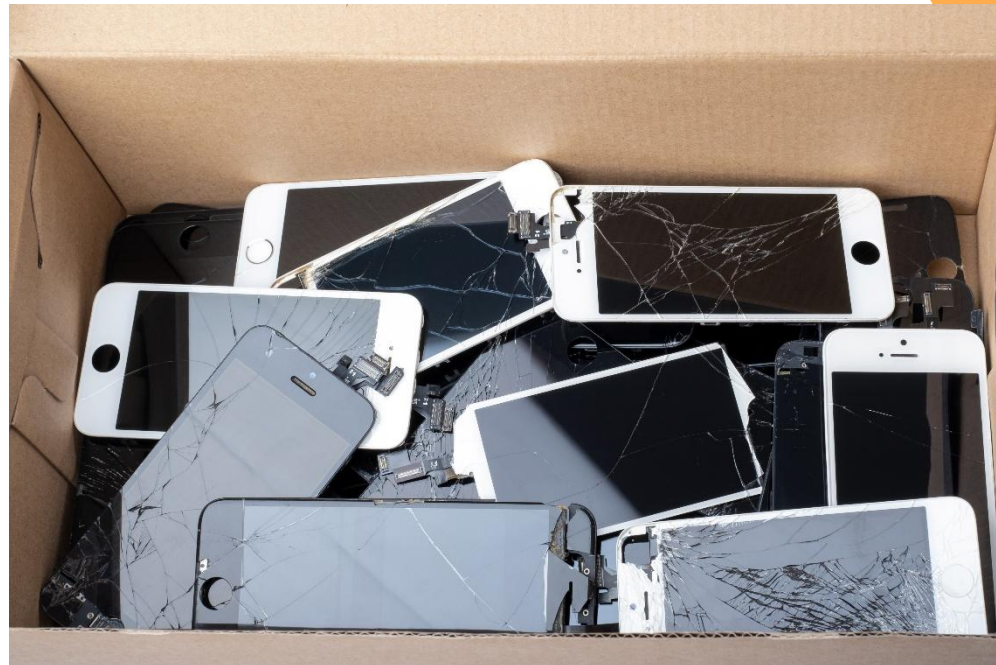
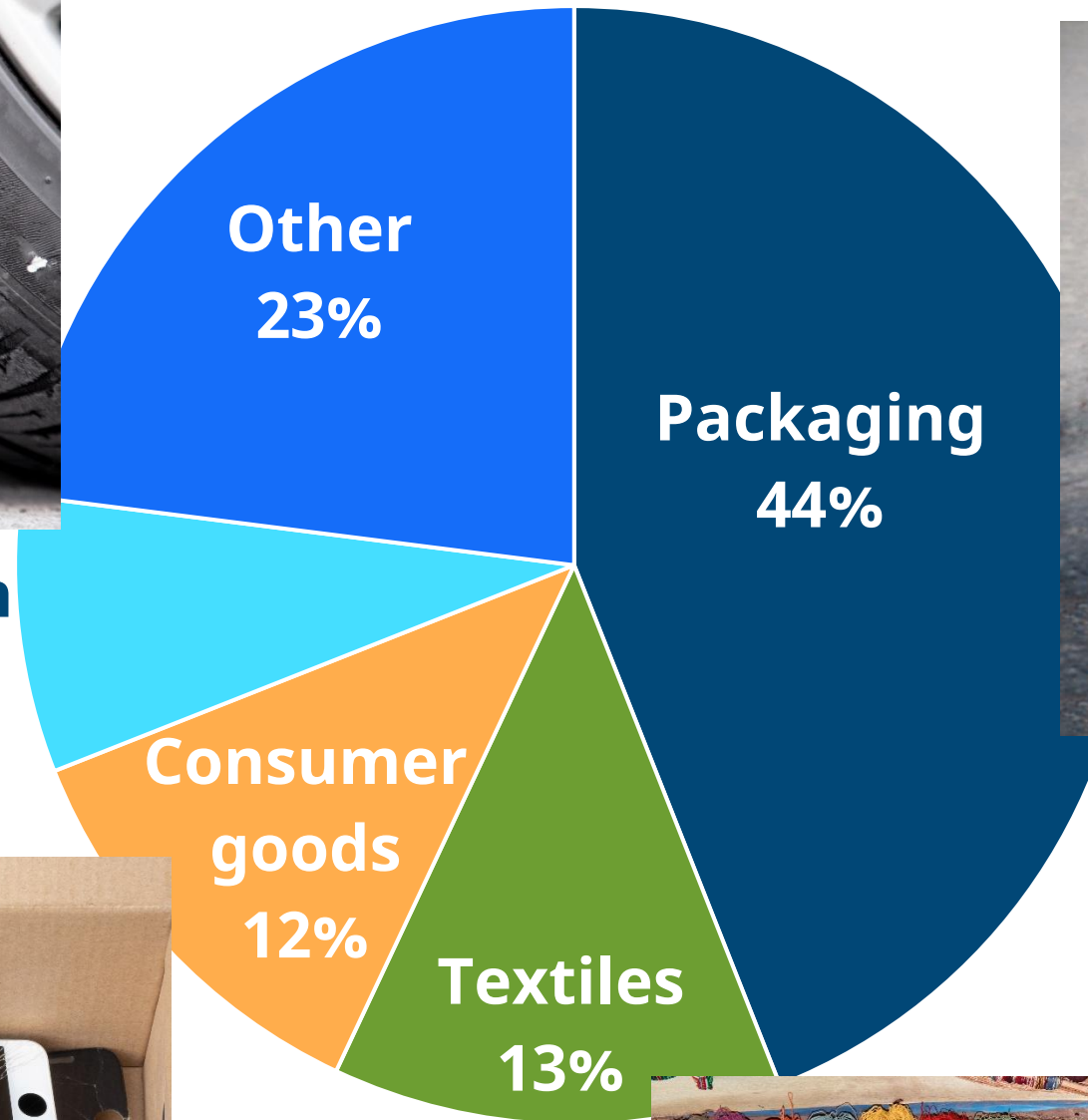
■ Thailand 
 ■ Rest of ASEAN - HIC & UMIC 
 ■ Indonesia 
 ■ Rest of ASEAN - LMIC 
 ■ Japan 
 ■ Korea 
 ■ China



# ... LEADING TO 113 MT OF WASTE ...



**Transportation**  
8%

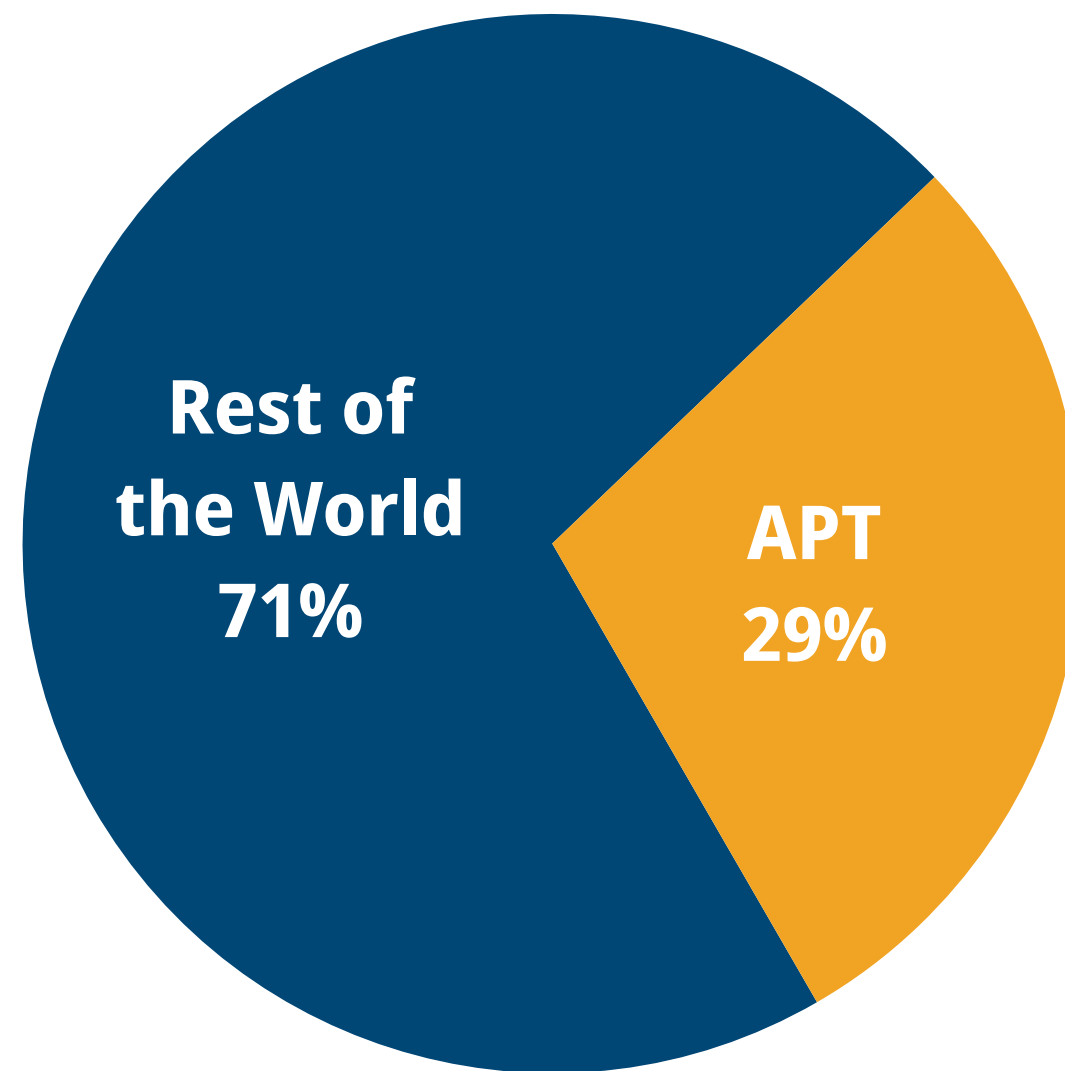


***Most plastic waste in the region comes  
from applications with lifespans of  
less than five years***

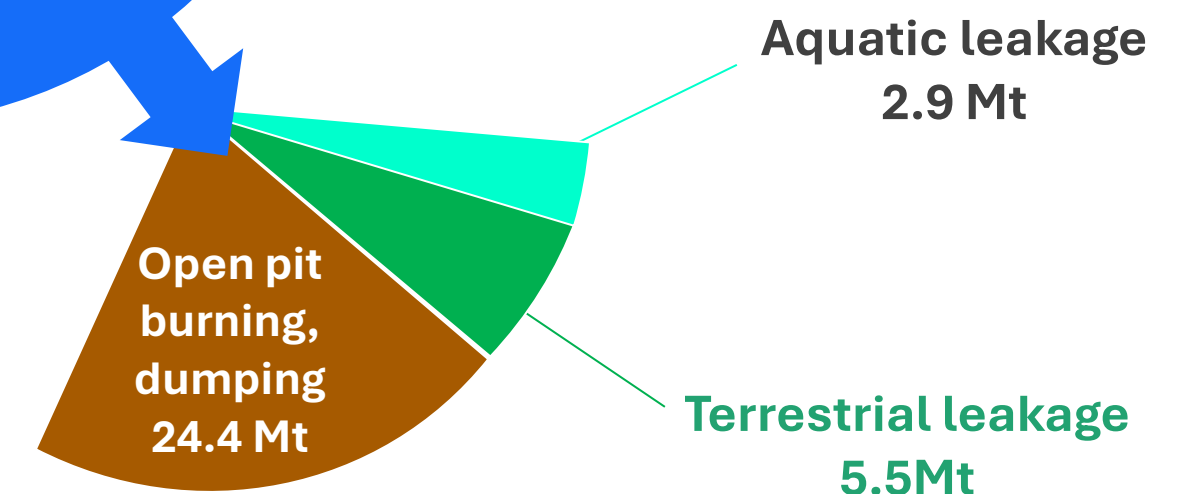
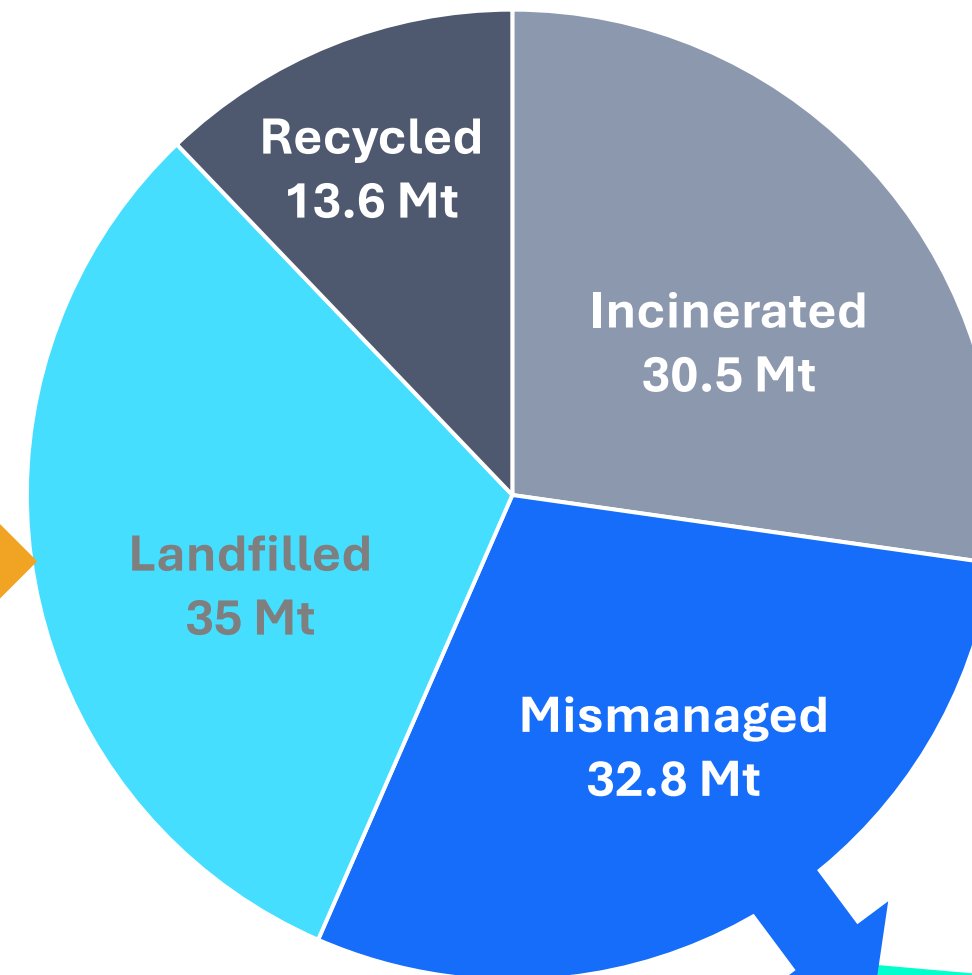
# ...8.4 MILLION TONNES OF PLASTIC WASTE LEAKED INTO THE ENVIRONMENT...



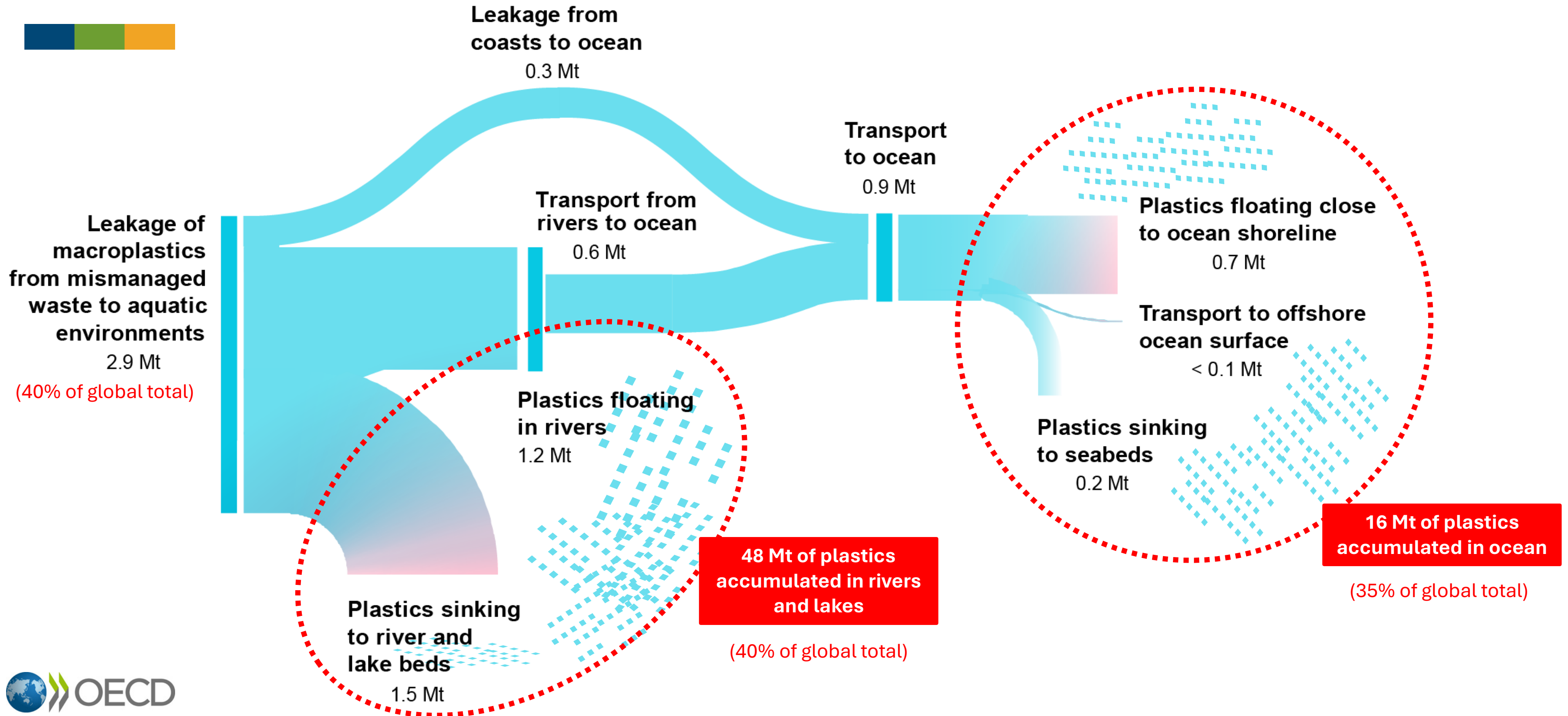
*Plastic waste generation*



*End-of-life fates*



# ... WITH LONG-TERM ENVIRONMENTAL CONSEQUENCES



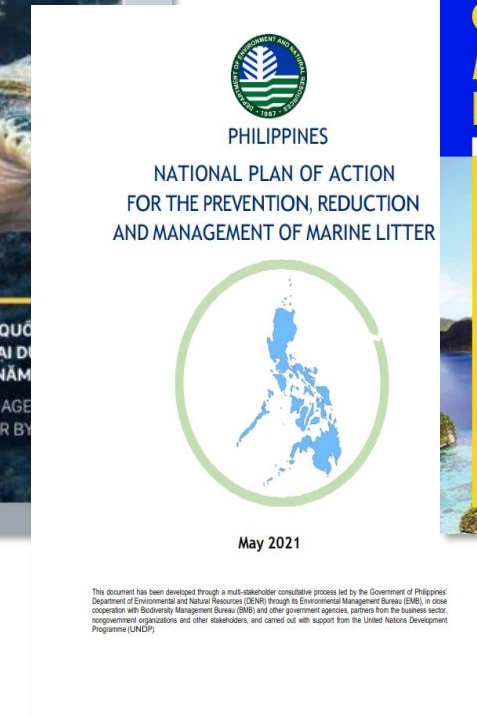
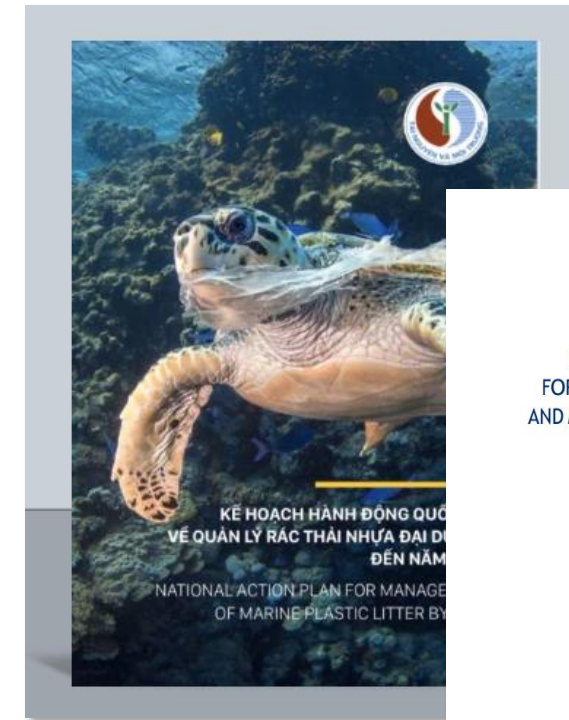
The region is key in the global fight against plastic pollution



# POLICY ACTION IS ACCELERATING, WITH ENCOURAGING BUT UNEVEN PROGRESS

# PLASTIC POLLUTION IS A REGIONAL POLICY PRIORITY

- National action plans in 9 APT countries
- APT national plastics action plans generally comprise
  - Waste management and recycling policies
  - Reduction measures
- Growing emphasis on regional co-operation
  - ASEAN Framework of Action on Marine Debris
  - ASEAN Regional Action Plan for Combating Marine Debris
  - ASEAN Plus Three Cooperation Work Plan



# POLICIES TO IMPROVE SORTING AND RECYCLING ARE ADVANCING, BUT THERE IS HETEROGENEITY

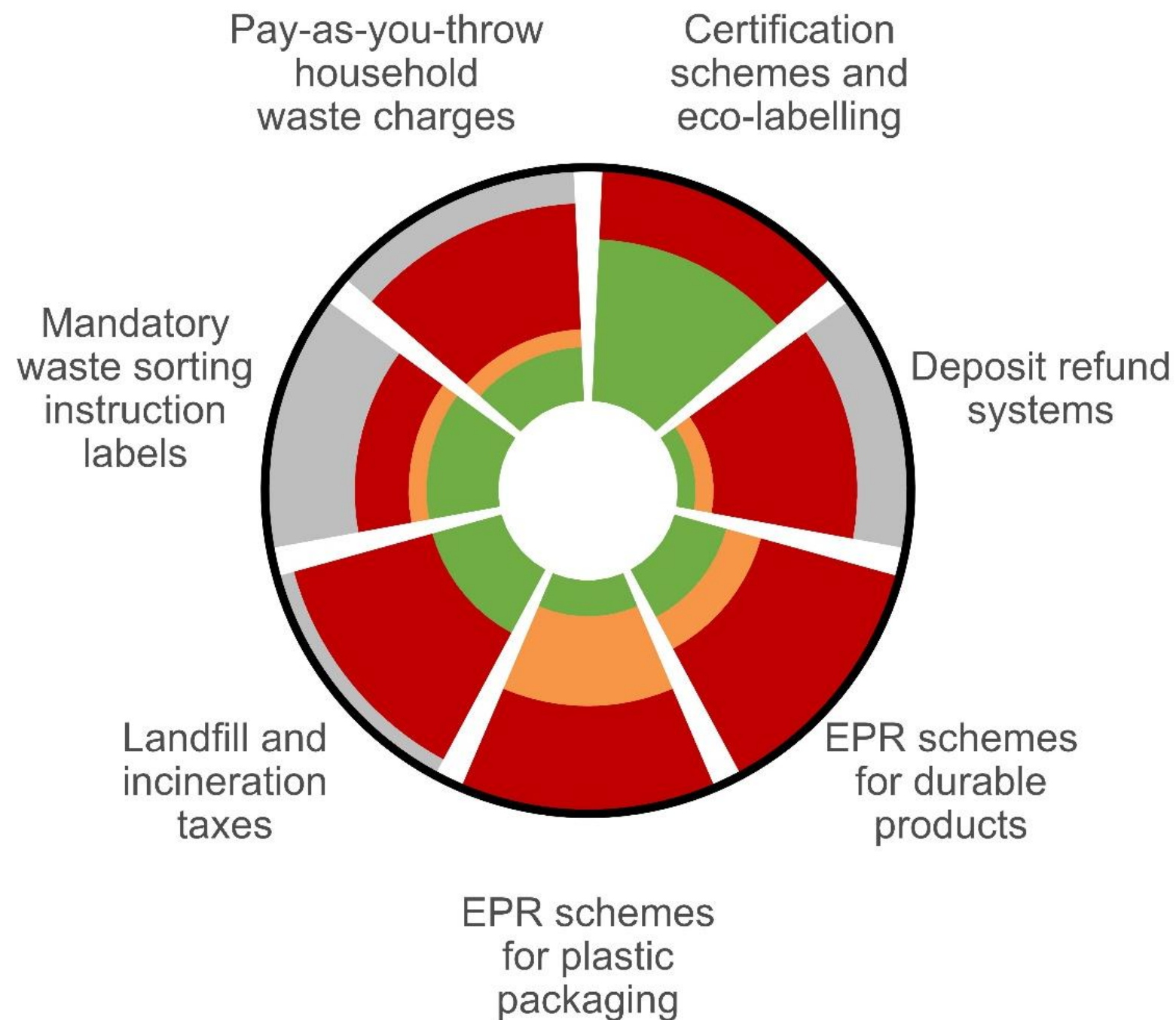


Country	Certification schemes and eco-labelling
Brunei Dar.	●
Cambodia	●
Indonesia	●
Lao PDR	●
Malaysia	●
Myanmar	●
Philippines	●
Singapore	●
Thailand	●
Viet Nam	●
China	●
Japan	●
Korea	●



- Most APT countries have **eco-labelling** in place
- **Extended Producer Responsibility (EPR) schemes for plastic packaging** are gradually deployed
  - Japan and Korea have well-established schemes
  - Four ASEAN countries (Indonesia, the Philippines, Singapore, Viet Nam) at early stages of implementation
- Lack of **landfill taxes** in most APT countries is a missed opportunity

# POLICIES TO IMPROVE SORTING AND RECYCLING ARE ADVANCING, BUT THERE IS HETEROGENEITY

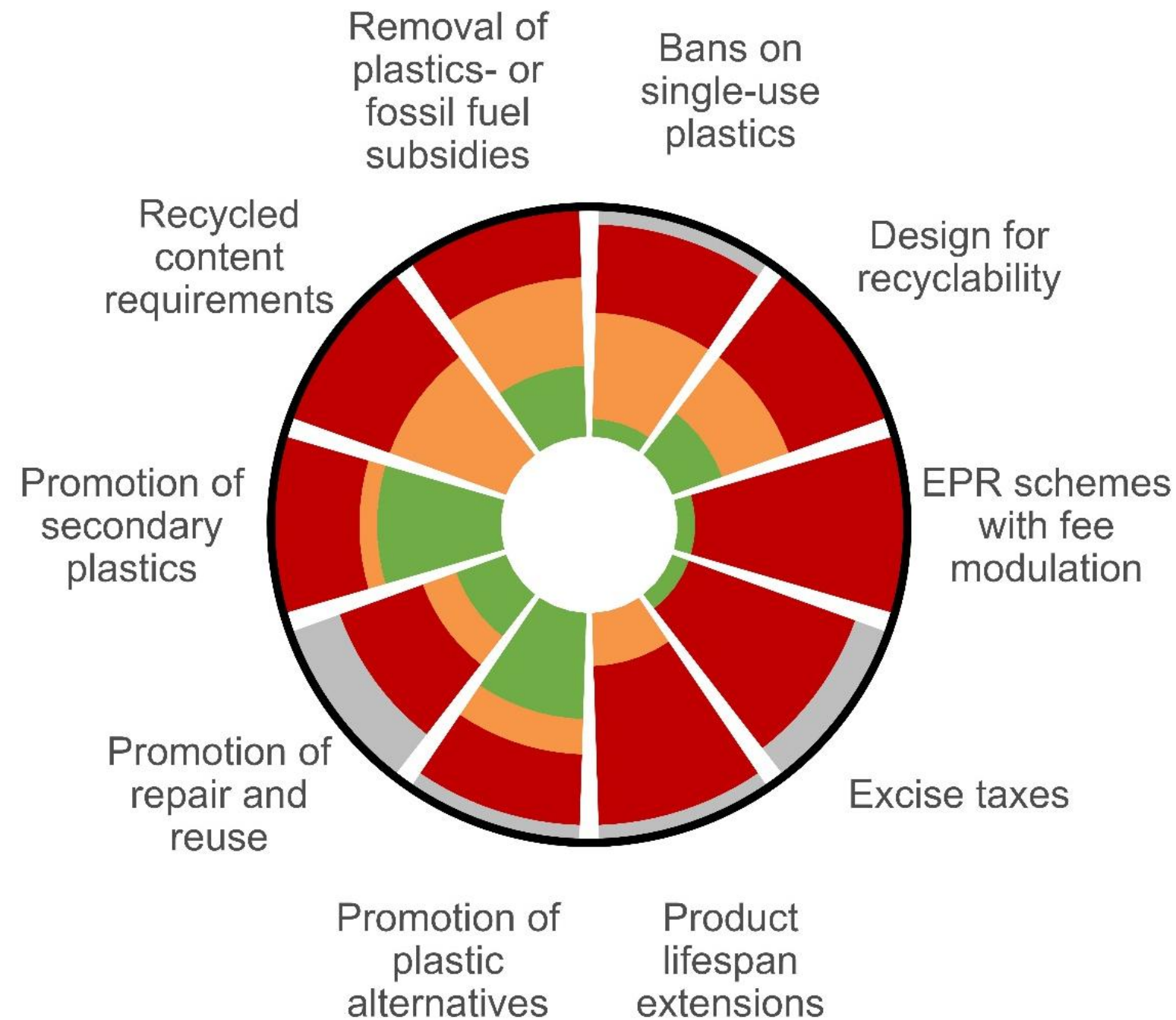


■ System is advanced 
 ■ System can be improved 
 ■ System can be markedly improved 
 ■ Missing data

Number of APT countries per policy

- Most APT countries have **eco-labelling** in place
- **Extended Producer Responsibility (EPR) schemes for plastic packaging** are gradually deployed
  - Japan and Korea have well-established schemes
  - Four ASEAN countries (Indonesia, the Philippines, Singapore, Viet Nam) at early stages of implementation
- Lack of **landfill taxes** in most APT countries is a missed opportunity

# POLICIES TO PROMOTE ECO-DESIGN AND REDUCTION VARY IN STRINGENCY AND REMAIN UNDERUTILISED



- 7 countries have (or have planned) **bans on some single-use plastics**
- 3 countries promote **design for circularity**, focussing on enhancing recyclability of plastics
- **Policies to promote reduction, reuse and longer lifespans** remain largely untapped

*Overall, weak enforcement poses challenges in many APT countries*

■ System is advanced 
 ■ System can be improved 
 ■ System can be markedly improved 
 ■ Missing data

Number of APT countries per policy

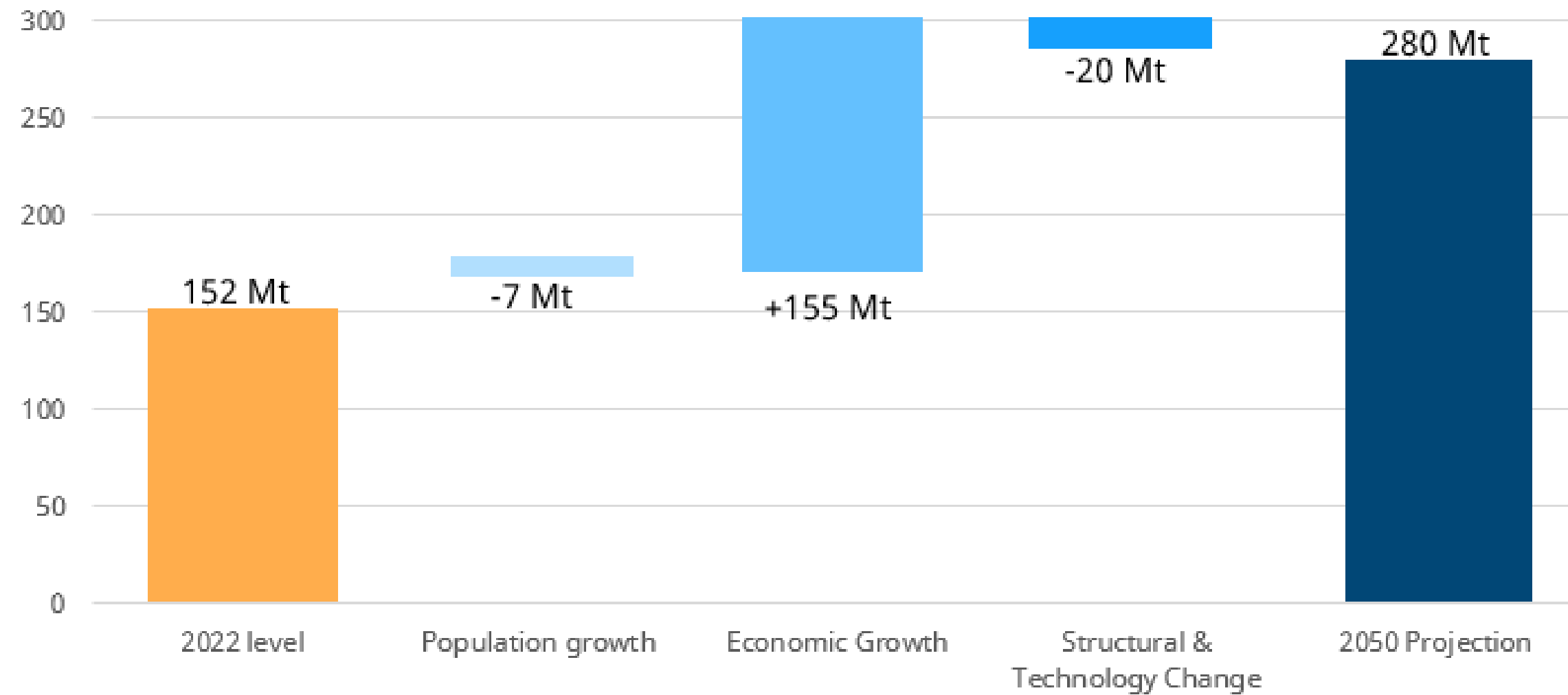


# OUTLOOK TO MID-CENTURY

# INCREASED PLASTICS USE DRIVEN BY ECONOMIC GROWTH



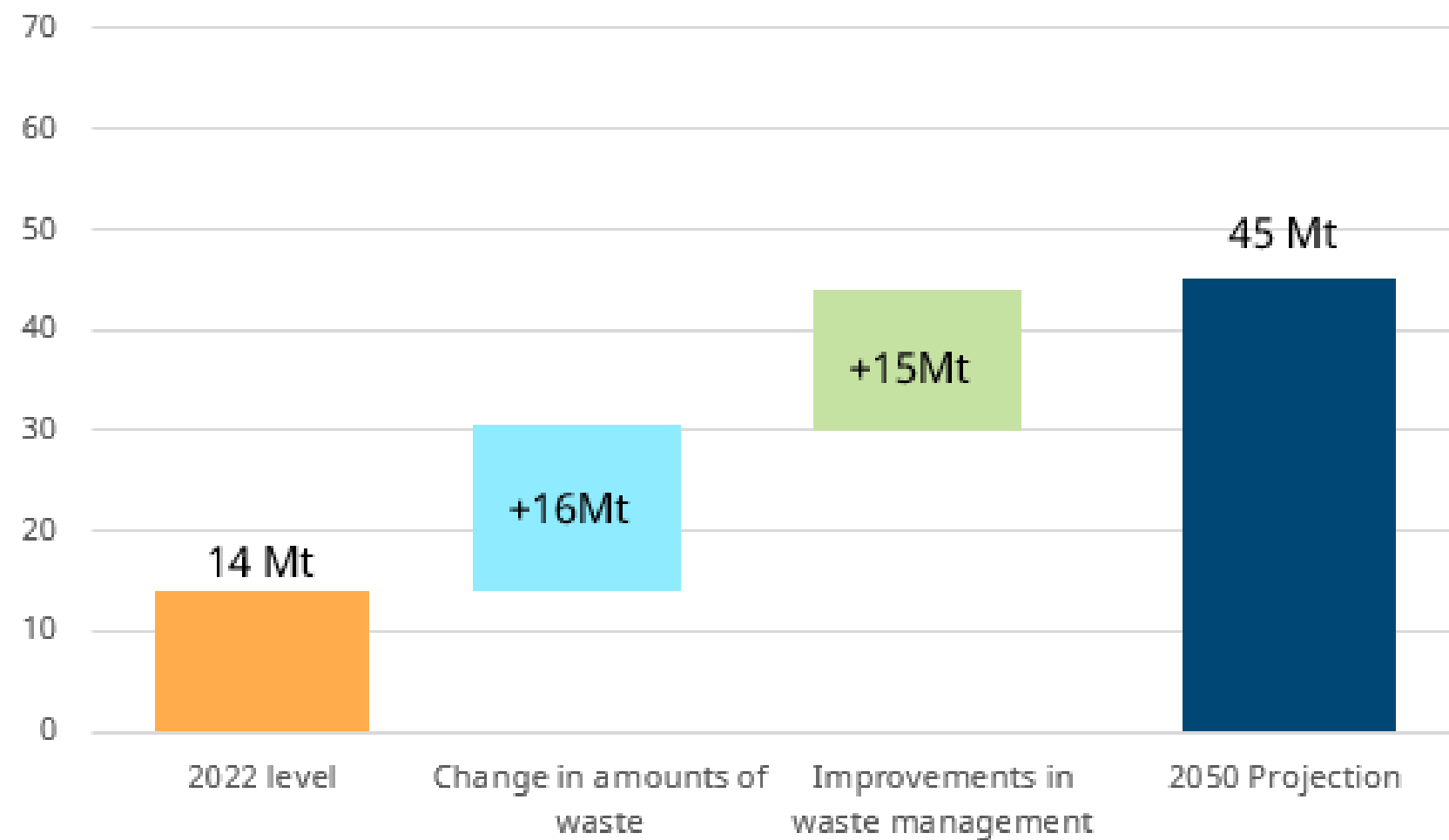
Plastics use in the region (Mt)



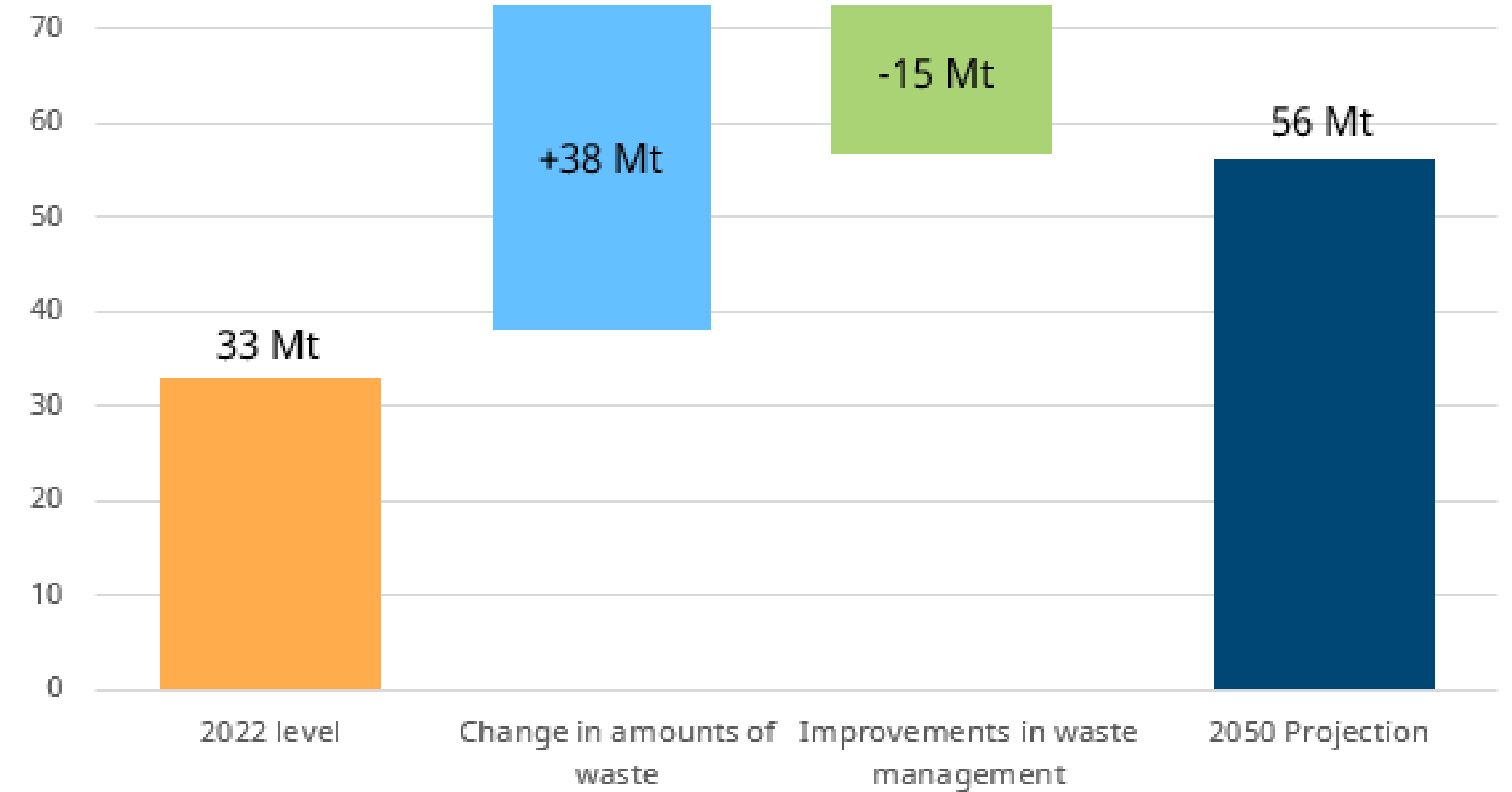
# WASTE MANAGEMENT IMPROVES, BUT MISMANAGED WASTE STILL GROWS IN ABSOLUTE TERMS



### Recycled waste (Mt)



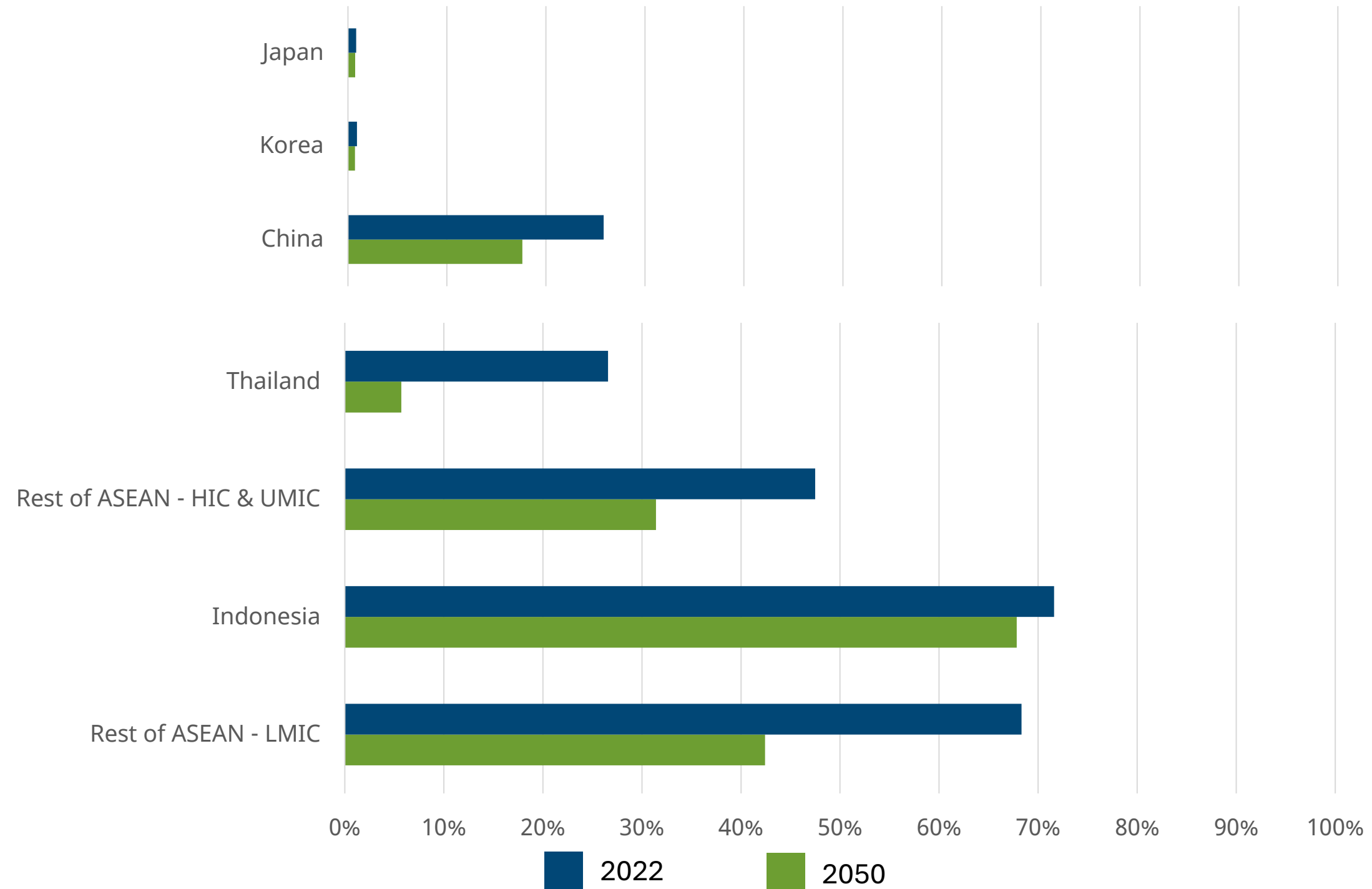
### Mismanaged waste (Mt)



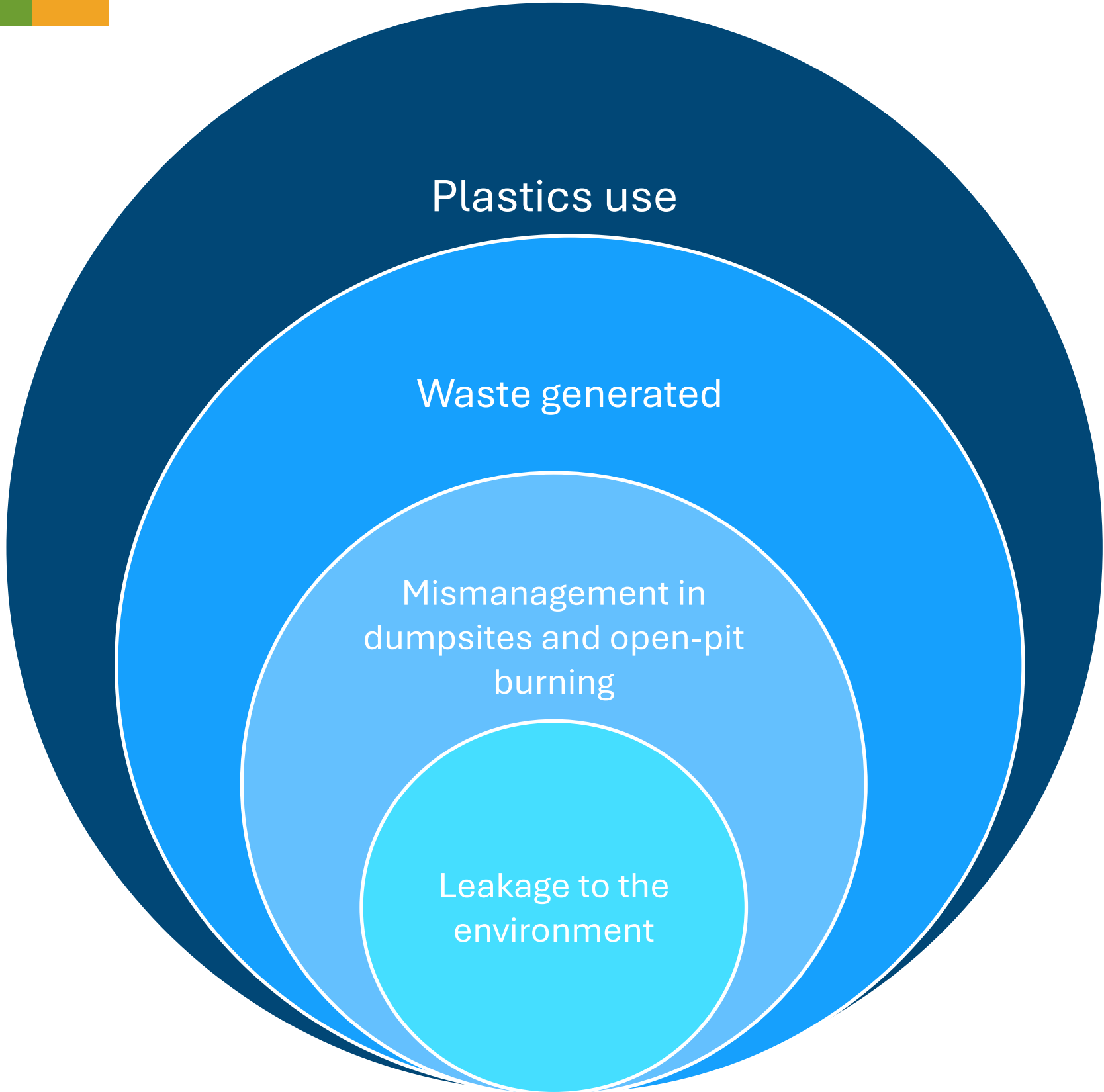
# HETEROGENEITY ACROSS THE REGION PERSISTS BEHIND AGGREGATE IMPROVEMENTS



Share of mismanaged waste (%)



# CURRENT POLICIES FALL SHORT OF ELIMINATING PLASTIC LEAKAGE IN THE REGION



Between 2022 and 2050...

➔ From 152 Mt to 280 Mt

➔ From 113 Mt to 242 Mt

➔ From 33 Mt to 56 Mt

➔ From 8.4 Mt to 14.1 Mt

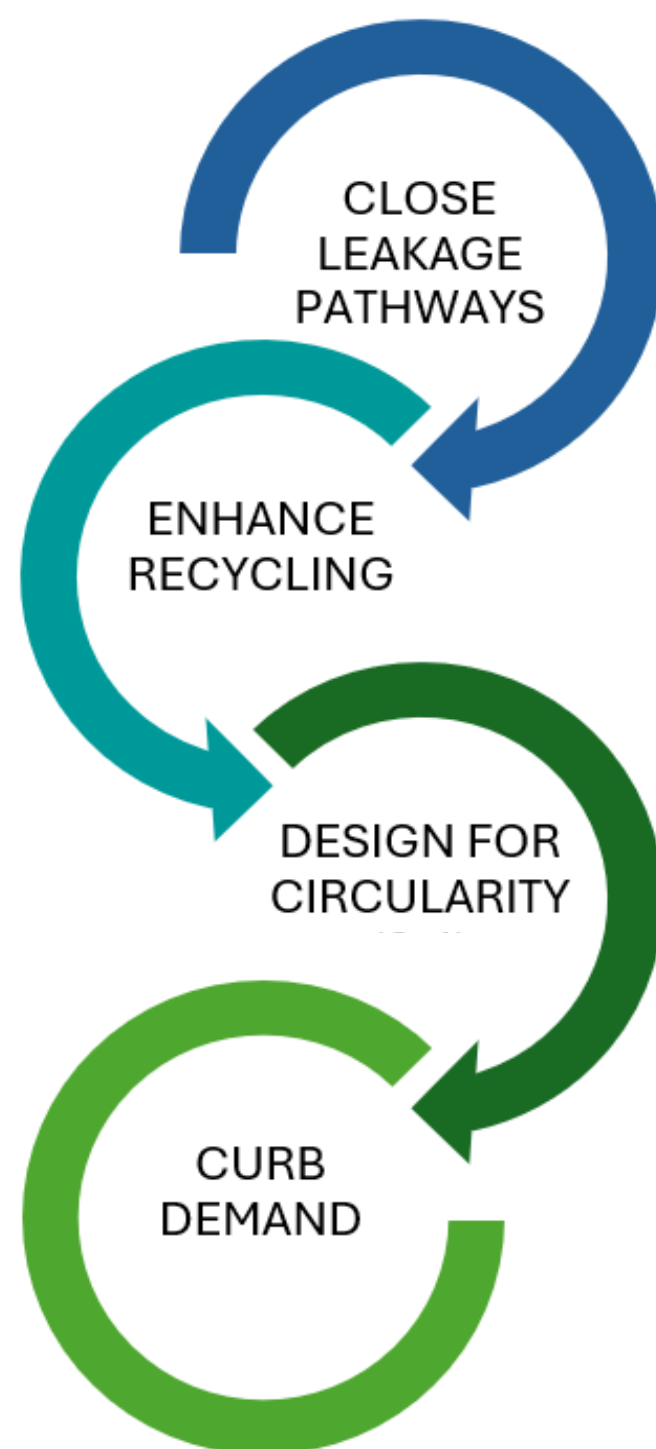
*More than one-third reaches rivers, coastal areas and oceans*

*ASEAN LMICs are particularly vulnerable to intraregional transport of leakage*



# HOW CAN THE REGION END PLASTIC POLLUTION?

# STRINGENT POLICIES ACROSS THE PLASTIC LIFECYCLE IN THE REGION



## Main Scenario :

### High Stringency scenario

- Stringent policies along the plastic lifecycle
- Implemented in all 13 APT countries

## Additional Scenarios:

### Global High Stringency scenario

- Stringent policies along the plastic lifecycle
- Global coverage

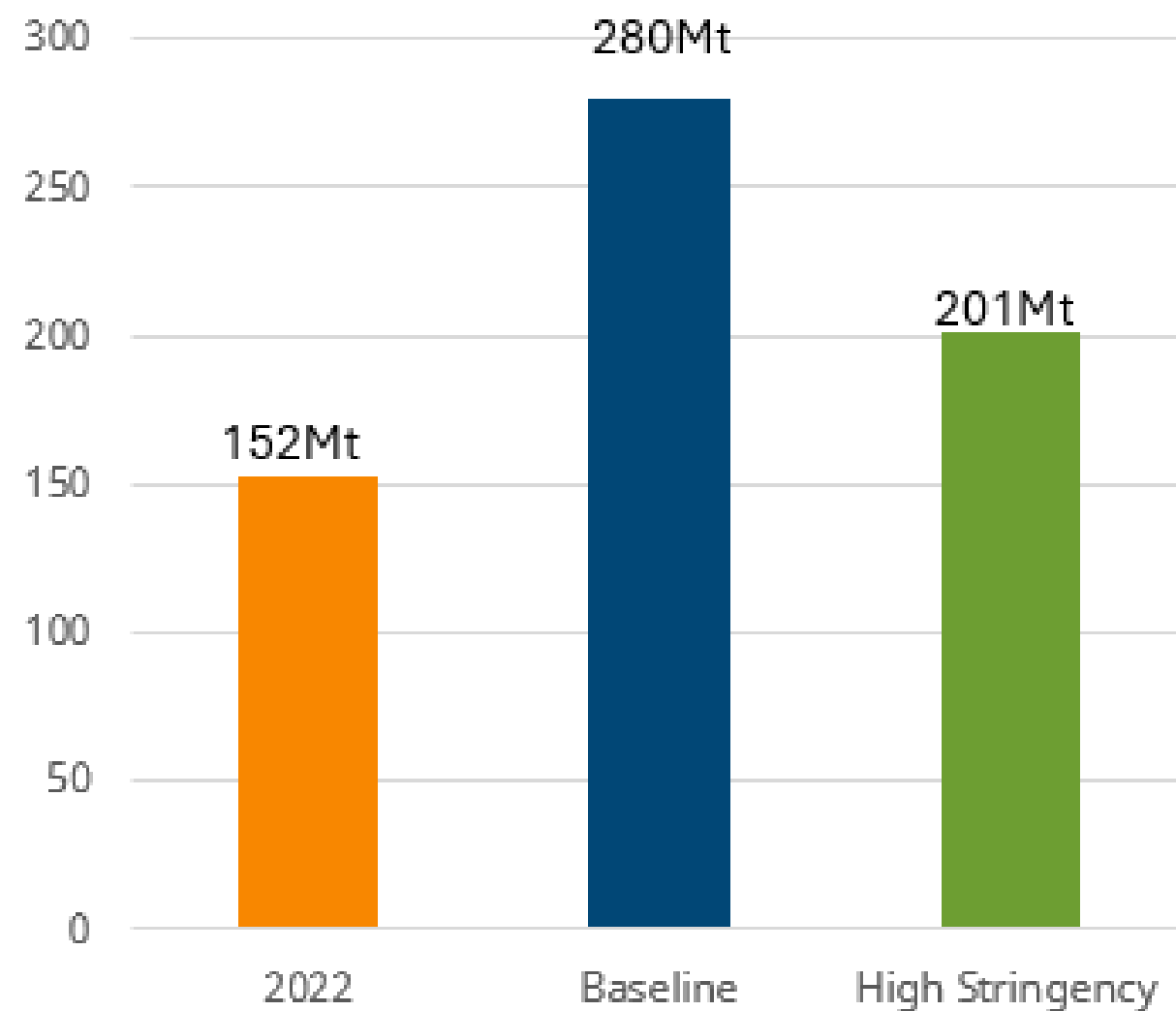
### Differentiated Stringency scenario

- Lower stringency, particularly in LMIC and for reduction measures

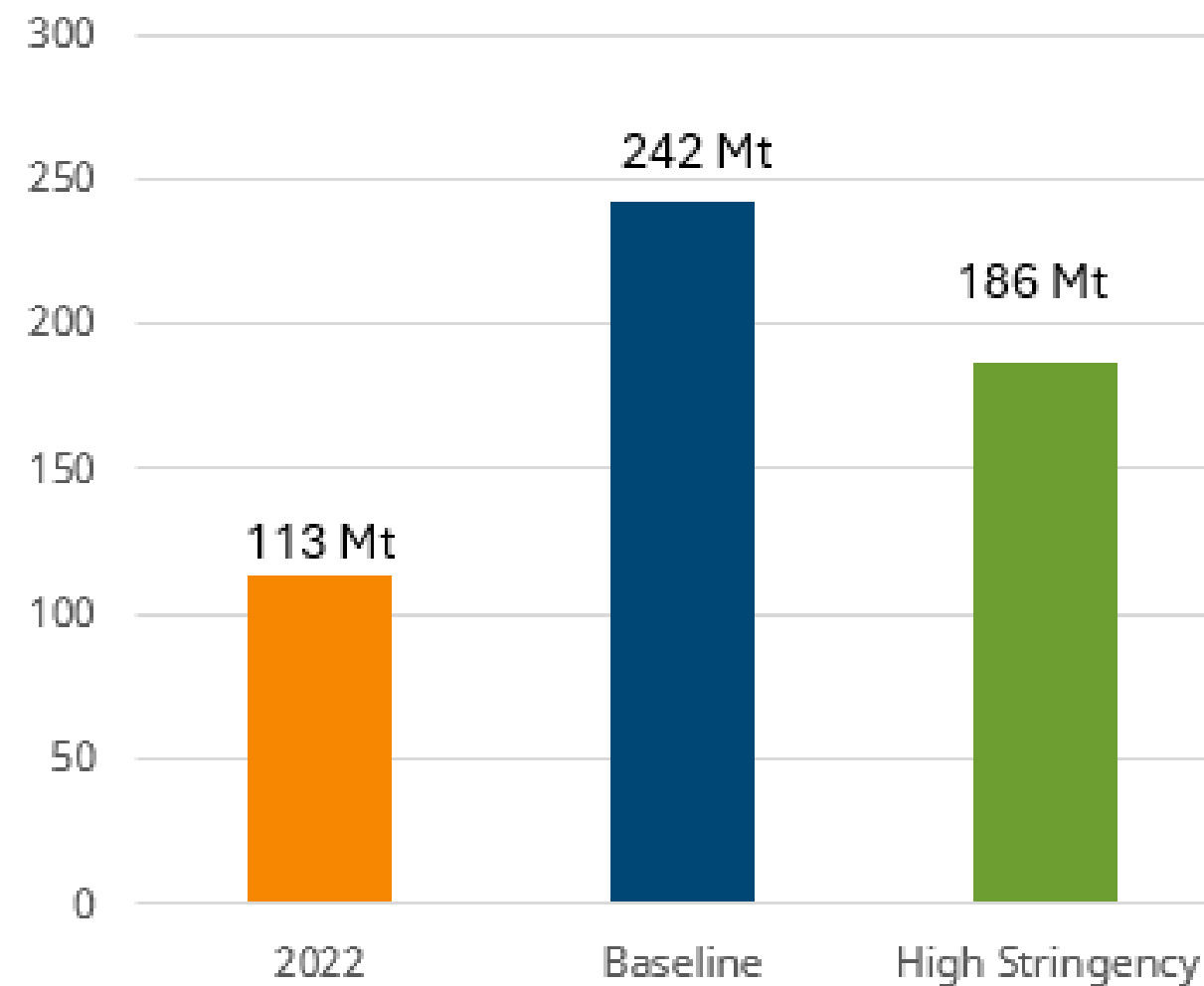
# STRINGENT POLICIES CAN ELIMINATE PLASTIC LEAKAGE IN THE APT



### Plastics use (Mt)



### Plastic waste (Mt)

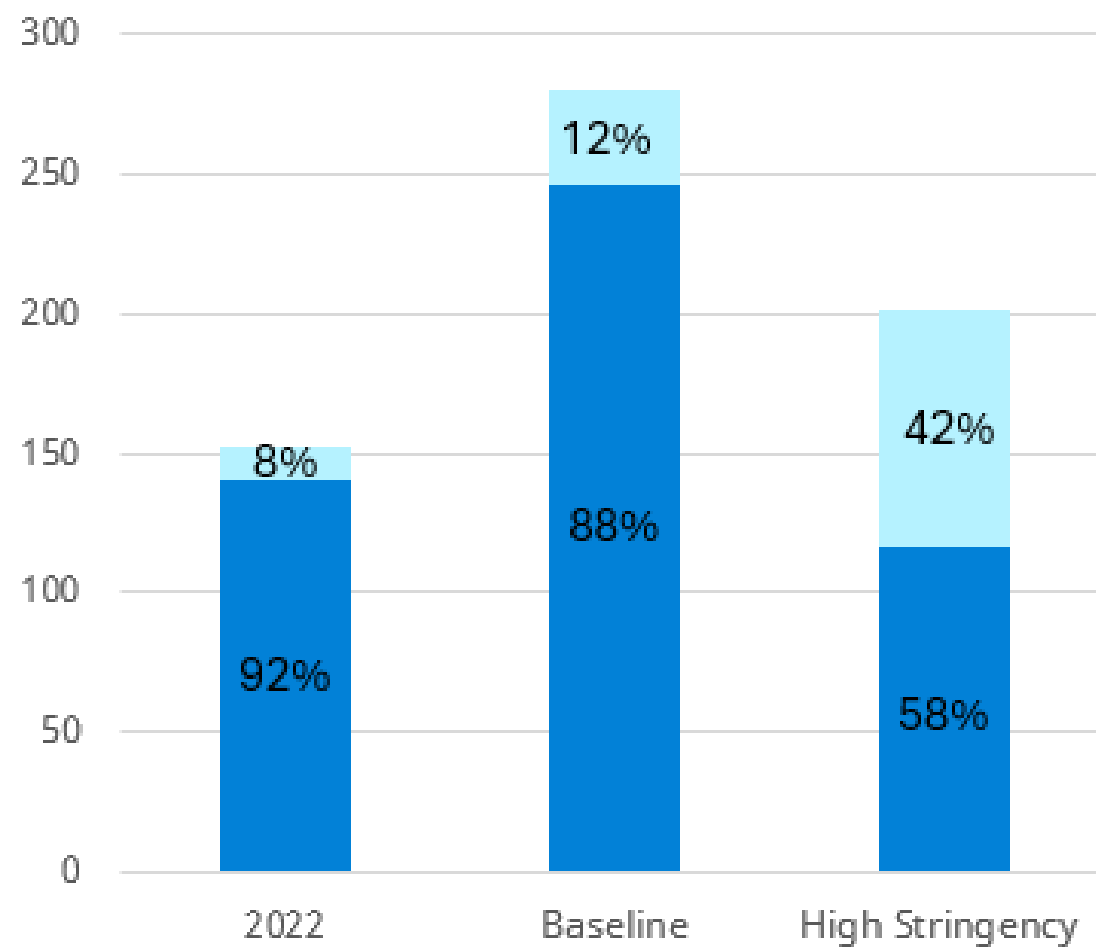


- Plastics use is reduced by **28%** compared to the Baseline scenario
- Growth in plastics demand (above 2022 levels) met through **secondary plastic production**
- Recycling will need to quadruple to **54%**

# STRINGENT POLICIES CAN ELIMINATE PLASTIC LEAKAGE IN THE APT

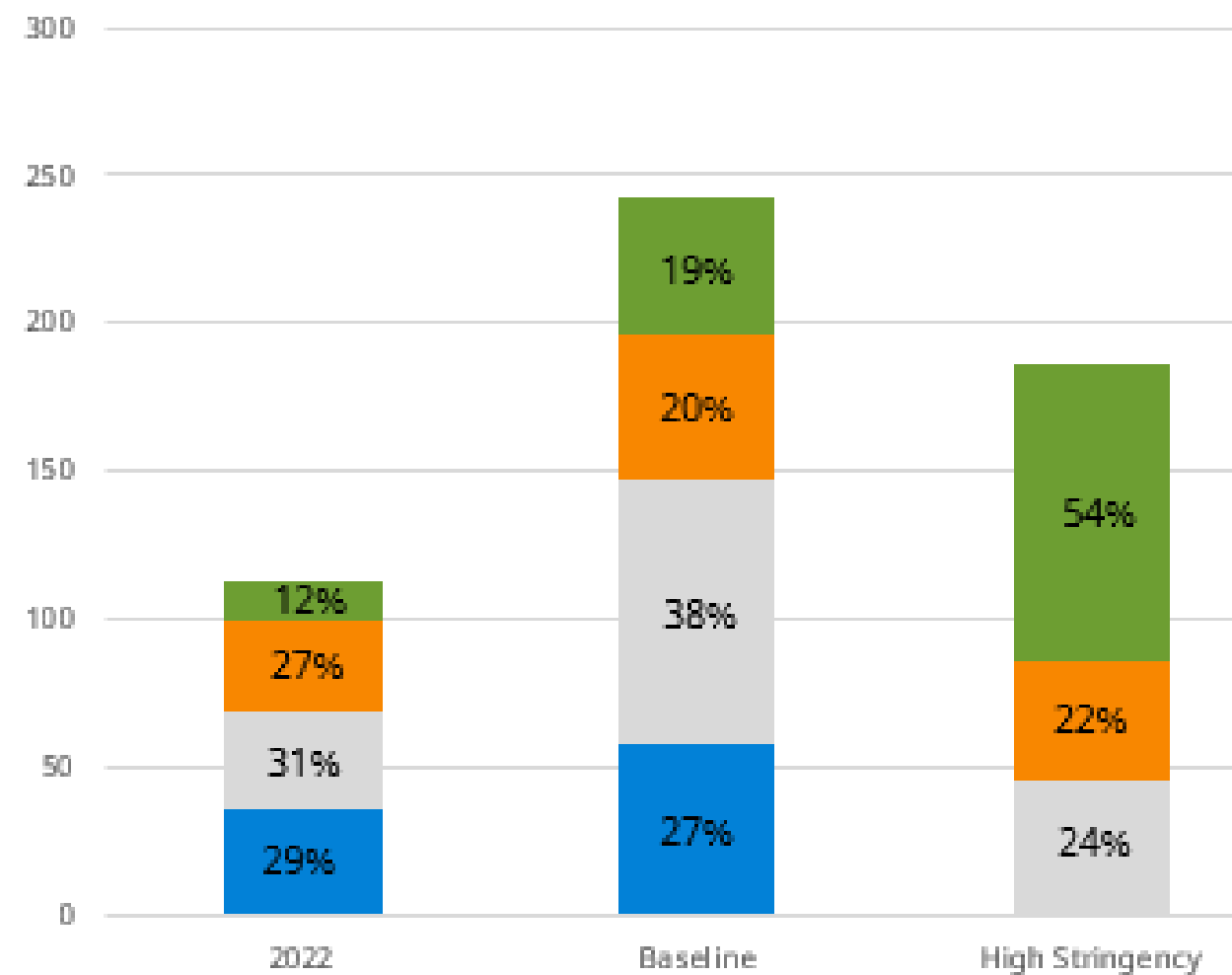


Plastics use (Mt)



Primary Secondary

Plastic waste (Mt)

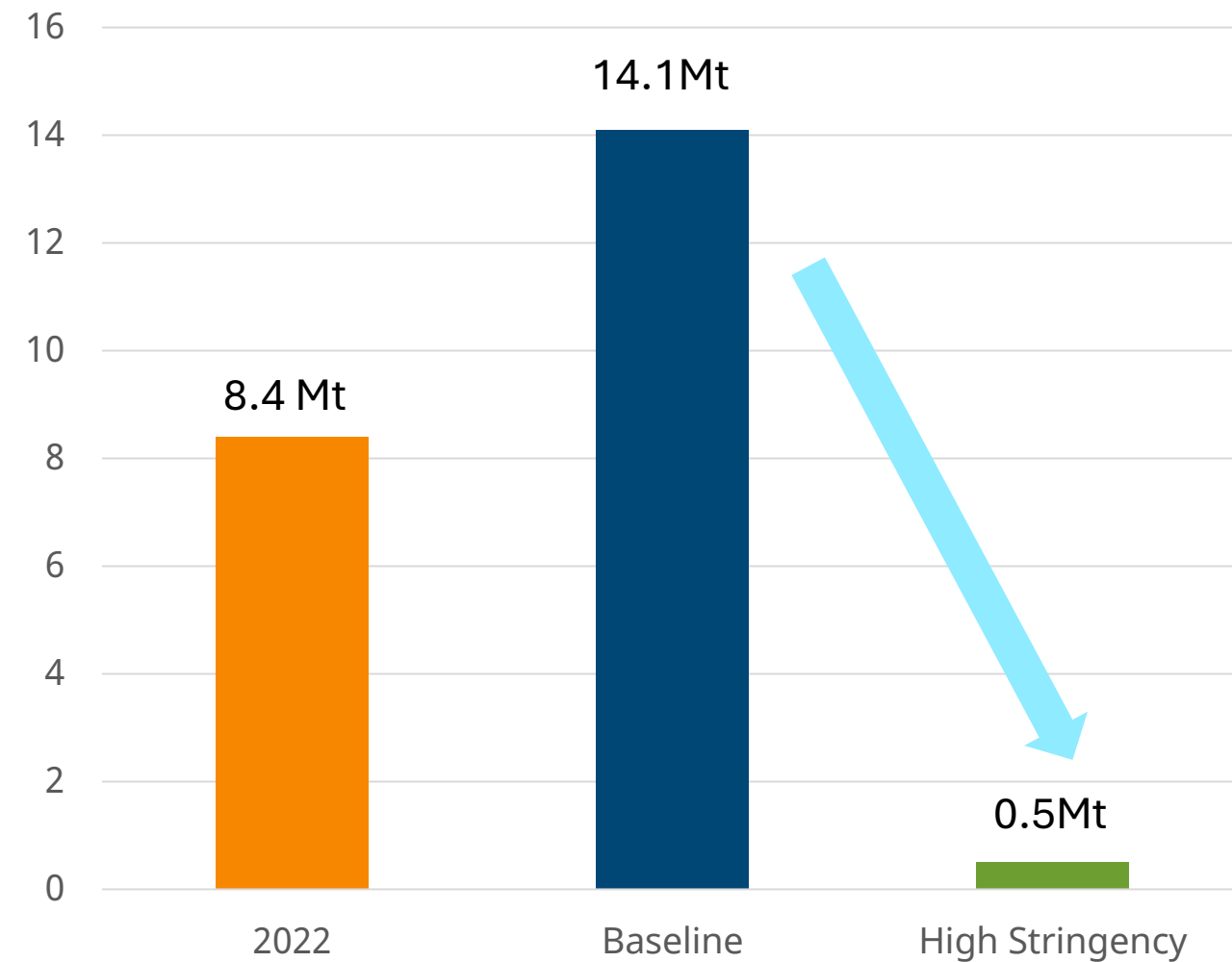


- Plastics use is reduced by **28%** compared to the Baseline scenario
- Growth in plastics demand (above 2022 levels) met through **secondary plastic production**
- Recycling will need to quadruple to **54%**

# STRINGENT POLICIES CAN ELIMINATE PLASTIC LEAKAGE IN THE APT

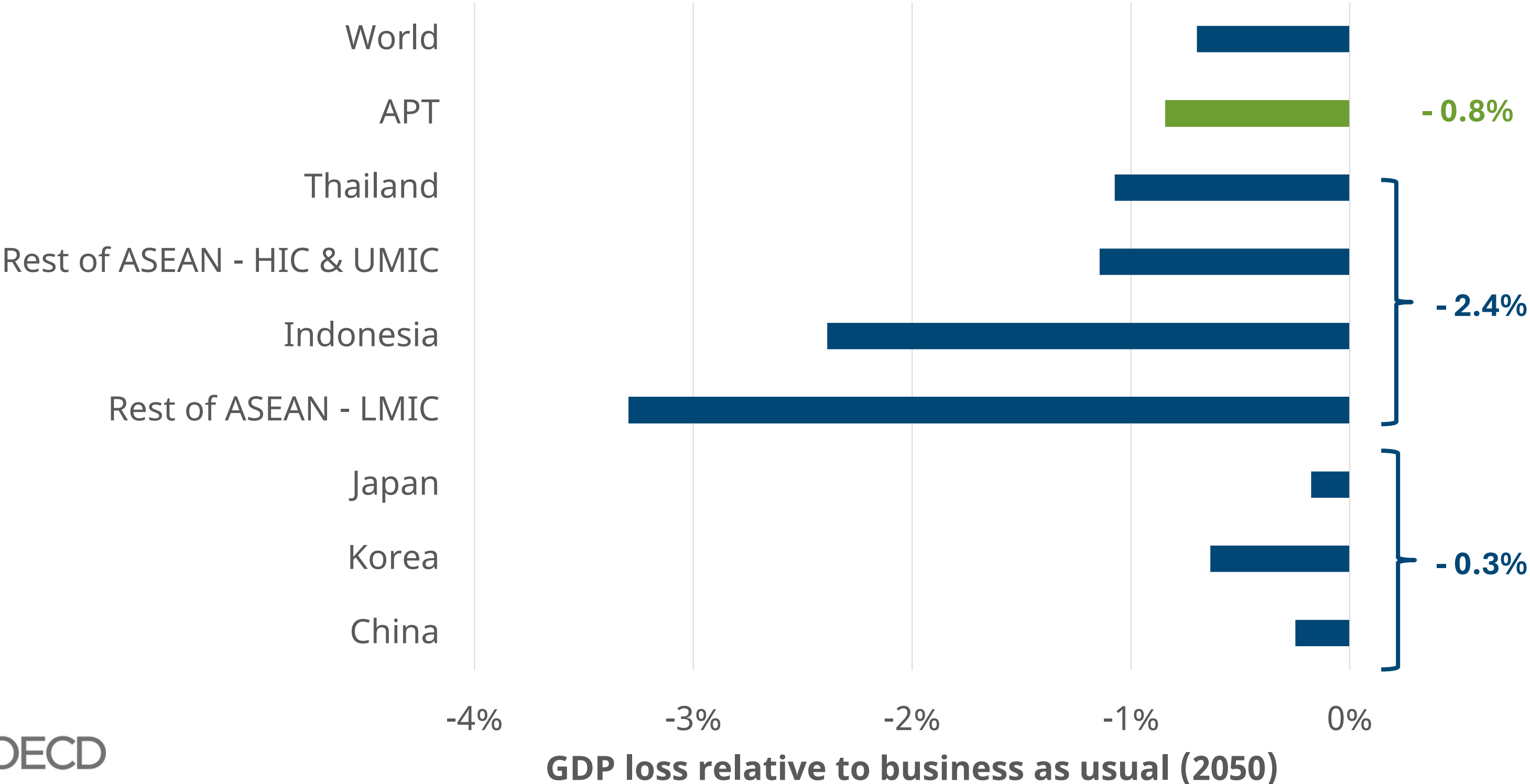


Plastic leakage (Mt)



- Mismanaged waste and leakage to the environment are **almost eliminated (<1% of plastic waste)**
- Co-ordinated global action is needed to eliminate plastic leakage globally (*Global High Stringency*), but **APT can virtually eliminate leakage in its own region through ambitious action**

# MACROECONOMIC COSTS ARE HETEROGENEOUS AND LARGER FOR LOWER MIDDLE-INCOME COUNTRIES



# CONCLUDING REMARKS



- APT countries are **acting**, with encouraging but uneven progress
- Current policies can **slow, but not reverse**, recent trends in regional plastic leakage
- While global co-operation is needed to end plastic pollution on a global scale, APT countries can **nearly eliminate plastic leakage** in the region through stringent policies across the lifecycle
- Stronger policy design, implementation and financing is needed. Ending plastic pollution will require **capacity building, stronger enforcement and regional co-operation**

# ACKNOWLEDGEMENTS



## OECD

Rob Dellink	Manuela Kiehl
Sarbjit Gill	Kumi Kitamori
Sebastián Higuera	Elisa Lanzi
Bum Cheul Park	Yiannos Lazzarotto
Daniel Ostalé	Jo Tyndall
Valriberas	Toon Vandyck
Laura Atarody	Hidemichi Yonezawa
Peter Börkey	Illias Mousse Iye
Emma De Roy	Elizabeth Del Bourgo
Yuko Ishibashi	Elisabeth Schoeffmann
	Meral Gedik

## External

Institute for Global Environmental Strategies

Economic Research Institute for ASEAN and East Asia

National experts and government representatives

Laurent Lebreton (The Modelling House Ltd)

Asnawi Kamis (DIW Econ)

Financial support from Ministry of Environment, Japan



## Regional Plastics Outlook for Southeast and East Asia



Scan the QR code to  
download the full report

