



# GLOBAL PLASTICS OUTLOOK

*Economic Drivers, Environmental  
Impacts and Policy Options*

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# The Global Plastics Outlook



First **comprehensive mapping of the lifecycle of plastics globally**

**High-level of granularity:** primary and secondary production, 14 polymer categories, various applications.

Detailed insights on **leakage to land, water and air.**

Novel analysis of effects of **COVID-19 pandemic.**

Novel empirical analysis of **plastics innovation.**

**Domestic plastics policy landscape** covering 50 countries.

First **quantification of global costs to halt leakage.**



# Modelling approach

## Projecting the regional and sectoral drivers of plastics use

The dynamic global general equilibrium model ENV-Linkages is used to represent the complex dynamics of economic activities across sectors and regions.

## Projecting plastics use

Plastics are included in the ENV-Linkages model by categories of polymers and linked to the most relevant economic activities to obtain projections of plastics use.

## Projecting plastic waste

Plastic waste is calculated in ENV-Linkages based on the projections of plastics use, the life span of products and international trade patterns. Plastic waste is then differentiated by end-of-life fates.

## Projecting environmental impacts from plastics use and waste

Different methodologies are used to calculate environmental impacts of plastics, including plastic leakage to the environment, emissions of microplastics from transport, plastic-related emissions of greenhouse gases, the environmental consequences of biobased plastics, and the global lifecycle impacts of plastics.

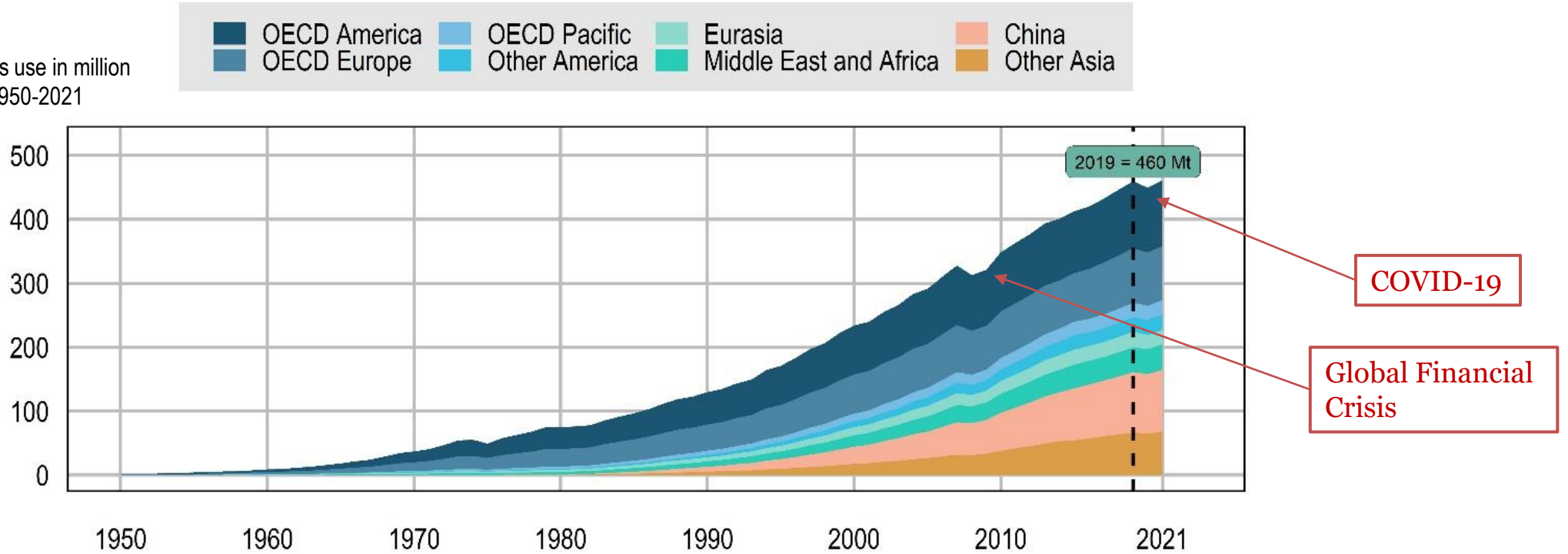


# Key Findings



# Global use of plastics is growing steadily...

Annual plastics use in million tonnes (Mt), 1950-2021



45 500



40%  
quicker growth  
than GDP in  
2000-2019

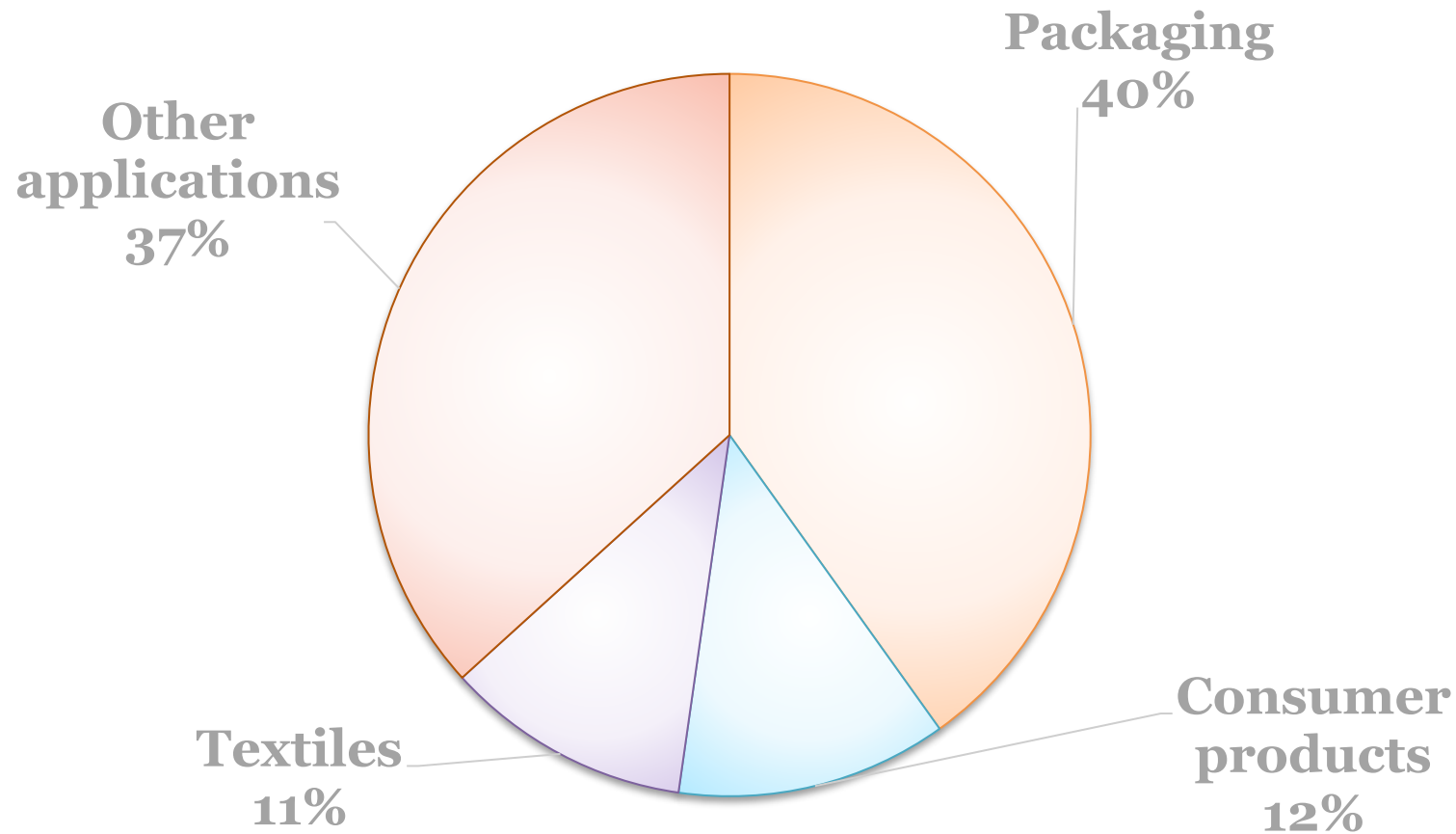
1.8 Gt  
GHG emissions  
generated annually

156 kg  
per capita /year in OECD  
39 kg  
per capita /year in non-OECD





In 2019, plastic waste generation amounted to **353 Mt**





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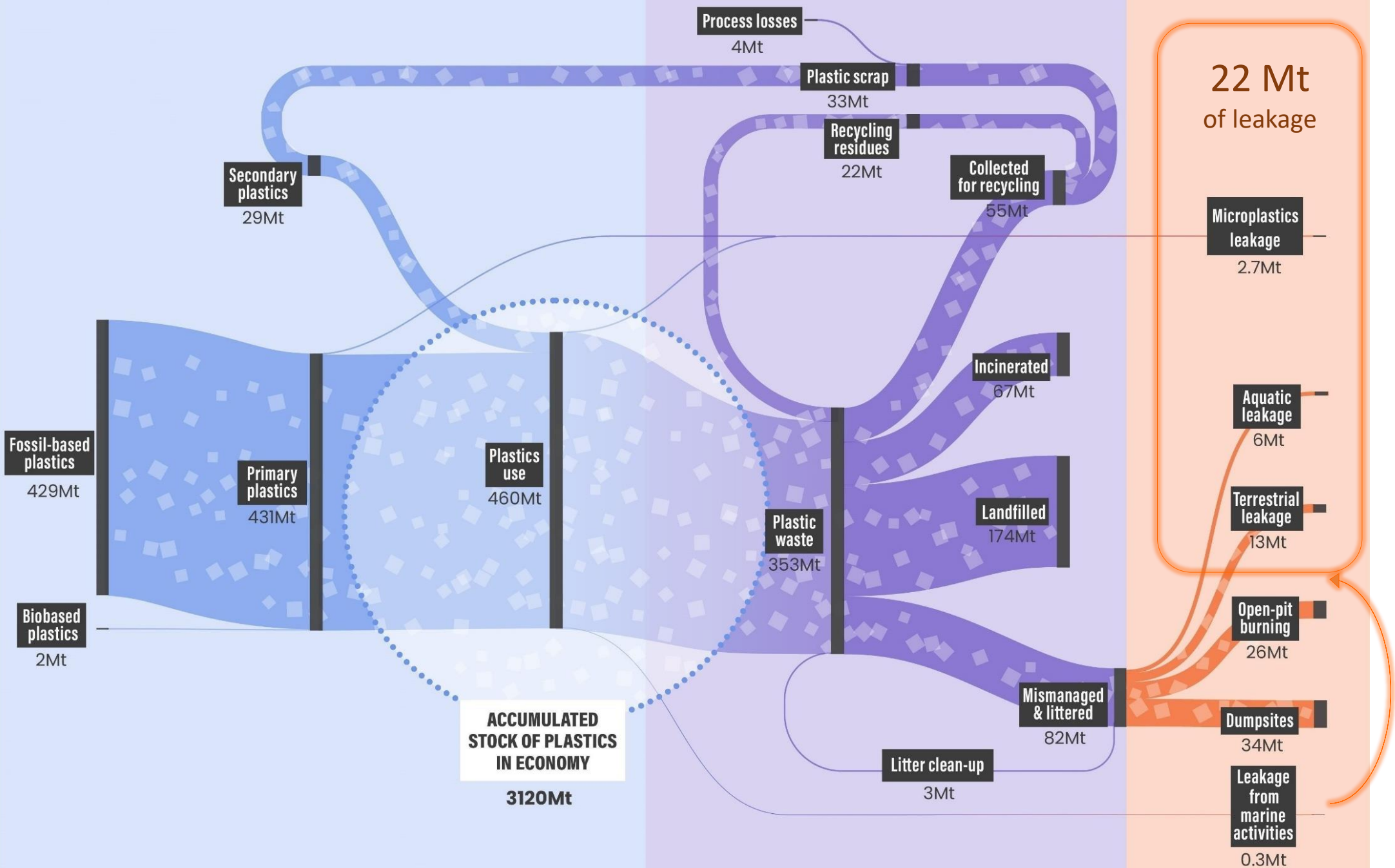
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More than half of plastic waste generated comes from **applications with lifetimes of less than five years**

# PLASTICS PRODUCTION & WASTE

# PLASTIC WASTE

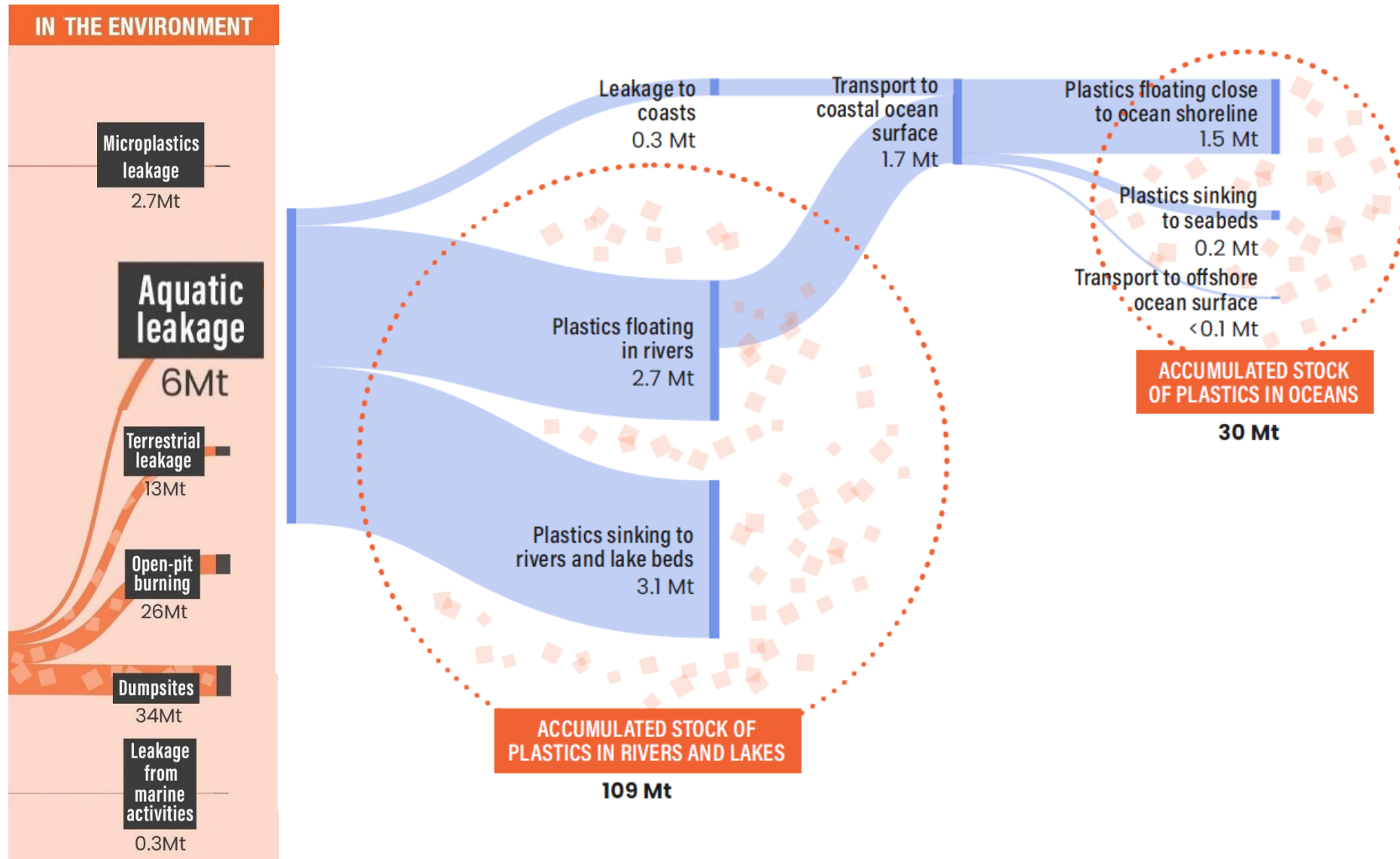
# IN THE ENVIRONMENT







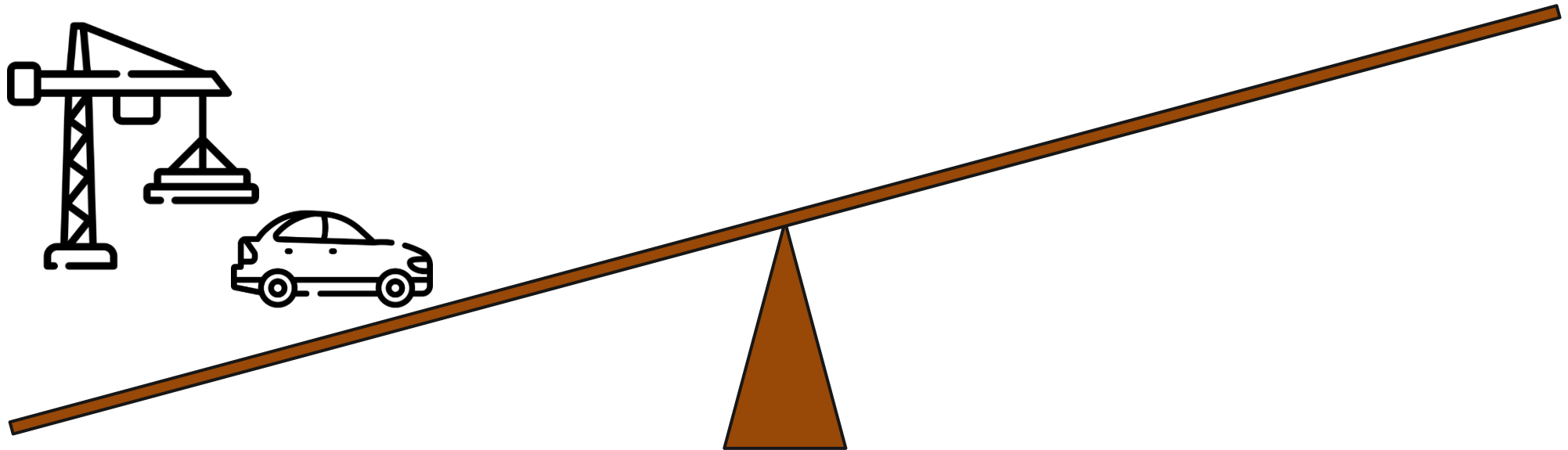
# Rivers are a key pathway and sink for aquatic leakage





In 2020, COVID-19 disrupted plastics use in various and opposing ways

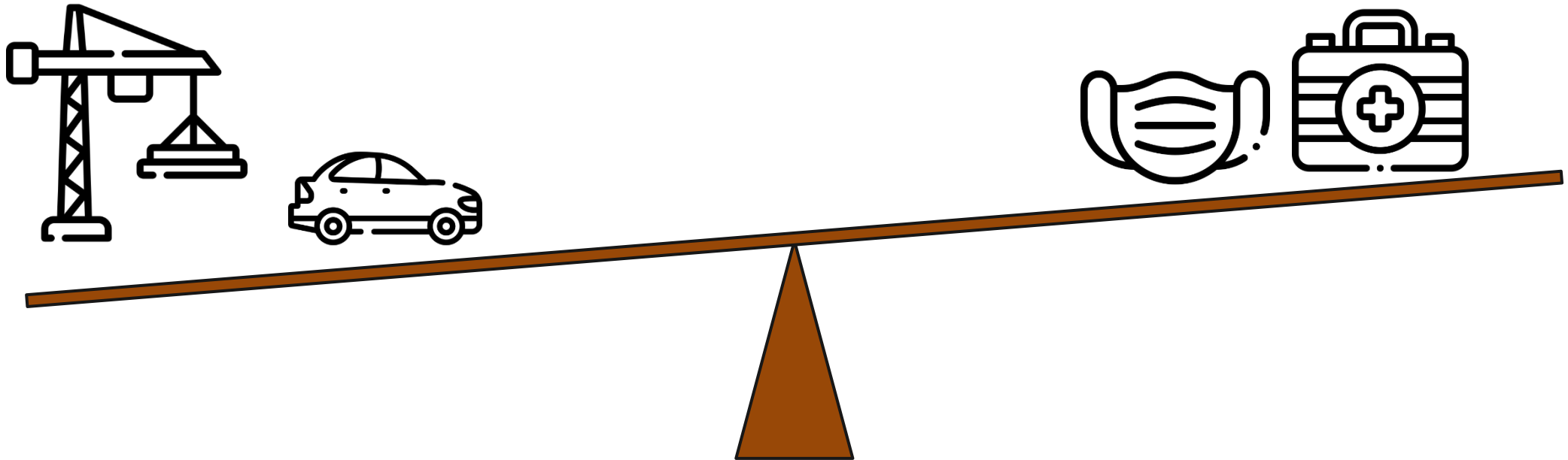
2.2% decrease in plastics use in 2020





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2.2% decrease in plastics use in 2020







...But weight is not always a good proxy for environmental impacts



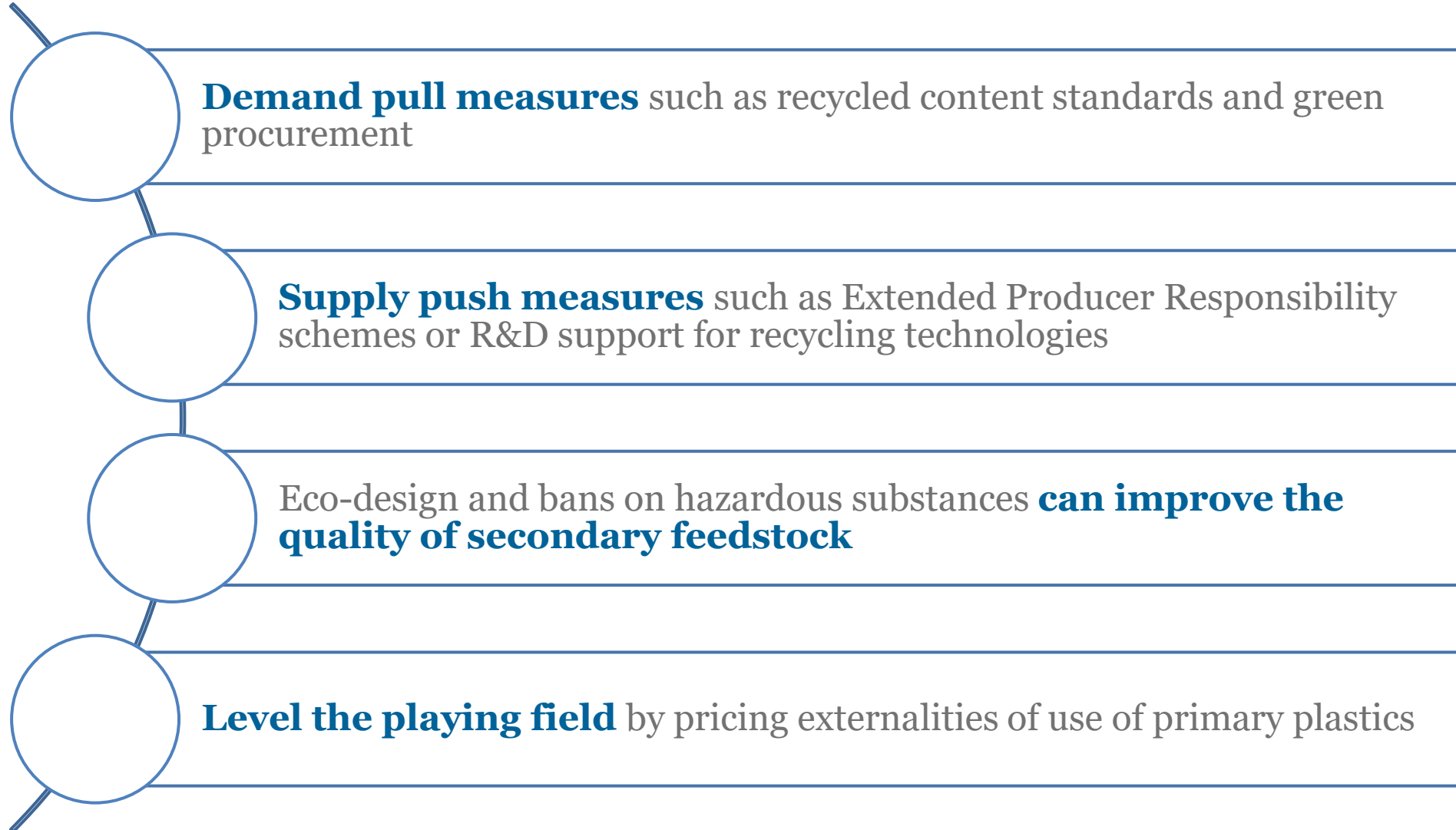




Key Levers for Action



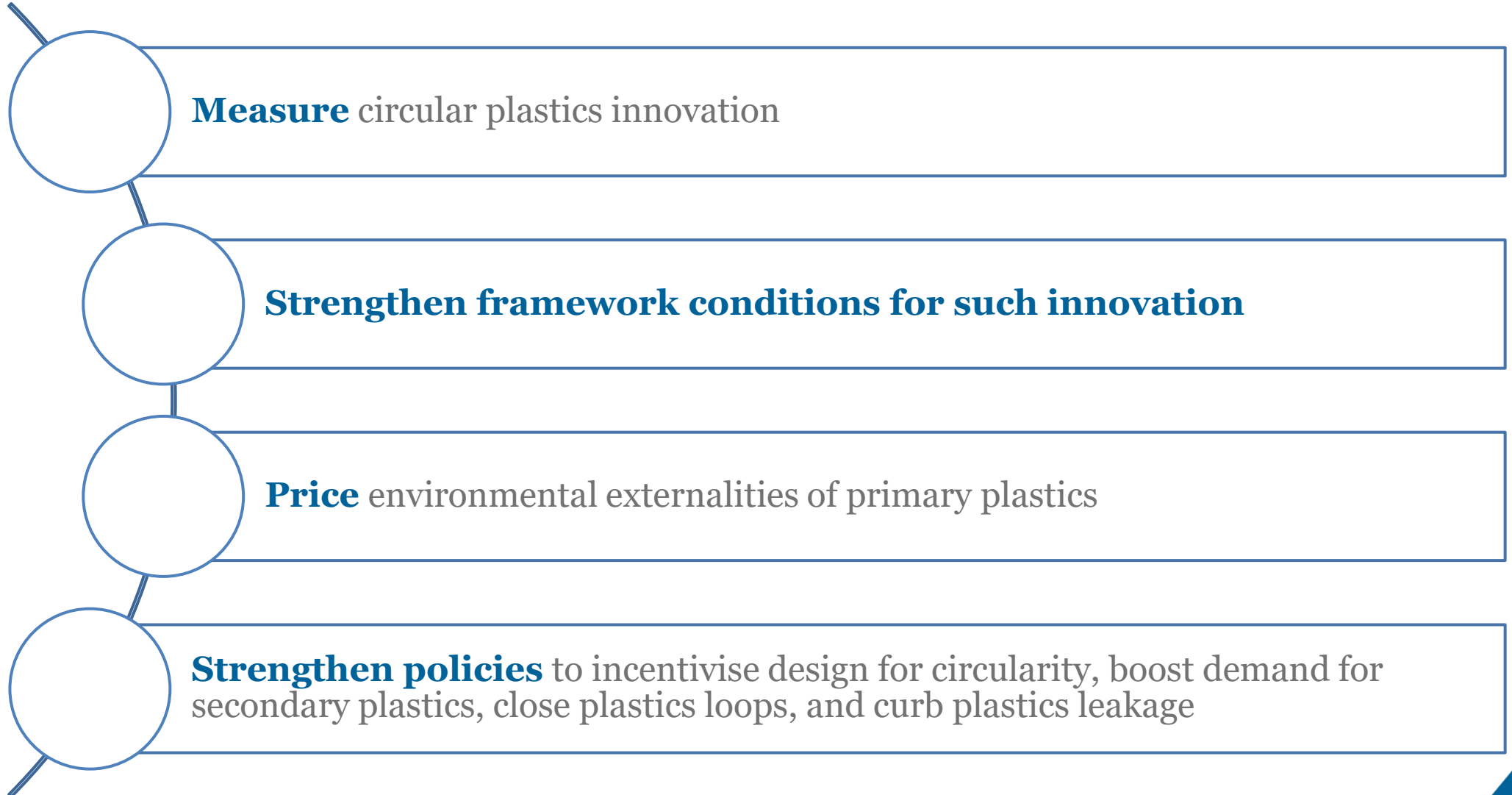
# 1. Bolster markets for recycled plastics





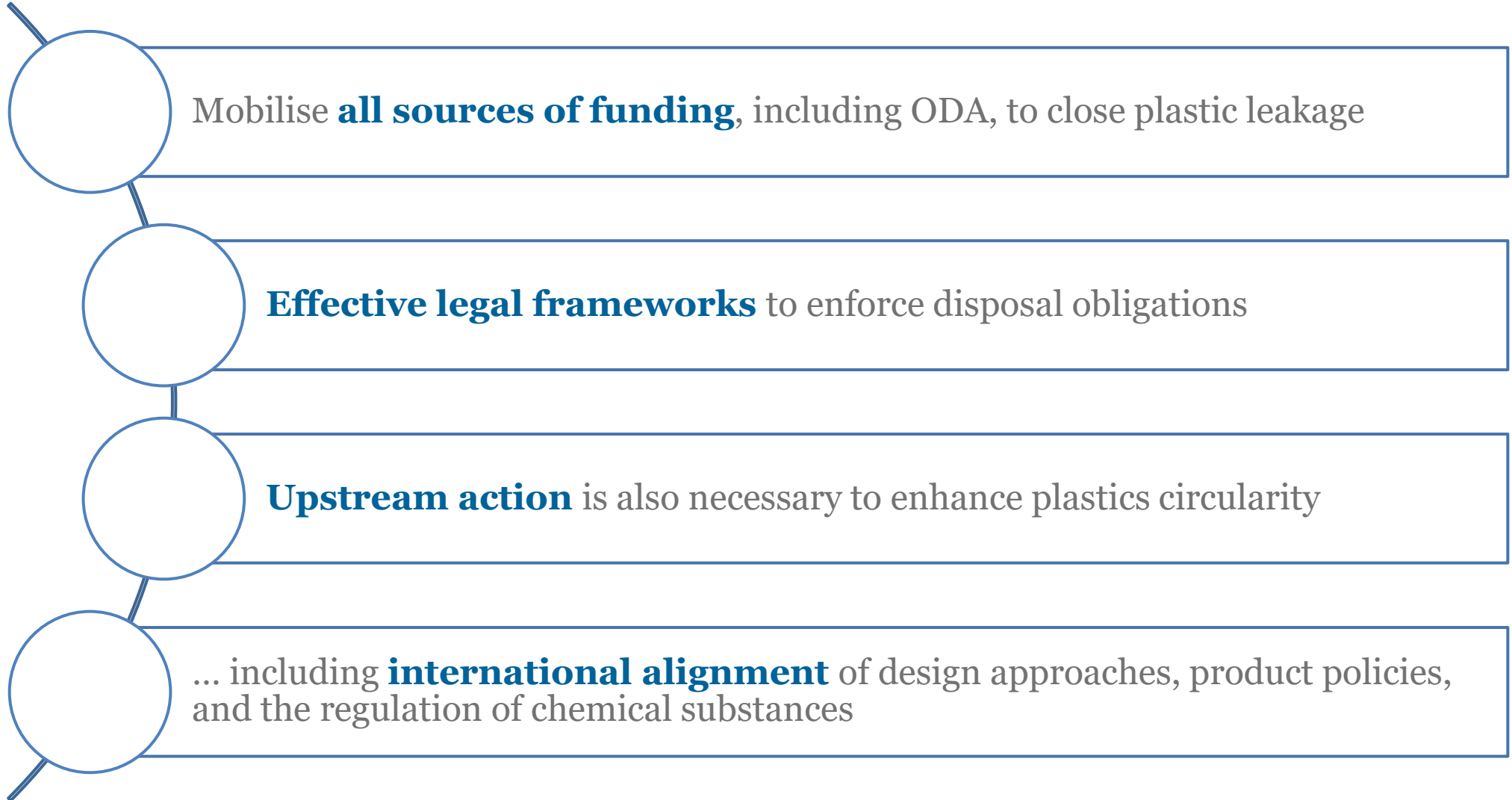


## 2. Boost innovation for circular plastics



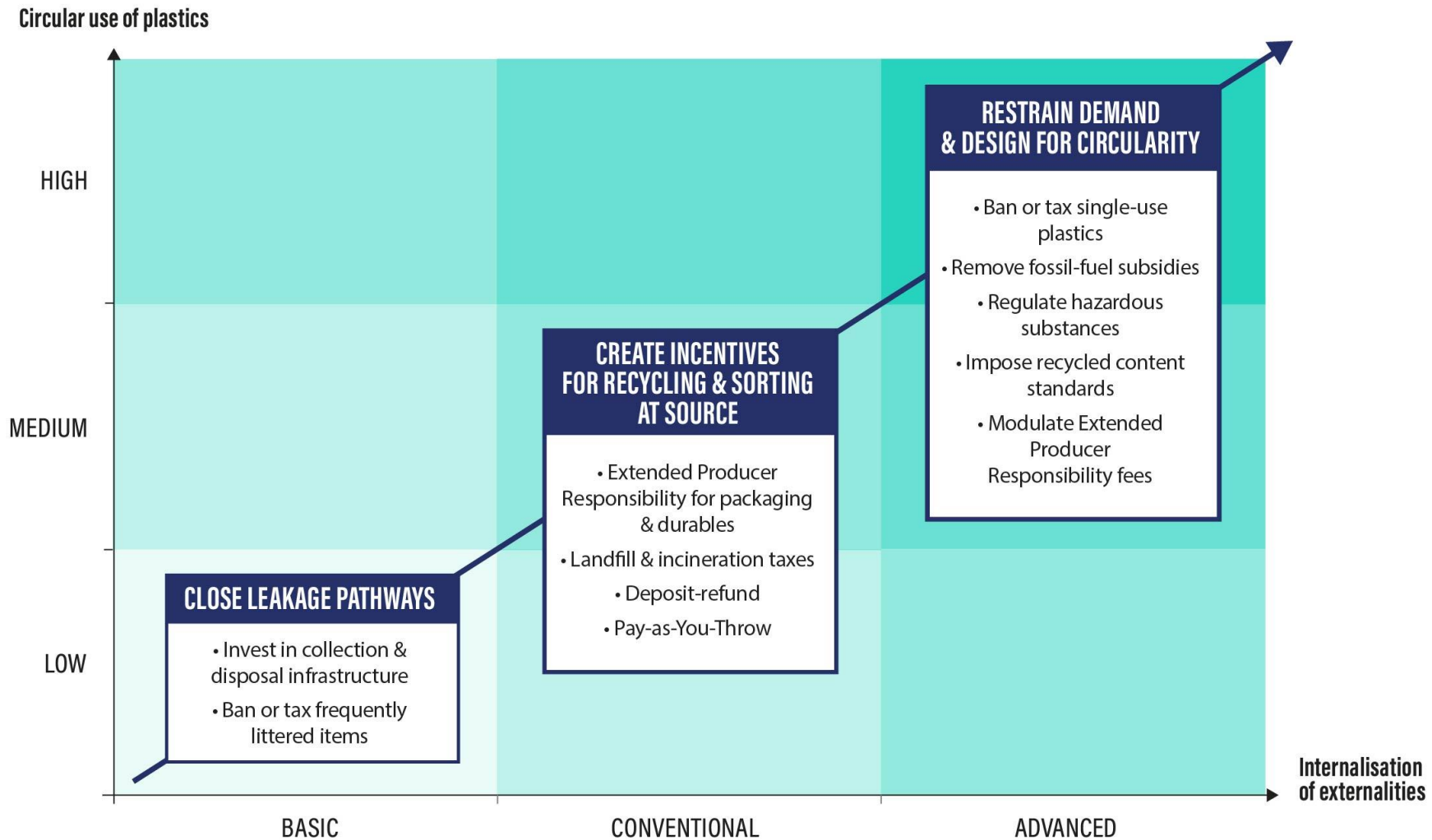


## 3. Scale-up international co-operation





## 4. Increase domestic policy ambition





**THANK YOU!**

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[www.oecd.org/environment/plastics](http://www.oecd.org/environment/plastics)

<http://oe.cd/recircle>

