

# MARINE DEBRIS AND PLASTIC WASTE MANAGEMENT –INTERNATIONAL EXPERIENCES

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FROM SCIENCE  
TO APPLICATION

## WORKING ON THE SUSTAINABLE DEVELOPMENT GOALS



VITO CONVERTS  
IDEAS INTO REALITY









# Technical and financial resources and mechanisms for supporting countries in addressing marine plastic litter and microplastics

- **Technical resources:**

Sources of information, knowledge, expertise or support that can be drawn upon by a member state or organization to define an effective policy to prevent or remediate marine litter and microplastics related issues.

Examples of technical resources are technical guidelines, information on best practices, technical reports, tool kits, training materials, calculation models, etc.

- **Mechanisms:**

Online platforms and data bases that provide access to a bigger collection of various technical resources.

# Challenges and barriers

- **Mismatch** between an increase in **plastic production and consumption** and **available waste management infrastructure** (especially in developing countries). This is particularly true in the case of remote and/or rural areas that receive plastic products but do not have adequate collection and recycling infrastructure.
- **Integrated case studies** at a local level that address both waste management and marine plastic litter by combining upstream and downstream measures are widely missing. For example: not many technical resources address the link between marine plastic litter and cities, and specific case studies are not available.
- There are still no technical resources explicitly addressing **new business models** or **alternative distribution systems** (e.g. to reduce overpackaging). Industry design and consumption systems are not prioritized along the “3R waste hierarchy” of reduce, reuse, recycle.

# Challenges and barriers

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- There are many successful national strategies. However, **regional and global efforts** could be improved and **better coordinated** so as to **complement national efforts** in support of global responses.
- At the national level there is still a need for greater **reporting** on consumption, production and end-of-life treatment of plastics. In that respect, global **standards** are needed for **national monitoring** and reporting on the consumption, use, final treatment and trade of plastics that will eventually become waste.
- The increasing number of toolkits, including specific guidance for political decision makers, shows that government authorities, corporations and the public are indeed still asking for better **knowledge** of the matters involved, or of the **best available techniques** and **best environmental practices** required to address marine plastic litter and microplastics.

## CALCULATION TOOLS – 2 EXAMPLES

plasticpollution.leeds.ac.uk/toolkits/wfd/

UNIVERSITY LINKS

UNIVERSITY OF LEEDS

Water, Public Health and Environmental Engineering Group >> Dr Velis Research Team >> Plastic Pollution Projects

HOME TOOLKITS PROJECTS EXPERTISE OUR RESEARCH TEAM NEWS WORK WITH US

### Mapping waste flows

Waste flows are mapped through all stages of a solid waste management system, including contributions from the informal sector and leakages to the environment

COLLECTION SYSTEM SORTING STAGE TRANSPORTATION

WASTE FLOW DIAGRAM SDG COMPATIBLE SWM FOCUS RAPID ASSESSMENT

oceanimpact-quickscan.azurewebsites.net

### FILL OUT THE PLASTIC SCAN

GAIN INSIGHT INTO YOUR PLASTICS USE  
FIND OUT HOW BIG YOUR SOURCE IS DISCOVER BUSINESS OPPORTUNITIES

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Plastic Scan

Plastic Scan: Gain insight into your plastics use, Find out how big your source is, Discover business opportunities.

#### General

Question 1: In which sector are you working?

Waste

Question 2: What is the size of the company?

☒ Small and medium size enterprises (up to 250 employees)  
☐ Large-scale enterprise (>250 employees)

#### Use of plastic

Question 3: To what extent does the company use plastic for:

	None	A little	Average	Much	Very much
Products	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Packaging materials	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistics or processing chain	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 4: Which types of plastic are used in the company?

	None	A little	A lot	Don't know



## NEEDS : SYSTEMS THINKING IN LINE WITH CIRCULAR ECONOMY

- Regional aspects of plastics management – local chains? Asia as outlet?
- Stop dumping
- Selective ban on single-use plastics
- Extended producer responsibility – e.g. packaging
- Biodegradable materials
- Mechanical recycling
- Chemical recycling



## FAST FACTS

# 'Breaking the Plastic Wave' in numbers

Scale of the problem

**11 million** metric tons  
of plastic leaked into the ocean in 2016

**29 million** metric tons  
of plastic leakage into the ocean in 2040

**40%**  
of today's global plastic waste ends up in the environment

**7%**  
reduction of leakage if all current government and industry commitments were implemented by 2040

**500,000**  
people need to be connected every day until 2040 to close the collection gap

**11%**  
of leakage is microplastic in 2016

By 2040:  
**2x** plastic generation  
**3x** plastic leakage into the ocean  
**4x** plastic stock in the ocean

**US\$100B**  
financial risk to industry under BAU in 2040

**45%**  
of today's leakage is from rural areas, where collection economics don't work

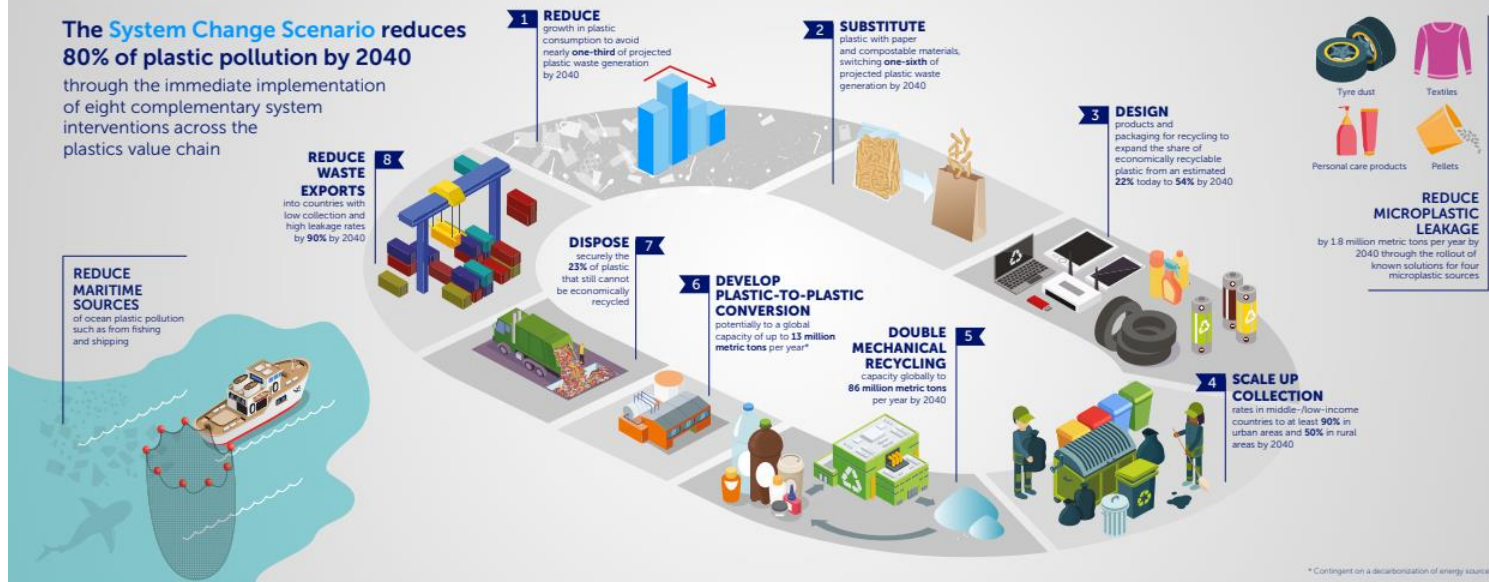
**21%**  
of plastics are economically recyclable (but only 15% are actually recycled) in 2016

**19%**  
share of carbon budget used by plastic industry by 2040 under BAU to stay under 1.5°C

**80%**  
share of leakage from flexible and multilayer plastics in 2016

## The System Change Scenario reduces 80% of plastic pollution by 2040

through the immediate implementation of eight complementary system interventions across the plastics value chain



\* Contingent on a decarbonization of energy sources

**Integrated system change** achieves social, environmental, and economic benefits

**80%**  
reduction in plastic leakage into the ocean by 2040 relative to BAU

**US\$70B**  
saving for governments over 20 years relative to BAU

**700,000**  
jobs created by 2040 relative to BAU

**25%**  
reduction in annual GHG emissions by 2040 relative to BAU

**55%**  
reduction in virgin plastic demand by 2040 relative to BAU

**195 million metric tons**  
reduction in other environmental leakage (land and atmosphere)



El Océano  
NO ES UNA  
BASURA





# THANK YOU

