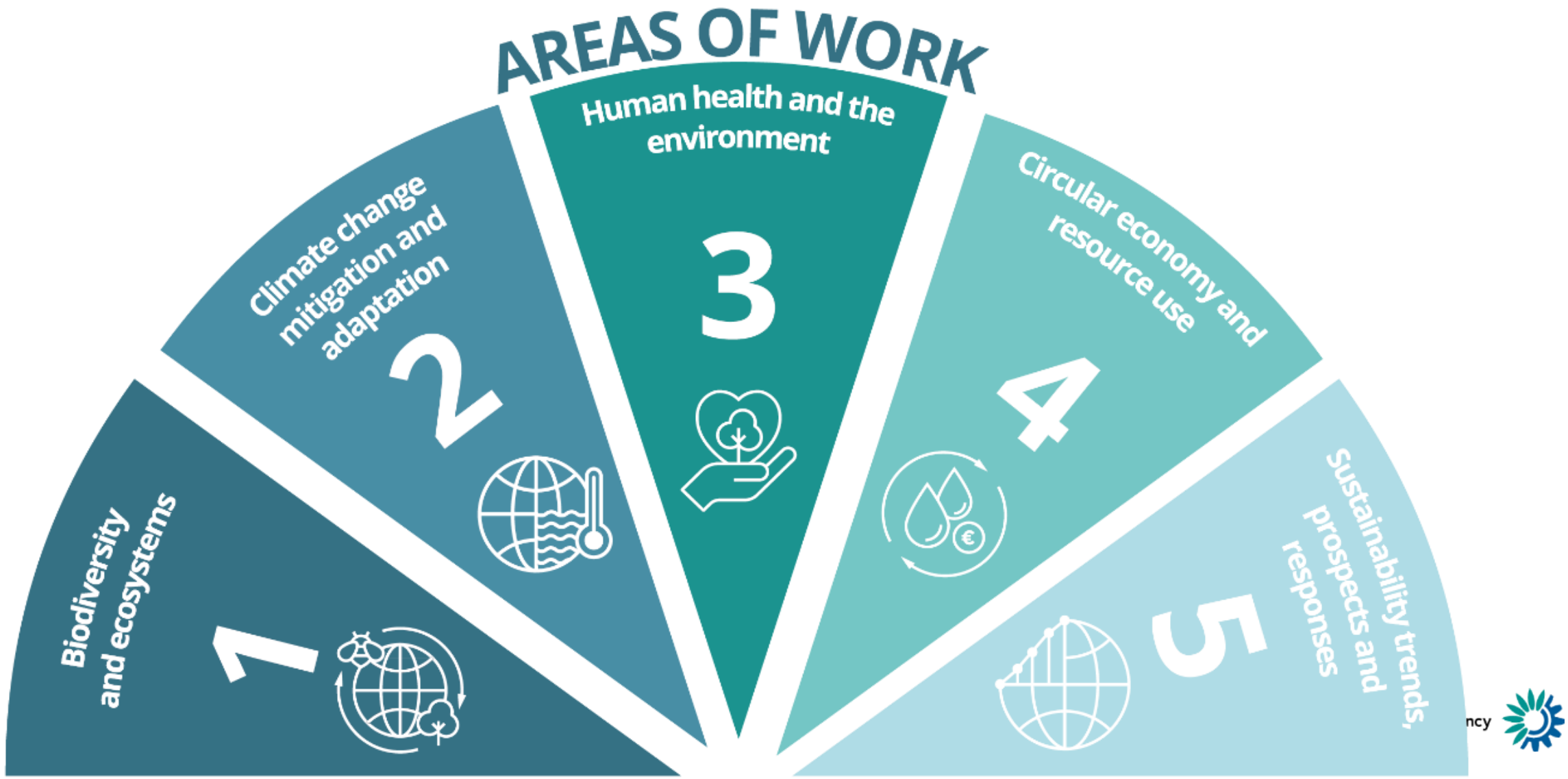
Informing (plastic) policy through science

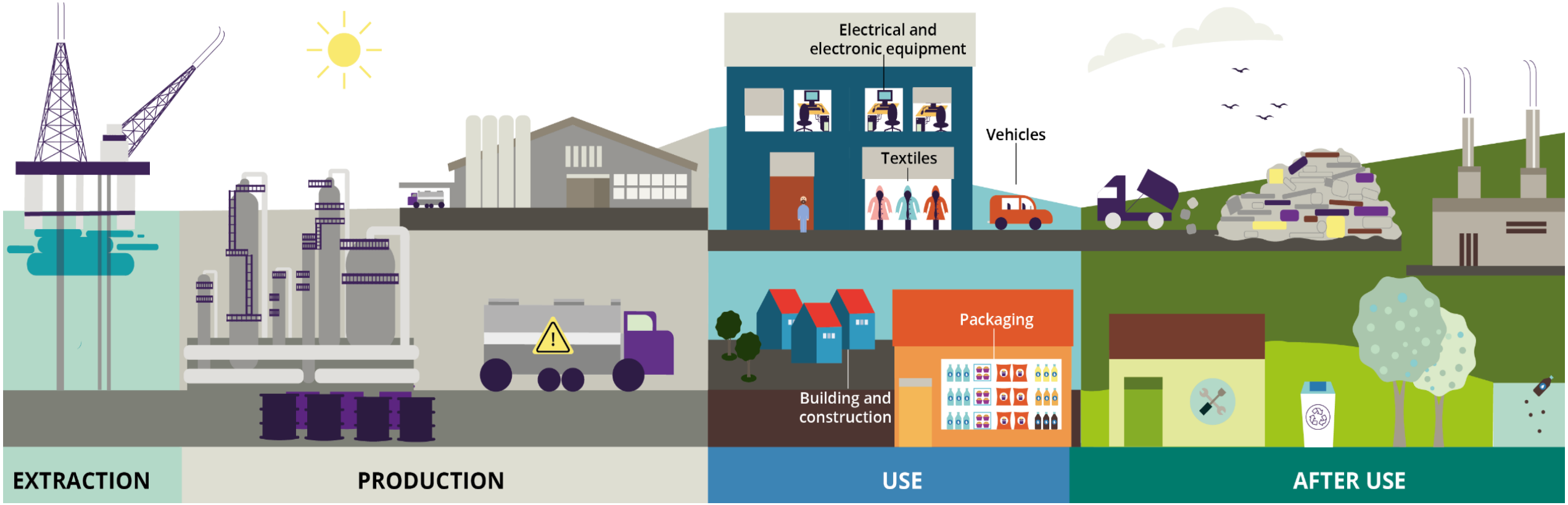
Tobias Dan Nielsen| CUSP workshop| 7 February 2023

European Environment Agency

Areas of work



Environmental and climate impacts across the plastic life cycle



- Fossil fuel use
- Greenhouse gases and pollutants

- Human health effects: Exposure to toxic chemical substances

- Leakage to environment
- Greenhouse gases from incineration and decomposition

Source: EEA (2020) Plastics, the circular economy and Europe's environment.

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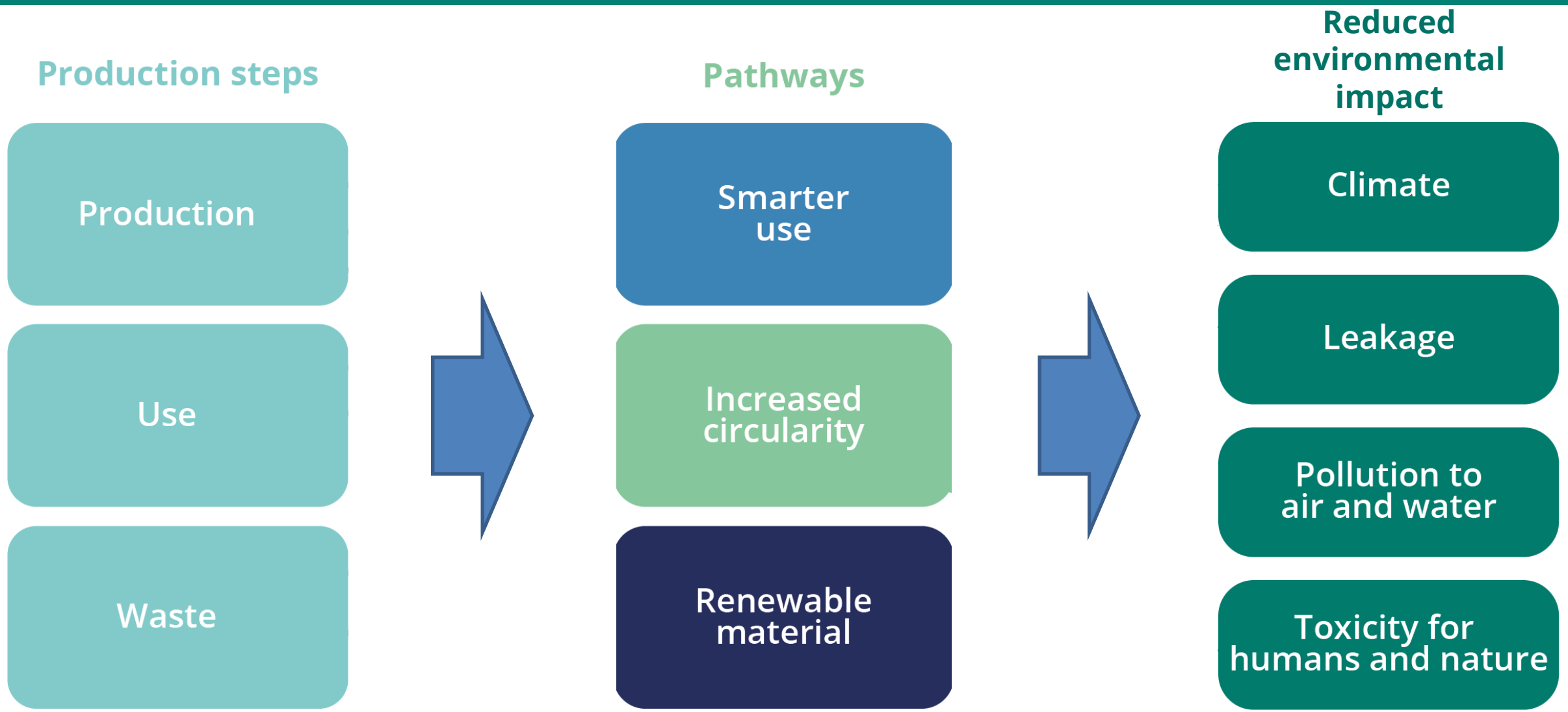
Pathways towards a circular plastic system



Sources: EEA (2020) Plastics, the circular economy and Europe's environment.

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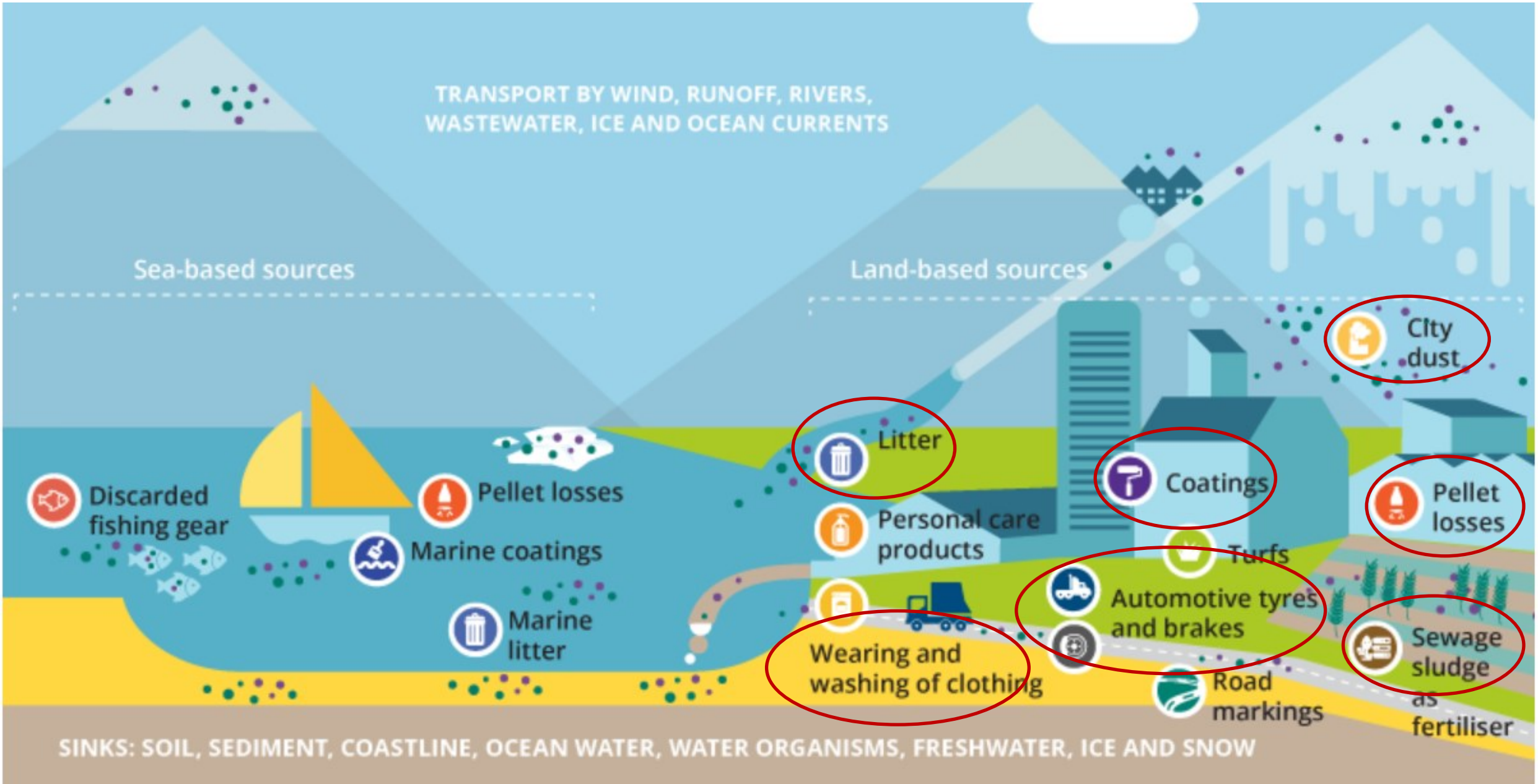
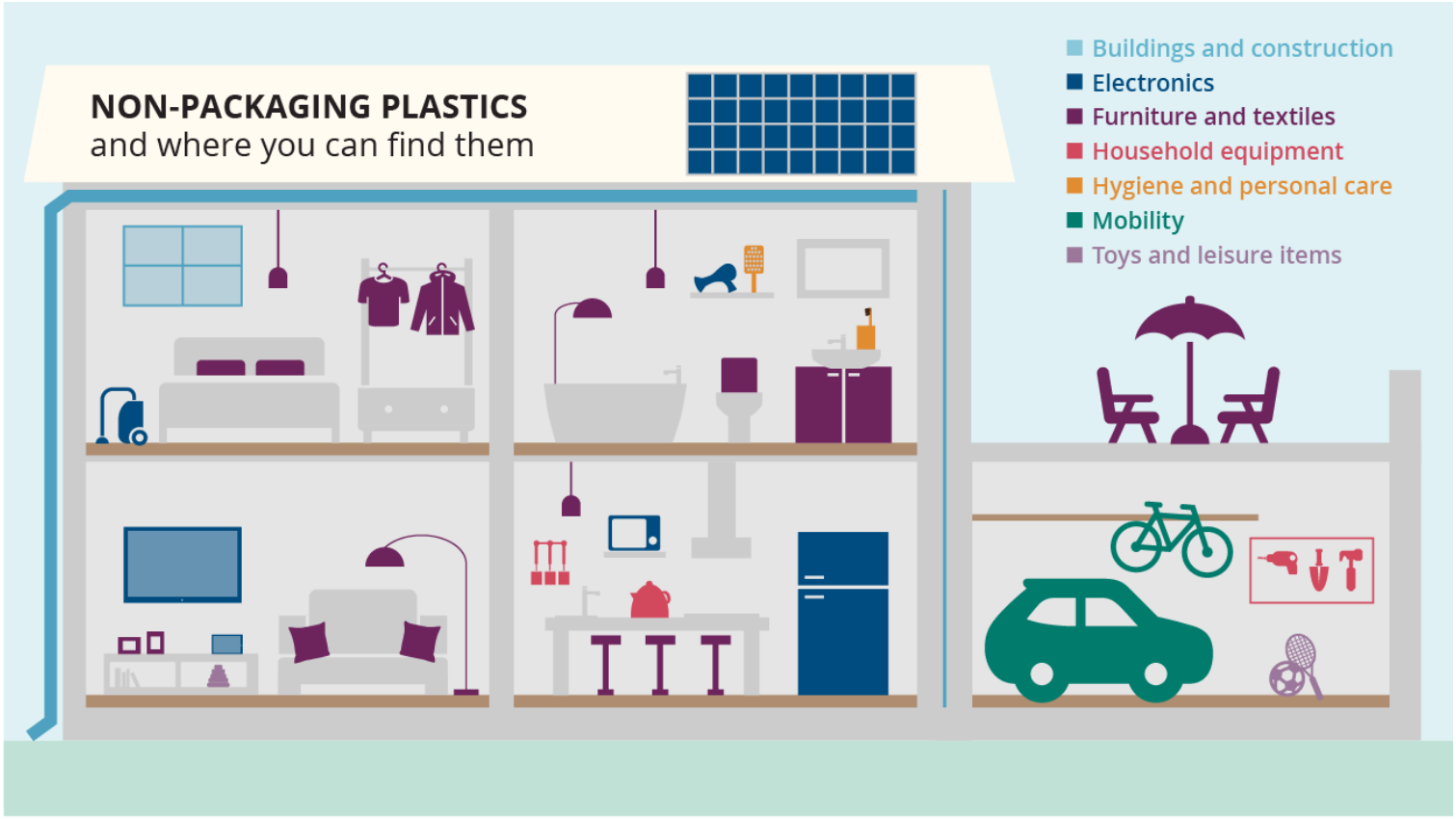
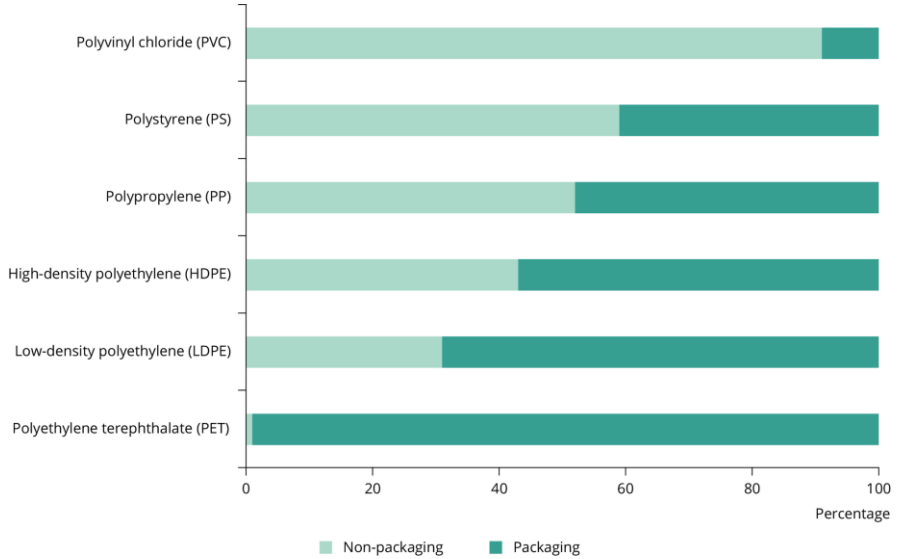
Sources of microplastic pollution

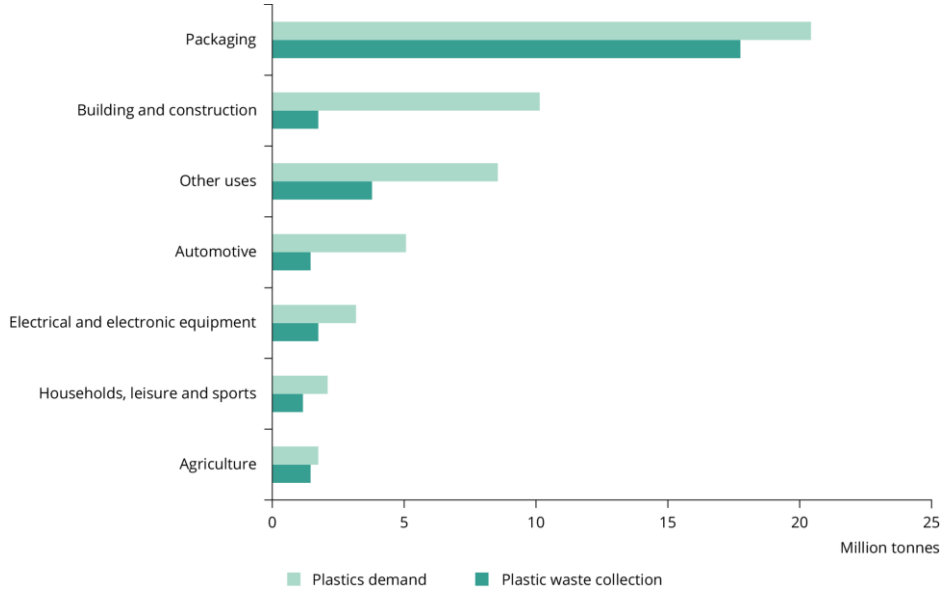


Source: EEA and ETC/WMGE, illustration by CSCP

Non-packaging plastics (74%)

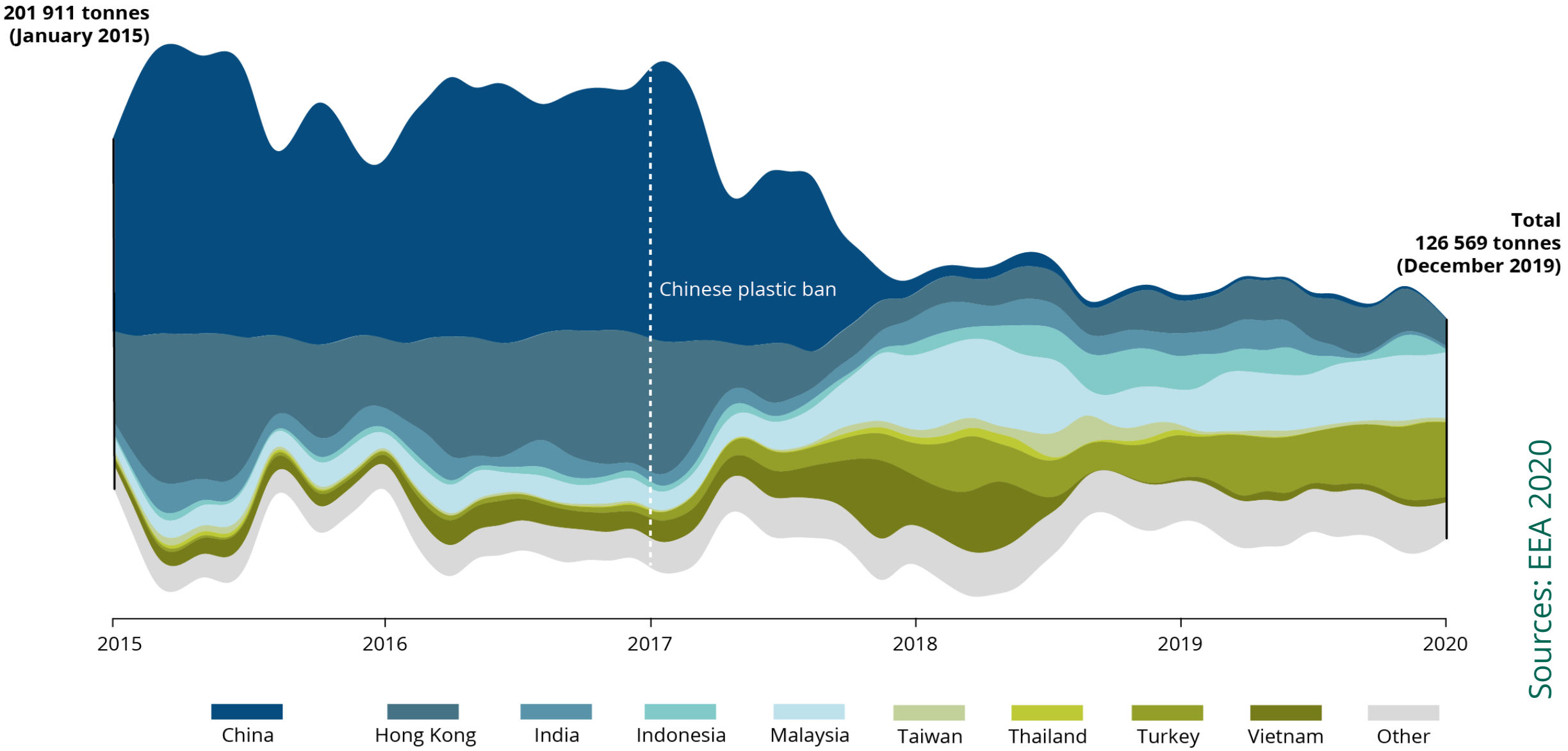






Sources: EEA 2023; Plastic Europe 2022

Plastic waste exports



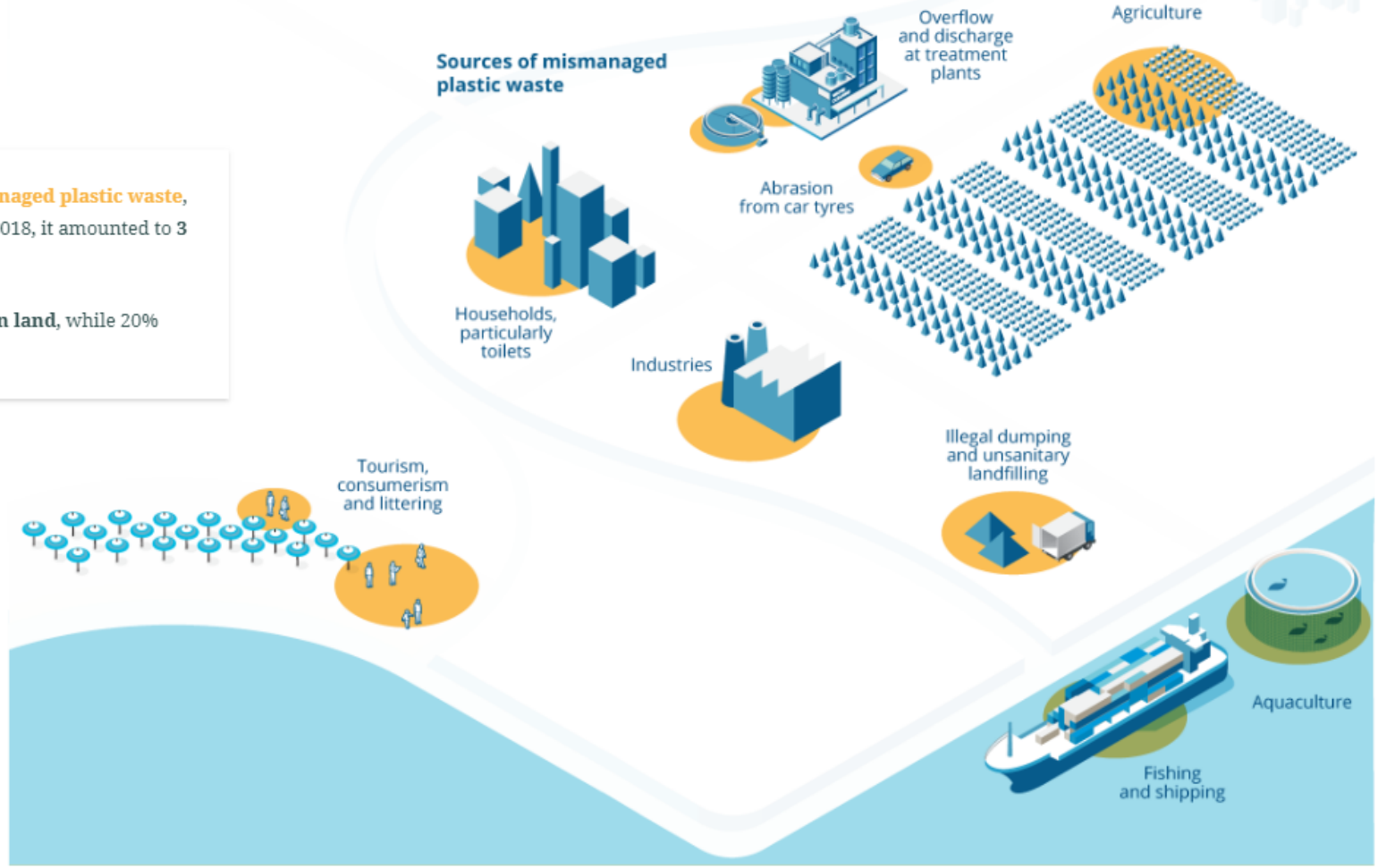
Sources: EEA 2020

From source to sea — The untold story of marine litter

The source

The primary source of marine litter is **mismanaged plastic waste**, which slowly leaks into the environment. In 2018, it amounted to **3 million tonnes**.

Approximately **80% of marine litter starts on land**, while 20% begins at the sea.



Sources: EEA (2020) Plastics, the circular economy and Europe's environment.

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Impact on human health (Phthalates)

PHTHALATES | WHAT YOU NEED TO KNOW

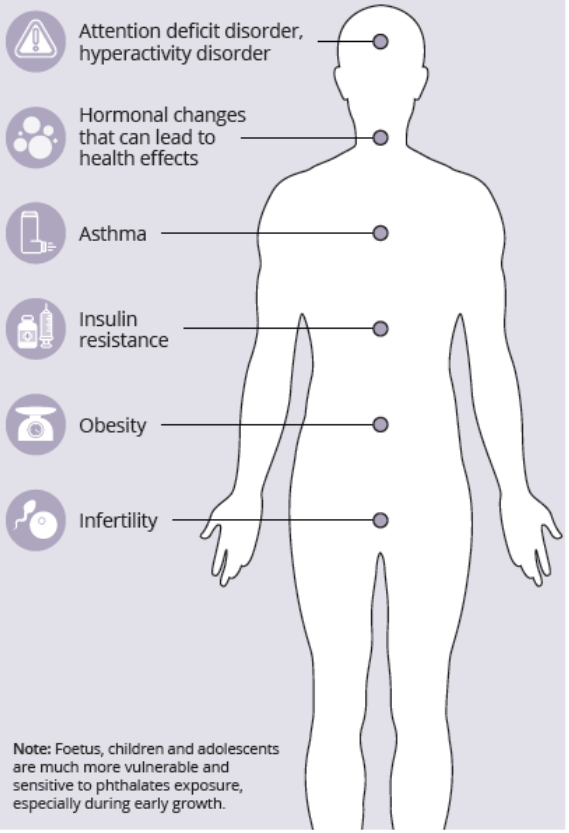
1 Possible sources of exposure

- Plastic tableware containing phthalates
- Toys
- Personal care products
- Fabrics
- Medical devices
- Air & dust contaminated released from consumer products

2 How can phthalates enter your body?

- Via ingestion
- Via dermal absorption
- Via inhalation

3 How might phthalates affect your health?



Note: Foetus, children and adolescents are much more vulnerable and sensitive to phthalates exposure, especially during early growth.

4 How can you reduce your exposure to phthalates?

- Do not microwave plastic utensils containing phthalates
- Prefer glassware to store food and beverages
- Read product labels and choose to use phthalate-free products
- Clean and air your home regularly to remove dust
- Choose fresh products rather than prepacked and processed food and drinks

The **European Union** has taken action to reduce citizens' exposure to phthalates known to cause risks to health such as banning several phthalates in all toys and childcare articles, prohibiting the use in the EU for specific uses, and setting legal limits for the concentration of certain phthalates in materials intended to be in contact with food.

For further information on how the European Union is protecting citizens read the **HBM4EU Phthalates Factsheet**.

Where they can be possibly found?

Phthalates may be present in plastics with the following pictograms:

HBM4EU science and policy for a healthy future

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 733032

www.hbm4eu.eu

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HBM4EU science and policy for a healthy future

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Input to policy processes

- Part of the EU delegation at INC
- Close interaction with DG ENV – plastics teams (and others)
- Cooperation with EIONET (states)
- Engage with civil society and industry actors.

What do we do want from academia, NGOs, and industry

- Overview of new topics, impactful findings, and info on topics
- Intersections between circular plastics, chemicals & health, leakage, env pressures…
- Data streams/indicators for measuring plastics and plastic impacts.
  - Circular Metrics Lab for plastics.
  - Input plastic treaty (data, monitoring techniques, …)
- More knowledge on exposure and key risks associated with (MPNs)
  - Thresholds
  - Overview of exposure (human)
  - Impacts (beyond smoking guns)
  - Participation in expert events
- What works in terms of preventing release
  - Assessments and good examples from countries

Thank you

Plastics, the circular economy and Europe's environment — European Environment Agency

Greenhouse gas emissions and natural capital implications of plastics

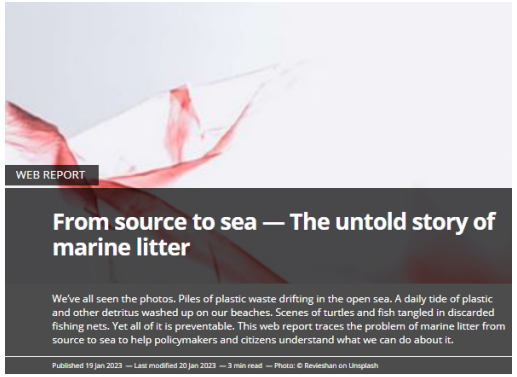
Non-packaging plastics in Europe

Plastic in textiles: potentials for circularity and reduced environmental and climate impacts

Marine LitterWatch – Citizens helping to monitor marine litter

ZERO POLLUTION AMBITION

Zero Pollution website



Web report: From source to sea

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science and policy
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