Ecologic Institute

Science and Policy
for a Sustainable World

# Plastics & the environment – responsibilities and implications between North and South

## 46th UNEP/UNESCO/BMUV International Postgraduate Course on Environmental Management

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Mandy Hinzmann

**Berlin, 29 March 2023**

# Content

1. About Ecologic Institute
2. Plastics: Problem & solutions from a global perspective
3. Plastics and Textiles: The waste problem and potential solutions

Scene from the film “A plastic planet”

# Ecologic Institute



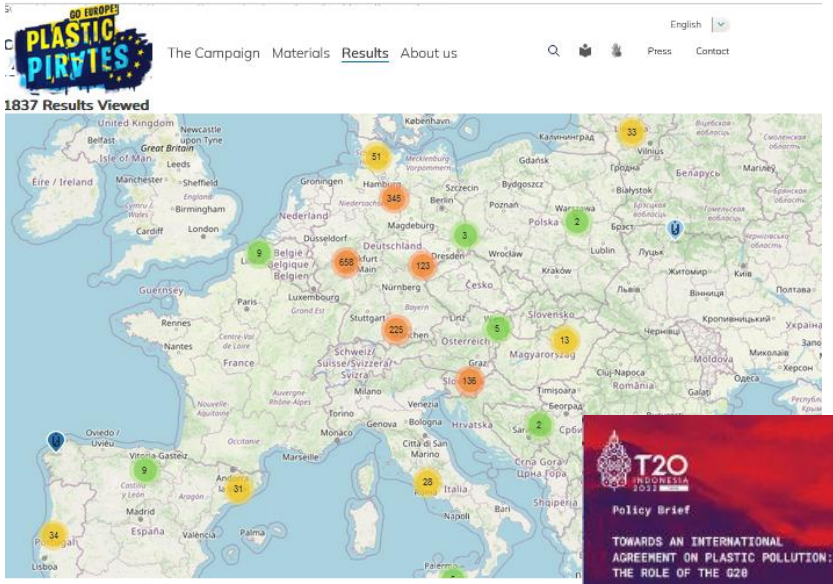






# What we do


Tackling microplastics in the environment
evidence-based policy recommendations on textile fibres, tire abrasion, and pellet loss
9 MAR 2023
09:00-15:00 | Brussels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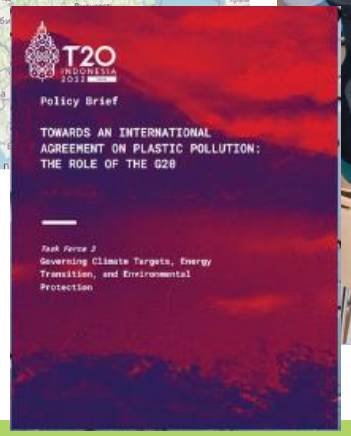
T20
Policy Brief
TOWARDS AN INTERNATIONAL AGREEMENT ON PLASTIC POLLUTION: THE ROLE OF THE G20
Governing Climate Targets, Energy Transition, and Environmental Protection


WWF
GLOBAL RULES IN A NEW GLOBAL TREATY:
ASIA'S OPPORTUNITY TO END SINGLE-USE PLASTIC POLLUTION
JULY 2022


Plastics in the Environment
FONA
EPA Network
SFB MIKROPLASTIK


Key messages
Short version
FONA


Recommendations for policy interventions
ensure environmentally-friendly materials as well as product and packaging designs
require a transparent declaration (e.g., via online portals) of the additives, auxiliary materials and other substances used (including quantities) along the entire product life cycle
promote the use of alternative practices (e.g., unpackaged goods), reusable systems, deposit-return systems, and regional socio-ecological supply systems


Circular Economy and Sustainability
DESIGN
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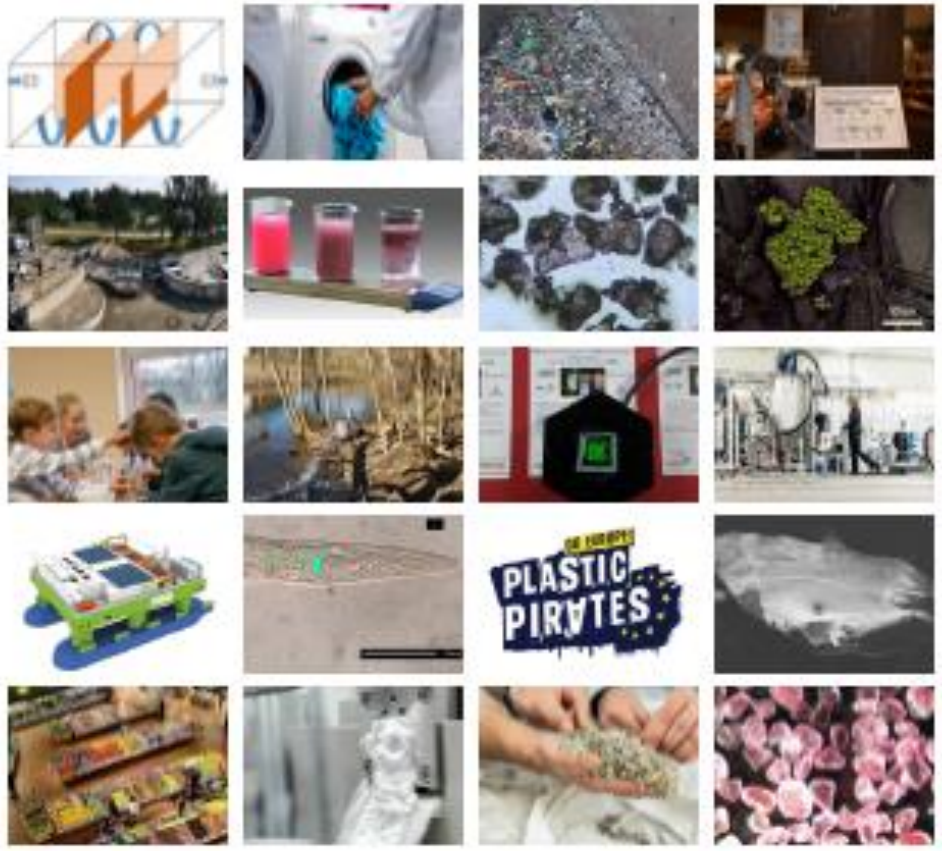
# Plastics in the environment – the challenge

- Every year, 6 to 26 million tonnes of plastic litter end up in the oceans.
- Sources are to 80% land-based.
- Only 1% of the marine litter is found at the surface.

# Discussion in Germany: Still trying to “understand” the problem…

- Implementation of EU Directive on single-use plastics (SUPs)
- Packaging
- Microplastics
  - In soils
  - In freshwater and salt-water ecosystems
  - in the air
- Circular economy
- Sewage treatment plants

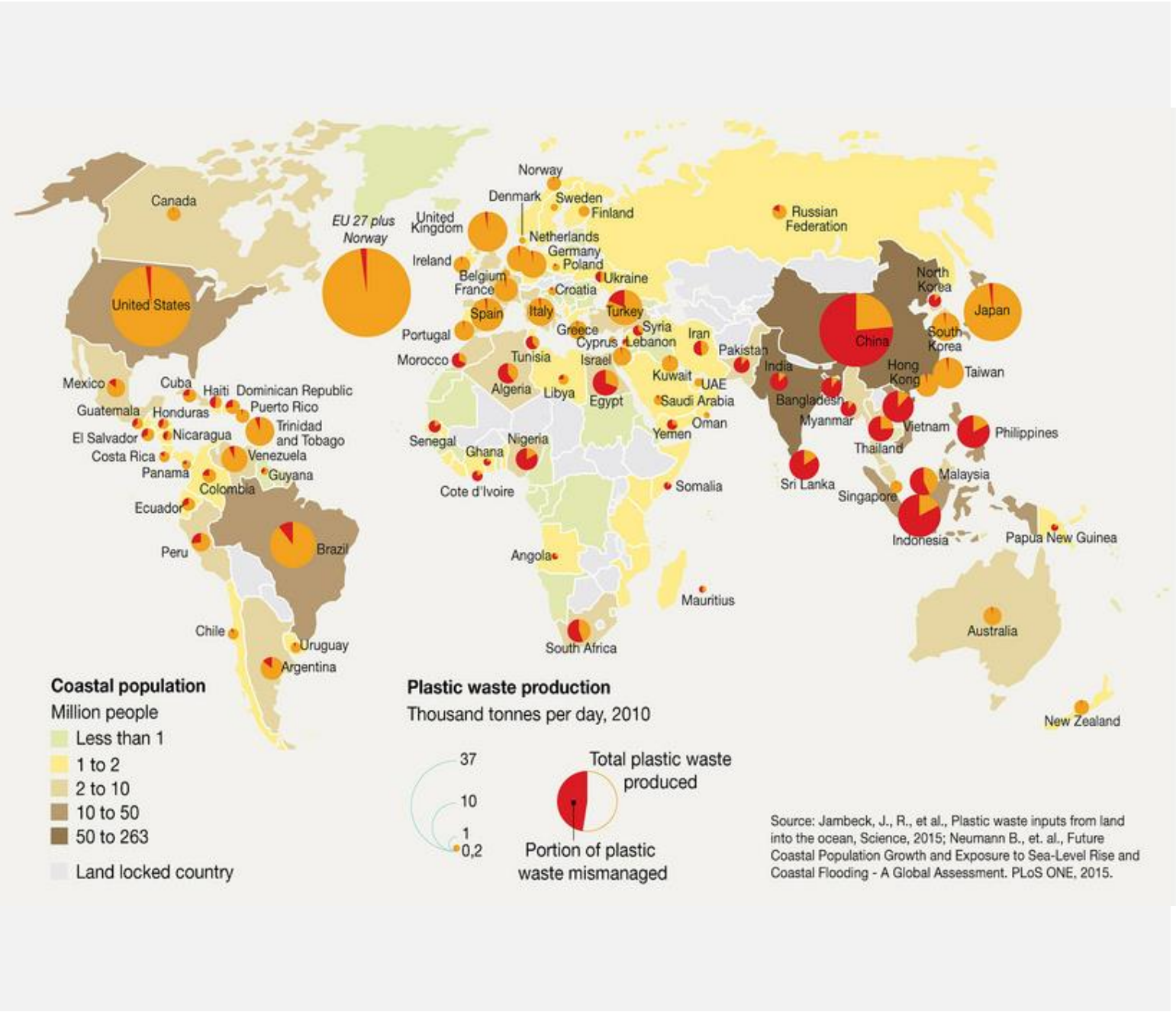


# …while NGOs & science urge to take action

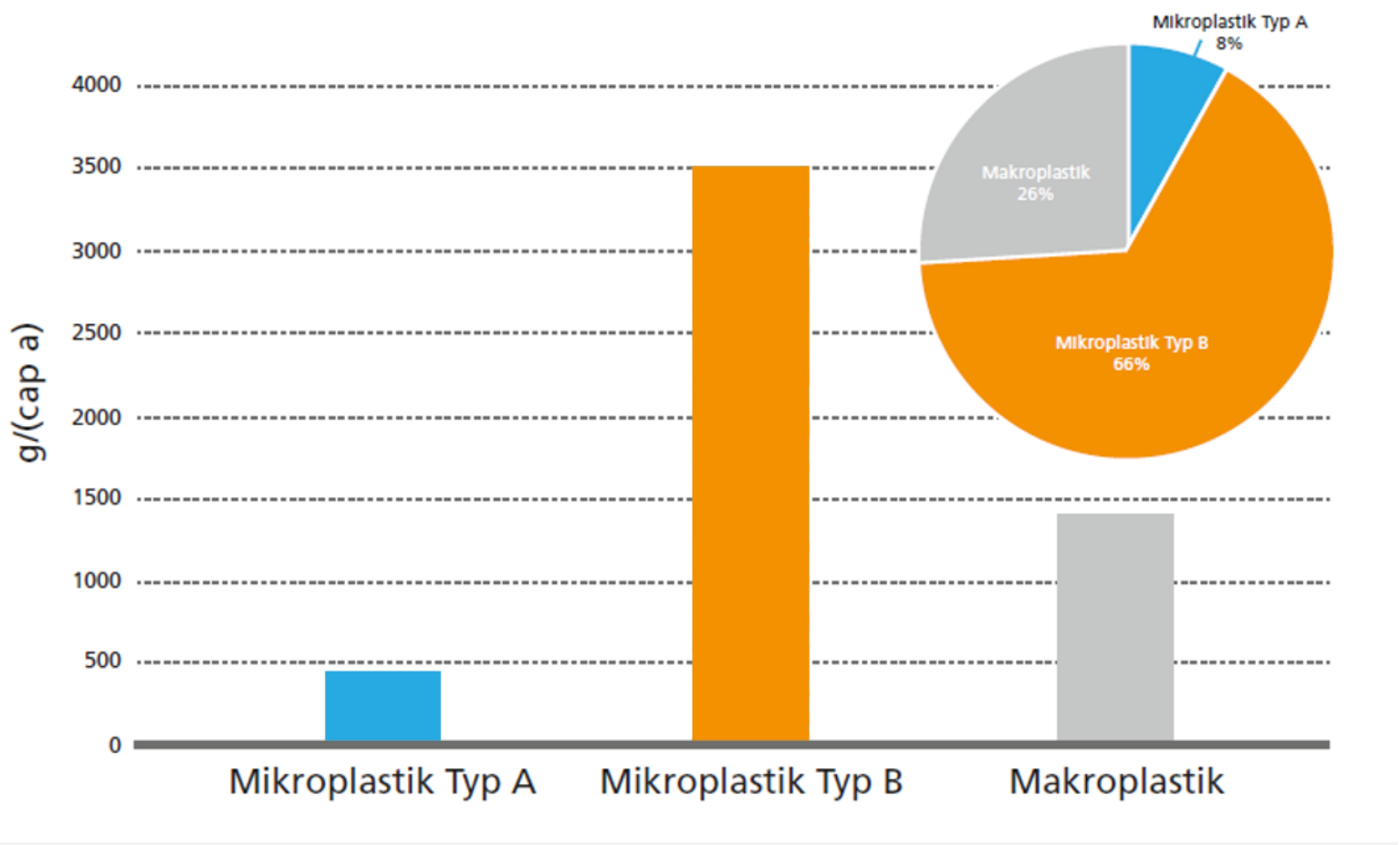
- Precautionary principle:
  Environmental policy
  to minimize (cut off!) inputs
  of plastics into the environment

© Katriona McGlade

# Where does the plastic waste come from?

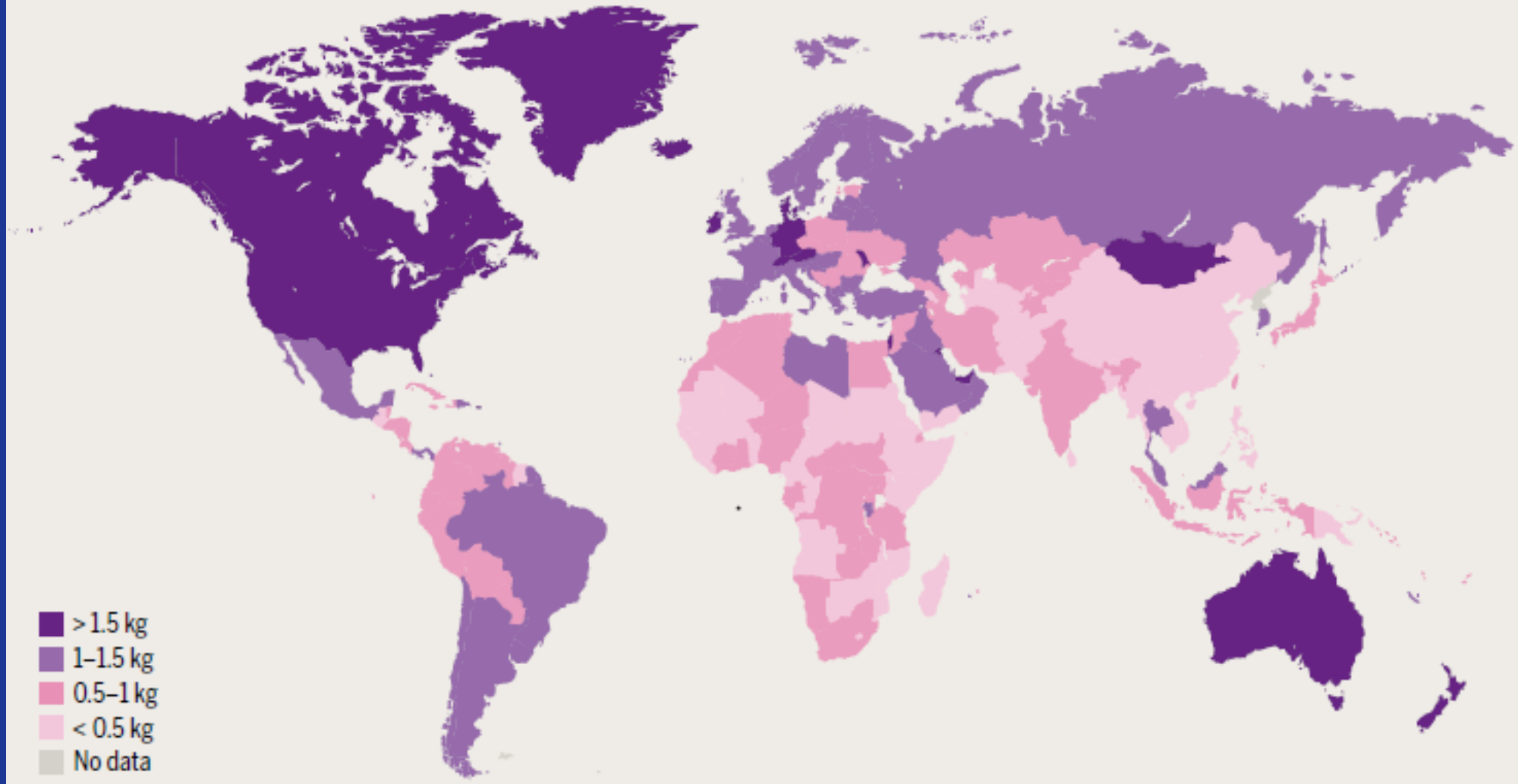


# A large part of the problem is “invisible”



## AFFLUENCE AND EFFLUENCE

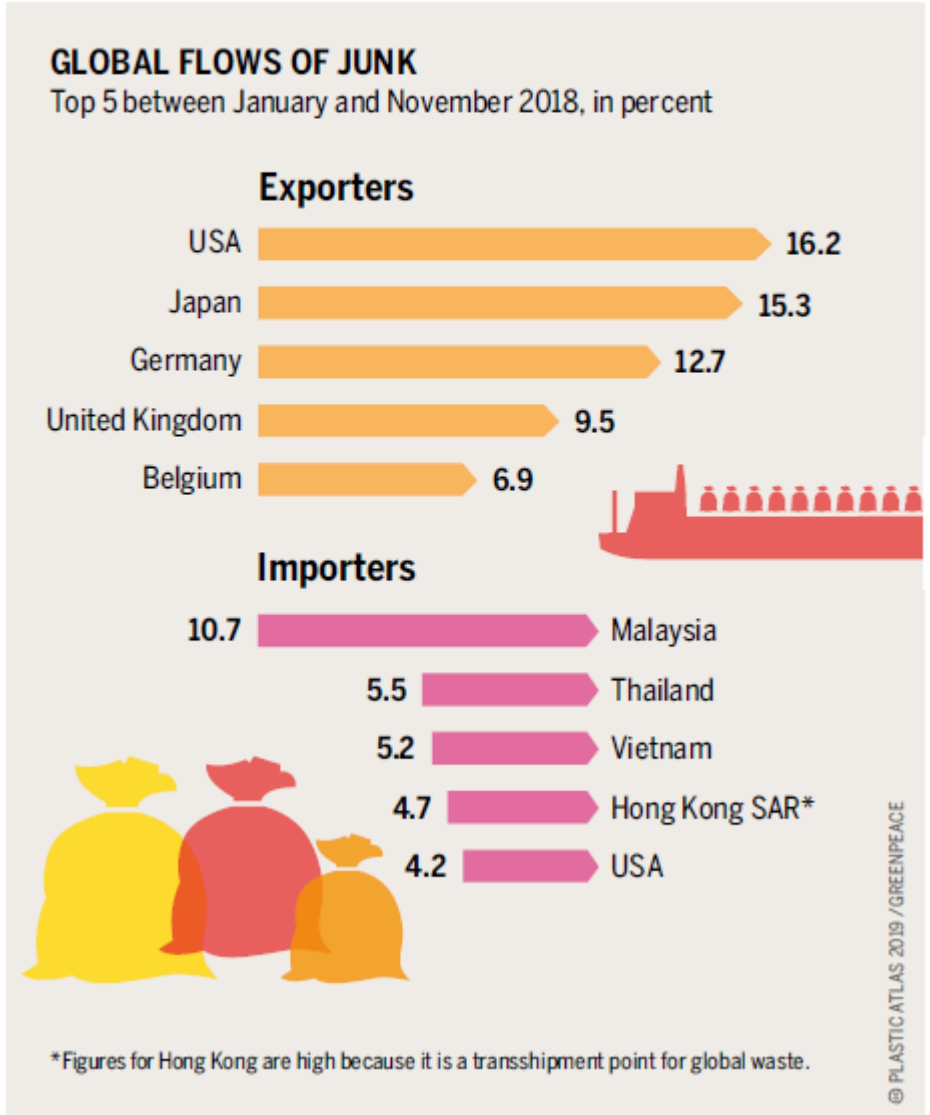
Waste generation per person per day, 2016



# “Global flows of junk”

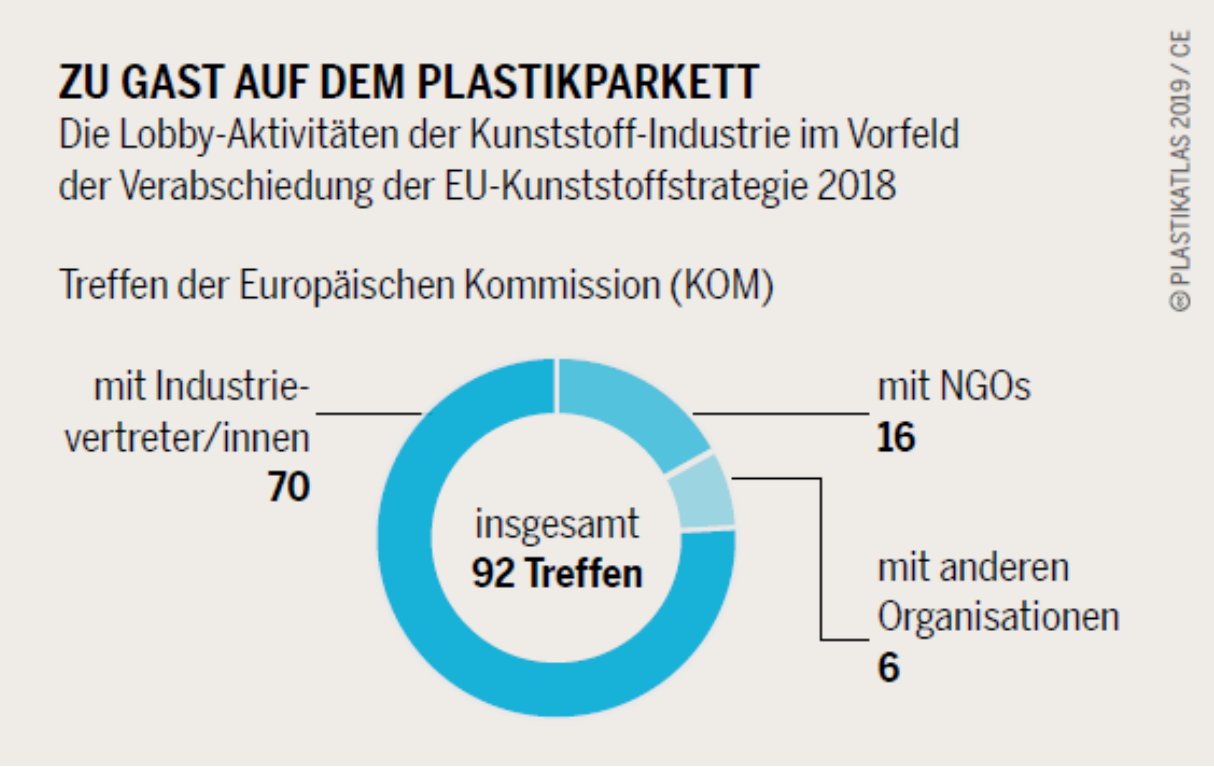
- Only high-value plastic materials (i.e. PET & HDPE) are recycled in the Global North
- Jan. 2018: import ban from China
- 2018: Huge increase in Malaysia and Thailand (more than double), while imports in China fell by > 90%

The industrial world is the source of most plastic waste exports. The biggest importers are in Asia. Most waste consists of containers, films and sheets.



# The plastics lobby is strong

- In the run-up towards the EU Plastics Strategy, the European Commission had 92 meetings with externals:
  - 70 with representatives from industry
  - 16 with NGOs
  - 6 with other organisations




© Plastik Atlas, 2019, German edition

# Problem is obvious – what is the solution?

## Global level: High Ambition Coalition to End Plastic Pollution

- https://www.youtube.com/watch?v=HZojOyStOcc
- As of March 2023, 50 Members (incl. EU)
- “A group of like-minded countries has taken the initiative to form a coalition of ambitious countries following the adoption of resolution 5/14 “End Plastic Pollution: Towards an International Legally Binding Instrument” by the UN Environment Assembly in March 2022. The High Ambition Coalition is Co-Chaired by Norway and Rwanda as announced during UNEA5.2.”

# HAC Three global strategic goals

## HAC

- Three global strategic goals:
  1. **Restrain plastic consumption and production to sustainable levels**
  2. **Enable a circular economy for plastics that protects the environment and human health**
  3. **Achieve environmentally sound management and recycling of plastic waste**

Source: https://hactoendplasticpollution.org/

Photo: Private.

# HAC Seven deliverables for success

## HAC

- Key deliverables for success:
  1. Eliminate problematic plastics, including by bans and restrictions.
  2. Develop global sustainability criteria and standards for plastics.
  3. Set global baselines and targets for sustainability throughout the lifecycle of plastics.
  4. Ensure transparency in the value chain of plastics, including for material and chemical composition.
  5. Establish mechanisms for strengthening commitments, targets and controls over time.
  6. Implement monitoring and reporting at each stage through the lifecycle of plastics.
  7. Facilitate effective technical and financial assistance, scientific and socio-economic assessments.

Source: https://hactoendplasticpollution.org/

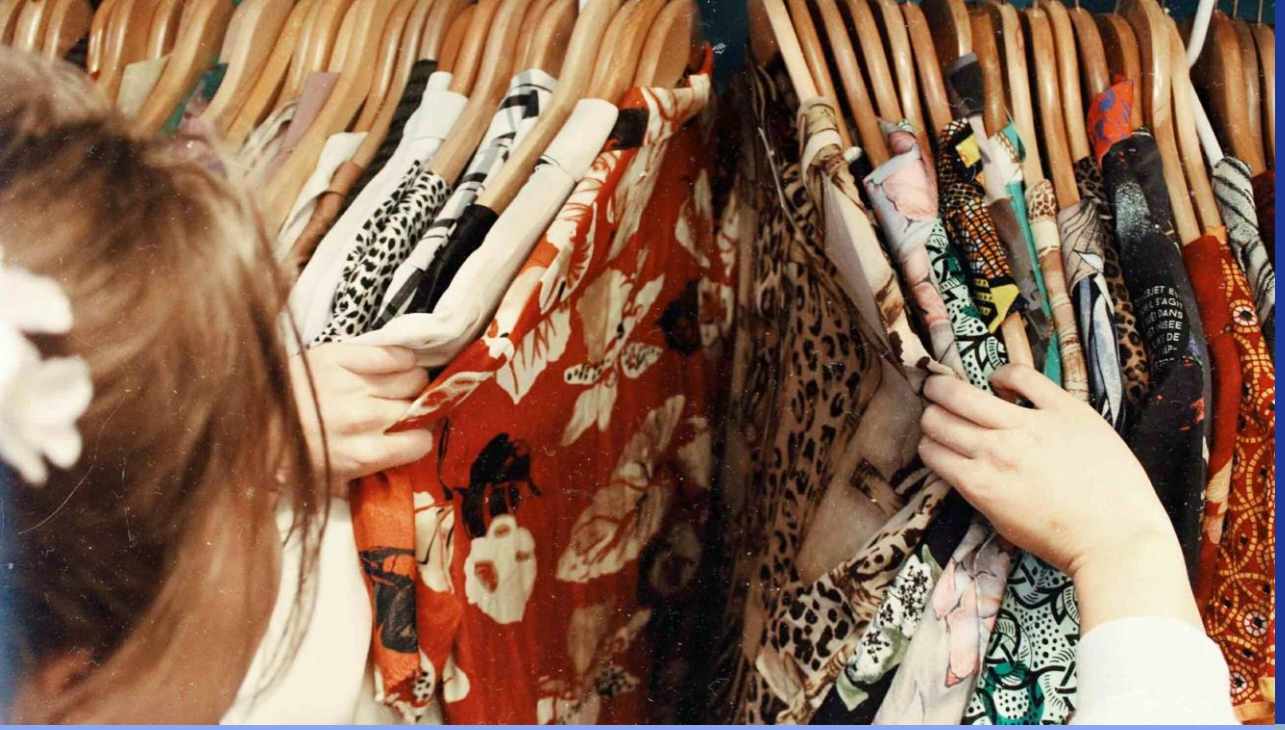
# Discussion:


## Global level

- What do you think of the HAC goals & deliverables?

## National level

- Reflections on the regulations that are in place in your home country (or any other country of choice) regarding plastics regulation (e.g., plastic bag bans or taxes, recycling regulation, sorting, dumping, importing of e.g. textiles, etc.).



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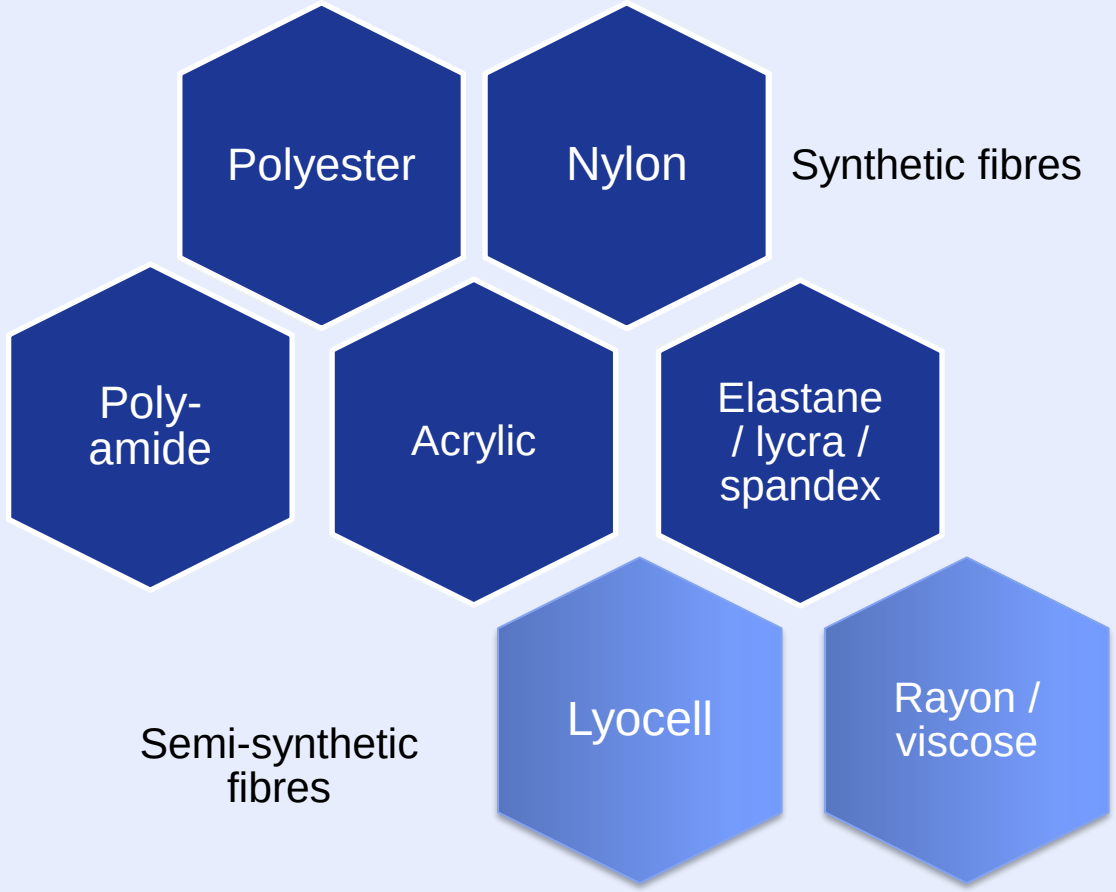
# Plastics and Textiles.

## The waste problem and potential solutions


© Cristobal Olivares / Greenpeace

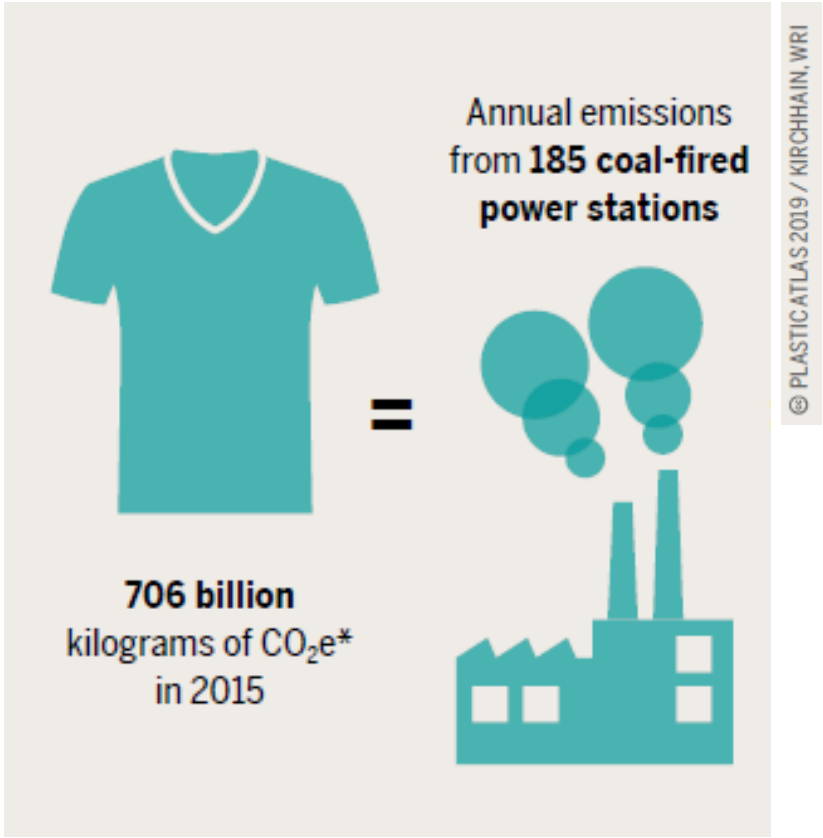
# Plastics in textiles



# Environmental impacts of synthetic fibres

Emissions of greenhouse gases caused by the production of polyester fibers

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# Plastic packaging along the textile supply chain

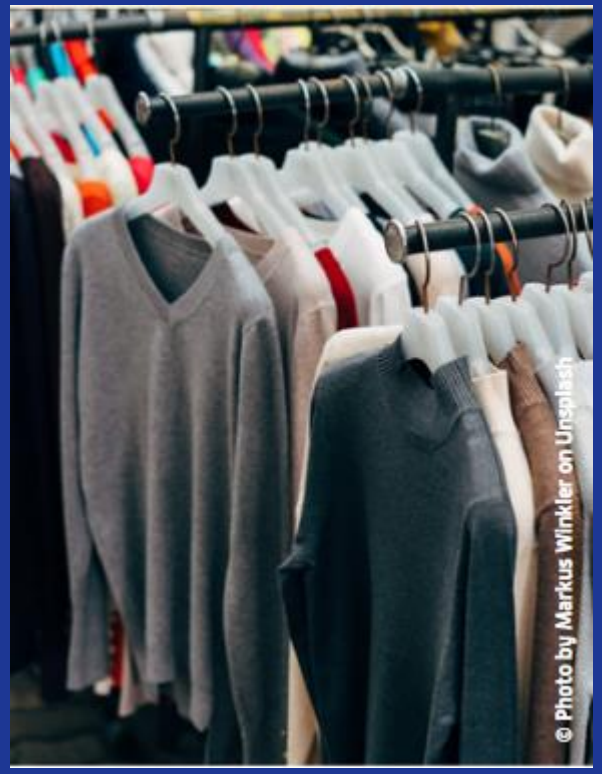
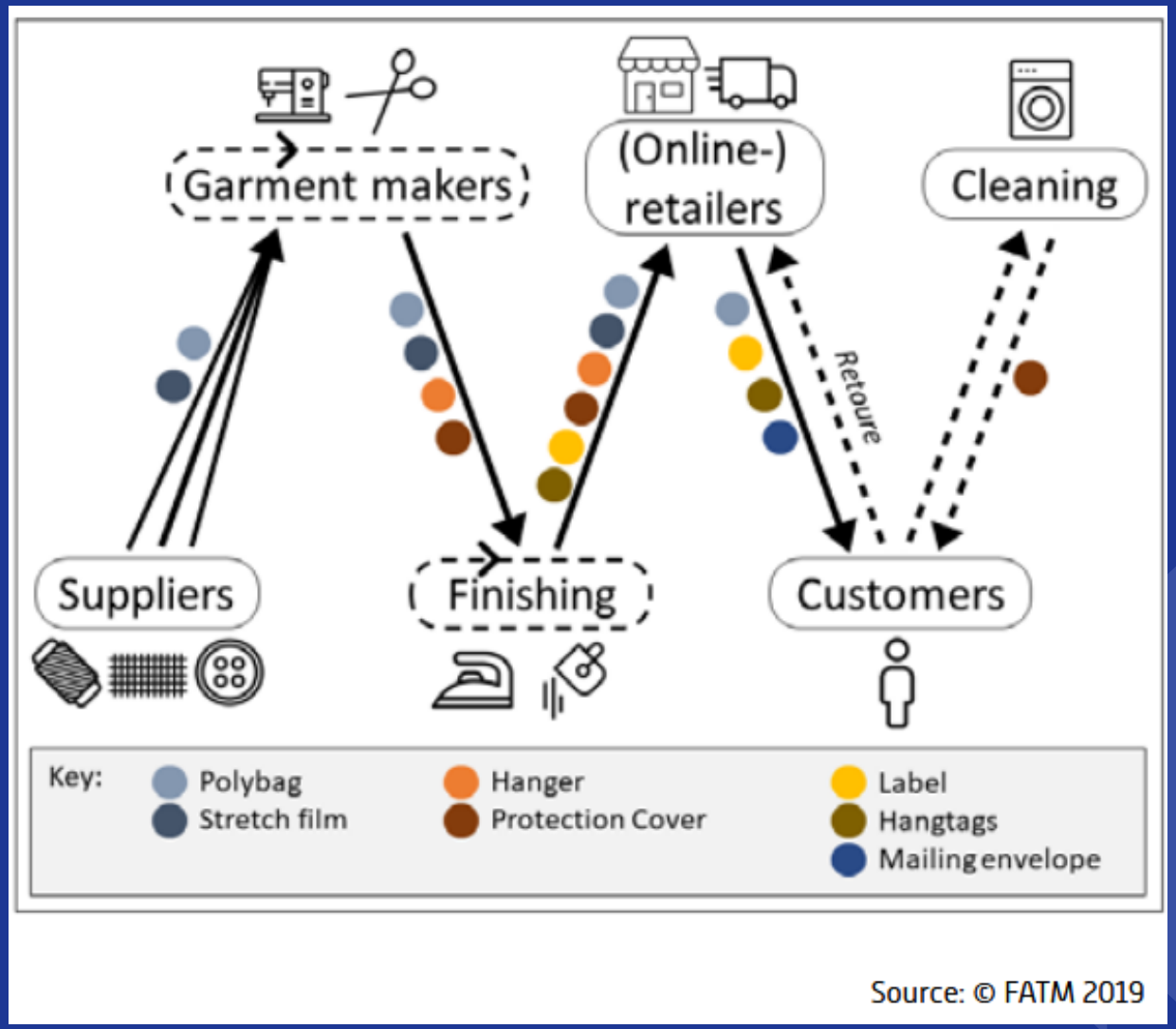


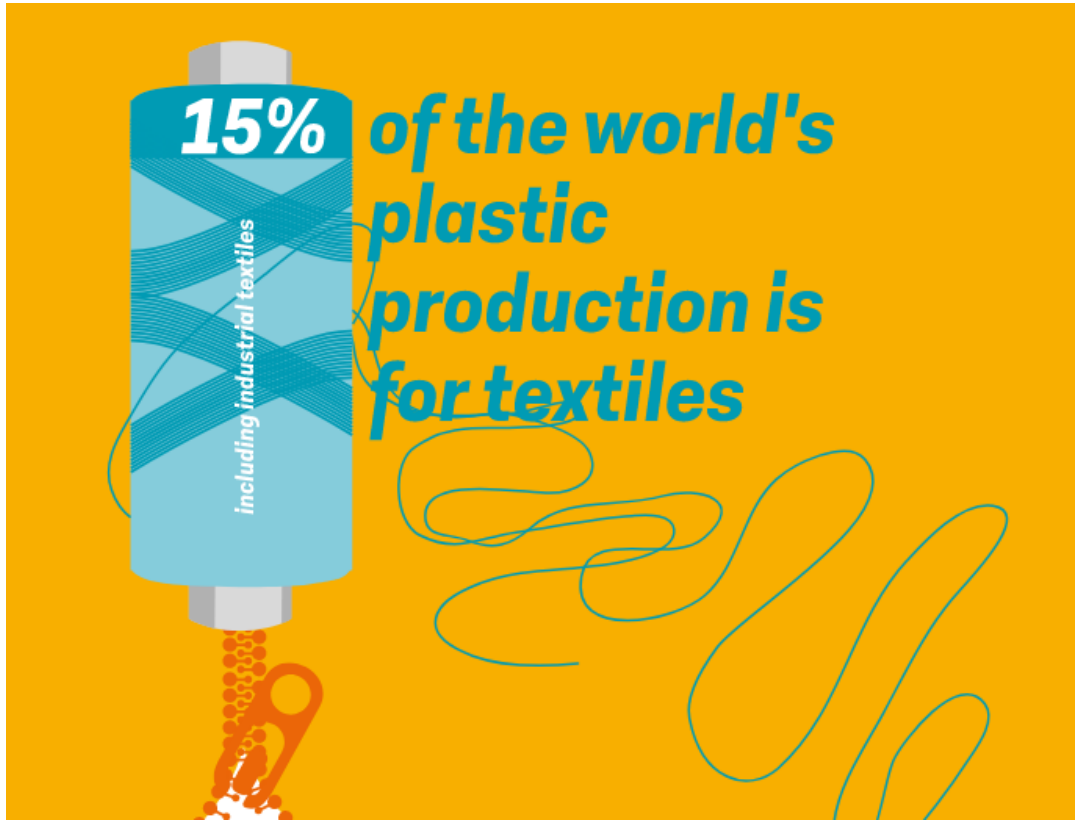


Photo: © Thomas Decker 2018




Source: © FATM 2019

# Synthetic fibres on the rise

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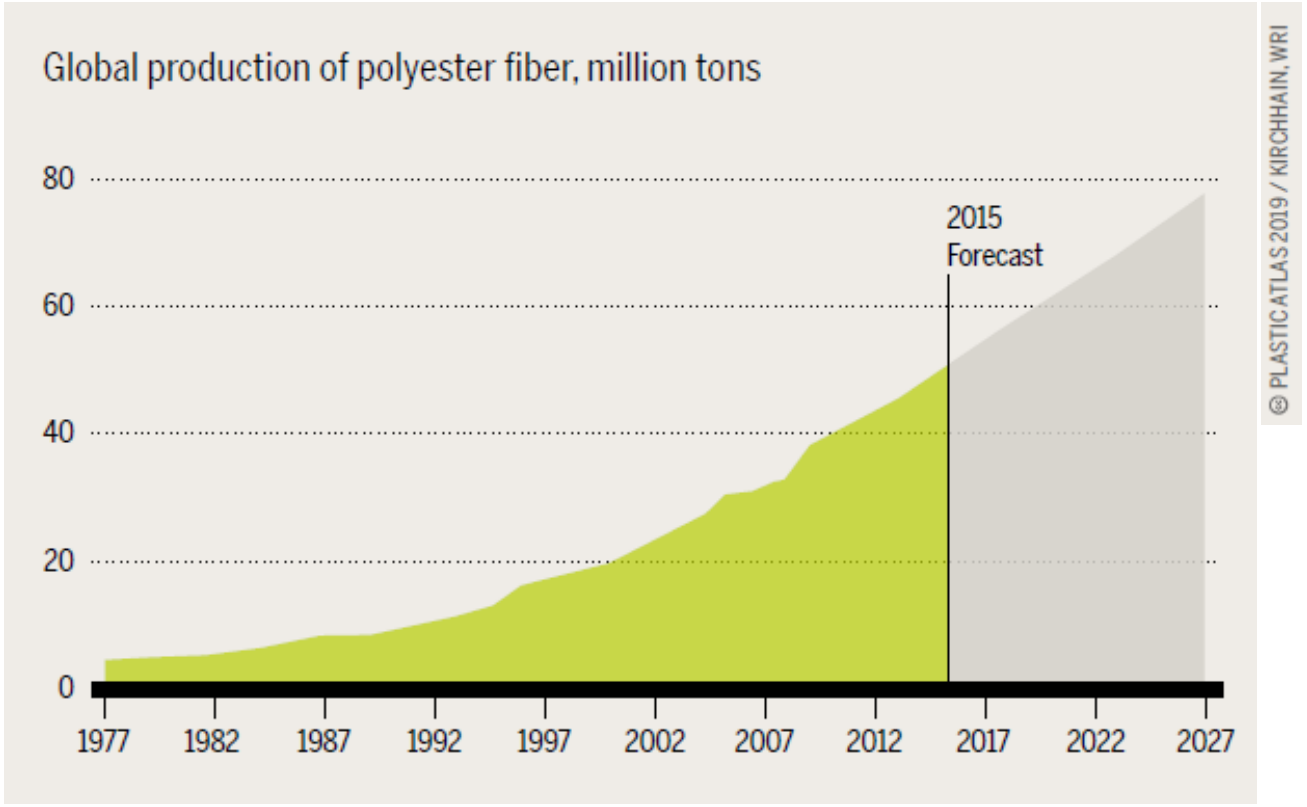
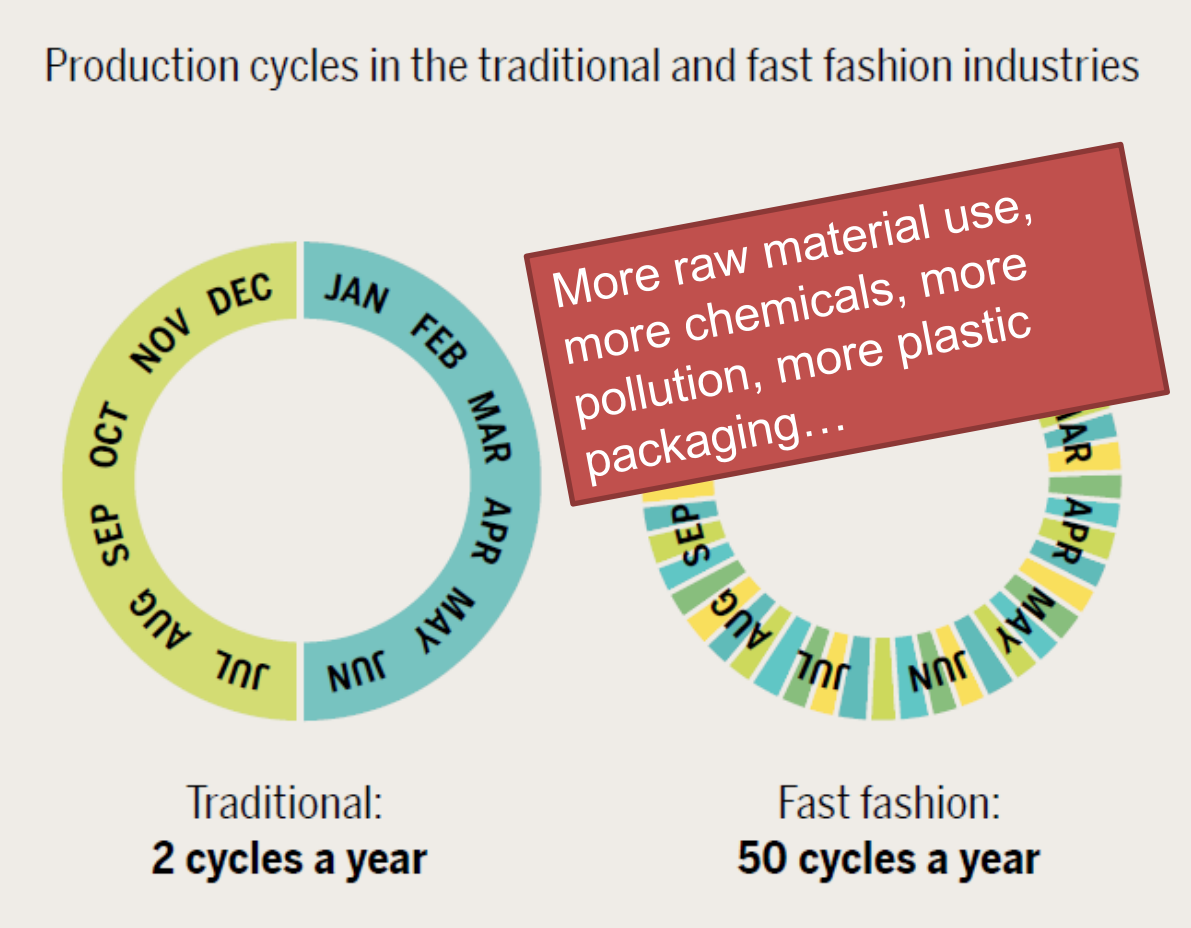
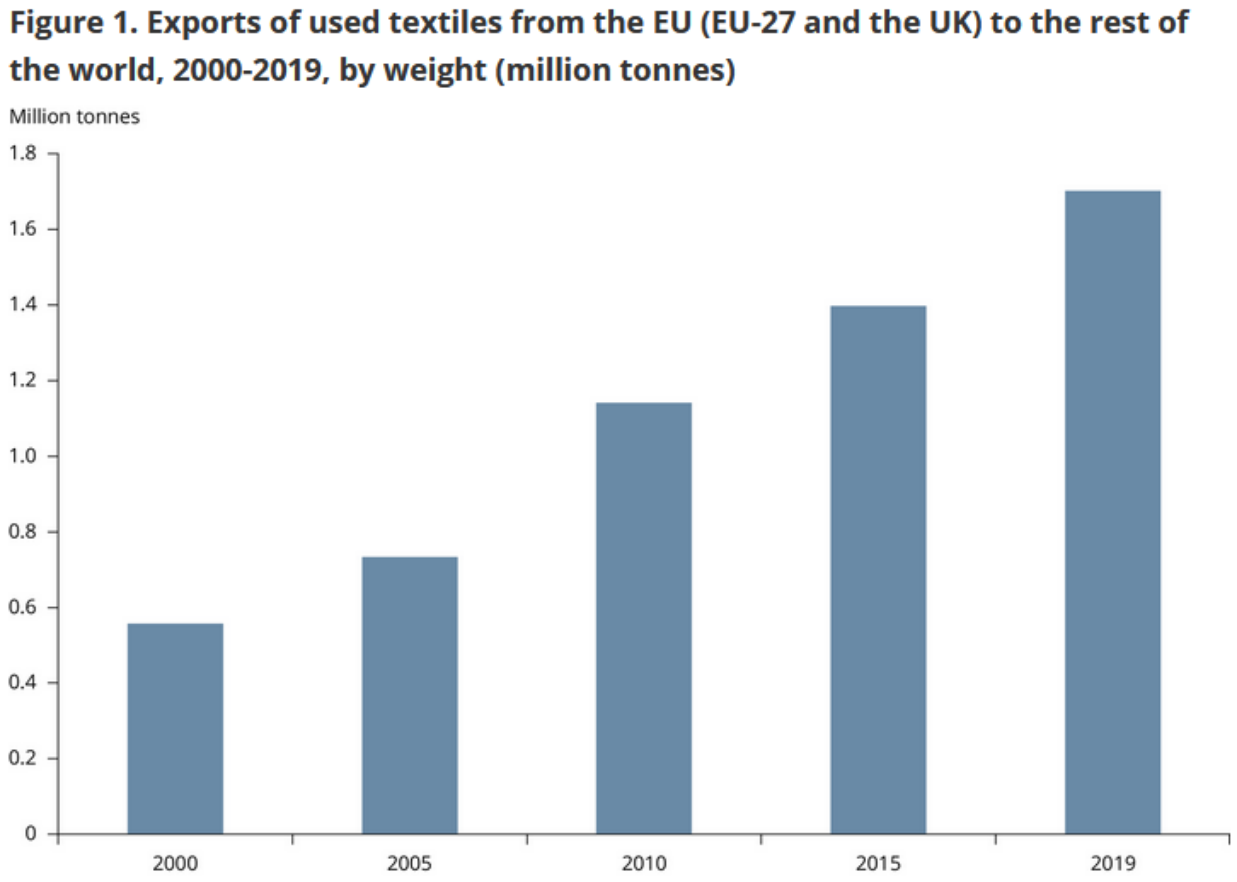


# Fast Fashion and the (plastic) waste problem

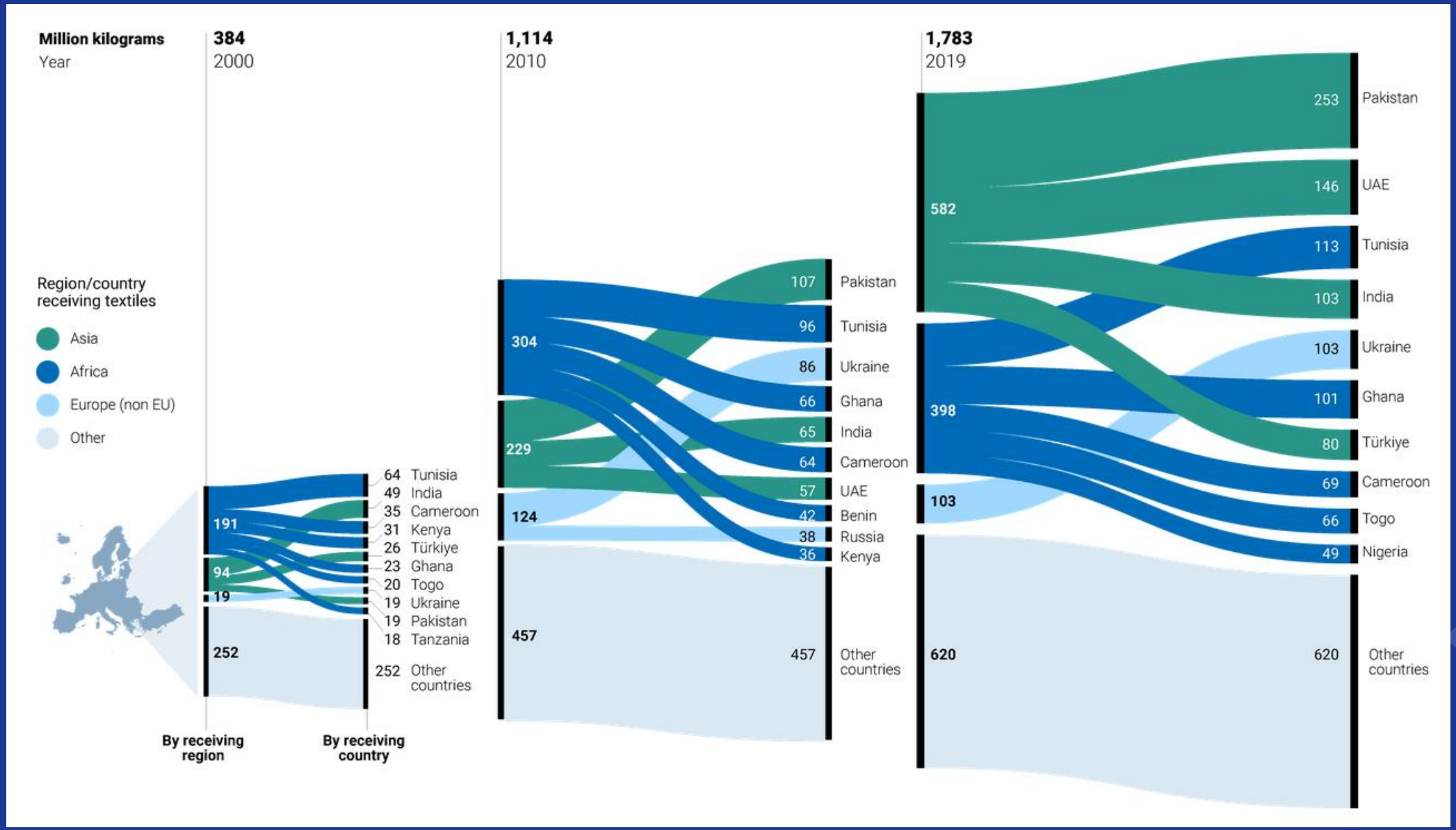



Plastic Atlas 2019 / Kirchain / WRI




European Environment Agency, February 2023

# EU exports of used textiles, by receiving country, 2000, 2010 and 2019, million kilograms



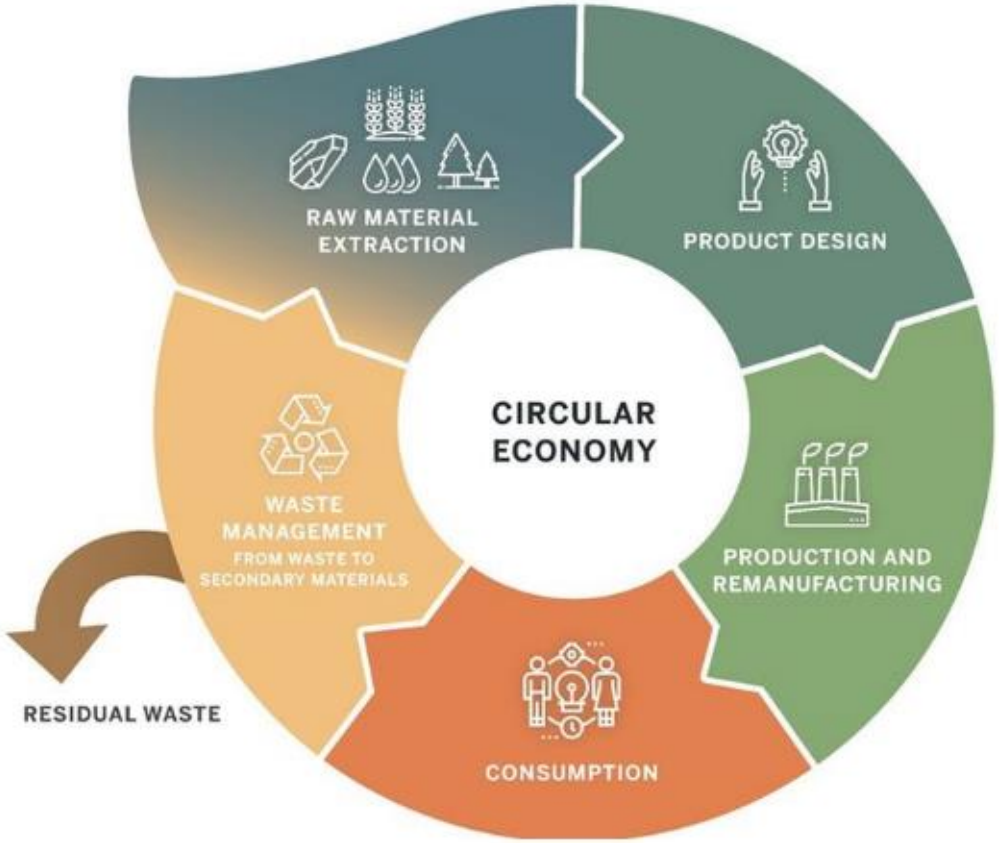

European Environment Agency, February 2023

# The waste problem

**Similar situation in Ghana**
https://www.youtube.com/watch?v=Ichj0ac3V_Y&t=116s

The Nairobi River which runs through Gikomba market is clogged up with textile waste. © Kevin McElvaney / Greenpeace

# EU vision of a circular textile economy




European Commission 2017

- Prolong the use phase of textiles
- Foster repair and reuse
- Design for longevity
- Design for recyclability
- Increase use of recycled fibres
- Phase out hazardous chemicals
- Increase transparency

# Solutions for more circular textiles

**Title:** Study on the Technical, Regulatory, Economic and Environmental Effectiveness of Textile Fibres Recycling

**Funding:** European Commission

**Duration:** Sep 2020 – Oct 2021

**Partner:** VITO (Belgium), Centexbel (Belgium)

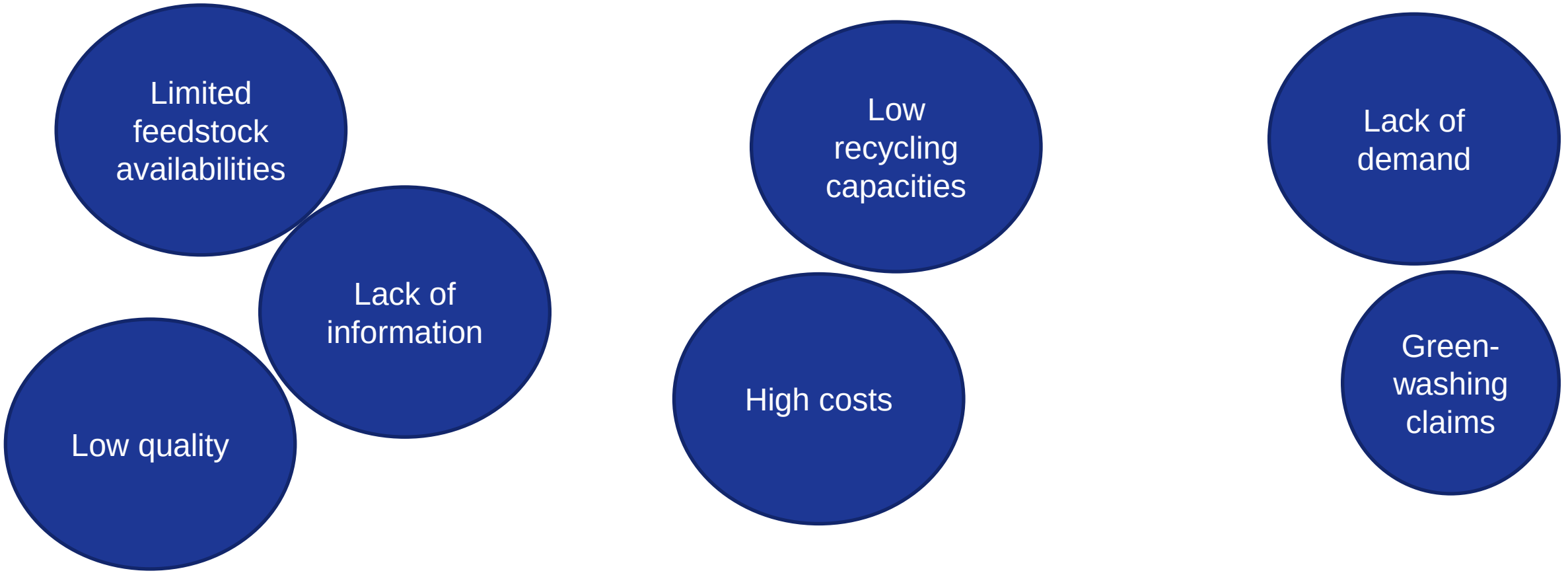
**What did we do?** Analysis of existing regulatory framework, identification of barriers, developing policy options

# Barriers for textile-to-textile recycling

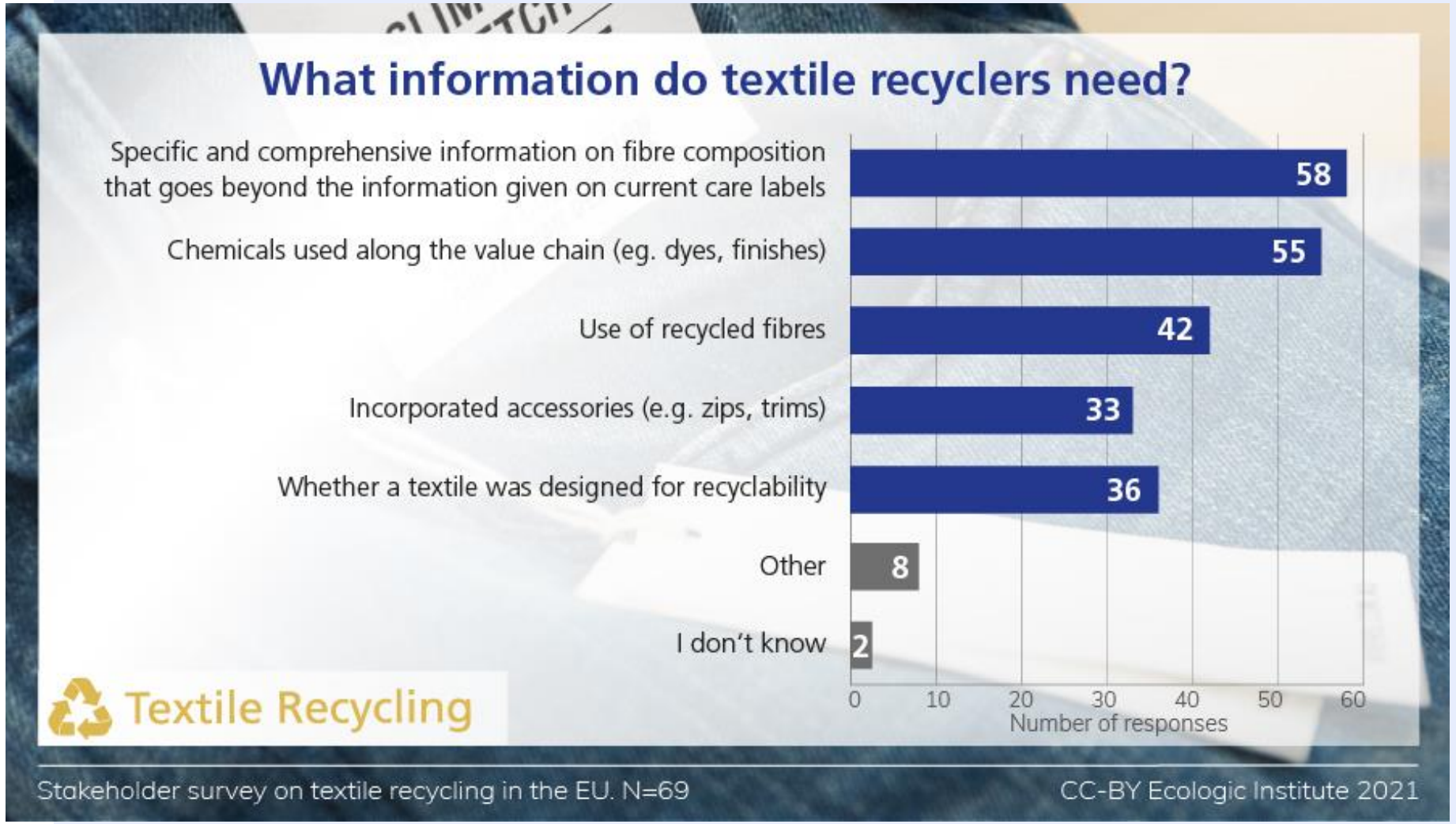
**Input:**
used textile waste

**Process:**
sorting and recycling

**Output:**
recycled fibres



# Lack of information hampers recycling

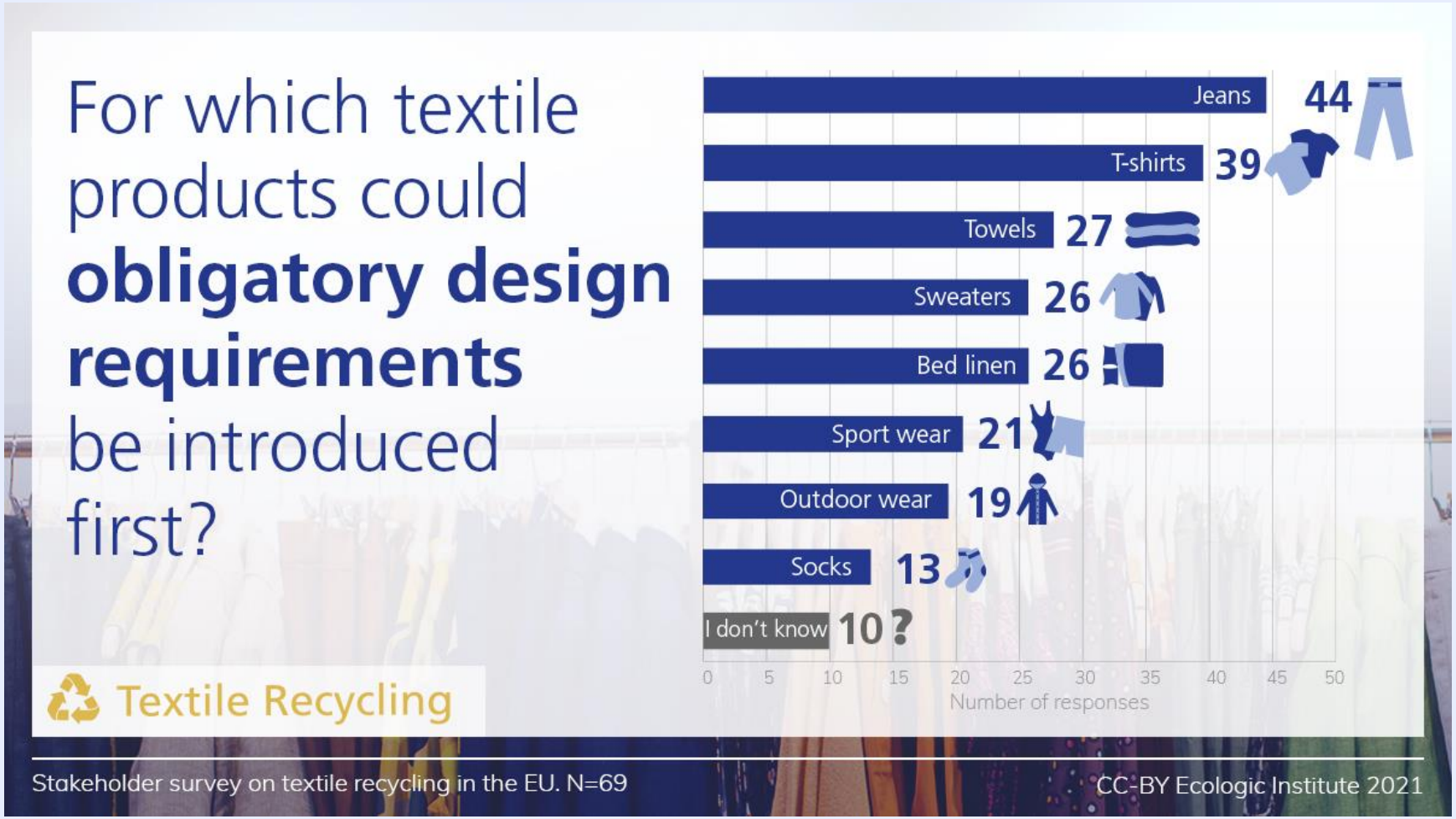


# Enhancing transparency


Stakeholder survey on textile recycling in the EU. N=69

# Design for circularity

- applicable to products produced in or imported to the EU
- Eliminate the worst performing textile products from the market
- Reduce amount of textile waste that needs to be incinerated, landfilled or exported



# Summary

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# Questions for discussion

- Who is responsible for improving textile waste situation? **Who should take action?**
  - Producers (companies, countries?) – safe products of high quality, take back products after use?
  - Consumers (waste exporting countries?) – make rules for safe waste exports, manage own waste?
  - Importing countries? – impose import bans, make rules for imports?
- Do you think more transparency and better design can make a change?
- What do you think of the HAC goals & deliverables?

# References


- Decker, T; Lippl, M; Frommeyer, B et al. (2021): Plastic Packaging: What are the possibilities for reducing waste when buying clothes? Fact sheet 1 of the BMBF research focus „Plastics in the Environment“, https://bmbf-plastik.de/sites/default/files/2021-04/FactSheetVerPlaPoS_en_01.pdf
- Duhoux, T. et al. (2021): Study on the technical, regulatory, economic and environmental effectiveness of textile fibres recycling. Final Report to the European Commission, Brussels, https://www.ecologic.eu/sites/default/files/publication/2022/50030-study-textile-recycling-web.pdf
- European Environment Agency (2023): EU exports of used textiles in Europe’s circular economy. Briefing no. 01/2023, https://www.eea.europa.eu/publications/eu-exports-of-used-textiles/eu-exports-of-used-textiles
- Heinrich Böll Foundation & Break Free From Plastic (2019): Plastic Atlas. Facts and Figures about the world of synthetic polymers, https://www.boell.de/en/2019/11/05/plasticatlas

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# Thanks! Any more Questions?


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