



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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**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



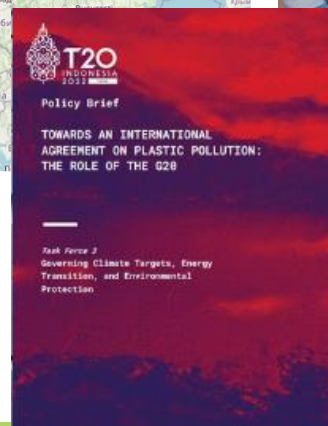
Key messages  
Short version



FONA



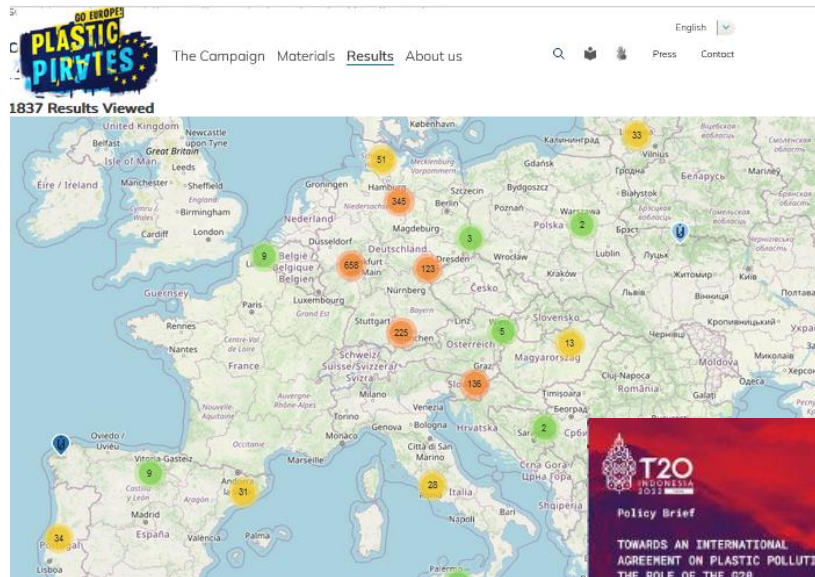
GLOBAL RULES IN A  
NEW GLOBAL TREATY:  
ASIA'S OPPORTUNITY TO END SINGLE-USE PLASTIC POLLUTION  
JULY 2022



Circular  
Economy and  
Sustainability



Springer





# Plastics in the environment – the challenge

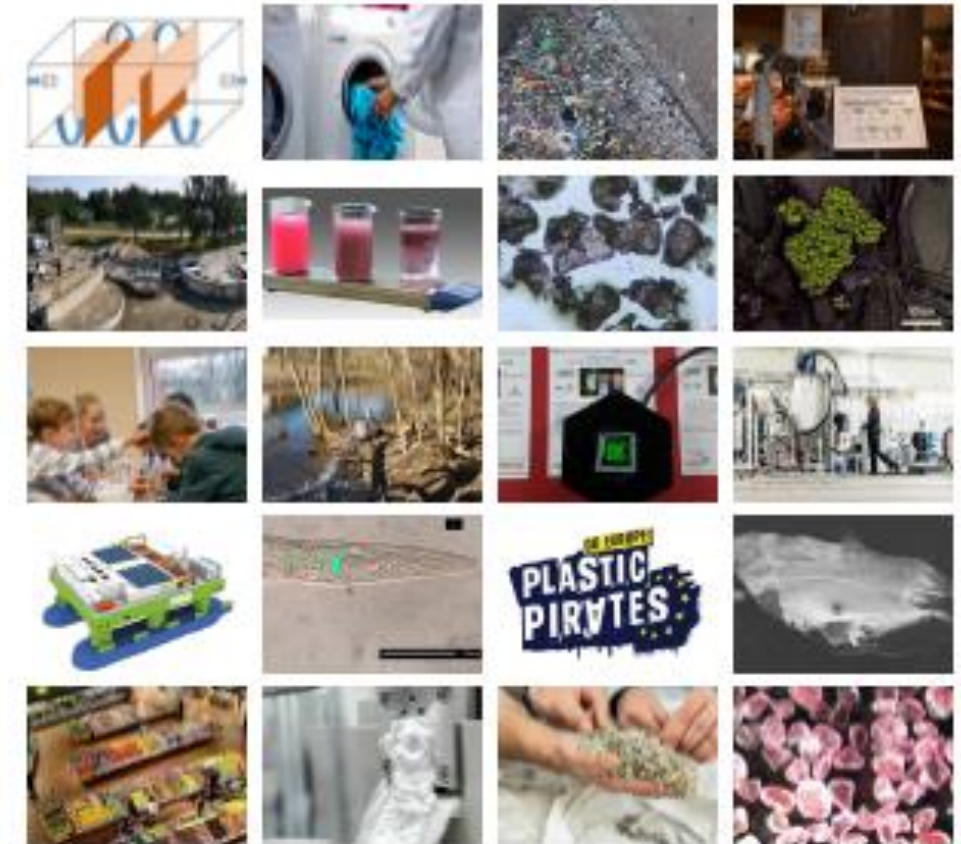
- Every year, 6 to 26 million tonnes of plastic litter end up in the oceans.
- Sources are to 80% land-based.
- Only 1% of the marine litter is found at the surface.



© Private

# 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



© Ecologic Institute



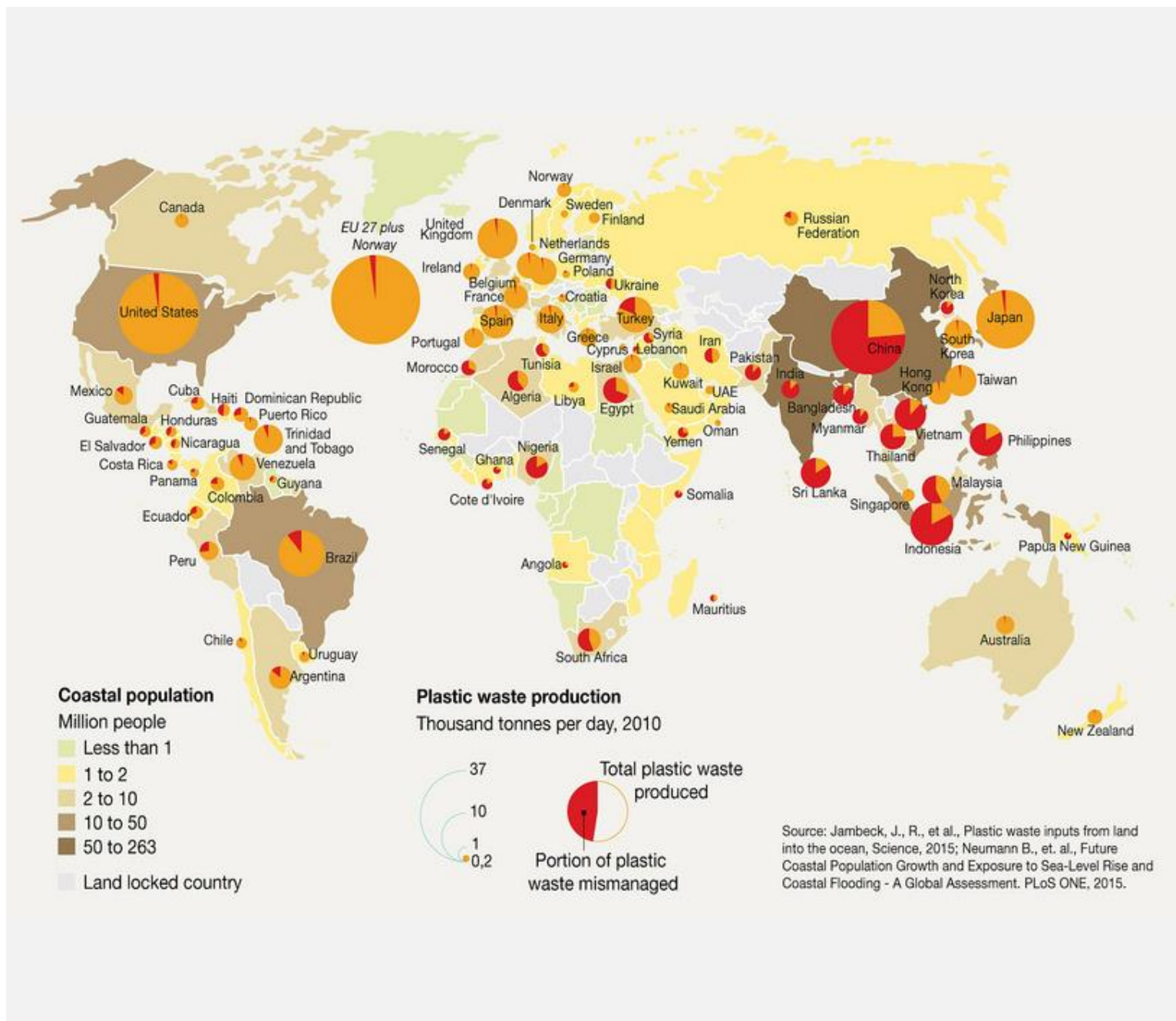
## ...while NGOs & science urge to take action

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



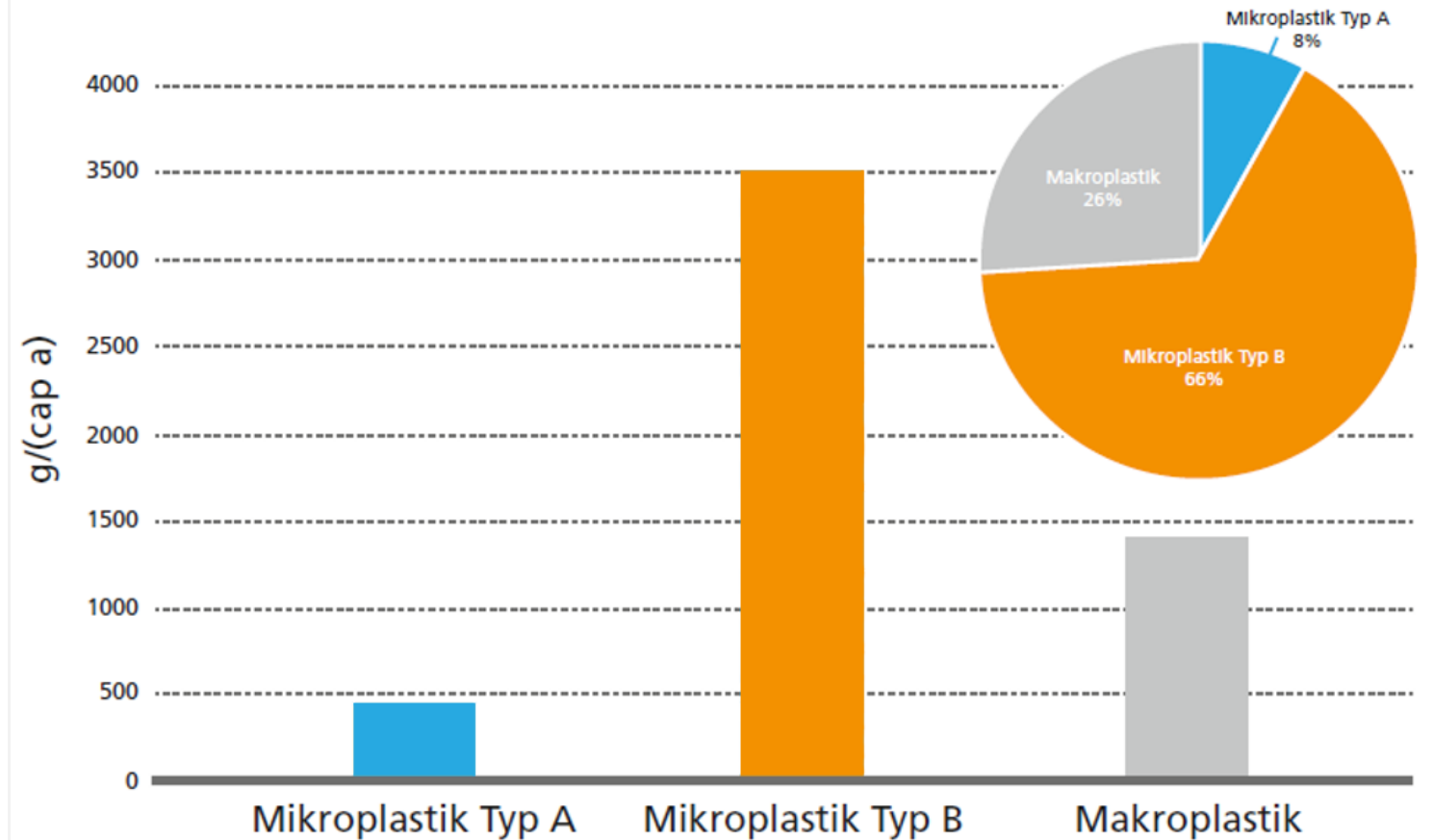
© Katriona McGlade

# Where does the plastic waste come from?



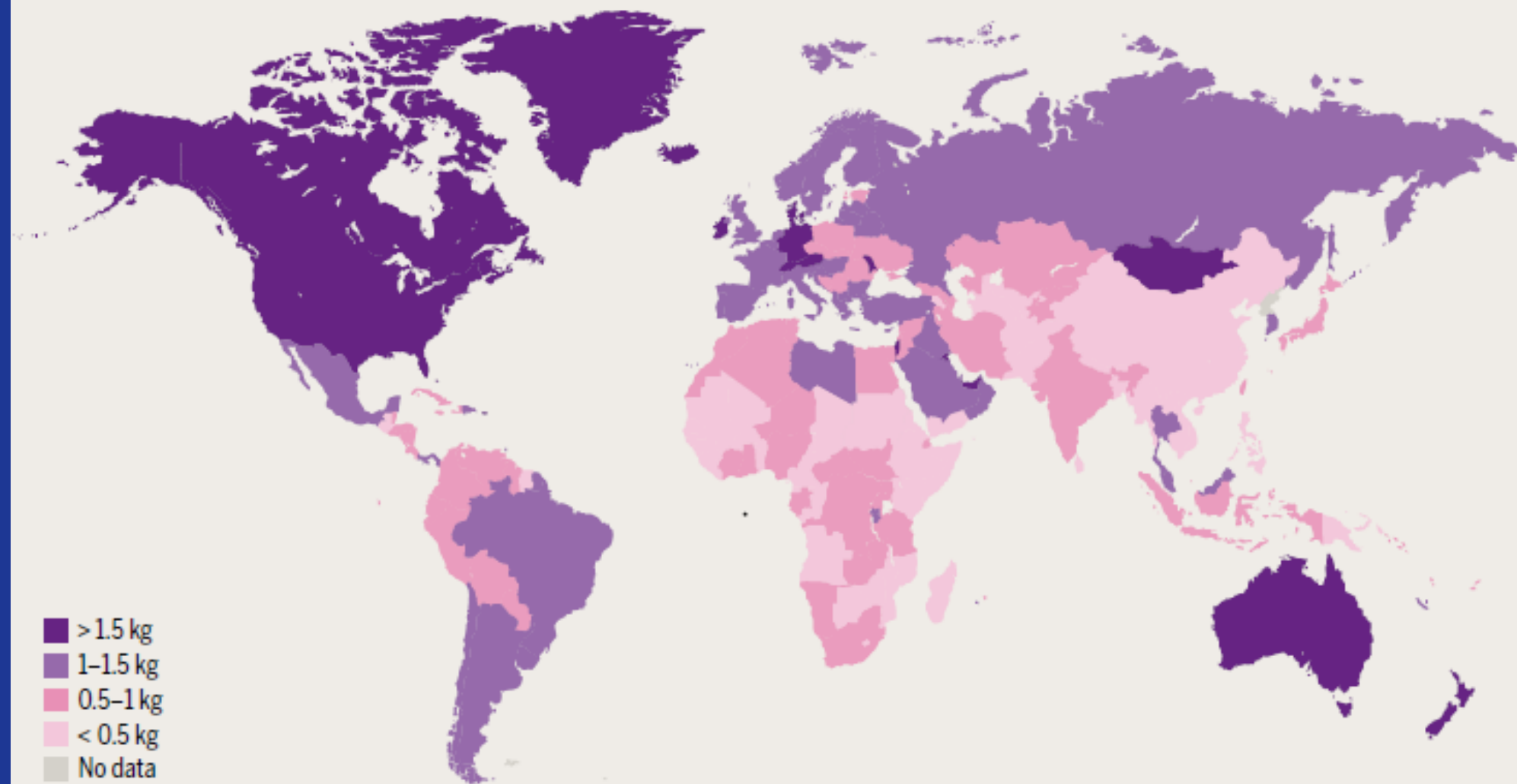


A large part of the problem is “invisible”



## AFFLUENCE AND EFFLUENCE

Waste generation per person per day, 2016





# “Global flows of junk”

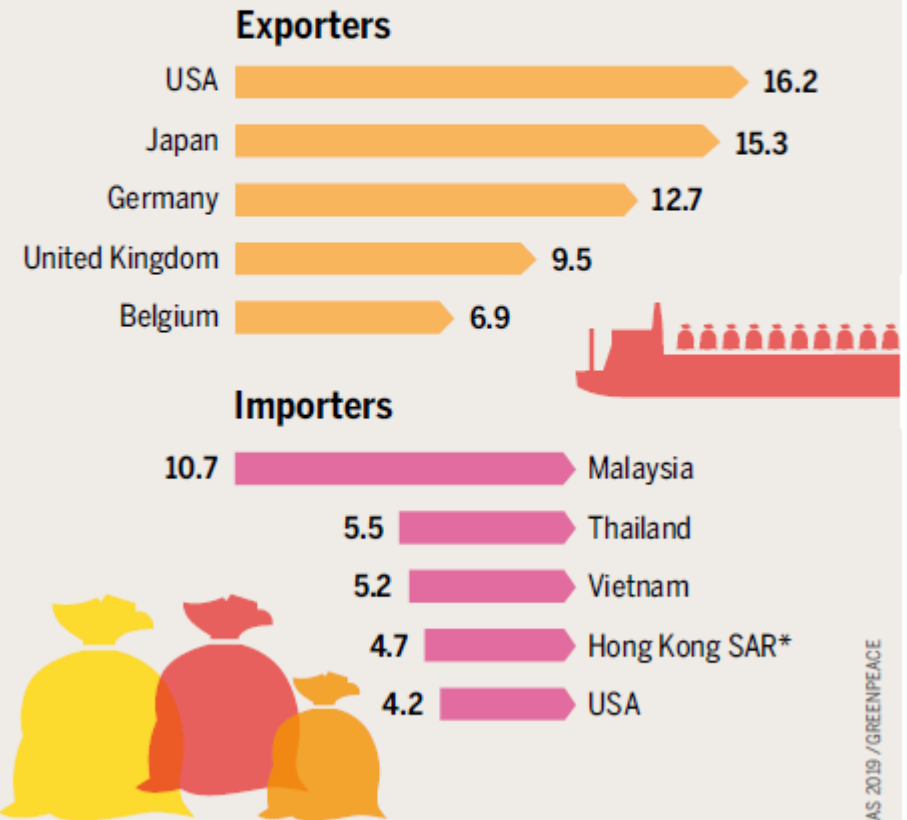
- ▶ Only high-value plastic materials (i.e. PET & HDPE) are recycled in the Global North
- ▶ Jan. 2018: import ban from China
- ▶ 2018: Huge increase in Malaysia and Thailand (more than double), while imports in China fell by > 90%

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.

© PLASTIC ATLAS 2021/ITC, INTERPOL, WEN

## GLOBAL FLOWS OF JUNK

Top 5 between January and November 2018, in percent



\*Figures for Hong Kong are high because it is a transshipment point for global waste.

© PLASTIC ATLAS 2019 / GREENPEACE

© Plastic Atlas, 2021, Asian edition

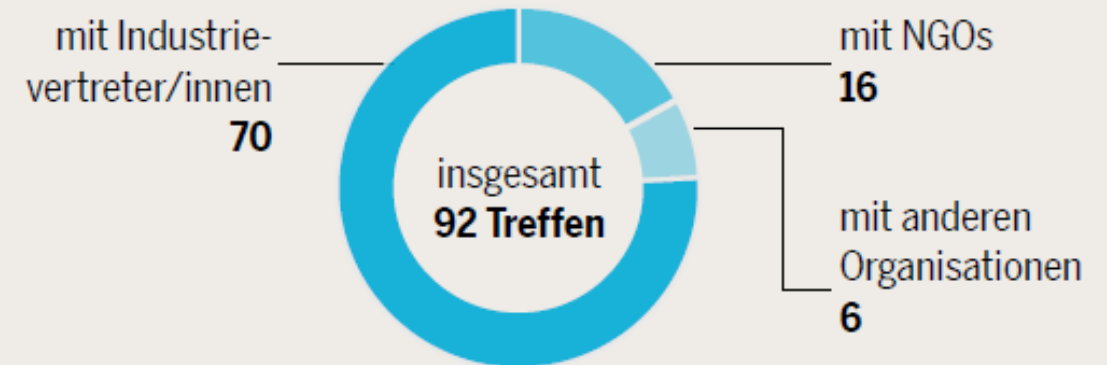
# The plastics lobby is strong

- ▶ 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

## ZU GAST AUF DEM PLASTIKPARKETT

Die Lobby-Aktivitäten der Kunststoff-Industrie im Vorfeld der Verabschiedung der EU-Kunststoffstrategie 2018

Treffen der Europäischen Kommission (KOM)



© PLASTIKATLAS 2019 / CE

© 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.).





(cc) Becca McHaffie on Unsplash



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# Plastics and Textiles.

## The waste problem and potential solutions

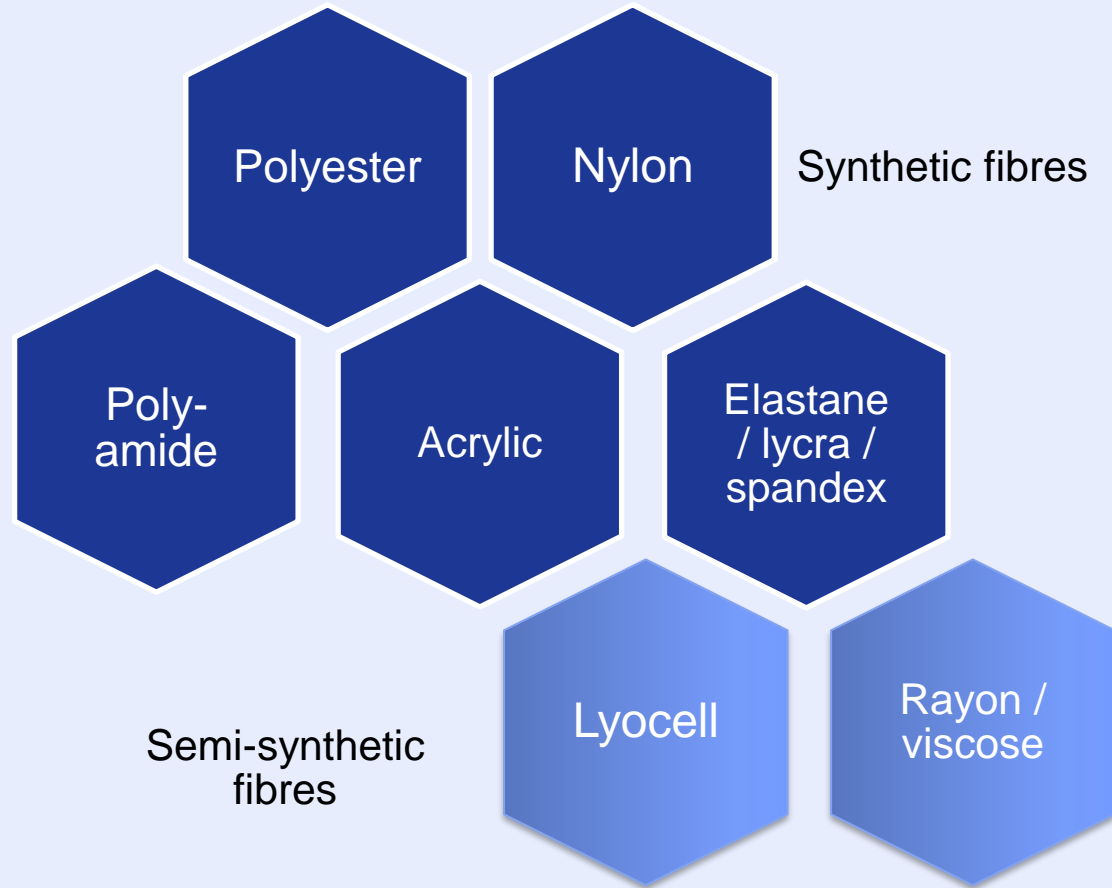
© Cristobal Olivares / Greenpeace



# Plastics in textiles



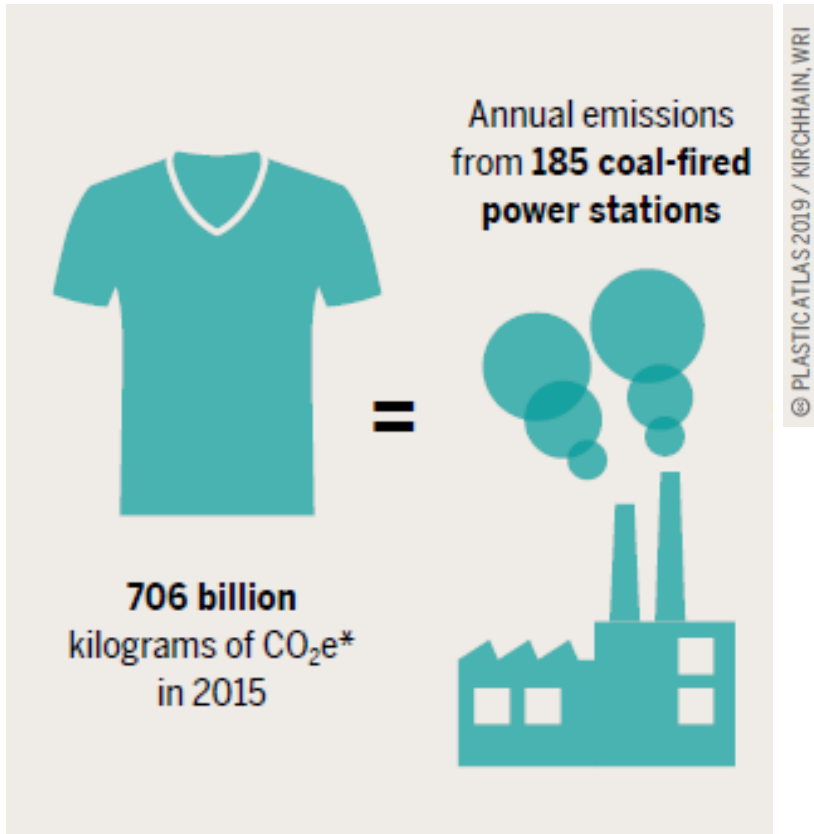
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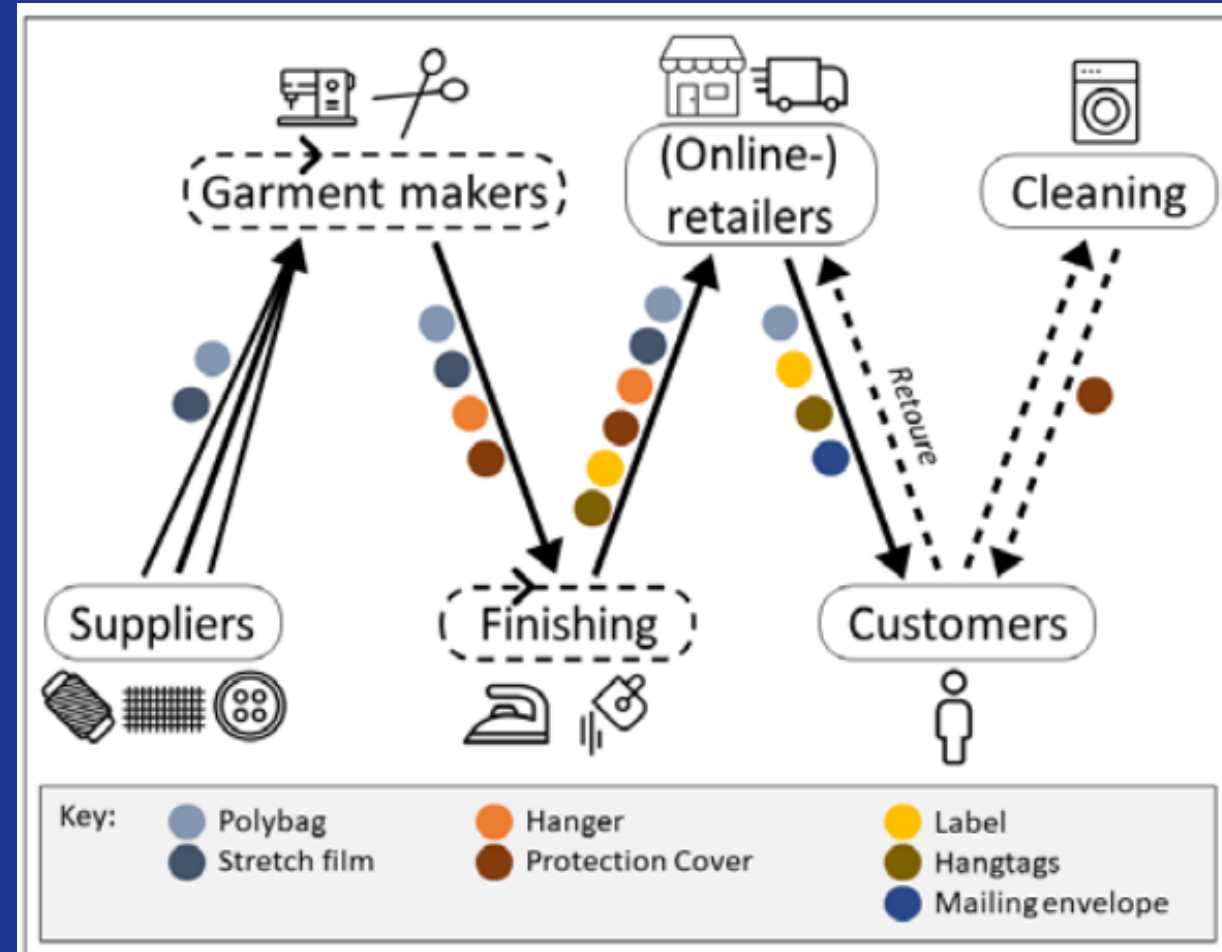
# Environmental impacts of synthetic fibres

Emissions of greenhouse gases caused by the production of polyester fibers



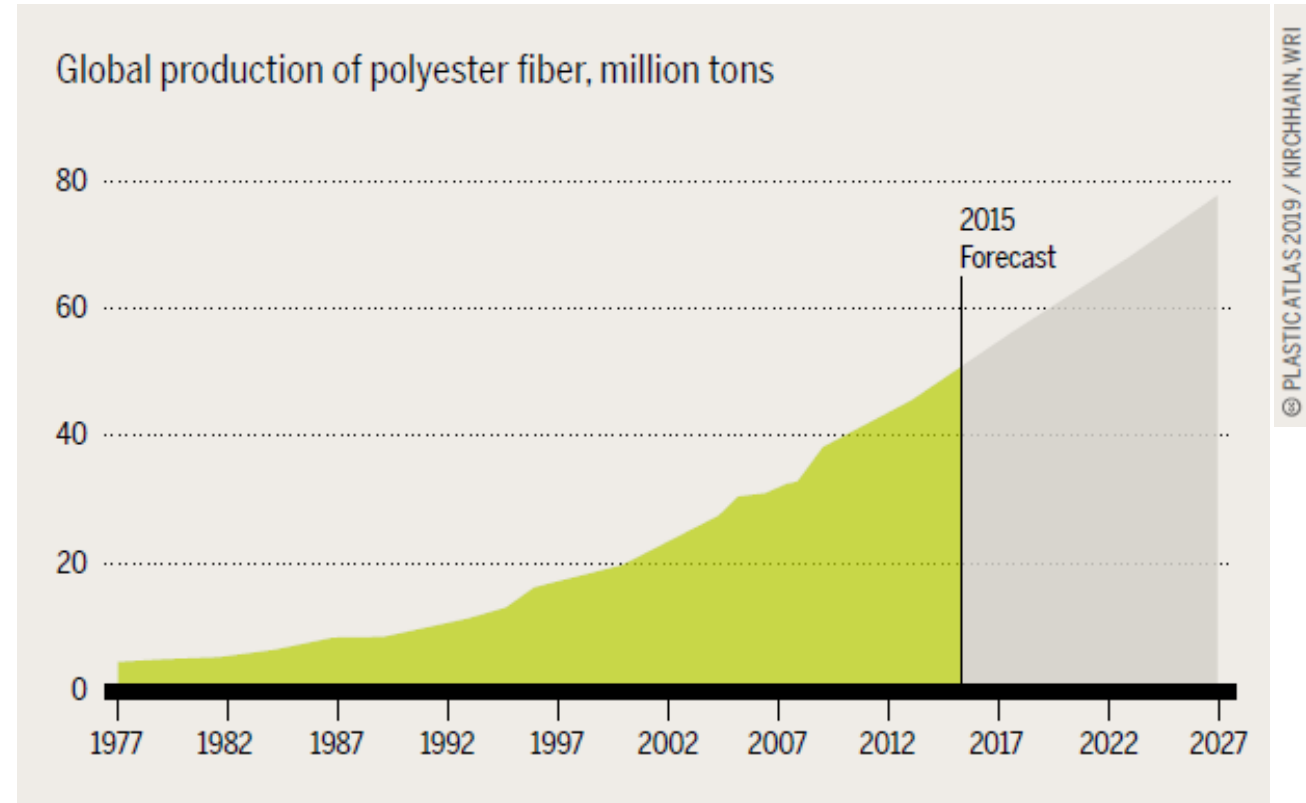
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# Plastic packaging along the textile supply chain



Source: © FATM 2019

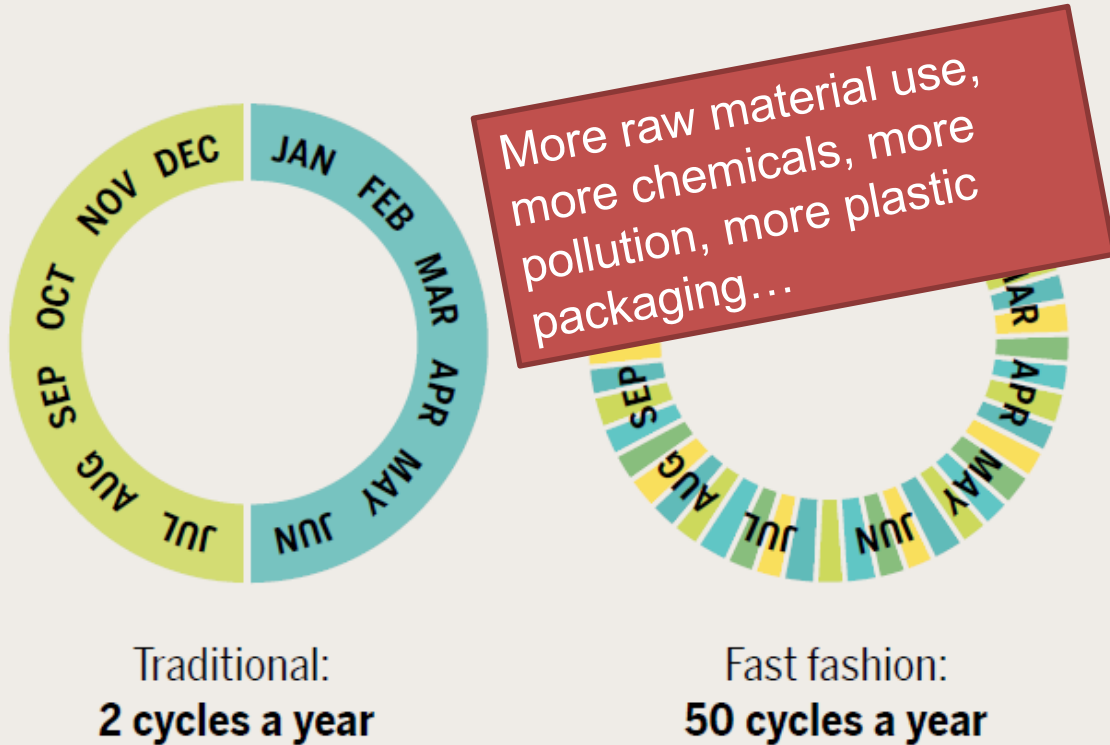
# Synthetic fibres on the rise





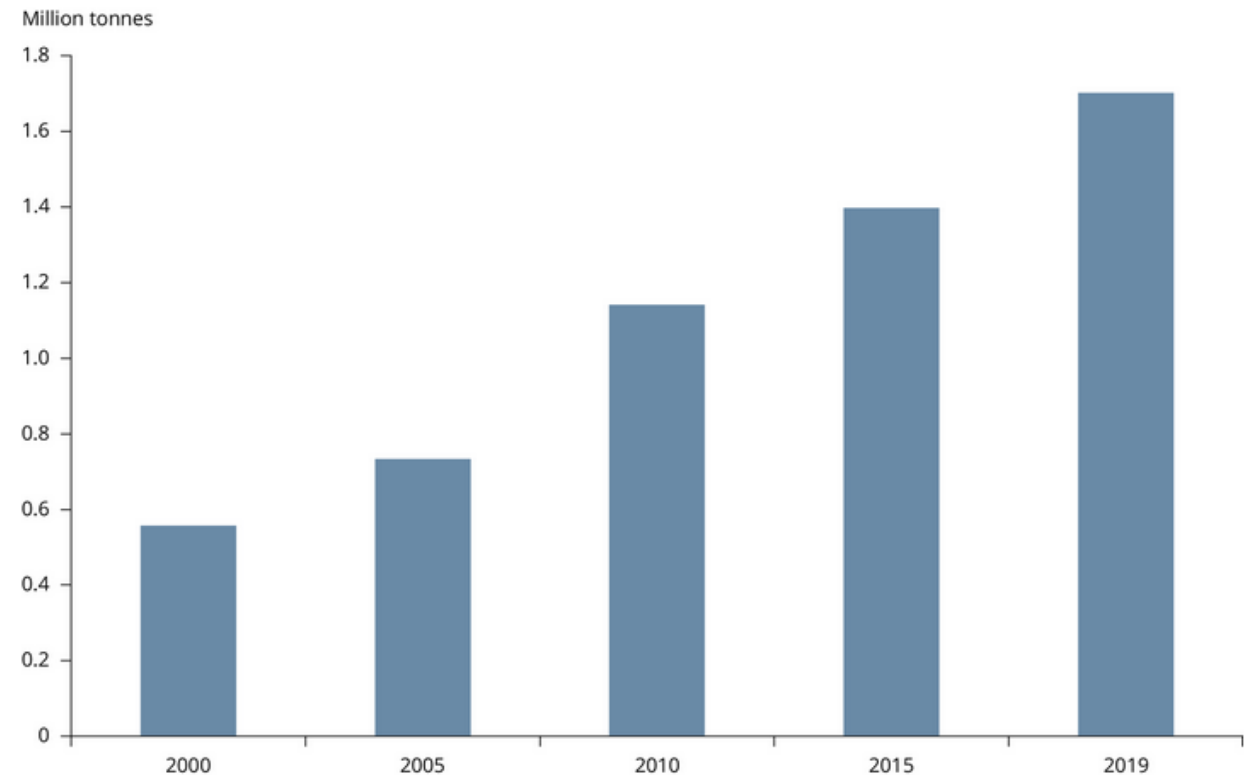
# Fast Fashion and the (plastic) waste problem

Production cycles in the traditional and fast fashion industries



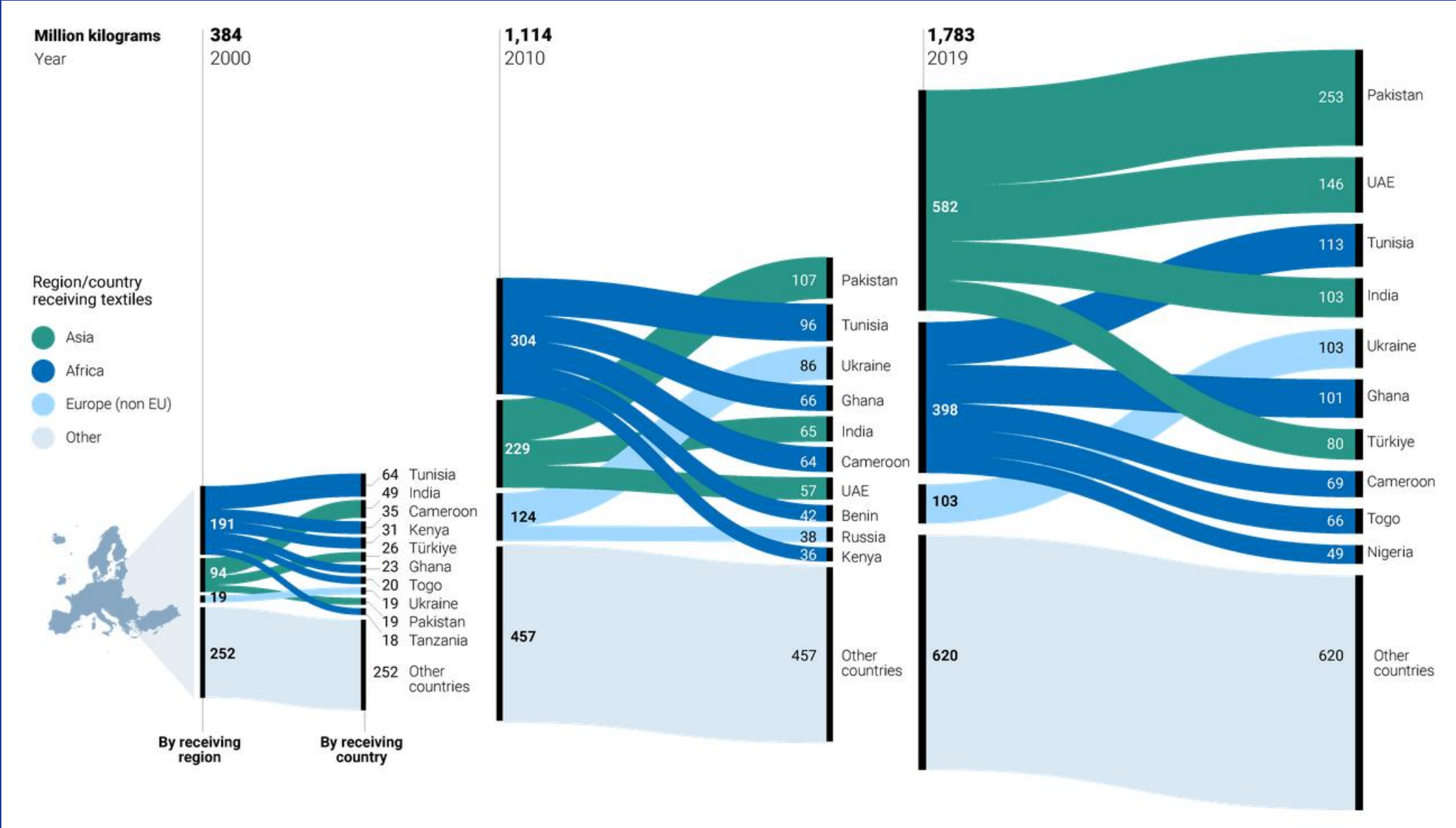
Plastic Atlas 2019 / Kirchchain / WRI

Figure 1. Exports of used textiles from the EU (EU-27 and the UK) to the rest of the world, 2000-2019, by weight (million tonnes)



European Environment Agency, February 2023

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





# The waste problem

Similar situation in  
Ghana

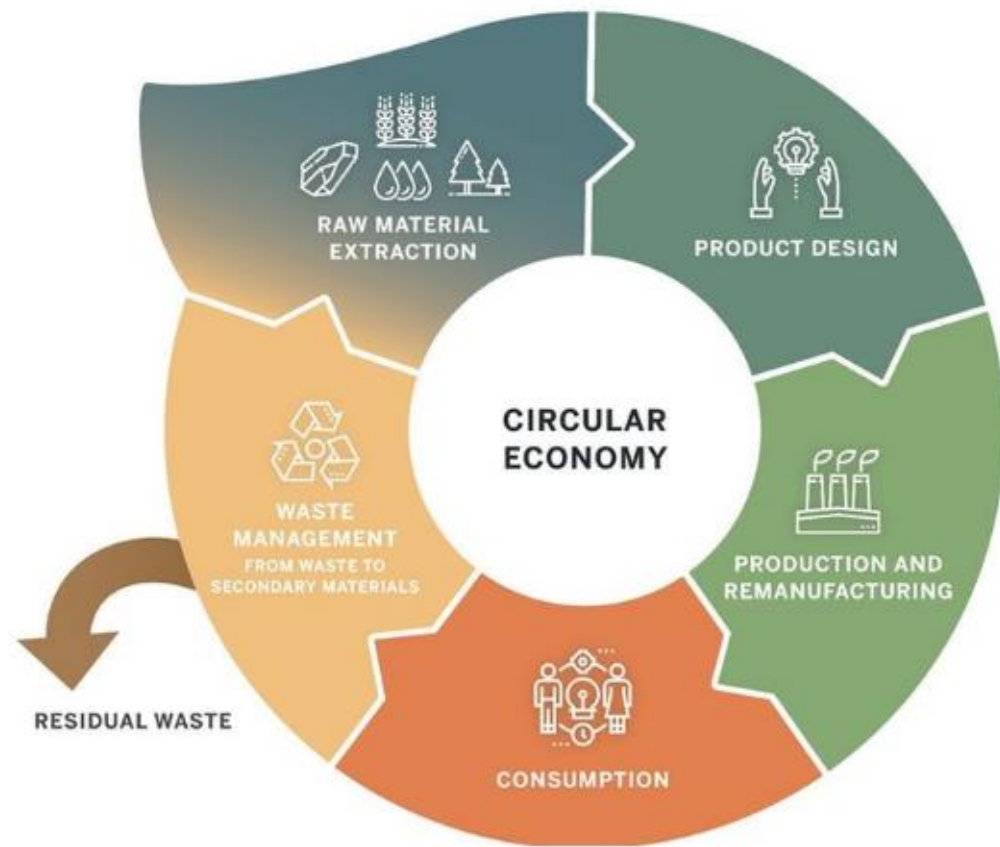
[https://www.youtube.com/watch?v=lchj0ac3V\\_Y&t=116s](https://www.youtube.com/watch?v=lchj0ac3V_Y&t=116s)



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

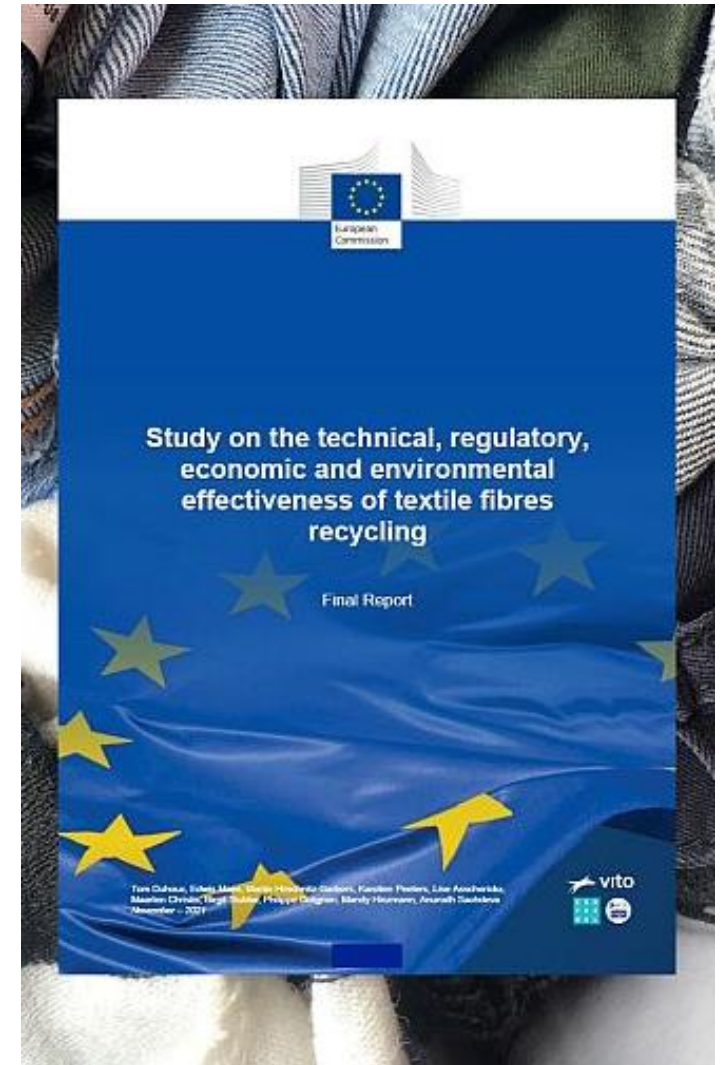
**Title:** Study on the Technical, Regulatory, Economic and Environmental Effectiveness of Textile Fibres Recycling

**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

Limited  
feedstock  
availabilities

Low quality

Lack of  
information

**Process:**  
sorting and recycling

Low  
recycling  
capacities

High costs

**Output:**  
recycled fibres

Lack of  
demand

Green-  
washing  
claims



# Lack of information hampers recycling

## What information do textile recyclers need?

Specific and comprehensive information on fibre composition that goes beyond the information given on current care labels

58

Chemicals used along the value chain (eg. dyes, finishes)

55

Use of recycled fibres

42

Incorporated accessories (e.g. zips, trims)

33

Whether a textile was designed for recyclability

36

Other

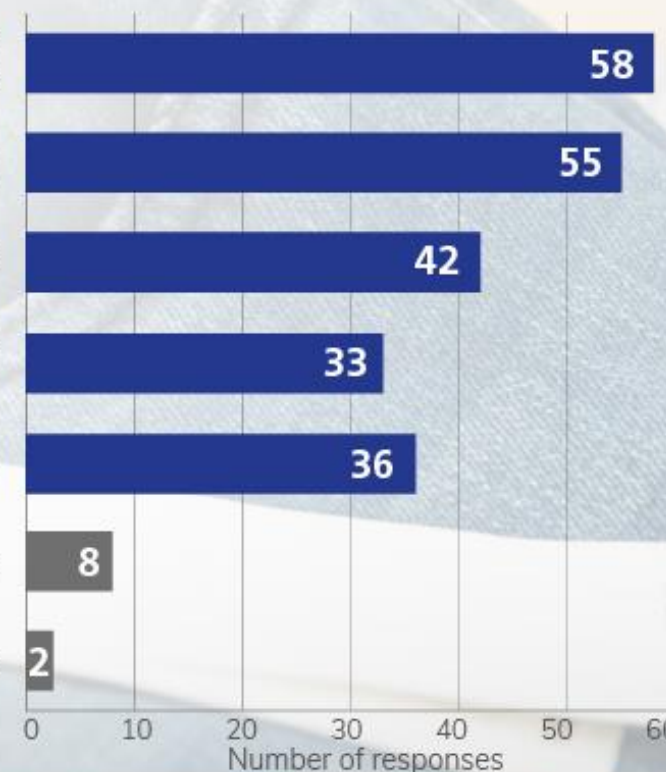
8

I don't know

2



Textile Recycling



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

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## Enhancing transparency

Are you in favour  
of introducing a  
**digital product  
passport** for  
textile products?



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

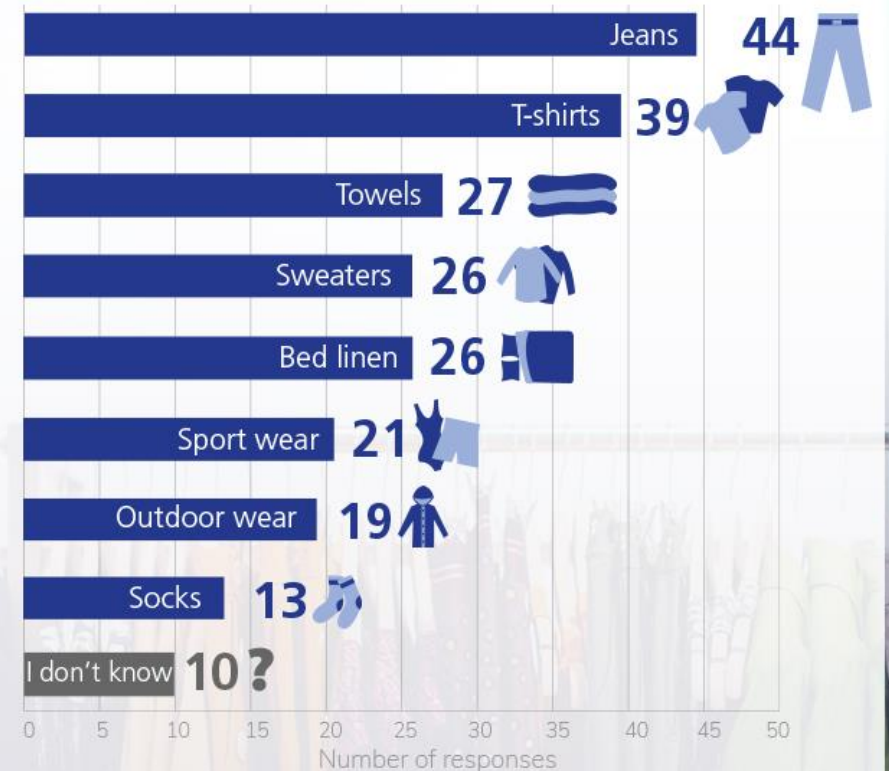
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# Design for circularity

- 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

For which textile products could **obligatory design requirements** be introduced first?

 Textile Recycling



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

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# 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

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- 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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