

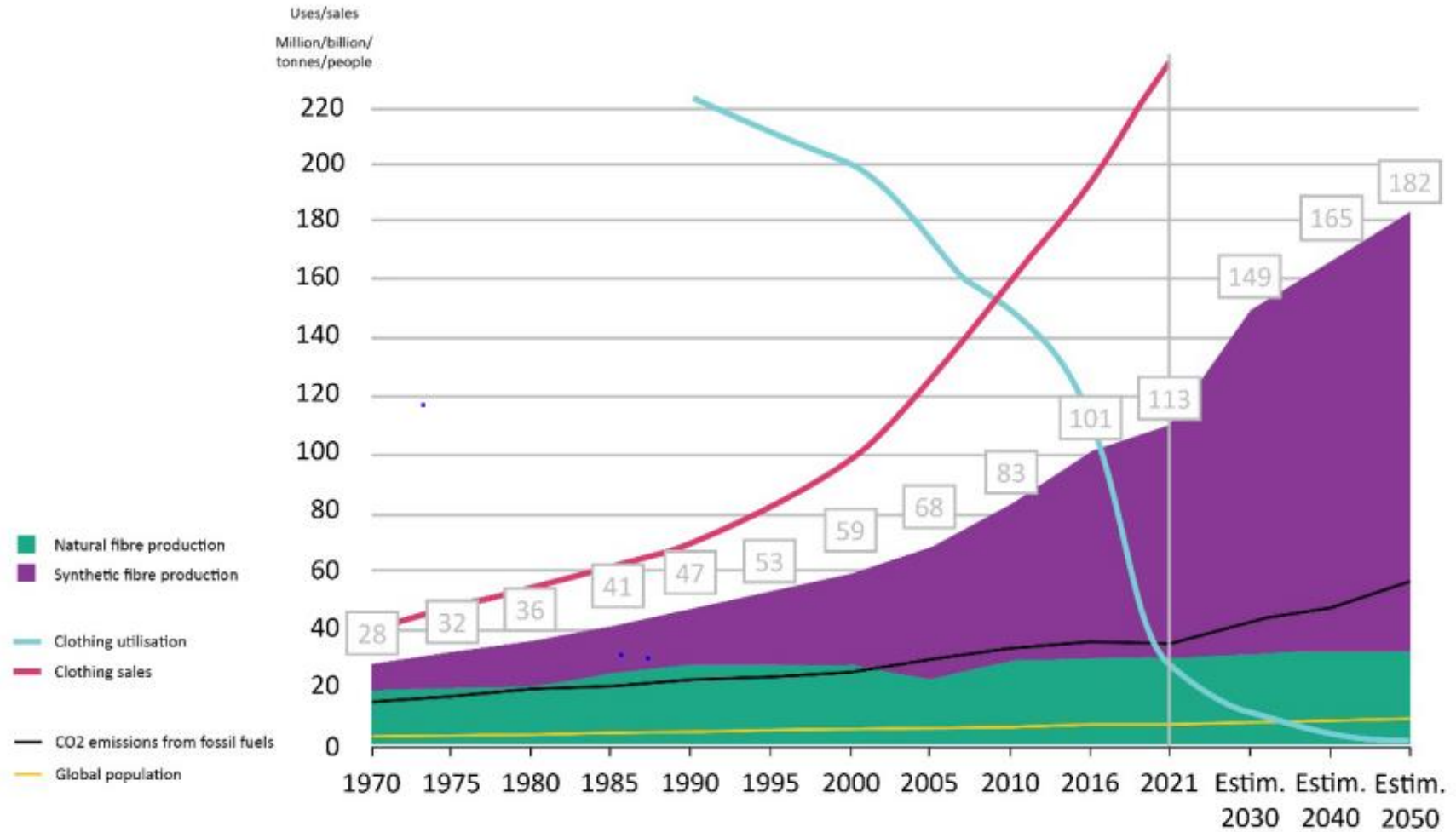
SALHUS 23.4.2025

# Understanding consumer behaviour to drive change

Professor Clothing and sustainability  
Ingun Grimstad Klepp

Consumer research Norway , SIFO

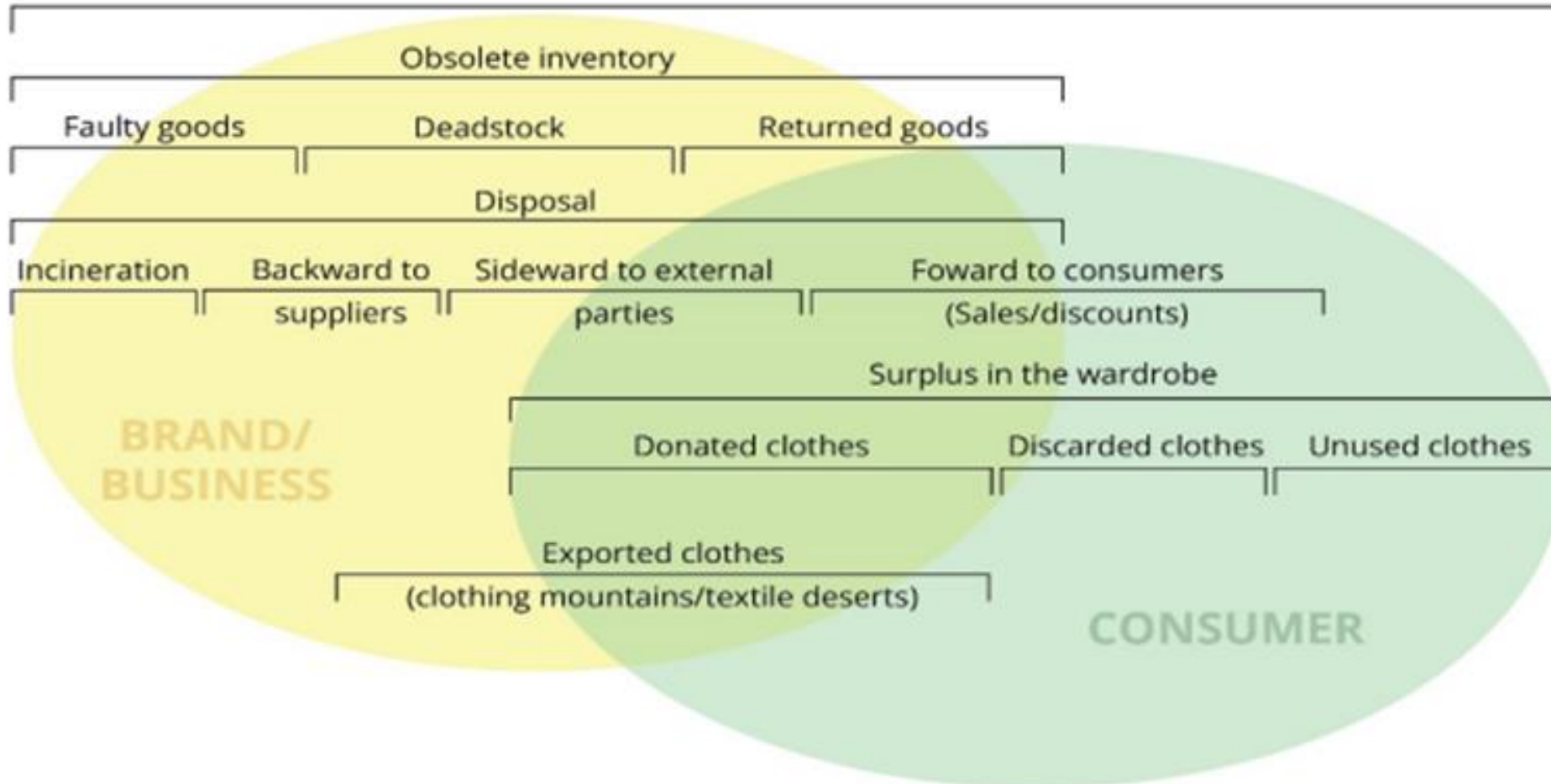




**Figure 2-3 Global fibre production compared to clothing utilisation, sales, CO2-emissions from fossil fuels, global population and estimated future production growth.**  
 (Sources: Ellen MacArthur Foundation, 2021; Ritchie et al., 2020; TE, 2017, 2018, 2019, 2020, 2021b, 2022; United Nations, 2022; World Bank, 2020)

# Overproduction of clothing

( or surplus of clothing = clothing which is unused or not worn out at the time of final disposal )

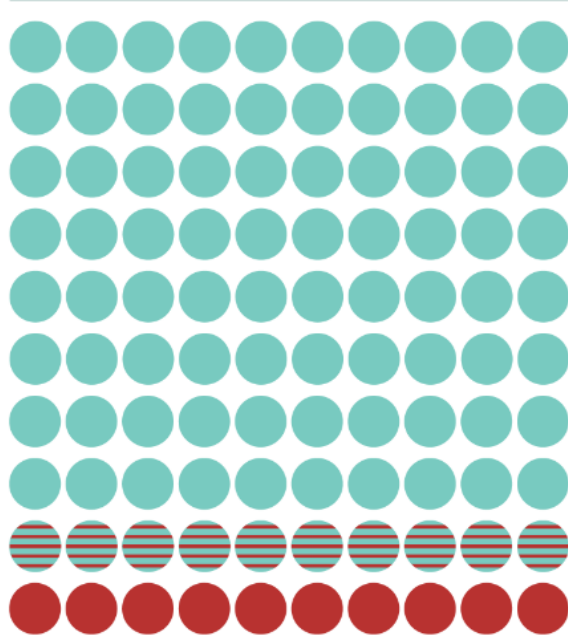


**THE PLASTIC ELEPHANT:**  
Overproduction and synthetic fibres in sustainable textile strategies

Figure 2. Share of unsold textiles according to available sources

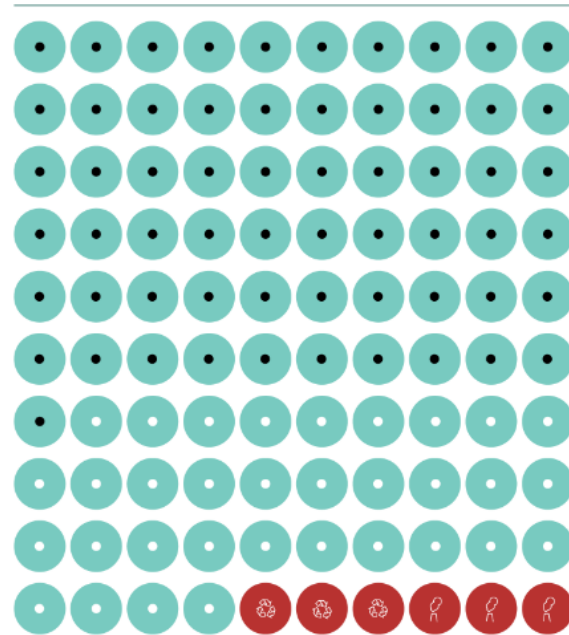
Berner (2021); Dowideit (2019)

● 80-90% ● 10-20%



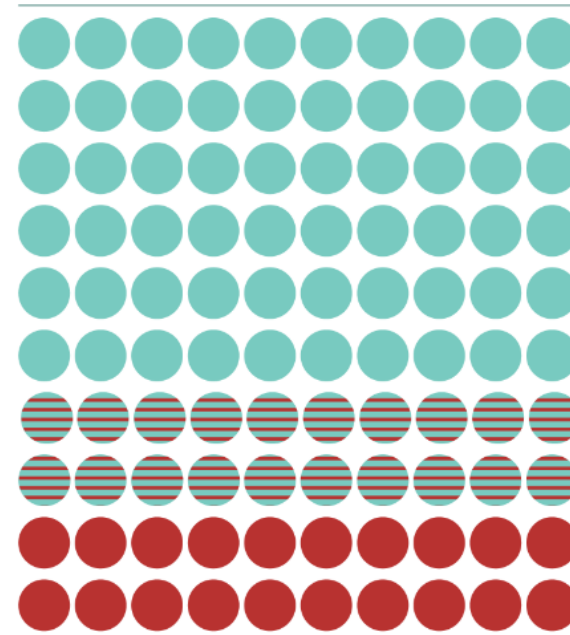
Wijnia (2016)

● 61% ● 33% ● 3% ● 2.7%



EURATEX (2023a)

● 60-80% ● 20-40%

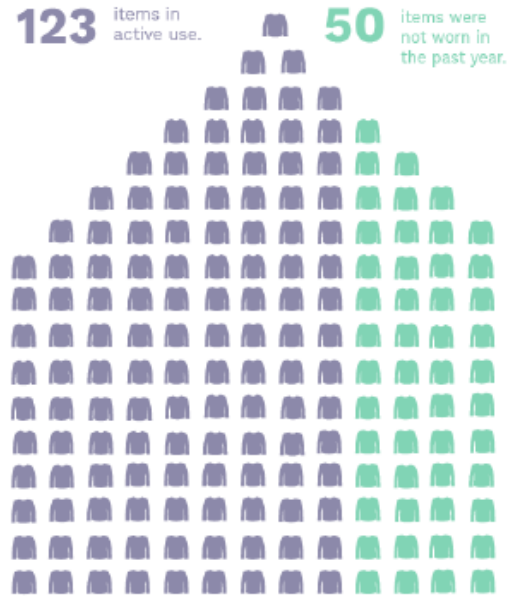


## THE DUTCH CLOTHING MOUNTAIN

**46** items  
bought annually  
per person.



**173** items  
in each personal  
wardrobe.



**123** items in  
active use.

**50** items were  
not worn in  
the past year.

**7** items in the wardrobe  
are second-hand.

**40** items are  
annually disposed  
of per person.

**24** items are disposed with non-textile  
materials and therefore incinerated.

**16** items are separately collected:

**9** items are rewearable and suitable  
for the international second-hand  
market.

**5** items are not suitable for  
reuse. These can be recycled.

**2** items are potentially  
rewearable according to the  
consumer, but do not meet  
the international  
second-hand standards.



**3** items per year are wasted  
before arriving to the consumer.

**Growth in consumption and accumulation of unworn garments (Maldini et al., 2016)**

**Norwegian Consumer Agency (NCA) issued a warning that Higg MSI, could not be used to support sustainability claims in marketing towards consumer**

Green claims must be easy to grasp and understandable for the consumer. Claiming that recycles polyester is more sustainable, is neither easy to grasp nor understandable for anyone.

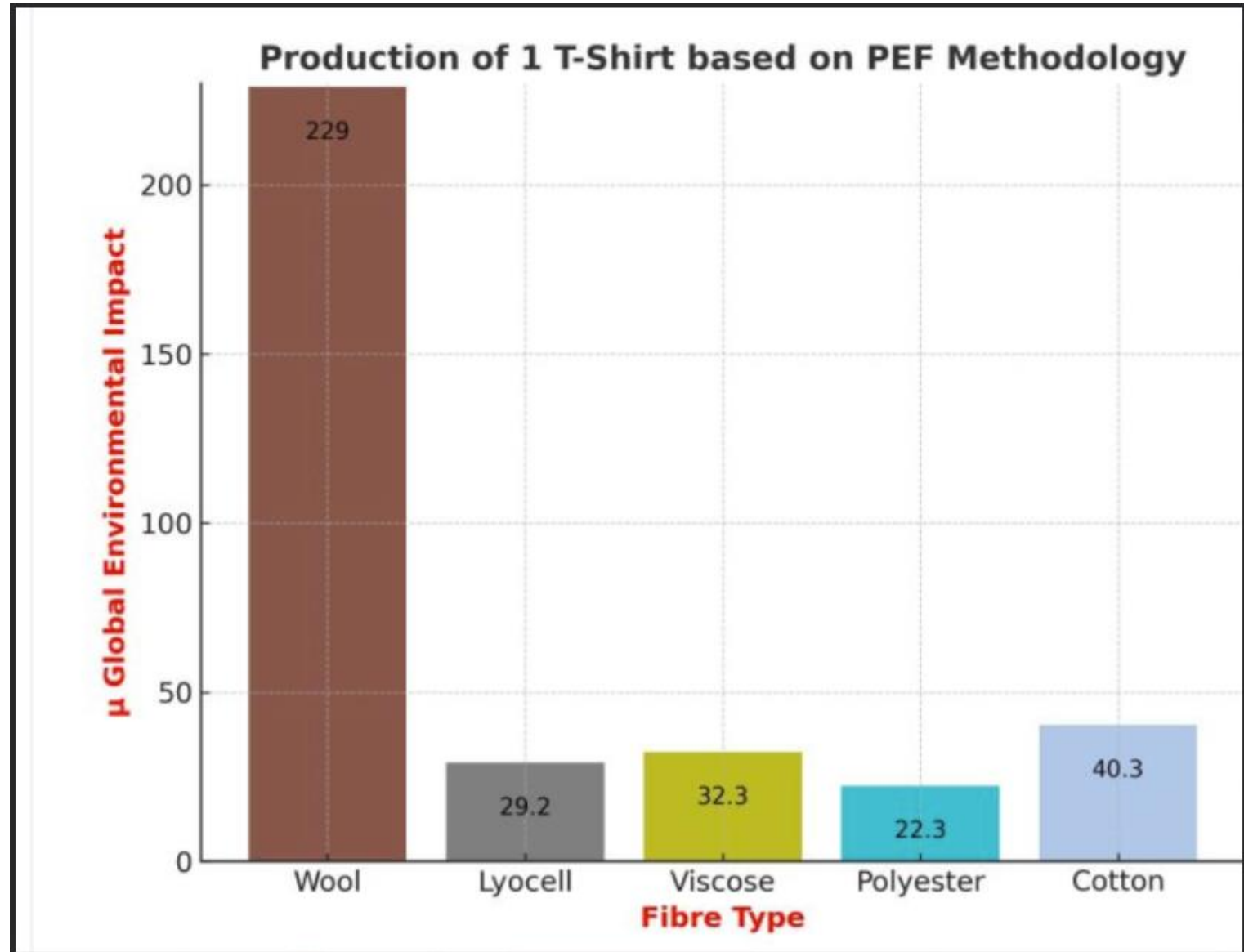
Andrea Schill  
OECD

Tonje Drev  
Norwegian Consumer Agency

## **Glimpact:** First actual tool that uses PEF data to calculate impact of concrete apparel

The European Commission sets the evaluation benchmarks for each category of products targeted according to this unique methodological framework, and not the EU member states themselves, **no other method of evaluating the environmental footprint of products and therefore Environmental labelling, defined at country level, will now have no legal basis.**

The PEF method is therefore now the single reference framework for the application of the ESPR according to sectoral benchmarks that will be defined by the EC.





## The global apparel industry is a significant yet overlooked source of plastic leakage

[Anna Kounina](#) , [Jesse Daystar](#), [Sophie Chalumeau](#), [Jon Devine](#), [Roland Geyer](#), [Steven T. Pires](#), [Shreya Uday Sonar](#), [Richard A. Venditti](#) & [Julien Boucher](#)

[Nature Communications](#) **15**, Article number: 5022 (2024) | [Cite this article](#)

17k Accesses | 115 Altmetric | [Metrics](#)

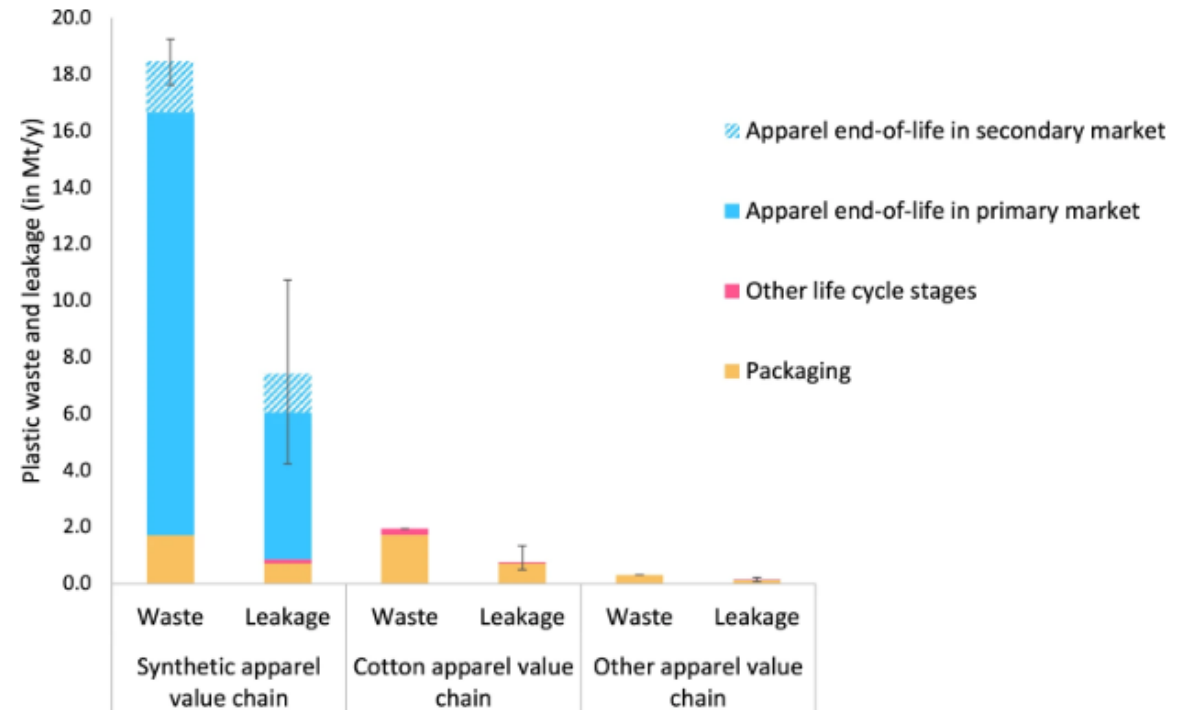
## SECOND-HAND IS <sup>currently</sup> BAD FOR GLOBAL SUSTAINABILITY

**Presenting a five-step strategy**  
 From a static problem perspective – with a focus on less bad solutions in unsustainable systems, to a dynamic solution perspective – with a focus on global sustainability



**Fig. 1: Overview of apparel macroplastic waste and macro- and microplastic leakage.**

From: [The global apparel industry is a significant yet overlooked source of plastic leakage](#)







## Does large-scale textile recycling in Europe reduce climate impact?

A consequential life cycle assessment

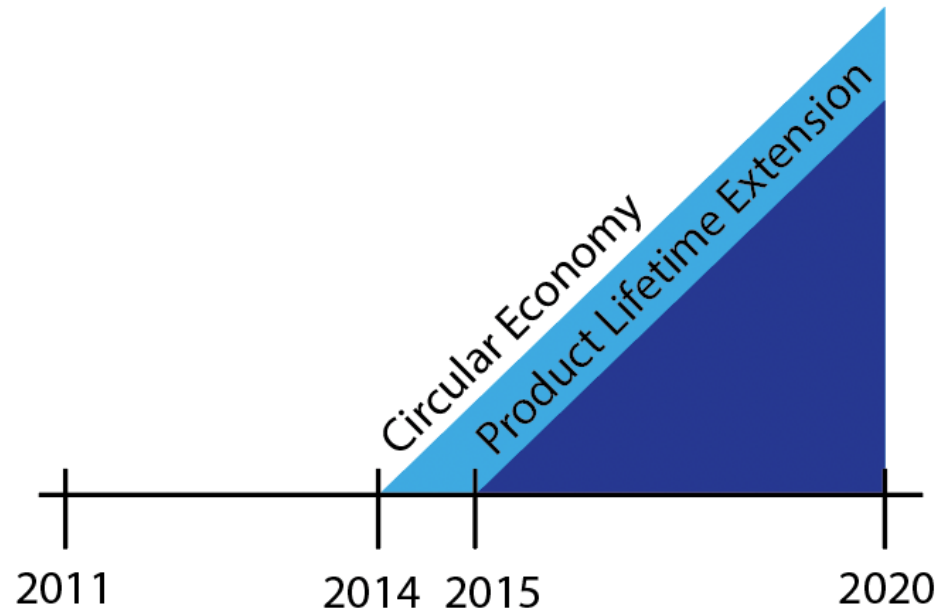
# 1,3% Reduction...

## Avfallshierarkiet/Avfallspyramiden

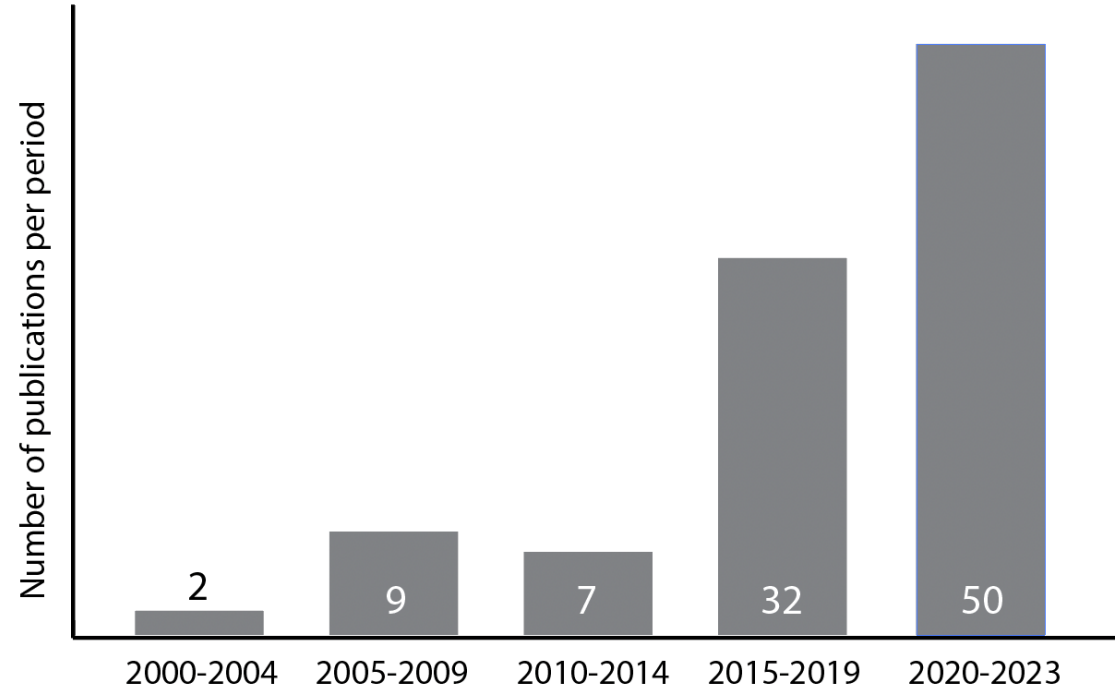


# Durability discourse (in policy and academic literature)

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Heidenstrøm, et al., 2021. Product lifetime in European and Norwegian policies. Oslo.

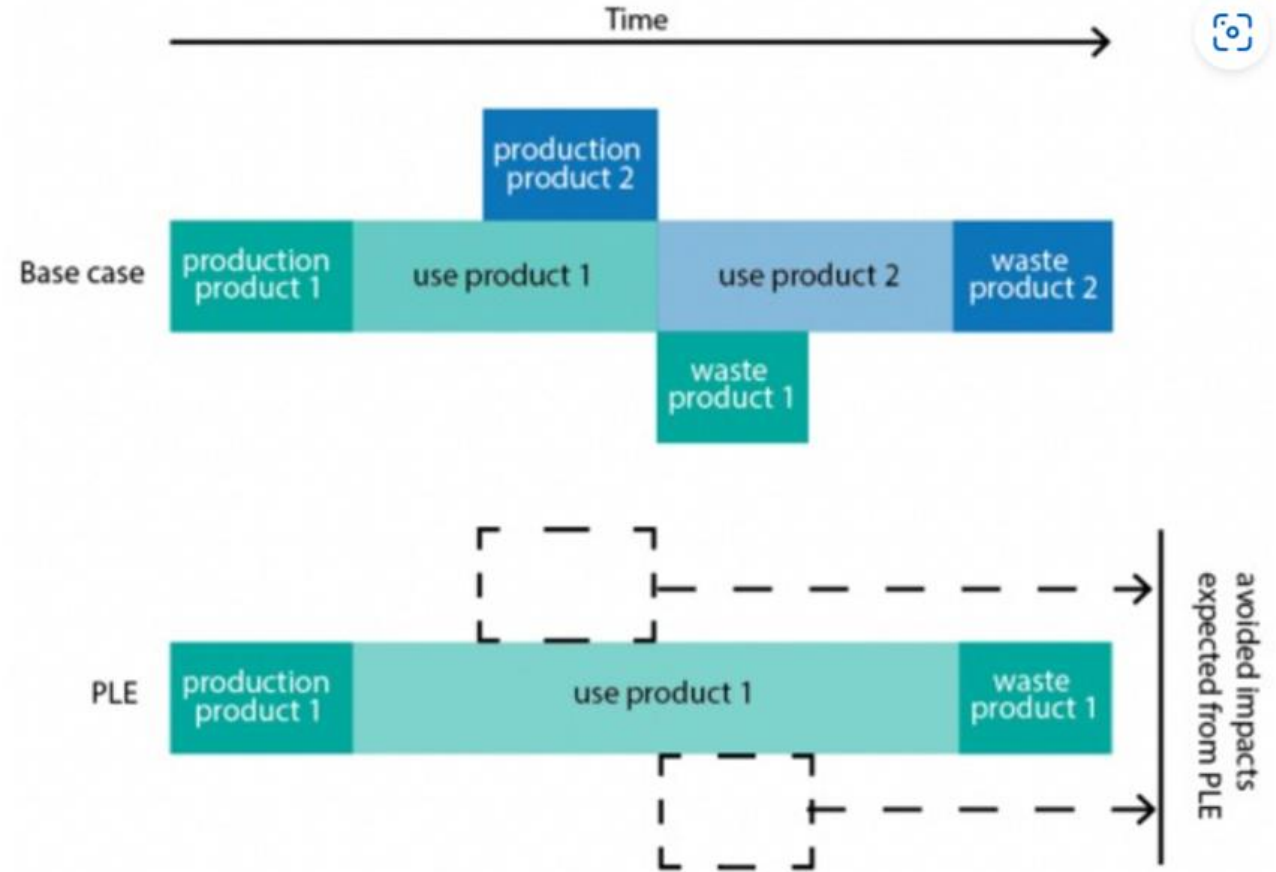


Maldini, Klepp and Laitala, forthcoming. The environmental impact of product lifetime extension: a literature review and research agenda.

Review article

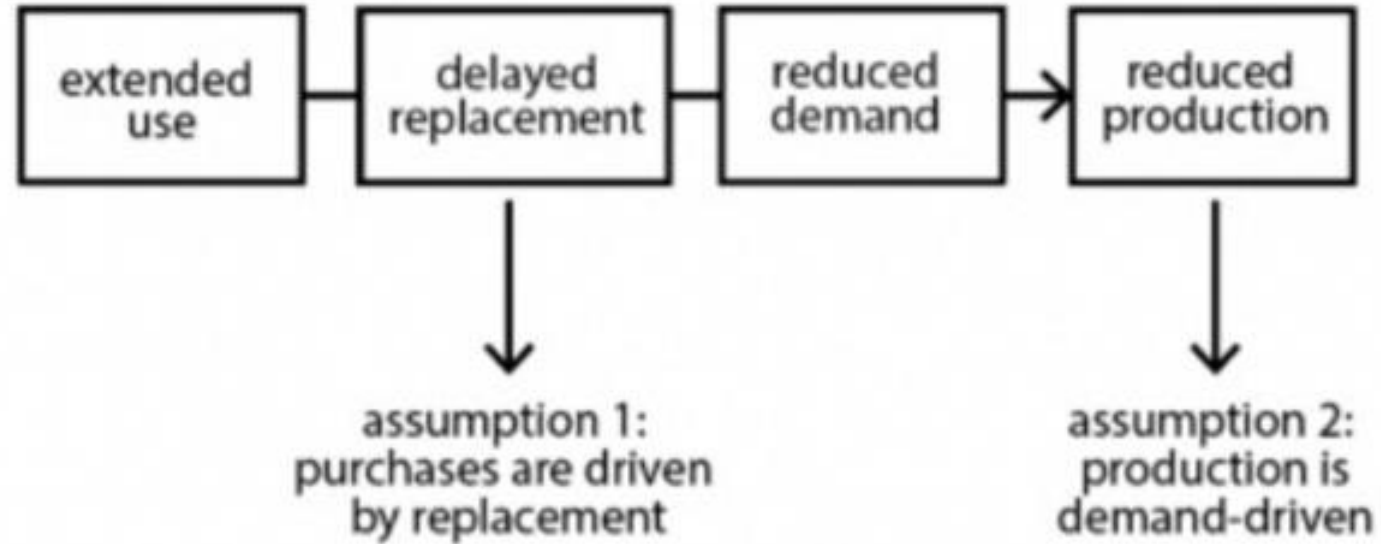
## The environmental impact of product lifetime extension: a literature review and research agenda

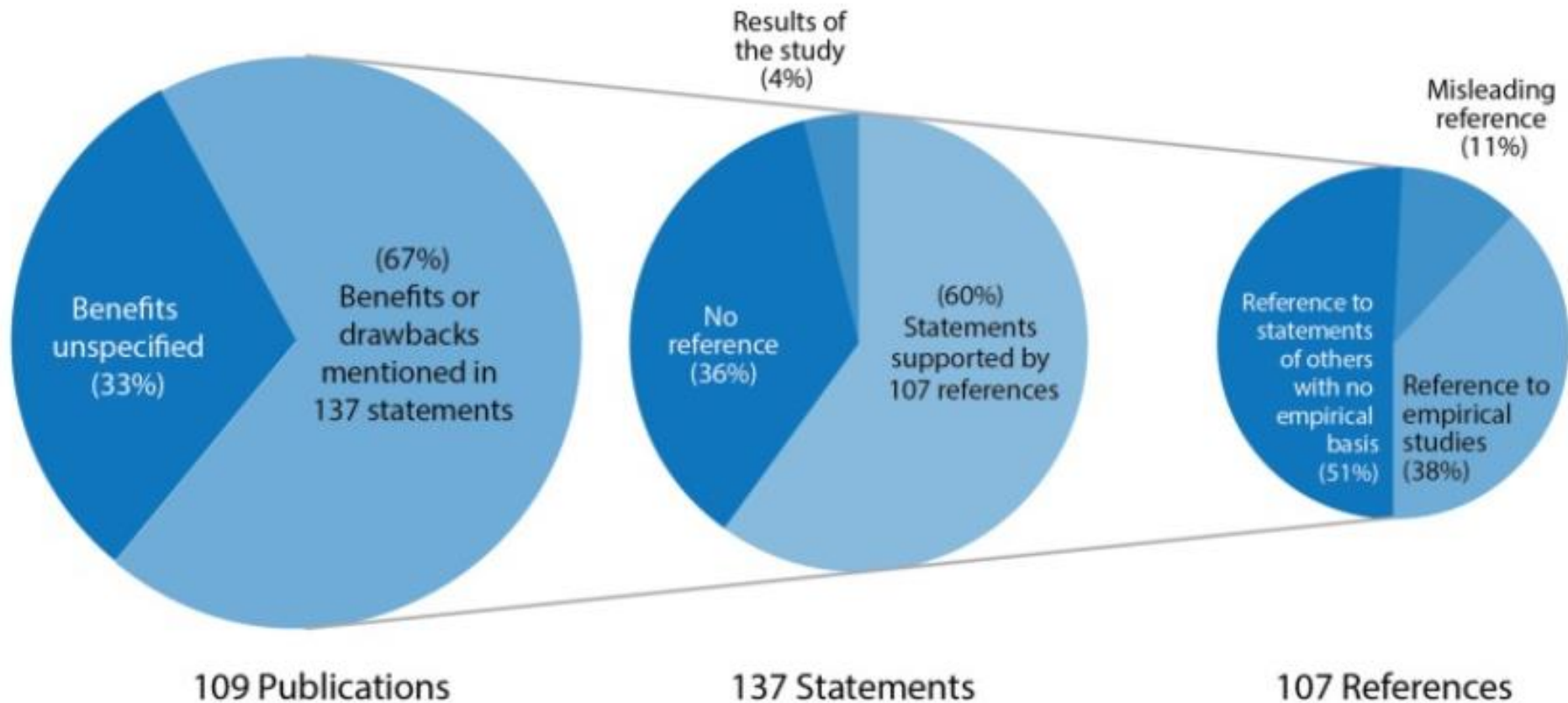
Irene Maldini  , Ingun Grimstad Klepp , Kirsi Laitala 



Review article

# The environmental impact of product lifetime extension: a literature review and research agenda

Irene Maldini  , Ingun Grimstad Klepp  , Kirsi Laitala  








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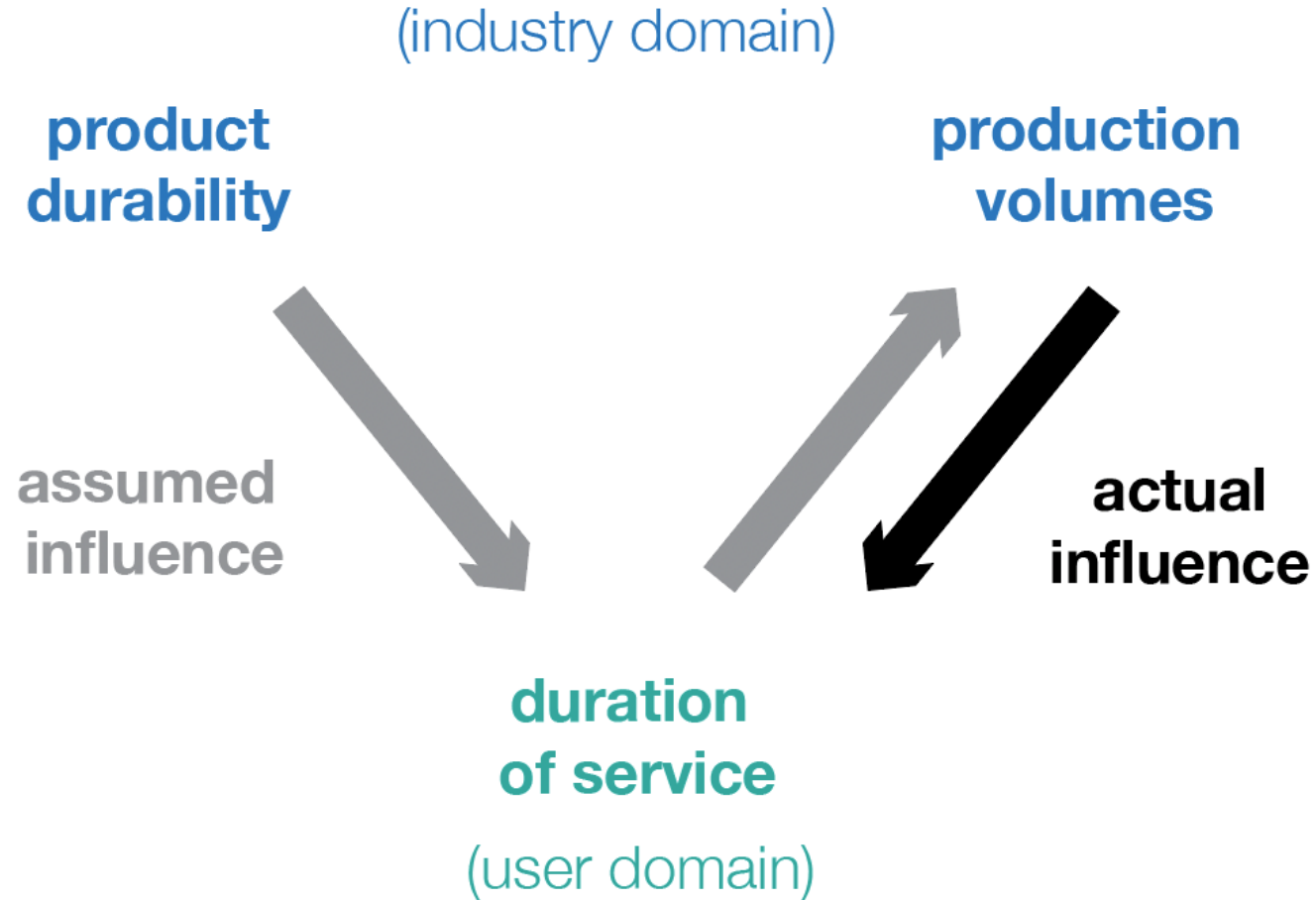
Review article

# The environmental impact of product lifetime extension: a literature review and research agenda

Irene Maldini  , Ingun Grimstad Klepp  , Kirsi Laitala  

# Durability discourse

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# Durability discourse

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- **Assumptions:**

- acquisition is driven by replacement
- production volumes decisions are demand-driven

- **We argue that:**

- replacement is a minor driver of acquisition, at least in clothing
- production volumes decisions are taken with little attention to demand and mainly driven by ambitions of economic growth

# Reducing the quantity of products made

~~“Extending the life of textile products is the most effective way of significantly reducing their impact on the climate and the environment”~~

**EU Strategy for Sustainable and Circular Textiles, March 2022**



# Fibershed DACH

How a dozen dedicated women in Germany, Austria, and Switzerland have started to promote textile production from local fibres.



 **lidewij edelkoort** • 2nd  
2w • 🌐 [+ Follow](#)

Yesterday I participated in the Wool March protest walk (or should I say fast walk?) with sheep wearing felted & embroidered messages to draw attention to wool waste in the Netherlands. A Wool March was proposed & designed by the great Cynthia Hathaway with shepherds from the city of Tilburg. The march started at the famous Textielmuseum & finished in beautiful meadows where the flock could rest & feed. A profound experience with many like-minded friends & colleagues. We hope other countries & cities will follow this lead. European wool needs to become a homegrown fiber again. 🙏 🐏

—Lidewij

[#FarmToFabricToFashion](#)  
[@polimodafirenze](#)



# Fibershed Ireland: Liadain Aiken Knitwear x Moy Hill Farm: A case study in the future of local Irish textiles

Written by Malú Colorín of Fibershed Ireland



**ENJOY MORE AFFILIATE STORIES IN OUR THREADING RESILIENCE ZINE**



THREADING RESILIENCE GROWING REGIONAL FIBER SYSTEMS WORLDWIDE

Fibershed Affiliate Zine • Vol 1 • 08.2022 

## Fibershed Finland



Flax processing and spinning the traditional way

Written by Leena Pesu

It was in the middle of a rare heat wave in our northern country of Finland that eight women gathered in the vicinity of a 100 year old flour mill with the aspiration to learn how to process flax into linen yarn using traditional methods. This was the first fiber processing course organized by Fibershed.



Finland, with other courses in plans as we get our activities properly kicked off.

Some of us had grown our own flax, while others used materials provided by the organizers. One participant had found a treasure in her barn: flax harvested and retted by her grandmother nearly a century ago! As the saying goes: "wool turns into soil, but flax turns into gold", hence flax had not suffered from the long storage and was still good for processing.

Flax was cultivated in each and every farm in Finland in the old days, and there is an abundance of related stories and traditions which our teacher shared with us during

mented, for instance, before she could properly spin linen! Lucky for us, some of these traditions are forgotten now, but there are still people that can teach us the skills, like our wonderful teacher Kirsi Kostamo. Also traditional tools are still to be found in the attics for processing.

During two days we learned to break, scutch, hackle and spin flax into linen. Even with no earlier spinning experience, each and every one of us managed to produce at least a little bit of yarn, even if it was coarse in the beginning. The experience increased the appreciation of the earlier generations that had to do this to produce garments and other textiles for their households, and sparked an interest in the noble fiber. Organizing a course like this is also a good tool for communicating about our fibershed.



To learn more about Fibershed Finland, visit their website [fibershedfinland.fi](#) and follow them on Instagram [@fibershed\\_finland](#)



**1** Kjøper ull direkte fra bonde

**2** Sorteres i naturfarger og vaskes hos Tingvoll Ull

**3** Ulla spinnes hos Selbu Spinneri

**4** Strikkingen skjer hos oss

**5** Dette er reine naturprodukt som går tilbake til naturen



OSLOMET

<https://clothingresearch.oslomet.no>

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