

Sustainable Fashion & Apparel

101

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THE FASHION INDUSTRY'S EFFECT ON THE PLANET IS MASSIVE

It's difficult to quantify, but experts place it **between the #2 and #10 polluter in the world.**^{1,2}



HOWEVER, TWO THINGS ARE CLEAR

- 1.** The fashion industry is a major global polluter and contributor to climate change
- 2.** Fashion is a consumer gateway into affecting numerous harmful industries

NEGATIVE EFFECTS OF THE FASHION INDUSTRY¹¹

RESOURCE DEPLETION



FOOD INSECURITY



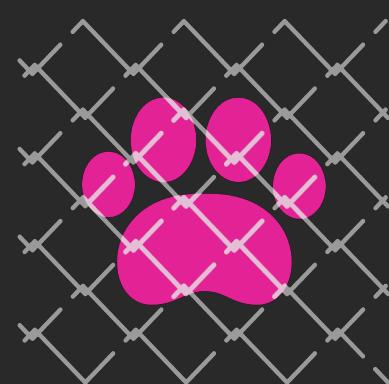
CLIMATE CHANGE



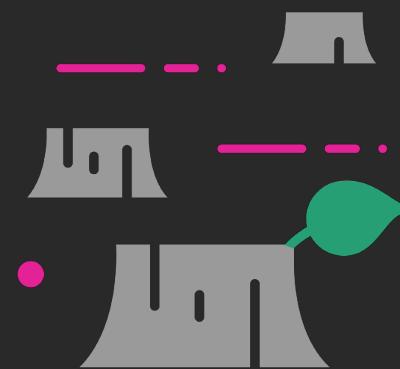
AIR POLLUTION



ANIMAL SUFFERING



HABITAT DESTRUCTION



WATER POLLUTION



HUMAN RIGHTS ABUSES



By fixing fashion we
can positively impact
these and more

There are three general stages in the life cycle of our clothing. ***We have to get better at all of them.***

PRODUCTION



CONSUMPTION



DISPOSAL





Producing Clothing Takes A Toll on Our Planet and Society

PRODUCTION

Greenhouse Gasses



The textiles industry (60% being apparel) produces an estimated **1.2 billion tonnes of CO₂ equivalent (CO₂eq) per year** - more than international flights and maritime shipping combined.⁴

Apparel and footwear combined account for an estimated **8.1% of global CO₂eq emissions.**¹²

PRODUCTION

Freshwater Withdrawal

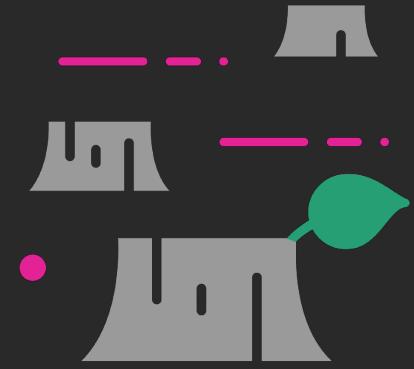


The fashion industry uses **79 billion metric tonnes of water every year** - think 32 million Olympic swimming pools.¹⁰

By 2030 main cotton-producing countries such as China and India may have to **choose between cotton production and securing clean drinking water** for their citizens.¹⁰

PRODUCTION

Habitat Destruction



The fashion industry is projected to use **35% more land for fiber production by 2030 (land double the size of France)** that could be used to grow crops or preserve forest to store carbon.¹⁰

Runoff from cotton's excessive use of **fertilizers leads to deadly algal blooms** and its overuse of pesticides causes major ecosystem toxicity.^{10,13}

Meanwhile, the toxic dyeing and finishing processes are responsible for **20% of all industrial wastewater.**⁵

PRODUCTION

Labor Abuses



As many as **51% of workers are paid below minimum wage** even though those minimum wages are often **less than half of what can be considered a living wage.**¹⁰

Gender inequality worsens the reality: **87% of women are paid less than the minimum wage** while the figure is 27% for men.¹⁰

Not only are they underpaid, these people are often overworked and **subjected to hazardous working conditions.**

ASK: Who Makes Your clothes?

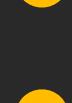
Photograph: Anadolu Agency/Getty Images

RANA PLAZA CATASTROPHE

“Six years after the Rana Plaza factory collapse in Bangladesh, which killed 1,138 garment workers, our clothes are still being made by some of the poorest, most overworked and undervalued people in the world.”¹⁴

RANA PLAZA CATASTROPHE

As a response,
@fash_rev launched
the campaign
#whomademyclothes
to demand more
transparency along the
supply chain so that
workers are seen,
heard, paid properly
and work in safe
conditions.¹⁴



**Unfortunately,
We Consume
As Poorly As
We Create**

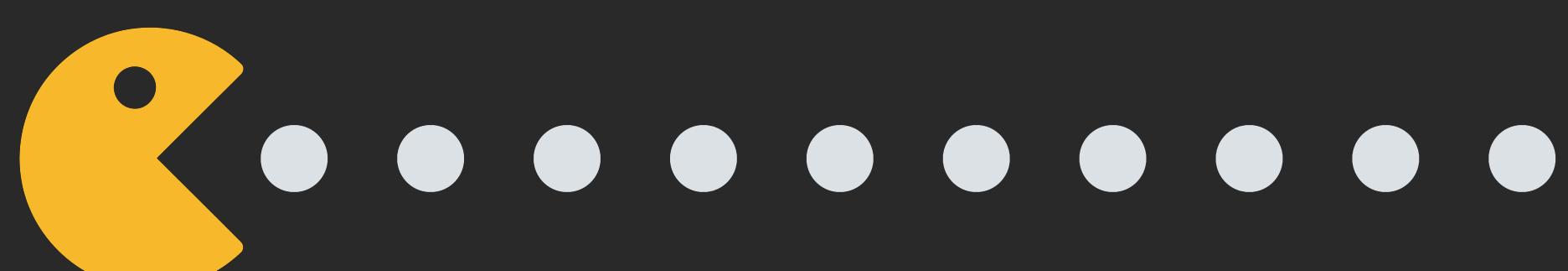


CONSUMPTION

The rise of “fast fashion” has fostered a disposable mindset

Fast fashion retailers sell garments **intended to be used less than 10 times.**¹⁵

And the average **number of times a garment is worn before its disposed has decreased by 36%** in the last 15 years.⁴



CONSUMPTION

Low-quality fast fashion is why textile waste in the U.S. has soared from 20 lbs in 1960 to **83 lbs per person per year** in 2016.^{12,16}

The problem, however, is only getting worse, as the consumption of “**fast fashion**” is projected to jump 63 percent by 2030.¹⁰

This trend can't continue



REMEMBER,

“The reason fast fashion businesses can afford to discount so heavily is that somewhere along the supply chain, someone has paid the price—be it environmentally or through sweatshop labour.”

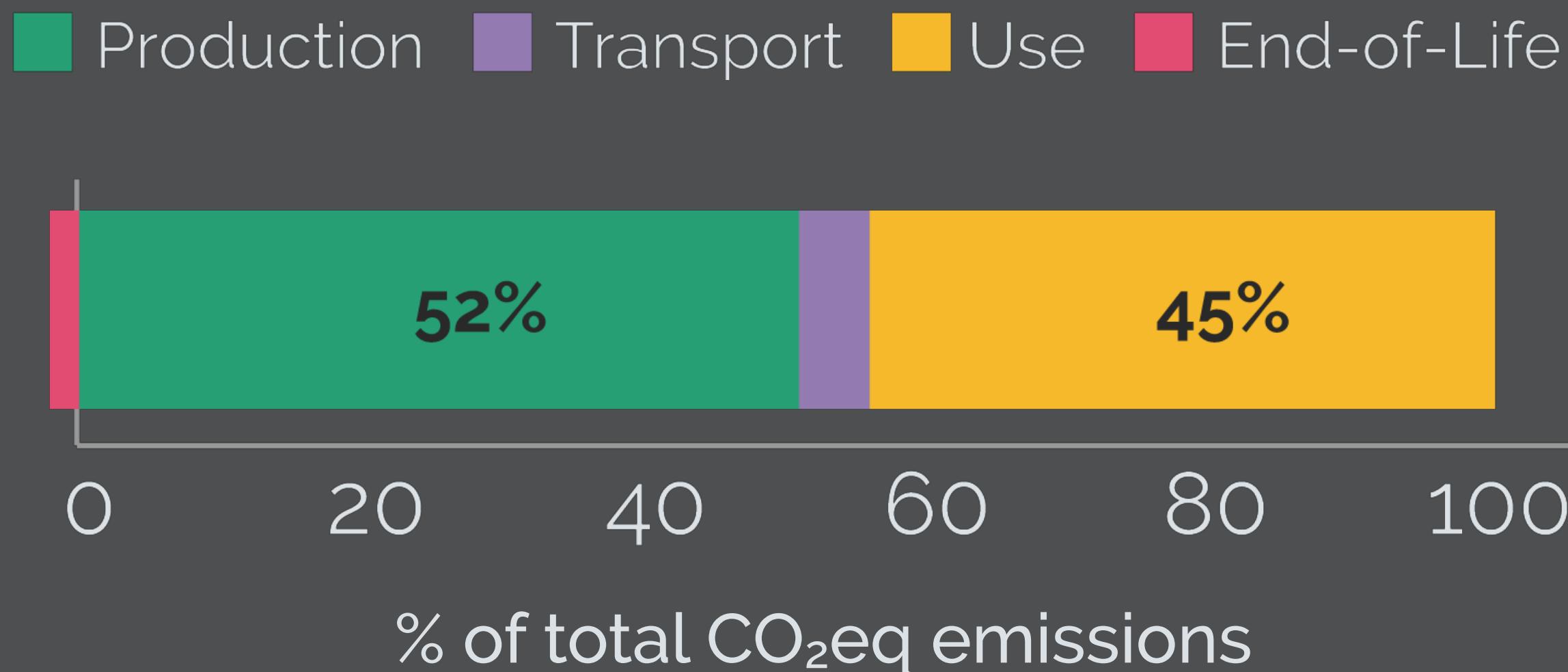
-Kate Osborne, Po-Zu

CONSUMPTION

Where and from whom we buy our clothes isn't the only factor that contributes to our clothing's effect on the planet.

The **use stage of a textile's life-cycle accounts for around 45% of its GHG emissions as a result** of our washing, drying, and ironing habits.¹³

Greenhouse Gas Emissions Throughout Textile Life Cycle¹³



CONSUMPTION

Microplastics

Synthetic fabrics like **Polyester** **shed tiny plastic particles during the washing process.** Sea life eat these undigestible plastics causing them harm before returning to our plates.⁴



As much as **35% of primary microplastics in the ocean are released from textiles** during the washing process.⁴

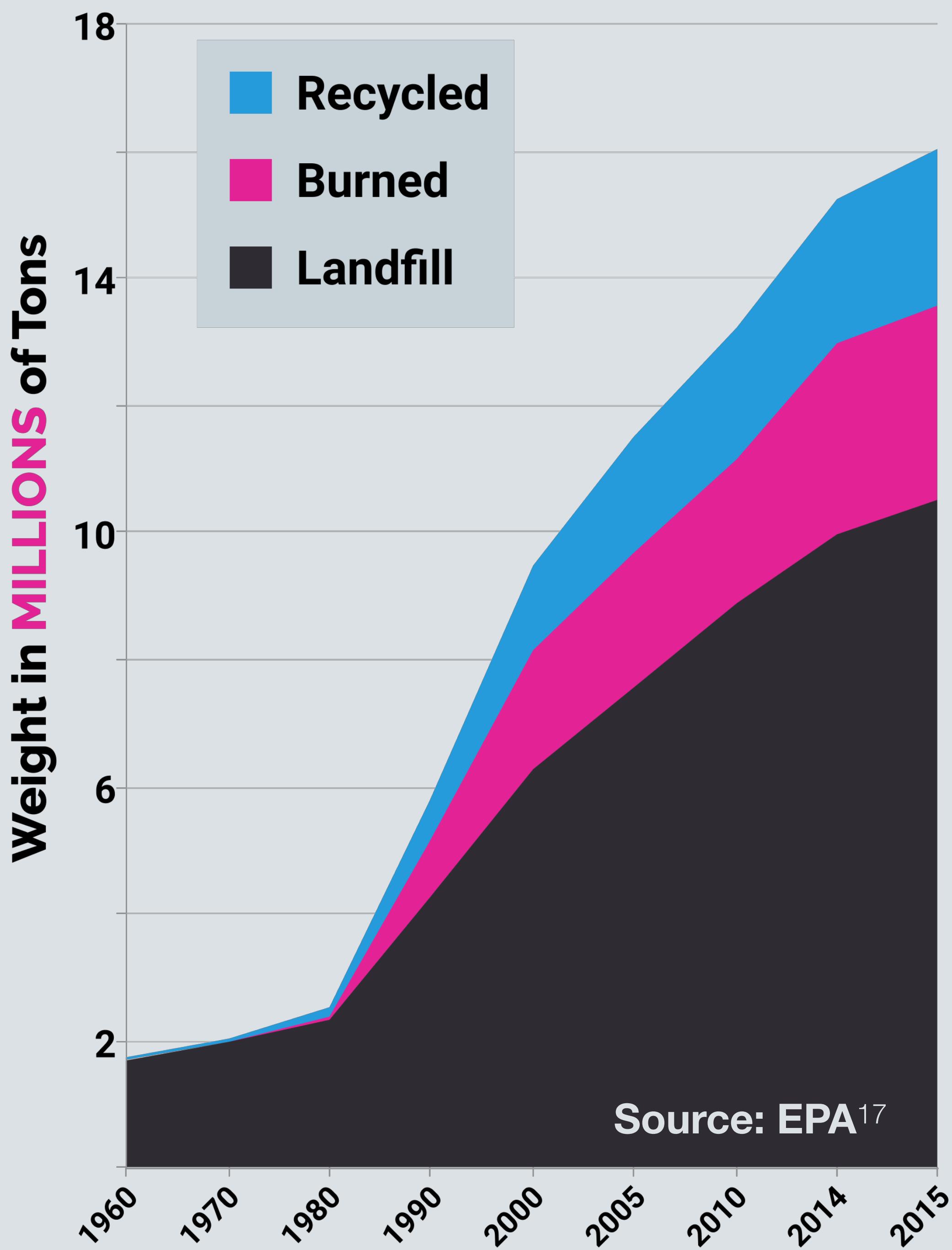
A Disposable Mindset Can Only Lead to One Place

X

DISPOSAL

We send 84% of our used clothing to be landfilled or incinerated⁴

**Textile Waste Management
United States 1960-2015¹⁷**



DISPOSAL

Worse than the percentage of clothing going to the landfill is the **sheer volume of clothing being disposed.**

In 2015 alone around **77 TRILLION pounds** of our clothes were sent to landfills or incinerated globally⁴

That's the weight of ten Empire State Buildings¹⁸



Almost all of this was recyclable

All of this Makes me Wonder, **What's Our Role As Consumers?**



WHAT CAN WE DO?

The core of becoming a conscious consumer is simply **being aware of each piece of clothing's impact.**

Reducing your impact depends on many factors but prioritizes **buying less and buying smarter.**

The larger goal we need to strive for is to shift our culture from fast, disposal fashion to **buying long-lasting clothing we love.**¹⁹

SUSTAINABLE FASHION CHEAT-SHEET

Above all else, to buy less,

- 1 MAKE YOUR CLOTHING LAST

Understand the impact of how to

- 2 WASH & DRY RESPONSIBLY

When you need something,

- 3 BUY SECOND-HAND OR RENT

If it has to be new,

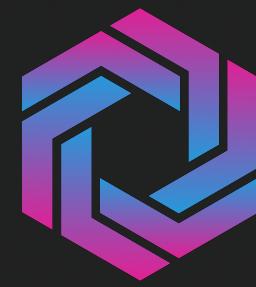
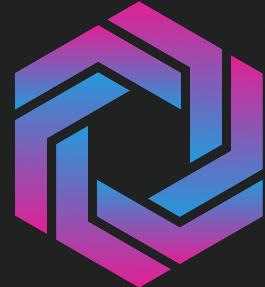
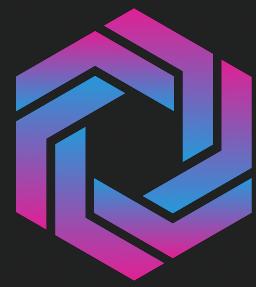
- 4 SUPPORT MINDFUL PRODUCTS

And when the time comes

- 5 RECYCLE OR DONATE

MAKE YOUR CLOTHING LAST

One of the most effective ways to reduce your environmental impact is to increase the lifetime of your existing clothing⁹



Extending the life of clothing by an extra nine months could **reduce carbon, waste and water footprints by around 20–30% each**^{9,20} because it slows your need for new, resource-intensive clothing.

Repair before you replace, and set yourself up for success by buying **higher quality, longer-lasting, and classic & timeless** pieces you know you'll wear often and utilize fully.

WASH & DRY RESPONSIBLY

Reducing washing temperature, washing at full load, avoiding tumble-drying whenever possible, and phasing out synthetic clothing can greatly reduce your impact.¹³



Elimination of tumble-drying and ironing, together with lowering the wash temperature from 60°C to 40°C, could **lead to around 50% reduction in the climate change impact of the product.**²¹

To reduce **microplastic** waste buy a filter like Guppyfriend, and phase out synthetic clothing where you can (polyester, nylon, spandex).^{7,21}

BUY SECOND-HAND, SWAP OR RENT

Producing new clothing is extremely resource intensive. Buying second-hand is a way of extending a garment's lifetime.



If the number of times a garment is worn were doubled on average, **fashion's GHG emissions would be 44% lower.⁴**

Data suggests 68% of clothing is disposed of because it doesn't fit or the owner doesn't like it anymore.²⁰

Rental models could help these clothes find new owners to increase their utilization.⁴

As long as these models *increase individual garment lifetime* they provide a much better alternative to buying new/virgin materials.

SUPPORT MINDFUL PRODUCTS

Buying new/virgin materials in moderation can be a great way to support mindful brands, artisans, and products to help usher in a new era of sustainable fashion.



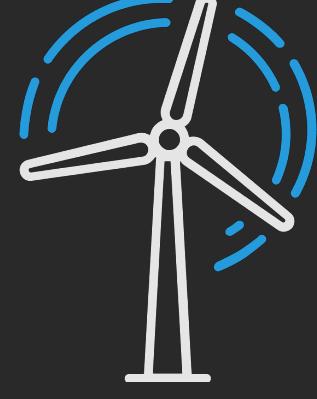
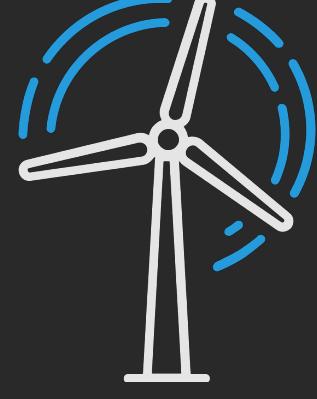
Two things to look for in a mindful product:

1. Eco-friendly process:
efficiency and sustainability along their supply chain

2. Preferred Materials:
Includes recycled, organic, fair-trade, and other sustainable indicators

Eco-friendly Process

One of the most effective ways a company can reduce their GHG emissions is to transition their supply chain to renewable energy¹²

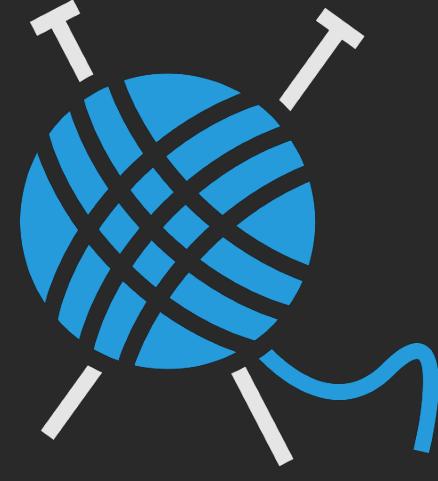


Other sustainable practices:

- Ships by sea not by air (100x smaller carbon footprint)⁹
- Better chemistry in yarn prep and dyeing processes
- Reduce or recycle water
- Innovative designs specific for reducing fabric waste during cutting

Preferred Materials

All conventional fabrics, including 100% cotton, have serious downsides.⁴ “Preferred” is a catch-all term to indicate materials that have reduced environmental impacts.



Some general guidelines:

- Raw material choice matters in large part due to its **ability to be recycled**.¹⁰
- **Regenerative** and **recycled** fabrics promise the lowest impact.⁴
- **Switching from conventional to organic cotton could reduce GHGs by 46%.**²²

Preferred Materials

A few examples of materials seeking to decrease resource use



Holistic, sustainable cotton

Organic hemp



Sustainably sourced viscose

Leather from mushrooms



Recycled cotton and PET

Vegan silk and leather

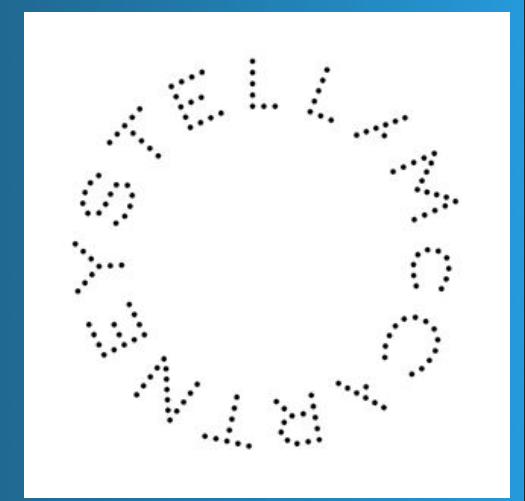
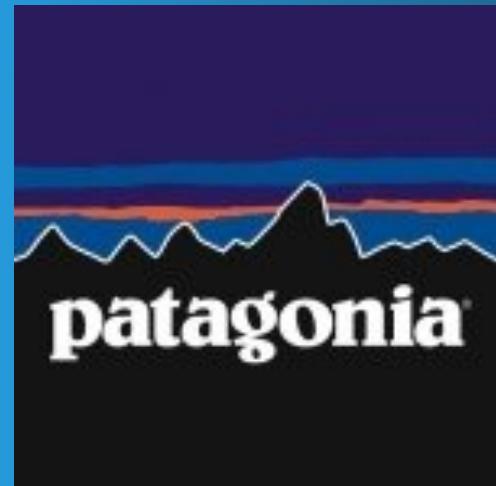


Next gen. recycled cotton

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A FEW GOOD BRANDS

Some folks doing great work.
More info at 101.eco - link in bio



Filippa K

EILEEN
FISHER

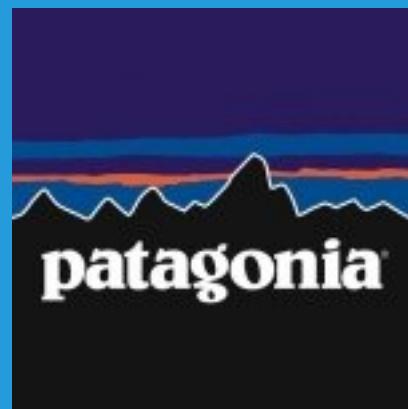
Reformation

LINDEX

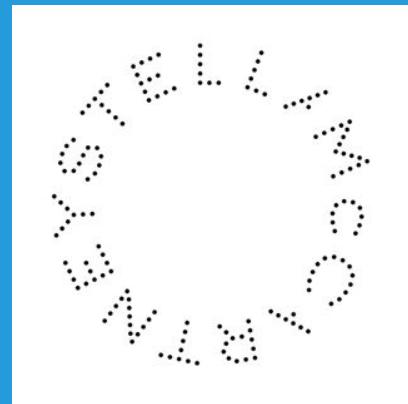


A FEW GOOD BRANDS

Check out the Pulse of Fashion
2017 Report for more info¹⁰



Early adopters of 100% organic cotton. Worn Wear program gives used items new life.



Thought leaders in sustainable fashion. Clevercare labels focused on consumer education.



Brand committed to every aspect of reduce, reuse, recycle. In-house take back and second-hand store



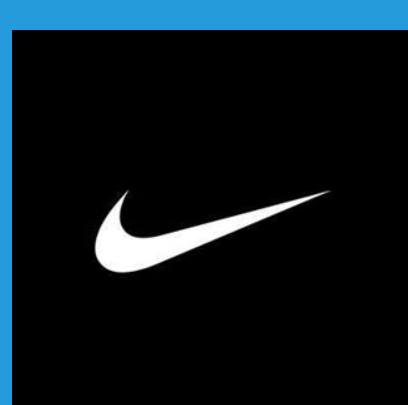
Eileen Fisher Renew creates new clothes from take back program, supporting organic cotton farmers



Innovative life cycle analysis RefScale to monitor environmental impact along supply chain



Swedish brand focused on sustainable materials



Creator of the Nike Sustainability Index and Nike Circular Design Guide for designers

Lastly, RECYCLE OR DONATE!

Currently, only 13% of our used clothing is being recycled!⁴

Increasing recycling is the most promising way to decrease fashion's impact on climate change.¹³



How to recycle used clothes:

- Take them to a **local thrift store or donation center**
- Sell on apps like **Poshmark** or **ThredUP**
- Drop-off at **USAgin** or **I:CO** collection bins

THANKS FOR LISTENING Y'ALL

Some Takeaways:

BUY LESS NEW

reduce volume, increase quality, wait before you buy, choose timeless

STAY CURIOUS

look at labels, follow sustainability thought leaders, keep your eyes open

STAY VOCAL

talk to your friends, demand more from brands, support renewable policies

**And share this story
with your friends!**

**Now That
You're all
Caught Up,
Stay Up-To-
Date With
These
Resources**

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ACCOUNTS TO FOLLOW

Thought leaders in sustainable fashion

FASHION
REVOLUTION



the
SFF



APPS TO DOWNLOAD



Good On You -
Consumer guide to
sustainable clothing

MAKING by Nike Materials

Sustainability Index -

Understand Impacts of
specific materials



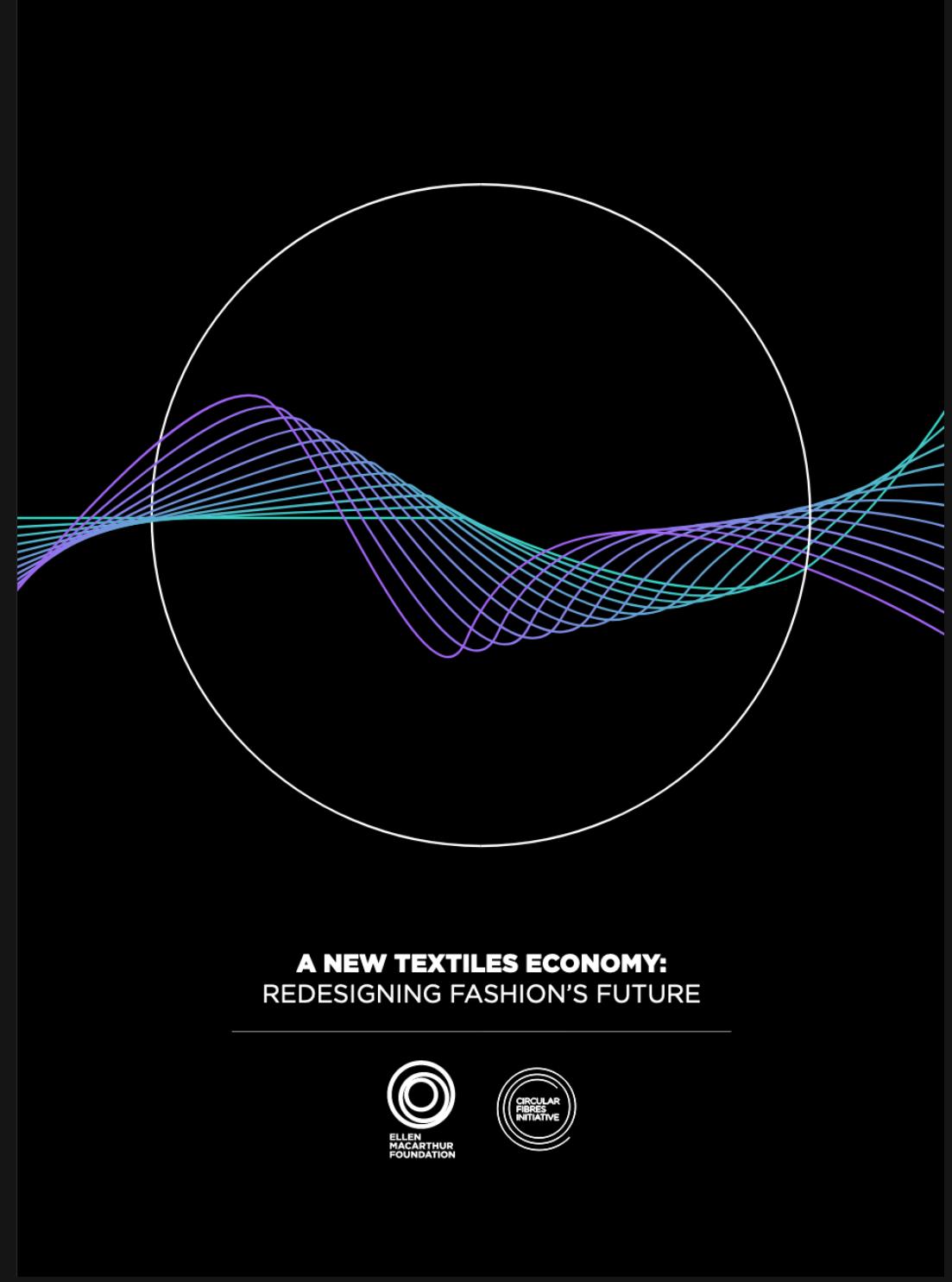
DoneGood -
Vote with your wallet to
support good products

FURTHER READING

PULSE FASHION INDUSTRY 2017



NEW TEXTILES ECONOMY 2017



MEASURING FASHION 2018



PREFERRED FIBER & MATERIALS 2018



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