

# Clothing Sustainability

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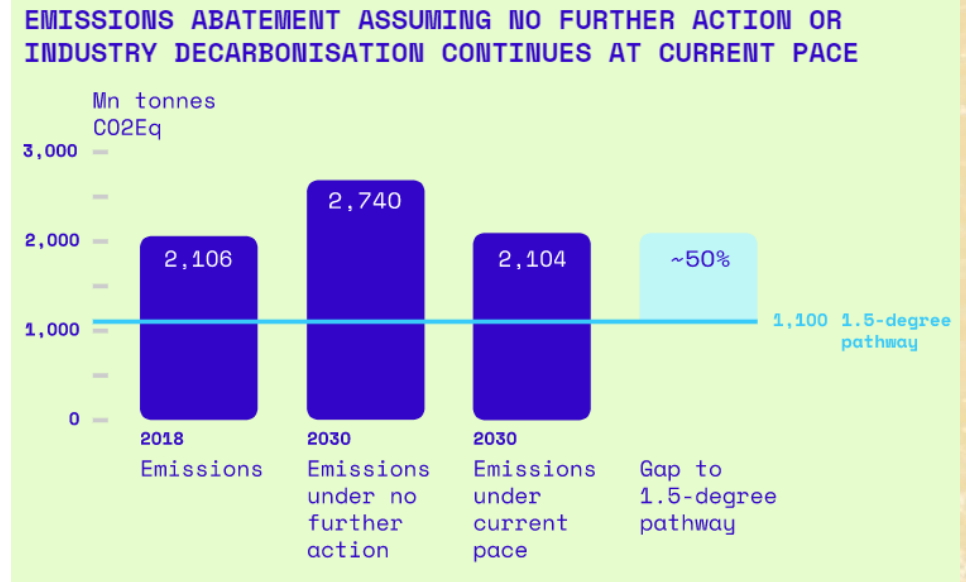
# Overview

Industry studies demonstrate that the textiles sector is a significant contributor to the global economy, creating millions of livelihoods around the world.

- This presentation provides an overview of the following elements:
- Carbon Emissions associated with the Garment industry
- Microfiber release into the environment
- Garment waste and effects on Landfills
- Recycling of Garments
- Roadblocks to the recycling of Garments
- Who can act to reduce emissions and waste production?
- Tips that can be used by citizens to reduce impact

# Data Carbon Emissions

- Fashion industry produces 4% of global Carbon Emission
- Industry will by 2030 produce around twice the volume of emissions required to align with Paris Agreement global warming pathways
- The fashion industry produces 1.2 million metric tons of CO<sub>2</sub> each year



# Environmental Impact

Polyester, is made from fossil fuels -

- About 65 percent of all clothing contains polyester.
- The production of polyester consumes 70 million barrels of oil each year. Additional fossil fuel inputs include production of packaging and hangers.

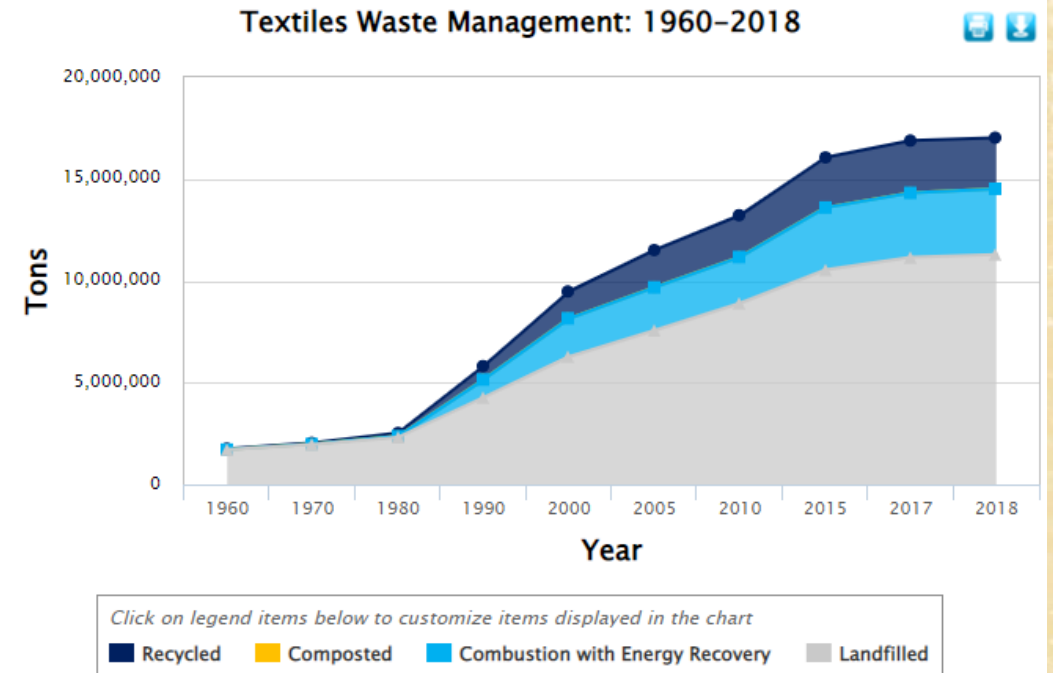
Microfiber Release –

- When clothes made from synthetics are washed, microplastics from their fibers are shed into the wastewater.
- 35 percent of the microplastics in the ocean come from the fashion industry. Garments disposed in landfill can shed microfibers.
- Studies estimate that for every 100,000 people, up to 110kg of microfibers would be released into local waterways daily, which is equivalent to the pollution caused by approximately 15,000 plastic bags.

# Landfills

Main source of textiles in municipal solid waste (MSW) for the United States is discarded clothing, although other smaller sources include furniture, carpets, tires, footwear, and other nondurable goods such as sheets and towels.

Landfills received 11.3 million tons of MSW textiles in 2018. This was 7.7 percent of all MSW landfilled.





# Challenges

The current fashion system uses high volumes of non-renewable resources, including petroleum.

Average consumer now buys 60% more items of clothing than in 2000, but each garment is kept for half as long

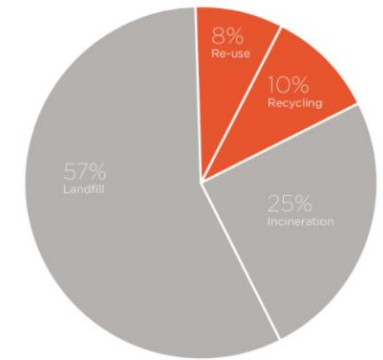
Buying habits contribute to the 39 million tons of post-consumer textile waste that is generated (at a minimum) worldwide each year – primarily in the form of garments.

Lifespan is between 2-10 years – with underwear and t-shirts lasting just one to two years, while suits and coats last for around four to six years

# Challenges

In the United States the recycling rate for all textiles was 14.7 percent in 2018, with 2.5 million tons recycled.

Compare that to paper, glass and plastic PET bottles – which have recycling rates of 66%, 27% and 29% respectively in the US – and it is clear clothing lags behind.



Source: Pulse Report, 2017

# Roadblocks

Less than one percent of clothing is recycled to make new clothes  
Modern garments are blended with multiple types of fabric materials.

- This makes them hard to separate so they can be effectively recycled.
- Sorting textiles into different fibers and material types by hand is **labor intensive, slow and requires a skilled workforce.**
- Mechanical fiber recycling shortens the fiber length thus producing lower quality and strength fibers. The fibers are often “downcycled” to **produce other composite fiber materials**
- Most of today’s textile-to-textile recycling technologies cannot separate out dyes, contaminants, or even a combination of fabrics such as polyester and cotton.



# Opportunities to Reduce

Brands and Retailers:

Have influence across the value cycle.

Factories, Material producers and other upstream players:

Must be fully involved in and committed to decarbonization programs.

# Opportunities to Reduce

## Citizens:

1. **Reacquaint yourself with the garments that you currently own.** One survey found that 20 percent of clothing in the US is never worn
2. **Secondhand is an easy and affordable way to be more sustainable.** Reuse is much greener than recycling, and shopping secondhand is a great way to afford higher-quality clothes that last longer and have higher resale value, creating a virtuous circle of sustainability.
3. **Don't leave out the human element in your environmental commitments.** A sustainable society takes care of people, animals, and the planet in tandem.
4. **Learn how to properly care for the clothes you own.** Extend the life of your garments by learning how to properly care for different fabrics
5. **Donation and Consignment reuse of clothing.** There are several local resources that can be used to enhance the longevity and thus increasing the sustainability of your clothing.

# Local Options

There are several options around the community that will take clothing donations:

Goodwill of the Great Plains  
Brookings Domestic Abuse Shelter  
Local Places of worship  
The Salvation Army of Brookings –  
Share the warmth

# Questions