

Don't Buy a Pair of Jeans Before Reading This

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

April 07, 2022

STORY AT-A-GLANCE

- › If you think buying new clothes is a fun activity with few consequences on human health and the environment, you may want to watch the BBC documentary “Fashion’s Dirty Secrets”
- › According to BBC investigative reporter Stacey Dooley, fashion is second only to oil on the list of the top five most polluting industries in the world
- › It can take 4,000 to 5,000 gallons of water to conventionally grow the cotton needed to make a single pair of jeans
- › Waterways around the world are being irreversibly harmed by textile growers and manufacturers, who are collectively creating climate change, human health risks and environmental damage
- › You can do your part to help fix this broken system by selecting organic fabrics, refusing to participate in “fast fashion” and buying only the clothes you truly need and will wear for a long time

This article was previously published January 12, 2019, and has been updated with new information.

Shopping is often referred to as "retail therapy." Some suggest buying stuff, especially new clothes, can make you feel better – more relaxed, perhaps, or prettier or more popular. While shopping for the latest trendy fashions may boost your mood temporarily, most people agree the positive vibes seldom last long.

Even if they did, there is more to modern fashion than meets the eye. Underneath all the glitz and glam portrayed in store windows are layers of what a new BBC documentary refers to as "fashion's dirty secrets."

If you think turning over your wardrobe frequently has little impact on world events, you may want to take an hour to watch the film. From start to finish, it will compel you to seriously consider how the fashion industry is actually wreaking havoc on the environment and endangering human health.

BBC Reporter Suggests Our Clothes Are Wrecking the Planet

In the featured 2018 documentary, BBC investigative reporter Stacey Dooley unearths some of the fashion industry's "dirty secrets."¹ Her conclusion: Our clothes are wrecking the planet. At the onset of the film, Dooley is quick to admit she is a fan of fashion.

"It's retail therapy," she says. "For me, shopping is a way to unwind. I buy a treat, and I get home, try it on and take loads of photos wearing it." Like many, she puts the clothes on, poses in front of a full-length mirror and uses her smartphone to snap a bunch of photos. Later, she posts her favorite pictures on social media, which attracts a flurry of comments from friends and followers.

Dooley notes how easy it is to get pulled into a relatively new trend called "fast fashion," which alludes to how designers and retailers introduce new collections on a weekly basis to keep consumers hooked on clothing. Because clothing lines turn over rapidly, buyers often feel pressure to keep pace with the latest trends, even when they already have a closet full of perfectly useable clothing.

"Fast fashion lures us into buying more clothes than we need," asserts Lucy Siegle, a journalist and author specializing in environmental issues and one of Dooley's interviewees in the documentary. "It's a production system that brings us clothes at intense volume." The problem is our insatiable demand for cheap copies of catwalk fashion is having a devastating impact on the environment.

Like Dooley, you may be surprised to learn that fashion is second only to oil on the list of the top five most polluting industries in the world. That revelation took Dooley on a global adventure to further investigate the impact fashion has on vital aspects of living such as air quality, the economy, human health and water supplies.

Nonorganic Cotton Is One of the Worst Offenders

Nonorganic cotton is one of the fibers Dooley reveals as doing the most harm to the environment, particularly as it relates to its devastating impact on fresh water supplies.

Finding out that cotton is one of the "bad guys" may surprise you, especially if you have been influenced by the U.S. industry group advertising that, for nearly 50 years, has promoted conventionally grown cotton as the "fabric of our lives."² Dooley notes some of the "dirty secrets" associated with nonorganic cotton include the:

- Pesticides used in cotton farming
- Dyes and other chemicals used in manufacturing items made from cotton
- Immense amounts of water needed to produce and process it

In the film, Dooley is told it can take upward of 15,000 liters (about 4,000 gallons) of water to grow the cotton necessary to make some brands of jeans. "I've never associated clothes production with pollution before," she said.

Cotton and Textile Production Damages Vital Waterways

In addition to being chemical-dependent, conventionally produced cotton also needs water – lots of water. Dooley discovered the amount of water needed in some cases is enough to nearly drain a sea in a few decades. On a visit to Kazakhstan, Dooley heard firsthand about how the water level of the Aral Sea began receding in the early 1970s.

The Aral Sea is situated between Kazakhstan and Uzbekistan – the world's sixth-largest cotton producer among 90 cotton-growing countries.³ At the time cotton began making

inroads, fish started dying from the chemical runoff from cotton fields. Now, in an area that used to be covered in turquoise blue water, you find a sparsely populated, barren wasteland.

The Amu Darya, one of the rivers that fed the Aral, was diverted into cotton-production farms in Uzbekistan and sucked dry before it could reach the sea. In Kazakhstan, what used to be a thriving seaport is now nearly 80 kilometers (50 miles) from the water's edge. The country's fishing industry has been obliterated by its neighbor's cotton industry.

Sadly, the former Kazakhstani seabed is heavily contaminated with pesticides, which prevents plant growth. Locals say wind-driven toxic dust has led to high rates of cancer, tuberculosis and other illnesses among those eking out a living there. The negative impact of cotton is felt daily in the local economy, public health and weather.

"You don't understand the enormity of the situation until you're here," asserts Dooley, standing on the dry earth that was once the Aral seabed. Camels and horses roam in an area once teeming with fish and other sea life. "[D]id I know cotton was capable of this? Of course, I didn't. I had no idea."

Beyond cotton, textile manufacturers themselves also misuse water resources. Dooley visited Indonesia to get a firsthand look at the Citarum River, known as the world's most polluted river. The area around the Citarum is home to more than 400 factories thought to be releasing toxic chemicals into waterways across the region on a daily basis.

Touring the river by raft, Dooley observed several hues of colored dye being pumped into the water and well as bubbling, bad-smelling foam. Toxicology results indicated the river is heavily polluted by heavy metals, including arsenic, cadmium, lead and mercury, which damages the health of local residents who depend on the river for drinking water as well as for bathing and washing clothes.

"To me, this feels like a complete catastrophe, and it's worth bearing in mind that Indonesia isn't even in the top five garment manufacturing countries globally," Dooley commented.

Sustainability: A Real Issue That Needs To Be Addressed

In the U.S. alone, the impact of fashion has been outlined as follows. Every year:⁴

- 13.1 million tons of textile waste are created
- 11 million tons of textile waste end up in landfills
- 68% of the water used to create one pair of jeans revolves around fiber production alone

Because sustainability is such a huge issue for the textile industry, as part of her investigation, Dooley attended the Copenhagen Fashion Summit — a gathering billed as "the world's leading business event on sustainability in fashion." Unfortunately, not many of the clothing brands participating in the event were willing to speak to Dooley on camera.

As such, she stated, "This summit is a sign that some in this industry are working to clean up fashion, but I have felt the brands' refusal to talk to me make it look like some of them have something to hide."

That said, Dooley was able to speak to Paul Dillinger, vice president of global product innovation for Levi Strauss & Co., the \$5 billion American brand that produces denim jeans and jackets and other clothing. "We're working on a solution that takes old garments, chemically deconstructs them and turns them into a new fiber that feels and looks like cotton, but with zero water impact," he said.

Beyond that, Dillinger says, "In the meantime, we are doing everything we can to use less water in our finishing. We share information on how to reduce the water footprint of our cotton with everyone else." While all that sounds great, he and Dooley agreed the industry and consumers are not yet ready for large-scale change.

"This is a big industry. It's so broadly decentralized that affecting change is nearly impossible," Dillinger notes, "especially when the [consumer] appetite doesn't want change. For that reason, there will need to be a regulatory solution. It has to happen, because there just isn't enough water."

The only lasting solution it seems is for the fashion brands to invest themselves in environmentally friendly production methods. Those new methods, Dooley notes, must run in a parallel path alongside government oversight.

This would include laws and regulations designed to place limitations on water usage, while closely monitoring and responding to other negative environmental impacts brought about by textile companies.

Discarded Clothing Also Has Huge Environmental Impacts

While it may seem the number of textiles discarded are not important, as most fabric should be biodegradable, the reality is the large amount of clothing thrown away every day contains more than cotton. Procedures to treat clothing include using specialized chemicals, such as biocides, flame retardants and water repellents.⁵

More than 60 different chemical classes are used in the production of yarn, fabric pretreatments and finishing. When fabrics are manufactured, between 10 and 100% of the weight of the fabric is added in chemicals.⁶ Even fabrics made from 100% cotton are coated with 27% of their weight in chemicals.

Most fabrics are treated with liquid chemicals to ready them for the fashion industry, going through several treatments before being shipped to a manufacturer. A number of chemicals used on clothing are known to present human health and environmental issues.

Greenpeace International⁷ commissioned an investigation into the toxic chemicals used in clothing. They purchased 141 different pieces of clothing in 29 different countries. The items were manufactured in 18 countries. The chemicals found included high levels of phthalates and cancer-causing amines.

The investigators also found 89 garments with nonylphenol ethoxylates (NPEs). Twenty percent of the garments reflected levels above 100 parts per million (ppm), whereas 12 of the samples contained levels above 1,000 ppm. Because any level of phthalates,

amines or NPEs are considered to be hazardous, you do not want them coming into contact with your body through clothing.

While you may think the potential danger of these chemicals comes from wearing clothing containing them, that is just one step in the cycle of harm. When the material makes it to a landfill, these toxic chemicals can leach out into the groundwater. Perfluorinated chemicals (PFCs) have been widely used in textile marketing and have been linked to a variety of health problems in humans.⁸

PFCs are so ubiquitous they've been found in the blood of polar bears⁹ and in tap water supplies used by 15 million Americans in 27 states.¹⁰ Fortunately, Greenpeace has listed PFCs as one of the hazardous chemicals used in clothing production targeted for elimination by 2020.¹¹ So far, progress has been slow.

"It fills me with dread," says Dooley. "It's hard to think that the clothes I'm wearing could do so much damage, but I now see how the industry is such a threat to the planet."

The Care What You Wear Campaign

We simply have to start caring about what went into the clothes we wear, which is why I'm participating and donating proceeds from my Dirt Shirts to the Care What You Wear campaign. Marci explains the incentive behind the campaign thus:

"We want to empower consumers and businesses to care about what's behind the way it looks. It's not just about looking good in clothing. It's about feeling good and doing good in the world. When you think about caring about what you're wearing, it's about going deeper and saying, 'Where did this apparel come from? How is it being grown? Where is it being made? Who's making it?'

It's not that different from the Farm to Table Movement, where people are saying, 'Where is my food coming from? How is it being grown and produced?' It's the same thing.

We're waking up to our source inside. We're awakening to that desire to know what we're putting in and on our bodies as an extension of ourselves. It's not just what you eat. It's also what you wear that is a part of you. We need to be thinking about fiber no differently than we are about food."

Startups Are Changing the Industry From the Ground, Up

Though not explicitly mentioned in the documentary, one of Levi Strauss' big moves in terms of sustainability involves its partnership with a Seattle-based textile startup called Evrnu.¹² In 2016, the two created the world's first jeans made from the reclaimed fibers of five recycled cotton T-shirts. This renewable fiber uses substantially less water than the traditional cotton process.

Such a change is significant considering the Evrnu team notes it takes a staggering 20,000 liters (about 5,300 gallons) of water to produce the amount of cotton needed to make a single pair of jeans. After discovering it takes 700 gallons of fresh clean water to make a simple cotton shirt, Evrnu founder Stacy Flynn recognized the need for sustainability.

Determined to find a way to combat such waste, Flynn launched Evrnu as a startup. By 2014, Flynn and her team had created a new, sustainable alternative from recycled clothing.

Although the full impact of companies like Evrnu are yet to be seen, Flynn says, "It shows that even big players in the textile industry are open to change for the good of the environment, as well as willing to seek out and find the new eco-friendly solutions that are emerging."¹³

About the new product, Dillinger said, "This first prototype represents a major advancement in apparel innovation. We have the potential to reduce by 98% the water that would otherwise be needed to grow virgin cotton."¹⁴

7 Ways You Can Help Reduce the Negative Impact of Fashion

Given Dooley's passionate call to action, you may want to consider how you can help reduce the negative impact of fashion. For one, as a consumer, you can vote with your purchases – buying sustainable brands and avoiding companies and clothing items you know are damaging the environment. Beyond that, you can:

1. Choose fabrics made with organic cotton, hemp, silk, wool and bamboo
2. Resist the pull of "fast fashion" and only buy clothes you can commit to wearing for a long time
3. Trade clothes among your family and friends, especially items that have been hanging in your closet unworn for more than six months
4. Select items colored with nontoxic, natural dyes
5. Avoid screen printed items because they typically contain phthalates
6. Be mindful of when and how you wash synthetic clothing so as to minimize the shedding of microfibers
7. Keep in mind that most donated clothing actually ends up in landfills

While in Indonesia, Dooley spoke with Ade Sudrajat, chairman of the Indonesian Textile Association (API), who said, "I feel ill. The situation I face makes me desperate." Without better regulation and oversight from government, Sudrajat says, "The planet is gone. Water is our life. Water is our future."

Though she has investigated environmental issues before, Dooley says she was marked by the enormity of the problems going on inside the fashion industry, which she claims have become "a tremendous threat to the planet."

"For me to tell you that I'm never going to shop again would be completely dishonest," she concludes. "But I do recognize how powerful I am as a consumer. This is a situation that needs addressing – and fast. There has to be a real sense of urgency now because to be totally honest with you, we're running out of time."

Sources and References

- ¹ [BBC October 9, 2018](#)
- ² [Marketplace November 15, 2010](#)
- ³ [AzerNews March 30, 2018](#)
- ^{4, 12, 13, 14} [Impact Hub June 29, 2018](#)
- ⁵ [Greenpeace East Asia, Hazardous Chemicals in Clothing](#)
- ⁶ [O Ecotextiles January 1, 2013](#)
- ⁷ [Greenpeace International October 2012 \[PDF\]](#)
- ⁸ [Environmental Sciences Europe 2011; 23:38](#)
- ⁹ [The Science of the Total Environment November 15, 2015; 533: 290-296](#)
- ¹⁰ [Environmental Working Group June 8, 2017](#)
- ¹¹ [Sustainable Brands July 13, 2018](#)