

Denim production is incredibly polluting. Jeans makers are trying to clean up their act

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Adam Taubenfligel thought he understood the business of denim until he visited the place where many of the world's jeans are made. The co-founder of Triarchy, a Vancouver-based denim brand, Taubenfligel had been producing small runs of denim in Los Angeles, but with his sights set on growth, he had travelled to southern China to check out production facilities there. On a tour of a "wash house" where jeans are faded and distressed in large industrial washing machines, he was shocked by what he saw.

"When you're manufacturing in L.A., it's all very small production with three or four machines. But seeing it on such a massive scale in China stopped me dead in my tracks," he says. "You are literally witnessing hundreds of machines spewing hot indigo water all over the place with no proper drainage and no one wearing correct protection. It's obscene at that level."

To anyone, including those who work in the denim industry, the volume of global production and its consequences can be a shock. In *Fashionopolis*, her 2019 book about the fashion industry, Dana Thomas writes about Xintang, an industrial city in China's Pearl River Delta, where some 3,000 factories pump out 300 million pairs of jeans per year at a rate of about 800,000 each day, which is only a fraction of the five billion pairs of jeans produced globally every year. A large part of this production is done in wash houses, which produce an ocean of waste water laced with toxic chemicals such as cadmium, chromium, mercury, lead and copper, much of which is dumped in nearby waterways.



Triarchy Jeans uses wash houses in Turkey that recycle their waste water.

"Jeans embody all that is good, bad and awry in fashion," Thomas writes. In *Fashionopolis*, Thomas uses the ubiquitous blue jean to illustrate how fashion's relentless pursuit of speed and profits has led to horrors at every level of the industry, from children toiling under dangerous conditions in Bangladeshi sweatshops, to Vietnamese rivers turned to

toxic sludge by wash house runoff, to the more than 10 million tonnes of clothing and textile waste that's dumped in North American landfills every year.

While Fashionopolis provides a sobering, detailed analysis of the crime scene that is modern denim production, it doesn't dwell there. Instead, Thomas focuses on the people who are working to right these wrongs, from farmers growing natural indigo to new technology for distressing jeans without toxic chemicals, to denim factories reopening in the United States and Britain. "The denim industry has lost its way," she says over the phone from France, where she lives, "But we can bring it back."

Following his experience in China, Triarchy's Taubenfligel shuttered his company for a year while he figured out how to continue doing business in a way he could feel good about. Now, Triarchy buys denim made from certified organic cotton (which uses less water than conventional cotton, in addition to keeping pesticides out of the soil and water), uses wash houses in Turkey that recycle their waste water (rather than dumping it in the nearest river) and even uses rivets made from recycled sheet metal.

Triarchy isn't the only example of a denim brand choosing to do things this way. Montreal-based Frank & Oak recently overhauled its denim supply chain, switching to certified organic cotton and a washing process that uses less energy and water and fewer chemicals than conventional methods. It is also experimenting with jeans made from partially recycled denim and new dye processes that keep black jeans from fading, thereby extending their life.



Nudie Jeans switched its back patches from leather to paper – further lowering the carbon footprint.

The granddaddy of all denim companies, Levi's, is also getting on board, using similar water-saving techniques on most of its jeans, while introducing initiatives to recycle old, unwanted denim into insulation for Habitat for Humanity homes.

In Sweden, meanwhile, Nudie Jeans has been working on becoming the world's most sustainable denim brand since its founding in the early 2000s. As it continues to push toward that goal, Nudie publishes its progress in a lengthy annual sustainability report. Among the highlights of their most recent report, the company now uses 100-per-cent organic cotton in all of its product categories, regularly audits its suppliers and switched its back patches from leather to paper – further lowering the carbon footprint.

Perhaps Nudie's most noteworthy accomplishment, however, is its policy of offering complimentary repairs for any jeans it sells. According to the company, its staff mended more than 50,000 pairs in 2018, a service that saved some 386 million litres of water and 44,000 kilograms of landfill waste. Nudie plans to continue growing its denim repair network around the world, in the hopes of encouraging all of its customers to hang onto their old jeans for as long as possible. For the fashion industry, which has grown into a global juggernaut by pumping out new clothes as quickly and cheaply

"If we actually want to be a sustainable brand, we some time need to settle down and be satisfied with the size we're at," Kevin Gelsi, Nudie's sustainability coordinator, says. "We need to have a responsible approach to our growth. And that, I think, is hard to align with making sure every consumer on the planet wears a pair of Nudie Jeans."

Beyond switching to organic cotton, natural indigo, closed-loop washes and fair labour practices, and even making new jeans out of old ones, this is the question that lies at the heart of the quest for sustainability in the denim industry, and in fashion as a whole: How many more pairs of jeans does the world actually need?

"The volume issue is the big nut to crack," Thomas says. "How do you keep your business going and not follow the business model of volume, which has been the model since the industrial revolution?" Thomas says the fashion industry's biggest conundrum is its dependence on consumption. "Until we address those questions, none of it's going to get solved."