


# Fashion has a misinformation problem. That's bad for the environment.

 [vox.com/the-goods/2020/1/27/21080107/fashion-environment-facts-statistics-impact](https://www.vox.com/the-goods/2020/1/27/21080107/fashion-environment-facts-statistics-impact)

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Questionable facts plague the conversation around sustainability and fashion, and that makes the industry harder to regulate.

By [Alden Wicker](#) Jan 27, 2020, 7:00am EST



Environmental pollution on the river banks surrounding some of the textile industry buildings of Savar Upazila in Dhaka, Bangladesh.

*Andrew Aitchison/In pictures via Getty Images*

Whenever a fashion brand makes a commitment to offset its carbon emissions, it needs to explain why it matters. Whenever a journalist like me writes a story about, say, activists protesting London Fashion Week, I also need to tell you why you should care and should

keep reading. After all, there are so many other worthy things that demand our attention these days. So consider the following harrowing, commonly repeated facts:

- Eight to 10 percent of global greenhouse gas emissions comes from the fashion industry, which is more than the aviation and maritime shipping industries combined.
- The fashion industry produces and sells somewhere between 80 billion and 150 billion garments a year globally.
- Nearly three-fifths of all clothing produced ends up in incinerators or landfills within years of being made.

It's clear that the fashion industry is a big, stinking mess. But if you take a moment to ponder these facts, you realize that something is ... off. An estimated range of 80 billion to 150 billion garments a year is ridiculously wide. The two most common estimates for fashion's greenhouse gas emissions vary by a billion tons, a huge margin of error. And saying three-fifths of clothing will be trashed within "years" is a meaningless statement.

Yet I pulled all of these statistics and other common facts from reputable sources: McKinsey. The United Nations. The Ellen MacArthur Foundation. The World Bank. International labor unions. Advocacy organizations. And these facts have been cited by publications like the Wall Street Journal and the New York Times.

Not all of these highly respected experts could be wrong. Could they?

"Only one out of the dozen or so most commonly cited facts about the fashion industry's footprint is based on science"

It turns out they could. Because only one out of the dozen or so most commonly cited facts about the fashion industry's huge footprint is based on any sort of science, data collection, or peer-reviewed research. The rest are based on gut feelings, broken links, marketing, and something someone said in 2003.

If we're serious about recruiting the fashion industry into the fight to save our world from burning, these bad facts do us all a disservice. They make fashion activists look silly. They allow brands to wave vaguely at reducing their impact without taking meaningful action. And they stymie the ability to implement meaningful regulation, which needs to be undergirded by solid data.

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There are unmissable clues everywhere that something is wrong, from poisonous rivers in Bangladesh and Indonesia to old clothing littering the shores of East Africa to microplastics in our drinking water. But as long as we have only garbage information, we'll only get garbage action from brands and governments to fix the problem.

"Where are the technical papers? Where are the peer-reviewed journals? Where is the serious work?" says Dr. Linda Greer, a former senior scientist at the Natural Resources

Defense Council and now a senior global fellow at the Institute of Public and Environmental Affairs, a Chinese environmental NGO. “You couldn’t even get a master’s degree with this, not even close.” (Sick burn from someone with a PhD in toxicology.) “And here we are trying to run a whole industry’s environmental footprint reduction based on this kind of stuff. It’s kind of preposterous that people put up with it.”

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Greer is intimately familiar with these bad facts and where they come from — she thinks she might inadvertently be responsible for one of the most persistent. Years ago, she looked at sources of water pollution in the only province in China that had good government data, the highly industrialized Jiangsu, and found that the textile industry was the second most polluting after the chemical industry *in that particular province*. “I thought, okay, for my purposes of NRDC trying to get on top of polluters in China, this is fine. I can use this.” She went on to found the NRDC’s Clean by Design program, which helped increase water and energy efficiency at Chinese textile factories, partly on the basis of this transparently back-of-the-envelope calculation.

At some point in the next decade, the belief that globally, the fashion industry is the second most polluting industry after oil took off, much to her horror. (It continued to circulate even after I debunked it for Racked in 2017.) And better data has never emerged. “Somebody by now should have gone ahead and figured out what’s really true,” she says.

As the co-founder of the now-defunct ethical e-tailer Zady, Maxine Bédard used to repeat many of these non-facts at sustainable fashion panels. After Zady shut down, she founded an organization called the New Standard Institute. Her goal is to collect all the best information about the fashion industry in one place and leverage it to pressure fashion brands to do something about their footprint. But as she and NSI research volunteers started to peel away the layers of each statistic, she realized that there was nothing at their core.

I asked Bédard in January if she had found any fashion facts that were true or had a reliable primary source, but she says NSI is not yet ready to go on the record endorsing anything. “I can tell you a bunch that are *not* true,” she says. She homes in on the stat that says that there are 60 million garment workers globally, which the advocacy organization Clean Clothes cited as from the International Labor Organization. “We reached out to ILO, who doesn’t have a record of this information. It was also used by BetterWorks, Sustainable Brand Solidarity Center, and IndustriAll. Seventy-five million garment workers globally was also found in a Clean Clothes publication, and they cite Fashion United, but the link doesn’t mention that stat.”



We know that the garment industry is polluting our rivers, but we do not know how much.  
*Ed Wray/Getty Images*

This is what happens in the fashion sustainability space. One organization puts out a fact, and four other organizations link to it, and then nobody remembers or cares who first made the claim.

The statistic that 4 percent of global waste is from the fashion industry is the most well-sourced fact I've found, eventually leading back to a report by the UK nonprofit Waste & Resources Action Program (WRAP) on the waste associated with clothing sold in the UK, which is based on a peer-reviewed tool whose methodology is laid out in a robust technical analysis. It still may not be true, given that the global waste figure is extrapolated from UK figures and then compared to a stat from the UN, which hasn't proved to be very reliable on fashion figures. But at least it's transparent.

WRAP's transparency is in contrast to the consulting firm McKinsey, which says that between 2000 and 2014, global clothing production doubled, and the number of garments purchased each year by the average consumer increased by around 60 percent, to 100 billion garments per year. (The documentary *The True Cost* says we purchase 80 billion garments a year, while the World Economic Forum puts it at 150 billion.) Where did the figure of 100 billion garments come from? McKinsey would only say that it analyzed proprietary data provided by market research firms to come to their conclusions. And yet, in

fashion's desert of scientific research, a report with zero footnotes from a company that has reportedly helped Saudi Arabia silence critics and — over objections from the World Health Organization — brought an ethos of cost-cutting to the arena of global health is what passes for reputable information.

The McKinsey website also used to say that nearly three-fifths of all clothing produced ends up in incinerators or landfills within “one year” of being made but at some point changed it to the vague “within years.”

Fashion industry produces 20 % of global wastewater and the grand majority of your closet is doomed to pollute the earth.

It's not too late to stop this trend. #ActNow, be fashionably sustainable, & register your #ClimateAction on zero-waste fashion ➡ <https://t.co/cH20vIRbgO>  
[pic.twitter.com/KdtUE6h0Qy](https://pic.twitter.com/KdtUE6h0Qy)

— UN Geneva (@UNGeneva) August 7, 2019

An Ellen MacArthur Foundation report says that 20 percent of global industrial water pollution is from the fashion industry, but EcoTextile News shredded this in its December issue dedicated to myth-busting, tracking the statistic back to a vague assertion by a 2012 paper that attributed it to the World Bank; the bank denied it was the origin of the fact. Also attributed to the World Bank is the fact that 80 percent of garment workers worldwide are women, but when I asked, a representative directed me to an article that says 80 percent of garment workers *in Bangladesh* are women and then to a conflicting World Bank report that says it's actually 54 percent. The idea that the average American throws away 80 pounds of clothing comes from a 2014 Environmental Protection Agency report, but that data is also inaccurate: It includes textiles like carpets and mattresses and garment factory waste.

And finally, one statistic you'll see in almost every story and at every panel: the greenhouse gas emissions attributed to the global fashion industry. According to the UN, it's 10 percent of global emissions. But according to a 2018 report by the sustainability consulting firm Quantis, it's 8 percent.

“Let's talk for a moment about the Quantis report,” says Greer. “They refused to provide anybody — me, Climate Works Foundation that funded them, or the general public — any of the data that went into their conclusions. If you were to try to publish that in a peer-reviewed journal, you would be rejected in 30 minutes. It should have died a quick death.”

The report didn't die. It was pulled off the Quantis website for a few months, then republished without Climate Works' name on it. And it keeps getting cited. By me, by other journalists, by panelists, by everyone. There's just nothing else to go on.

Even without good data, brands and countries are attempting to lessen the fashion industry's impact. Last year, 150 companies joined a pact where they agreed to "science-based" targets around emissions, biodiversity, and single-use plastics by 2050. It's the latest in a long line of industry groups, agreements, conferences, promises, and "sustainable" product lines. But companies still don't know what is happening in their supply chains, and so have no baseline for what they will cut their emissions *from*. (According to a report by Greer's organization, Nike is the only brand that regularly asks for emissions data from its factories in China.)

Some of this bad data has even cynically been pressed into service to increase our consumption. "Double sales and retention," crows a marketing company that creates carbon emission calculators for eco brands. "By purchasing a product, visitors fully understand their positive environmental impact!"

Brands have also zeroed in on circular design, a utopian economy where waste materials would be recycled right back into new clothes. (Right now, we think that 99 percent of old clothing is eventually landfilled or burned. Don't ask me to find the primary source for that.) As a result, Nordic countries — the only governments that have committed any resources to improving the fashion industry — are pouring money into textile R&D. Sure, that will help with waste, but what if it ends up increasing fashion's footprint in other areas?

"If they put out a rule that is based on ... this 20 percent stat, then it's not going to survive a courtroom challenge"

"Where is the data that shows what the difference is in terms of carbon emissions, water use, toxic chemical use in a fully circular economy for the fashion industry?" Greer asks. "I've yet to see numbers." She's spent decades at the NRDC working to protect the environment from industrial pollution and knows firsthand the kind of robust research literature that has to undergird government rulemaking on corporate pollution. The false stat about how much global industrial water pollution comes from the fashion industry, for instance, is not going to cut it. "If they put out a rule that is based on something as flip-floppy as this 20 percent stat, then it's not going to survive a courtroom challenge," she says.

It's clear that before we do anything else — demand legislation, invent new textiles, set targets — we need to figure out what research we need, then ask the government and big brands to fund it.

"We need a landscape assessment of the data and an analysis of the gaps and inconsistencies that's crisp," Greer says. "And then a call for funding the research to fill those gaps. Then we'd be making progress."

That money needs to come from the government or a consortium of fashion brands, because getting good data is expensive. For example, the California nonprofit Fibershed is planning a fiber mapping project where it would go into people's closets, look at all the tags

in their clothing, weigh the clothing, and then process the data to yield high-quality research on the fiber mix in our closets. Founder Rebecca Burgess estimates that it will cost more than \$100,000 just for California.

“All these sociological and quantitative data sets on the labor side would cost as much or more money,” Burgess says. “We need funding for people to be on the ground to take water samples, to go into factories and count how many workers are women. Unless the public is crying for it, who is going to fund that?”

There is some progress. Last May, Stella McCartney and Google announced a partnership to test Google’s data-processing prowess by quantifying the impact of various types of cotton and viscose, using McCartney’s data and more data they hope to collect from researchers and brands. But the fear is that the resulting data will only be available for brands to use.

“If we don’t invest as an industry in this process, any company can say anything and we can’t say whether it’s meaningful”

“There’s not enough investment in academia, but I can say there’s a lot of money in private research,” says Dr. Joanne Brasch, a lecturer at UC Davis on textile sustainability and special project manager at the nonprofit California Product Stewardship Council. She sees her students get snapped up by fashion brands at graduation, essentially privatizing the vast majority of fashion science.

This might be her last year at UC Davis, too. Her research funding has dried up, and UC Davis shut down the two undergraduate majors, textiles and clothing and polymer science. Incoming graduate students interested in fashion sustainability will now have to choose either fashion design or material engineering. Students revolted and signed a resolution against the move, but it was no use. Instead of researching what fashion does to our world, they now can only study how to make more of it.

“This stuff isn’t rocket science,” Bédard says. “The industry just hasn’t invested and prioritized this information. And if we don’t invest as an industry in this process, any company can say anything and we can’t say yes or no on whether it’s a meaningful process.”

But despite all this, she thinks the conversation is shifting. “I am hopeful in this year and decade that we’re moving toward bringing clarity into this space.”