

Tehran Twister / Climate Change: What Would Darwin Do?

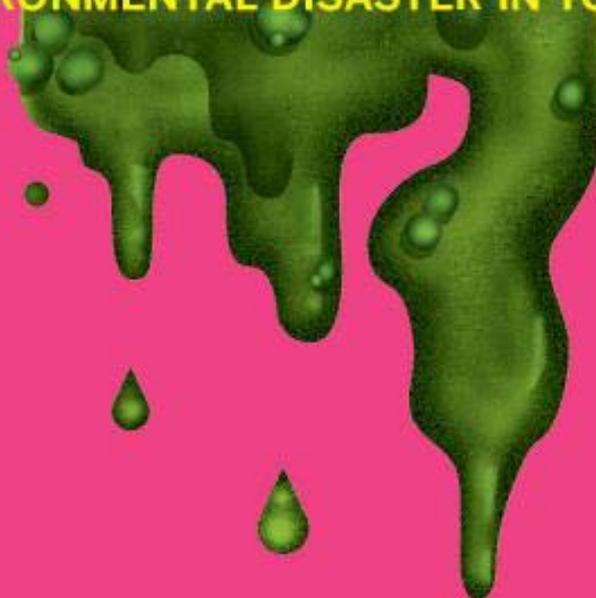
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## TOXIC FASHION

THE ENVIRONMENTAL DISASTER IN YOUR CLOSET



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# The Environmental Crisis in Your Closet

BY ADAM MATTHEWS / AUGUST 13, 2015 11:25 AM EDT

Approach the massive Orathupalayam Dam by road, and it quickly becomes clear that something has gone terribly wrong. Within 2 miles of the dam, the lush rice paddies, coconut palms and banana trees that have characterized this part of southern India suddenly give way to a parched, bright red landscape, dotted only with scrub forest. The Noyyal River, which used to be clean and clear, now runs foamy and green, polluted with the toxic runoff of the titanic textile industry 20 miles to the west, in Tirupur.

At first glance, Tirupur, aka “Knit City,” appears to be an exemplar of how globalization can improve the developing world. The garment industry here in the south Indian state of Tamil Nadu earns billions of dollars annually, employs about a half-million people and exports clothes to Europe and the United States. Chances are good that if you have a Gap, Tommy Hilfiger or Wal-Mart T-shirt marked “Made in India,” it came from here.

American taxpayers have played a key role in turning Tirupur into a manufacturing powerhouse. In 2002, the United States Agency for International Development (USAID) loaned \$25 million to the government of Tamil Nadu and a local clothing industry group, the Tirupur Exporters Association, to finance [a new water-delivery system](#). It kick-started a slew of investment into the project; a local consortium [eventually raised](#) an additional \$220 million. The U.S. consulate in Chennai in a 2006 [press release](#) explained that before the American intervention, the local industry “was running out of water, a critical input for dyeing and bleaching.” As a side note, the release noted that the thousands of slum dwellers in the area could finally have access to treated, running water.

The USAID project, which piped in clean water from a stretch of the Noyyal in a nearby farming region, helped the local industry boom. Between 2002 and 2012, U.S. knitwear imports from India jumped from \$571 million to \$1.25 billion, and [an estimated 56 percent](#) of those garments came from Tirupur. But all that growth has had devastating consequences for the environment and people living in the area.

In early April 2013, I met the leader of the Orathupalayam Farmers Association, Chelliappan Udayakumar, near the Orathupalayam Dam. For generations, Udayakumar’s family farmed this land, growing local crops such as rice, banana, coconut and turmeric. “There were good jobs

and good livelihood,” says Udayakumar. Now, “there is no cultivation of the land, no income.” The small-scale agriculture lifestyle that characterized the region for centuries, he says, has “fully collapsed.”

He walked me through Orathupalayam village, a small town at the base of the dam. Abandoned brick homes painted light blue and topped with red tile roofs dominated the main square. Plaques on the homes commemorated their erection—most date from the late 1980s, when construction of the dam began. Twenty-five years later, the Orathupalayam is one of over 60 villages that have been transformed into ghost towns.

The dam was supposed to update agricultural irrigation practices in Tirupur. But by the mid-2000s, the water was so saturated with chemicals, salts and heavy metals that local farmers were petitioning the Madras High Court—the highest court in Tamil Nadu—to not release the water into their fields. It was making farmland unusable and locals sick. In 2002 and 2003, a local university set up [three camps](#) to examine the health effects of the toxins downstream. In one of the camps, doctors found that about 30 percent of villagers suffered from symptoms—including joint pain, gastritis, problems breathing and ulcers—connected to waterborne diseases. A [2007 study](#) by a local nongovernmental organization found that Tirupur’s 729 dyeing units were flushing 23 million gallons per day of mostly untreated wastewater into the Noyyal River, the majority of which collected in the Orathupalayam Dam reservoir. When officials finally flushed the dam in the mid-2000s, 400 tons of dead fish were found at the bottom.

### **Comically Corrupt**

A couple of weeks after I visited Tirupur, on April 24, 2013, Rana Plaza, an eight-floor complex of clothing factories in Dhaka, Bangladesh, caved in, [burying over 1,100 workers](#) in the rubble. As the dead dominated newscasts, brands like [Wal-Mart Stores Inc.](#) and [United Colors of Benetton](#) momentarily defended their labor and safety records. Activists called for boycotts, and President Barack Obama even [revoked](#) Bangladesh's right to export certain clothing items to the U.S. without paying tariffs.

Rana Plaza resonated with American consumers. After all, even Bangladeshi women earning less than two bucks a day deserved to go to work in the morning confident that they would be alive that evening. But while the disaster did force Westerners to take notice of the plight of those who make their clothes, a larger environmental crisis in the region continued unnoticed—

despite impacting many hundreds of millions of people.

According to Yixiu Wu, who helms Greenpeace's "Detox My Fashion" campaign, the average pair of jeans requires 1,850 gallons of water to process; T-shirts require 715 gallons. And after going through the manufacturing process, all that water often ends up horribly polluted. The textile industry today is the second largest polluter of clean water after agriculture, and it has an outsized effect on the people of Asia.

In large part, that's because over the past two decades American clothing brands have steadily moved production out of the U.S. and into Asia. The American Apparel and Footwear Association estimates its members outsource the manufacturing of 97 percent of their clothing, more than 75 percent of it to Asia. "Simply put: We are a nation of 330 million importers," the trade group says.

The benefit to the U.S. consumer is clear: Just drive to a nearby mall and pop into H&M, Uniqlo, Gap or any other fast-fashion label, and check the clothing tags. It's likely that they'll say the garments were made in Cambodia, Laos, Indonesia, China or Bangladesh—all countries competing to make a T-shirt that costs Americans and Europeans just \$5 but takes a heavy toll on the people at its source. Near critically polluted waters like Bangladesh's River Buriganga and Cambodia's Mekong River, life-sustaining farms are dying, potable water has become toxic and locals are now at great risk for serious illness, all as a result of industrial-scale clothing manufacturing.

At the core of this environmental and health disaster is the poor state of regulatory institutions throughout much of South and East Asia. Transparency International's annual Corruption Perception Index paints a dispiriting picture: Cambodia and Burma (two of the latest hot spots for textile manufacturing) are tied with Zimbabwe at 156 out of 175 countries ranked, while Laos and Bangladesh are tied at 145. India fares a lot better at 86, but even there, human rights and environmental preservation are often trumped by the need to provide a business environment that can compete with more corrupt countries.

In a 2013 study, Indian environmental scholar Geetanjoy Sahu investigated the country's various state pollution control boards, responsible for regulating the environmental impact of all sorts of industries, including clothing manufacturing. Sahu, drawing on data gathered through Right to Information Act requests (similar to the U.S. Freedom of Information Act), found that the boards are often underfunded, understaffed and run by political appointees with no scientific background.

The pollution control boards for two ocean-facing Indian states frequently cited as development models—Tamil Nadu and [Gujarat](#)—are especially corrupt. For example, a [2008 paper](#) by Sahu explains in detail how the Tamil Nadu Pollution Control Board failed to stop the massive spread of pollution from leather tanneries. In February 2015, a wall in a pit holding tannery effluent collapsed, drowning 10 employees in toxic sludge. The plant had been approved by two TNPCB inspectors, who were arrested and jailed for allegedly receiving a bribe of more than [\\$3,000](#) to approve the factory's license. The two men are facing charges in a [local court](#) in Tamil Nadu of three counts of corruption, reckless endangerment, negligence and involuntary manslaughter. A third, more senior, official is also [being investigated](#).

Pamela Ellsworth, chairperson of the Fashion Institute of Technology's [Global Fashion Management Program](#) and a supply chain expert, says the core problem is that people in the U.S. and Europe expect both a low price and a responsible corporation—and the margins clothing companies require often make it difficult for suppliers to meet corporate vendor codes of conduct and still earn a profit. “Eventually we are going to have to train consumers in the U.S. to pay more for clothing,” she says. “It can't be the only commodity that gets cheaper every year.”

### **Bottled Water Unfit to Drink**

In the wake of the Rana Plaza disaster, India's clothing industry has presented itself as the sustainable, safer alternative to Bangladesh. On September 19, 2013, the Tirupur Exporters Association and the Indian Consulate in New York City co-hosted an event in Manhattan's Garment District, a few blocks from the 34th Street fast-fashion strip. The event was designed to attract orders from American clothing brands, and the message was simple: Fiascos like Rana Plaza won't happen in India.

"The Indian apparel industry is compliance-oriented, and we follow all the rules of the game," Arumugam Sakthivel, president of the association, [told the Press Trust of India](#) at the time.

Sinnathamby Prithviraj isn't buying it. The chubby, pompadoured and mustachioed social activist is one of the leading critics of the local clothing industry. He's been fighting for years to publicize—and end—the industry's polluting practices. In 2007, after a decade-long legal battle to shut down dyers who flagrantly violated pollution rules to supply major U.S. brands, Prithviraj and a group of farmers won a decision by the Supreme Court of India to shutter any

dyers who hadn't brought their liquid discharge down to zero. But India's legal system moves slowly. The Dyers Association of Tirupur filed appeal after appeal, and the dyers continued to operate in the interim, despite being in contempt of the court's decision.

Meanwhile, as orders from major brands like Gap and Wal-Mart increased, so did the release of even more toxic wastewater. Then, in 2011, in what seemed like a triumph for the environmentalists, India's Supreme Court told the utility company in Tamil Nadu to cut power to any dyeing factories in contempt of its order. Most of the factories could not afford to conform to the requirements and ended up shutting down.

But this turned out to be a Pyrrhic victory for Prithviraj and his farmers. Wildcat dyers in outlying districts sprang up, and soon Tirupur's garment pollution problem had spread statewide. In Namakkal, an adjacent district where inspectors are engaged in a game of whack-a-mole to shut down illegal dyers, M. Murugan, the pollution control board's local environmental engineer, admits he's fighting a losing battle. "Many units are small, mobile and can function without electricity," he says. Over the past two years, the Namakkal pollution control board has averaged one or two raids per month. "Ultimately, if we demolish [the dyeing industry] in Namakkal, in some other place it will come again," he says.

In April 2013, Prithviraj told me he wasn't sure what to do next. "Although we won the case, practically, we lost it. We don't have the eyes and human resources to watch what's going on illegally." And, he added, India is "a country where anything can be done illegally."

The next day, Prithviraj sent me out with his driver to see just how lawless the industry can be. For about an hour, my photographer and I snooped around a government-run industrial park home to a number of textile factories. But as I was gathering water samples from the river, the photographer strayed across a bridge to take pictures of a nearby factory, which he believed was

illegally discharging waste into the ditch in front of the building. That's when men began to approach us from several directions. I ran to the car to avoid a confrontation; the photographer seemed less concerned and kept snapping shots.

I yelled for him to speed up and get back in our SUV, but he waved me off, strolling leisurely back to the vehicle. A large crowd gathered. A minute later, we were trapped. One of our pursuers, a brawny man in his early 30s with a shaved head and a clean, striped button-down shirt, blocked our car with his body. An older man joined him and produced a card saying he

was from the TNPCB. Our driver, who had seen many such cards, immediately said it was a counterfeit. But the man with the shaved head took charge, warning us that we needed to “take the proper permissions to be here.” He introduced himself as “a local political leader.” We later found out that he was [Jagadesh Np](#)—one of the owners of Spencer Apparel, a dyeing company that makes clothes for an Indian department store chain, Westside.

When I called Spencer Apparel, a man who identified himself as Rajesh Np, Jagadesh’s brother, got on the line. At first, he yelled, questioning angrily why we had been on the grounds of the government industrial park without special permission. After talking for a few minutes, he changed tack, suddenly inviting us back. “I can give you a detailed explanation about everything and show you everything so that you can write a very good article,” he said. And he promised, “In Tirupur, most of us do eco-friendly dyeing. Everything is nonhazardous.”

But as Vidiyal Sekar, a former Tamil Nadu state legislative assembly member representing Tirupur, points out, “Eighty percent of dyers do not properly discharge their waste.” Sekar did not speak directly to the practices at Spencer Apparel. But he added that much of the blame should be placed on TNPCB officials, anyway: “All the pollution department officers do is take a lot of money from these small factories and allow them to operate freely.” The TNPCB, Sekar says, is “100 percent corrupt.”

Lack of accountability means that it’s nearly impossible to figure out which companies were legally operating dyeing plants and which were not. In June 2013, I spoke numerous times on the phone with then-TNPCB Member Secretary S. Balaji, who was steadfastly evasive. In July 2013, H. Malleshappa replaced Balaji. Malleshappa also did not answer any phone messages from *Newsweek*. Late in 2013, a group of environmentalists [launched](#) a public interest lawsuit to remove Malleshappa from office, claiming that he was unqualified. Malleshappa eventually left the position soon after an incident in which almost [1,000 illegal bottled water](#) plants were found in his district. Much of the water was unsafe for human consumption. Despite the scandal, Malleshappa remains in a position of power: He is now head of the state’s [Department of the Environment](#). His replacement at the TNPCB, K. Karthikeyan, didn’t last long either. He was [forced out](#) when a local crusading journalist revealed that Karthikeyan had been under investigation for corruption when he was appointed.



Records show that Raagam sold clothing to major companies like Ecko, Desigual and New Era over the past decade. NEWSWEEK

Meanwhile, according to the [most recent information available](#) on the TNPCB website, Spencer Apparel does not have permission to run a dyeing unit. Neither do many other companies operating in Tamil Nadu. Raagam Exports, for example, has for a long time manufactured clothing for the Spanish streetwear label Desigual and other European brands. After being officially told to stop operations in 2011, Raagam, along with 12 other large Tamil Nadu dyers, [appealed](#) to India's National Green Tribunal, the country's highest environmental court, claiming they'd received permission from the Tirupur District Environmental Engineer to resume operations. But the court found that only the TNPCB's head office in Chennai could grant them permission to reopen—and that they still hadn't achieved the zero-liquid discharge required for that consent. In October 2011, [the court dismissed Raagam's case](#).

Borja Castaneda, Desigual's marketing director, says the company has been working with Raagam since 2012. "They have the temporary license to run the dyeing unit," Castaneda wrote in an email to *Newsweek*. "This license has been annually renewed (including the one for 2015) as they are still pending to receive the final one." However, Desigual was unable to provide documentation of the licensing. It was also unable to send over documentation of the audits it claims to undertake regularly. "Unfortunately, these are confidential," said Castaneda.

Raagam Exports was also unwilling to provide proof of its license to operate; its website has a "Compliance" section, but does not include any TNPCB licensing. And the TNPCB website provides nothing that can help to ascertain whether Raagam is currently licensed. Meanwhile, the company continues to send clothes to international brands—Desigual, for example, received its most recent shipment—almost 260 pounds of multihued viscose dresses—from Raagam in July 2015.

## The Gap Gap

P.N. Shamuhasundar runs [Mastro Colours](#), a small hosiery dyer on Tirupur's outskirts. The state government gave him and about 20 other dyers a \$4 million, no-interest loan to overhaul and modernize their shared effluent treatment plant. Mastro is now certified as having "zero liquid discharge," but the extra cost of treating and evaporating that liquid waste (instead of just dumping it into the river) means it can't compete with polluting dyers.

Prithviraj believes American consumers are complicit here. “We feel that selling a T-shirt for \$10 is a sin,” he says. “Is it fair Wal-Mart makes \$8 off a T-shirt and gives nothing to the labor, nothing to the environment?”

Shipping records provided by Datamyne, which tracks import-export transactions in the Americas, show that between 2007 and 2011, Wal-Mart’s orders increased from Tirupur clothing companies who dyed garments in defiance of the court-ordered shutdown. Take Balu Exports, for example. On its website, the company describes itself as a “vertical set-up under one roof.” Two of its divisions, Balu Process and Balu Exports Dyeing, are members of the Dyers Association of Tirupur. And since 2007, the association has operated in contempt of [India’s Supreme Court order](#) to reach zero discharge.



During the 2000's Wal-mart's orders from Balu Exports increased, despite the fact that the company was operating an illegal dyeing factory. NEWSWEEK

Repeated inquiries to Wal-Mart over the years about its reliance on toxic dyeing companies have been unanswered. In 2015, after receiving detailed shipping records and documentation highlighting the illegal operating status of Balu and other companies from which Wal-Mart sources, Juan Andres Larenas Diaz, director of communications for international corporate affairs, sent a written statement to *Newsweek*: “Our expectation and a contractual requirement of doing business with us is that our suppliers and their subcontractors are in compliance with the law. Our relationship with garment suppliers in Tirupur has always been based on their ability to meet Wal-Mart’s supplier standards and code of conduct.” But Diaz would not address

specific allegations.

Prithviraj says he’s been similarly frustrated in attempts to engage Wal-Mart. Talking to Wal-Mart is like “banging your head against a wall,” he says. Instead, he suggested, we should try asking some “big brands”—like Gap, J.C. Penney, Tommy Hilfiger—about their record in Tirupur.

Gap Inc. has long been on the radar of environmental activists. Every year, Greenpeace’s garment monitoring unit—called the [Detox Catwalk](#)—places major clothing companies in three categories: winners, greenwashers and losers. Gap Inc. is one of the most well-known

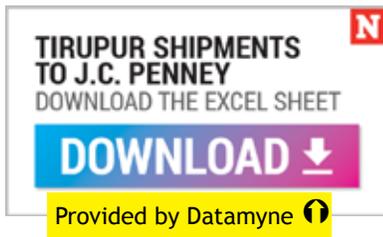
“losers,” based on the company’s refusal to disclose hazardous chemicals and unwillingness to commit to stop using them.

Over the past 15 years, Gap Inc. has increasingly outsourced its manufacturing. The company says it has a field team of 40 sustainability experts around the world who make both announced and unannounced visits to nearly all of the factories where its clothing is made. However, it also has come to rely on inspection from third-party firms in order to ensure its indirect suppliers—such as mills and dyers—are adhering to the company’s vendor code of conduct.

In its 2011-2012 Social and Environmental Responsibility Report (the most recent publicly available), Gap Inc. admits that it does not have direct control over its supply chain, and things appear to be getting worse. In 2005, 10 to 24.99 percent of its factories in South Asia had violations in their Vendor Code of Conduct- mandated environmental management systems; by 2012, that rose to over 50 percent.

“If over 50 percent of their suppliers are not in compliance, then environmental issues are not a factor in the Gap's supplier selection process,” says Heather White, a supply-chain expert and fellow at Harvard University’s Edmond J. Safra Center for Ethics . White adds that in many cases, factories end up paying auditors for an inspection report, and in those cases, “the quality of the findings suffers.” That’s because auditors are more likely to keep their jobs if the factories pass inspections. Bribery is common, White says—though she was not able to speak directly to activities within Gap’s supply chain.

The issue, ultimately, is that the compliance measures taken by retailers like Gap, Desigual and the dozens of other firms sourcing garments in Tirupur don’t account for the complexity of modern clothing-supply chains. Fabric is frequently taken from a mill, dyed at a second facility (owned by the same parent company) and then sewn into finished garments at a third factory (ditto). A corporate auditor, examining the factory and the final product, would find it difficult to determine where the cloth has been dyed. Even visiting a dyeing facility isn’t enough; it’s easy for a given dyeing facility to subcontract some portion of its dyeing orders to smaller, unauthorized units. And it’s even unlikely that an inspector is present when effluent is treated—or released directly into the Noyyal, or dumped in a local field in the middle of the night. Auditing and even TNPCB approval, says Prithviraj, provide little more than a veneer of plausible deniability. “It’s a very sophisticated system of lying,” he says.



Over the last decade, J.C. Penney has taken shipments from many Tirupur-based exporters, including Eastman Exports, which also runs an illegal dyeing operation. NEWSWEEK

A representative for J.C. Penney, for example, told *Newsweek* that “to the best of our knowledge it does not appear that J.C. Penney has any dyeing business in that area,” despite records showing that the company has been taking shipment for years from numerous vertically integrated manufacturers in the Tirupur area, including Eastman Exports. Eastman was [operating in contempt of India’s Supreme Court](#) 2007 demand that it reach zero effluent discharge during the time it sold garments to J.C. Penney. But since the American giant was able to buy from its “finishing” arms, it could feasibly deny knowledge of the illegal dyeing operations involved. “We confirmed with Eastman Exports that no dyeing services were performed for J.C. Penney's private brand merchandise in those factories,” its representative wrote in an email. Eastman did not respond to requests for comment.

According to Gap Inc., the situation in South India has improved dramatically in recent years. Spokeswoman Laura Wilkinson told *Newsweek* that all the company’s third-party auditors are paid for by corporate, and as of June 30, 2015, approximately 90 percent of the company’s approved facilities in South Asia have an environmental management system. “We recognize there is a still long way to go,” says Wilkinson, “and it will require sustained, and collective, effort to have the most lasting impact.”

Many of the other companies that rely on factories in South and East Asia offer similar promises. “Since we are operating in a water-intense industry, we have worked actively to reduce negative water impacts in different parts of the value chain for more than 10 years,” says Ulrika Isaksson, an H&M spokeswoman. “Our goal is to become the fashion industry’s leading water steward.” (H&M is one of [Greenpeace's “winners”](#); it also publishes a [supplier list](#), which includes both primary manufacturers and secondary suppliers like dyers.) Others, including Uniqlo and Tommy Hilfiger, did not respond to multiple requests for comment.

Gap, for its part, has made a [commitment](#) to achieve zero liquid discharge in all its supplier factories by 2020. But even if it makes good on the promise, for many farmers in and around Tirupur, it’s likely to be too late.

## Rotten Coconuts

When I returned to Tirupur in January 2015, the Orathupalayam Dam was still filled with green, foamy water. The few locals who have remained in the area struggle to survive.

Karuppaiah Subramanyam has lived and farmed near the dam for many years. From his house, I could see some scrub grass and a smattering of coconut trees, but when I looked a little more closely, the damage became clear: The coconuts—his only crop—were undersized, and many came off the tree already rotten. Subramanyam’s 7-acre farm, which was in his family for several generations, remains the same size it's always been, but it has now become essentially worthless. When Tirupur’s clothing industry began producing more clothes and even more toxic runoff, he lost about half his crop, because his primary water source became unusable. “We can only do rain-fed agriculture now,” he explains. Before 1995, he could grow eggplant, green chilies, tomatoes, rice, turmeric and tobacco. Now he has to buy all that on the market, with the meager funds he gets from his remaining, undernourished coconuts.

Asked whether he ever received compensation for his losses, he simply shakes his head. There were some court cases, but only the largest landholders with the best legal representation were compensated. Smaller farmers, like Subramanyam, got nothing. Prithviraj led 4,000 of these excluded farmers in an appeal to the Madras High Court, which ultimately decided they should all be remunerated by the dyers association for land that was made barren by the release of toxic textile runoff. Still, that’s only a fraction of the nearly 30,000 farmers Prithviraj estimates lost their livelihood.

Meanwhile, illegal dyeing units continue to surface regularly. “Some of the new dyeing factories are coming up in other river basins and even in the coastal areas,” says Prithviraj. He mentions Cuddalore, an ancient seaport town about 200 miles east, where chemical pollution in some areas has already raised the risk that residents will contract cancer in their lifetimes at least 2,000 times that of the average person.

Even if all the polluting ceased immediately, the damage is already done; it might be impossible to clean and regenerate the Noyyal River and the soil along its basin, says Prithviraj. “We’d have to turn back the clock 20 years.”

*Additional reporting by Aletta Andre and Anil Varghese.*