

Dirty Fashion

How pollution in the global textiles supply chain is making viscose toxic





Executive Summary

This report shines a spotlight on the environmental and human health impacts caused by the rapidly expanding viscose industry. It presents evidence from the top three viscose producing countries in Asia, showing how the environment, lives and livelihoods are being ruined by the dangerous chemicals and noxious gases its production generates. The report tracks the supply chain and establishes direct links between major European and North American brands and the polluting factories investigated.

Viscose, an increasingly popular man-made fibre, prized by high street brands and high-end designers alike, is not inherently unsustainable. However, when manufactured irresponsibly it can have a devastating impact on workers and people living in areas surrounding manufacturing plants.

As a plant-based fibre, viscose is sometimes presented as a 'green choice' for consumers but, as this report shows, most viscose on the market today is in fact produced using a highly chemical-intensive process. While much has been written about the problems caused by the production of cotton and oil-based synthetics, consumers are less aware of the negative impacts of the production of viscose and other semi-synthetic fibres, which are derived from the organic compound cellulose.

Cheap production, which is driven by the fast fashion industry, combined with lax enforcement of environmental regulations in China, India and Indonesia, is proving to be a toxic mix.

The investigation: Evidence and impacts of pollution from viscose manufacturing in Indonesia, China and India

In each of the countries we visited, we found clear evidence that viscose manufacturers are dumping untreated wastewater, which is contaminating local lakes and waterways. This pollution is having a devastating impact on local people's quality of life. In some areas we visited it is suspected to be behind the growing incidence of cancer, and villagers have stopped drinking the well water for fear of the effect it will have on their family's - particularly their children's - health. The factories are also destroying many traditional livelihoods, with local fishermen particularly badly impacted.

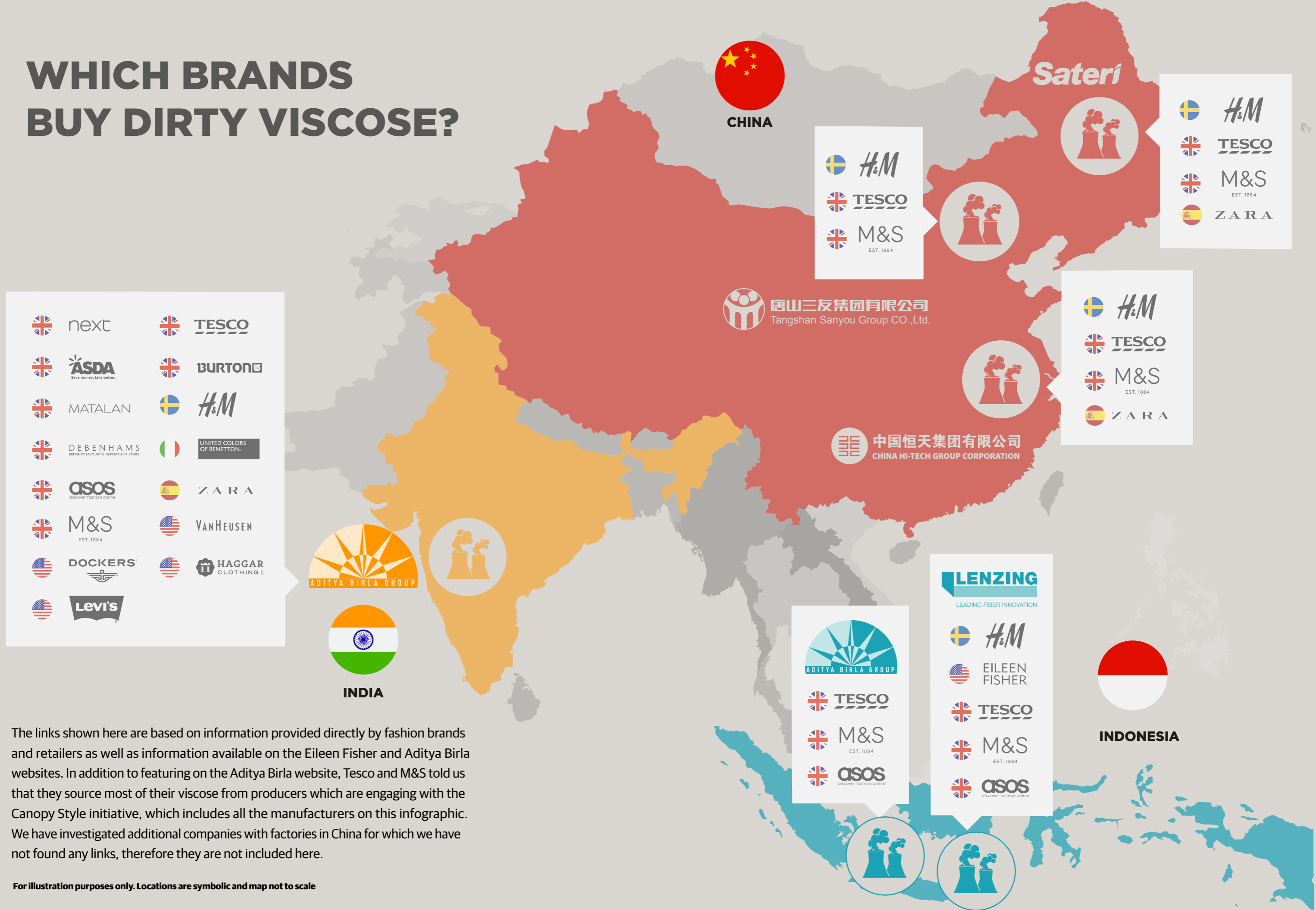
At factories in West Java operated by Indian conglomerate Aditya Birla and Austria's Lenzing Group, we found villagers doing the dirty work for manufacturers by washing intermediary viscose products in the Citarum river, directly exposing themselves to toxic chemicals contained in the fibre and adding to the river's already considerable pollution load. Our investigators were told that no one swims in the river anymore, as was once common. In one village they visited, viscose fibres were observed hanging out to dry and viscose waste littered the ground as far as the eye could see.

At production plants in the Chinese provinces of Hebei, Jiangxi and Shandong operated by viscose manufacturing giants including Sateri, Tangshan Sanyou and Shandong Helon, our investigators found evidence of water and air pollution, worker fatalities and severe health impacts on local residents. In Jiangxi, they found evidence that the viscose industry has played a role in polluting Poyang Lake, turning the water black, killing fish and shrimps, and stunting crop growth. Poyang, China's largest freshwater lake, is already under serious threat from desertification. It's home to several critically endangered species, including the finless porpoise, and provides critical habitat for half a million migratory birds each year.¹

At a plant operated by Birla subsidiary Grasim Industries in Madhya Pradesh, our investigators discovered a close nexus between the local authorities and Grasim management which resulted in most violations not being reported. However, it has become clear that pollution from Grasim Industries - the only big industrial complex in Nagda - is a large source of pollution for the Chambal River, a key tributary to the sacred River Ganges. Downstream villages reported dark black water with streaks of red and an intense smell of rotting radishes coming from the plant, indicating the presence of carbon disulphide. The factory also dumps huge quantities of its viscose rejects on the bank of the river which are washed away into the river during monsoons. Families are suffering cases of cancer and birth deformities, as their groundwater and soil have been contaminated by industrial pollution. Upstream, investigators reported villagers protesting against the factory's building of a dam, which has caused flooding, and plans to raise the dam height by one metre, which would lead to the submergence of agricultural lands and homes along the bank.

1. Eco Watch, Shocking Photos Show China's Largest Freshwater Lake Is Drying Up Fast, 10.11.2016, <http://www.ecowatch.com/china-poyang-lake-drought-2084891682.html>

WHICH BRANDS BUY DIRTY VISCOSE?



The links shown here are based on information provided directly by fashion brands and retailers as well as information available on the Eileen Fisher and Aditya Birla websites. In addition to featuring on the Aditya Birla website, Tesco and M&S told us that they source most of their viscose from producers which are engaging with the Canopy Style initiative, which includes all the manufacturers on this infographic. We have investigated additional companies with factories in China for which we have not found any links, therefore they are not included here.

For illustration purposes only. Locations are symbolic and map not to scale

Big fashion brands sourcing from polluting viscose factories

Through desk research and communication with clothing retailers, we were able to establish direct links between major European and North American brands and many of the polluting factories we investigated. We approached over 40 of the world's largest fashion brands and retailers directly to enquire about their viscose sourcing and manufacturing policies and the factories they are buying from. We received responses from a third of the brands and conducted our own research to fill in the gaps where information was lacking or incomplete. Many brands have no viscose-specific policies in place and a significant number of those who responded refused to reveal their suppliers.

Among the most transparent companies were Swedish clothing group H&M and Spanish giant Inditex (parent company of high street chain Zara), both of which disclosed supplier relationships with a wide range of viscose manufacturers in China, India and Indonesia. H&M is buying directly from six polluting factories that we investigated in Indonesia and China and is also sour-

ing from one factory in India. Zara/Inditex is sourcing from three polluting companies in China and one in India. Online retailer ASOS is sourcing from two polluting companies in Indonesia and India, while Tesco and M&S said they were sourcing from most major viscose producers.

Owing to the persistent lack of transparency throughout fashion supply chains the information presented in this report is just the tip of the iceberg when it comes to understanding which brands are buying from polluting factories. Because the viscose industry is so highly concentrated, it is very likely that most brands source from several of the companies we investigated. It is only when more brands start to disclose the identity of factories at each stage of their supply chain that we will know the full story of where our viscose clothing comes from, and the full impact of our high street purchases on our shared environment.

While it is encouraging that brands such as H&M and Zara are following through on their commitment to transparency, this is only a first step in the journey towards a more environmentally and socially responsible fashion industry that truly embraces

sustainability. In many cases the most transparent brands are also those in the fast fashion driving seat, pushing the environmental and social impacts of the fashion industry beyond what people or the planet can sustain.

The way forward: Putting pressure on viscose producers to clean up their act

The viscose industry is so concentrated, and the major fashion brands have such considerable purchasing power, that it would take relatively little effort to pressure irresponsible manufacturers to fall into line and clean up their act. With a small group of 10 companies controlling around 70 percent of global viscose production, there is a clear opportunity for rapid and transformational change across the sector. Some of these companies are already making progress, by discontinuing the use of wood pulp from unsustainable sources, such as highly biodiverse and ancient forests. However, the processing of that wood pulp into viscose staple fibre (VSF) and filament yarn remains a 'black box' about which little has been known so far.

Viscose is sometimes billed as being the 'fibre of the future', a good and sustainable replacement for cotton and synthetics. For this to be the case, the viscose industry has a huge task ahead of it to clean up production. Better alternatives already exist, as viscose can be produced with a reduced amount of toxic chemicals and in a closed loop system which eliminates pollution. Global demand for viscose is growing in step with the unprecedented growth in demand for clothing worldwide, boosted by population growth and the emergence of middle class consumers in China and India. Soon we will need to clothe a global population of nine billion people and to do this in a more sustainable way, viscose production needs to become as green as it is advertised as being.

Brands can play a key role in this process by demanding that viscose companies clean up their act and by offering them support in transitioning towards more sustainable production processes. The good news is that some producers and brands are beginning to embrace innovative approaches to viscose production. These now need to be taken to scale and rolled out industry-wide. Big brands can play a key role in this process by wielding their enormous power to create lasting change.



All three children of Kallu Singh, a soya bean farmer who lives near Aditya Birla's viscose plant in Nagda, showed signs of mental and physical deterioration between their 10th-12th years. The family says the water is to blame.



Water pollution in the Beijiao Xinhe River close to the Shandong Silver Hawk factory in China



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