# The human cost of textile recycling

## Case study India

The fashion industry has become infamous for its environmental footprint and poor working conditions.[1] In response to growing criticism, new legislation and pressure from civil society, fashion brands are increasingly considering sustainability and adopting circular business models.[i] [2]

Several brands have started to offer 'take-back' schemes, enabling customers to hand in their unwanted garments. Others offer repair services to extend the lifecycle of garments. Some have also launched online resell platforms or even offer second-hand clothes in stores.[3] Multiple brands are also promoting their 'sustainable' collections that make use of recycled materials, such as recycled cotton or polyester.[4]

At first glance, the various brands' efforts might seem like a green and sustainable way to reduce the industry's environmental footprint and waste. Unfortunately, it is not that simple. Not only do recycling and circularity initiatives fail to address the underlying problem of fast fashion's negative impacts – namely, the overproduction of cheap, low-quality clothes – but brands' recycling and circular economy strategies largely overlook a key factor: the rights and well-being of workers in the recycling industry.[5]

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i In a circular business model, emphasis lies on keeping products and materials in circulation through processes like reuse, repair and recycling.

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In India, the textile recycling industry employs an estimated 4 million informal workers.[6] The country has become a global recycling hub for used clothing and textiles, as well as residual (leftover) textiles from garment production, also known as pre-consumer waste.[ii] Working conditions in India's textile recycling industry are often exploitative, including a lack of proper protective gear for workers, which exposes them to chemicals and dust, workers receiving less than the minimum wage and a high incidence of child labour.[7]

☞ Read on to explore the realities workers in India's textile recycling industry face – a crucial yet largely neglected aspect of the global fashion supply chain.

## Textile waste and recycling in India

India accumulates around 7,793 million kilogrammes of textile waste every year, which is 8.5 per cent of total global textile waste. This includes imported used clothing and textiles, domestic used clothing and textiles, and pre-consumer textile waste both generated in India and imported from other producer countries. An estimated 34 per cent of this textile waste ends up being reused, while 19 per cent is 'downcycled',[iii] 5 per cent is incinerated, and 17 per cent is landfilled. This leaves about a quarter (1,939 million kilogrammes) of textile waste each year feeding India's recycling industry.[8]

Textile recycling has been an established industry in India for decades. It is mostly informally organised, with a large network of traders, collectors, agents and other intermediaries who facilitate the various processes. The country's largest textile recycling hub is the city of Panipat, north of Delhi, where since the 1980s many recycling facilities have processed truckloads of mostly imported used clothing and textiles each day.[9] Other well-established hubs are Amroha, located east of Delhi, and Tirupur in south India. Newer hubs have emerged in the states of Gujarat, Madya Pradesh, Maharashtra, Punjab and Rajasthan.

As we note above, around 4 million informal workers are said to be active in India's textile recycling industry, although numbers are hard to confirm due to the sector's pervasive informality, which leaves most workers unregistered.

Textile recycling usually consists of several stages:

- Sorting the waste material based on colour, type of material and size.
- Removing non-textile items like zippers and buttons from clothing.
- Cutting the textiles into smaller pieces of fabric (often but not always done).
- Shredding the material into fibres.
- Spinning the fibres into yarn.

In some areas, such as in Panipat, the waste material may be bleached before it is shredded. Once the yarn is spun from the shredded fibres, it may be dyed again in various colours.

ii This includes waste generated in spinning mills, cutting waste, sewing waste and rejected garments.

iii Downcycling refers to textiles that are unfit for purposes such as reuse or recycling and therefore used as stuffing or insulation material, cleaning wipes, and so on.

# About imported textiles

Shipping data reveals that India imported over 700 million kilogrammes of used clothing and textiles (henceforth 'used textiles') and residual textiles from all over the world for processing in 2024.[iv] [10] The textiles can be broadly distinguished into two categories: textiles that are still fit for reuse and those that are not.[11] Around 80 per cent of the used and residual textiles India receives are categorised as unfit for reuse, such as unwearable clothes and pre-consumer textile waste.[12]

## 'Unfit-for-reuse' textile waste in India

The large share of textiles imported into India categorised as unfit for reuse is a result of the country's import restriction on re-wearable second-hand clothes. India permits imports of re-wearable second-hand clothes only in the Kandla Special Economic Zone (KASEZ) in the state of Gujarat, and these clothes are required to be exported again after they are sorted and graded. Clothes imported into the KASEZ are sorted into bales of items such as shirts, trousers and tops, which get exported to other countries in Africa and Asia.[13]

However, a significant share of the imported second-hand clothes that are re-wearable are deliberately labelled as unfit for reuse, so they can enter India anyway. They are then resold informally on the domestic market or end up being recycled. Another common practice is that re-wearable second-hand clothes are purposely slashed in the KASEZ to make them unwearable and thus can be freely distributed throughout the country. Once beyond the KASEZ, some of these slashed clothes are then repaired for resale on informal markets.[14]

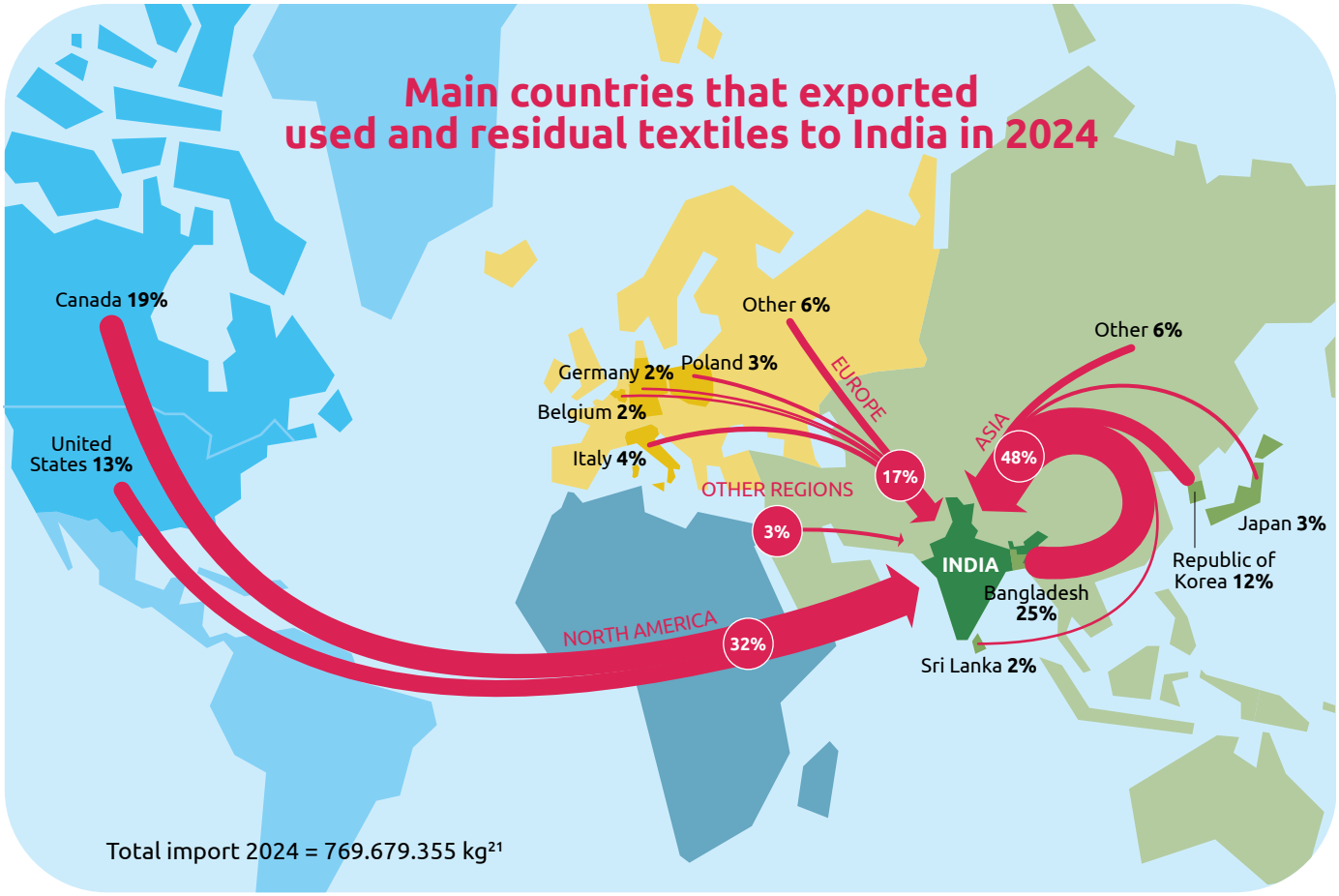
Large-scale collectors buy the imported non-wearable used and residual textiles that enter India's recycling market. They sort the waste based on the requirements of recyclers, who then start the process of recycling the textiles into new yarn for home textiles or garment production, or for downcycling into products such as filling for other industries.[15]

# Where do the imported textiles come from?

Shippers use the same product shipment codes for used textiles and residual textiles. This prevents us from distinguishing volumes of imported used textiles (those that consumers have discarded) from volumes of residual textiles (left over from garment and textile production).

The figure on the next page shows the main countries that export used and residual textiles to India. Bangladesh is the largest contributor, responsible for almost a quarter of the imports. Bangladesh has a huge garment and textile industry, producing many of the garment pieces that international fast fashion brands use. Waste that India imports from Bangladesh consists mostly of residual fabric scraps and cutting waste.[16] We assume that Canada, the United States and European countries are the largest exporters of used textiles to India.

iv All international shipments worldwide are required to be labelled with a code describing the type of product contained, and shipping data includes this product code.




## About India's pre-consumer textile waste

India has a large textile and garment industry, catering for domestic needs and contributing to the international market. There are many garment and textile production hubs across the country, with Bangalore, Tirupur, and the National Capital Region (NCR) significant producers for international demand.[v] The garment and textile industry accounts for 12 per cent of India's total exports, making it one of the largest contributors to the country's economy.[17]

In 2022, the number of workers in India's garment and textile industry was estimated at 45 million.[18] Yet part of the industry operates informally, especially in earlier production stages and where formal workplaces outsource work to unregistered work units or homeworkers.[vi] Therefore, the total number of workers in the industry may in reality be much higher.

The various stages of garment and textile production create all kinds of waste, from leftover yarn, thread and larger pieces of fabric to fabric cuttings and defective and excess garments.

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v The National Capital Region (NCR) covers the entire territory of India's capital (Delhi) and adjacent districts of neighbouring states.

vi Homeworkers are mostly women working at home on orders brought to them by agents or other intermediaries. Homeworkers are rarely formally contracted, experience work insecurity, receive very low wages and usually cannot negotiate their labour conditions. Learn more about homeworkers at the Homeworkers Worldwide website: www.homeworkersww.org.uk.

This pre-consumer waste that India generates may be reused, recycled or downcycled:

- Defective and rejected garment items, including rejected orders, can be resold.
- Fabrics that remain unused can be reused.
- Fabric waste and cuttings can be recycled into new yarn, often blended with virgin materials to improve its quality and subsequently used in production of new textiles.
- Fabric waste and cuttings are also downcycled and may end up as cleaning wipes or filling for mattresses or car seats.

## Perspectives of people involved in the industry – including the workers

Now we have seen the type of textile waste processed in India and how the industry broadly operates, let's consider the recycling system in more detail and the perspectives of the different actors who operate it, including the workers who turn the textile waste into recycled yarn.

Arisa with an Indian partner organisation undertook a short study in 2025 involving a team of investigators visiting and talking to various actors involved in the textile recycling industry in Panipat and Tirupur. People we spoke with included workers, owners and managers of recycling units, textile waste traders, production unit managers supplying pre-consumer waste, and civil society organisation (CSO) staff working to eliminate child labour in textile recycling.

We grouped the information we gained from the conversations and interviews we held (which ranged from the informal to the formal) by location (Panipat and Tirupur) and by type of stakeholder, and recorded the various perspectives on the different workplaces and working conditions. These people's stories illustrate the reality of work in India's textile recycling industry.

*Piles of pre-consumer textile waste waiting to be processed at a recycling facility*

# Panipat

Panipat is around 90 kilometres north of Delhi. As one of the world's largest textile recycling hubs, Panipat mostly processes used textiles imported from Western countries, such as the United States, Canada and European nations. It also processes some pre-consumer waste, especially from the nearby NCR garment and textile manufacturing hub.

In Panipat, textile waste is sorted, stripped of zippers and buttons, cut into smaller pieces, bleached, shredded and spun into yarn. Factories make new products from the recycled yarn – mostly home textiles like rugs and carpets. They sell these products on the domestic market and export them. Some cuttings processed in Panipat are not bleached and shredded but used to make colourful carpets where the pieces of fabric are knotted into the carpet.

Most recycling facilities in Panipat are relatively small unregistered units. Larger formally registered units are few in number. This leaves the city's textile recycling workers mostly unregistered as well. Earlier investigations showed that informal textile recycling workers in Panipat receive less than minimum wages, experience serious health risks through exposure to dust and bleaching fluids without protective equipment, and may not even have facilities such as drinking water and toilets at the workplace. There are no trade unions or other forms of worker representation, and child labour is widely known to be present in the industry.[19]

## Three CSO staff members with work experience in social projects in Panipat[vii]

*"We estimate there are about 30,000 textile recycling factories in Panipat, with only 4,500 of them registered. The lower tiers comprise mainly small and medium-sized enterprises.[viii] The larger companies hire skilled workers, who are mostly local. The smaller and medium-sized factories use unskilled and informal workers who are usually poor migrant workers from other states in India.*

*"Hired via contractors and unregistered, these informal workers rarely have access to basic entitlements like minimum wages and decent working conditions. There is no job security, and they work in unhealthy, unsafe environments. They are paid on a piece rate basis, so their wage depends on the weight of garments and textiles they process each day. These workers often live with six to seven family members in one room, and many of their children work as well. They work just to survive from day to day.*

*"Women workers remove zippers and buttons, do sorting work and weave carpets on hand looms. Male workers are involved in loading and unloading trucks, sort material from the larger bales, and are involved in all the processes using machinery, such as shredding and spinning. The men work 10 to 12 hours per day, without any overtime pay. The women work about eight hours per day.*

vii We have summarised and combined what the three CSO staff members told us as a single extended quotation. Like the other quotations below, this represents what stakeholders told us as accurately as possible but not necessarily using their original words and combining different people's accounts in some places. Also, some of the conversations and interviews were not in English.

viii The lower tiers of a supply chain are those where earlier production stages take place, such as cotton farming, spinning yarn and weaving cloth in case of the garment and textile industry.

*"The working environments are often very dirty and unhealthy. In some workplaces, the stench can be unbearable. Yet people have to work in such conditions, often with their young children beside them, because they have no alternative. Workers have skin rashes, cuts, eye irritation and breathing difficulties. Spending long hours sitting in the same position also take a toll on their bodies. Yet they rarely mention these harsh realities, which they have normalised and silently accept.*

*"There is fear among the smaller and medium-sized enterprises that they may have to close down, as they are mainly unregistered and do not comply with the law. There is a lack of knowledge and awareness among the owners. We should support them and improve their knowledge and capacity to help them provide better conditions for workers. The exporters and the government do not take responsibility for workers in the lower tiers."*

## What goes on in hand-cutting units as described by owner and workers[ix]

### Owners' perspective

*"I have worked in this sector for decades. I own a hand-cutting unit where we process jeans. There are five workers in this unit, all women. They work from 9 a.m. to 6 p.m. all days of the week. However, they are free to take leave.*

*"I buy the textile waste from different sorting centres in Panipat, where the jeans are divided into those suitable for the second-hand market and those that go for recycling. I am not sure where the stock originates from, although it is mostly imported. The workers process around 3,000 kilogrammes of jeans in five days.*

*"At this unit, the buttons and zippers are removed from the jeans, after which the fabric is cut into pieces and then sent to factories for producing gloves for automobile brands. The buttons and zippers are cleared of any last pieces of fabric by burning the cloth. Zippers that are still functioning end up with tailors for reuse. Broken zippers and buttons are sold to metal collectors. For the zippers and buttons, workers get INR 60 per kilo; for the cloth, INR 3 per kilo.*[x]

*"The textile recycling industry has grown over time. However, there is more competition now compared to earlier days. Therefore, my business has gone down. Prices for textile waste have also increased, from INR 5 per kilo 20 years ago to INR 16 nowadays.*[xi] *But the stock supply is consistent. There are also sufficient workers available, migrants from other states."*

### Workers' perspective

*"We cut the zippers and buttons off the jeans. We use a hasua knife, a folded iron blade, that we use with our bare hands. One of us has been working in textile recycling for 21 years. We are migrants from different states across India.*

*"The dust and the bad smell of the textile waste are very unpleasant, and not good for our health. Our eyes get irritated. We also cut our hands. The owner takes care of the wounds when this happens.*

*"One of the women here takes her baby with her to work. Her child sleeps and plays in the piles of textile waste, which is full of dirt and other pollutants. We know that the waste comes from other countries. We sometimes find foreign coins in the pockets of the jeans.*

*"We do this work for our survival."*

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ix Based on conversations with a hand-cutting unit owner and four female workers at two hand-cutting units.

x INR 60 was equivalent to about EUR 0.58 according to https://wise.com/gb/currency-converter/inr-to-eur-rate on 28 October 2025, while INR 3 was equivalent to about EUR 0.03.

xi INR 5 was equivalent to about EUR 0.05 according to https://wise.com/gb/currency-converter/inr-to-eur-rate on 28 October 2025, while INR 16 was equivalent to about EUR 0.16.

*A female worker using a folding blade to cut of zippers and buttons of used jeans*

# Tirupur

Tirupur in Tamil Nadu state in southern India is known as the country's knitwear capital. Much of the clothing and home textiles produced in the area is exported, including to many well-known fast fashion brands. There is a textile recycling cluster in the area that mostly processes pre-consumer waste from the local garment and textile industry, but input material also comes from across India and from other countries. The waste comprises mainly cuttings – said to be 90 to 95 per cent of the total pre-consumer waste – as well as leftover yarn, fabric rolls and defective garments.

The textile recycling sector in Tirupur comprises a tightly linked network of garment factories, waste traders, sorting units and open end (OE) spinning mills.[xii] Sorting units and traders play a central role in aggregating, sorting and segregating the material by size, colour and quality before supplying it to OE mills. These mills process the sorted waste into yarn by first shredding the material into fibres and then spinning the fibres into yarn. The yarn is then used in the Tirupur garment and textile industry to make new home textiles as well as garments such as T-shirts, vests and briefs, that are partly exported.

The investigative team did not find any trade unions in the area that represented textile recycling workers.

xii The open end (OE) spinning process is distinct from conventional ring spinning and commonly used to produce yarn from short staple fibres. OE spinning in the recycling industry often processes a blend of recycled and virgin fibres, depending on material availability and quality requirements. According to India's Open End Spinning Mills Association, there are over 600 OE spinning mills in Tamil Nadu. Their size ranges from 40 to 600 workers.

### Tirupur traders' perspective[xiii]

*"We source our waste primarily from factories and sorting units in Tirupur, from around 25 to 50 different facilities. One of us has an import licence and also imports waste from Sri Lanka and Bangladesh. This is done via agents. Some traders hire migrant workers to sort the waste. The imported waste is pre-sorted.*

*"The larger traders have daily transactions with buyers in Tirupur and in more distant hubs such as Panipat. Smaller traders sell on a weekly basis. Small-scale operations are often family-run, with brothers or spouses helping with sorting or loading.*

*"Most traders are registered with the government as either traders or importers. Most of us keep quite good documentation, such as receipts for waste transactions.*

*"We have been doing this work for 10 to 15 years. Competition and a shortage of workers are our main challenges. Shipping costs and taxes for importing waste are also a concern. But overall, we are happy with how the industry is organised. It provides a good income. We do not see any need to change the processes."*

### Export factory managers' perspective[xiv]

*"For us, selling our textile waste is an additional revenue stream. We produce T-shirts and track suits based on brand requirements. We are solely dependent on orders from brands, for which we buy raw materials and make the products. It is not feasible for us to reuse the textile waste, therefore we sell it. The selling price depends on fabric quality. On average, we receive about 35 to 50 per cent of the original fabric costs.*

*"We generate around 15 to 16 tonnes of textile waste per month. The waste mostly comprises cuttings, leftover fabric rolls and thread waste made of pure cotton, viscose blends and polyester blends. In the factory, the helpers are responsible for collecting and segregating the waste. It is stored either in dedicated storerooms or on the work floor until it is sold.*

*"We sell the waste to traders or sorting units. Whoever offers the highest price gets the waste. Traders often act as intermediaries, sourcing waste from factories and then selling it to super-stockists.[xv] There are also intermediaries who sometimes facilitate waste sales from factories to sorting units. The larger fabrics are used for making new textile items for the domestic market. The cuttings end up in spinning mills, where they are processed into recycled yarn.*

*"We maintain registers to record the waste transactions. We have agreements with solid waste disposal agencies and have sustainability-related policies and certifications, as required by Tamil Nadu law. No factory can dispose of their waste in a general area; we have to handle it properly. Our records ensure we can show compliance. Most traders are registered and keep records. When they pass on the waste, there are usually no further records, and traceability stops there. Sorting units often operate informally and are unregistered. Therefore, any waste sold directly to them is no longer recorded from that point on."*

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xiii Based on conversations with three traders.

xiv Based on conversations with two factory managers.

xv Super-stockists are larger sorting and/or storage enterprises that source from both smaller units and larger factories. For example, a larger factory may have 50 to 70 units, and only one person or enterprise, known as a super-stockist, may source cotton waste from all 70 units. There are 10 to 15 super-stockists in Tirupur.

## What happens at sorting units?[xvi]

### Employers' perspective

*"In general, sorting units get the textile waste via traders or by buying directly from factories. When we buy directly we have to arrange the transportation, otherwise the waste is delivered to us by the traders. We have fixed arrangements in place with suppliers and buyers. The waste we process consists mainly of coloured knitted fabric waste. Larger sorting units can store up to 2 to 3 tonnes of waste per day, whereas smaller units handle 400 to 500 kilogrammes per day.*

*"We sort the waste according to colour and size. After sorting, the smaller pieces of fabric and leftover thread, which make up around 70 per cent of the total waste, move on to spinning mills in Tirupur. The remaining 30 per cent consist of larger pieces of fabric, which we send to local units in Tirupur and Coimbatore for stitching vests and briefs. The sales happen directly or through agents. There is a 10 to 20 per cent profit margin with sales to spinning mills. Demand for waste remains steady throughout the year. Prices vary according to fabric type, colour and quality. White fabric and 'Pakistani green' are the highest-valued items. Some colours are less desired and are more difficult to sell.*

*"Sorting takes place manually. This is done by hired workers and family members. One worker sorts approximately 100 kilos of waste per day. About 80 per cent of sorting unit workers are women. Loading and unloading are done by men, also manually.*

*"The employment arrangements are entirely informal, as it is with most sorting units in Tirupur. The workers do not have a formal employment contract, do not get pay-slips and do not have access to social benefits such as Provident Funds (PF) or Employee State Insurance (ESI).*[xvii] *We have no desire to formalise our operations."*


*A sorting centre with bales of pre-consumer textile waste*

xvi Based on interviews with two managing directors and four workers (three female and one male) at two sorting units.

xvii India's Employees' State Insurance Act (1948) provides all employees (irrespective of number of hours worked, whether temporary or permanent, and covering contract workers) with benefits in case of sickness, injury or pregnancy: see https://labour.gov.in/sites/default/files/factories_act_1948.pdf. The Employees' Provident Funds scheme (1952) provides for state retirement benefits, or pension funds, for all waged employees at a workplace employing more than 20 people: see https://www.epfindia.gov.in/site_docs/PDFs/Downloads_PDFs/EPFAct1952.pdf.

### Workers' perspective

*"Our workplace is hot, dusty and noisy.[xviii] There is poor ventilation. It is hard to work in such heat, and the constant exposure to dust creates much discomfort and affects our health. We do not have any masks to protect us from the dust. We use the cotton cloth waste to cover our mouths. If we fall ill or get injured, we just get sent home, without any pay. There is no assistance provided from employers, who take no responsibility for our welfare.*

*"We usually work 10 hours per day, six days per week, both men and women. No premium is paid for overtime hours. Our wages are paid either weekly or monthly in cash. We do not get any documentation of our pay. Women receive INR 7,200 to INR 8,000 per month for sorting work, while men get paid around INR 12,000 per month for loading.[xix] One of us has been working here for 20 years now.*

*"The loading is physically demanding, and there are no mechanical aids to help the men doing this. One male worker wants to become a supervisor, since the heavy lifting and carrying are becoming too hard.*

*"With the sorting, women can sit down, which makes the work more manageable. Women can also keep their children nearby while doing the work. Some of us bring our children who are not yet of school age when there is no one to look after them. But this means the children are then also exposed to the dust and unhealthy environment.*

*"We appreciate our work, especially since we as the women workers can combine it with our family responsibilities. We would like to have fans installed for tackling the heat. A forklift truck would help reduce the strain of the men's loading work. Also, we would appreciate a Diwali bonus in recognition for our hard work."*

## Work in open end (OE) spinning mills[xx]

### Employer's and manager's perspective

*"The two OE spinning mills specialise in polyester blend yarn production. They each produce 100 tonnes of yarn and 40 tonnes of yarn per month respectively. The larger mill holds Global Recycled Standard certification.[xxi]*

*"Both mills rely exclusively on hosiery (mainly cotton socks, stockings and tights) waste. There are established networks of traders and sorting units for sourcing the material locally. No material is imported. The price of the cotton waste is primarily determined by colour, with darker shades being higher valued. The variety of fabric also influences price.*

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xviii Due to climate change, heat stress is becoming an increasingly serious workplace health risk, with an alarming number of heat stroke deaths reported in India's garment and textile sector. To learn more see https://www.business-human-rights.org/en/latest-news/india-report-finds-heat-stress-related-deaths-six-times-higher-than-official-data-calls-for-greater-protections-for-garment-textile-workers.

xix INR 7,200 to 8,000 was equivalent to about EUR 70 to 78 according to https://wise.com/gb/currency-converter/inr-to-eur-rate on 28 October 2025, while INR 12,000 represents about EUR 117.

xx Based on interviews with a managing director and a factory manager, and five workers (four male and one female) at two mills.

xxi The Global Recycled Standard (GRS) is a certification standard that ensures various objectives in recycled materials, including having recycling work facilities that meet strict social requirements. For more information on GRS, visit https://textileexchange.org/recycled-claim-global-recycled-standard.

*"The recycling process in the mills consists of shredding, carding, spinning and packing. Recycled polyester fibres are added during the process to enhance the yarn's quality and strength. The recovery rate from the waste material is about 90 per cent. One of the mills produces weaving yarn for home textiles, while the other focuses on knitting yarn for apparel.*

*"The recycled yarn is mostly sold to exporting manufacturers. Recycling operations are increasingly profitable. Yet there are challenges in securing consistent raw material supplies and finding suitable buyers. This is especially relevant regarding the colour. We cannot produce any colour that is demanded by potential buyers. It depends on the input material, which determines the colour of the output material.*

*"The two mills employ 220 workers in total: 160 workers in the larger mill and 60 in the smaller one. In the larger mill, 30 per cent of the 160 workers hold a formal contract. The 60 workers in the second mill are employed informally. Informal employment is a regular situation in the sector. The formally employed workers receive benefits such as PF and ESI, while those employed informally do not. Supervisory and managerial positions are typically filled by formally recruited local workers. Other roles are occupied by migrant workers from other states in India. Workers engage in machine operation, sorting and packing. Worker retention is not a challenge for us.*

*"We are interested in improving working conditions and in formalising employment relations for all workers if there is support for this, such as having fixed prices for the produced yarn and market stability for the cotton bales we buy."*

### Workers' perspective

*"We are all migrants from across India. Most recycling spinning mill workers are male. We secured our jobs via labour contractors, which is a normal practice in the area. Some of us started working here five years ago, while others have been here for 15 years. Men and women perform the same tasks. We do sorting, spinning and cleaning work.*

*"There is a lot of noise, dust and heat. We do not have any protective equipment such as gloves, masks or earplugs. Some of us suffer from dust allergies. Ventilation is inadequate. Working here brings risks for our health. New workers receive basic training. If there is an accident or injury, our employer provides first aid and takes responsibility for immediate care. But if we were provided with protective equipment, there would be fewer injuries.*

*"Our work schedule is 12 hours per day, seven days a week, with only short tea and lunch breaks. This takes a toll on our bodies. We need more rest breaks for recovering. It would help us to have additional co-workers, so we could share the workload. The work is too much for us.*

*"We do not have any proof of employment. No appointment letter or pay-slips. We get paid in cash. Sorting may pay INR 9,000 per month, while spinning may pay INR 14,100 per month.*[xxii] *Our wages remain modest, with no benefits, even after years of service."*

xxii INR 9,000 was equivalent to about EUR 88 according to https://wise.com/gb/currency-converter/inr-to-eur-rate on 28 October 2025, while INR 14,100 was equivalent to about EUR 137.

*A shredding machine at a recycling facility*

## Summarising workers' situations

As we have seen above, there is much to say about workers' situations in India's textile recycling industry. The widespread informality of work in the sector leads to workers not being recognised as formal employees. This strips them of job security and can expose them to exploitation.

Many workers are unaware of their rights or how to claim them. They do not know that social benefits exist, which leaves them unprotected in case of sickness or injuries, and without the possibility of receiving pension benefits when they are older. With no trade union to represent them, it is difficult for workers to negotiate better pay or improved conditions. The lack of regulatory oversight leaves these workers without institutional protection. Even at the OE spinning mill that holds GRS certification, 70 per cent of the workers were unregistered.

The combination of extended hours and minimal wages with the absence of social protection places these workers in a precarious financial position. Cash payments from the owner/employer, without any formal documentation, mean that wages are not guaranteed and cannot be legally claimed if withheld. The relentless work schedule, paired with at best modest pay and an unhealthy working environment, reflects workers' economic vulnerability that compels them to accept such undesirable conditions.

Workers expressed a sense of respect in doing the work. Beneath the surface, however, lies deep structural vulnerability of dependence on informal employment, inadequate workplace protection and an absence of institutional support, leaving workers exposed to economic and health risks.

Moreover, it is unclear which communities the workers we talked with for this study belong to, other than being migrants in need of work. Research shows that most garment and textile workers in exploitative work situations in caste-affected countries such as India, including child labourers, belong to the so-called 'lowest' castes or Indigenous communities.[20] These communities generally experience all kinds of restrictions in gaining access to decent work, and have to take the least desired jobs without any prospects of change. Although we cannot confirm that the workers we have quoted belong to such communities, it is certain that people experience such exploitative working conditions only when they have no other option available.

# Call to companies

Companies that use recycled textile content in their products, and those that promote textile recycling in their supply chains, need to apply a social lens to this part of their business, next to the widely adopted environmental view. They should be aware of the exploitation risks that affect textile recycling workers and take responsibility to include in their human rights due diligence the recycling sector as part of their supply chains.

Simply having recycled content in your garment or textile products – or knowing that your suppliers recycle pre-consumer waste – does not automatically mean that you sell responsible products to customers. Workers' rights are violated and they risk their health in processing the recycled content. Brands should map their supply chains to include the recycling facilities that create the recycled content in their products – or recycle their suppliers' pre-consumer waste – and ensure the workers in these supply chain tiers have decent and healthy working conditions, with the freedom to stand up for their rights.

To make a genuinely just transition to a fairer and cleaner fashion industry, companies must consider the situation of textile recycling workers. Business plans and initiatives involving recycling or circularity must look at the on-the-ground reality and the way it affects workers, and ensure full respect for recycling workers' labour and human rights. If not, any fashion industry transition towards sustainability will never be truly just.

*Textile waste in Panipat*

# Notes

1 McKinsey & Company, Business of Fashion, The State of Fashion 2022, 2022, https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf ; Sarah Butler, "Fashion retailer Shein finds child labour in its supply chain", 2024, The Guardian, https://www.theguardian.com/business/article/2024/aug/23/shein-fashion-retailer-child-labour-supply-chain.

2 McKinsey & Company, Business of Fashion, The State of Fashion 2022, 2022, https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf.

3 George Williams, "Circular Fashion: Committing to transparency and human rights from the outset", 22 April 2025, Ethical Trading Initiative, https://www.ethicaltrade.org/resources/blog/circular-fashion-committing-to-transparency-and-human-rights-outset ; Sophie Benson, "Fast Fashion Brands Launching Resale Platforms: Circular or Cynical?", 2 August 2022, Good on You, https://goodonyou.eco/fast-fashion-resale/.

4 Charlotte Pointing, "Recycled Polyester Doesn't Fix Fast Fashion's Over-Production Problems", 19 January 2023, Good on You, https://goodonyou.eco/recycled-polyester-fast-fashion/.

5 Charlotte Pointing, "Recycled Polyester Doesn't Fix Fast Fashion's Over-Production Problems", 19 January 2023, Good on You, https://goodonyou.eco/recycled-polyester-fast-fashion/ ; Anniina Nurmi, Circular Economy and Human Rights in the Fashion Industry, 2025, EETTi, https://eetti.fi/en/sisallot/circular-economy-and-human-rights-in-the-fashion-industry-a-guide-for-companies/ ; George Williams, "Circular Fashion: Committing to transparency and human rights from the outset", 22 April 2025, Ethical Trading Initiative, https://www.ethicaltrade.org/resources/blog/circular-fashion-committing-to-transparency-and-human-rights-outset ; Lucianne Tonti, "'The missing link': is textile recycling the answer to fashion's waste crisis?", 18 October 2023, The Guardian, https://www.theguardian.com/fashion/2023/oct/18/the-missing-link-is-textile-recycling-the-answer-to-fashions-waste-crisis.

6 Fashion for Good, "The Untapped Potential of Textile Waste in India", chapter 2 in Wealth in Waste: India's Potential to Bring Textile Waste Back into the Supply Chain, July 2022, https://reports.fashionforgood.com/report/sorting-for-circularity-india-wealth-in-waste/#chapter2.

7 Arisa and Sympany, Textile Recycling Unravelled, 2020, https://arisa.nl/wp-content/uploads/TextileRecyclingUnravelled.pdf; Al Jazeera, "Fast fashion and the dark side of textile recycling in India", 10 July 2025, https://www.aljazeera.com/video/101-east/2025/7/10/fast-fashion-and-the-dark-side-of-textile-recycling-in-india.

8 Fashion for Good, Wealth in Waste: India's Potential to Bring Textile Waste Back into the Supply Chain, July 2022, https://www.fashionforgood.com/report/wealth-in-waste/.

9 Arisa and Sympany, Textile Recycling Unravelled, 2020, https://arisa.nl/wp-content/uploads/TextileRecyclingUnravelled.pdf.

10 UN Comtrade database, data for product groups HS 6309 and 6310, https://comtradeplus.un.org/.

11 European Environmental Agency, "EU exports of used textiles in Europe's circular economy", 2023, https://www.eea.europa.eu/publications/eu-exports-of-used-textiles.

12 UN Comtrade database, data for product groups HS 6309 and 6310, https://comtradeplus.un.org/.

13 Norris, L., "The limits of ethicality in international markets: Imported second-hand clothing in India", 2015, Geoforum, https://discovery.ucl.ac.uk/id/eprint/1471418/1/1-s2.0-S0016718515001529-main.pdf ; UN Comtrade database, data for product group HS 6309, https://comtradeplus.un.org/ ; IDH, Sattva Consulting, Unveiling India's Textile Waste Landscape: a Cost Analysis, 2023, https://www.idhsustainabletrade.com/uploaded/2023/09/IDH_textile-waste-cost-analysis_2023.pdf.

14 Norris, L., "The limits of ethicality in international markets: Imported second-hand clothing in India", 2015, Geoforum, https://discovery.ucl.ac.uk/id/eprint/1471418/1/1-s2.0-S0016718515001529-main.pdf.

15 IDH, Sattva Consulting, Unveiling India's Textile Waste Landscape: a Cost Analysis, 2023, https://www.idhsustainabletrade.com/uploaded/2023/09/IDH_textile-waste-cost-analysis_2023.pdf.

16 Fashion for Good, Wealth in Waste: India's Potential to Bring Textile Waste Back into the Supply Chain, July 2022, https://www.fashionforgood.com/report/wealth-in-waste/.

17 IBEF, "Textile industry & market growth in India", https://www.ibef.org/industry/textiles ; Ministry of Commerce & Industry, "Threads of progress: How Make in India is Shaping the Future of Textiles and Apparel Industry", 1 April 2025, https://www.pib.gov.in/PressReleasePage.aspx?PRID=2117470.

18 Fashion for Good, Wealth in Waste: India's Potential to Bring Textile Waste Back into the Supply Chain, July 2022, https://www.fashionforgood.com/report/wealth-in-waste/.

19 Arisa and Sympany, Textile Recycling Unravelled, 2020, https://arisa.nl/wp-content/uploads/TextileRecyclingUnravelled.pdf.

20 Ethical Trading Initiative (ETI), Base Code Guidance: Caste in Global Supply Chains, 2019, page 4, https://www.ethicaltrade.org/sites/default/files/shared_resources/ETI%20Base%20Code%20guidance%2C%20caste%20in%20global%20supply%20chains.pdf.

21 UN Comtrade database, date for product groups HS 6309 and 6310, https://comtradeplus.un.org/.

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## About Arisa

Arisa – Advocating Rights in South Asia – works to improve respect for human rights and labour rights in global supply chains. Working with civil society partners in India, Bangladesh and Pakistan, among other countries, we expose human rights and labour abuses in the production of garments, leather, natural stone and vegetable seeds, and we call on companies and governments to ensure that rights are respected. We prioritise the position of the people in the most vulnerable situations in global supply chains and work to eliminate child labour, forced labour and caste discrimination. For more information,see www.arisa.nl

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The stories in this publication are based largely on informal conversations with various stake-holders and rightsholders and partly on more formal interviews.

The photographs used in this publication are to illustrate the stories. They do not reflect the workplaces or workers quoted in the stories.

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