

DENIM PRODUCTION
IN TÜRKIYE:

SUSTAINABILITY IN PRACTICE?

BETWEEN CODES OF CONDUCT AND PRODUCTION REALITY

JUST FASHION 



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EDITORIAL

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YEAR OF PUBLICATION

2025

LAYOUT

Atelier Création Graphique - www.acg-bxl.be

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ABSTRACT

Do you own a pair of denim jeans, or know someone who does?

Denim is one of the most widely worn garments in the world today. Yet behind this everyday familiarity lies a production system shaped by hidden labour costs, exploitation, environmental damage and global inequalities. This report investigates denim production not only as a matter of textile manufacturing, but as an intensified form of contemporary capitalist production. Tracing the transformation of jeans from durable workwear in the nineteenth century to global fast fashion commodity, its story reveals how functionality has been replaced by aesthetics, and how labour has become increasingly invisible in the production regime.

Türkiye occupies a unique and central position in this story. As one of the world's leading denim producers, it forms a critical link in the supply chains of global brands. Based on a combination of desk research and fieldwork,

the research resulted in two complementary reports. [The report "Denim Production in Türkiye: From Workers' Wear to Workers' Harm"](#) focuses on the historical and social dimensions of denim production with a particular focus on Türkiye, while this report at hand presents findings from field research, particularly concerning social and ecological sustainability practices, workers' health and blind spots. By combining desk and field research, the reports examine how denim production operates across different levels of the supply chain, using a multi-stakeholder approach that spans certification programmes, large-scale factories, small workshops, and workers' lived experiences.

The findings reveal how the multi-layered and largely invisible structure of the supply chain disperses and obscures responsibility. The shrinking sector, barriers to unionisation, the precarious position of labor, and how cost pressures are passed down to the lowest levels of the chain are interlinked components of this picture. The report highlights that sustainability cannot be confined predominantly to environmental indicators – labour justice and climate justice are inseparable.



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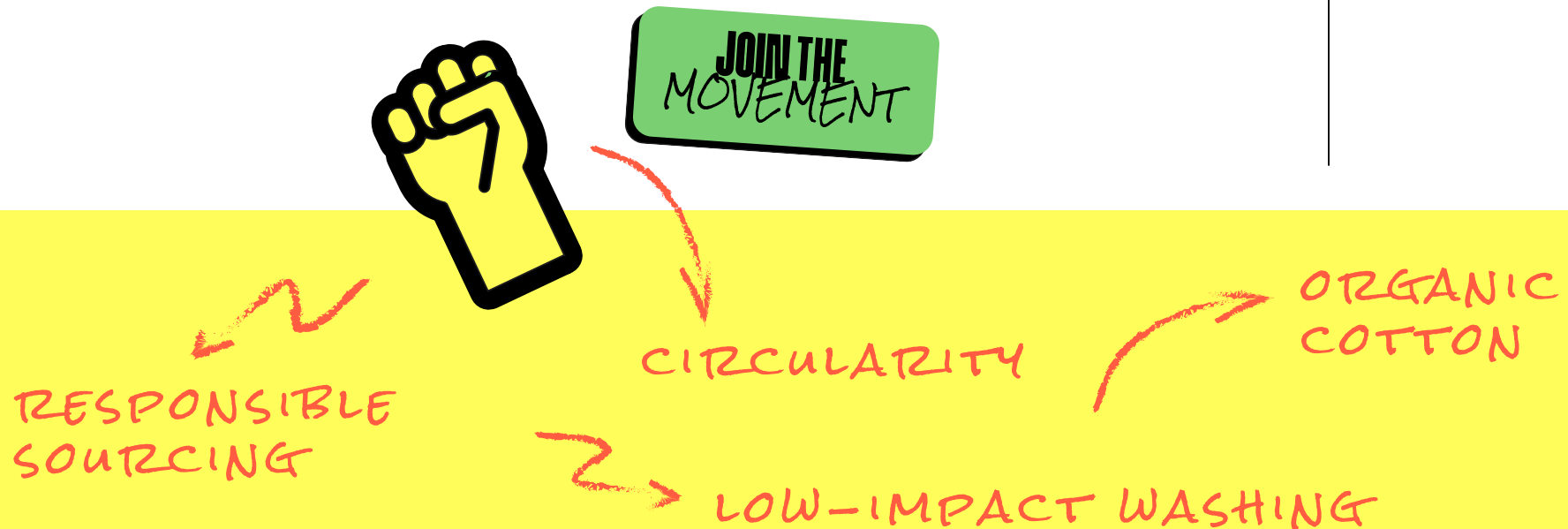


1. INTRODUCTION

Over the past decade, sustainability has become a dominant narrative shaping the denim industry. Brands increasingly communicate environmental commitments through public announcements, audit mechanisms, and certification schemes. Terms such as responsible sourcing, circularity, organic cotton, and low-impact washing have become standard vocabulary within corporate communication. In this context, “sustainability” is often used primarily to refer to environmental considerations, while social and labour conditions remain separate, secondary or – at worst – unaddressed. However, this report highlights ecological sustainability as inseparable from just labour conditions and social realities, arguing that both dimensions cannot be meaningfully addressed in isolation.

Yet when examined from within production sites in Türkiye, a more complex and often contradictory picture emerges. The translation of sustainability discourse into everyday industrial practice reveals significant gaps between promise and implementation. Environmental improvements are frequently pursued without corresponding integration of labour conditions and social realities.

The following section examines how sustainability and social responsibility initiatives materialise – or fail to materialise – on the shop floor. Drawing on interviews with producers, certification representatives, and workers, as well as investigative field encounters, the analysis highlights structural limitations embedded within current denim supply-chain mechanisms.



2.

Tracing Denim Production in Türkiye: A Multi-Layered Research Methodology

The prevailing view on denim production is now entirely shaped by the concept of “fast fashion,” driven by advancing technology and a massive increase in production volume. This shift has fragmented responsibilities and oversight mechanisms while spreading production across a global network. Accepting the current situation as merely “an inevitable function of the global system” rationalizes and obscures rights violations and environmental damage in production processes. To break this invisibility, the research examines production methods, sustainability claims, and labor experiences together. This study is not an attempt to collect quantitative data, but rather an effort to provide a qualitative understanding of the invisible layers of production. In this vein, the study is structured around a multi-actor methodology that extends from certification

programs to fabric manufacturers, and from garment factories to basement workshops.

The field research was carried out through a series of steps designed to emphasize experiential depth rather than statistical generalization.

Three certification programs claiming transparency were contacted; direct interviews were conducted with two of them, while one shared only the policy documents available on its website. Large-scale denim fabric manufacturers in Türkiye were approached, but only one responded positively to the interview request; the lack of response from the others was considered an indication of corporate opacity in the sector. Interview requests were also sent to high-capacity factories operating in major production hubs such as Istanbul, Malatya, Şanlıurfa, and Tekirdağ, including those claiming to practice sustainable and fair production; however, physical access was not possible due to security barriers and the inability to reach authorized personnel. This situation was recorded as significant data regarding sectoral transparency.



LET'S TALK
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Looking for male and female overlock operators, ironers and packaging workers.
Note: Pay is weekly.

© Vivien Tauchmann, 2026

Denim waste in a sewing workshop, Bağcılar, İstanbul
© Vivien Tauchmann, 2026

Workshops carrying out washing, dyeing, and surface treatment represent the most “invisible” links in the production chain. Dozens of workshops in industrial sites and neighborhoods in Istanbul were surveyed; alongside limited internal interviews, detailed observations were made regarding the surrounding areas and externally visible production practices. Due to the closed nature of these spaces, field research relied on acceptable indirect access rather than formal interview requests, enabling the documentation of largely uninspected processes.

Central to the research are worker interviews reflecting the labor dimension of production. Interviews were conducted with workers employed in factories within global brand supply chains, as well as experienced workers active since the early 2000s, when the textile sector underwent fast fashion transformation. Emphasis was placed on diversity of experience rather than number, with in-depth interviews including women and unionized workers.

This approach made it possible to reveal that denim is not just a technical process, but a complex production regime shaped by pressure for speed, cost, and flexibility, and often deliberately rendered invisible.

The field data presented in this section provides a basis for evaluating the current functioning of denim production in terms of workers' rights, sustainability claims, and fast fashion dynamics. In the following sections, these multi-layered field findings will be analyzed to reveal the structural contradictions of the denim industry.

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3.

Sustainability in Practice? Between Codes of Conduct and Production Reality

3.1. Environmental Sustainability vs. Social Sustainability

Across interviews and field research, a central imbalance emerges between environmental and social sustainability. Certification systems and brand initiatives overwhelmingly prioritise measurable environmental indicators – chemical management, water consumption, or raw-material sourcing – while labour conditions remain marginal.

Environmental improvements are easier to quantify through technical data, whereas labour relations are embedded in complex social arrangements involving subcontracting, informal employment, seasonal migration, and unequal bargaining power. Consequently, labour issues frequently remain outside the operational

scope of sustainability programs. This imbalance is particularly significant in Türkiye's garment sector, structurally dominated by small enterprises.

In districts such as Bağcılar and Gaziosmanpaşa in Istanbul, washing, finishing, and sewing workshops operate under intense economic pressure while carrying substantial environmental responsibilities, including costly waste-management requirements. Unlike large integrated factories, these producers rarely access certification systems or direct communication with brands, despite remaining essential nodes within production networks.

Workers themselves frequently linked labour and environmental concerns. A woman employed in a large factory in Malatya described a nearby stream emitting strong chemical odours, though she did not know how waste disposal was managed. Such observations demonstrate how environmental harm is experienced not as an abstract ecological issue but as part of everyday life surrounding industrial production.

“Without leaving the fast-fashion philosophy, sustainable denim is almost impossible.”

A Denim and Labour Expert, Istanbul

“If brands don't pay, suppliers cannot change.”

A Denim Producer, Istanbul



Mix of pumice stone and Potassium Permanganate waste behind dryer drums, Gaziosmanpaşa, Istanbul

3.2. Sustainability as Trend

Interviewed producers repeatedly described sustainability demands as fluctuating priorities shaped primarily by brand expectations rather than long-term structural transformation. A representative of a large internationally recognised denim manufacturer (Orta Anadolu), producing under Global Organic Textile Standard (GOTS) certification for brands including Levi's, Diesel, Replay, G-Star, Lee, Wrangler, and H&M, characterised sustainability requirements as inconsistent and trend-driven. According to the interviewee, one year buyers demanded organic cotton, the next recycling technologies, followed by water reduction or carbon accounting targets.

This constant recalibration creates uncertainty at factory level. Investments in machinery, training, or process redesign require long-term planning, yet sustainability criteria often shift faster than production infrastructures can adapt. Rather than representing a stable transition, sustainability appears as a moving framework shaped by marketing cycles within global fashion companies.

Producers also emphasised that environmental upgrades frequently increase operational costs without

corresponding price adjustments from buyers. Replacing potassium permanganate in denim finishing, for example, requires technological investment and more expensive materials.

Several manufacturers noted that brands demanding such improvements often refuse to compensate these costs, transferring financial risk downward in the supply chain. Sustainability thus becomes conditional upon economic feasibility rather than ethical commitment.

3.3. Certification Programs, Structural Limits, and the Problem of Paper Compliance

To understand how sustainability is operationalised through certification, three widely used frameworks were examined: Bluesign®, Better Cotton, and the Global Organic Textile Standard (GOTS). Each addresses specific production stages, yet none functions as comprehensive governance across the supply chain.

Bluesign® focuses primarily on chemical management and environmental safety. Better Cotton targets agricultural practices at farm level, promoting improved cultivation methods. GOTS regulates predominantly the processing of organic fibres and environmentally

“Brands demand sustainability but refuse to pay the price difference.”

A Denim Producer,
Istanbul

¹For further information, please see Temiz Giysi Kampanyası, “Potassium Permanganate Spray Report,” 2019, accessed February 19, 2026, <https://www.temizgiysi.org/wp-content/uploads/2019/07/Clean-Clothes-Campaign-Turkey-Potassium-Permanganate-Spray-Report.pdf>.

Potassium permanganate (PP)

A chemical oxidising agent commonly used in denim production to create distressed effects. It is typically applied in liquid form through spraying or washing processes, allowing manufacturers to alter fabric appearance quickly and at low cost. It is classified as a hazardous substance. Exposure can cause skin and eye irritation, respiratory problems, and potential long-term health risks, particularly when handled without adequate protection. It remains widely used due to its low cost and efficiency.¹

Wastewater mixed with potassium permanganate running onto the street, Esenyurt, Istanbul

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responsible textile production, even though social criterias are focused on as well. Despite these different entry points, all three systems share structural limitations. Their interventions remain largely technical and environmentally focused, while labour relations and broader social conditions fall only partially within their scope.

Monitoring frequently depends on producer participation and self-reporting, shifting responsibility toward suppliers without addressing purchasing practices and pricing pressures imposed by brands. Access to certification is also uneven. Larger manufacturers can integrate such standards, whereas much production in Türkiye takes place in small and micro-scale workshops operating with narrow margins and limited administrative capacity. Certification fees, reporting requirements, and infrastructural investments remain difficult for these producers to meet.

As a result, sustainability tends to concentrate within large vertically integrated factories, while smaller workshops – despite forming the backbone of production – remain outside formal sustainability frameworks. Certification therefore risks reinforcing existing hierarchies rather than transforming them.

Investigative visits outside formal audit and interview contexts further revealed a structural gap between audit and production reality. Several small-scale producers stated openly that sustainability documentation could be obtained through intermediaries or brokers. Many factories rarely work directly with international brands; instead, intermediary companies manage compliance paperwork and communication. Certifications may therefore exist on paper while everyday production conditions remain largely unverified, with audits temporarily reorganising spaces without fundamentally altering routines.

3.4. State Regulation: the Case of the Sandblasting Ban in 2009

The history of sandblasting in Türkiye provides a critical counterexample demonstrating how meaningful change has occurred within the industry. Unlike certification-driven initiatives, the prohibition of sandblasting emerged from worker-led struggle.

Introduced to create the worn aesthetic popularised by fashion brands, sandblasting exposed workers to silica dust, causing widespread and often deadly silicosis, an irreversible lung disease caused by inhaling the fine

“We don’t involve ourselves in wages or gender issues.”

A representative of a certification program, Germany

“Preparations are made one week in advance when an inspection is due. If cleaning is being carried out at the factory, we understand that an inspection is imminent.

If advance notice is given, this is not an inspection.”

A Worker, Şanlıurfa

“One limitation we recognise is that certification alone cannot solve systemic issues. Purchasing practices of brands play a major role. Brands cannot demand sustainability while imposing extreme price pressure and deadlines.”

A representative of a certification program, Great Britain



silica particles, leading to severe respiratory damage, chronic breathing difficulties, reduced lung capacity, and often premature death. Workers frequently lived inside factories, inhaling dust continuously, while particles spread into surrounding neighbourhoods, blurring the boundary between workplace hazard and environmental exposure.

Former sandblasting worker Bego Demir, who lost nearly half of his lung capacity and was diagnosed with silicosis in 2007, described witnessing numerous deaths among colleagues and relatives. After doctors warned he might only live six months if conditions continued unchanged, he wrote a public letter that catalysed widespread attention and led to the founding of the Sandblaster Workers Committee (Kot Kumlama İşçileri Dayanışma Komitesi).

Excerpt of the letter "Leyleğin Atılmış Yavruları"² (The Stork's Cast-Off Chicks) by Bego Demir:

"When a stork has more chicks than it can feed in its nest, it leaves behind only as many as it can raise and throws the rest out of the nest.

We were born in Taşlıçay village, in the Karlıova district of Bingöl. Until the 1990s, we made a good living from animal husbandry. [...] Life was good, until the village guard system was introduced. [...]

I was one of those who left. Because of financial hardship, I had to drop out of school and came to Istanbul. Since I was still a child, I had great difficulty finding work. In the first places where I found jobs, I couldn't stay because there was nowhere to sleep. Later, I began working in sandblasting workshops where friends of ours—who had come to Istanbul earlier—were employed. Those workshops provided sleeping places. The wages were the same as in other workplaces; the only thing that made them attractive to us was that we could sleep there.

Sandblasting was still new in Türkiye at the time and not very developed. In dark rooms, jeans were bleached with sand. To avoid using too much sand, small fans were installed in the rooms. Those who worked in these places were either people like us, who had no place to stay, or foreign workers. [...]

While there had once been only a handful of sandblasting workshops in Istanbul, their number suddenly rose into the hundreds. [...] To open such a workshop, you didn't need much: a compressor, an air tank, a few spray guns—

and, of course, a cheap basement and workers to fill it. [...] But where was the state? These workplaces paid taxes. They paid electricity bills. They paid water bills. Didn't anyone wonder what was being produced there, or who was working there? After all, you have labor laws and institutions meant to oversee them. If you supply electricity and water and collect taxes, then you must also inspect. [...]

Today, we are all sick—with a disease that has no cure. In our village alone, there are officially 187 patients. Including those who never went to a doctor, around 300 people are ill, helplessly waiting for death. [...]

So far, we have lost three friends. Four others are confined to bed, their lives dependent on oxygen tanks. In truth, we are all shattered. We can no longer work; even walking is difficult. Our families depend on us, but we can no longer take care of them. This hurts us more than the illness itself.

Just as guilty as the employers who brought us to this state is the state itself. It must take responsibility. If it cannot heal us, then it must at least secure our lives from here on.

Now I wonder: will those who read this text stand with us? Or will I truly believe this story of the stork?

Are we the chicks that were thrown out of the nest?"



Workplace security signs in washing and finishing facility in Gaziosmanpaşa, İstanbul
© Vivien Tauchmann, 2026

² Bego Demir, "Leyleğin Atılmış Yavruları," Kot Kumlama İşçileri Dayanışma Komitesi, accessed February 19, 2026, <http://kotiscileri.org/kategori/silikozis/>.

Through collective organising, affected workers documented cases, travelled across regions to identify undiagnosed illnesses, and built alliances with doctors, lawyers, unions, and activists. Although official estimates suggested between 8,000 and 10,000 workers had been employed in sandblasting, organising remained difficult due to informal employment and geographic dispersal³. During the struggle, 147 workers lost their lives⁴.

The campaign gradually expanded. They built national and international awareness and pressured brands and policymakers. Government response was initially limited despite growing public visibility. Only after sustained pressure did regulatory change occur. Türkiye banned sandblasting in 2009, followed by expanded healthcare access for affected workers in 2010. More than one hundred global brands subsequently pledged to eliminate the practice⁵.

This history demonstrates that substantial regulatory change did not originate from certification systems or voluntary commitments by brands but from worker knowledge, collective organisation, and public accountability. Worker testimony reframed denim production through lived experience, linking fashion innovation directly to occupational harm.

3.5. Denim and Sustainability: Transition or Trend?

The interviews reveal that sustainability initiatives often coexist with unresolved structural contradictions. A producer operating in the premium sector for brands such as Lacoste, Ralph Lauren, and Kings of Indigo described investments in green factory infrastructure and circular economy participation. Yet technological optimisation frequently functioned as efficiency improvement rather than systemic transformation.

Environmental gains occurred alongside persistent labour precarity, outsourced production, and unresolved waste externalities, including chemical sludge ultimately ending in landfills. The interviewee acknowledged that denim production remains dependent on accelerated, low-cost labour shaped by global competition. In this light, sustainability appears less as a transition away from extractive production and more as an adjustment within it.

The experience of the sandblasting ban suggests that lasting transformation requires political pressure, worker participation, public awareness, and regulatory enforcement. Without addressing purchasing practices and economic power imbalances, sustainability risks remaining a managerial framework layered onto unchanged production relations.

³ Kot Kumlama İşçileri Dayanışma Komitesi, accessed April 6, 2026, <http://kotiscileri.org/kategori/english/>.

⁴ Based on an interview with Bego Demir, organiser of the Solidarity Committee of Sandblasting Workers and founder of Temiz Giysi Kampanyası, Istanbul, December 2025.

⁵ See, for example, H&M Sustainability Department, "Policy on Sandblasting," accessed February 19, 2026, <https://hmgroupp.com/wp-content/uploads/2020/10/Sandblasting-Ban.pdf>; and Levi Strauss & Co., "It's Time to Ban Sandblasting," *Unzipped* (blog), accessed February 19, 2026, <https://www.levistrauss.com/2010/09/07/its-time-ban-sandblasting/>.



4.

What Denim Costs Human Lives

The transition into Istanbul's industrial zones is gradual rather than abrupt. Residential streets merge into warehouses, logistics depots, and multi-storey production buildings. In neighbourhoods such as Esenyurt, Bağcılar, and Gaziosmanpaşa, denim production sites remain largely indistinguishable within the urban fabric, offering few visible signs of their role in a global supply chain producing garments sold across Europe and beyond.

Inside, the atmosphere shifts according to each stage of production taking place. Sewing, finishing, and packaging workshops are often located in multi-storey buildings within working-class residential neighbourhoods. Narrow staircases connect small companies operating on separate floors, where half-open doors reveal the continuous rhythm of sewing machines and steaming irons, accompanied by varying radio music.

Laundry and washing facilities are typically situated in industrial zones shared with metal workshops

and mechanical repair businesses. The surrounding environment signals heavier forms of bodily labour: welding sparks, stacked machine parts, and delivery trucks navigating narrow streets. Inside denim laundries, humidity and heat dominate the workspace. Around large rotating washing drums, steam, detergent, and chemical residues saturate the air. During our visits to several of such subcontracting facilities, irritation and coughing began within minutes, while workers continued their routines without interruption, moving through conditions where exposure appeared normalised.

These laundries represent one of the most decisive stages of denim production. Here, jeans are transformed from fabric into fashion through processes designed to artificially age, fade, and damage the material. Distressing – the deliberate destruction of fabric – creates the aesthetic value of contemporary denim. It is also where exposure to chemicals, heat, and physical strain becomes most intense.

Access to larger, often certified factories proved impossible during the research period. While representatives described controlled chemical management and high environmental standards, visits



*Denim fabric rolls on the sidewalk in Bağcılar, İstanbul
© Vivien Tauchmann, 2026*



were repeatedly declined. The investigation therefore focused on smaller subcontracting facilities, where production realities unfolded more openly. These Tier-2 workshops typically have no direct relationship with brands regarding wages or labour conditions, yet they carry out some of the most hazardous processes.

Workers rarely wore protective equipment. Most worked in everyday clothing; occasionally a plastic apron protected against splashes. Gloves were mostly uncommon in the places we went to. In one facility, a worker operating near potassium permanganate (PP) wore flip-flops, his feet stained bright purple from the chemical. Large industrial washing machines mixed pumice stones with the PP bleaching powder, while liquid residues leaked openly onto the floor and into the drainage. In spraying areas, potassium permanganate was presented proudly as a “magic” substance capable of producing any design effect, applied manually without masks or protective eyewear. In another facility, workers demonstrated manual distressing using sanding blocks.

Potassium permanganate (PP), classified as a hazardous substance by the European Chemicals Agency, can cause severe skin burns and eye damage, respiratory irritation, and potential long-term organ harm through repeated

exposure⁶. Despite growing awareness, it remains widely used because it is inexpensive, fast, and easy to apply – significantly cheaper than alternatives such as laser or ozone technologies. It’s continued use reflects a recurring pattern within denim production: safer technologies exist, but economic pressure determines which methods prevail.

How workers spoke about risk varied according to experience. In some workplaces, PP was described as largely harmless – a substance that might cause “a little coughing”. Yet workers, especially those with long-term experience in the sector, described accumulated health problems: back pain from prolonged standing, eye strain from constant visual focus, respiratory difficulties, and persistent skin conditions. Several spoke of colleagues who had become seriously ill. One worker described a friend from the washing section who developed cancer after years of exposure. “Everyone who works long enough gets something,” another explained.

Here, a central contradiction of denim becomes tangible. Originally designed as durable workwear meant to protect labouring bodies, jeans are now produced through processes that place workers themselves at high risk. The forced destruction of the fabric mirrors the gradual wearing down of those who produce it.

“They give the workers in the washing department one dairy product per day (to prevent them from getting poisoned).”

A Worker,
Kahramanmaraş

⁶ For further information, please see Temiz Giysi Kampanyası, “Potassium Permanganate Spray Report.” Temiz Giysi Kampanyası. “Potassium Permanganate Spray Report.” 2019. Accessed February 19, 2026. <https://www.temizgiysi.org/%20wp-content/uploads/2019/07/Clean-Clothes-%20Campaign-Turkey-Potassium-Permanganate-%20Spray-Report.pdf>.

“When the inspection comes, they tie the scissors to the table, but normally there's no such thing. We normally work in slippers. When the inspection comes, they make us wear shoes.”

A Worker, Kahramanmaraş



4.1. After the ban of Sandblasting: New Techniques, Old Risks

The widespread adoption of PP must also be understood historically. After Türkiye banned sandblasting in 2009, the industry sought alternative bleaching techniques to maintain the distressed aesthetic demanded by the market.

The disappearance of one hazardous technique did not eliminate risk; it transformed it. New chemical processes emerged to maintain the same distressed aesthetic demanded by the market. Workers repeatedly described PP as replacing sandblasting because it is faster and less problematic. Producers themselves framed it as progress: less visibly dangerous, more efficient, easier to control. The shift demonstrates how technological innovation within the industry often redirects rather than resolves harm.

Beyond bodily exposure, these processes generate contaminated wastewater and chemical residues, linking occupational risk directly to environmental degradation. Pollution and labour exposure therefore cannot be separated; both emerge from the same production logic.

4.2. Economic Pressure and Ignored Precarity

Labour conditions in Türkiye's denim sector cannot be understood without considering the broader economic environment. The industry is dominated by small and medium-sized enterprises operating under intense price competition. Producers described shrinking margins, rising inflation, and increasing relocation of orders to lower-cost countries such as Egypt. Under these pressures, labour becomes the primary variable through which costs are adjusted.

Workers consistently reported wages barely sufficient for daily survival, often below the poverty line. Informal employment remains widespread, particularly through subcontractors recruiting daily labourers on short notice. These arrangements transfer insecurity onto workers while allowing factories to respond rapidly to fluctuating orders. In practice, such precarious systems disproportionately affect migrant and displaced workers – including Kurdish, Syrian and Afghan workers – whose limited access to contracts, social security, and legal protection makes them especially vulnerable to exploitation.

“Living wage is more like a dream in the current system. The prices brands are paying today do not allow this. [...] “Everyone talks about living wage, but nobody wants to pay for it.”

A Producer, Istanbul



Pumice stone used for distressing jeans, Esenyurt, Istanbul

© Vivien Tauchmann, 2026



One factory representative described the implementation of living wages almost sarcastically as “a dream” under current market conditions. The statement exposes a structural contradiction: ethical labour commitments exist rhetorically, yet purchasing practices leave little economic space for their realization. Even where machinery improvements reduced certain physical risks, workers emphasised that emotional and economic pressures had intensified.

4.3. Gendered Injustice in Denim Production

Although garment production is often described as feminised labour, denim manufacturing complicates this narrative. Washing and finishing sections – among the most hazardous stages – are largely male-dominated due to physical demands. Women are concentrated in sewing, quality control, and packaging, where a different but equally intense pressure prevails.

Female workers from Malatya and Şanlıurfa described long hours of repetitive, high-speed work, particularly during peak production periods. These “silent” tasks frequently extended late into the night beyond formal operating limits. Workers in packaging and control reported shifts lasting twelve to thirteen hours, structured by supervisors’

constant commands – “Hadi, hadi!” (“Faster!”). Prolonged standing caused chronic pain, while mobbing and psychological pressure were described as widespread.

Gender-specific vulnerabilities appear repeatedly. Women reported restricted toilet access during menstruation, scrutiny over time away from workstations, and experiences of verbal harassment or sexualised language. Marriage or potential pregnancy could become grounds for workplace pressure, with young women perceived as unreliable future employees. Following the 2023 earthquakes, some workers reported being told that leaving to check on family members could cost them their jobs.

“There are more things they can do to a woman to harass her. For example, they cannot say to a man, ‘If you don't work overtime now, we won't give you time off tomorrow when your child is ill.’”

A worker, Şanlıurfa

“It's so embarrassing to be constantly asked why you're going to the toilet. They count the minutes; we can't go for more than 5 minutes. When we're on our period, that day is hell.”

A Worker,
Kahramanmaraş

“We worked overtime every evening. At that time, I was breastfeeding my baby. Because I worked overtime, I couldn't breastfeed my baby enough. I cried a lot during that time. There were many women in the factory who were in the same situation as me, and we consoled each other. The times when we worked overtime until 9 pm took a lot away from my life.”

A worker, Şanlıurfa



5.

Shared Responsibility, Absent Accountability

Our research revealed a persistent contradiction: although many actors contribute to the conditions of denim production, responsibility is continually shifted, leaving accountability largely unclaimed. Brands, certification bodies, suppliers, auditors, and consumers all shape the system, yet responsibility is frequently displaced through narratives of limited control. Workers, meanwhile, bear the material consequences of decisions made elsewhere.

One mechanism enabling this diffusion of responsibility lies in the deliberately narrow scope of certification systems and auditing institutions. Several initiatives emphasise targeted intervention at a single stage of production – for example at the cotton farm level – while explicitly excluding other parts of the supply chain as outside of their capacities. While such focus allows measurable outcomes, it fragments accountability across the supply chain. Environmental and social risks are addressed in isolation rather than as interconnected

realities, creating gaps through which responsibility is continuously transferred rather than resolved.

This fragmentation is reinforced by the unequal distribution of power within supply chains. Producers are expected to implement sustainability standards, monitor compliance, and invest in technological improvements, yet they operate under intense price pressure and short production timelines defined by brands. Manufacturers repeatedly described sustainability demands that were not matched by financial support: brands require improved practices while refusing to absorb the associated costs. Under these conditions, responsibility is decentralised downward while economic authority remains concentrated upward. The resulting pressure is ultimately passed on to workers through intensified labour, insecure contracts, and unsafe conditions.

The history of the sandblasting ban in Türkiye illustrates the limits of market-driven protection mechanisms. The prohibition of the process responsible for widespread silicosis among denim workers did not primarily emerge from certification schemes or voluntary corporate reform, but from persistent worker organising supported by international solidarity networks. Its legacy continues



*Potassium Permanganate spray stations,
Gaziosmanpaşa, İstanbul
© Vivien Tauchmann, 2026*

today, as labour activists and organisations such as Temiz Giysi Kampanyası (Clean Clothes Campaign Türkiye) draw attention to other hazardous substances⁷, such as potassium permanganate (PP), whose long-term health impacts still remain insufficiently recognised. This history forms a counter-narrative to dominant sustainability discourse: meaningful transformation has often begun not with standards, but with workers' embodied knowledge of harm.

Current sustainability initiatives have achieved measurable improvements through organic cotton sourcing, water-reduction technologies, and alternative finishing methods. Yet these advances are frequently framed through quantitative and technical indicators, leaving labour perspectives marginal. Improvements may unintentionally introduce new occupational risks when workers are not actively involved in decision-making processes. The persistent separation between ecological and labour concerns therefore remains one of the sector's most significant challenges.

Our findings further challenge the widespread “beyond our control” narrative frequently invoked by brands. Pricing structures, delivery schedules, and purchasing volumes fundamentally shape production conditions. They are not external constraints but central governing mechanisms of the system itself. At the same time, public

discourse often positions producers – predominantly located in production regions of the Global South – as primary agents of environmental and labour violations, reproducing colonial assumptions that obscure structural dependency. Interviews suggest a different reality: producers express willingness to improve practices but lack the economic stability and institutional support required to do so. Without shared investment and labour empowerment, sustainability becomes a hollow obligation.

Union organising remains one of the few spaces in which workers can collectively articulate grievances, share knowledge about occupational risks, and negotiate improvements beyond individual vulnerability. Independent unions and worker networks create forms of community and education that counter isolation within fragmented subcontracting structures, demonstrating that participation from below remains essential for meaningful transformation.

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⁷ See, for example, Temiz Giysi Kampanyası, “Labour and Risk: Occupational Health and Safety in Türkiye,” 2025, accessed February 19, 2026, <https://www.temizgiysi.org/wp-content/uploads/2017/03/OHS-ENG.pdf>.



Taken together, these findings suggest that sustainability in denim production cannot be achieved through technical adjustment alone. Environmental and social justice are inseparable lived realities on the shop floor, where global supply chains become embodied through labour. A shift toward bottom-up approaches – strengthening worker participation, supporting smaller producers, and redistributing decision-making power – is necessary to close existing responsibility gaps.

Responsibility also extends to consumption. Denim, once designed as durable workwear, has been transformed into a rapidly changing fashion commodity whose shortened life cycle sustains continuous production pressure. Workers repeatedly emphasised the high level of manual skill embedded in each garment, from sewing to finishing and cleaning threads – labour that remains largely invisible to consumers. Re-imagining sustainability therefore requires not only systemic reform within production but also a cultural shift toward valuing the human labour contained within clothing.

As one worker expressed when asked what consumers should know:

“We want to be treated as humans. Wearing a piece of denim is easy – making one is not.”

Their words reposition the question of a just transition away from abstract metrics toward lived experience. The future of sustainable denim depends on whether responsibility becomes collectively acknowledged – and whether those most affected by production gain a decisive voice in shaping its conditions.



6. CONCLUSION:

Towards a Just Transition

Fast fashion is a production system that operates on a global scale, involving multiple actors, distributed, and at the same time multi-layered. Examining denim, the most symbolic and widespread product of this system, makes the functioning of this complex structure more visible. Denim is not merely a clothing item; it serves as a lens through which to understand how global production networks are established, how capital and labor are positioned, and how the relationship between humans and the environment is shaped.

This study examines denim from the perspectives of global production networks, labor regimes, and rights. Of course, each topic discussed here requires more comprehensive research in its own right. However, when desk research and field observations are evaluated together, the picture that emerges is clear: The fashion system operates as an intensified and accelerated form of capitalist production relations.

The multi-layered and largely invisible structure of supply chains leads to the diffusion and obscuring of responsibility. In this network, which extends from billion-dollar brands to small workshops, human labor still forms the backbone of production; however, workers often remain the most invisible actors in this system. Sustainability, meanwhile, has become a window-dressing element, limited to incomplete and fragmented practices that are often shaped by the trends of the moment.

This picture is not unique to Türkiye. The fast fashion system operates with a similar logic regardless of the country where production takes place: low cost and high speed expectations determine production; risk and uncertainty are concentrated in the more fragile areas of production; flexibility becomes the primary competitive tool. Türkiye is not outside this system but is one of its central actors; therefore, the consequences of global dynamics are observed more clearly here.



The structure we are trying to understand through the example of Türkiye may appear complex and, at times, hopeless; however, this situation is not inevitable. The clear and precise definition of responsibilities within the production network is of vital importance. This responsibility falls primarily on global brands, as well as all actors in the supply chain and regulatory mechanisms. Voluntary commitments cannot bring about this transformation; the construction of a fair production system requires globally binding rules with enforcement power.

Transparency cannot be limited to the visible links in the supply chain. Brands must share all production tiers, including subcontractors, with the public; audits must address not only the manufacturers with whom direct contracts are held, but also the lowest links in the chain. Governments must strengthen their legislation to oversee this multi-layered structure; responsibility must be extracted from a diffuse and ambiguous structure within the chain and transformed into concrete and enforceable policies.

Sustainability must go beyond being merely a marketing narrative measured by environmental indicators. Human sustainability – the ability of labour to exist under conditions that are dignified, safe and free to organise – is an integral part of this debate. The climate crisis is no longer a distant scenario, but a concrete reality manifesting itself on production lines and in workers' bodies; climate justice and labour justice are complementary, inseparable struggles. Questioning the excessive production cycle of fast fashion is therefore inevitable – yet at the heart of this questioning must lie the visibility and rights of the workers at the core of the production network.

The story of denim production is not merely the story of an industry; it is a mirror of today's global production system and the inequalities it creates.

JOIN THE
MOVEMENT



7. ANNEX

From the Field – Key statements from conducted interviews

Statements from workers:

“I lost 46% of my lung capacity.”

“We were sleeping in the factory and breathing the dust all night.”

“If you produce faulty goods, they call you into the room and insult you. Do you have a short memory? Are you dumb? Are you stupid?”

“Preparations are made one week in advance when an inspection is due. If cleaning is being carried out at the factory, we understand that an inspection is imminent. If advance notice is given, this is not an inspection.”

“One day we worked until 4 in the morning. We were about to go home. They told us to go and sleep in the prayer room, as we would be coming back to work in two hours anyway.”

“Not much equipment is used in washing, sometimes gloves are available, masks are very rare. They are not provided regularly. Sometimes they give masks to workers who ask for them, sometimes they say there are none.”

“When the inspection comes, they tie the scissors to the table, but normally there's no such thing. We normally work in slippers. When the inspection comes, they make us wear shoes.”

“It's so embarrassing to be constantly asked why you're going to the toilet. They count the minutes; we can't go for more than 5 minutes. When we're on our period, that day is hell.”

“I always wonder who wears these jeans, because I can't wear them. I always wonder who can afford to buy the jeans I produce.”

“When we ask the boss or the manager for our rights, they say we are insulting them. That's how they see it. We just want a decent wage.”

“They give the workers in the washing department one dairy product per day (to prevent them from getting poisoned).”

“We worked overtime every evening. At that time, I was breastfeeding my

baby. Because I worked overtime, I couldn't breastfeed my baby enough. I cried a lot during that time. There were many women in the factory who were in the same situation as me, and we consoled each other. The times when we worked overtime until 9 pm took a lot away from my life.”

“The factory takes workers to hospital every two to three years, but if they develop a work-related illness such as asthma, they dismiss them. If you are well-connected, the managers would have another worker examined instead of the sick one and report that, which is why there are workers who have been working for 15 years despite having COPD (Chronic Obstructive Pulmonary Disease).”

“There are more things they can do to a woman to harass her. For example, they cannot say to a man, ‘If you don't work overtime now, we won't give you time off tomorrow when your child is ill.’”

“When the earthquake struck, the factory called the workers to the containers they had set up within the industrial complex. They told the workers to bring their families, but the conditions were terrible. They forced the workers to work, saying, ‘Since you're here, don't just stand around.’ They exploited people even during the earthquake.”

Statements from representatives of certification programs:

“Our role is not formalisation. We are not the right structure to ensure formalized labor. We just make sure that the labor practices are followed.”

“We all obviously are of the opinion that we cannot rely on audits alone.”

“We really need to do one thing, one thing well... the cotton farm level... elsewhere in the supply chain... it's outside of our agreements.”

“Türkiye is one of the more expensive programs to run, which strains our resources and limits the scale at which we can operate.”

“One limitation we recognise is that certification alone cannot solve systemic issues. Purchasing practices of brands play a major role. Brands cannot demand sustainability while imposing extreme price pressure and deadlines.”

“Subcontracting is widespread and difficult to manage.”

“We don't involve ourselves in wages or gender issues.”

Statements from producer representatives Tier-1:

“We have implemented improvements such as eliminating pumice stone washing by replacing it with enzyme and compound alternatives, reducing sludge waste significantly. We hold multiple certifications and social audits, but we do not have a union because it is not compulsory.”

“Our industry is based on speed and cost.”

“We had a very strong sustainability strategy – but the macroeconomic situation makes it unbearable.”

“Today we outsource more because we had to reduce overhead.”

“Our industry is based on exploiting people – they need to sew as fast as possible.”

“Brands demand sustainability but refuse to pay the price difference.”

“Many clients don’t even know the impact of potassium permanganate.”

“If brands don’t pay, suppliers cannot change.”

“Living wage is more like a dream in the current system. The prices brands are paying today do not allow this.”

“If we increase wages, we simply lose the order.”

“Everyone talks about living wage, but nobody wants to pay for it.”

“We design and manufacture denim for many leading global brands, with a production capacity of 600,000 pieces per month and 7,200,000 pieces per year.”

Statements from denim and labour experts:

“Denim was made as a uniform for workers – now it is killing workers and the environment.”

“Jeans used to last twenty years; now their life is around nine months.”

“Distressed jeans were not a consumer demand; brands created and marketed them.”

“Selling durable jeans would mean selling one pair every ten years.”

“The dirtiest jobs become migrant work because migrants have no alternatives.”

“Without leaving the fast-fashion philosophy, sustainable denim is almost impossible.”

“Brands keep a sustainable product in the window but sell fast fashion behind it.”

“Even European systems contain contradictions: hazardous chemicals may be classified as dangerous but still enter markets through imports.”

Statements from workshop owners Tier-2:

“When you can’t get a pay rise from the company, you can’t pay the workers here, and they don’t want to work either. Are they right? They’re absolutely right! Because life really is expensive.”

“We used to calculate costs like this: we could buy two balls of yarn for every pair of trousers we made, but now we can only buy one ball for every four pairs we make.”

“We’re trying to keep the business going somehow; we have no choice, we have no other occupation.”

“Today, the average age in the textile industry should not be this high. Everyone working here is over 45, except for two or three people. There is no one who has been trained as an apprentice because there is no training infrastructure.”

“We used to work on the same model for six months. Now every new model is different. The repetition doesn’t exceed two, and that’s within a month.”

“What we mean by child labour is... Their parents say, ‘They’re not going to school’ and wonder what to do. They say, ‘At least they should work, rather than loitering on the streets’. In textiles, children as young as 11 or 12 work⁸, and it’s not heavy labour. If the child isn’t going to school, at least they should work and learn a profession.”

“Are you wearing it out of necessity or for pleasure? Now that shopping is done for pleasure, they want it to tear as soon as possible. Back in the day, you had clothes you wore for holidays, weddings, and work, but now you’re baffled every morning about what to wear.”

“There is no need to use a mask for potassium permanganate. If you inhale it directly, it makes you cough a little, but other than that, I don’t think it’s very harmful.”

⁸In Türkiye, it is prohibited to employ children under the age of fifteen. However, children who have reached the age of fourteen and completed compulsory primary education may be employed in light work that does not hinder their physical, mental, social and moral development or their continued education.

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Denim dust outside
facilities, Esenyurt,
İstanbul

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DENIM PRODUCTION
IN TÜRKIYE:

SUSTAINABILITY IN PRACTICE? BETWEEN CODES OF CONDUCT AND PRODUCTION REALITY



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