



From Pollution to Progress:

Lessons from the SMEP Programme
in the Savar Tannery Industrial
Estate, Bangladesh

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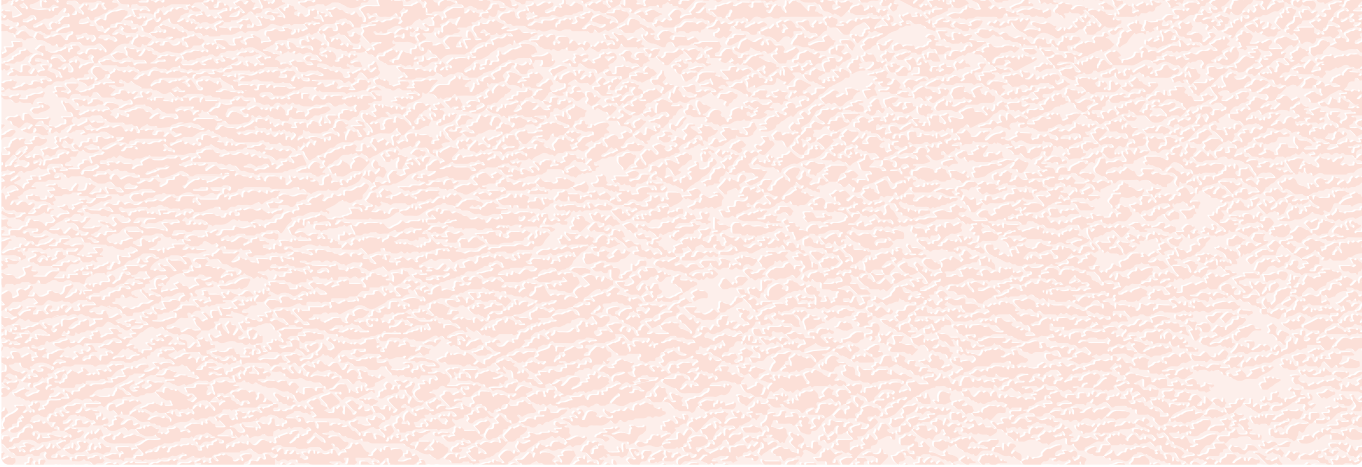
Mondiaal FNV's contribution is made through the Trade Union Co-financing Programme, supported by the Dutch Government.

Executive summary

People working and living around the Savar Tannery Estate in Bangladesh face serious environmental and social challenges. This learning paper shares baseline findings from an Ethical Trading Initiative's (ETI) project aimed at tackling these issues. It explores both the systemic barriers and the factors that can drive change, focusing on working conditions, occupational health and safety (OHS), environmental management, and wider community impact. This work is part of the UK Government-funded [Sustainable Manufacturing and Environmental Pollution](#) (SMEP) Programme.

Key findings

- ▶ **Work remains largely informal**, with 56% of workers engaged in informal employment. The rate is even higher among women, at around 70%, leaving many without adequate protections or access to benefits.
- ▶ **OHS and chemical safety systems are dangerously inadequate**, with women facing disproportionate risks.
- ▶ **Most tanneries lack the systems and documentation required to meet Leather Working Group (LWG) environmental standards** meaning that environmental risks are unverified. Many brands now prefer or require LWG-certified tanneries, and a lack of certification can limit tanneries' business opportunities.
- ▶ **Workers and communities are aware of the pollution, but without the necessary resources or support, they cannot fully protect themselves or take action against its harmful effects.**
- ▶ **Despite these challenges, the sector has strong potential for change.** Strengths include a domestic raw material base, growing export potential opportunities, active labour unions, and untapped by-product industries (such as gelatine, pet food, tiles). Positive signs also include the government's recognition of leather as a priority sector — reflected in the interim government's new policies and incentives to boost exports and investments as well as the National Action Plan for sustainable leather.



Context and project overview

The leather industry is Bangladesh's second-largest export sector after readymade garments (RMG). In the fiscal year 2024–25, it contributed approximately \$1.14 billion to the national economy, accounting for 2.36% of total exports.¹ The sector employs around 850,000 people² and holds nearly 3% of the global market share, supported by abundant raw materials and significant export potential. Yet, this potential remains under-realised due to persistent challenges in environmental and social compliance, particularly in relation to effluent treatment and international certification standards.

In 2017, following a relocation initiative first launched in 2001, most tanneries were moved from Hazaribagh — long regarded as one of Dhaka's most polluted industrial areas — to the newly built Tannery Industrial Estate in Savar. Of the original 220 tanneries in Hazaribagh, 142 are now operating in Savar (June 2025).³ The relocation aimed to reduce pollution and strengthen the sector's international competitiveness through a shared Central Effluent Treatment Plant (CETP) and upgraded infrastructure. Initially, tanneries were not permitted to establish individual Effluent Treatment Plants (ETPs). Only recently have authorities allowed six tanneries to pilot individual ETPs, though unresolved policy issues continue to limit effective implementation.

Despite relocation, significant environmental and social shortcomings persist. The CETP remains ineffective due to design flaws and incomplete construction, leading to ongoing contamination of nearby rivers and canals. Many tanneries still lack adequate Environmental and Social Management Systems (ESMS), adequate waste management, or compliance with Environmental, Social, and Governance (ESG) standards. Workers continue to face poor conditions, limited awareness or enforcement of OHS, gender equality, and mechanisms for social dialogue, making it challenging for the estate to live up to international standards.

These systemic weaknesses have eroded the sector's ability to access high-value international markets, particularly where LWG certification is required. Without meaningful reforms, Bangladesh risks further marginalisation within global value chains.

¹ [Export Promotion Bureau](#), Government of Bangladesh.

² Bangladesh Investment Development Authority, [Leather and Footwear Sector](#).

³ Jahir Rayhan, [Tanners eying 1cr animal hides this Eid, say move to export raw, wet blue hides 'suicidal'](#), The Business Standard, 2025.

To address these challenges, ETI, ETI Bangladesh, Bangladesh Labour Foundation (BLF), and Mondiaal FNV launched a consortium project in August 2024 under the SMEP Programme. Funded by the UK Government and implemented in partnership with the UN Conference on Trade and Development (UNCTAD), the initiative – *Improving Environmental and Social Conditions in the Savar Tannery Estate* – seek to enhance workplace conditions, promoting sustainable practices, and support the industry to meet international standards.

As part of this initiative, ETI Bangladesh conducted a comprehensive survey assessing knowledge, attitudes, and practices related to:

- ▶ Environmental pollution
- ▶ Occupational health and safety
- ▶ Waste management and housekeeping
- ▶ Water saving and energy efficiency
- ▶ Gender equality and sexual harassment prevention
- ▶ Decent work and social dialogue
- ▶ Community-level environmental and social impacts

In addition, the project evaluated the environmental performance of 40 participating tanneries against 14 core LWG standards, identifying key gaps and priority areas for improvement. These findings will inform targeted training and technical support to prepare factories for future LWG audits and enable more sustainable growth.

This learning paper presents key findings from the baseline assessment and shares early lessons from the consortium's work. It reflects a shared commitment to building a leather sector in Bangladesh that is more sustainable, ethical, and globally competitive.



Methodology

The baseline assessment applied a mixed-method approach, combining quantitative and qualitative research to capture a comprehensive picture of environmental and social conditions in the Savar Tannery Industrial Estate. The study focused on two core components: (i) a knowledge, attitudes, and practices (KAP) survey, and (ii) an environmental assessment aligned with LWG standards.

Sampling and respondent selection

Thirteen tanneries were purposely selected for the KAP study to represent diversity in sizes, ownership, and operations. Within these tanneries, workers and worker representatives were identified through convenience sampling to ensure practical access to a broad range of perspectives.

Quantitative component — KAP survey

A semi-structured survey was conducted with 238 participants, comprising 81% tannery workers and 19% worker representatives. Of respondents, 82% were men and 18% were women, providing a basis to examine gender-related dimensions of working conditions, safety, and representation.

Qualitative component — Focus group discussions (FGDs)

To complement survey data, six FGDs were held with 49 worker committee members across selected tanneries, along with two FGDs involving community members living near the estate. These discussions generated insights into workplace dynamics, and awareness of environmental practices and safety concerns. Additionally, eight key informant interviews (KIIs) were conducted with tannery management, the owners' association, CETP representatives, and government officials. These interviews provided valuable sector-level perspectives to contextualise worker and community findings.

Environmental assessment

In parallel, an environmental assessment was conducted across 40 tanneries guided by the [LWG Tannery of the Future \(TOTF\) Self-Assessment Questionnaire](#) which shaped the tools and framework for the study. The assessment included field visits to each tannery, during which:

- ▶ Key informant interviews were conducted with tannery staff,
- ▶ On-site environmental data were measured and verified,
- ▶ Operational practices and infrastructure were directly observed, and
- ▶ Secondary data, including historical records, were reviewed where available.

This methodology provided a robust baseline of environmental performance and enabled the identification of operational gaps and priority areas for project intervention.

Baseline findings

These findings were collected through qualitative (FDGs and KII with workers and management) and quantitative (KAP survey) methods as outlined in the methodology.

Employment practices and workforce profile

Employment in the tannery sector remains highly informal. Over half of surveyed workers (56%) reported being employed under verbal contracts, rising to 70% among women. The absence of formal contracts leaves workers without legal protections, including job security, wage entitlements benefits, or access to grievance mechanisms. Gender inequalities are evident: women are more likely to hold part-time or low-skilled roles, with limited opportunities for advancement. Only 17.5% of surveyed tanneries had policies guaranteeing equal pay for women and workers with disabilities. While 25% of factories offered paid maternity leave, just 35% maintained a maternity benefit register, highlighting weak implementation of gender-sensitive employment policies.

Child labour,⁴ once widespread in the sector, has declined in numbers in the formal tannery sector. Among surveyed workers, only 5% had entered the sector between ages 15–17, with none reporting entry under the age of 14 in the past decade. This progress, especially since relocation to Savar, reflects meaningful efforts to eliminate child labour. The sector has been declared child labour-free by the government under national law. However, ongoing monitoring and enforcement remain essential to sustain these gains. The workforce remains vulnerable due to informal arrangements and gender-based inequalities. Strengthening contractual frameworks and enforcing gender-responsive employment policies is essential.

Occupational health and safety

Occupational health risks are widespread, with safety systems dangerously informal. Nearly half of workers (49%) reported work-related illnesses in the past year. Skin conditions (73.5%) and respiratory issues such as asthma (20%) were among complaints. Chemical exposure was identified as a major concern, particularly related to chromium. One worker shared:

“With regular use, chromium leads to allergies among workers. The fumes from chemicals affect the workers. I used to work in a wet blue drum section, which damaged my lungs.”

Accidents are frequent, caused by machinery malfunctions (35%), chemical spills (28%), and slips and falls (29%). Despite these risks, nearly 40% of workers reported not knowing what constitutes OHS, and 37% said they did not know what actions to take to ensure their safety. Awareness among women workers was particularly low, underlining a gendered safety gap.

⁴ As defined by ILO's convention [C138 – Minimum Age Convention, 1973 \(No. 138\)](#).



Personal protective equipment (PPE) use

Since relocation to Savar, access to PPE has improved. A safety committee member explained:

“When I worked in Hazaribagh, we never got PPE. Now, workers are trained on how to use it and why it’s important.”

Despite progress, usage remains inconsistent. While 88% of workers said PPE was available, only 40% used it regularly, and 23% said they never used it. Face masks were the most commonly used item (59%), followed by safety boots and gloves. Use varied depending on gender and whether workers have received training. As one respondent emphasised:

“Providing PPE alone is not sufficient. It must be comfortable, suited to the local environment, readily available, and consistently enforced. Daily use should be promoted through regular training, awareness, and active supervision.”

Main barriers to consistent use of PPE

Discomfort

64%

Lack of enforcement by management

32%

Limited supply or irregular supply

22%

Hazardous materials and risk communication

Many workers, particularly women, often handle hazardous substances without adequate understanding or protection. Over one-third of surveyed workers (37%) were unaware of the hazardous materials they handled; among women, this figure rose to 65%. One worker described a worrying practice:

“We drink water from mineral water bottles, and those bottles have no labels. In many factories inside the Tannery Estate, there have been cases where clear acid was stored in drinking water bottles. Workers are not that educated.”

This reflects a critical failure in hazard communication protocols, limited worker training, and stemming from limited knowledge, insufficient practice and awareness at the factory level, as well as a lack of caution regarding the hazard. The lack of chemical safety awareness — especially among women — points to the urgent need for robust, gender-sensitive risk communication and training.

Training and rights awareness

The assessment revealed a weak training culture across the sector, driven by limited investment in capacity development and the prevalence of temporary and seasonal workers, which makes factories reluctant to allocate time for training. Just over half of surveyed workers reported receiving any training — primarily from NGOs or trade unions, rather than employers — highlighting limited factory-level commitment to skill development.

Equally concerning, 84% of the workers lacked awareness of their legal rights, including entitlements to leave, working hours, and workplace protections. This leaves workers vulnerable to exploitation and unsafe conditions. Without consistent, employer-led training and legal rights education, workers remain ill-equipped to protect themselves or claim their rights.



Awareness of environmental aspects

Most tannery workers surveyed (63%) recognised pollution through their lived experience — bad smells, chemical fumes, and dirty water — but lacked formal understanding of the potential negative impact. Only 13% could clearly explain what “environment” means. Women in particular showed lower awareness of pollution impacts, pointing to a gendered information gap.

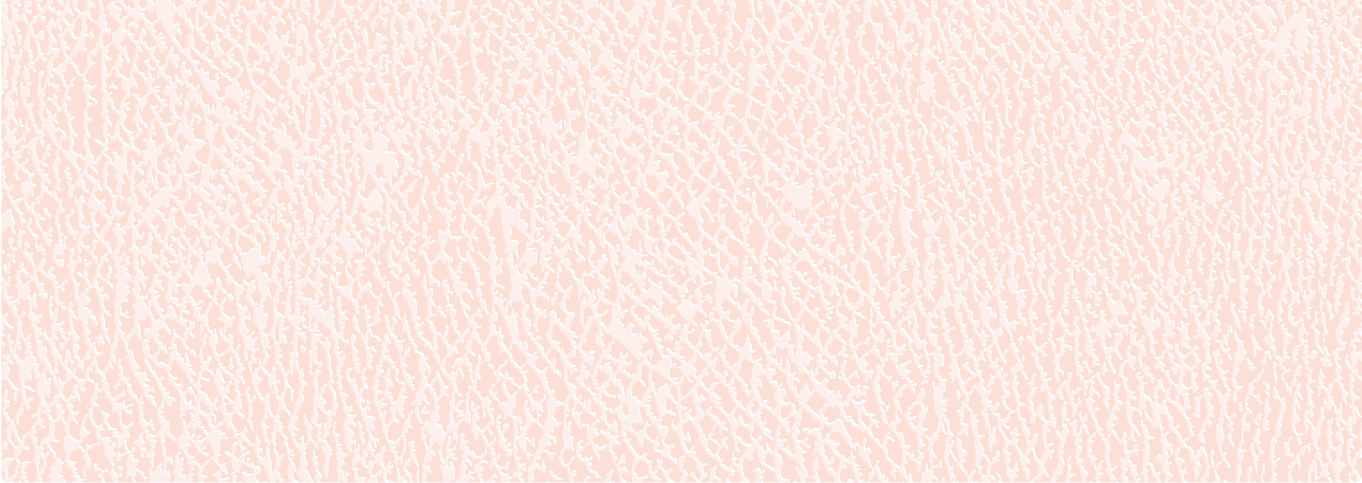
Community insights

Two FGDs with community members revealed both opportunities and risks linked to the Savar Tannery Industrial Estate.

Key insights:

- ▶ **Mixed economic effects:** Some residents benefit from renting rooms or taking informal jobs linked to the tanneries. However, participants reported losing about 75% of their farmland due to factory expansion, undermining farming and cattle rearing. Access to direct tannery jobs remains limited.
- ▶ **Basic services under pressure:** Roads and schools have improved, but sewage and waste systems have not kept pace. Waterlogging, poor sanitation, and gas shortages are common.
- ▶ **Rising health and environmental risks:** The local river is heavily polluted, no longer safe for fishing, bathing, or drinking. Waste dumping has damaged soil and crops, while skin diseases and respiratory illnesses have increased, especially among children and the elderly.
- ▶ **Unkept promises:** Residents said tannery operators had promised safe waste treatment, but those commitments remain unfulfilled.
- ▶ **Lack of power to act:** Communities are aware of the damage but lack the knowledge, resources or influence to demand or create solutions.





Environmental assessment findings

The environmental assessment of 40 tanneries revealed widespread gaps in environmental management and documentation. The findings reinforced worker and community perspectives, revealing systemic challenges that undermine regulatory compliance and access to global markets.

Inadequate documentation and tracking systems

- ▶ Over 90% of the tanneries lacked structured systems for monitoring critical environmental parameters, such as waste disposal, effluent discharge, chemical use, and emergency preparedness.
- ▶ 95% had never conducted an environmental risk assessment, internally or through third parties.
- ▶ Existing documentation was often incomplete, poorly maintained or stored off-site — limiting access for both internal staff and external auditors.
- ▶ Many managers withheld data citing confidentiality or reputational concerns.

A workshop facilitated by industry associations helped build trust and clarify that the assessment was intended to support learning and development rather than punitive audits, improving transparency and dialogue.

The lack of reliable data — including basic metrics like monthly production volumes — undermines the ability to demonstrate compliance or environmental responsibility to buyers and certifiers. It also makes it difficult to track progress on key improvements such as water use efficiency and energy savings over time.

Low awareness of environmental protocols

Awareness of environmental protocols was extremely low among management and workers. Over 90% lacked understanding of key requirements on emissions, chemical safety, energy efficiency, and water conservation. No evidence tannery had structured or ongoing training programmes, resulting in a significant institutional knowledge gap that weakens compliance efforts.

Inefficient energy and water use

Energy and water usage practices were found to be wasteful and outdated. All factories relied on grid electricity; over 90% also using diesel generators or gas-fired boilers. Only two had adopted solar energy. Over 95% used open water hoses for cleaning and processing. Nearly half had uninsulated steam lines, leading to substantial energy loss. About 40% of compressed air systems leaked, indicating clear opportunities for efficiency gains.

Weak waste and effluent management

- ▶ Effluent treatment remains a serious concern. Only one tannery had initiated the construction of an on-site ETP, while the remaining 97.5% relied on the CETP, which has known design and maintenance issues.
- ▶ None had formal systems for waste segregation, recycling, or applying 3R (Reduce, Reuse, Recycle) principles.
- ▶ These shortfalls present both immediate environmental risks and long-term barriers to sustainability certification.

Unsafe chemical handling practices

- ▶ Chemical safety procedures were either poorly implemented or entirely absent in most tanneries. Around 90% did not maintain restricted substances lists (RSL) or material safety data sheets (MSDS).
- ▶ Hazard communication was inconsistent or lacking.
- ▶ 65% of women workers were unaware they were handling hazardous materials, compared to 37% of the overall workforce, highlighting a gender-specific risk that needs urgent attention.

No monitoring of air, noise, or emissions

- ▶ None of the tanneries had systems in place to monitor air quality, noise pollution, or industrial emissions.
- ▶ No environmental officers, third-party monitoring partnerships, or standard operating procedures (SOPs) were in place.
- ▶ This is a significant blind spot, especially in light of increasing global scrutiny of supply chain environmental impacts.

Systemic gaps in management capacity

- ▶ The lack of trained personnel, clear procedures, and reliable tools severely has left factories unable to systematically monitor, manage, or improve environmental and occupational standards.
- ▶ Fragmented, paper-based systems further hinder oversight and accountability. Few factories have internal policies or SOPs, resulting in ungoverned compliance areas and missed improvement opportunities.

Project response

The SMEP-funded partnership is addressing these challenges through a multi-pronged strategy:

Learning and development

All 40 participating tanneries received individual environmental assessments, followed by tailored action plans for improvement.

Strengthening workplace structures

To enhance worker participation and foster a culture of safety and respect, Anti-Harassment Committees and Safety Committees will be established, operationalised and supported. While national legislation mandates their formation with 50 or more employees, practical implementation remains limited. Baseline data revealed that only 2.5% of workers knew such committees existed to address workplace sexual harassment concerns.

Green social dialogue (GSD)

Originally piloted in tier one RMG factories in 2022, this model has been adapted to tanneries to encourage inclusive dialogue on environmental and social issues. It promotes participation, shared accountability, and rights-based approaches to climate action.



Towards sector transformation

Sustainable change will require ongoing collaboration across industry, trade unions, civil society and government. Strengthening social and environmental compliance and due diligence — aligned with national law and international standards — is essential.

In periods of political uncertainty, strengthening sectoral coordination and stakeholder collaboration is even more critical. The SMEP consortium is actively engaged in the Leather Development Forum (LDF) alongside UN Development Programme and other key stakeholders including government bodies, financial institutions, industry representatives, civil society actors, and labour rights organisations. Together, we are co-developing a sector-wide roadmap for sustainable transformation.

However, challenges remain. Leather supply chains are highly complex and opaque, particularly in upstream areas such as cattle farming, slaughterhouses and tanneries. With poor traceability and multiple tiers, brands can find due diligence beyond tier one challenging. While some environmental progress (e.g. deforestation, water pollution, and greenhouse gas emissions), critical human rights concerns — including OHS, workers' rights, fair wages, freedom of association, and animal welfare are still frequently overlooked.

To support stakeholders in the leather sector, ETI has developed an introductory guide to Human Rights and Environmental Due Diligence (HREDD) in the leather industry titled [Getting Started on Leather Due Diligence: A good practice guide for brands and retailers](#). The guide outlines key risks, share good and better practices, and links to relevant research and resources. It encourages brands and retailers to take practical and meaningful steps toward strengthening HREDD across their leather supply chains.



Learning

ETI and ETI Bangladesh have primarily worked with tier one RMG factories in Bangladesh, most notably through a large-scale social dialogue programme that supported the establishment of 104 Worker Participation Committees. This project marks the direct engagement with tier two suppliers. These suppliers typically have less internal infrastructure and experience in areas including environmental management, data systems, and worker engagement, requiring adaptation of training methods and project activities.

Findings from the baseline assessment underline the need to strengthen knowledge and awareness among management, workers, and surrounding communities. This highlights the importance of complementing technical innovations aimed at improving environmental performance with parallel investments in human capital. Without such investment in “soft capital,” technological-driven advancements risk falling short of their intended impact. In parallel, increasing knowledge and reinforcing social standards are essential for building a sustainable industry that can effectively adapt to and practice international environmental and social standards.

Unlike tier one RMG factories — many of which have received significant attention and support from brands, donors, and other stakeholders — tier two suppliers bring a distinct set of challenges. Early in the project, tannery management was reluctant to share information, reflecting limited trust and concerns about external scrutiny. The project team addressed this by emphasising their collaborative, improvement-oriented approach. Targeted workshops for mid-level managers were introduced to clarify objectives, build trust, and encourage active engagement.

Fostering open communication, mutual respect, and recognising local efforts — even in resource-constrained contexts — proved critical to building trust, transparency and participation. Encouragingly, the project partners observed tangible signs of commitment from tannery staff, who, despite systemic challenges, have taken visible steps to address pressing issues with the resources available.



Opportunities

Despite challenges, Bangladesh's leather sector retains several structural strengths that can underpin a pathway to sustainable growth — including a well-established supply of raw materials, strong export potential, and growing support from government and development partners.

Worker representation also has a solid foundation. The longstanding presence of the Tannery Workers Union (TWU), which actively advocates for labour rights, creates opportunities to strengthen worker participation and social dialogue. National organisations such as Bangladesh Labour Foundation, multi-stakeholder platforms like the Leather Development Forum, and targeted support from international initiatives — including the SMEP consortium — are further aligning the sector with global standards.

There is also untapped potential in by-product industries, such as gelatine, collagen, tiles, fertiliser, and pet food. These industries can reduce waste, contribute to a circular economy, and create new revenue streams. With the right investments in environmental compliance, worker protection, and sustainable production practices, Bangladesh's leather sector has the potential not only to recover but to thrive in international markets as a responsible global competitor.



Improving Environmental and Social Conditions in the Savar Tannery Estate is implemented by the Ethical Trading Initiative (ETI), ETI Bangladesh, the Bangladesh Labour Foundation (BLF), and Mondiaal FNV. The project has been awarded a grant by the UK Government through UK International Development. The grant has been provided through the Sustainable Manufacturing and Environmental Pollution (SMEP) Programme. SMEP is funded by the UK Government and is implemented in partnership with the UN Trade and Development (UNCTAD). Mondiaal FNV's contribution is made through the Trade Union Co-financing Programme, supported by the Dutch Government.

The project has been awarded from August 2024 to June 2026.