

***Promoting Decent Work and Acceptable Working Conditions in the
Tannery Sector in Bangladesh: Tannery Sector and its Relocation***

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Abbreviations

Bangladesh Environmental Lawyers Association	BELA
Bangladesh Finished Leather, Leathergoods, &Footwear Exporters Association	BFLLFEA
Bangladesh PoribeshAndolon	BAPA
Bangladesh Small and Cottage Industries Corporation	BSCIC
Bangladesh Tanners Association	BTA
Bangladeshi Taka	BDT
Bangladesh Export Processing Zone Authority	BEPZA
Care-Taker Government	CTG
Central Effluent Treatment Plant	CETP
Chrome Recovery Unit	CRU
Civil Society Organizations	CSOs
Department of Environment	DoE
Effluent Treatment Plant	ETP
European Union	EU
Executive Committee of the National Economic Council	ECNEC
Foreign Direct Investment	FDI
International Non-Government Organizations	INGOs
Member of Parliament	MP
Ministry of Environment and Forests	MoEF
Ministry of Industries	MoI
Multi-national Corporations	MNCs
Non-governmental Organizations	NGOs
Overseas Development Institute	ODI
PoribeshBachaoAndolon	POBA
Readymade Garments	RMG
Sewage Treatment Plant	STP
Tannery Industrial Estate	TIE
The Asia Foundation	TAF
Total Dissolved Solid	TDS
United States Dollar	USD
Water Treatment Plant	WTP

Executive summary

Prior to the relocation of the tanning industry in Savar, the leather and leather goods sector was portrayed as capable of exporting \$5 billion by 2021. The sector was considered to have held a great promise for promoting export diversification and thereby widening the country's narrow export basket, which is currently dominated by readymade garments (RMG). However, since the relocation of the tanning industry, the export performance of the sector has met with setbacks. The export earnings from leather and leather goods in 2017-18 fell by more than 12 percent to \$1.08 billion from \$1.23 billion in 2016-17. Although a comprehensive analysis of the reasons for this dismal performance is lacking, disruption in production arising from the relocation of tanneries is widely regarded as a principal reason.

A mixture of qualitative and quantitative methods of data collection have been applied to gather both qualitative and quantitative data and to gain relevant insights on the ongoing developments in the country's leather tanning industry. Moreover, journal articles, books, newspaper reports, and documents from government agencies, NGOs, development organizations, and relevant business associations have been used as the sources of secondary data and literature for this study. A questionnaire survey has been conducted among the workers and the community people to gather quantitative data while qualitative data have been collected through focus group discussions (FGDs), key informant interviews (KIIs) and case studies. Furthermore, interviews of a diversified group of relevant stakeholders including responsible government officials, business owners, sector leaders, workers, worker leaders, CETP experts, and environmental activists have also been conducted.

This study, in a broader sense, reveals and analyses two of the most important aspects for the sustainability of the industry in the post-relocation scenario. The first and the most critical of it is ensuring the environmental compliance of the tanneries by implementing a proper effluent treatment system through the operation of CETP, CRU, WTP, and sludge recycling as part of an integrated process. Given the existing condition of CETP and other supporting components, ensuring environmental compliance has currently become a top priority for the sustainability of the industry. The second and another very important challenge has to do with ensuring the welfare of the tannery workers in the post-relocation scenario. On this backdrop, this study has identified the major challenges and laid out a number of recommendations taken from different stakeholders on how to overcome the challenges.

Apart from the two major challenges of the post-relocation period regarding environmental compliance and labour welfare issues, the study has also illustrated a stakeholder mapping of the tanning industry centring on the recent debates of relocation. Moreover, the study has also presented a political economy analysis on the relocation agenda. Both the stakeholder mapping and the political economy analysis help to unfold and understand the current challenges at TIE in the post-relocation period. Furthermore, the study has explored and presented the effect of tannery relocation on the communities of Hazaribagh, the old home of the tanning industry, as well as on the communities of Savar, the new of the tanning industry.

The study started with the mentioning of brighter hopes regarding the tanning industry after relocation which was supposed to be realized by far. Later on, by assessing the current state of relocation against the projected hopes, the study has explored the challenges ahead for the sustainable growth of the tanning industry. However, while portraying the challenges, the study has also compiled the recommendations of diversified groups of stakeholders focusing on the way out from current setbacks. Given that proper steps are taken immediately by government agencies as well as by tannery owners, a lot of relevant stakeholders believe that the growth of leather tanning industry can regain positive growth and can also boost the growth of the broader leather sector including leather footwear and leather goods industries.

Promoting Decent Work and Acceptable Working Conditions in the Tannery Sector in Bangladesh: Tannery Sector and its Relocation

1. Introduction

Prior to the relocation of the tanning industry in Savar, the leather and leather goods sector was portrayed as capable of exporting \$5 billion by 2021. The sector was considered to have held a great promise for promoting export diversification and thereby widening the country's narrow export basket, which is currently dominated by readymade garments (RMG). The leather sector has advantages to leverage a secured supply of raw hides and skins domestically and to move towards the production and export of high value-added items by processing wet leather to finished goods. (European Union, 2013; Paul et al., 2013; Strasser, 2015; Harris, 2016). However, since the relocation of the tanning industry, the export performance of the sector has met with setbacks. The export earnings from leather and leather goods in 2017-18 fell by more than 12 percent to \$1.08 billion from \$1.23 billion in 2016-17. The figures for the first eight months of FY 2018-19 are also quite disappointing with a negative growth in export receipts persisting. Although a comprehensive analysis of the reasons for this dismal performance is lacking, disruption in production arising from the relocation of tanneries is widely regarded as a principal reason.

The relocation of old Hazaribagh tanneries was first seriously conceived in the 1990s and then a policy of relocation was formulated by the Government of Bangladesh in 2001. However, the process of relocation could eventually begin in early 2014 with the government allocating land for 155 tanneries in the Tannery Industrial Estate (TIE) in Savar. A majority of the tanneries were compelled to shift the factories in April 2017 as the government decided to disconnect the utility supplies to their old establishments in Hazaribagh. According to a recent report by BSCIC (April 2019), among the selected 155 owners, as many as 123 have already started processing of leather in the new factories, while 18 are under construction.

Reported, the Central Effluent Treatment Plant (CETP), lifeline of the relocation project, with a treating capacity of 30000 m³ of effluents a day in the TIE has not become fully

functional till the day¹. Additionally, the other necessary components of effluent treatment process like the dumping yard, chrome recovery unit, and the sludge storing and processing plants are yet to be built as promised in the revised MoU (Memorandum of Understanding) signed between relevant public and private stakeholders before the relocation. As a result, concerns regarding successful operation of CETP and other supporting components like dumping yard and chrome recovery unit in ensuring environmental compliance have emerged as a 'teething problem' of the relocation process. The additional concerns after the relocation include welfare issues of the tannery workers and health concerns of the people living in the neighbourhood of the TIE.

1.1. Objectives of the study

This study, broadly, seeks to understand the current status of relocation of the tanning industry from various perspectives. More specifically, the study looked into the following aspects:

1. Analysing the interest, incentives, and influences of the key stakeholders, and conducting a political economy analysis on different aspects of relocation
2. Assessing the current status of operations and management of the CETP as well as the factories in the TIE
3. Assessing the current status of construction and operation of the CETP and other supporting components including the dumping yard, chrome recovery unit, and the sludge processing plants
4. Exploring the current status of tannery workers in terms of their health, occupational safety, accommodation and other welfare issues after relocation of tanneries, as well as workers' knowledge of labor rights, negotiation and advocacy
5. Gathering the perceptions of community people in both Hazaribagh and Savar regarding the relocation of tanneries
6. Investigating the challenges faced by the tannery workers, supervisors and owners after the relocation of the tanneries

¹<https://www.daily-sun.com/post/311419/2018/05/26/Tannery-estate-not-fully-functional-growth-reducing-rapidly>

7. Compiling the recommendations from diversified groups of stakeholders focusing on the way out from current set-backs

1.2. Methodology of the study

A mixture of qualitative and quantitative methods of data collection have been applied to gather both qualitative and quantitative data and to gain relevant insights on the ongoing developments in the country's leather tanning industry. Moreover, journal articles, books, newspaper reports, and documents from government agencies, NGOs, development organizations, and relevant business associations have been used as the sources of secondary data and literature for this study. A questionnaire survey has been conducted among 220 workers and 50 community people by using random sampling technique to gather quantitative data. Moreover, in-depth interviews have been conducted with the key informants like the factory owners, of worker leaders, leaders of tannery associations, representatives of relevant NGOs and INGOs, and representatives of the relevant government agencies. Furthermore, the FGDs have been conducted among the tannery workers, tannery supervisors, tannery owners, and the community people from both Savar and Hazaribagh. Along with interviews and FGDs, case studies (see Table 1) on tannery workers, tannery owners, and the community people of Savar have been collected and analyzed for the study.

Table 1: Details of respondents and respondent groups for the study

Respondent Groups	Survey	Interviews	FGDs	Case study
Workers in Savar	220		2	5
• Old workers			1	
• New workers			1	
• Female workers			1	1
Managers and supervisors		10	1	
Owners		12		2
Community people in Hazaribagh	20		1	
Community people in Savar	30		1	3
Worker leaders		3		
Owner leaders		5		
Civil society members		5		
Government officials		4		

BUET Experts		2		
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Source: TAF-RAPID Study 2019

2. Overview of the leather tanning manufacturer in Bangladesh

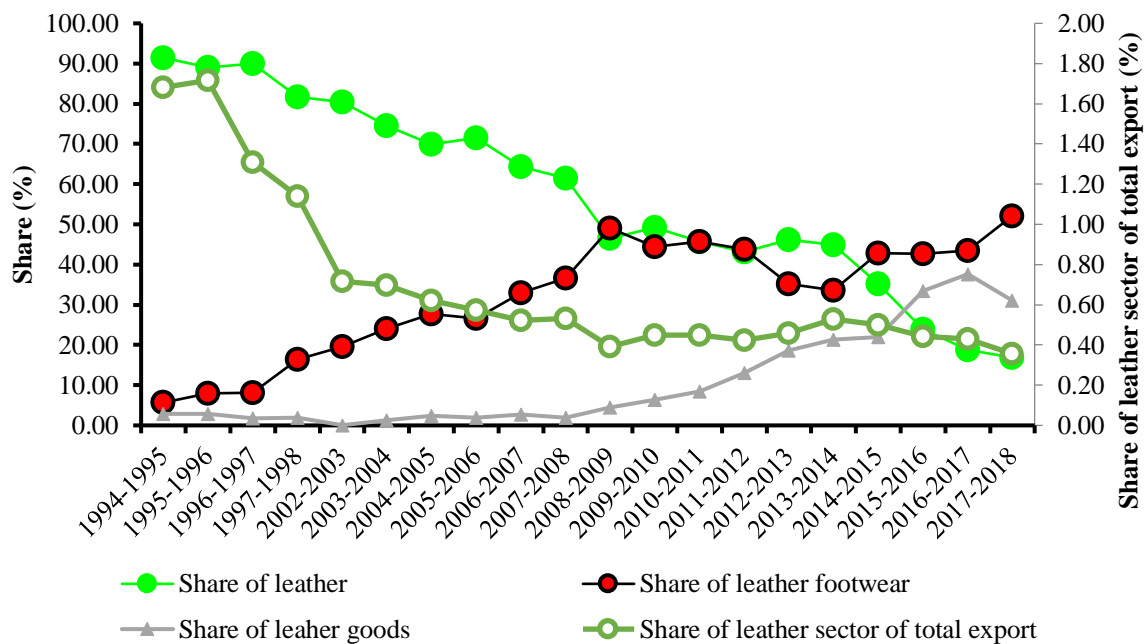
From the very beginning of the recent decade, Bangladesh has been consistently achieving a GDP (i.e. Gross Domestic Product) growth rate of above 6 percent which is apparently being driven by the growth in the manufacturing sector (Centre for Policy Dialogue, 2017). Very recently, the leather sector has been considered as capable of widening the country's narrow export basket which is currently dominated by the readymade garment (RMG) industry. The leather sector has the advantages to leverage a secured supply of raw hides and skins locally and also to gain from higher value addition by converting processed leather to leather products (The European Union, 2013; Paul et al., 2013; Strasser, 2015; Harris, 2016). While the leather tanning industry remains an important sub-sector of the broader leather sector of Bangladesh, other two sub-sectors are the leather goods and the leather footwear sub-sectors (Ahmed and Bakht, 2010).

Literatures suggest that the commercial operation of the leather tanneries at Hazaribagh began in 1960s. Ever since, the industry has grown to a number of more than 200 tanneries in Hazaribagh prior to the recent relocation process. Over the passage of time, Hazaribagh got stuck in the middle of the rapidly expanding capital city from once being a suburb of Dhaka. Due to lenient enforcement of environmental regulations and shortage of land later on, the leather tanning industry continued to grow without effluent treatment plants. Evidently, the leather tanneries have been seriously accused for discharging untreated wastes and effluents and for polluting the nearby river and other water bodies (Strasser, 2015; Harris, 2016; Al-Muti, 2017). The presence of few technical constraints along with the pressures from the environmental NGOs required the government to decide on the relocation of the tanning industry in 2003. However, due to several political-economic issues, the relocation got stalled for a decade and finally initiated since early 2014 (Harris, 2016; Al-Muti, 2017).

As leather tanning sub-sector acts as the backward linkage for the leather goods and leather footwear sub-sectors, the negative image of the leather tanning sub-sector was believed to be a major setback for the growth of the leather sector (Ahmed and Bakht, 2010; Harris, 2016). Amidst all the constraints, the leather sector of Bangladesh has experienced an upward trend

in export since 2009-10 (see Table 2), touched the milestone of exporting USD 1 billion in 2013-14, and maintained a positive growth in the export earning until 2016-17 (Al-Muti, 2017; Export Promotion Bureau, 2018). In addition, the relocation of the industry to ensure environmental compliance sparked a strong hope of rising export not only in the leather tanning sub-sector but also in the leather goods and leather footwear sub-sector. However, recent export statistics show that the export of the leather sector saw a significant negative growth in 2017-18 which coincides with the exact timeline of opening of tanneries at the new tannery industrial estate after relocation.

Figure 1: Share of export of leather, leather footwear and leather goods in leather sector in Bangladesh (1994-95: 2017-18)



Source: TAF-RAPID Study 2019

3. Relocation of the tanning industry

The relocation of the tanning industry has remained eventful as it stretched over the period of a couple of decades since the signing of the first official agreement for relocation in 2003. A lot of economic as well as political factors gave rise to the stalemate which sustained for a decade before the revised agreement was signed between the tannery owners and the relevant government agency in 2013. Involvement of diversified groups of stakeholders eventually created the momentum to break the stalemate and push the relocation process forward since

early 2014. However, in five years since then, the relocation process seems to remain caught in a complex loop of negotiation and implementation problems till the first quarter of 2019.

Figure 2: Images of the TIE over half of a decade

Figure 2a: Leather Industry Park at Savar - before relocation (Daily Star, 2012)² Figure 2b: Building construction at Leather Industrial Park, Savar (Dhaka Tribune, 2018)



3.1. Mapping the stakeholders of the relocation process

For the leather tanning industry, the Ministry of Industries (MoI) has been the key agency of the government to regulate and facilitate growth of the industry. On the other hand, the Department of Environment (DoE) under the umbrella of the Ministry of Environment and Forests (MoEF) has been acting as the regulator of environmental impacts of the industry. MoI and DoE led the governance of the leather tanning industry for a couple of decades since the birth of the country in 1971. However, inability of the government agencies in monitoring environmental impact of the leather tanning industry prompted the appearance of environmental CSOs in the realm of environmental governance of the industry by early 1990s (Harris, 2016; Shakil et al., 2016; Al-Muti, 2017). Two of the major CSOs to bring the pollution and relocation issue of the leather tanneries into the limelight are Bangladesh Environmental Lawyers Association (BELA) and Bangladesh PoribeshAndolon (BAPA).

To stop environmental pollution by the leather tanneries, the environmental CSOs appealed to the Judiciary to issue legal orders to protect natural environment and public health. Since then, the Judiciary became an important part in monitoring initially the environmental impact

²<https://www.thedailystar.net/news-detail-243721>

and later the relocation process of the tanning industry (Harris, 2016; Shakil et al., 2016; Al-Muti, 2017). Besides the Judiciary and the environmental CSOs, development partners like the International Non-Government Organizations (INGOs) and donor agencies have come forward to ensure a better environmental governance in the leather tanning industry. Over last couple of decades, donor agencies like the European Union (EU) and INGOs like The Asia Foundation (TAF) have remained as important actors in the environmental governance of the leather tanning industry. Apparently, the EU has provided technical support to the leather tanneries of Hazaribagh to improve waste management and ensure environment-friendly leather processing. On the other hand, TAF has conducted evidence-based research and collaborated with different stakeholders of the industry including government agencies and tannery owners to expedite the relocation process of the tanning industry (Harris, 2016; Al-Muti, 2017).

Table 2: Primary stakeholders in the relocation process of the leather tanning industry

Stakeholders	Type of stakeholders	Role of stakeholders before initiating relocation debate (until 2003)	Role of stakeholders after signing of First MoU (2003-2014)	Current Role of stakeholders after initiating relocation (2014- onward)
Ministry of Industries (MoI)	Regulating and monitoring agency	Facilitating growth of the tanning industry by implementing regulations and providing incentives	Facilitating growth of the tanning industry by improvising regulations and providing incentives	Monitoring the implementation of TIE by BSCIC and facilitating growth of the tanning industry
Department of Environment (DoE)	Monitoring agency	Monitoring the tanneries for pollution and take legal actions	Monitoring the tanneries for pollution and assisting MoI in planning for the relocation of tanneries	Monitoring the tanneries for pollution and assisting MoI in implementing the TIE

BSCIC	Implementing agency	No involvement with the tanning industry	Chosen by the MoI to implement TIE in 2003 and has been involved ever since	Implementing the TIE with all the necessary infrastructures
Tannery owners	Primary actors of relocation	Paying no heed to the accusations of pollution by tanneries and maintaining business-as-usual approach	Agreeing on the relocation issue but delaying to relocate due to strong resistance from the majority	Constructing and operating new factories at TIE; yet, critical of BSCIC's role in implementing the TIE

Source: TAF-RAPID Study 2019

Though the relocation process necessitated the presence of diversified groups of stakeholders, representatives from the tannery workers as well as other smaller backward- and forward-linking businesses remained side-lined in the relocation debate. Neither the government agencies and nor the business associations of the tannery owners felt the necessity to involve the trade unions of the tannery workers in the negotiation of the relocation process. Moreover, the MoU (Memorandum of Understanding) for the relocation was signed between the Bangladesh Small and Cottage Industries Corporation (BSCIC), a government agency, and two business associations where workers' unions was not a party. As a result, the welfare issues of the workers including accommodation, transportation, medical facilities, and canteen facilities remained out of the scope of the MoU. Hence, the workers' unions have often been organizing processions to raise their demands regarding the welfare of workers after the relocation.

Table 3: Secondary stakeholders in the relocation process of the leather tanning industry

Stakeholders	Type of stakeholders	Role of stakeholders before initiating relocation debate (until 2003)	Role of stakeholders after signing of First MoU (2003-2014)	Current Role of stakeholders after initiating relocation (2014- onward)
Tannery workers	Directly affected group of relocation	Not a party in any debate of environmental pollution by the tanneries	Not involved as a party in the relocation process	Trying to take part in the recent debates over TIE on worker related issues
Environmental CSOs	Pressure groups for relocation	Active role in pressurizing tannery owners as well as relevant government agencies to terminate pollution	Active role in pressurizing tannery owners as well as relevant government agencies to relocate the tanneries	Active role in overseeing the current state of implementation of TIE, especially the CETP and other relevant components
Development partners	Pressure groups and partners for relocation	Active role in partnering with the tannery owners as well as with relevant government agencies to facilitate growth of the tanning industry	Active role in partnering with the tannery owners as well as with relevant government agencies to facilitate growth and	Active role in partnering with the tannery owners as well as with relevant government agencies to ensure proper implementation of the TIE, especially the

			ensure environmental compliance of the tanneries	CETP
Local politicians of Hazaribagh	secondary actors and collaborators of the tannery owners	Maintaining good terms with both the tannery owners and workers to facilitate growth of the industry	Maintaining good terms with the tannery owners and often lobbying on behalf of the tannery owners	Maintaining good terms with the tannery owners and facilitating the relocation process of tanneries
National media	Pressure groups for relocation	Active role in reporting about the pollution of tanneries	Active role in reporting about the pollution of tanneries and following up on the progress of the relocation debate	Active role in reporting about the pollution of tanneries and following up on the progress of implementing TIE, especially the CETP

Source: TAF-RAPID Study 2019

3.2. Political economy of the relocation of the industry

BELA's appeal to the High Court to control environmental pollution by the leather tanneries of Hazaribagh in 1994 apparently initiated a series of debates about the ways to monitor and control environmental pollution by the tanneries. Later on, BELA turned to the High Court in 2001 and 2003 to file petitions against the pollution of tanneries. In response, the High Court in 2003 ruled that all the relevant government agencies and the leather tannery owners should put a stop environmental pollution first and to take necessary steps to relocate the industries

(Shakil et al., 2016). In response to the High Court orders in 2001 and 2003, BSCIC signed a MoU with the associations of leather tannery owners, namely Bangladesh Tanners Association (BTA) and Bangladesh Finished Leather, Leather goods, and Footwear Exporters Association (BFLLEA), in October 2003. The MoU detailed a plan for relocating the leather tanning industry from Hazaribagh to a new location in Savar and ensuring that environmental pollution is controlled at the new location (Karim et al., 2012; Harris, 2016; Shakil et al., 2016).

The first MoU in 2003 set the timeline of relocation for 3 years and targeted to accomplish the construction of physical infrastructures for transportation, utility connections, a CETP, and a dumping yard in the TIE (Harris, 2016; Shakil et al., 2016). Within the timeline of the first MoU, land acquisition and the construction of roads in the TIE remained as visible achievements of the relocation process as the tannery owners resisted to relocate. Apparently, internal resistance and the unwillingness of majority of tannery owners to relocate due to the fear of huge financial undertaking were the key reasons behind the failure of the first MoU. In addition, government's inability to enforce the agreement was also another reason behind the failure of the first MoU (Harris, 2016; Shakil et al., 2016; Al-Muti, 2017).

The relocation debate took a new turn with the change in the state power as the tenure of the previous regime came to an end in late 2006. The new regime remained in power for two years and maintained distance from the relocation debate with an unofficial withdrawal from previous commitment of any financial assistance from the government in relocation purpose (Harris, 2016; Shakil et al., 2016; Al-Muti, 2017). Later in December 2008, though a new government came to power, but the relocation issue was not a priority agenda for the ruling party. Again to break the status quo, BELA drew the attention of the High Court towards the stalemate in the relocation process in June 2009. The High Court, again, strictly ordered the government agencies and the leather tannery owners to implement the relocation of leather tanneries by February 2010. However, both government and tannery owners appealed to the High Court for further extension of the relocation deadline over next few years (Strasser, 2015; Harris, 2016; Shakil et al., 2016).

It was in 2013 when the relocation agenda finally got some momentum as the EU apparently threatened the leather tannery owners to terminate business deals if environmental compliance is not ensured. As a result, the associations of the tannery owners collaborated

with development partners like TAF to conduct research and organize meetings on the revival of the relocation issue (Harris, 2016; Al-Muti, 2017). The business leaders of the leather tanning industry leveraged their deep relationship with the local Member of Parliament (MP) to lobby to the top-brass of policy makers including the Finance Minister and the Industry Minister. A coordinated political economy approach in 2013 by the business leaders and by TAF was aimed towards getting full financial and technical support from the government to establish the TIE (Harris, 2016; Shakil et al., 2016).

As the outcome of the coordinated approach by various stakeholders, the ECNEC revised the longstanding relocation proposal in August 2013 and decided to allocate a sum of 10.78 billion BDT for the establishment of the TIE. In addition, ECNEC also decided to allocate about 80 percent of the money as government's grant to construct the CETP and other related components for proper effluent and waste management in the TIE. Moreover, a compensation package of 2.5 billion BDT was also included in the grant to compensate the tannery owners for relocation (Dhaka Tribune, 2013; Shakil et al., 2016). In the aftermath of the ECNEC's decision, a revised MoU was signed in October 2013 with an urgency of the relocation. As a result, visible implementation of the relocation process started in early 2014 with the initiation of CETP construction in the TIE (Harris, 2016; Al-Muti, 2017).

For the next couple of years after the initiation of CETP construction in early 2014, construction of roads and other physical infrastructures in TIE coincided with the construction of new tanneries. There was an urgency among the policy implementers of government agencies as well as among the environmental CSOs to start relocating the tanneries gradually whenever the CETP is partially operational. The urgency appeared to arise from the rising consciousness of the extremely negative impact of pollution from tanneries on the Buriganga River. However, when the CETP was partially operational, government took a strict decision to cut the utility connections to the tanneries in April 2017 and forced the tanneries to stop processing leather in Hazaribagh. As an outcome of the government's strict move, bigger tanneries started operating in the TIE followed by most of the medium and small tanneries within the period of a year.

The optimism surrounding the relocation process, however, started to wither away with the news of poor management of CETP and other supporting infrastructures appearing in the newspapers within the first year of the operation of TIE. Tannery owners and workers

altogether raised this issue and blamed the rash move by government to relocate the tanneries without properly building all the necessary infrastructures including the CETP. Besides the tannery owners and the workers, other stakeholders like the environmental CSOs and other development partners also currently point towards the apparent impasse in ensuring the environmental compliance in the TIE.

In an apparent blame game, the tannery owners and workers also point towards the lack of BSCIC's capacity and experience to handle such a huge undertaking to relocate the tanning industry as BSCIC is mostly known for handling small and cottage industries at best. On the other hand, BSCIC accuses the tannery owners and workers for not following the pre-treatment procedures for the waste and effluents disposal which obstructs the ideal effluent treatment process of the CETP. Moreover, as an important part of the industry, the tannery workers appear to accuse the government agencies and tannery owners alike for failing to ensure minimum welfare of the workers in terms of accommodation, transportation, health, and other occupational safety issues in the TIE. The blame game between and among the important stakeholders now characterize the ongoing impasse in the tanning industry after relocation.

3.3. Progress of relocation

The relocation of the tanneries started with the construction of CETP and was closely followed by the construction of new factories in the TIE by early 2014. The relocation project was initially slated to end by December 2016 which later has been extended for quite a few times to June 2019 in the latest revision. By March 2019, there are 123 tanneries operating in the TIE and 18 others are still under construction. The field survey reveals that majority of the small and medium tanneries have only started processing of wet blue, the first stage of the leather processing from raw hides and skins, in the new factories at TIE. Hence, a lot of tanneries have kept other two steps of processing crust and finished leather in the old factories of Hazaribagh as these two steps involve no chemicals and other sources of pollution.

Majority of the tanneries were forced to shift the factories from Hazaribagh to Savar in April 2017 as government decided to shut down the utility connections to all the tanneries of Hazaribagh. In this instance, government agencies forced the tannery owners to come out of

the longstanding resistance towards the relocation plan. However, when the tanneries were forced to start operating at new factories in April 2017, only two of the four modules of CETP were in operation whereas the completion of CRU and the STP was far behind. The experts and other stakeholders believe that the forceful shifting of the tanneries to the TIE in early 2017 was an immature move before ensuring proper operation of CETP and other supplementary units.

Building other physical infrastructures like roads and drainage systems and setting up utility connections have been accomplished to a great extent. According to recent BSCIC report (published in February 2019), 130 factories have received electric connections while gas and water supplies have been made available to 66 and 114 factories, respectively. As the relocation of factories proceeded in the TIE, the Ministry of Industries (MoI) implemented the compensation scheme for the tannery owners upon fulfilling the required conditions of relocation. As of March 2019, a sum of approximately TK 2119.94 million (i.e. 81.52 percent of the total compensation fund) has been distributed against the committed sum of Tk. 2600 million. Data from the MoI show that a majority (69 percent) of the tanneries have received at least 80 percent of the compensation committed. Around 10 tanneries are yet to reach the stage of construction required to receive the first installment of the compensation scheme.

4. CETP and other environmental compliance issues in the TIE

The Central Effluent Treatment Plant (CETP) is at the core of the relocation project of the tanning industry. With a capacity to treat 30,000 cm³ of effluents a day, the CETP is built to avoid environmental pollution and to ensure environmental compliance of the industry in the new location. As mentioned above, the CETP is accompanied by other supporting components like the Chrome Recovery Unit (CRU), Water Treatment Plant (WTP), Sludge Treatment Plant (STP), and a dumping yard. Reportedly, the CETP is not running at its fullest efficiency as some of the facilities are yet to be installed. The tannery owners and environmental activists are asking for quick installation of all the necessary units related to the CETP before the beginning of the peak season by July 2019.

4.1. Current issues related to CETP and related units:

Reportedly, the CETP is not running at its fullest efficiency as some of the facilities are yet to be installed. Dewatering tanks, sludge thickening, and sludge recycling processes are not placed yet. As a result, the sludge are now dumped into the dumping yard which was in a process to be filled up before the end of 2019 and hence reinforces the need for a sludge recycling system in the TIE. However, the BSCIC officials are extending the possible timeline of installation of the CETP and other components since the last quarter of 2018 to the recent days of March 2019. In the recent interviews in March 2019, the BSCIC officials expressed their optimism to accomplish the process by June 2019 as the recent extension permits.

Lack of BSCIC's understanding with the current contractors, inability of the CETP to take the full load of effluents in the peak season, and ensuring proper screening of wastes and effluents at source are some of the major challenges in operating the CETP sustainably. Tannery owners and BUET experts altogether have blamed the existing contractors of the CETP for the delay in installing the necessary units of CETP and other units. BSCIC officials have also acknowledged the fact that the contractors are now intentionally delaying the completion of the CETP and other supporting units. The tannery owners have indicated toward a hidden feud between the contractor and the BSCIC over the quality of the electro-mechanical products installed in the CETP and other units. BSCIC officials and BUET experts also acknowledged monitoring the contractors closely as the contractors have already been found to supercede the earlier agreement once and import low quality materials.

There are concerns over the capacity of the CETP to take the load of effluents in the peak season even if the CETP runs at its fullest capacity. According to experts, there's a mismatch in the treatment capacity of the CETP and the actual flow of effluents in the peak season which spans over at least three months of a year. The CETP is currently capable of treating 25000 cubic meter of effluents per day whereas the flow of waste can reach as high as around 40000 cubic meter a day in the peak season. On the other hand, the flow of effluents in the non-peak season remain under the treatment capacity at about 18,000 cubic meter a day. The overflowing in the peak season coupling with monsoon make the situation worse as the drains seemed to get overloaded and the roads flooded in the previous couple of years.

Apart from all the challenges, the positive progress in the recent weeks have been the repairing of about 70 percent of the road infrastructures inside the TIE. According to BSCIC officials, remaining 30 percent of the road infrastructures will be repaired within next few months. Moreover, the 22-feet-wide connecting road to Horindhora from the TIE has been widened to 30 feet and being repaired. According to the Project Director (PD) of the TIE, street lights will be installed in all the roads and the drainage system will be upgraded by June 2019. Moreover, in a recent decision of a collaborative meeting at the MoI, roadsides will be beautified by the tannery owners in upcoming months. Furthermore, the newly appointed Minister for the MoI as well as the Private Sector Advisor to the Prime Minister are concerned over the proper implementation of the TIE and have been consistently communicating with the tannery owners and government agencies over ensuring better environmental compliance.

4.2. Environmental compliance of the CETP and the tanneries:

Water and effluent treatment at any ETP and CETP in Bangladesh follows the Environmental Conservation Rules (ECR) of 1997 set by the DoE. According to the experts from Bangladesh University of Engineering Technology (BUET), the allowable limit for Biological Oxygen Demand (BOD), sulphide and dissolved oxygen in the treated effluents are maintained as per the DOE standards. The allowable limit for BOD is 100 ppm which is well-maintained in the lean season and meets both the DoE and Leather Working Group (LWG) standards (see Table 4). In the peak season, as per the BUET experts, the treatment quality goes down due to the overload of effluents. Although there are no installed mechanisms in the CETP to treat Total Dissolved Solid (TDS), BUET experts also pointed towards the inconsistency in the decades-old DoE standards for TDS. The allowable limit for TDS is 2100 milligram/litre as per DoE whereas it is about 5000 milligram/litre in India for different industries. The tanneries in India, according to BUET experts, maintains TDS at about 8,000 milligram/litre in practice which is close to the current value of what the CETP in TIE can reach. Hence, the limit DoE has been keeping currently for TDS is impractical.

As part of the compliance, tannery owners and other stakeholders like development partners are looking forward to achieving the accreditation of LWG for the tanneries. To certify a tannery for its compliance, LWG have a requirement that CETP needs to ensure a treatment quality with a minimum level of Chemical Oxygen Demand (COD) and BOD maintained in

the treated water as per LWG standards. According to BUET experts, the allowable limit of BOD has been achieved so far as per the LWG standard. However, the level of COD, chromium, and ammonia are falling behind. Hence, the CETP might achieve the points at a Bronze standard with its existing setup while achieving the Silver and Gold standards will certainly need more investment and strong commitments from all the concerned stakeholders. In this instance, the DoE must become more effective in implementing ECR and other relevant rules to ensure better environmental governance, the BUET experts commented.

Table 4: Raw and treated tannery waste water quality

Parameter	Unit	Raw wastewater (Inlet)	Treated water (Outlet)	Allowable limit (ECR'1997)	Status
COD	Mg/L	4870	505		X
BOD	Mg/L	1200	40	<100	Achieved
NH₃-N	Mg/L	235	90	< 50	X
Chromium	Mg/L	64	2.5	<2	X
TDS	Mg/L	8898	7150	<2100	X

Source: Bureau of Research, Testing and Consultation (BRTC), BUET, March 2019

To ensure the proper operation of CETP as well as other units and to ensure environmental compliance, pre-treatment of the wastes and effluents at the tanneries before disposal to the CETP is as important as the proper operation of CETP. There is a guideline from the High Court for the tannery owners to apply 3 sets of screening (25 mm, 12 mm, and 6 mm must be fixed in each drain and two drains must be separated one is chrome drain, and another is effluent drain) before discharging waste and effluents to the CETP and yet pre-treatment of effluents remains a major concern, as per the BUET experts and BSCIC officials. To monitor the pre-treatment process at the tanneries, BSCIC team visits five tanneries every day and inform tanners the proper ways of waste disposal. Moreover, a number of meetings and workshops with the tannery workers have not brought positive result in the pre-treatment as most of the small and medium factories are run by third party contractors. The third party contractors do the job by the temporary workers at low wages and hardly employ any

technicians to maintain proper discharging of effluents. A lot of small factories are even run by freelancer technician who barely care about pre-treatment.

Besides the waste disposal mechanism, use of huge volume of water in the leather processing adds pressure to the treatment capacity of the CETP. As per the DOE standard, 30 tonnes of water can be used to process 1 ton of leather whereas the current use of water at local tanneries is around 50 tonnes to process a ton of leather. This existing practice is far from the LWG standard as LWG requires use of 15 tonnes of water to treat 1 ton of leather. Besides the use of lower volume of water, LWG also requires one-third of water to be recycled for using again. The pre-treatment issues in TIE have not only affected the treatment quality of the CETP but also the chrome separation unit of CRU. The tanneries often discharge chrome with limes instead of chrome with water which affect proper separation and recycling of chrome in the CRU. Hence, proper waste disposal and pre-treatment of effluents remain a challenge for both the tannery owners and government agencies in achieving environmental compliance.

4.3. Future operation and maintenance of the CETP and other units

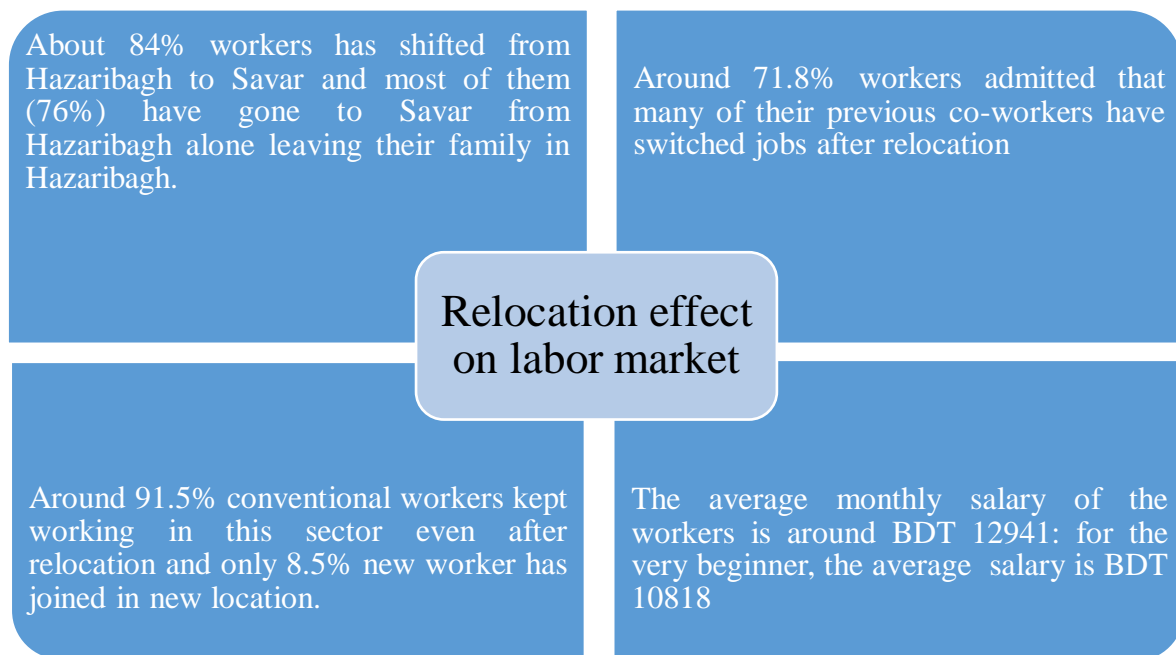
As per the revised MoU of 2013, the CETP will be operated by an autonomous company once the existing contractors accomplish the implementation of the CETP and other supporting units. The company will be formed with the representatives from tannery owners as well as from relevant government agencies. As the current contract with the existing contractor ends in June 2019, the urgency of forming the company is now imperative. However, the process of the company formation still awaits approval from the MoI. A major concern is the running and maintenance costs of the CETP, which needs about TK 30 million per month i.e. about TK 40 for treating per cubic meter of effluents. Clearly, the tannery owners need to be strongly committed and united in ensuring sound operation and well maintenance of the CETP under the autonomous company. While some bigger tanneries in the TIE have allegedly proposed to build individual ETPs at the factory premises, majority of the small and medium tannery owners fear that this may undermine the quality operation and maintenance of CETP in future. However, the issues regarding the operation and maintenance of individual ETPs and chrome treatment plants need to be settled for the sake of sustainable operation of CETP.

5. Labour issues in the tanning industry

As mentioned earlier in this report, the workers were not a part of the relocation agreement since the beginning and hence could not voice their concerns properly. TWU, as the major representative body of the tannery workers, have tried to raise the issues of accommodation, transportation, and medical services before relocating to the TIE. However, the tannery owners and the government agencies overlooked the demands of the tannery workers. As a result, the tannery workers are found to be delusional about the relocation now as they have been ignored so far and their demands remain unmet even after a couple of years of relocation.

Among 25 thousands of workers in Hazaribagh, about 20 thousand workers moved to Savar while the remaining portion either left or were forced to leave the job. Those who left the job by choice have done so to avoid the accommodation and transportation problems. On the other hand, few thousands of workers lost their job as they used to work for the third party contractors and a lot of the third party contractors refused to shift to Savar. Moreover, after the utility discontinuation in April 2017, several thousands of workers lost their job who worked with the commercial exporters. While some of the tannery workers were losing jobs, most of the workers suffered from temporary loss of jobs during the transition period of the factory relocation due to their temporary job status. On behalf of the workers, TWU contacted with the big tanneries to compensate the own workers with three months of wages.

Figure 3: Relocation effect on labour market in the tanning industry



Source: *Source: TAF-RAPID Study 2019*

5.1. Wages and other benefits for the workers after relocation

The wages of the tannery workers have increased a little after the relocation which was yet to suffice the need of the workers to cope up with the new setup of the minimum wage for unskilled workers declared by the Wage commission 2018 is 13500 BDT for the tannery workers. However, the scenario at the tanneries is completely different as most of the workers are employed on a temporary basis at a lower rate of daily or monthly payment. To ensure proper wage of the workers, TWU signed a formal agreement with the tannery owners recently to pay the temporary workers at least 8000 BDT per month in the beginning of their career. On the other hand, the permanent workers currently get about 11000 BDT per month. Moreover, the tannery workers and TWU have been consistently trying to increase the salary so that the workers can cope up with the increased cost of accommodation, food, and transportation.

Majority of the workers in the TIE are temporary workers and, hence, do not get any extra benefits and allowances. However, housing, transportation, and food have become way too costly in Savar if compared with that of in Hazaribagh. Lots of the workers still travel to Savar from Hazaribagh by hiring buses for themselves. Though some companies arrange transport facilities for their officials and managers, but do not do the same for the workers. However, few tanneries arranged transport for workers for first couple of months

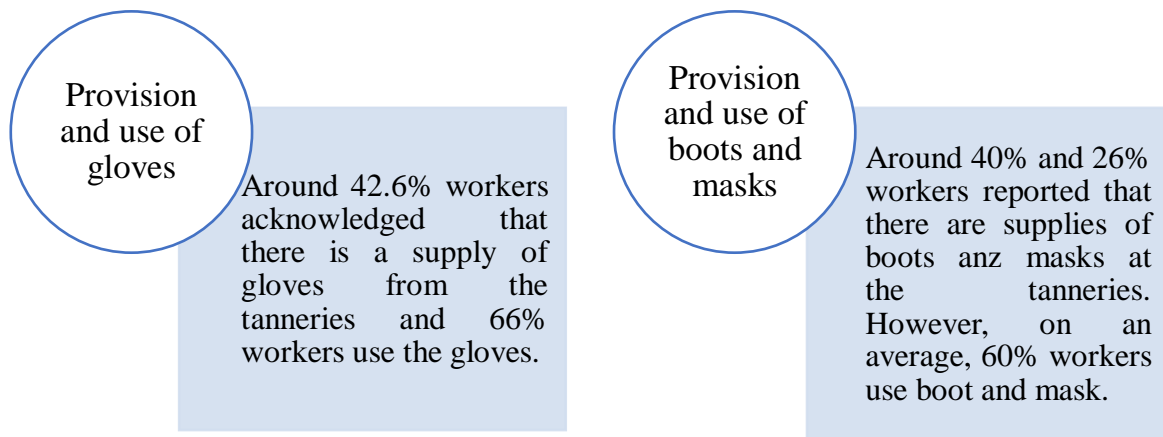
immediately after the relocation which has been cancelled later on. Moreover, managing accommodation in the nearby areas of the TIE at a reasonable cost is the biggest challenge for the tannery workers. So far, only one tannery has built a colony in the nearby areas of TIE while no other tanneries have immediate plans for this. Along with the wage issue, TWU also supports the workers to ask for their rights to other benefits like housing, transportation, health and so on.

5.2. Occupational health and safety at the workplace for tannery workers

Occupational health and safety issues have broadly been neglected at the tanneries for a long time, according to the tannery workers. As the findings from field research suggests, health and safety at the workplace have not improved significantly at the tanneries after the relocation. About half of the respondents claim that the tanneries they work do not contain any first aid facilities for the workers. The absence of first aid facilities can be alarming in such a labour-intensive industry where 8 percent of the respondents have reported to have suffered from minor injuries at work last year. Moreover, about 95 percent of the respondents claim to have no doctor at their tanneries. Furthermore, only about 10 percent of the respondents are aware of any ‘safety committee’ at their respective workplace.

Construction of new factories in the TIE have not brought significant changes in terms of occupational safety of the workers. While the tannery owners have brought new machineries for better processing for leather at the new factories, but haven’t brought newer and better safety equipment at the factories for the workers. Even where the PPE is available, the number of PPE is not sufficient for the workers of the factory. The survey data reveals that about 40 percent of the respondents have received gloves and boots from the factories while the remaining 60 percent have received no PPEs. Percentage of respondents receiving masks from the factories gets even lower (see Figure 4). However, survey data also reveals a demand side constraint as about 40 percent of the respondents never seem to use the PPEs at work even after receiving PPEs from the tanneries. The workers, in this instance, blame the climate of the country and the adverse working condition inside the factories where using PPEs cause massive sweating problem.

Figure 4: Provision and use of PPEs



Source: TAF-RAPID Study 2019

Apart from the supply and use of PPEs, the fire safety issue is also important for the tannery workers. Preparation for fire safety at the tanneries seems vulnerable as the necessary infrastructure and trainings are hardly implemented in the factories. The survey data shows that about two-third of the respondents have seen fire exits (69%) and fire extinguishers (53%) at respective tanneries. However, only five percent of the respondents have reportedly received a firefighting training where the remaining 95 percent have barely received any sort of training on fire safety. This particular data reveals the lack of proper attention to fire safety issues at the tanning industry of Bangladesh.

5.3. Working conditions at the new factories in TIE

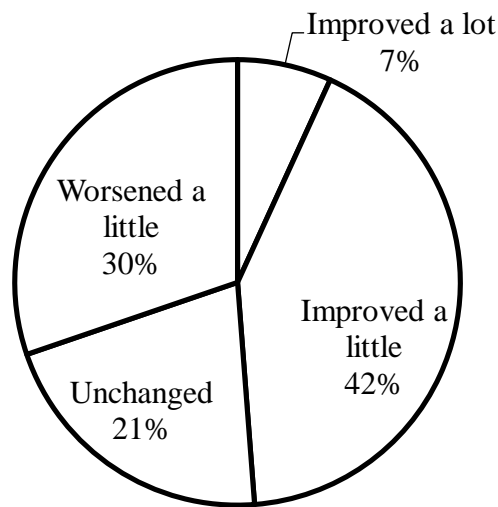
The working conditions after the relocation have barely improved, if not deteriorated, as per the workers. There are about eight thousands of workers from 30 tanneries involved with the TWU where the standard working hours are maintained. Big and medium tanneries are affiliated with the TWU while the small ones are often run by third party contractors and are indifferent about TWU. The non-affiliated tanneries barely pay any attention to working hours and other forms of labour rights. The tanneries rented to the third party contractors have no fixed working days and hours and rather have the seasonal assignments of completing the job by a deadline. The workers under the third party contractors work days and nights relentlessly when there is an assignment to accomplish, but roam free when there is no assignment and yet they are paid on a monthly basis.

Apparently, receiving increments in wage is a major struggle for the tannery workers. Moreover, even after all the efforts by the TWU, most of the medium sized tanneries pay the

salaries to workers often in three months of interval except for some big tanneries. The tannery owners, in this instance, blame the downfall in the leather export behind the recent irregularity in salary payment. However, given all the challenges, TWU has been working to materialize the welfare of the tannery workers by informing the workers about their rights and by negotiating with the tannery owners to claim the rights of the workers. Yet, only about 40 percent of the respondents seem to have sufficient knowledge on the minimum wage set by the government while about 72 percent of the respondents know about the standard working hour. Nonetheless, the survey reveals that majority of the workers (92 percent respondents) acknowledge the contribution of TWU in improving different aspects of labour welfare including recruitment, wages, and so on.

In the interviews, workers have acknowledged the fact that the workload in the tanneries have decreased in the last couple of years after the relocation. One reason behind that is the incompleteness of the relocation process as the roads, drains, and the CETP remain less than functional which in turn affected the lower amount of export of leather. The other reason is the installation of modern machineries with higher capacity in the new factories. According to the workers, about four months of work can now be done in a month due to four times higher capacity of newly installed drums than that of the previously used local drums. The decrease of the workload has hence prompted job cut and forced leave for many workers. However, given all the adversities at the new factories in TIE, about 30 percent of the respondents believe that the relocation ultimately worsened the working conditions for tannery workers while about half of the respondents believe otherwise (see Figure 5).

Figure5: Working environment comparison: new place vs. old place



Source: TAF-RAPID Study 2019

Low workplace safety added with low job security have been a major concern for the mental health of the tannery workers. Though the mental health issue is very sensitive yet significant, this aspect has not been covered in a great detail in any previous studies. This study has put the issue of mental health in the survey questionnaire to see the effect of low wage, hard work, harsh working condition, and low job security on the mental health of the workers. The survey findings reveal that the low wage and hard work has the most negative impact among the workers as 78 percent of respondents believe. On the other hand, consecutively 60 and 54 percent of respondents claim that low job security and harsh working conditions also negatively affect the mental health of the workers (see Table 5).

Table 5: Mental health issues of the tannery workers

	Low wage and hard work (% of response)			Harsh working condition (% of response)			Low job security (% of response)		
	Male	Female	Overall	Male	Female	Overall	Male	Female	Overall
Neutral	8	11	9	34	5	31	24	17	24
Positive	10	26	11	12	32	14	12	39	15
Very positive	2	5	2	2	5	2	2	6	2
Negative	49	37	48	42	53	43	39	33	39
Very negative	31	21	30	11	5	11	22	6	21

Source: TAF-RAPID Study 2019

5.4. Facilities in and outside of the TIE for the tannery workers

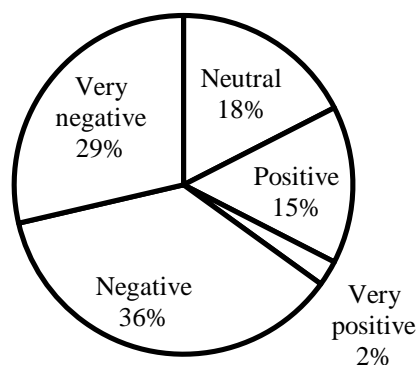
There is no medical facility nearby for the workers of the tanneries. There are small medical centres in Hemayetpur, about 4 kilometres away from the TIE, while the full-fledged medical hospitals are located more than 10 kilometres away near to Savar city. Last year, there has been a tragic case of the death of Maruf (44) who died of heart attack while returning home after work last year. He suffered from a stroke at the TIE and was taken to a hospital in Dhaka as there were no better hospitals for critical patients nearby. Unfortunately, he died after 3 days of treatment in the ICU. He was an old victim of asthma and, according to his co-workers, the uncontrolled dust in the TIE killed him slowly in a couple of years. Apart from Maruf's death, there was another death in 2018 as three workers got injured from slippage of acid drum while carrying the drum manually from one factory to another. One died immediately after reaching the hospital with serious burn injuries and the other two survived with scars all over the body. Proper medical hospital closer to the cases of similar accidents might help saving lives and minimizing the damages. Thus, getting a full-fledged hospital in the vicinity of the TIE is the first priority of the tannery workers.

Apart from the medical services, housing facilities and food in the nearby areas of TIE have been bigger challenges for workers. Food and accommodation cost has just doubled, as the workers say. The accommodation cost is apparently higher as the area has seen a recent rise in the demand for accommodation and as there are no suitable residential facilities nearby. About 77 percent of the respondents claimed that their accommodation cost has increased while only about 16 percent have been benefited by the reduction of accommodation cost and the accommodation costs has remained unchanged for 7 percent of respondents. On the other hand, the food cost is high as there is no gas connection in the houses and the residents are

forced to use cylinder gas which costs way higher than the government provided gas connection. Moreover, transportation to the TIE remain challenging as the area is far from the nearest urban centres and lack proper public transport for the commuters who travel from any part of Dhaka. Findings from the survey shows that about 62 of the respondents have been experiencing an increase in the transportation cost while only 6 percent of respondents have seen a decline.

Despite all the adversities the workers are facing, majority of the workers are hardly compensated while the tannery owners have been compensated by the government. The survey findings show that, about 91, 88, and 78 percent of the respondents consecutively put the establishment of medical centre, increment of salaries, and assurance of low-cost housing as the top priorities after the relocation. However, according to BSCIC officials, some plots in the TIE have been kept vacant to establish prayer halls and fire station while housing and medical services are left for the next phase of extension of the TIE. Eventually, all the accumulated adversities of living and working in the TIE and nearby areas have brought a major dissatisfaction among the workers about the whole relocation program. The survey data uncovers that about 65 percent of the respondents think that the relocation have negatively affected their lives while only 17 percent think otherwise (see Figure 6).

Figure 6: Effect of relocation on workers' lives



Source: TAF-RAPID Study 2019

5.5. Female workers at the TIE

There are 19 female respondents, around 9 percent of the respondents, have provided answers to the survey questions. The female workers of the tanning industry have suffered severely due to the relocation effect. Reportedly, female workers who used to work on temporary basis at Hazaribagh have mostly last job or chose to leave. Currently, there are some medium and big tanneries where few thousands of female workers have remained at work. Some female workers, during the interviews, have reported that the female workers are paid less than their male counterparts in most of the tanneries except for few big tanneries. The average monthly wage of female worker is BDT 10,624 while the average monthly salary of the male worker is around BDT 13,227 which is approximately 1.25 times higher than the female worker. Moreover, the job environment at the tanneries have not been much favourable to the female workers due to lower standard of health and hygiene. Most of the female workers claim that there are no separate toilets, dining space, prayer hall, and waiting rooms for the female workers at most of the tanneries. The survey data reveals that about 80 percent of the respondents, both male and female, have not seen any separate toilet facilities for female workers at their respective tanneries. Furthermore, the long working hour added with hazardous workplace scenarios have had negative effect on both physical and mental health of the female workers at the tanneries. However, only two cases of harassment, single case of physical and mental harassment, are reported by the female workers and no case of sexual harassment of the female workers at the tanneries has been reported in last few years after relocation.

6. Community perception regarding the relocation of the industry

The people of the closest neighbourhoods of the leather tanneries are direct victims of the environmental pollution. Apparent pollution of soil, water and plants in Hazaribagh has caused the people of the neighbourhoods a great suffering. As the industry has been relocated to Savar now, the nearby communities are at the risk of facing various types of unforeseen costs if the industry fails to meet the environmental compliance.

6.1. Community people of Hazaribagh

People of Hazaribagh have both benefitted and suffered for decades due to the tanning industry before its recent relocation. People who were employed at the tanneries and were involved in any business directly or indirectly related to the tanning industry were the major groups of beneficiaries in financial terms. On the other hand, general residents of the area who were neither employed nor involved in any tannery-related businesses have been the worst sufferers of the pollution from the tanneries. However, there are no doubts that the health and welfare of both the groups have extremely been affected from pollution of the tanneries. Overflow of the drains in Hazaribagh with effluents, and pollution of air, water, and soil were some major concerns for the community people.

In recent years, for the residents of the Hazaribagh, the relocation of the factories have brought visible changes in the environment of Hazaribagh. The drainage system has improved visibly and there were no incidence of drainage overflow in last couple of years. Air quality has apparently improved as there are no smells of raw hides and chemicals in the nearby areas of Hazaribagh, according to majority (73 percent) of respondents. Moreover, the water quality in the closer waterways of Hazaribagh as well as of the river Buriganga has reportedly improved in last couple of years. Improvement in the natural environment has brought positive changes in the life of the general residents of Hazaribagh as 65 percent of the respondents claimed to have better space to walk and getting better-off people in the neighborhood. However, some people who were indirectly affiliated with the tannery business as commercial exporters and third party contractors have been effected negatively with the closure of tanneries in Hazaribagh. Some forward linking business like the small leather goods producers are also effected as the tanneries have moved far away from Hazaribagh.

6.2. Community people of Savar

As the TIE stands at the bank of Dhaleshwari River, there are villages in both sides of the river who are affected by the ongoing activities at the tanneries. Horindhora is the nearest village situated on the same bank of Dhaleshwari as the TIE does. On the other hand, Bokchor is another closest village on the other side of the Dhaleshwari river. As the findings from the field shows, Bokchor, a century-old rural village with very fertile land, is highly affected by the relocation of tanneries. People of the south part of Bokchor, the closest area to the river, are the worst sufferers of both air and river pollution in recent years. South breeze during the

spring and summer brings with it the bad smell of tanneries and makes it tough to breathe for about half of the year, as the residents of Bokchor remarked.

People of the nearby villages, especially the people of Bokchor, used to use the river water for different purposes like taking shower, bathing the household animals, irrigating the arable lands and so on. There were no purpose-built ponds in the area earlier as the river was a great source of fresh water for the humans, animals and the plants alike. Some households even used to collect water from the river to cook foods and to wash dishes. However, during the in-depth interviews and group discussions, residents of the nearby villages have claimed that the water of the Dhaleshwari river has become not only useless now but also toxic in recent years. Use of the river water in other day-to-day activities is feared to cause extreme skin problems and water-borne diseases, as the residents suggest. Moreover, for the farmers of Bokchor who constitute majority of the residents of the village, the cost of irrigation has increased substantially due to the need for using motor-driven deep tube-wells for irrigation. The pollution of the river water has brought negative financial implication for the common residents of the neighbouring areas. It has been unanimously reported by the residents that the yield of seasonal fruits like mango, coconut, and papaya have decreased drastically in last couple of years as the seasonal fruits often fall off the trees at the premature stage.

Besides a long list of financial costs for the people of the neighbouring areas, there is also a socio-cultural aspect of the river and air pollution as about 84 percent of the respondents suggested during the survey. Previously, people of all ages – from young to elderly - used to swim together in the river. This was a source of entertainment and social bonding. However, due to severe pollution, such an opportunity is lost now. Furthermore, as the air of this area stinks during the spring and summer time, social life in the villages is also disrupted. People from other areas often refuse to pay a visit to Bokchor and other neighbouring villages during the spring and summer due to the bad smell, as the residents of Bokchor mentioned. Consequently, financially better-off people are leaving the villages.

The scenario of the people of Horindhora is a bit different from that of the residents of the Bokchor and other villages on the opposite side of the river. As Horindhora stands on the same bank as the TIE does, people of Horindhora are able to take advantage of the location and now rents their houses to the tannery workers and other employees related to the tanning

industry. Opportunities to earn from rents and other new businesses have been expanded with the relocation of the tanneries to Savar. Hence, for many people of Horindhora, the financial gains outweigh other financial and socio-cultural costs of the relocation of tanneries. Moreover, many residents of Horindhora are now shifting to the nearby towns after renting their houses off to gain from increased rents as well as to avoid the pollution by the tanneries.

Among very few positive things mentioned by the people of Bokchor during the interviews, the usability of the river water during the monsoon is an important one as river water reportedly gets better. Hence, the local people suggested the river water can be used for several purposes during the monsoon when rainwater flushes away the wastes and stains. Moreover, fishes occasionally appear in the Dhaleshwari River for few months during monsoon. Apart from the nature taking care of the river water, there are barely any positive aspect of the tanning industry for the community people. Moreover, the younger generation, who were somehow eager to get jobs at the tanneries, have now lost their desires mostly as the negative perception about the tannery jobs have been strengthened in recent years.

7. Policy recommendations by the relevant stakeholders

The relocation of the leather tanning industry has been confronted by several challenges with the most important one being not having a fully functional CETP with other supporting units. Various stakeholders have already questioned the quality of construction work and suitability of the facilities. According to the experts, if the quality of CETP and other supporting units is compromised, the whole purpose of the relocation could prove to be not very worthwhile. There are also other challenges like maintaining physical infrastructures, controlling water pollution, and addressing the welfare issues of the workers. The following provides a list of recommendations that have been prepared in collaboration with various stakeholders.

Recommendations for government agencies

- All the stakeholders prioritize immediate completion of all necessary units of CETP and CRU for the sake of the credibility and sustainability of the TIE project. The tannery owners and other stakeholders asked to BSCIC to deliver on its promises on CETP completion by the next deadline and to avoid further extension.

- The urgency of implementing a sludge recycling system has been acknowledged by all concerned. According to the experts, BSCIC need to call for tenders immediately to select bidders to build a sludge recycling system. BUET experts suggest installing the reverse osmosis technology in additional modules of CETP in future will enable the total dissolved solid (TDS) mechanism in the CETP which is currently unavailable.
- Relevant stakeholders including the tannery owners as well as the workers have asked BSCIC to be more attentive to the robust maintenance of the roads and an integrated drainage system throughout the Estate.
- The Department of Environment (DOE) can consider introducing penalties on tanneries for discharging effluents and wastes without proper filtering and screening. DoE can also setup a small unit or at least can make an officer available at the TIE site office to regularly monitor the activities of the tanneries.
- Government can announce and implement an incentive structure for the tanneries on the basis of proper environmental as well as other sorts of compliance. Screening effluents at the source before disposal, separating chrome from other wastes, and ensuring occupational and fire safety for the workers at the factories can be some of the important indicators of compliance at the tanneries. Based on satisfactory performance on the proposed indicators, incentives for tax rebates can be offered.
- As local people suggest, the pollution of river water have become acute due to the siltation in the downstream. If the siltation can be cleared from the downstream, the water will flow smoothly and the quality of the water may improve. In addition, it has been found by the BUET experts that water quality in the upstream of nearby river is worse than what the CETP discharges in the nearest part of river. Hence, more inspection of dying factories in the upstream of the river to control pollution can bring some meaningful change in the quality of river water.
- As BSCIC remains involved with the TIE even after the transformation of the project to a company in the near future, the higher officials appointed for TIE needs to be from an engineering background. Experts have suggested the creation of a separate cell at the MoI, other than BSCIC, to deal specifically with the issues of the tanning industry. If BSCIC remains involved, some tannery owners suggest BSCIC officials' learning from the Bangladesh Export Processing Zone Authority (BEPZA) on the ways of managing a special economic zone.

- Department of Inspection for Factories and Establishments (DIFE) need to be much more proactive in inspecting the tanneries in TIE to monitor the existing practices regarding employment at tanneries. DIFE can make an officer and a supporting staff for the officer available at the TIE site office to regularly monitor the employment related practices between owners and workers at the tanneries.
- For the tannery workers of the TIE, a full-fledged medical hospital is the first priority and developing housing facilities is the next in the list. In addition, maintaining the roads and drainage systems properly to lessen the dust problem at the TIE is another important demand of the workers.

Recommendations for the tannery owners

- BSCIC engineers and CETP contractors stress on the urgency of separating chrome at source so that the chrome-rich water reaches the CRU separately to make the recovery process smoother. All the tannery owners need to cooperate sincerely in this regard while some bigger tanneries can build chrome separation system at source.
- Ensuring screening and separating of effluents at the tanneries has been a major obstacle in attaining proper treatment of effluents at the CETP. As directed by the High Court, the tannery owners are supposed to apply 3-steps of screening before discharging effluents which needs to be strictly observed.
- All the relevant stakeholders insist on achieving LWG certification for the CETP as well as for individual tanneries. According to experts, the bigger tanneries can attain LWG certification separately for their tanneries and in the same way can help the CETP to be accredited by the LWG.
- Formation of a company with representatives from relevant agencies, as per the revised MoU of 2013, to operate and manage the CETP in the very near future have become a priority agenda. The tannery owners need to be more proactive in discussing about the formation and operation of the company as it may need to hire experienced engineers from home and abroad to manage the CETP smoothly.

Recommendations for the tannery workers

- The tannery workers, especially the TWU, need to raise their voice in different public platforms like seminars and to sit with the relevant government agencies on a

continuous basis to push the immediate issues of labour welfare for workers in the TIE.

- Government has a plan to expand the current TIE and to build new tannery cities across the country. TWU and other labour organizations need to be proactive in raising their demands properly this time so that the new tannery cities become worker-friendly.

Recommendations for The Asia Foundation and other development partners

- Attaining a proper accreditation for the CETP will be the immediate priority after its completion in the upcoming months. In order to achieve certification of environmental compliance for the CETP, the tannery owners need technical assistance of the development partners to deal with the global agencies like LWG and others. Both knowledge and technical supports will be needed in this regard.
- Apparently, information gaps as well as the lack of proper knowledge regarding the operation of CETP and other supporting components are severe among the most important stakeholders like the tannery owners as well as workers. TAF and other development partners may play a major role to organize necessary seminars and workshops for raising awareness among the relevant stakeholders regarding the operation of CETP and other supporting components. The seminars and workshops can be helpful in instilling positive attitude towards ensuring environmental compliance from all ends.
- BUET experts suggest that the company to operate the CETP in future may need to hire experienced engineers from home and abroad to manage the CETP smoothly. Experts also suggested for robust discussions about the structure and operation of the company itself in open forums to ensure that the company is well-equipped to sustainably manage the CETP. TAF can help the tannery owners as well as government agencies in this regard by organising public-private dialogues (PPDs).
- Some experts suggest that repairing the mechanical and electrical part on top of the existing civil work can be a temporary solution while increasing the CETP's capacity by adding additional modules can be a long-term solution. Another opinion of a group of experts is that adding a couple of additional modules with membrane technology as well as reverse osmosis technology can address the immediate as well as future problems. However, one aspect where most of the stakeholders seem to stick with is

the appointment of European companies with proven experience of CETP to construct the additional modules in future. On this backdrop, TAF can organize PPDs to explore the potential of future development of the CETP.

- Demands of the tannery workers were completely overlooked while signing the MoU for TIE as the workers' representatives were not invited in many of the government meetings. Currently, a full-fledged medical hospital in the TIE is the first priority of the tannery workers and developing housing facilities is the next in the list. TAF can help the workers through TWU to raise all the welfare issues in the right forums for immediate actions.

8. Conclusion and way forward

The relocation of the tanning industry began with brighter hopes for all the relevant stakeholders which was supposed to be realized by far. However, the hopes are apparently faded now as most of the stakeholders foresee a critical situation ahead for the tanning industry given the current shape of it. Yet, few of the stakeholders still seems to be optimistic about the slow but gradual development of the industry given that proper steps are taken immediately by government agencies as well as by tannery owners. As the sustainability of leather tanning industry is highly correlated with the broader leather sector including leather footwear and leather goods industries, current setbacks in this industry may affect the growth of the whole leather sector in near future if proper measures are not taken. Hence, most of the stakeholders emphasize on the need for urgent actions to tackle the challenges in the TIE.

This study, in a broader sense, reveals and analyses two of the most important aspects for the sustainability of the industry in the post-relocation scenario. The first and the most critical of it is ensuring the environmental compliance of the tanneries by implementing a proper effluent treatment system through the operation of CETP, CRU, WTP, and sludge recycling as part of an integrated process. Given the existing condition of CETP and other supporting components, ensuring environmental compliance has currently become a top priority for the sustainability of the industry. The second and another very important challenge has to do with ensuring the welfare of the tannery workers in the post-relocation scenario. On this backdrop, this study has identified the major challenges and laid out a number of recommendations taken from different stakeholders on how to overcome the challenges.

This study has undertaken a comprehensive analysis of the relocation process of the tanning industry as it touches on the essence of the relocation debate as well as the recent challenges towards making the relocation successful. As this study tries to explore all the relevant issues regarding relocation, particular issues like the effluent discharging practices at the tanneries and welfare of female workers still remain to be explored further in a great detail. Given the depth of some issues, future research can explore very specific aspects of both the environmental compliance and labour welfare. Issues like the comparative analysis of production and export capacity of the tanneries before and after relocation, sustainable use of chemicals and water in the leather processing, waste and effluent discharging practices, the state of female workers at the tanneries can be covered in future research. Moreover, more policy papers on comparative analysis tanning industry best practices in terms of environmental and social compliance can also be useful.

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