COST-SHARING CONTRACT FOR SUSTAINABLE APPAREL INDUSTRY IN BANGLADESH IN THE ERA OF HUMAN RIGHTS AND ENVIRONMENTAL DUE DILIGENCE LEGISLATION

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ABSTRACT

This article examines how emerging Environmental, Social, and Governance (ESG) regulations—particularly the European Union's Corporate Sustainability Reporting Directive (CSRD) and Corporate Sustainability Due Diligence Directive (CSDDD)—affect the textile and apparel industry in Bangladesh. It highlights the sector's dual role as a driver of economic growth and a major source of environmental degradation and greenhouse gas emissions. The study explores how the EU's mandatory human rights and environmental due diligence frameworks extend to upstream suppliers in Bangladesh, reshaping the country's comparative advantage and labor conditions under the 'Brussels Effect' It argues that without financial and technical support from global brands, Bangladesh's suppliers risk losing market share and jobs due to weak regulatory capacity and limited resources. To mitigate these risks, the article proposes the adoption of fair and responsible cost-sharing contracts between global buyers and local suppliers. Such contractual arrangements can equitably distribute the costs of sustainability compliance, promote environmental upgrading, and ensure that workers and small producers are not unfairly burdened. By emphasizing corporate accountability, shared responsibility, and sustainable partnership, the study situates Bangladesh's apparel sector within the global movement toward climate-aligned and socially responsible supply chains.

Keywords: *Environmental due diligence; ESG regulation; Bangladesh apparel industry; EU CSDDD; cost-sharing contracts.*

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I. INTRODUCTION

Businesses, including fashion brands, are increasingly held accountable through mandatory public regulations for their human rights, environmental, and climate impact caused by their operations and their supply chain activities. In recent years, Environmental, Social, and Governance (ESG) standards which are largely voluntary for corporate accountability and transparency have increasingly become mandatory, as many countries now enforce them as legal obligations for companies. So far, the European Union (EU) has the most robust and comprehensive framework of ESG that integrates mandatory human rights and environmental due diligence (HREDD) requirements, namely, the Corporate Sustainability Reporting Directive (CSRD), and Corporate Sustainability Due Diligence Directive (CSDDD). The CSRD came into force on January 5, 2023, and the CSDDD on July 25, 2024. They mark a momentous turn from voluntary and private regulation by global corporations of their supply chain practices to binding public regulation'.[1] In recent years, Germany, France, Norway, Switzerland, the Netherlands, and the United Kingdom have enacted their own national laws to address ESG-related issues, i.e., human rights, forced labor, and/or environmental risks in the supply chains of corporations doing business in their countries. Among them, the ESG-related national laws in Germany and France incorporate both human rights and environmental risks. The United States is slowly progressing to introduce ESG regulations that require companies to address the impact of their supply chains through the *SEC Climate Disclosure Rule*, 2024 and the *California Transparency Supply Chain Act*, 2010. Thus, a major shift is made to ensure corporate transparency and accountability in their supply chains, requiring companies to integrate an ESG framework into their business operations. At present, robust and comprehensive environmental disclosure and due diligence mechanisms can drive global retailers to improve environmental sustainability and the human rights of workers in the supply chains.[2]

[1] Sarosh Kuruvila and Jason Judd, *Measuring Supply Chain Due Diligence: Labor Outcomes Metrics*, May 2024, <https://www.ilr.cornell.edu/sites/default/files-d8/2024-05/GLI Labor Outcomes Metrics Policy Brief May 2024.pdf> accessed 19 January, 2025.

[2] Gerald T. Garvey, Mohanaraman Iyer, and Joanna Nash, 'Carbon footprint and productivity: Does the "E" in ESG capture efficiency as well as environment?' (2018) 16 *Journal of Investment Management* 59 at 69.

Textile and apparel industries, of which the suppliers and manufacturers are mostly in developing countries with weak legal frameworks and capacity, are notorious for their environmental and climate footprints. Industry contributes as much to economic growth and employment opportunities in many countries as to the harms of nature and climate. Globally, the apparel industry (including clothing, leather, and footwear) is a $2.4 trillion-dollar industry that generates revenue equal to 2-3% of global GDP and employs approximately 300 million people across the value chain.[3] On the contrary, the industry is responsible for an wide-scale global air, water, and land pollution[4], as it accounts for 5-10% of total global carbon emission[5], 20% of industrial water pollution[6], 35% of total microplastics and 31% of overall plastic pollution in the oceans[7]; produces 92 million tons of wastes[8] and consumes 79 trillion liters of fresh water per year[9]. The apparel industry in Bangladesh, popularly known as readymade garments (RMG), manufactures wearable clothing. It is the largest manufacturing industry in the country, accounting for 84-85% of the total export income of Bangladesh that constitutes 13% of the GDP[10] and employing about 4.5 million workers- 55-60% of the total workers are women and girls[11] and supports indirectly another 40 million people.[12] Despite its enormous economic and social benefits,

[3] Angus Bauer, Stephanie Williams, Jason Judd, and Sarosh Kuruvilla, *Higher Ground? Report 2: Climate Resilience and Fashion's Cost of Adaptation*, 13 September 2023, <https://ecommons.cornell.edu/bitstreams/1ae7178b-ba05-424a-8257-88ed8c99afb3/download> accessed 19 January 2025.

[4] See generally, Kirsi Niinimäki et al, 'The environmental price of fast fashion'" (2020) 1 *Nature Reviews Earth & Environment* 189.

[5] Bauer Above at 3; United Nations Climate Change News, *UN helps fashion industry shift to low carbon, 6 September 2018,* <https://unfccc.int/news/un-helps-fashion-industry-shift-to-low-carbon> accessed 19 January 2025. See, Ellen MacArthur, *A new textiles economy: Redesigning fashion's future, 28 November 2017* <http://www.ellenmacarthurfoundation.org/publications> accessed 19 January 2025.

[6] Id.; See also, The Carbon Trust, *International carbon flows-Clothing,* 2011, <https://prod-drupal-files.storage.googleapis.com/documents/resource/public/International%20Carbon%20Flows%20-%20Clothing%20-%20REPORT.pdf(2011)> accessed 19 January 2025.

[7] Julien Boucher and Damien Friot, 'Primary microplastics in the oceans: a global evaluation of sources' (2017) 10 *Gland, Switzerland:IUCN*1.

[8] Helena Dahlbo, Kristiina Aalto, Hanna Eskelinen, and Hanna Salmenperä, 'Increasing textile circulation — consequences and requirements' (2017) 9 Sustainable Production and Consumption 44. ; Ellen MacArthur Foundation (EMF). Circular Fibres Initiative analysis in EMF (2017).

[9] Global Fashion Agenda (GFA) & The Boston Consulting Group (BCG), *Pulse of the fashion industry* (2017) <https://www.globalfashionagenda.com/wp-content/uploads/2017/05/Pulse-of-the-Fashion-Industry_2017.pdf> accessed 19 January 2025.

[10] Bangladesh Textiles Mills Association (BTMA), *Contribution of Textiles*, <https://btmadhaka.com/>

[11] Id.

[12] International Labor Organization, *Workers' Welfare in the Bangladesh RMG Industry*, 8 January 2020 <<https://www.ilo.org/publications/workers-welfare-bangladesh-rmg-industry> accessed 19 January 2025; Dr Sanchita Banerjee Saxena, Salil Tripathi, and Nancy Reyes Mullins, *The Weakest Link in the Supply Chain- How the Pandemic is Affecting Bangladesh's Garment Workers,* 29 April 2021 <https://www.ihrb.org/resources/bangladesh-garment-workers> accessed 19 January 2025.

the apparel industry is also one of the largest polluting sectors of Bangladesh and accounts for a substantial portion of the country's greenhouse gas (GHG) emissions.[13] Bangladeshi factories are part of the upstream supply chains[14] that manufacture clothes and supply to global brands, mostly EU- and US-based brands. Almost all global fashion brands, including Adidas, Gap, H&M, Zara, Nike, Primark, Walmart, Inditex and N Brown Group, Uniqlo, Target Australia, Bershka, Marks & Spencer, OVS, Pull & Bear, Gina Tricot etc. manufacture their products from Bangladesh factories. The combined EU market is the largest exporting market for Bangladesh apparel industry; the US is the second.[15] Very soon, global fashion brands doing business in the EU must adopt and align with sustainable and environmentally friendly production practices at all stages of their supply chain, including manufacturing their products in Bangladesh as required under the different EU ESG regulatory frameworks. This phenomenon is demonstrated by the influential theory of Brussels Effect, coined by the Professor Anu Bradford that suggests that EU, being the largest single global market, has unilateral regulatory power to make both EU and non-EU companies comply with their regulations and standards as they compete to have market access.[16] Since the EU environmental standards and climate goals are the highest standards, and it is the largest exporting destination for Bangladesh apparel, there will be a clear impact on the Bangladesh apparel sector because apparel production in Bangladesh factories takes place in an environment with relatively weak enforcement of human/labor rights and environmental standards.[17] The impact will be aggravating, ultimately affecting the workers if the global retailers

[13] See the discussion below.

[14] The chain of activities includes all upstream activities of companies' business partners if they are related to the production of goods or the provision of services by that company (including the design, extraction, sourcing, manufacture, transport, storage and supply of raw materials, products or parts of products and the development of the product or the service); downstream activities are limited to distribution, transport and storage of company products, if carried out for or on behalf of the company, Article 3(1)(g), CSDDD.

[15] According to the Export Promotion Bureau (EPB) data, Bangladesh exported apparels of about $ 21.64 billion in the Jul-May period of 2023-24; See, RMG Bangladesh, Apparel export to EU rises by 2% in 11 months: EPB, Jun 28 2024, <https://rmgbd.net/2024/06/apparel-export-to-eu-rises-by-2-in-11-months-epb/#:~:text=The%20country%E2%80%99s%20apparel%20export%20to%20the%20European%20Union,by%20Bangladesh%20Garment%20Manufacturers%20and%20Exporters%20Association%20%28BGMEA%29> accessed January 20 2025. According to the US Trade Online data, in 2023, Bangladesh exported to the USA about $6.5 billion of knit and woven clothes and Bangladesh had a market share of 9% of the USA's total imports in 2022, up from 6% in 2015, See, UN Trade Online, 2023, (data based on HS Codes 61 and 62). According to OEC data, the volume of exports to the USA was estimated about $11.7 billion. See, OEC Data, United States / Bangladesh, 2024 <https://oec.world/en/profile/bilateral-country/usa/partner/bgd> accessed 20 January 2025.

[16] Anu Bradford, *The Brussels Effect: How the European Union Rules the World (*Oxford University Press, 2020);

[17] Mohammad A. Razzaque and Jillur Rahman, *Fifty Years of EU-Bangladesh Partnership: Charting Ahead on A Legacy of Success, March 2023* <<https://www.rapidbd.org/wp-content/uploads/2023/03/Policy-Brief_50-years-of-EU-BGD_Mar14_Revised_RI_MR_11March_FINAL.pdf> accessed 20 January, 2026.

and brands that manufacture clothes in Bangladesh do not support the local factories in adapting to or sharing the burden of complying with the EU reporting and due diligence standard. It has already been found that global fashion brands tend to increase their business and relocate their manufacturing to suppliers with higher ESG standards.[18] It reasonably indicates that Bangladesh may lose its market share and jobs for workers to competitors better equipped to comply with EU standards, such as China and Turkey. Moreover, many express fear of an 'unfair burden' on the upstream suppliers the Asia Pacific Region including Bangladesh, that is closely embedded in the EU market.[19]

Global retailers have many leverages to drive sustainability across supply chains, including incentivizing local suppliers, educating them, and cooperating with capacity building etc.[20] Therefore, the role and responsibility of global brands in helping the Bangladesh Industry as part of their upstream supply chains adapt to sustainable and climate friendly production is crucial. The extent of their shared responsibility for the environmental externalities of apparel manufacturing in upstream Bangladesh is difficult to ascertain as most often the local factory owners' negligence and weak enforcement of environmental law and regulation on the part of the government is highlighted. Research finds that the non-commitment of global brands to sustainability, unwillingness to pay extra-cost for environment-friendly production, practices related to low prices, cancellation of orders, delayed payment, etc. result in the unsafe working conditions of local factories with low wages for workers, as well as environmentally harmful and unsustainable production.[21] In the new liberal economic system, where capitalism and profit maximization inherently drive all economic activities, brands naturally opt for comparatively less costly production for short term profit maximization irrespective of adverse environmental and ecological impacts. Yet, instances have been made where fashion brands have driven meaningful changes through their cooperation and support with factory owners and the government. Many studies have

[18] Bauer*l, Above at* 3; Emilio Bisetti, Guoman She, and Alminas Zaldokas, 'ESG shocks in global supply chains' (2026) The Review of Financial Studies, hhag001 .

[19] Kristina Kukolia, *Asia apparel sector warns of unfair burden as EU prepares diluted CSDDD*, 8 March 2024, <https://www.just-style.com/news/asia-apparel-sector-warn-of-unfair-burden-as-eu-prepares-diluted-csddd/> accessed 20 January 2026.

[20] Gautham G. Vadakkepatt et al, 'Sustainable Retailing' (2020) 97 *Journal of Retailing* 62.

[21] Mahwish Khan et al, 'The Factory Manger Dilemma: Purchasing Practices and Environmental Upgrading in Apparel Global Value Chains' (2020) 52 *Environment and Planning* 766; Stefano Ponte, *Business, Power and Sustainability in a World of Global Value Chains* (London: Zed Books, 1st edn, 2009); Mark Anner, 'Squeezing Workers' Rights in Global Supply Chains: Purchasing Practices in the Bangladesh Garment Export Sector in Comparative Perspective' (2020) 27 *Rev. Int'l Pol. Econ.* 320.

found that after the notorious Rana Plaza Disaster in 2013, the deadliest structural collapse of modern human history, active and persistent initiatives led to dramatically improved standards for workers' safety in relation to apparel factory buildings' structural integrity and fire safety protocols.[22] Global brands and retailers responded to the disaster by creating 'the Accord in Fire and Building Safety in Bangladesh' and 'the Alliance for Bangladesh Worker Safety' and provided uniform standards and inspection mechanisms as well as logistic and financial support to factories. From 2019 onwards, the RMG Sustainability Council took over and continued the work.[23] Global fashion brands can thus foster sustainable and climate friendly industrial practices through their cooperation and support. One such example is the 'Circular Fashion Partnership' wherein over thirty fashion brands, i.e., H&M, Primark, OVS, Bershka etc. are supporting the joint effort of BGMEA, P4G, and Reverse Resource, an NGO, for promoting textile recycling and circular fashion in Bangladesh.[24]

In this context, the present study seeks to explore the extent to which EU ESG regulations, in particular, environmental disclosure and due diligence requirements, will hold global apparel brands accountable for pollution caused and carbon emitted by apparel factories located in Bangladesh. Then, it will assess the impact of environmental disclosure and due diligence framework on the comparative advantage of Bangladesh's apparel sector and how it affects the labor rights. This study will also explore how the sector will need to adapt to meeting environmental disclosure and due diligence requirements with its limited capacity resources, and how global brands and retailers will support local suppliers in adapting accordingly. Finally, this study will critically examine the cost-sharing contracts between global retailers and local supplies where global retailers bears a portion of cost based on respectful and responsible partnerships as a crucial means to promote sustainable apparel industry and supply chain practices in Bangladesh.

[22] On April 28, 2013, when an eight storied building which housed apparel, several factories collapsed that instantly killed about 1,132 workers and injured another 2500. See, Brian W. Jacobs & Vinod R. Singhal, The Effect of the Rana Plaza Disaster on Shareholder Wealth of Retailers: Implications for Sourcing Strategies and Supply Chain Governance (2017) 49 *J. Operations Mgmt.* 52 ; See, Saxena, Sanchita Banerjee, 'The garment industry under COVID-19: lessons from the Rana Plaza disaster on how we understand worker safety' (2024) 15 *South Asian History and Culture* 75.

[23] Saxena, Sanchita Banerjee Above at 22.

[24] Reverse Resources, *Circular Fashion Partnership*, February 10, 2021, <https://reverseresources.net/circular-fashion-partnership-officially-launched/> accessed 20 January 2026.

II. THE ENVIRONMENTAL AND CLIMATE IMPACT OF THE TEXTILE AND APPAREL INDUSTRY IN BANGLADESH

In Bangladesh, the combined greenhouse gas (GHG) emissions from the textile and apparel industries amounted to 6043.5 Gg CO_2 eq., of which 32.2% originated from the apparel or the RMG sector, while textile mills contributed to 67.8%.[25] In the overall emissions, scope 1 ("on line fuel combustions") is dominant, accounting for approximately 85% of the total emissions, whereas emissions from scope 2 ("grid electricity usage") and scope 3 ("solid waste and wastewater treatment") activities constitute around 10% and 5%, respectively.[26] If the socio-political situation, technology, and consumer demand remain unchanged, revenue from Bangladesh's textile and apparel industry is projected to grow exponentially and greenhouse gas (GHG) emissions attributed to the industry are expected to rise to nearly 26,347 Gg CO_2 eq. by 2032.[27]

The environmental pollution caused by the textiles and apparel industry in Bangladesh is significant, affecting air, water, land, biodiversity, and so forth.[28] Comprehensive current literature on a comprehensive sectoral data on environmental impact of the apparel industry is lacking. However, the existing literature indicates the serious and grave environmental impact of the industry, primarily caused by effluent dyes and wastewater polluting rivers and water bodies and their ecosystems around Dhaka, the capital city, and three major areas near Dhaka, Narayanganj, Savar, and Gazipur, where factories are concentrated. According to a study, in Bangladesh's textile industry, 2 million tons of dyes are turned into effluent every year.[29] One study suggested that more than 200 rivers are directly or indirectly affected by untreated effluents from industries,

[25] Biswas, Mithun Kumar et al, 'Navigating Sustainability through Greenhouse Gas Emission Inventory: ESG Practices and Energy Shift in Bangladesh's Textile and Readymade Garment Industries' (2024) 345 *Environmental Pollution* 123392.
[26] Id.
[27] Id.
[28] Saha, Krishnendu, Prasanta Kumar Dey, and Eleni Papagiannaki, 'Implementing circular economy in the textile and clothing industry' In *Supply Chain Sustainability in Small and Medium Sized Enterprises*, (Routledge, 2022) pp. 239-276.; Hussein, Shahadat, 'Reconciling industrialization and environmental protection for sustainable development in Bangladesh: The textile and apparel industry case' A Thesis Presented to the Faculty of the Graduate School of Cornell University in Partial Fulfillment of the Requirements for the Degree of Master of Professional Studies in Global Development (2020) <https://ecommons.cornell.edu/server/api/core/bitstreams/5d73bd21-8012-489e-8752-0c7e5f20ad46/content> accessed 19 January 2026.
[29] Rony Mia et al, 'Review on various types of pollution problem in textile dyeing & printing industries of Bangladesh and recommandation for mitigation' (2019) 5 *Journal of Textile Engineering & Fashion Technology* 221.

mostly textile and apparel enterprises.[30] Wastewater produced in textile industries is also a critical source of environmental pollution. A 2016 study estimated that wastewater generated by textile industries in Bangladesh amounted to approximately 217 million cubic meters, which, if the textile industry continues with conventional dyeing practices, was projected to increase to 349 million cubic meters by 2021.[31] However, around 48% industries still do not use any effluent treatment plant (ETP) resulting in the direct discharge of wastewater into the waterbodies. The remaining 52% who are using the ETP are generating 1.14 kg solid sludge per m3 of wastewater.[32] In 2012, the total generation of textile sludge produced after waste treatment was about 36.39 metric tons, but there is still no established method to decontaminate this sludge.[33]

Most alarmingly, more than 90% of washing, dyeing, and finishing units are located near water bodies like rivers and canals in Dhaka and Narayanganj, as these locations provide easier access to water and easy dumping and discharge facility.[34] The three rivers located around Dhaka where textile industries are concentrated, the Turag, Buriganga, and Balu rivers, have already lost the minimum level of oxygen required for living creatures, and thereby most of the fish and other aquatic species have disappeared.[35] Toxic waste from nearby textile and dyeing factories has contaminated vast areas of cropland in Savar, Tongi, and Ashulia, near the capital.[36] Crops and vegetables collected from these areas reveal the presence of harmful chemicals used in textile dyeing factories.[37] A 2021 study found that industrial wastewater and sludge contained an abundant concentration of microplastics, with treatment plants demonstrating an average removal

[30] Brett Mathews, *Pollution to Soar as Bangladesh Textile Grows, Apparel Insider* (May 20, 2018), <https://apparelinsider.com/pollution-soar-bangladesh-garment-sector-grows/> accessed 20 January 2026.
[31] Laila Hossain, Sumit Kanti Sarker, and Mohidus Samad Khan, 'Evaluation of Present and Future Wastewater Impacts of Textile Dyeing Industries in Bangladesh' (2018) 26 *Environmental Development* 23.
[32] Md Shafiul Islam and Jahid MM Islam, 'Sources and fates of textile solid wastes and their sustainable management', In *Handbook of Solid Waste Management: Sustainability through Circular Economy* (Springer Singapore, 2021) 1.
[33] Badrun Nessa et al, 'Impact of textile sludge on the growth of red amaranth (Amaranthus gangeticus)' (2016) 5 International Journal of Recycling of Organic Waste in Agriculture 163.
[34] Zakia Sultana, Md Ershad Ali, Md Sala Uddin, and Md Mominul Haque, 'Study on implementation of effluent treatment plants for safe environment from textile waste' (2013) 2 Journal of Research in environmental Science and Toxicology 9. SEDF Baseline Surveys and Sector Studies in Agribusiness, Light Engineering and Textiles and Apparel Sectors in Bangladesh. Final Report. Dhaka: International Finance Corporation, South Asia Enterprise Development Fund.
[35] Arif Reza and Tariq Bin Yousuf, 'Impacts of waste dumping on water quality in the Buriganga River, Bangladesh and possible mitigation measures' (2016) 11 *Journal of the Environment* 35.
[36] Mohammad Amir Hossain Bhuiyan et al, 'Investigation of the possible sources of heavy metal contamination in lagoon and canal water in the tannery industrial area in Dhaka, Bangladesh' (2011) 175 *Environmental Monitoring and Assessment* 633.
[37] M. Rafiqul Islam et al, 'Consumption of unsafe foods: Evidence from heavy metal, mineral and trace element contamination' (2013) Department of Soil Science, Bangladesh Agricultural University.

efficiency of 62%. The most prevalent microplastics found in the study are fibrous and nylon-based plastics which are largely generated by the textile industry.[38] High concentration of microplastics in wastewater that are later released to waterbodies poses a major threat to fresh water in Bangladesh.[39]

The Textile industry heavily depends on the use of water at different stages (i.e., dyeing, finishing, designing, scouring, bleaching). The textile sector is the world's third-largest consumer of fresh water. It is estimated that around 28 million tons of textiles are dyed annually, consuming more than 5 billion cubic meters of fresh water.[40] The textile industries of Bangladesh consume approximately 0.25 – 0.30 m (250 – 300 liters) of water to manufacture 1.0 kg of finished fabrics, which is also a potential factor responsible for the high depletion of the groundwater table.[41] The textile industry's water requirements are escalating steadily because of ambitious ready-made garments (RMG) export objectives of $50 billion by 2021 and $66.25 billion by 2030. Forecasts indicate that achieving these export targets will lead to daily water consumption exceeding 6.75 million cubic meters by the year 2030.[42] The current use of water and the projected use of water by 2030 or 2050, with a high increase in production goals, will cause severe groundwater depletion.[43] In Dhaka city, groundwater levels have decreased by more than 200 feet over the past 50 years, and this decline persists at a rate of 2-3 meters per year.[44] Currently, the average depth in the groundwater table is reported to be 78.0 m from the ground level, which is projected to reach

[38] Md Morshedul Haque, Farzana Yasmin Nupur, Fahmida Parvin, and Shafi M. Tareq, 'Occurrence and characteristics of microplastic in different types of industrial wastewater and sludge: a potential threat of emerging pollutants to the freshwater of Bangladesh' (2022) 8 *Journal of Hazardous Materials Advances* 100166.
[39] Id.
[40] Laila Hossain, *Water Footprint Assessment of RMG Sector of Bangladesh*, Degree Thesis, Bangladesh University of Engineering & Technology, Dhaka – 1000, 2017, 29 November 2017 <https://pdfs.semanticscholar.org/98d6/d19f2ed886e456909a924a990291744283da.pdf> Accessed 28 August 2025.
[41] Id., see also, Thomas Sagris and Justin Abbott, An analysis of industrial water use in Bangladesh with a focus on the textile and leather industries, May 2015 <https://documents1.worldbank.org/curated/en/099113024053527856/pdf/P181147-a915d380-0f92-4d66-b3ea-345e750e811e.pdf> accessed 20 January 2026.
[42] Id.
[43] Md Sazzadul Haque, Nazmun Nahar, and Sayed Md Sayem, 'Industrial water management and sustainability: development of SIWP tool for textile industries of Bangladesh' (2021) 25 *Water Resources and Industry* 100145.
[44] Karen B Roberts, *Water crisis in Bangladesh: Overpumping in Dhaka may threaten regional groundwater resources outside the city* (September 28 2016) retrieved 14 April 2024 from <https://phys.org/news/2016-09-crisis-bangladesh-overpumping-dhaka-threaten.html> accessed 20 January 2026; Brett Mathews, *Pollution to Soar as Bangladesh Textile Grows, Apparel Insider*, 20 May 2018), <https://apparelinsider.com/pollution-soar-bangladesh-garment-sector-grows/> accessed 20 January 2026.

132.0 m by 2030 with annual depletion rate of 5.1 m.[45] Several studies have attributed this depletion of groundwater level to the high consumption of ground water by the industries.[46]

Reports vary on the amount of textile waste from the industry in Bangladesh. One study suggests that approximately 5,77,000 tons of waste is reported to be generated from the apparel industry and fabric mills of Bangladesh.[47] A limited amount of the waste is sold to local markets, known as Jhut; a limited amount is exported or recycled, and the rest is dumped into landfills or open spaces.[48] Due to the detrimental impact of the industry, the government has categorized the textile industry as 'Red industry' under the *Bangladesh Environment Conservation Act*, 1995 and the *Environment Conservation Rules*, 1997.

III. MAPPING AND ANALYZING MANDATORY DISCLOSURE AND DUE DILIGENCE REGULATIONS IN THE SUSTAINABLE APPAREL INDUSTRY

In the business and corporate sphere, the due diligence concept was first introduced in 'the 2011 United Nations Guiding Principles on Business and Human Rights' to align business operations with human rights obligations under the international human rights framework. 'The OECD Guidelines for Multinational Enterprises' first adopted in 1976 and last updated in 2023, further developed this concept. The recommendation of 'the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy', last updated in 2022, also incorporates the concept of human rights due diligence. However, due diligence obligations under these international instruments are voluntary.

The Corporate Sustainability Due Diligence Directive (CSDDD) 2024 is the first mandatory due diligence regulation with global reach. In addition, the Corporate Sustainability Reporting

[45] WRG, *Rapid Assessment of Greater Dhaka Groundwater Sustainability. 2030 Water Resources Group (WRG),* 2019 <https://www.2030wrg.org/wp- content/uploads/2019/11/GW-Report-Final-Peer-Reviewed.pdf> accessed 9 October 2020; Sumit Kanti Sarker, *Material Balance Approach to Measure Water Pollution Impact of Industrial Development in Bangladesh,* Degree Thesis, Bangladesh University of Science and Technology, Dhaka, 2017 <https://pdfs.semanticscholar.org/a0c0/b9d4faf7811f204299c8160eec36502983d9.pdf> accessed 23 June 2020.

[46] Laila Hossain, Sumit Kanti Sarker, and Mohidus Samad Khan, 'Evaluation of Present and Future Wastewater Impacts of Textile Dyeing Industries in Bangladesh' (2018) 26 *Environ. Dev.*23.

[47] Maria Cristina Pavarini, *The Materials: How Bangladesh Could Benefit from Recycling Cotton Waste,* June 22, 2021, <https://www.the-spin-off.com/ news/stories/The-Materials-How-Bangladesh-could-benefit-from-recycling-cotton-waste-15973> accessed 20 January, 2026.

[48] Maeen Md Khairul Akter, Upama Nasrin Haq, Md Mazedul Islam, and Mohammad Abbas Uddin, 'Textile-apparel manufacturing and material waste management in the circular economy: A conceptual model to achieve sustainable development goal (SDG) 12 for Bangladesh' (2022) 4 *Cleaner Environmental Systems* 100070.

Directive (CSRD) 2016 is the mandatory reporting and disclosure regulation. Both complement and interoperate with each other as with the EU Taxonomy and European Sustainability Reporting Standards (ESRS). Companies that disclose under the CSRD are deemed to comply with the due diligence requirement of publicly communicating and reporting under the CSDDD. The disclosure requirement under the CSRD is very broad, as it is based on double materiality and requires companies to disclose information related to both financial and impact materiality. The CSRD has already been in force since January 5, 2023, and companies in scope will disclose information in their annual financial reports starting from the 2024 financial year report. The CSRD will apply to companies with a turnover of more than 40 million euros and 250 or more employees. The CSDDD came into force on July 25, 2024. The CSDDD will be implemented in three phases, starting with large companies and then applying to all companies with more than 1000 employees and a worldwide turnover exceeding 450 million euros by 2029 (art 2).

Germany and France have their own national laws called, 'New Supply Due Diligence Act 2023' and 'Duty of Vigilance Law 2017' respectively addressing both human rights and environmental impacts of businesses. Both provide a similar framework of human rights and environmental due diligence as the CSDDD, except that their scope of application is different. The German Act, which first came into force on January 1, 2023, initially applied to German enterprises with at least 3,000 employees, and beginning from January 1, 2024, extended to enterprises with at least 1,000 employees. The French law applies to companies with more than 5,000 employees in France or more than 10,000 employees worldwide. In the USA, the Security and Exchange Commission (SEC) Climate Disclosure Rules for Public Companies 2024 introduces a climate disclosure mechanism but does not require companies' due diligence requirements as in the EU. The SEC Climate Disclosure Rule was finally adopted on March 6, 2024, by the Securities and Exchange Commission to enhance and standardize climate-related disclosures by public companies and to provide consistent, comparable, and reliable information about climate risks on the financial performance of companies. The Rule requires the companies to mandatorily disclose their direct (Scope 1) and indirect (Scope 2 and Scope 3) carbon emissions.[49] The SEC Rule also requires companies to disclose their climate targets or goals, or action plans on mitigation measures

[49] Scope 1 is carbon emissions generated from the own operations of the companies whereas Scope 2 refers to emissions generated from their purchased electricity or energies. Scope 3 are upstream and downstream emissions along the company's value chain.

and the material expenditures or costs for such mitigation measures.[50] Large US-based fashion brands will come under the purview of the Rule, which may pressure them to take some concrete actions.[51] The SEC Climate Disclosure Rule was voluntarily stayed by the SEC on April 4, 2024, in response to petitions in multiple courts and pending the completion of judicial review of the consolidated petitions before the Eighth Circuit Court of Appeals.[52] The stay means that the implementation of the Climate-Related Disclosure Rules is suspended until the judicial review of the consolidated challenges is completed.[53] The California Transparency in Supply Chains Act 2010 was the first regulation of its kind to address the human rights impacts of California-based companies in their supply chains. However, this state regulation does not address the companies' responsibility for environmental damage.

This study will primarily focus on the environmental and climate disclosure and due diligence framework set by the EU, as the European framework provides the most comprehensive one and, as 'the Brussels Effects theory'[54] suggests, has the potential to be unilaterally globalized, even to influence the making of ESG policies in the USA.[55] It is expected that the EU CSDDD will establish an international benchmark for responsible business conduct.[56] The study will discuss the USA ESG regulations to a lesser degree, because their scope regarding the environment and climate is limited, as the SEC Climate Disclosure Rule does not provide for due diligence obligation for companies and requires them to disclose climate impacts that are material to the company's financial performance, as well as how their emissions contribute to global warming. More importantly, the SEC Rule has excluded the Scope 3 disclosure requirements[57] and does not cover value chains to local apparel suppliers, such as those in Bangladesh.

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[50] SEC, *SEC adopts Rules to Enhance and Standardize Climate-Related Disclosures for Investors, Press Release, (2024-31)* 6 March 2024 <https://www.sec.gov/news/press-release/2024-31> accessed 20 January 2026.
[51] Jasmin Malik Chua), *Why Fashion's 'Acutely' Worried About SEC's Climate Disclosure Proposal, 22 June 2022* <https://sourcingjournal.com/sustainability/sustainability-news/aafa-sec-carbon-climate-disclosure-proposal-greenhouse-gas-compliance-350543/> accessed22 February 2024.
[52] SEC, Climate-Related Disclosures**,** SEC Release Nos. 33-11280, 34-99908, File No. S7-10-22 (Apr. 4, 2024).
[53] Id.
[54] Bradford, Above at 18.
[55] Beate Beller, *A New Chapter is About to Start for Corporate Accountability, Blog, Global Witness*, 24 April 2024, <https://www.globalwitness.org/en/blog/new-chapter-about-start-corporate-accountability/> accessed 20 January 2026.
[56] Gabrielle Holly, The *EU Corporate Sustainability Due Diligence Directive maximizing Impact through Transposition and implementation*, 24 April 2024 <https://www.humanrights.dk/publications/eu-corporate-sustainability-due-diligence-directive-maximising-impact-through> accessed 20 January 2026.
[57] SEC, Climate-Related Disclosures**,** SEC Release Nos. 33-11280, 34-99908, File No. S7-10-22 (Apr. 4, 2024).

Environmental due diligence is a robust and comprehensive framework for ensuring corporate environmental and climate accountability. It is part of the broad Human Rights and Environmental Due Diligence that includes 'the process of identifying both actual and potential adverse human rights and environmental impacts, taking actions to prevent, mitigate, and account for any such impacts, and monitoring the effectiveness of actions taken, and to provide remedies in appropriates cases.' The CSDDD developed a risk-based due diligence framework which means that companies must take 'appropriate measures' when identifying and addressing adverse impacts, and they can prioritize their actions when they cannot address all impacts.[58] The aim of this directive is 'to foster sustainable and responsible corporate behavior in companies' operations and across their global value chains'.[59] According to the CSDDD, due diligence consists of the following steps:

a) To integrate and implement due diligence into policies and risk management systems of companies (art 7).
b) To identify and assess actual or potential adverse impacts, and where necessary, prioritize potential and actual adverse impacts (art 8): The companies may map the company's own operation, upstream and downstream chains of activities, and then conduct a periodic in-depth assessment to identify adverse impacts using relevant internal and external information sources. They may prioritize adverse impacts based on severity and likelihood, as needed (art 9).

[58] European Commission, *Frequently Asked Questions on Directive on Corporate Sustainability Due Diligence, p. 10,* 25 July 2024, <https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en#documents> accessed 20 January 2026.
[59] European Commission, *Sustainability, due diligence, responsible business: Corporate Sustainability Due Diligence*, 25 July 2024, <https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en#documents> accessed 20 January 2026.

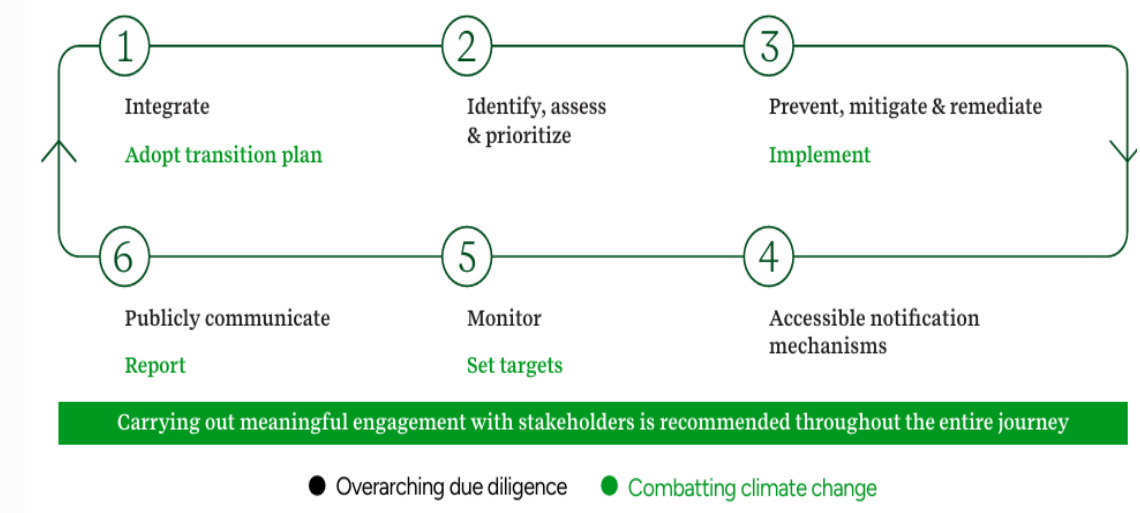


Chart: Steps of Environmental Due Diligence Under the CSDDD

c) To prevent and mitigate potential adverse impacts and bring actual adverse impacts to an end or minimize their extent and remediate where actual adverse impact have been occurred (art 10, 11 & 12): companies shall take appropriate measures to prevent and mitigate impacts, and bring actual adverse impacts to an end, minimize their extent and provide remediation. Then, they must develop corrective action plans, get involved in or step up participation in multi-stakeholder initiatives, and seek contractual assurances from their business partners. Where impacts involve business partners who are SMEs, they must provide targeted and proportionate support and implement fair, reasonable and non-discriminatory contractual assurances. Conducting meaningful and effective stakeholder engagement throughout due diligence process is a crucial part of mitigating actions.

d) To establish and maintain a notification mechanism and complaint procedure (art 14): Companies shall establish a company-level notification mechanism that is accessible to potentially affected stakeholders or their legitimate representatives, including trade unions, civil society organizations and human rights or environmental defenders, and that does not prevent complainants from making use of other judicial or non-judicial mechanisms. They must institute a procedure to respond to and address complaints raised through the notification mechanism, which should be fair, accessible, transparent and publicly available and which includes reasonable steps to prevent all forms of retaliation. Companies should also provide adequate information on procedures to workers, and their representatives, as well as complaints and keep them.

e) To monitor the effectiveness of due diligence policies and measures (art 15): Companies shall carry out periodic assessments to monitor the effectiveness of due diligence policies and processes, as well as the measures taken to address identified potential and actual adverse impacts.

f) To publicly communicate on due diligence (art 16): For companies that also need to comply with the Corporate Sustainability Reporting Directive (CSRD) shall report on due diligence through CSRD complain reports. For other companies, shall issue an annual statement describing how they implement due diligence.

g) To combat climate change (art 22): Companies are under legal obligation to adopt and implement a climate transition plan for mitigation that is compatible with the Paris Agreement and climate neutrality targets by 2050 (regulation 2021/1119). Companies shall set time-bound targets based on conclusive specific evidence and key actions, i.e., decarbonization to reach the targets for 2030 and in five-year steps up to 2050 for scope 1, 2, and 3. Companies which fail to adopt, or to update the transition plan according to the directive may face administrative sanctions.

The unique feature of due diligence framework under the CSDDD is the imposition of broad civil liability and penalties on companies that breach their due diligence obligations. A company in scope is liable for damages for harm caused intentionally or negligently by failure to meet due diligence requirements to a natural or legal person (art 29). Any injured legal or natural person has the right to full compensation for the harm (art 29) and to take judicial recourse to enforce the rights under article 29, independent of any complaints or notifications filed in the complaint mechanisms established by the company under art 5 or to the national supervisory authority established under art 25 (arts 5.7 and 25.4). The company is also liable for penalties not exceeding the amount of 5% of the net worldwide turnover of the company in the financial year preceding the fining decision (art 27).

A major challenge in environmental due diligence is to integrate environmental and climate concerns into the human rights due diligence framework. Through the CSDDD, environmental due diligence has been an integral part of the human rights due diligence framework, now commonly known as 'Human Rights and Environmental Due Diligence' (HREDD). The challenge lies ahead because the two frameworks have been developed in separate silos, and environmental

due diligence is still in its infancy.[60] Therefore, a coherent and systematic integration of environmental consideration within the wider Human Rights and Business framework must be explored or studied theoretically and empirically.[61] Recently published GLI Labor Outcomes Metrics can be a good example integrating environmental impact on workers along with human rights when the document contains 'extreme heat', 'intense flooding', 'workplace conditions' and 'Illness' affected by climate change as a measure of a company's due diligence outcome.[62] Although it does not integrate significant environmental impacts, such as pollution, biodiversity loss, or carbon emissions in the metrics, which also have a real impact on workers' health and working conditions, the metrics are an important step in the right direction.

It is essential to define the legal terminology used in the directive and their scope to determine the liability of companies or their business partners for environmental harm.[63] Furthermore, to hold companies accountable under the CSDDD, which provides cross-sectoral terminology, it is crucial to identify the sector-wise scope and nature of environmental law phraseology.[64] For instance, legal interpretation will be needed as to what would be the 'adverse environmental impact' or 'appropriate measures' to prevent, mitigate or remedy such 'adverse environmental impacts' in the apparel industry in Bangladesh, considering the international environmental laws and country-specific laws and circumstances or under what circumstances large companies and local suppliers in Bangladesh would be jointly liable for the environmental harm. Each industrial sector has varying environmental impacts, and the degree of such impacts may be location-specific. Moreover, risk-based environmental due diligence allows companies to prioritize preventing or mitigating those impacts of high-risk. Therefore, effective compliance with due diligence in a specific industrial sector at a given location necessitates the development of a whole policy

[60] Andreas Hösli & Rolf Weber, 'Climate Change Reporting and Due Diligence: Frontiers of Corporate Climate Responsibility' (2022) 18 European Company and Financial Law Review 970.
[61] Olga Martin-Ortega, Fatimazahra Dehbi, Valerie Nelson, and Renginee Pillay, 'Towards a business, human rights and the environment framework' (2022) 14 Sustainability 6596.
[62] Sarosh Kuruvila and Jason Judd, *Measuring Supply Chain Due Diligence: Labor Outcomes Metrics, GLI Policy Brief*, May 2024 <https://www.ilr.cornell.edu/global-labor-institute/research-0/measuring-supply-chain-due-diligence> accessed 20 January 2026.
[63] Collin Mackie, *Environmental Due Diligence in Globa Value Chains: A Study to Inform Interpretation of Key Terms within a Cross-Sectoral EU Directive*, November 2020 <https://corporatejustice.org/wp-content/uploads/2021/05/Environmental-Due-Diligence-in-Global-Value-Chains-Prof.-Dr.-Colin-Mackie.pdf> accessed 20 January 2026.
[64] Colin Mackie, 'Due Diligence in Global Value Chains: Conceptualizing 'Adverse Environmental Impact', (2021) 30 Review of European, Comparative & International Environmental Law 297.

environment with legal certainties that create enabling conditions for implementation.[65] Thus, the implementation of environmental due diligence is more challenging when it comes to diverse locations, particularly in countries like Bangladesh having relatively policy gaps, lack of enabling capacity, and weak regulatory enforcement. Effective due diligence requires more nuanced and localized approaches.[66]

In the apparel supply chain between local and large fashion retailers where a huge power imbalance exists, access to complaints procedure either at the company-level or remedies national supervisory authority or a judicial forum is a daunting task. There may be practical barriers unique to Bangladesh industry context that need to be explored. The CSDDD establishes the company-level complaints procedure (art 14) and national supervisory authority (art 24) of each EU member state to provide grievance and remediation measures for injured party. The directive does not override any right to judicial recourse if available for remedies by establishing the aforementioned enforcement mechanisms of administrative nature (arts 5.7 and 25.4). The civil liability under art 29 is a significant step, yet many suggest that the legal framing of the provisions is such that it may benefit large companies as they can skip liability by proving evidence of 'not being negligent' or for 'the burden of proof being on the claimants'.[67] The requirement of proving 'damage caused to a natural or legal person' (art 29.1) may further limit the scope of holding companies liable for environmental harm as often environmental harm is caused not to a particular person, rather to an unknown group or community or simply to ecology or nature. In a case where only ecological damage is caused, for example, in a climate change scenario, it would be extremely difficult to establish the causal link between a company's activities and damage caused to a natural or legal person.[68] Moreover, many legal issues and uncertainties are left unresolved by the directive in relation to supply chains, for example, it is uncertain whether the courts of Bangladesh can take a case against large companies when they caused harm by themselves or jointly with their local business partners for violating due diligence on behalf of a local injured party. Legal uncertainties weaken the legal standing for local suppliers, and opportunities for legal recourse for local injured

[65] Beate Beller, *A New Chapter is About to Start for Corporate Accountability, Blog, Global Witness*, April 24, 2024, <https://www.globalwitness.org/en/blog/new-chapter-about-start-corporate-accountability/> accessed 20 January, 2026.
[66] Id.
[67] Fatimazahra Dehbi & Olga Martin-Ortega, 'An Integrated Approach to Corporate Due Diligence from a Human Rights, Environmental, and TWAIL Perspective' (2023) 17 Regulation & Governance 927.
[68] Id.

parties. Therefore, legal issues relating to *locus standi*, choice of forums, burden of proof, nature of evidence appropriate remedies, conflict of laws, etc., in relation to injury or damage caused by failure to comply with environmental due diligence by large companies in the apparel industry need to be explored for ensuring legal certainty, since in international environmental law these legal issues vary widely in specific sectors. For instance, ocean pollution, biodiversity loss, or climate change have their own specific procedural rules guiding standing, forums, evidence, etc.

IV. IMPACT OF ESG REGULATIONS ON THE COMPARATIVE ADVANTAGE OF BANGLADESH AND WORKERS IN THE APPAREL INDUSTRY

Investors, shareholders, and consumers are increasingly putting pressure on MNCs and fashion brands to promote environmentally sustainable supply chains.[69] Businesses are increasingly incorporating ESG principles into their strategies to align corporate values with sustainable economic development.[70] More and more studies agree that enhancing corporate Environmental, Social, and Governance (ESG) performance can yield several benefits for companies, including but not limited to overall productivity, financial outcomes, innovation capacity, and reputation.[71] Research indicates that in an environment with information asymmetry, businesses with strong ESG performance are more likely to get finance from banks and financial institutions, which helps build trusts and interdependence among them. [72]

Environmental sustainability along with human rights promotion can foster business profitability as well as workers and people at the bottom. Two targeted studies as mentioned in the recently published FAQ by the EU Commissoin on the CSDDD show that 'integrating sustainability consideration into business operations and value chains improves risk management, resilience, innovativeness, and overall competitiveness'.[73] A recent study finds that reducing

[69] Bisetti, Above at 18.
[70] Linze Li, Xuexin Liu, and Man Hu, 'Textile and apparel supply chain coordination under ESG related cost-sharing contract based on stochastic demand' (2024) 437 *Journal of Cleaner Production* 6.
[71] Gerald T. Garvey, Mohanaraman Iyer, and Joanna Nash, 'Carbon footprint and productivity: does the "E" in ESG capture efficiency' (2018) 16 *The Journal of Investment Management* 59; Doron Avramov, Si Cheng, Abraham Lioui, and Andrea Tarelli, 'Sustainable investing with ESG rating uncertainty' (2022) 145 Journal of Financial Economics 642.
[72] Joel F. Houston and Hongyu Shan, 'Corporate ESG profiles and banking relationships' (2022) 35 The Review of Financial Studies 3373.
[73] Tensie Whelan, Ulrich Atz, Tracy Van Holt, and Casey Clark, 'ESG and financial performance: Uncovering the relationship by aggregating evidence from 1,000 plus studies published between 2015–2020' (2021) New York: NYU STERN Center for sustainable business 520; Gunnar Friede,Timo Busch &Alexander Bassen, 'ESG and financial

environmental pollution and carbon emissions of the manufacturing industry, including apparel, enhances efficiency and production capacity that generate long-term profits and corporate financial performance.[74] Another study that 'an integrated and sustainable three-layer supply model' that integrates and implements circular economy business model, zero-waste green technologies, wastewater and waste treatment technologies, a carbon cap and trade policy yielded approximately 2% more profit than the sum of separate profits obtained by the suppliers, manufacturers, and retailers and also resulted in a decrease in related costs and environmental damage.[75] These findings corresponds with the growing shift of corporate culture towards focusing long-term corporate value, which requires sustainability, over short-term profit maximization and financial performance alone.[76] CEOs of companies are increasingly acknowledging that ESG programs improve the financial performance of companies and are increasingly investing in such programs.[77]

Experts increasingly agree that environmental due diligence can foster the promotion of sustainable industrial and supply chain practices of developing countries ultimately impacting the workers at the bottom. Sustainable apparel industry may provide them higher wages given that profits are shared with them, and healthy and pollution free working environment. Factories adopting climate mitigation measures will produce less heat that provides workers better places to work and promotes workers' health. According to the 2024 ILO Report, *Ensuring Safety and Health at Work in a Changing Climate*, 70 per cent of the world's workers are suffering hazardous health problems and illness caused by climate induced excessive heat, ultraviolet radiation, air pollution, extreme weather events etc. It estimates that 2.4 billion workers out of 3.4 billion workers face excessive heat.[78] A 2023 study by the Global Labor Institute at Cornell University found that due to climate-induced flooding and excessive heat, four major apparel manufacturing

performance: aggregated evidence from more than 2000 empirical studies' (2015) 5 Journal of Sustainable Finance & Investment 210.

[74] Garvey, Above at 71.

[75] See generally,Ezhilarasan Peter John, and Umakanta Mishra, 'A sustainable three-layer circular economic model with controllable waste, emission, and wastewater from the textile and fashion industry' (2023) 388 *Journal of cleaner production* 135642.

[76] Hana Vizcarra, *What Does the Business Roundtable Statement Mean? A Lot, But Also Not that Much*, Environmental and Energy Law Program, 28 August 2019 <https://eelp.law.harvard.edu/2019/08/what-does-the-business-roundtable-statement-mean-a-lot-but-also-not-that-much/> accessed 20 January 2026.

[77] Chrissie McClatchie, *How ESG is Becoming the Essential Ingredient for A Successful Business, CEO Magazine*, 27 March 2023 <https://www.theceomagazine.com/business/management-leadership/esg/> accessed 20 January 2026.

[78] International Labor Organization, *Ensuring Safety and Health at Work in a Changing Climate*, 22 April 2024 <https://www.ilo.org/publications/ensuring-safety-and-health-work-changing-climate> accessed 20 January 2026.

hubs—Bangladesh, Pakistan, Vietnam, and Cambodia—could lose 65 billion US dollars, which means a 22% decline in export earnings and the loss of nearly 1 million new jobs by 2030.[79] It is increasingly acknowledged that climate change and environmental harm directly or indirectly adversely affects the enjoyment of human right including but not limited to right to life, heath, food security, development, and an adequate standard of living.[80] There is a growing body of literature that says environmental sustainability complements human rights or labor rights, especially around workers' health, wages, and working environment.[81] Environment 'is a precondition to the enjoyment of human rights . . .and that human rights are tools through which environmental issues (both procedural and substantive) can be ad dressed.'[82] Therefore, environmental due diligence is complementary to human rights due diligence and need to be integrated. Due diligence framework will also provide better access to justice and remedy for workers and victims of adverse impacts as it creates multiple forums for filing complaints and seeking redress.[83]

However, the potential impact of the disclosure and due diligence requirements across the value chains and apparel workers in manufacturing countries remains uncertain.[84] It is reasonably feared that requiring compliance with ESG standards on the suppliers without supporting them may put an unfair burden on them or result in many unintended consequences.[85] This fact warrants early comprehensive study to explore the potential impact on the supply chains, which are mostly developing countries like Bangladesh with weaker capacity and legal system, in order to avoid any unintended consequences and to prevent large companies from shifting their compliance burden on suppliers or to turn the regulations into mere tick-box compliance. Many caution that less environmentally sustainable suppliers are at risk of losing their business relationships with global

[79] Bauer, Above at 3.
[80] Skylar Shulman, 'Corporate Sustainability Due Diligence: Combining Human Rights and the Environment' (2024) 49 *Columbia Journal of Environmental Law* 494.
[81] Martin-Ortega,, Above at 61.
[82] General Comment No. 36–Article 6: Right to Life, U.N. Doc CCPR/C/GC/36, U.N. Human Rights Committee, 124th Session, 3562nd meeting, Agenda Item: General comments of the Committee (30 October 2018).
[83] European Commission, *Frequently Asked Questions on Directive on Corporate Sustainability Due Diligence, p. 17,* https://commission.europa.eu/business-economy-euro/doing-business-eu/sustainability-due-diligence-responsible-business/corporate-sustainability-due-diligence_en#documents.
[84] Bauer Above at 3.
[85] Leonard Feld, 'Leading the Way or Crossing the Line? The Extraterritorial Dimension of the EU Directive on Corporate Sustainability Due Diligence' (2026) 1 *Business and Human Rights Journal* 25, 30; Kristina Kukolia, *Asia apparel sector warns of unfair burden as EU prepares diluted CSDDD, Just Style*, 8 March 2024, <https://www.just-style.com/news/asia-apparel-sector-warn-of-unfair-burden-as-eu-prepares-diluted-csddd/> accessed 20 January 2026.

brands that will necessarily focus on adopting ESG in their business operations. A recent study finds that U.S. firms reduced imports from their suppliers by 29.9% when they could not meet the standards, and instead tended to reallocate their orders to other suppliers that already met higher ESG standards.[86] It also found that US firms may resume the trade relationship when their suppliers implement higher ESG standards.[87] Similarly, there is also a shift, at least to a limited extent, of relocating manufacturing factories, with US and European brands shifting their production away from Asia and exploring the possibility of diversifying their production to Egypt, Turkey and North American countries to avoid climate and physical supply chain risks.[88] The trend has already been visible in Chinese apparel factories that have been relocated to Vietnam due to the ongoing US-China trade war.[89] If these regulations are implemented as planned, and fairly adopted across all supplier countries like Bangladesh, India, Morocco and Tunisia, the Turkish apparel industry will have a fair advantage given their early start in complying with EU ESG standards. It may increase its relative share of the EU's total apparel imports.[90]

A 2019 report from McKinsey Global Institute found a similar shift in the global value chains, which are becoming more knowledge intensive rather than labor intensive, and businesses are increasingly establishing production in proximity to demand.[91] With automation diminishing the significance of labor costs, lower-income countries have shrinking opportunities to rely on labor-intensive exports as a development approach.[92] This trend will likely to be further aggravated the ability of suppliers to adapt their capabilities toward environmental sustainability to meet ESG regulations through various means. These may include integrating a circular economy business model, adopting green technology, and investing in modern waste treatment facilities. Moreover,

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[86] Bisetti, Above at 18.
[87] Id.
[88] Bauer, Above at 3.
[89] Paritta Wengkiat, Pham Lan Phuong, *Vietnam Thrives in the US-China Trade War*, 16 July 2019 <https://chinadialogue.net/en/business/11385-vietnam-thrives-in-the-us-china-trade-war/> accessed 21 February 2024; BBC, *US-China Trade War: Moving to Vietnam to avoid sanctions*, 19 May 2019 <https://www.bbc.com/news/world-asia-48273550> accessed 22 February 2024.
[90] Shemona Safaya, *The EU's CSDDD struggle and how its approval will impact global apparel ?* (Global Data), 14 March 2024 <https://www.just-style.com/features/the-struggles-of-eus-csddd-and-how-it-will-impact-global-apparel> accessed 20 January 2026.
[91] Susan Land et al, *Globalization in Transition: The future of trade and value chains*, McKinsey Global Institute, January 2019 <https://www.mckinsey.com/~/media/mckinsey/featured%20insights/innovation/globalization%20in%20transition%20the%20future%20of%20trade%20and%20value%20chains/mgi-globalization%20in%20transition-the-future-of-trade-and-value-chains-full-report.pdf> accessed 20 January 2026.
[92] Ibid.

sustainable apparel industry and decarbonization of its manufacturing process will require a major transition that will likely have significant impacts on the employment and labor conditions and economies of the countries in the supply chain.[93] Not being capable to adapt with the growing market demand of environmental sustainability means losing comparative advantage for factories and loss of jobs, less wages and unhealthy, hotter and polluted working place for workers. Bangladesh Institute of Labor Studies (BILS) reports that half of 402 respondents (workers) from 160 factories they interviewed suffer climate-change implications, resulting in a 23% increase in leave/absence which means lower production and lower income for them.[94]

In summary, since the CSRD or CSDDD and related ESG regulations are in the early stages and will be in force in the coming years, their impact upon the apparel industry in Bangladesh is not quite certain. However, from the existing literature discussed above and industrial trends, it can be predicted that they will bear significant effect on the industries that compete for EU market access. The sustainability performance of the local factories will be impacted either positively or negatively, depending on how the global brands approach and engage with them. Responsible business and collaboration of global brands with local suppliers to build their capacities providing technical and financial assistance can help them adapt and align with the global ESG- conscious business environment. On the other hand, shifting the full burden of sustainability compliance under the ESG framework to Bangladeshi suppliers risks the loss of their competitive advantage since they lack resources for investment, technical capacities, and so forth. If Bangladesh loses its comparative advantage in the apparel global trade, it faces a devastating impact on the economy and the apparel workers left behind.

V. Cost-Sharing Contracts as Means to Address Potential Adverse Impacts on the Comparative Advantage and Workers

This study proposes that a cost-sharing contract based on respectful and responsible partnership and purchasing practices between retailers and local suppliers may reduce the challenges in the implementation of the ESG framework. Such contracts may also reduce the

[93] Samantha Sharpe, Elsa Dominish, and M. Cristina Martinez-Fernandez, *Taking climate action: Measuring carbon emissions in the garment sector in Asia*. No. 53. ILO Working Paper, 2022.
[94] The Financial Express, *Around 36pc garment workers migrated for climate change: Study speaks volumes on their exodus* 18May 2024 <https://thefinancialexpress.com.bd/economy/around-36pc-garment-workers-migrated-for-climate-change> accessed 20 January 2026.

power imbalance between buyers and suppliers, and has potential avoid the shifting of compliance-burden from local suppliers to global brands, and to prevent unintended consequences. Thus, cost-sharing contracts may play a critical role in the effective implementation of due diligence framework, but the companies must fundamentally change how they design these instruments with a responsible code of business and commitment to the people and the planet.[95] Traditional, informal trading arrangements, or simply risk-shifting approaches, do not meet due diligence requirements.[96]

Contracts have long been used as a means by companies to implement human rights and environmental due diligence.[97] The CSDDD recognizes its significance and makes it mandatory for companies to enter into binding, well-termed, fair and reasonable contract with their business partners, as part of taking appropriate measures for prevention and remediation of adverse environmental impacts (art 10 and 11). The directive also emphasizes that the direct business partners establish similar contractual arrangements with the indirect business partners (art 10.2.b, 7.4, and 11.3.c). The directive foresees that large companies may shift their compliance burden to the local suppliers through such a contract. Therefore, it provides that the terms of the contract with the SME business partners shall be 'fair, reasonable and non-discriminatory' (art 10.5, 7.4, and 11.6). It also provides that the companies shall bear the cost of third-party verification for compliance (art 10.5, 7.4, and 11.6). Furthermore, to guide the companies to make contractual arrangements in light and spirit of the CSDDD and to facilitate contractual arrangements as required under arts 10 and 11, the EU Commission shall issue a 'voluntary model contractual clause' for companies, 'no later than after 30 months from the entry into force of this Directive' (art 12).

To facilitate prevention and remediation measures, companies are required to "provide targeted and proportionate support" to their SME business partners as appropriate considering the resources, knowledge and constraints of the SME, such as capacity building, training or upgrading management systems. Where compliance with the prevention action plan or remediation measures would jeopardize the viability of the SME, companies shall provide 'financial support, such as

[95] Sarah Dadush, Daniel Schönfelder, and Michaela Streibel, *Policy Brief on What the EU Corporate Sustainability Due Diligence Directive Says About Contracts*, 08 July 2024 <https://www.responsiblecontracting.org/csddd-policy-brief> accessed 20 January 2026.
[96] Id.
[97] Lise Smit et al, *European Commission, Study on Due Diligence Requirements Through the Supply Chain, Final Report*, 02 April 2020, <https://ec.europa.eu/newsroom/growth/items/673435/en> accessed 20 January 2026.

direct financing, low-interest loans, guarantees of continued sourcing, or assistance in securing financing' (art 7.2.d and 8.3.c). While making contractual arrangements with SMEs, companies shall assess whether the contracts should be accompanied by some of the support prescribed above (art 7.4). How this support system for local apparel factories may work needs to be investigated. This study argues that the support system as envisaged under the CSDDD can be translated into practice for local suppliers through cost-sharing contracts.

Research finds that ESG cost-sharing contracts, in which global brands share in the cost of implementing stronger environment due diligence enhance the environmental performance of the supply chain, leading to higher profits for both manufacturers and retailers.[98] Such contracts also alleviate the risks associated with unstable market demand for suppliers.[99] Mutually agreed cost-sharing between retailers and suppliers incentivizes and obliges suppliers to reduce the overall production cost and to better perform ESG.[100] Suppliers have been found to perform better under mutually agreed-upon cost-sharing contracts than under unilaterally determined contracts handed down to them by the retailers.[101]

This study identifies five priority measures that need to be taken to make the Bangladesh apparel factories environmentally sustainable. First, the industry shall start using natural and environmentally safe dyes and chemicals. Second, the industry shall establish advanced ETPs and a robust system of waste treatment management. Third, it must use advanced technology or manufacturing processes that use less water. Fourth, it must develop a circular economy with appropriate recycling. Fifth, the industry must use clean energy to reduce its carbon footprint. All these measures require a substantial amount of investment and capacity building. However, unfortunately, studies find that attaining an environmental high standard does not automatically lead to 'higher prices' from buyers and suppliers did not increase their profit margins compared to their investment for environmental sustainability.[102] There are no binding commitments or additional orders or incentives of any form from global brands for local suppliers for their investment to making environmentally sustainable manufacturing or industries. The reputational

[98] Linze Li, Xuexin Liu, and Man Hu, 'Textile and apparel supply chain coordination under ESG related cost-sharing contract based on stochastic demand' (2024) 437 *Journal of Cleaner Production* 6 (This study explores "the conditions for reaching a cost-sharing contract and its impact on the supply chain coordination mechanism based on the Stackelberg game model in both stochastic and deterministic market scenarios")
[99] Id.
[100] Id, at 11.
[101] Id.
[102] Id.

or comparative advantage the buyers gain from suppliers' environmental investment are not shared adequately with suppliers.[103] It is also found that global buyers even further reduce prices when suppliers' environmental upgrading results in minimizing its production cost leading to 'sustainability supplier squeeze'. [104] This is why for small and medium enterprises, investing in environmental sustainability is far more challenging if they do not receive additional orders or profits or any support for their additional investment.[105] Similarly, one recent research finds that 'the slow return on investment' is the first and foremost barrier for Bangladeshi factory owners to adopt sustainable production process.[106] Cost-sharing contracts may address these issues requiring brands sharing both burden and profits with the suppliers. Responsible and ethical business model also requires buyers to practice responsible purchasing having due consideration of interests of suppliers and incentivizing their sustainability efforts and sharing the profits gained from suppliers' taking sustainable manufacturing.[107] Thus, cost-sharing contracts may fill up the gaps between the supplier's environmental investment and profit margin.

Cost-sharing contracts may be crucial for providing assurance and assistance if any civil liability arises for suppliers on the event of occurrence of environmental damage and corresponding litigations. The CSDDD under art 29 hold companies liable jointly or severally, when the environmental harm was caused jointly by the company and its subsidiary, direct or indirect business partner, intentionally or negligently by the failure of due diligence requirements to a natural or legal person. Where companies are found jointly or severally liable, they are under legal obligation to provide compensation for damage occurred in accordance with the national law. The determination of joint liability given the complex relationships and visibility of supply chain partners is always a challenge. Prior written provisions in the cost-sharing contract as to the determination of liability, if arise, may provide security and certainty for local suppliers. But how cost-sharing contracts may be introduced in Bangladesh need to be further investigated.

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[103] Mahwish Khan et al, 'The Factory Manger Dilemma: Purchasing Practices and Environmental Upgrading in Apparel Global Value Chains' (2020) 52 *Environment and Planning* 766.
[104] Ponte, Above at 27.
[105] Mahwish J. Khan, 'An exploratory evidence of the types of challenges and opportunities perceived by the small and medium enterprises in the apparel export sector of Pakistan' (2017) 10 *Abasyn University Journal of Social Sciences*(2) 373.
[106] Binoy Debnath et al, 'A grey approach to assess the challenges to adopting sustainable production practices in the apparel manufacturing industry: Implications for sustainability' (2024) 22 *Results in Engineering* 102006.
[107] Mahwish Khan et al, 'The Factory Manger Dilemma: Purchasing Practices and Environmental Upgrading in Apparel Global Value Chains' (2020) 52 *Environment and Planning* 766.

VI. CONCLUSION

Environmental due diligence have been an integral part of the wider human rights due diligence framework with the adoption of the European Union Corporate Sustainability Reporting Directives (CSRD) and Corporate Sustainability Due Diligence Directives (CSDDD), along with similar kinds of regulations at the national level, for instance in Germany, France and the USA. Among these directives, the CSDDD is the most comprehensive one. These directives apply not only to the actual or potential environmental impact of the companies but also of their supply chain partners. Research increasingly asserts that the regulations will have an impact to a varying degree across the countries where European companies conduct their businesses, depending on how companies approach their supply partners. Accordingly, they can potentially impact the comparative advantage of Bangladesh in apparel sector, of which the EU is the largest market. The apparel industry contributes as much to the economy of Bangladesh as to the widespread pollution. Its manufacturing processes are hugely environmentally unsustainable. To remain comparatively advanced for having access to the EU market, local factories in Bangladesh must adapt the sustainable industry standard in line with the CSRD and CSDDD. However, since this process requires substantial amount of investment, financial and technical support for capacity building, local factories of Bangladesh cannot achieve it alone. The retailers and brands must support the apparel industry in Bangladesh. To this end, responsible and cost-sharing contracting between retailers and local factories with fair and reasonable terms based on the standards set by the CSDDD can hugely benefit the Bangladeshi local suppliers to retain their comparative advantage and to protect labor rights.

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