LightCastle
PARTNERS

BUNON 2030

POLICY ExCHANGE
BANGLADESH
Catalyzing Growth Solutions

Bunon 2030:
Key Interventions, Insights, & Way Forward for Bangladesh's RMG Sector

A Two-Year Journey Summarizing the Key
Interventions to Drive Systemic Change

H&M FOUNDATION

oporajita

The Asia Foundation

Acknowledgment

We would like to express our sincere gratitude to all those who have contributed to the **Threads of Progress: A Comprehensive Landscape Study of the Apparel Industry and the Future for Women Workers**. The research was enriched by insights from over 40+ in-depth interviews with key stakeholders, including industry leaders, academic experts, policymakers, innovators, and representatives from worker rights associations, as well as 50+ participants in the Focus Group Discussions, 65% of whom were women apparel workers. We also appreciate the valuable input from international experts, international brands, and innovators based in India, Kenya, Brazil, the United States, and Sweden, whose perspectives significantly informed the development of two policy briefs and the key themes for the Bunon 2030 dialogues.

Additionally, we extend our heartfelt thanks to all those who attended and participated in our dialogue sessions—panelists, distinguished speakers, innovators, development partners, government representatives, RMG entrepreneurs, workers, trade associations, collective impact partners, financial institutions, experts, and academics. Your thoughtful contributions, coupled with the feedback from the events, were essential in shaping the dialogue series. We are deeply grateful for the time, expertise, and support shared by all involved in this process.

About Oporajita:

With the ongoing shift in the apparel sector, to prepare women garment workers in Bangladesh for a future where the textile industry is defined by automation and digitalization to safeguard their livelihoods, the **H&M Foundation** is currently running a long-term programme, '**Oporajita: The Collective Impact initiative on Future of Work for Women Garment Workers**' with **The Asia Foundation** operating as the backbone organization. This initiative unites **eleven** implementing partners and **three** co-funders with a common goal of future-proofing the livelihood of garment women workers in Bangladesh. Through this programme, they are equipping and empowering women garment workers through appropriate training for new roles, undertaking broader initiatives to improve the enabling environment for women workers' career progression and employability, and co-designing holistic activities together with a diverse group of stakeholders, including local organizations, entrepreneurs, innovators, public agencies, and academia as a part of the collective impact initiative.

About Bunon 2030:

As a part of the 2-year-long program Oporajita, LightCastle Partners has proudly introduced Bunon 2030 - a dedicated initiative to empower Bangladeshi women garment workers in the face of increasing automation, changing geopolitics, decarbonization, and circularity, among others.

The project intends to improve sector competitiveness, skills development, and employment opportunities for women apparel workers based on an improved understanding of the impact of technology and automation on the apparel industry. In addition, Bunon 2030 aims to strengthen the apparel industry for the next decade—adapting to the emergence of the 4th Industrial Revolution, changing Geopolitics, Circularity, Decarbonization, and the upcoming LDC graduation.

With the Bunon 2030 initiative, our goal is to foster collaboration and knowledge sharing as we collectively navigate the path ahead for Bangladesh's apparel sector. Through this effort, we encourage stakeholders to unite with us to drive systemic change in collaboration with apparel ecosystem stakeholders.

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and In-Depth Research:
A Comprehensive Landscaping
Study

Project Inception and In-Depth Research:
A Comprehensive Landscaping Study

Threads of Progress: A Comprehensive Landscape Study of the Apparel Industry and the Future for Women Workers was prepared which served as a foundational source of industry insights to drive the dialogue series. LightCastle Partners, in collaboration with Policy Exchange of Bangladesh, worked with the 'Oporajita: Collective Impact on Future of Work' intervention that is designed to enhance the global competitiveness of the apparel industry while improving the livelihood and wellbeing of workers in the RMG sector.

The study incorporated a comprehensive secondary research phase. Insights were derived from respected local and international research publications as well as credible news sources.

40+

In depth interviews were conducted, engaging a broad spectrum of stakeholders.

Participants included industry leaders, academic experts, policymakers, innovators, and representatives from worker rights associations.
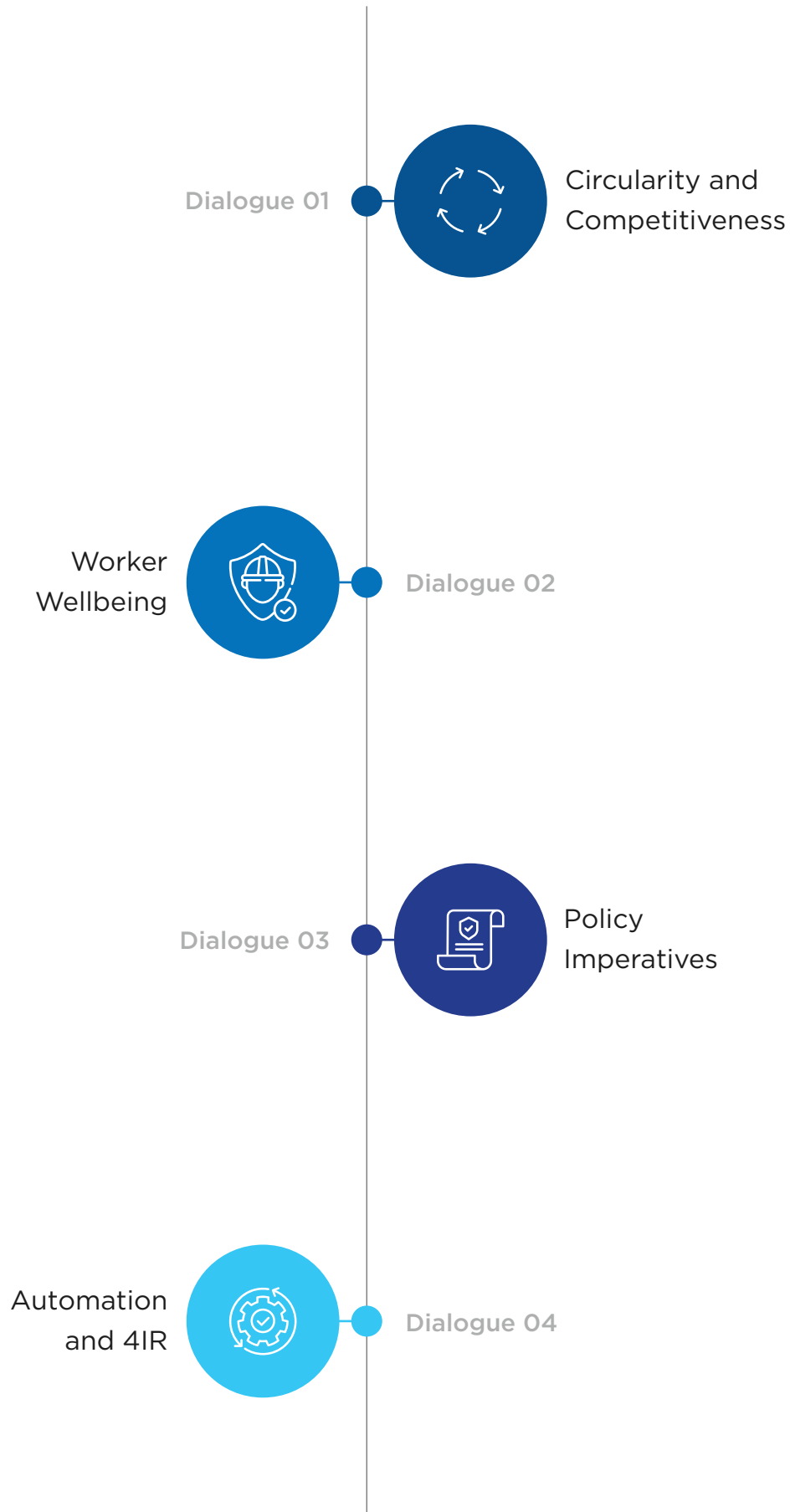
600+

Industry players were reached, providing them with the latest knowledge and insights.

50+

FGD Participants, 65% of them being Women Apparel Workers.

The study went through an exhaustive secondary research phase that gathered insights from reputed research publications and news sources at home and abroad, conducted in-depth interviews with more than forty stakeholders involved within the industry, buyers, academia, policymakers, innovators, worker rights associations,among others. International innovators also contributed to the insights such as experts from India, Kenya, Brazil, USA, and Sweden. The **insights from the report served as the foundation for two policy briefs**—one for industry leaders and another for policymakers—and helped finalize the **key themes for the four pivotal dialogues** under the Bunon 2030 initiative. The dialogue themes were set as follows, and before conducting the dialogues, a Learning Dissemination event was held to share initial findings from the report.

Dialogue 01 ● — ◯ Circularity and
Competitiveness

Worker
Wellbeing ◯ — ● Dialogue 02

Dialogue 03 ● — ◯ Policy
Imperatives

Automation
and 4IR ◯ — ● Dialogue 04

Learning Dissemination Session

Learning Dissemination Session:

LightCastle Partners, in collaboration with Policy Exchange Bangladesh, organized a **Learning Dissemination and Roundtable Discussion** on November 4, 2023. This event was a continuation to unveil key findings from the study **Threads of Progress: A Comprehensive Landscape Study of the Apparel Industry and the Future for Women Workers** along with **two policy briefs**. The study and associated policy recommendations offered critical insights and strategic guidance on building a resilient and future-ready apparel sector in Bangladesh. The event gathered prominent stakeholders, policymakers, and experts to discuss actionable strategies for sectoral transformation.

The event was attended by distinguished guests, including Mr. Md. Abdus Samad Al Azad, Joint Secretary (FTA-1) of the Ministry of Commerce, and Mr. Shahidullah Azim, Former Vice President of the Bangladesh Garment Manufacturers and Exporters Association (BGMEA). The roundtable discussion was moderated by Dr. M. Masrur Reaz, Chairman and CEO of Policy Exchange Bangladesh, ensuring a well-rounded exploration of the study's implications for various stakeholders.

The report detailed the impact of the COVID-19 pandemic, which caused the cancellation of international orders, resulting in an estimated USD 3.15 billion in losses and severe impacts on garment workers. Despite these setbacks, Bangladesh's apparel exports recovered to reach USD 46.99 billion in FY 2022-23, marking a significant 10.27% growth over the previous year.

There were several strategies for future-proofing the sector which came from the insights of the landscape study and was part of the discussion.

- **Automation and Circularity:**
  Implementing automation and circular economy practices to increase resilience and sustainability.

- **Textile Waste Recycling:**
  Formalizing recycling sector for textile waste, potentially generating over $3 billion in value.

- **Capitalizing on Global Trade Shifts:**
  Leveraging opportunities created by U.S.-China trade tensions to expand Bangladesh's market share.

- **Logistics and Regulatory Readiness:**
  Enhancing logistics capabilities and preparing for upcoming regulatory changes, including the EU Due Diligence and Green Deal laws.

This event set the context for the upcoming pivotal dialogues under the Bunon 2030 initiative.

Building Resilience in the RMG Sector: Addressing Circularity, Decarbonization, Worker Wellbeing, and Automation

Building Resilience in the RMG Sector: Addressing Circularity, Decarbonization, Worker Wellbeing, and Automation

As Bangladesh rapidly advances in sectors like Ready-Made Garments (RMG) and textiles, it faces growing challenges that necessitate strategic adaptation to sustain its global competitiveness. Rapid developments in technology emerging from the 4th Industrial Revolution along with geopolitical shifts, and stringent European Union (EU) regulations on circularity and decarbonization, are reshaping industry dynamics. The EU regulations are designed to facilitate the transition of the apparel market from linear to circular models by introducing new sustainability standards that prioritize **circular design and recycled materials**.

Moreover, as Bangladesh moves closer to graduating from Least Developed Country (LDC) status in 2026, it must adapt to the evolving demands of global buyers. This involves **aligning with the forthcoming EU Green Deal requirements, Ecodesign for Sustainable Products Regulation (ESPR), and EU Due Diligence Acts, and expanding its apparel portfolio to include high-value-added products**. Achieving this shift, alongside advancing in decarbonization and resource efficiency, requires an **integration of advanced technology across the RMG value chain**. Without substantial automation upgrades, Bangladesh may struggle to meet the evolving standards of global markets, potentially limiting its market access if proactive measures are not taken.

Beyond its economic impact, Bangladesh's apparel sector is a crucial source of livelihood, **supporting over 4 million workers, with women making up 60% of this workforce**. Any upheaval in the industry poses a significant threat to their livelihoods. As the sector grapples with these challenges, the wellbeing of millions, particularly women who are essential to its success, hangs in the balance.

To address these critical issues, the four thematic dialogue series identified during the landscaping study served as a key platform for comprehensive discussions and targeted interventions across each critical area. These dialogues offered valuable insights into challenges and strategies for the RMG sector, addressing circularity, worker wellbeing, policy interventions, and automation. The discussions revolved around each of the thematic areas. has been thoroughly discussed in the subsequent chapters.

Dialogue 01:
Circularity, Decarbonization, & Competitiveness

Ensuring a sustainable apparel industry requires addressing the environmental and resource challenges embedded in every stage of garment production. Studies reveal that carbon emissions are present across the entire production chain, with emissions spiking during the energy, and chemical-intensive wet treatment phases like dyeing and finishing, which also produce hazardous effluents.[1]

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1. Measuring carbon emissions in the garment sector in Asia | ILO

Distribution of Emission in the Garment Sector Value Chain:

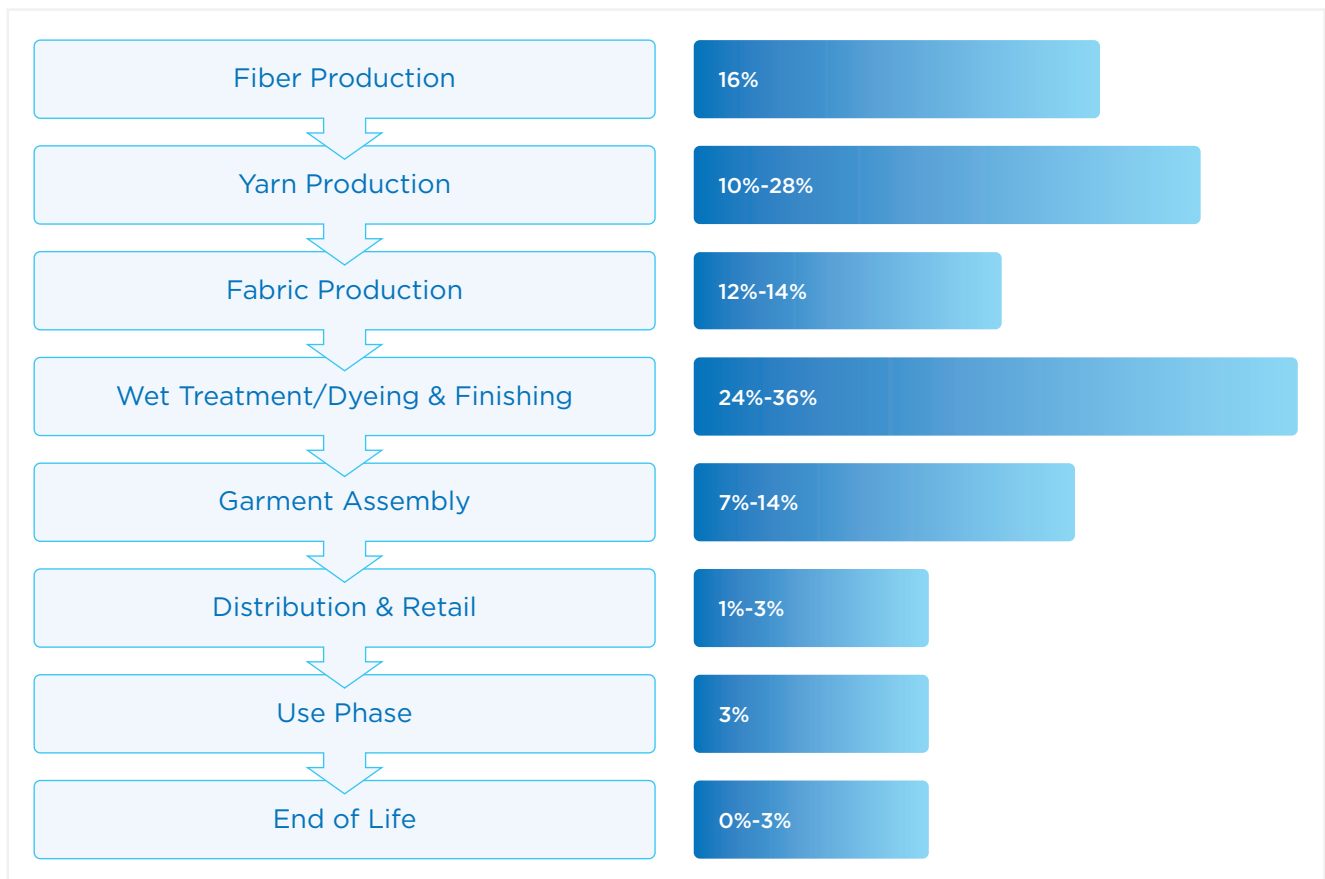| Stage	Emission
Fiber Production	16%
Yarn Production	10%-28%
Fabric Production	12%-14%
Wet Treatment/Dyeing & Finishing	24%-36%
Garment Assembly	7%-14%
Distribution & Retail	1%-3%
Use Phase	3%
End of Life	0%-3%

Figure 1: Distribution of Emission in The Garment Sector Value Chain.[2]

An IFC study also highlighted the substantial impact on water resources, as Bangladeshi factories consume approximately **1,500 billion** liters of water annually, which is equivalent to filling **600,000 Olympic-sized swimming pools**; intensifying concerns over rapidly declining groundwater levels.[3]

1500Bn
Lt./annum
___
Water consumed by Bangladeshi Factories

Equivalent to
600,000 Olympic-Sized Swimming Pools

In response to these urgent environmental issues, the project team **launched the inaugural Bunon 2030 dialogue in early December 2023**. This gathering focused on core themes of Circularity, Decarbonization, and Competitiveness, aiming to foster resilience and adaptation within Bangladesh's RMG sector.

As part of these efforts, industry leaders, policymakers, development partners, innovators, and academics convened at the event to underscore the pressing need for sustainable practices that can support the apparel industry's evolution over the next decade.

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2. Measuring carbon emissions in the garment sector in Asia | ILO
3. Bangladesh's Textile Sector Weaves a Clean, Sustainable Future | IFC

Notable Quotes
From Dialogue 01

Fazlee Shamim Ehsan
Executive President of Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA)

"In the dyeing sector, there is an urgent necessity to minimize the water footprint. Additionally, it is crucial to lower the taxes on imported solar panels. Apart from that, instead of prohibiting the export of recycled products, there should be an encouragement of competition in this aspect."

Vidiya Amrit Khan
Former Director of Bangladesh Garment Manufacturers and Exporters Association (BGMEA)

"In Bangladesh, the proper availability and collection of textile waste are lacking, and there is a shortage of recycling facilities. Moreover, the collection of waste from Export Processing Zones (EPZ) should not be restricted to designated individuals; instead, it should be open for anyone to take away. It is recommended not to levy tax when Ready-Made Garment (RMG) businesses sell waste to recyclers, as this would negatively impact the competitiveness of the sector."

Abdullah Hil Rakib
Managing Director of Team Group

"We as a country often do not reflect on what heroic achievement we have accomplished, in terms of organizing investment and creating the ecosystem present today. The country needs to remember its strength and become a flagbearer of circularity initiatives not only nationwide but also globally."

Dr. Zaki Uz Zaman
Country Representative in Bangladesh of UNIDO

"Bangladesh is the home to the best green factories in the world. But there are a lot of gaps of understanding between suppliers and buyers— a mismatch between visions. These need further alignment. Knowledge info has to be transferred to proper government bodies for effective initiative, with partners extending cooperation."

During the event, policymakers, foreign brands, innovators, and industry leaders engaged in pertinent conversations to adopt circular business models for establishing a circular ecosystem.

💡 Key Findings of Dialogue 01:

To enhance competitiveness through circularity in the RMG sector, policymakers and industry leaders identified several strategies during the first dialogue event, which has been compiled in the table below. These include prioritizing recyclable and resource-efficient materials to reduce carbon emissions and landfill waste. Additionally, transitioning to renewable energy sources is highlighted as a critical step to mitigate fossil fuel dependence. These measures not only align with environmental standards but also strengthen the sector's global positioning by integrating sustainable practices at every stage of production.

Recommendations from Participants: First Dialogue

Policymakers:

- Implement policies and tax incentives to create a conducive environment for fostering the growth of the recycling sector and textile waste.

- Establish and actively engage in waste recycling initiatives within the factories to decrease reliance on imported cotton meeting current demand.

- Explore the feasibility of setting up waste collection centers to address challenges in garment waste collection.

- Advocate for the implementation of a circular financing scheme, urging the government to provide low-cost financial support to the garment recycling industry.

- Encourage collaboration with buyers or donor agencies to secure financial assistance, enabling the apparel industry to unlock its full potential.

- Creating a pool of resident experts in ESG-like frameworks who can help companies transition faster.

- Introduce a pricing mechanism for water usage, incorporate advanced technologies in Effluent Treatment Plants (ETPs), and actively promote rainwater harvesting as actionable steps toward efficient resource management and minimizing environmental impact.

- Initiate RMG sector's shift to renewables: target 40% power from renewables by 2041. Implement PPAs, and wheeling policies, and utilize solar energy.

Industry Leaders:

- Shift to a circular economy paradigm through the implementation of ESG frameworks to enhance sustainability, and compliance, diminish imports, and reinforce brand negotiation capabilities, aligning economic and ethical objectives.

- Broaden sustainability initiatives beyond LEED certification to proactively respond to forthcoming European environmental regulations, guaranteeing future competitiveness within the industry.

- Accelerate the adoption and scaling of recycling processes for cotton scraps and post-industrial waste to produce fibers and yarns.

- Execute measures to minimize human errors in all facets of fashion production, from design sampling to cutting and sewing, emphasizing waste reduction and resource efficiency in alignment with the "Reduce" principle of the 3Rs (Reduce, Reuse, Recycle).

Embracing Wellbeing - Nurturing the Future of Apparel Workers in the Industry

Prioritizing workers' health and safety is imperative as they are the invaluable assets of our apparel industry, dedicating their labor hours to produce high-quality products. It is the responsibility of leaders and employers to ensure that these workers are afforded fair rights and treatment within factory settings. With human rights due diligence in supply chains gaining global focus, and brands closely examining suppliers, Bangladesh's apparel industry must urgently commit to safeguarding workers' rights, including safety, health services, and fair wages.

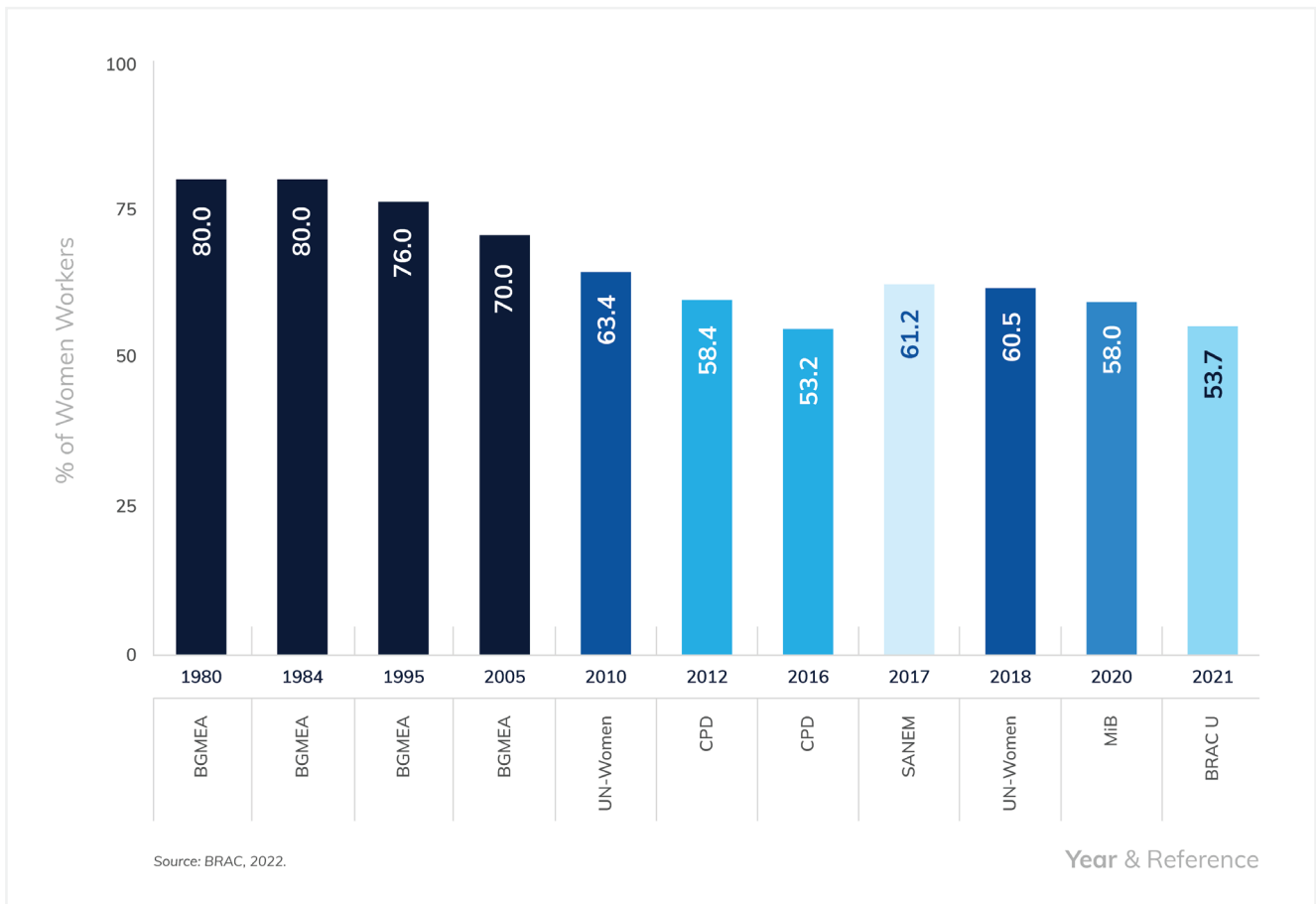## The Declining Trend of Women Workers in the RMG Sector of Bangladesh:

Source: BRAC, 2022.

Figure 2: Declining Trend of Participation of Women Workers in the RMG Sector.

Age 18:	Age 18-35:	Beyond 35:
Enters The RMG Sector	Engaged in the RMG Sector	**Alternative Work**
	Leaves Workforce Due To Domestic Affairs.	• Agriculture Work • Household Help • Self Owned Tailor Shop

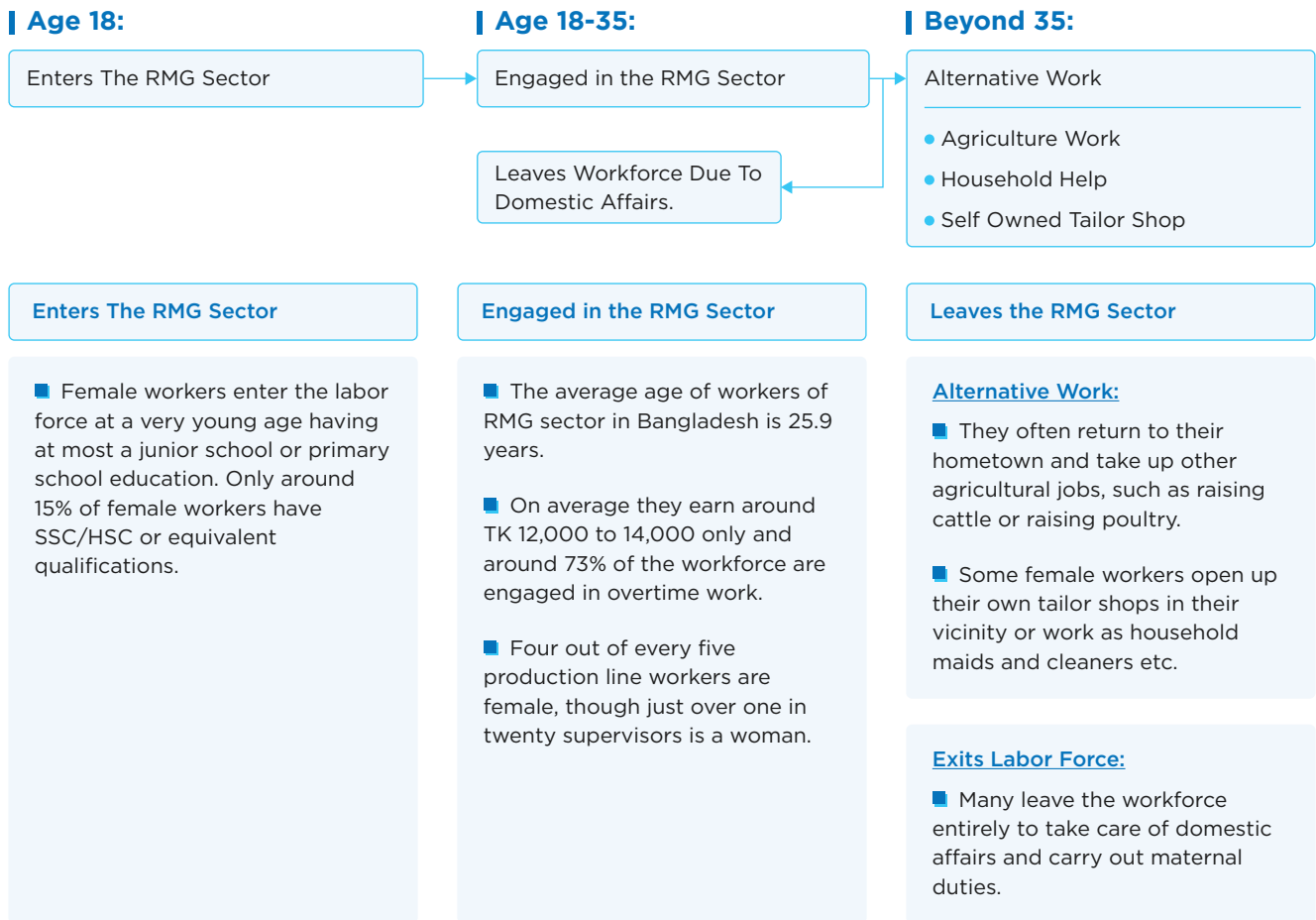| Enters The RMG Sector	Engaged in the RMG Sector	Leaves the RMG Sector
■ Female workers enter the labor force at a very young age having at most a junior school or primary school education. Only around 15% of female workers have SSC/HSC or equivalent qualifications.	■ The average age of workers of RMG sector in Bangladesh is 25.9 years. ■ On average they earn around TK 12,000 to 14,000 only and around 73% of the workforce are engaged in overtime work. ■ Four out of every five production line workers are female, though just over one in twenty supervisors is a woman.	**Alternative Work:** ■ They often return to their hometown and take up other agricultural jobs, such as raising cattle or raising poultry. ■ Some female workers open up their own tailor shops in their vicinity or work as household maids and cleaners etc. **Exits Labor Force:** ■ Many leave the workforce entirely to take care of domestic affairs and carry out maternal duties.

Figure 3: Life Mapping of Apparel Workers.

The figures above depict the concerning trend of the decreasing participation of women in the RMG sector, particularly after a certain age, raising essential questions about retaining their employment in this sector while upholding their fair rights.

Following the rising concern for worker wellbeing, the project team organized the **second dialogue event in mid-February, 2024**, as part of the Bunon 2030 initiative. The event focused on critical themes of enhancing worker wellbeing, exploring opportunities for reskilling and upskilling to mitigate automation risks, and addressing concerns related to the career advancement of women apparel workers.

The esteemed panelists including, industry leaders, policymakers, development partners, innovators, and academicians delved into the discussion centered on the fundamental human rights of workers within the apparel sector, focusing on the challenges and the necessity of raising awareness among them. They shared valuable insights into the evolving discourse on worker rights and wellbeing in Bangladesh's RMG sector.

Notable Quotes
From Dialogue 02

Dr. Julia Ahmed

Independent consultant with a focus on Sexual and Reproductive Health and Rights (SRHR), Gender Mainstreaming, and Health System Strengthening, emphasized the importance of offering SRHR services such as family planning which empowers women to make informed decisions about their reproductive health.

"Ensuring a healthy workforce for women garment workers mandates the incorporation of principles of equity, prioritization of worker health, and maintenance of hygiene standards."

Dulal Krishna Saha

Former Executive Chairman of National Skills Development Authority (NSDA)

"The launch of the National Skills Portal marks a significant step towards enhancing the wellbeing of women workers in the RMG sector. By capturing the evolving needs of industries and tracking the training provided to workers, this platform will play a vital role in ensuring that training programs are tailored to meet the specific needs of women in the garment industry."

Ferdaus Ara Begum

CEO of BUILD

"To prioritize the wellbeing and success of women workers, we ensure that upskilling and reskilling initiatives are demand-driven. Collaboration with relevant stakeholders is crucial in outlining training programs that align with industry demands. Through this collaborative effort, we equip women with the skills they need to thrive in their roles, promoting their professional growth."

Md Selim Hossain

Former Deputy Secretary of the Ministry of Commerce

"By incorporating high-value-added products into our export basket, we not only enhance our competitiveness in the global market but also create opportunities for women to engage in more rewarding and sustainable roles. Prioritizing the inclusion of such products is essential for fostering a thriving and inclusive garment industry that includes the growth of career opportunities for our women workers."

Moreover, the panelists and attendees actively discussed prioritizing the soft skills development among the women workers for their career advancement and transition into supervisory roles in the RMG sector.

💡 Key Findings of Dialogue 02:

To summarize the key insights from prominent policymakers and industry leaders during the second event focused on worker wellbeing, a table of recommendations has been compiled. This table reflects the potential strategies for enhancing skills development among workers and increasing awareness of their rights within the Ready-Made Garments (RMG) sector, with particular emphasis on supporting women workers.

Recommendations from Participants: Second Dialogue

Policymakers:

- Facilitate export diversification with a focus on high-value-added products to maintain the competitive edge in the global apparel market.

- Encourage the development of low-cost housing options for RMG workers reducing the burden of high rent expenses as the current minimum wage might not be adequate.

- Implement a universal pension scheme for RMG workers to ensure financial stability during their retirement period.

- Strengthen labor standard enforcement mechanisms by increasing the number of labor inspections and regular audits for RMG factories.

- The Skills for Employment and Investment Programme' (SEIP) should collaborate with international experts, for example with H&M as training partners to harness the skills of the youth working in the Ready-Made-Garments (RMG) industry. These experts will then have access to a comprehensive database of training-related information, facilitating transparent mapping of additional training facilities.

Industry Leaders:

- Initiate women's leadership program to empower them with leadership positions while reskilling and upskilling them to ensure a sustainable pool of skilled workers.

- Create collaboration between MFS service providers and commercial banks to provide unbanked workers with collateral-free digital loans at a lower interest rate.

- Implement financial literacy programs to educate women workers on digital wallets to streamline formal saving channels and help them make informed choices about their retirement savings.

- Collaborate with industry leaders, policymakers, and trainers to incorporate demand-driven training into the curriculum of training institutes.

- Arrangement of counseling sessions in factories to help the workers recognize mental health symptoms, menstrual hygiene, micro-insurance and receive proper support from their peers.

- Provide access to complain cells to help the workers voice their grievances regarding working conditions within the industry.

- Establish affordable medical centers within the apparel factory premises to foster a healthy workforce, leading to increased productivity and reduced absenteeism.

- Establish eco-friendly RMG factories with improved ventilation systems to create a more comfortable working environment for workers as well as to adapt to climate change.

Dialogue 03:

Policy Dialogue on Sustainable Apparel's Future - Navigating Industry Shifts by 2030

Keeping worker wellbeing at the heart of the RMG industry, addressing the upcoming stringent regulations imposed by global brands, particularly as Bangladesh moves closer to graduating from Least Developed Country (LDC) status by 2026 is imperative. The impending crisis beyond 2026 as LDCs, Bangladesh may face the loss of trade benefits and increased production costs, particularly due to losing out on GSP benefits, which will likely hamper the industry's competitiveness on a greater scale.

In addition to the loss of trade privileges, RMG factory owners face challenges in negotiating pricing in the global apparel market, often hindered by limited diversification in Bangladesh's product range. Bangladesh lags behind peer nations in manufacturing high-value-added products, such as blazers, denim wear, and activewear, which carry higher global market prices due to their advanced technical properties and greater demand.

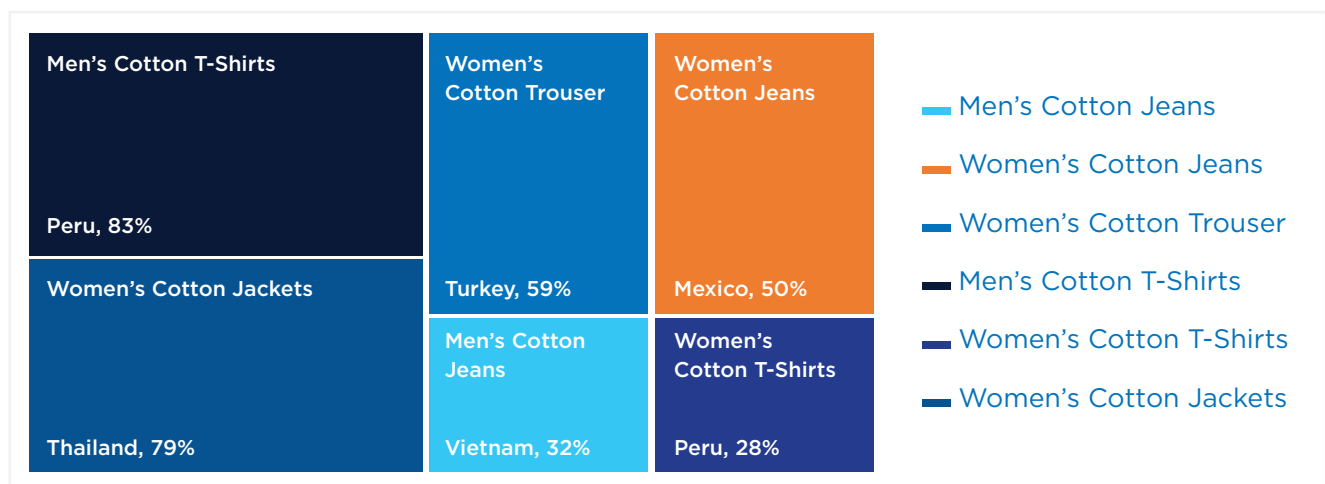## Comparison of Price Difference Between Bangladesh and Highest Recipients:

Men's Cotton T-Shirts	Women's Cotton Trouser	Women's Cotton Jeans	▬ Men's Cotton Jeans
			▬ Women's Cotton Jeans
			▬ Women's Cotton Trouser
Peru, 83%			▬ Men's Cotton T-Shirts
Women's Cotton Jackets	Turkey, 59%	Mexico, 50%	▬ Women's Cotton T-Shirts
	Men's Cotton Jeans	Women's Cotton T-Shirts	▬ Women's Cotton Jackets
Thailand, 79%	Vietnam, 32%	Peru, 28%	

Figure 4: Comparison of Price Difference Between Bangladesh and Highest Recipients due to Lack of Negotiating Power.[4]

This predicament is exacerbated by the fierce price competition within the domestic market among factory owners, further weakening their position in the global price negotiations.

In light of these multifaceted challenges, industry leaders and policymakers are working to navigate this complex landscape. To foster an open dialogue on these pressing issues, the project team, hosted the third **dialogue event on policy roundtable on May 11, 2024.**

This event served as a platform for influential figures and thought leaders including policymakers, government officials, development partners, and industry leaders to voice their concerns and offer potential solutions to pertinent issues.

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4. International Trade Center (ITC) report

Notable Quotes
From Dialogue 03

Abdur Rahim Khan
Inspector General, Department of Inspection for Factories and Establishments (DIFE)

"Emulating successful models like the Product Linked Incentive (PLI) scheme in India, tailored mechanisms could be devised to support and incentivize Bangladeshi apparel export market."

Mesbaul Asif Siddiqui
Deputy Managing Director & Chief Risk Officer, at City Bank

"The manufacturing sector, particularly RMG and Textiles, relies heavily on long-term financing, often exceeding 10 years, which presents challenges for commercial banks due to their predominantly short-term deposits maturing within a year. Consequently, financing needs spanning 10-12 years would be better served by the bond market, which can provide extended repayment periods. A robust secondary bond market is essential to ensure liquidity and the sustainability of this financing model."

Ainee Islam
Director, Program Development, The Asia Foundation

"The advent of the 4IR is significantly affecting the women workers roles. Our Oporajita initiative aims to equip workers with the necessary abilities to navigate the impending wave of automation effectively. Moreover, we are committed to establishing an enabling workplace environment conducive to the long-term retention of women employees."

Mohammad Hatem
President of Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA)

"To facilitate the diversification in fiber production, there can be duty-free access to importing raw materials for the production of Man-Made Fibers (MMF)."

To that, end, the participants focused on the discussions regarding, identifying investment opportunities including exploring bond and equity markets, as well as the potential for job creation through the establishment of recycling factories.

💡 Key Findings of Dialogue 03:

To summarize the key insights from prominent policymakers and industry leaders during the third event focused on future-proofing the apparel sector, a table of recommendations has been compiled. This table reflects, the discussions centered around Bangladesh's graduation from LDC status and necessary policy adjustments for sectoral competitiveness.

Recommendations from Participants: Third Dialogue

Policymakers:

■ Bangladesh should integrate a Digital Product Passport into its apparel industry to align with EU standards and enhance traceability. Developing a roadmap for this integration is essential to ensure compliance and improve industry transparency.

■ To foster the growth of the recycling sector and effectively manage textile waste, it's imperative to enact policies and offer tax incentives that create a favorable environment. Such measures can stimulate innovation and investment in recycling initiatives while promoting sustainable practices in the apparel industry.

■ To strengthen the backward linkage of MMF in Bangladesh, joint ventures with global innovators in the apparel manufacturing sector suggest a promising transition towards recycled polyester clothing. Alongside, revisiting import duties on MMF-based raw materials is also essential.

■ Inefficiencies and delays at the ports significantly impact business operations and the overall competitiveness of the sector. Therefore, prioritizing improvements in port management is essential to boost efficiency and meet international trade standards.

■ Promote the implementation of a circular financing scheme by urging the government to offer low-cost financial support to the garment industry. Additionally, equity and bond markets can be explored.

■ Encourage collaboration with buyers or donor agencies to secure financial assistance, enabling the apparel industry to unlock its full potential.

■ Drive the RMG sector's transition to renewable energy by achieving the goal of sourcing 40% of its power from renewables by 2041. To achieve this, implement Power Purchase Agreements (PPAs), establish wheeling policies, and maximize the use of solar energy.

Industry Leaders:

■ Broaden sustainability initiatives beyond LEED certification to proactively meet upcoming European environmental regulations. This approach will ensure the industry remains competitive in the future – integration of MMF, use of recycled yarn, and pre-consumer waste.

■ Implement strategies to reduce human errors throughout all stages of fashion production—from design sampling to cutting and sewing—focusing on minimizing waste and enhancing resource efficiency in accordance with the 'Reduce' principle of the 3Rs (Reduce, Reuse, Recycle).

■ Collaborating with foreign investors offers an opportunity to leverage advanced technologies and expertise in MMF production and high-value garment manufacturing. This partnership can enhance product quality and efficiency, empowering RMG factory owners in Bangladesh to leverage their global reputation. As a result, they can negotiate higher unit prices for their export items.

Dialogue 04:

Future-Proofing RMG - Tackling Automation for Sustainable Growth & Worker Wellbeing

To remain competitive in the global RMG landscape, Bangladesh must keep pace with peer economies like Vietnam and India, particularly in producing diversified, high-value-added products. Vietnam, for instance, has established a strong foothold in high-value garment production and leads in automation integration, with 56.4% of its manufacturing industry automated compared to Bangladesh's 1.9% [5]. This disparity underscores an urgent need for Bangladesh's RMG sector to accelerate automation efforts, especially in producing high-value-added garments, to strengthen its competitive edge.

Technology Adoption is Lower in Bangladesh Compared to Leading Nations:

Source: United Nations Industrial Development Organization, LightCastle Analytics
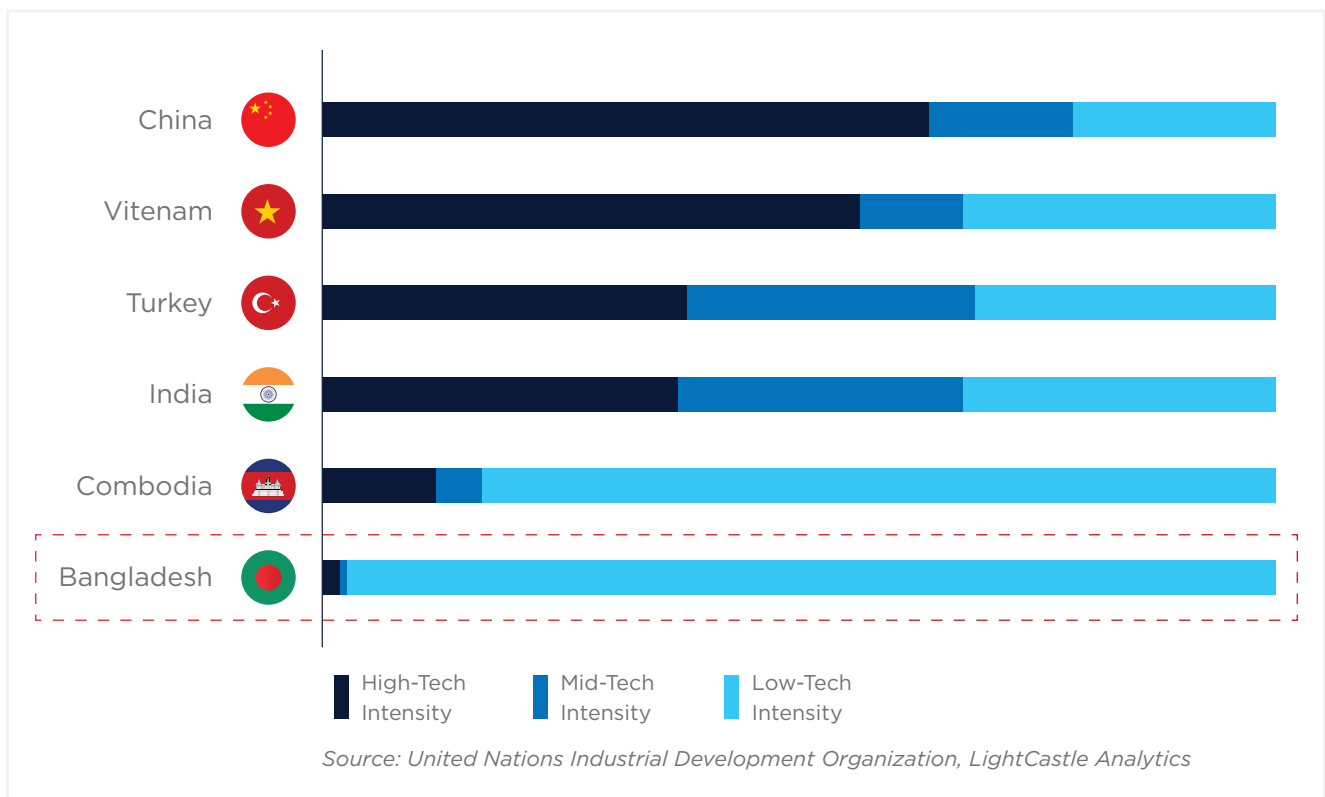
In recognition of this need for a balanced approach to integrating automation and balancing worker wellbeing, the project team has **organized the fourth and final dialogue event on October 21, 2024**, to address these pivotal industry challenges.

This event convened key ecosystem players, including industry leaders, innovators, development partners, academicians, and government stakeholders, to discuss collective action and the importance of research-driven insights in fostering meaningful, sustainable transformation in the RMG sector.

5. United Nations Industrial Development Organization

Notable Quotes
From Dialogue 04

Dr. Engineer Ayub Nabi Khan
Vice-Chancellor of BGMEA University of Fashion and Technology (BUFT)

"There is a significant lack of research on automation and its integration into the value chain, which is essential for effectively upskilling RMG workers, especially women. Conducting such research would provide data-driven resources and recommendations, empowering workers with the skills needed to adapt and thrive in an increasingly automated industry."

Shams Zaman
Country Managing Partner of PricewaterhouseCoopers (PwC)

"The lack of an organized waste value chain in the RMG sector is a pressing issue. We currently face a transparency gap in tracking the waste generated, which hinders both environmental sustainability and market efficiency."

Shams Mahmud
Director of BGMEA, and Managing Director of Shasha Denims

"Despite significant sales, we have failed to reinvest in upgrading technology or upskilling our workforce. Access to finance remains the biggest barrier to making these critical improvements."

The event concluded with innovative showcases, highlighting organizations like ThreadBridge, Solvei8, and Shimmy Technologies. ThreadBridge presented a QC Glass that improves fault detection in RMG production, enhancing quality control with accurate, rapid insights and seamless integration. Solvei8 demonstrated Factory OS, a mobile solution offering real-time asset and maintenance monitoring to reduce production downtime, along with a modular MES system designed for comprehensive apparel manufacturing operations. Shimmy Technologies showcased industrial ed-tech, empowering workers to upskill and reskill efficiently, aligning with Industry 4.0 demands while boosting factory efficiency.

💡 Key Findings of Dialogue 04:

A comprehensive recommendations table has been created to summarize the primary insights from key policymakers and industry experts during the fourth event on automation. This table outlines strategies for integrating automation into the RMG sector's value chain while simultaneously fostering essential soft skills among workers, with a particular focus on supporting female workers.

Recommendations from Participants: Fourth Dialogue

Policymakers:

- Develop and implement more accurate and inclusive credit assessment mechanisms tailored to the needs of small-scale RMG factories.

- Collaborate with financial institutions to offer specialized loans or credit lines for automation investments.

- Standardize accounting practices for small-scale RMG factories to simplify financial reporting and enhance eligibility for SREUP financing.

- Creating collaborations among industry players to ensure better after-sales service from machinery manufacturers.

- Establish skills development programs, specifically designed to train workers and factory managers in automation-related technologies and processes.

Industry Leaders:

- Allocate a portion of production to high-value products for better future investments and increased competitiveness.

- Recruit graduates with expertise in new product areas to drive innovation and adaptability in production strategies.

- Optimize factory layouts and infrastructure to accommodate modern automation and eco-friendly equipment efficiently.

- Establish a comprehensive maintenance and support network for automated machinery to minimize production disruptions and reduce the need for standby operators.

- Foster a culture of innovation in Bangladesh's RMG sector, to strengthen collaboration between educational institutions and industry. This partnership would enable in-depth research on workforce upskilling and technology integration throughout the value chain. For instance, developing business cases for technology adoption and providing students with hands-on access to advanced technology and practical skills training would help bridge the skills gap, particularly in mid-level management roles within an automation-driven industry.

- Implement an incentivized skills development program within factories, coupled with retention strategies, to reduce turnover rates during festival holidays and encourage on-going investment in worker training.

Chapter

04

Future-Proofing the Apparel Sector for the Next Decade

Future-Proofing the Apparel Sector for the Next Decade

The industry is navigating a multifaceted landscape marked by challenges that shape both its current operations and future growth potential. Critical issues—including sustainability, circular economy practices, environmental impacts and decarbonization, advancing automation, and escalating production costs are all profoundly influencing Bangladesh's RMG sector.

Looking ahead, achieving a green and just transition should be the main goal, the sector must enhance **resource efficiency** by focusing on three key areas: (Energy, Water, and Waste) and keeping the uptake of energy-efficient technology at the core.
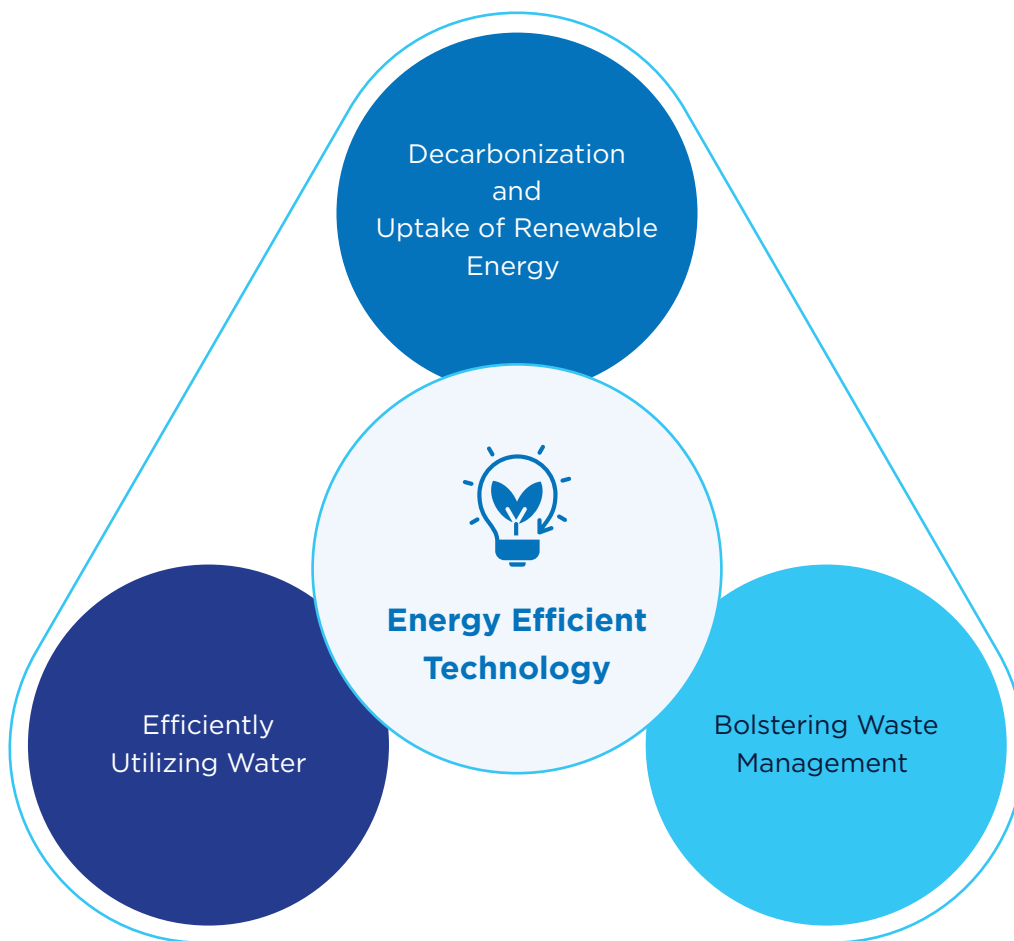

Figure 6: Imperatives for the Sustainable Apparel Sector Growth.

With that, the coming years will be challenging for Bangladesh's RMG sector as the country approaches its graduation from least developed country (LDC) status, set for November 2026.

RMG 2026 & Beyond:
Mapping Scenarios & Challenges for Bangladesh's RMG Sector

Highly Likely to Impact	Moderately Likely to Impact	Less Likely to Impact
Inefficient Infrastructure causing longer lead time	Political instability causing unrest	In the medium to long term, Bangladesh may risk losing its market share to competitors like India, Vietnam, and Turkey, which already hold significant market shares. The buyers may prefer shifting to these peer nations to avoid disruptions caused by longer lead times, high logistical costs, and political instability in Bangladesh.
Lack of bilateral agreements	Peer nations forming bilateral trade agreements	In the medium to long term, brands may increasingly shift toward nearshoring, relocating production closer to key markets. This transition could be driven by the demand for shorter lead times, reduced logistical costs, and a more resilient supply chain, achieved by minimizing transportation distances and lowering the carbon footprint.
Low skill level of workforce	Peer nations investing in automation	If Bangladesh's RMG sector is unable to achieve the anticipated green transition, it could face significant consequences, including a potential loss of market share and downward pressure on product pricing. These challenges may arise as global buyers increasingly prioritize environmentally sustainable suppliers, and competitors are able to meet green standards gain an edge in the market.

Duty-free and quota-free access till 2029	Automation in Bangladesh's RMG industry could threaten the employment opportunities if adequate skills development training is not provided	Bangladesh may need to negotiate with the U.S. to reinstate the Generalized System of Preferences (GSP), which would help enhance its competitive edge in the U.S. market amid the global rise in protectionist policies.
To comply with EU due diligence requirements, Bangladesh should focus on labor law reforms and enhancing labor rights compliance	The price of key RMG export items may rise, negating the competitive advantage	
EU green regulations require Bangladesh's RMG sector to incorporate circularity and decarbonization into its production processes	With Donald Trump winning the 2024 U.S. presidential election, Bangladesh's RMG sector may see both opportunities and challenges. Trump's aggressive tariff policies on Chinese imports, which he pursued during his previous term, could intensify, potentially leading to a shift in U.S. apparel sourcing from China to countries like Vietnam, and Bangladesh. This could boost Bangladesh's garment exports, benefiting from orders redirected away from China. However, Trump's stance on multilateral organizations like the WTO may create instability in global trade systems, which could impact Bangladesh as it prepares for its LDC graduation in 2026.	
Lack of diversification & higher concentration in cotton-based products and basic items, such as basic t-shirts, trousers among others		

Data discrepancies and lack of coordination among Bangladesh Bank, the Export Promotion Bureau (EPB), and the National Board of Revenue (NBR) led to double-counting and inflated export figures in the RMG sector. This overestimation, resulting from multiple agencies calculating export values, may require adjustments to economic indicators for an accurate representation of the apparel sector. However, there is a possibility that ongoing political instability, coupled with these recalculations and indicator reforms, could delay Bangladesh's graduation from LDC status as the economy may not yet be fully ready for the transition.

RMG 2026 & Beyond:
Mapping Scenarios & Challenges for Bangladesh's RMG Sector

Highly Likely to Happen	Moderately Likely to Happen	Less Likely to Happen
Bangladesh can diversify its export destinations by signing FTAs with non-traditional countries	High-intensity technology and skilled workforce to retain cost competitiveness	Implementation of advanced supply-chain management
Investment in modernizing infrastructure to ensure timely shipments		
Bangladesh can focus on strengthening labor reform laws to align with EU due diligence		
Bangladesh can invest in fiber-to-fiber recycling and energy-efficient technology to align with the EU Green deal		

As the EU remains a key buyer of Bangladesh's RMG exports, the country's upcoming LDC graduation in 2026 is crucial. Bangladesh currently enjoys duty-free access and other benefits that help keep production costs low, but post-graduation, it may lose these trade preferences, potentially raising garment prices. To remain competitive, Bangladesh should focus on enhancing resource efficiency and aim for a just transition by aligning with EU regulations.

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