

Sustainable Procurement and Its Implementation Challenges In Bangladesh

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A thesis submitted to the BRAC Institute of Governance and Development in partial fulfillment of the requirements for the degree of Masters in Procurement and Supply Chain Management (MPSM)

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Declaration

It is hereby declared that

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Approval

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Ethics Statement

This thesis adheres to ethical standards for research.

Informed consent was obtained from all participants. They were fully briefed on the nature of the study, assured of anonymity and confidentiality, and informed of their right to withdraw at any time. Identifying details have been removed from quotes and examples used in this thesis.

Care has been taken to ensure the accuracy and integrity of all data reported. Methods for data collection and analysis are outlined in detail to allow for scrutiny and reproducibility. Any potential conflicts of interest have been disclosed.

This thesis contains no plagiarism. All sources have been appropriately referenced and acknowledged. This thesis has not been submitted to any other institute or university for examination.

I declare this is a true and accurate account of the research performed.

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Abstract/Executive Summary

Sustainable procurement has evolved from "green" and "social" procurement to an integrated approach balancing environmental, social, and economic interests. This research examines the challenges of implementing sustainable procurement in Bangladesh, a developing nation pursuing economic growth and equity. Despite rising expectations for sustainable products and practices, developing a cohesive sustainability strategy remains difficult. Supply chain oversight and risk mitigation pose challenges in validating environmental claims and tracking social outcomes, although emerging legislation addresses issues like modern slavery. Global efforts promote integrating international standards into procurement, but fully incorporating sustainability components persists as an obstacle. Complex supply networks and consumption patterns also create hurdles. Sustainable public procurement in Bangladesh demands comprehensive integration of social, economic and environmental considerations. Leveraging purchasing power, incentivizing human rights standards, and establishing training frameworks become essential. Aligning supply chain strategies with citizens' needs is paramount, fostering a society valuing human dignity, social progress, and a rights-based future.

Keywords: Sustainable Procurement; Developing Nation; Social Equity; Supply Chain Oversight; International Standards; Human Rights Standards

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List of Acronyms

<i>ALT</i>	Abnormally Low Tender
<i>BC</i>	Budget Circular
<i>BCCSAP</i>	Bangladesh Climate Policies, Strategies and Action Plan
<i>BSTI</i>	Bangladesh Standards and Testing Institutions
<i>CFF</i>	Climate Fiscal Framework
<i>CPEIR</i>	Climate Public Expenditure Institutional Framework
<i>COP</i>	Cost of Product
<i>CPTU</i>	Central Procurement Technical Unit
<i>GPP</i>	Green Public Procurement
<i>SPP</i>	Sustainable Public Procurement
<i>IMED</i>	Implementation Monitoring and Evaluation Division
<i>ISO</i>	International Standard Organization
<i>KPIs</i>	Key Performance Indicators
<i>LCC</i>	Life Cycle Cost
<i>LCA</i>	Life cycle assessment
<i>MEAT</i>	Most Economically Advantageous Tender
<i>MTBF</i>	Mid Term Budgetary Framework
<i>PE</i>	Procuring Entity
<i>SDGs</i>	Sustainable Development Goals
<i>CCS</i>	Carbon Capture and Storage
<i>SMEs</i>	Small and Medium Enterprises
<i>TCO</i>	Total Cost of Ownership
<i>UNDP</i>	United Nations Development Program
<i>IFC</i>	International Finance Corporation
<i>ILO</i>	International Labor Organization
<i>WTO</i>	World Trade Organization
<i>SREDA</i>	Sustainable and Renewable Energy Development Authority
<i>NGOs</i>	Non-Governmental Organizations
<i>EIA</i>	Environmental Impact Assessment
<i>BECB</i>	Bangladesh Energy Conservation Board
<i>BNBC</i>	Bangladesh National Building Code
<i>ESG</i>	Environmental, Social, and Governance
<i>R&D</i>	Research and Development
<i>PCP</i>	Pre-Commercial Procurement
<i>PPP</i>	Public-Private Partnerships

Glossary

Term	Definition
Circular Economy	An economic system aimed at eliminating waste and the continual use of resources. Materials are reused, remanufactured, and recycled.
Closed-Loop Supply Chain	A supply chain where used products are collected, recovered, or recycled and used again in production. Minimal waste is created.
Corporate Social Responsibility (CSR)	Business practices involving initiatives that benefit society. CSR policies aim to align with societal values.
Cradle-to-Cradle	A biomimetic approach designing products for continual recovery and reuse. Materials are circulated in closed-loop cycles mimicking nature.
Eco-Labeling	Labels indicating environmental performance of a product, helping consumers make informed choices. Types include eco-seals, green stickers, and environmental report cards.
Life Cycle Analysis	Assessing environmental impacts associated with all stages of a product or service from cradle-to-grave.
Local Purchasing	Procuring goods and services within a local proximity to support nearby communities.
Modern Slavery	Umbrella term for human trafficking, forced labor, debt bondage, child labor and other exploitative work.
Sustainable Procurement	Integrating sustainability factors like human rights, environment, ethics, and local suppliers into an organization's procurement.
Traceability	The ability to identify and trace the history and origin of products, parts, and materials through supply chains. Enables transparency.
Upcycling	Reusing discarded products and materials to create something of higher value, quality, and environmental benefit.
Benefit Corporation	A certification for for-profit companies meeting social sustainability and environmental performance standards.
Conflict Minerals	Natural resources whose trade and exploitation help finance armed conflict and human rights abuses. Includes gold, tin, tungsten, and tantalum.
Ecolabelling	Voluntary labeling schemes indicating environmental performance of products and services based on lifecycle considerations.

Eco-Design	Designing products to minimize environmental impacts during all lifecycle stages while preserving function and aesthetics.
Ethical Sourcing	Ensuring human rights are respected throughout the supply chain during product manufacturing and resource extraction.
Green Public Procurement	Incorporating environmental criteria into public procurement processes of government authorities and agencies.
Product Stewardship	Actively managing health, safety, and environmental impacts of a product throughout its lifecycle from design to end-of-life.
Social Enterprise	Revenue-generating businesses with a core social or environmental mission driving their operations.
Supply Chain Transparency	Disclosing information related to the origin, movement, and conditions involved in producing goods to relevant stakeholders.
Sustainable Supply Chain	Supply chain management integrating ethical, social, and environmental considerations with economic interests.
Zero Waste	Minimizing waste generation through better product design, strict purchasing guidelines and improved manufacturing processes.

Chapter 1: Introduction

1.1 Introduction

1.1.1 Background and Context

In the contemporary landscape of global commerce, the notion of sustainable procurement has emerged as a pivotal force, encapsulating a multifaceted commitment to environmental responsibility, social equity, and economic viability. The genesis of sustainable procurement traces back to the aftermath of the Rio Earth Summit in 1992, where the introduction of "green procurement" policies laid the foundation for a transformative paradigm in procurement practices, primarily across Europe [1], [2]. This marked the inception of a broader movement toward "social procurement," emphasizing considerations beyond environmental impact and delving into social outcomes and goals [1], [2]. Sustainable procurement, as elucidated by a myriad of terms such as 'green procurement,' 'green supply,' 'green purchasing,' and 'social procurement,' distinguishes itself by adopting a holistic perspective that integrates environmental, social, and economic dimensions—often referred to as "people, planet, and profit" [2]. At its core, sustainable procurement is the strategic pursuit of sustainable development objectives through the intricate web of purchasing and supply processes [3]. This transcends mere transactional considerations, extending to the profound understanding that sustainable procurement is not solely about how goods and services are acquired but fundamentally about how they are supplied sustainably [4]. The international standard ISO 20400 defines sustainable procurement as a process that aligns purchasing decisions with an organization's needs while benefiting society at large and minimizing environmental impact (ISO 20400 Sustainable procurement). It mandates a comprehensive approach, ensuring that suppliers adhere to principles of decent working conditions, environmental sustainability, and addressing socio-economic issues like inequality and poverty. However, despite the global recognition of the imperative for sustainable procurement, the implementation of such practices presents formidable challenges, especially in the context of developing nations like Bangladesh. The complexity of supply networks, evolving societal consumption patterns, and the need for a consistent multidimensional sustainability strategy create hurdles in achieving a cohesive and impactful sustainable procurement system. This thesis embarks on a comprehensive exploration of the

dynamics surrounding sustainable procurement in the context of a developing nation. Bangladesh, with its transformative potential in public procurement, stands at a crucial juncture where the principles of the United Nations Guiding Principles (UNGP) and international labor standards intersect with its procurement regimes. By adopting a proactive approach, integrating human rights considerations, and establishing accessible grievance mechanisms, the government of Bangladesh can demonstrate its commitment to building a just and equitable society. The exploration extends beyond theoretical frameworks, delving into the industry-specific challenges faced by Bangladesh. As the government and industries signal intent to support sustainable products and services, navigating through the claims made by suppliers, ensuring compliance with internationally accepted labor standards, and adopting technologies for effective supply chain oversight become paramount. Moreover, the thesis aims to unravel the intricate interplay between sustainability dimensions—social, economic, and environmental—in public procurement. While progress has been made globally, achieving a harmonious integration of these dimensions remains a challenge. The thesis emphasizes the need for overcoming path dependencies, strengthening political will, and fostering a broader understanding of sustainability to usher in a transformative era in public procurement. In the context of Bangladesh, the thesis envisions the nation leveraging its substantial purchasing power to incentivize private sector entities, invest in comprehensive training for procurement officials, and align supply chain strategies with the principles of human rights. By infusing the United Nations Guiding Principles and incorporating local nuances, Bangladesh can shape a society where human dignity, social progress, and human rights form the bedrock of all endeavors. The journey toward sustainable public procurement is depicted as a continuous process for Bangladesh, requiring a meticulous examination of limitations, enhancements in implementation, and the pursuit of a balanced approach that encompasses economic, environmental, and social dimensions. The thesis aspires to contribute to this transformative discourse, envisioning a procurement landscape that propels Bangladesh towards a brighter, more equitable future.

1.1.2 The Decade for Education for Sustainable Development

In 2002, the United Nations General Assembly declared the years 2005–2014 as the Decade for Education for Sustainable Development, emphasizing the fundamental role of education in sustainable development approaches. This led to a profound declaration of the Sustainable Development Goals (SDGs) in September 2015, aiming for a comprehensive achievement of sustainable development.

1.1.3 The Relationship Between SDGs and Sustainable Procurement

Sustainable Procurement aligns closely with the broader objectives of the SDGs. It involves integrating sustainability considerations throughout the procurement process, encompassing the selection and purchase of goods and services. This practice makes environmentally and socially responsible choices from the initial planning and sourcing stages to contract management and supplier relationships. Recognizing sustainable procurement as a crucial pillar for sustainable development, its efficient implementation is essential for achieving the SDGs.

1.1.4 Definition of Sustainable Procurement

The concept of sustainability revolves around three pillars: economic, environmental, and social. Sustainable Procurement, as per ISO 20400, is defined as procurement that has the most positive environmental, social, and economic impacts on a whole-life basis. In essence, organizations practicing sustainable procurement leverage their purchasing power to support suppliers and products that generate positive outcomes for the planet and its inhabitants. This triangular approach embodies economic, environmental, and social pillars, forming the foundation of sustainable procurement.

1.2 Problem Statement

Sustainable procurement is important, but sometimes, it's not easy for organizations to do it right. They face challenges in making sure they buy things in a way that helps the environment and society. Even though people want to do good things, there's a gap between what they want to do and what they can do.

In this study, we want to figure out what makes sustainable procurement hard. We will look at the problems and try to find ways to make it better. By doing this, we hope to help organizations do a better job in buying things that are good for everyone and the planet.

1.3 Objectives of the Study

1.3.1 General Objective

To understand and improve how organizations can buy things in a way that is good for the environment and society.

1.3.2 Specific Objectives

1. To identify the challenges organizations, face in practicing sustainable procurement.

2. To explore ways to help organizations overcome these challenges in sustainable procurement.
3. To provide practical recommendations for organizations to enhance their sustainable procurement practices.

1.4 Significance of the Study

This study is important for a few simple reasons:

1. **Helps Organizations Do Better:** By figuring out how organizations can buy things in a way that's good for the environment and people, we can help them do better and make smarter choices.
2. **Makes the World Better:** If organizations start buying things more responsibly, it can have a positive impact on the world. It can help protect the environment and make sure people are treated fairly.
3. **Guides People:** The study can guide organizations on the right path. It's like giving them a map to navigate through the challenges of buying things responsibly.
4. **Encourages Positive Change:** If we show organizations how they can change for the better, it encourages a ripple effect. Other companies might see the positive changes and decide to do the same, creating a more responsible and caring business world.

1.5 Scope and Limitations

1.5.1 Scopes

This study will investigate a few things:

- **How Organizations Buy Things:** We will explore how companies buy stuff and whether they can do it in a way that's good for everyone.
- **Helping Companies:** The study aims to help companies understand how they can buy things more responsibly, which is good for the planet and the people.
- **Making Things Better:** By understanding sustainable procurement, we hope to make things better for everyone - from the companies buying products to the people making those products.

1.5.2 Limitations

But there are some things we won't be able to do:

- **Not Solving Everything:** While we want to help, this study won't solve all the problems. It's like we're shining a light on a small part of a big puzzle.

- **Can't Change Everything Quickly:** Even if we find great solutions, change takes time. Companies might need time to adjust and make more responsible choices.
- **Not Everyone Might Listen:** Even if we have good ideas, not all companies might listen and change their ways. It's a bit like giving advice – not everyone takes it.

Chapter 2: Literature Review

2.1 Sustainability Concepts

Sustainability, as a comprehensive concept, encompasses environmental, economic, and social dimensions, striving for the well-being of present and future generations. In the specific context of sustainable procurement, these three pillars play a pivotal role in shaping responsible and ethical practices.[5] Environmental sustainability in Bangladesh involves concerted efforts to preserve natural resources, mitigate climate-related risks, and address the challenges posed by frequent natural disasters.[6] Initiatives include promoting renewable energy, efficient water management, afforestation, waste management, and pollution reduction. Economic sustainability aligns with Bangladesh's progress, emphasizing inclusive growth policies that create jobs, reduce income inequality, and enhance access to education and healthcare for the benefit of all segments of society. Social sustainability, particularly crucial in a densely populated country like Bangladesh, focuses on ensuring universal access to fundamental services such as education, healthcare, and sanitation. Additionally, addressing issues like child labor and promoting gender equality are integral components of social sustainability.[6] In the realm of sustainable procurement, the integration of sustainability criteria becomes paramount. This approach entails considering not only the cost and quality of goods and services but also evaluating their environmental and social impacts throughout their lifecycle. Such integration is fundamental for fostering environmentally and socially responsible practices in both public and private sector procurement.[7] Furthermore, transparency and reporting form the bedrock of sustainable practices.[8] Transparency involves openly sharing information related to environmental, social, and economic performance, while structured reporting facilitates accountability, progress tracking, stakeholder engagement, and informed decision-making in the context of sustainability efforts in Bangladesh.[9], [10]

2.2 Environmental Consideration

Environmental considerations within the realm of sustainability involve the deliberate and comprehensive integration of environmental factors throughout the procurement processes, aiming to minimize adverse impacts on the environment and advocate for sustainable practices.[11] This entails the adoption of environmentally responsible procurement

strategies, the careful selection of suppliers with robust environmental performance, and the insistence on the use of sustainable products and services. Key components of this approach include Environmental Criteria, Supplier Assessment, Life Cycle Assessment, Green Products and Services, Waste Management, and Environmental Collaboration. The environmental pillar of sustainability encompasses a broad spectrum of aspects, including but not limited to environmental resource management, urban planning, CO₂ reduction strategies, the promotion of alternative energies such as solar and wind power, effective water management practices, sustainable agriculture initiatives, responsible marine resources management, protection of ecosystems, and strategic measures for pollution and waste management.[12] By addressing these facets, organizations can contribute significantly to fostering a procurement environment that prioritizes environmental sustainability and actively engages in practices that safeguard the planet's well-being.

2.2.1 Environmental Resource Management

Environmental Resource Management is the conscientious and efficient utilization of natural resources to meet current needs while ensuring their availability for future generations. Embedded within sustainable development, the Environmental Pillar serves as the guiding force for implementing sustainable practices in resource management.[13]

In the context of sustainable procurement, various key factors are considered. Conservation and Preservation involve the management of natural resources such as air, water, land, forests, biodiversity, and ecosystems to maintain their integrity and resilience over the long term. Resource Efficiency is promoted to minimize waste, reduce consumption, and optimize resource use through cleaner production processes, energy efficiency, and reducing environmental footprints.[7], [14]

Ecosystem Management recognizes the interconnectedness of ecosystems, emphasizing holistic management, biodiversity conservation, sustainable land use, and considering human impacts on natural habitats. Pollution Prevention aims to prevent pollution and minimize environmental degradation by reducing emissions, controlling waste disposal, and promoting cleaner technologies and sustainable waste management.[15]

Environmental Impact Assessment is essential for evaluating and mitigating potential environmental impacts of projects, policies, and practices, enabling informed decision-

making and sustainable alternatives.[16] Stakeholder Engagement involves engaging local communities, indigenous groups, NGOs, and businesses in decision-making, encouraging participatory approaches, consensus-building, and diverse perspectives.[17] Long-Term Planning and Policy Development require the formulation of long-term policies integrating environmental considerations, promoting sustainable practices, providing incentives, and establishing monitoring and enforcement mechanisms.[18]

2.2.2 Urban Planning

Urban planning is the process of integrating environmental considerations and practices into the development of cities and urban areas. The Environmental Pillar of sustainability plays a crucial role in guiding sustainable urban planning, addressing environmental challenges, promoting resource efficiency, and fostering the creation of environmentally friendly and resilient cities. When examining urban planning through the lens of sustainable procurement, several key factors should be considered.[19]

Efficient Land Use is a priority, emphasizing compact and mixed-use development patterns to minimize urban sprawl, preserve natural habitats, and reduce the need for long-distance commuting. Green Infrastructure involves integrating elements such as parks, green spaces, urban forests, and green roofs to mitigate urban heat island effects, enhance air and water quality, and provide recreational opportunities.[20]

Sustainable Transportation is crucial, promoting accessible public transportation systems, pedestrian-friendly infrastructure, and cycling networks to decrease reliance on private vehicles, alleviate traffic congestion, and lower carbon emissions. Energy Efficiency is addressed by incorporating energy-efficient design principles into buildings and infrastructure, including the use of energy-efficient technologies, renewable energy sources, and conservation measures.[21], [22]

Waste Management is a key consideration, involving the implementation of efficient waste management practices such as recycling programs, waste reduction, and innovative waste management technologies to minimize environmental impact and conserve resources. Climate Change Adaptation is vital, addressing climate change challenges by considering climate projections and implementing strategies to enhance urban resilience, including floodplain management, green infrastructure, and the protection of natural buffers.[23]

Lastly, Environmental Justice is incorporated, ensuring the equitable distribution of environmental benefits and burdens. This involves considering the social and environmental impacts of planning decisions on marginalized communities and addressing disparities to promote equal access to clean air, water, green spaces, and other environmental amenities.

2.2.3 CO₂ Reduction

CO₂ reduction involves the implementation of strategies and practices aimed at minimizing carbon dioxide (CO₂) emissions to mitigate climate change and foster environmental sustainability. The Environmental Pillar of sustainability plays a vital role in addressing CO₂ reduction by emphasizing the need to reduce greenhouse gas emissions and transition to low-carbon or carbon-neutral alternatives.[5], [24]

Promoting the use of renewable energy sources, including solar, wind, hydroelectric, geothermal, and biomass, is crucial for CO₂ reduction. Sustainable practices involve transitioning from fossil fuel-based energy systems to renewable energy technologies, reducing reliance on carbon-intensive sources and minimizing CO₂ emissions from electricity generation.Ç(Kabeyi & Olanrewaju, 2022)

Enhancing energy efficiency across sectors like buildings, transportation, and industrial processes is integral to sustainable CO₂ reduction. Measures such as improved insulation, efficient appliances, energy management systems, fuel-efficient vehicles, and optimized production processes lower overall energy demand, resulting in reduced CO₂ emissions.

Addressing CO₂ emissions in the transportation sector is a significant aspect of sustainability. Encouraging low-emission vehicles, supporting public transportation, promoting cycling and walking infrastructure, and implementing carpooling or ridesharing programs effectively reduce CO₂ emissions and promote sustainable mobility.

Adopting circular economy principles, focused on minimizing waste and maximizing resource efficiency, contributes to CO₂ reduction. This involves reducing virgin material consumption, promoting recycling and reuse practices, and implementing sustainable waste management strategies to minimize greenhouse gas emissions.

Forests play a crucial role in carbon sequestration. Sustainable CO₂ reduction involves protecting existing forests from deforestation and implementing reforestation initiatives.

These actions enhance carbon sinks, promote biodiversity, and contribute to overall climate resilience.

CO₂ reduction strategies may include carbon offsetting and carbon capture and storage (CCS) technologies. Carbon offsetting compensates for emissions by investing in projects that reduce or remove greenhouse gases elsewhere. CCS captures CO₂ emissions, preventing their release into the atmosphere.

Effective policies and regulations are crucial for driving CO₂ reduction efforts. Governments can implement measures such as carbon pricing, emission standards, renewable energy targets, and incentives to create a supportive environment for adopting sustainable practices and technologies, ultimately reducing CO₂ emissions.

2.2.4 Sustainability in Alternative Energies

Sustainability in alternative energies, particularly solar and wind power, revolves around promoting the use of renewable energy sources to reduce reliance on fossil fuels, lower greenhouse gas emissions, and minimize environmental impacts. Central to this approach is the widespread deployment and expansion of solar and wind energy infrastructure, encouraging the development of solar photovoltaic (PV) systems, wind farms, and other renewable energy installations. The scale-up of renewable energy deployment is a key driver for environmental sustainability, replacing conventional fossil fuel-based electricity generation and thereby reducing greenhouse gas emissions.[25]

Emphasizing the advantages of decentralized energy systems, sustainable practices empower local communities to generate their renewable energy. This involves supporting the installation of solar panels and wind turbines on various buildings and promoting community-owned renewable energy projects. Decentralized energy systems enhance sustainability by increasing energy independence, reducing transmission losses, and fostering local economic development.

Sustainability is further advanced through the integration of solar and wind power into existing energy grids and the optimization of their use via smart energy management systems. This involves implementing advanced grid technologies, energy storage solutions, and

demand-response mechanisms to ensure the efficient utilization of renewable energy resources, enhancing grid stability, and improving reliability.[26]

In conjunction with alternative energies, sustainable approaches underscore the importance of energy efficiency and conservation. This encompasses implementing energy-efficient practices in buildings, industries, and transportation, along with promoting energy-saving behaviors and technologies. The combination of alternative energies with energy efficiency measures contributes to environmental sustainability by reducing overall energy consumption and associated greenhouse gas emissions.

A crucial aspect of sustainable efforts in alternative energies involves conducting life cycle assessments to identify and minimize environmental impacts. This comprehensive approach considers the environmental footprint of renewable energy technologies from raw material extraction to disposal and implements measures to mitigate potential environmental concerns. Addressing environmental impacts throughout the life cycle ensures that the overall benefits of alternative energies outweigh potential drawbacks.[27]

Supporting research and development in the field of alternative energies is integral to sustainable practices. This includes investing in research, fostering collaboration between academia and industry, and providing financial incentives for technological advancements. Research and development contribute to sustainability by driving continuous improvements in renewable energy technologies and expanding their application potential.

Lastly, sustainable practices encompass the implementation of supportive policies and regulatory frameworks that incentivize the adoption of alternative energies. This involves establishing feed-in tariffs, tax incentives, renewable portfolio standards, and removing barriers to entry for renewable energy projects. Policy and regulatory frameworks play a crucial role in fostering sustainability, creating favorable conditions for the growth of the alternative energy sector, and facilitating the transition to a low-carbon economy.

2.2.5 Water Management

Ensuring the sustainable management of water involves promoting responsible use, conservation, and protection of water resources for the well-being of present and future generations. Key considerations for promoting sustainability in water management

encompass a range of practices. Prioritizing water conservation and efficiency involves implementing technologies across agriculture, industry, and households to minimize wastage and optimize water use. This contributes to environmental sustainability by reducing water stress, preserving ecosystems, and maintaining water availability for various uses.[28], [29]

Holistic watershed management is another critical aspect, encompassing measures to protect and restore the health of watersheds. This involves preventing erosion, conserving wetlands and forests, and reducing pollution, all of which contribute to environmental sustainability by ensuring the integrity and resilience of ecosystems, preserving water quality, and supporting biodiversity.[30]

In sustainable agriculture, the emphasis is on promoting water-efficient irrigation techniques, precision farming methods, and eco-friendly approaches. Practices such as drip irrigation and crop rotation aid environmental sustainability by reducing water demand, preserving soil health, and minimizing the impact of agricultural activities on water resources.

Efforts to prevent water pollution and implement effective wastewater treatment, backed by stringent regulations, eco-friendly practices, and infrastructure investment, contribute significantly to environmental sustainability. This not only protects aquatic ecosystems but also safeguards public health and preserves water quality for various uses.

Advocating for integrated water resource management is crucial, emphasizing the interconnectedness of water resources, ecosystems, and human needs. This approach involves basin-wide strategies, stakeholder engagement, and collaboration among sectors to ensure equitable water allocation, address competing water demands, and foster long-term water security.

In addressing the challenges posed by climate change in water management, sustainable practices include strategies like water storage, rainwater harvesting, and promoting drought-resistant crops. These initiatives contribute to environmental sustainability by building resilience, reducing vulnerability, and ensuring water availability in the face of changing climatic conditions.

Sustainable efforts also focus on raising awareness and promoting education on water conservation, protection, and responsible water use. This includes educating communities

about the value of water, teaching water-saving behaviors, and engaging in outreach programs to promote sustainable water management practices. Education and awareness efforts contribute to sustainability by empowering individuals, fostering a sense of stewardship, and promoting behavioral changes that support sustainable water management.

2.2.8 Protection of Ecosystems

Ensuring sustainability in the protection of ecosystems within the environmental pillar is centered on the preservation and conservation of natural ecosystems, sustaining biodiversity, ecological functions, and long-term viability. Key considerations for fostering sustainability in the protection of ecosystems encompass various facets.[31]

Sustainable practices prioritize biodiversity conservation through the protection and preservation of ecosystems, species, and genetic diversity. Establishing and managing protected areas, national parks, and nature reserves serve as sanctuaries for wildlife. Measures to prevent habitat destruction, invasive species introduction, and overexploitation contribute to environmental sustainability by maintaining ecosystem resilience and supporting intrinsic natural value.[32]

Sustainable approaches focus on protecting and restoring critical habitats like forests, wetlands, and coral reefs. Preventing deforestation, land degradation, and habitat fragmentation are paramount. Restoration efforts through reforestation and ecological rehabilitation contribute to sustainability by preserving ecosystem integrity, supporting wildlife populations, and mitigating climate change impacts.

Promoting sustainable land use planning involves considering ecosystem conservation and protection. Identifying ecologically significant areas, prioritizing intact ecosystems, and implementing measures to prevent encroachment into sensitive zones are key. Principles like land zoning, buffer zones, and ecological corridors maintain habitat connectivity, reducing fragmentation.

Sustainable approaches aim to prevent pollution and degradation of ecosystems. Controlling water, air, and soil pollution from industrial activities, agriculture, and urban development is crucial. Reducing the use of harmful chemicals and adopting eco-friendly technologies help maintain ecosystem health and protect water resources.

Sustainable efforts address climate change impacts on ecosystems, implementing adaptation strategies. Identifying climate-resilient ecosystems, reducing vulnerability, and supporting species migration in response to climate change are integral. Incorporating climate change considerations into ecosystem management plans ensures sustainability.

Sustainable practices involve ecosystem restoration and rewilding initiatives. This includes restoring degraded ecosystems through reforestation, habitat rehabilitation, and native species reintroduction. Rewilding focuses on restoring ecological processes, promoting recovery, and enhancing ecosystem resilience.

Sustainable approaches emphasize education and awareness about the importance of ecosystem protection and conservation. Raising public awareness, providing environmental education, and engaging local communities foster stewardship. Education and awareness contribute to sustainability by promoting behavior change and empowering individuals and communities in ecosystem protection.

2.2.9 Pollution and Waste Management

Pollution and waste management encompass adopting practices and strategies that mitigate pollution, minimize waste, and optimize resource usage. The Environmental Pillar of sustainability serves as a guiding force in steering sustainable approaches to pollution control and waste management, safeguarding the environment and human health. When delving into the Environmental Pillar of sustainability in pollution and waste management, several key aspects unfold.[5], [33]

Sustainable pollution management centers on thwarting pollution at its source. This involves measures to minimize or eliminate the release of harmful substances into the environment. Practices include embracing cleaner production technologies, implementing pollution control measures, and advocating for the use of non-toxic or less toxic alternatives.

Sustainable waste management prioritizes waste reduction and recycling, aiming to curtail the volume of waste generated and its environmental impact. Initiatives may include waste reduction programs, promoting recycling and composting, endorsing the use of recycled materials, and embracing circular economy principles to close the waste loop.

Sustainable approaches to hazardous waste management focus on the safe handling, storage, and disposal of hazardous materials. This entails proper labeling, containment, and treatment procedures to minimize risks. Practices also concentrate on reducing hazardous waste generation through process optimization and the use of less harmful alternatives.

Sustainable pollution and waste management champion resource efficiency by optimizing raw material use and minimizing waste throughout the production and consumption cycle. This involves efficient production processes, eco-design principles adoption, and the promotion of material reuse and recycling, all contributing to resource conservation and reduced environmental impacts.

Sustainable pollution management encompasses controlling emissions from diverse sources like industrial facilities, vehicles, and energy generation. Strategies involve implementing emission control technologies, championing energy efficiency, and transitioning to cleaner energy sources to curtail air and water pollution and diminish greenhouse gas emissions.

Sustainable pollution and waste management entail establishing robust monitoring systems to assess environmental quality and ensure compliance with regulations and standards. Monitoring programs identify pollution sources, track progress in pollution reduction, and facilitate early intervention and corrective measures when needed.

Sustainable approaches to pollution and waste management engage and educate stakeholders, including communities, businesses, and government entities. This encompasses raising awareness about pollution prevention, waste reduction, and responsible waste disposal practices. Stakeholder involvement cultivates a sense of collective responsibility, fostering the adoption of sustainable behaviors and practices.

2.3 Social Consideration

Social consideration in the context of sustainable procurement involves the comprehensive integration and promotion of social factors throughout the procurement process. This approach is dedicated to ensuring fair and ethical practices, fostering social equity, and generating positive social impacts within supply chains and communities. Aligned with the

Social Pillar of sustainability, this framework places a crucial emphasis on social well-being, human rights, labor standards, and community engagement within the realm of sustainable procurement practices.[7] Key aspects within the social pillar that are strictly considered during sustainable procurement include human rights, access to clean drinking water, guidance on food security, fair pay, and adherence to labor law protections. Additionally, the framework addresses issues such as anti-child labor and forced labor laws, fair trade practices, health and safety standards, child mortality, maternal health, and the promotion of healthy lives and well-being for all. Furthermore, gender equality, coupled with the pursuit of universal education, stands as a fundamental component in the social considerations integral to sustainable procurement.[34]

2.3.1 Human Rights

In the realm of sustainable procurement, the consideration of human rights forms a cornerstone, acknowledging the intricate link between social well-being and the enduring sustainability of fundamental rights. Human rights, encompassing civil, political, economic, social, and cultural dimensions, stand as inherent entitlements for all individuals, irrespective of their background. [35] To ensure the sustainability of human rights within the social pillar, key considerations include eliminating discrimination and promoting equality, addressing issues like gender inequality and racial discrimination. Social justice and access to essential services, such as healthcare, education, housing, and clean water, are pivotal, emphasizing their availability without discrimination.[36] The promotion of decent work, fair labor practices, and upholding workers' rights, including freedom of association, contributes to social sustainability. Sustainable procurement prioritizes ethical sourcing practices, diversity, and inclusion, engaging with suppliers from women-owned, minority-owned, or disadvantaged backgrounds. Establishing a supplier code of conduct covering labor and human rights, environmental responsibility, and ethical business practices is a common practice. Community engagement, ethical sourcing, fair trade, supply chain transparency, and supplier capacity building are integral components, collectively enhancing the social sustainability of the supply chain and fostering long-term development.

2.3.4 Fair Pay and Labor Law Protection

Sustainability in fair pay and labor law protections is centered on ensuring that workers receive fair compensation, have decent working conditions, and are protected by labor laws.

Key considerations for achieving this sustainability include providing living wages that meet basic needs, promoting dignity, reducing poverty, and supporting overall well-being.[37] Sustainable fair pay also involves eliminating wage gaps, ensuring equal pay for work of equal value without discrimination, and promoting pay transparency to enhance equality, diversity, and inclusion in the workplace. Upholding workers' rights, ensuring decent working conditions, and prohibiting forced and child labor are crucial aspects of sustainable labor law protections, contributing to social sustainability by safeguarding well-being and dignity.[38] Considerations for work-life balance, including reasonable working hours and flexible arrangements, contribute to individuals' quality of life, mental health, and overall satisfaction. Fostering social dialogue, worker participation, and inclusive decision-making processes enhance democratic practices, shared responsibility, and social sustainability. Additionally, ensuring fair pay and labor protections across supply chains, coupled with capacity building and education initiatives, addresses exploitation, forced labor, and human rights abuses, promoting social sustainability through knowledge and empowerment.

2.3.5 Anti-Child Labor and Forced Labor Laws

Sustainability in anti-child labor and forced labor laws revolves around preventing and eliminating these practices, ensuring worker protection and well-being, and promoting fair and ethical employment. Key considerations involve establishing robust legal frameworks with clear prohibitions, setting minimum age requirements, and enforcing penalties for violators. Raising awareness about the negative impacts of child and forced labor, particularly through education in at-risk communities, is crucial. Social protection measures, including access to education, healthcare, and support services, address root causes, while supply chain transparency and due diligence by businesses help identify and mitigate risks.[39] Multi-stakeholder collaboration among governments, civil society, businesses, and international bodies facilitates knowledge exchange and collective strategies. Ethical consumerism, supporting companies with ethical labor standards, plays a vital role in promoting sustainable practices, contributing to the eradication of child and forced labor through responsible purchasing decisions.

2.3.6 Fair Trade

Sustainability in Fair Trade is centered on promoting equitable trading practices, supporting producers in developing countries, and ensuring social justice throughout the supply chain.

Key considerations include securing fair prices and income for producers, empowering and capacitating marginalized producers, and ensuring safe and dignified working conditions.[40] Gender equality and women's empowerment are prioritized, addressing disparities and fostering inclusivity. Fair Trade initiatives invest in community development projects to improve social infrastructure and contribute to long-term development. Transparency and traceability throughout the supply chain are emphasized, promoting accountability and consumer trust. Consumer awareness and education about Fair Trade principles play a crucial role in encouraging responsible consumption. By integrating these considerations, Fair Trade contributes to sustainable trade practices that prioritize social justice, empowerment, and equitable economic development, fostering inclusive and ethical trading relationships worldwide.

2.3.7 Health and Safety

Sustainability in health and safety revolves around promoting well-being, safety, and equitable healthcare access. Key considerations include ensuring access to affordable, quality healthcare, addressing disparities, and promoting universal health coverage. Prioritizing safe working environments through occupational health and safety standards, training, and protective measures contributes to social sustainability by preventing accidents and work-related illnesses.[41], [42] Proactive disease prevention measures, such as vaccination programs and public health campaigns, enhance social sustainability by reducing the burden of illness. Addressing mental health and well-being, establishing emergency preparedness, and responding effectively to emergencies contribute to social sustainability by fostering resilience and protecting communities. Consideration of social determinants of health, promotion of health equity, and fostering collaboration among stakeholders further enhance social sustainability by ensuring equal opportunities for good health.

2.3.10 Gender Equality, Including Universal Education

Sustainability in gender equality, including universal education, within the realm of social sustainability involves a holistic approach to promoting equal rights, opportunities, and access to education for all individuals, irrespective of gender.[43] Prioritizing gender-responsive education entails addressing the specific needs and challenges faced by girls and boys, ensuring equal access to quality education, and combating gender stereotypes in curricula. Efforts to eliminate gender disparities focus on providing equal educational access,

addressing barriers such as poverty and cultural norms. Recognizing the pivotal role of girls' education, sustainable practices aim to empower girls by promoting enrollment, retention, and completion, thereby breaking cycles of poverty and fostering positive community change. Encouraging women's participation in leadership roles and decision-making processes within educational institutions contributes to social sustainability by promoting diverse perspectives and challenging gender norms. Integrating gender-responsive teaching and learning strategies challenges stereotypes and prepares students for gender-equal societies. Creating safe, inclusive, and gender-sensitive learning environments involve addressing gender-based violence, discrimination, and fostering a culture of respect. Collaboration among governments, educational institutions, civil society organizations, and communities is crucial for fostering collective action, mobilizing resources, and driving systemic change to advance gender equality and universal education, contributing to social sustainability.

2.4 Economic Considerations

The economic considerations in sustainable procurement extend beyond environmental and social factors, emphasizing financial aspects.[7], [44] This pillar aims to deliver value for money while fostering long-term economic sustainability. Organizations focus on evaluating the total cost of ownership throughout a product or service's life cycle, incorporating initial purchase price, operating costs, maintenance expenses, and end-of-life management. Mitigating risks related to supplier stability, reputational damage, and supply chain disruptions is integral. Supporting local economies, promoting transparency, and engaging in fair trade practices are key components. Sustainable procurement practices under the economic pillar encompass economic regeneration, sustainable development, engagement with emerging markets, development of SMEs, total cost of ownership and life cycle costing, value for money, and contributions to poverty reduction. Integration of these practices enables organizations to advance economic sustainability while addressing environmental and social concerns.

2.4.1 Economic Regeneration

In the realm of the economic pillar of sustainable procurement, sustainability in economic regeneration encompasses principles and practices geared towards rejuvenating economies in an environmentally and socially responsible manner. The focus is on fostering economic growth and development while ensuring long-term viability, resilience, and equitable benefits for communities and future generations. Key aspects include the promotion of green and inclusive economic growth by supporting industries aligned with a low-carbon economy, such as renewable energy and sustainable agriculture.[45] Circular economy principles, emphasizing waste reduction and resource efficiency, are integrated into regeneration efforts. Local sourcing and supply chain resilience are prioritized to strengthen local economies, create jobs, and reduce environmental impacts. Social value and community benefits are considered through fair employment practices and support for disadvantaged communities. Additionally, the emphasis on long-term economic resilience involves diversifying economies and investing in innovation to prepare for future challenges. In summary, sustainability in economic regeneration within the economic pillar involves a holistic approach that integrates green growth, circular economy practices, local resilience, social value, and long-term economic planning. This ensures that regeneration initiatives contribute to the creation of sustainable and resilient economies.

2.4.2 Sustainable Economic Development

Sustainable economic development, situated within the economic pillar of sustainable procurement, revolves around principles and practices geared towards fostering economic growth while minimizing adverse environmental impacts and promoting social well-being. This approach emphasizes the creation of economic systems that are environmentally sustainable, socially inclusive, and economically resilient.[46] Environmental stewardship is a key consideration, advocating for resource conservation, reduced emissions, energy efficiency, and environmentally friendly practices in procurement decisions. Social inclusion and equity are prioritized by creating opportunities for diverse societal participation, ensuring fair employment practices, and supporting vulnerable groups. The focus extends to building resilient infrastructure and systems that can withstand economic shocks and environmental challenges, integrating innovative technologies to drive sustainable growth, and ensuring the long-term viability of development initiatives by balancing short-term gains with

sustainability considerations. Sustainable procurement practices play a pivotal role in actualizing these principles by favoring suppliers that align with ethical and sustainable business practices. In essence, sustainable economic development within the economic pillar of sustainable procurement underscores the integration of environmental responsibility, social inclusivity, resilience, innovation, and long-term economic viability into economic growth strategies.

2.4.3 Emerging Markets

Emerging markets, situated within the economic pillar of sustainable procurement, embody principles and practices dedicated to fostering sustainable economic development in regions undergoing rapid growth and transformation. This approach acknowledges the distinctive challenges and opportunities in emerging market contexts, emphasizing the need to harmonize economic growth with environmental preservation and social well-being. Sustainability in emerging markets encompasses environmental conservation, tackling challenges associated with swift industrialization and urbanization, and promoting sustainable practices in sectors like energy, transportation, agriculture, and waste management.[44], [47] Through sustainable procurement, organizations can contribute to environmental conservation by prioritizing suppliers compliant with environmental regulations and committed to resource efficiency. Social inclusivity and equitable growth are paramount, ensuring that economic development benefits all societal segments, including marginalized communities. Sustainable procurement practices further this inclusivity by favoring suppliers upholding fair labor standards, diversity, inclusion, and supporting local community development. Capacity building and knowledge transfer are integral, involving training local stakeholders and facilitating collaboration between businesses, government agencies, and civil society organizations. In terms of infrastructure, sustainability calls for resilient systems capable of withstanding environmental and economic shocks, advocating for adaptable, resource-efficient, and environmentally friendly investments. Sustainable procurement supports this by selecting suppliers offering durable, energy-efficient products aligned with climate change considerations. Additionally, ethical business practices are promoted, addressing corruption, advocating transparency, and ensuring adherence to international standards. Sustainable procurement reinforces ethical business practices by selecting suppliers that exemplify integrity, responsible supply chain management, and corporate citizenship. In essence, the economic pillar of sustainable procurement in emerging markets

encapsulates environmental conservation, social inclusivity, capacity building, resilient infrastructure, and ethical business practices. Integration of these principles into procurement decisions aids in fostering sustainable economic development, contributing to the long-term prosperity and well-being of emerging market regions.

2.4.4 Development of SMEs

Development of Small and Medium Enterprises (SMEs) within the economic pillar of sustainable procurement centers on principles and practices aimed at fostering the growth and success of SMEs while ensuring their operations align with environmental and social sustainability. Recognizing SMEs as pivotal drivers of economic development, sustainability in SME development emphasizes the importance of supporting their long-term viability and contribution to sustainable economies.[48] This involves promoting environmentally sustainable practices, such as resource efficiency, waste reduction, and energy conservation, among SMEs. Sustainable procurement practices contribute by favoring suppliers that provide sustainable products and demonstrate responsible environmental practices. Additionally, social inclusivity and fair employment practices are paramount, advocating for diversity, equal opportunities, fair wages, and a safe work environment within SMEs. Sustainable procurement practices support social inclusivity by favoring SMEs that uphold responsible labor practices. Access to finance and capacity building are recognized as crucial aspects, involving support for SMEs in accessing sustainable financing, training, and skill development. Sustainable procurement practices enhance SME capacity by fostering partnerships and collaboration that facilitate sustainability requirements and practices. Responsible supply chain management is encouraged, urging SMEs to assess and manage their environmental and social impacts throughout supply chains. Sustainable procurement practices support SMEs by promoting transparency, responsible sourcing, and adherence to ethical standards. Lastly, support for local economies is integral, emphasizing the role of SMEs in community development and employment generation. Sustainable procurement practices aid SMEs by prioritizing local suppliers, facilitating their inclusion in supply chains, and fostering opportunities for local economic development. Overall, sustainability in the development of SMEs, within the economic pillar of sustainable procurement, involves the integration of environmental sustainability, social inclusivity, access to finance, responsible supply chain management, and support for local economies, contributing to the growth and success of SMEs while advancing sustainable economic development.

2.4.5 Total Cost of Ownership and Life Cycle Costing

Total Cost of Ownership (TCO) and Life Cycle Costing (LCC) within the economic pillar of sustainable procurement underscore the importance of evaluating long-term economic factors associated with a product or service throughout its entire life cycle. This entails going beyond the upfront purchase price and considering costs and benefits over the entire span of the product or service. Sustainability in TCO and LCC emphasizes achieving the best value for money, encompassing operating costs, maintenance expenses, disposal costs, and potential savings related to energy efficiency or reduced environmental impact.[49], [50] By conducting thorough analyses, organizations can identify sustainable options that offer cost-effective solutions and deliver enduring value. Environmental impact assessment is integral, involving the evaluation of factors such as energy consumption, greenhouse gas emissions, resource depletion, waste generation, and pollution. This comprehensive analysis aids organizations in making sustainable procurement decisions that minimize negative environmental effects. Social considerations are also incorporated, encompassing assessments of worker health and safety, labor conditions, community well-being, and human rights throughout the life cycle of a product or service. This ensures support for suppliers adhering to responsible business practices and fair labor standards. Durability and product/service life span are recognized as crucial factors, emphasizing the selection of products or services with longer life spans, less frequent replacement or maintenance requirements, and durable, recyclable materials. Prioritizing durability minimizes environmental impact and reduces costs associated with replacement and maintenance. Furthermore, sustainability in TCO and LCC encourages the adoption of innovative and sustainable technologies, products, and services. This involves considering emerging technologies that offer improved performance, increased energy efficiency, reduced environmental impact, and cost savings. By endorsing innovative solutions, organizations contribute to market transformation, stimulate sustainable innovation, and drive positive economic and environmental outcomes. In summary, sustainability in TCO and LCC, within the economic pillar of sustainable procurement, involves considerations of long-term cost-effectiveness, value for money, environmental impact, social aspects, durability, and innovation. Integrating these principles into analyses enables organizations to make sustainable procurement decisions aligned with economic goals while contributing to environmental and social sustainability.[51]

2.4.6 Value for Money

Value for money, within the economic pillar of sustainable procurement, encompasses the consideration of both long-term economic and non-economic factors in procurement decisions. This involves assessing the overall value and benefits derived from a product or service beyond the immediate purchase price. Sustainability in value for money incorporates key aspects to optimize economic, environmental, and social outcomes.[52], [53] Firstly, it involves considering the total cost of ownership (TCO) throughout the entire life cycle of a product or service, evaluating not only the initial purchase price but also ongoing costs like maintenance, energy consumption, disposal, and potential savings associated with energy efficiency or reduced environmental impact. Life cycle assessment (LCA) is integrated into the evaluation process, assessing the environmental impacts associated with the product or service throughout its life cycle. This ensures the selection of options that minimize negative environmental impacts and contribute to sustainable practices. Quality and performance are recognized as crucial factors, emphasizing the selection of products or services meeting required performance standards and boasting a longer lifespan, thereby reducing the need for frequent replacements and repairs. Social considerations are taken into account, evaluating impacts throughout the supply chain, such as fair labor practices, human rights, worker health and safety, and community well-being. This ensures support for suppliers practicing responsible business, promoting fair labor standards, and contributing positively to social sustainability. Finally, sustainability in value for money encourages the adoption of innovative and future-proof solutions by considering emerging technologies, trends, and advancements that offer improved performance, increased efficiency, and reduced environmental impact. By integrating these sustainability principles into value for money assessments, organizations can make informed procurement decisions that optimize economic benefits while considering environmental and social factors, thus contributing to a more sustainable approach to procurement.

2.4.7 Poverty Reduction

Poverty reduction, within the economic pillar of sustainable procurement, embodies principles and practices aimed at fostering economic growth and development while concurrently diminishing poverty and enhancing the well-being of marginalized and vulnerable populations. This approach prioritizes inclusive economic growth, advocating for

sectors and industries that create employment opportunities, generate income, and provide essential goods and services, particularly for those living in poverty. Organizations, through sustainable procurement decisions, can actively support suppliers and businesses that prioritize fair labor practices, decent work opportunities, and contribute to local economies. Additionally, sustainability in poverty reduction underscores the importance of capacity building and skill development, endorsing initiatives that offer training, education, and capacity-building opportunities for individuals and communities. By favoring suppliers investing in workforce development, skills transfer, and equitable employment opportunities, sustainable procurement practices contribute to poverty reduction.[54], [55] The strategy also encompasses supporting value chain development and facilitating market access for small-scale producers and entrepreneurs, emphasizing linkages between local producers and larger markets, access to finance, and fair-trade practices. Engaging with social entrepreneurship and inclusive business models is encouraged, promoting enterprises that address social and environmental challenges while prioritizing the well-being of marginalized communities. Sustainable procurement can effectively contribute to poverty reduction by collaborating with social enterprises, cooperatives, and businesses committed to poverty alleviation and community development. Furthermore, collaboration and partnerships among diverse stakeholders, including businesses, government agencies, civil society organizations, and local communities, are vital for sustainability in poverty reduction. This collaborative approach involves developing shared strategies, exchanging knowledge, and coordinating efforts to collectively address poverty. In integrating these principles into procurement decisions, organizations play a crucial role in contributing to poverty reduction, fostering economic opportunities, and creating more sustainable and equitable societies.

2.6 Public Procurement Policies

2.6.1 Public Procurement Act, 2006

The Public Procurement Act, 2006, is a pivotal legal framework governing procurement practices in Bangladesh, designed to ensure transparency, fairness, efficiency, and accountability in public procurement processes. The act establishes the Central Procurement Technical Unit (CPTU) within the Ministry of Planning as the central authority responsible for policy formulation, monitoring, and capacity building in public procurement.[56] Notably, the act encourages the inclusion of sustainable criteria in procurement processes,

allowing for the consideration of factors like environmental impact, energy efficiency, and social responsibility during bid evaluation. Emphasizing openness and transparency, the act mandates the public disclosure of procurement-related information. It delineates various procurement methods, outlines pre-qualification processes for complex projects, establishes guidelines for bid evaluation, and provides an appeals mechanism for dispute resolution. The act also addresses conflicts of interest, sets thresholds and exemptions for different procurement methods, and underscores the importance of procurement planning, requiring entities to prepare annual procurement plans. Serving as a foundation for sustainable procurement practices, the act aligns with broader sustainable development goals. For the most current and detailed information about the act and any amendments, it is recommended to refer to official government sources or legal databases.

2.6.2 Green Public Procurement (GPP) Policy

The Green Public Procurement (GPP) Policy of Bangladesh aimed to systematically integrate environmental and sustainability criteria into the procurement processes of government agencies and entities. With a focus on leveraging the significant purchasing power of the government, the policy sought to stimulate demand for environmentally friendly products and services, ultimately fostering sustainable consumption and production patterns. Key features of the GPP Policy included considerations for environmental factors such as energy efficiency, resource conservation, waste reduction, pollution prevention, and sustainable sourcing. Providing a comprehensive framework, the policy guided government agencies through various stages of the procurement cycle, emphasizing planning, specification, evaluation, and contract management. Additionally, the policy likely encouraged capacity-building initiatives to educate procurement professionals about sustainable procurement principles, while also aiming to raise awareness among stakeholders through advocacy efforts.[57] Monitoring and reporting provisions were likely included to ensure transparency and accountability in the implementation of GPP practices. The policy may have provided guidelines, tools, and resources to facilitate effective GPP adoption, including model specifications, criteria, and evaluation methods. By favoring eco-friendly products and services, the policy aimed to drive market transformation and potentially included incentives or rewards for suppliers adhering to sustainable practices. Furthermore, the GPP Policy could have promoted policy integration by encouraging coordination with other relevant strategies and initiatives related to sustainable development and environmental protection. For the most

current and detailed information on Bangladesh's Green Public Procurement Policy, including any recent developments, it is recommended to refer to official government sources, relevant ministries, or sustainable procurement-related publications.

2.6.3 Environmental Conservation Act, 1995

The Environmental Conservation Act, 1995, plays a crucial role in shaping environmental protection and conservation efforts in Bangladesh. Serving as a foundational legal framework, this act addresses a spectrum of environmental concerns and holds implications for sustainable procurement practices. Designed to oversee the conservation, improvement, and management of the environment, the act covers key aspects relevant to sustainable procurement. Environmental Impact Assessment (EIA) requirements, likely outlined in the act, ensure the evaluation and mitigation of potential environmental impacts for certain projects, including substantial development initiatives.[58] The act may also regulate pollution, encompassing air, water, and soil pollution, indirectly influencing procurement decisions by encouraging the adoption of eco-friendly and pollution-prevention technologies. Provisions for the conservation of natural resources, waste management, and the establishment of environmental standards and regulations provide a framework that aligns with sustainable procurement practices, promoting responsible sourcing and waste reduction. Additionally, the act may incorporate measures for public awareness and participation in environmental matters, indirectly shaping procurement practices by fostering demand for environmentally friendly products and services. Enforcement mechanisms, penalties for non-compliance, and the establishment of an Environmental Tribunal contribute to incentivizing organizations to adopt sustainable practices, including those related to procurement. Incorporating the principles and provisions of the Environmental Conservation Act, 1995, into sustainable procurement practices serves as a vital step in aligning procurement decisions with broader environmental goals, contributing significantly to the conservation and improvement of the environment in Bangladesh.

2.6.4 Bangladesh Labor Act, 2006

Bangladesh maintains a comprehensive framework of labor laws aimed at safeguarding the rights and interests of workers. The Bangladesh Labor Act, 2006, serves as a cornerstone, covering diverse aspects of employment, working conditions, and industrial relations. While these laws may not explicitly address sustainable procurement, they indirectly foster

sustainable practices by advocating for fair treatment of workers, ensuring safe working environments, and endorsing ethical employment practices. Provisions within the legislation outline working conditions, including rest breaks, weekly holidays, and overtime, contributing to the well-being of workers and indirectly supporting sustainable procurement through the promotion of decent working conditions. Additionally, the laws address concerns related to child labor and forced labor, aligning with ethical sourcing practices that aim to eradicate such practices from the workforce.[59] The recognition of trade unions, the right to collective bargaining, and the prohibition of discrimination in employment based on various factors contribute to ensuring fair labor practices and workers' rights, consistent with responsible and socially conscious procurement practices. Health and safety regulations outlined in the labor laws contribute to the creation of safe and healthy working environments, essential considerations for ethical and sustainable sourcing. Regulations related to employment contracts, termination, and severance pay further underscore the commitment to protecting workers' rights and ensuring fair employment practices. While not explicitly focused on sustainable procurement, Bangladesh's labor laws emphasize fair labor practices, worker well-being, and ethical treatment, aligning with the principles of responsible sourcing and contributing to broader social and ethical goals. For the latest and most detailed information regarding labor laws in Bangladesh and any recent developments, it is recommended to consult official government sources, legal databases, or labor regulatory authorities in the country.

2.6.5 Energy Conservation Act of 2012

Energy efficiency and conservation laws in Bangladesh play a crucial role in promoting responsible energy use and environmental sustainability. The Energy Conservation Act of 2012, a key legislative instrument, focuses on reducing energy consumption and establishing the Bangladesh Energy Conservation Board (BECB) to oversee energy conservation policies. While not directly linked to procurement, the act encourages principles of energy conservation that can influence procurement decisions by favoring energy-efficient products and services. The Bangladesh National Building Code (BNBC) incorporates provisions for energy-efficient building design, encouraging the consideration of energy-efficient materials and technologies in construction projects. [60] Additionally, the Bangladesh Standards and Testing Institution (BSTI) sets energy efficiency standards for appliances, guiding procurement decisions toward products that meet minimum energy performance criteria. The

country's emphasis on promoting renewable energy sources aligns with sustainable procurement goals, influencing decisions related to energy sources. Initiatives targeting industrial energy efficiency indirectly impact procurement practices by encouraging the adoption of energy-efficient technologies and processes. Government Procurement Guidelines may incorporate energy efficiency considerations, advocating for the selection of products and services with lower energy consumption and reduced environmental impact. In the realm of sustainable procurement, Bangladesh's energy efficiency and conservation laws provide a framework for considering the environmental impact of energy use, allowing organizations to prioritize energy-efficient practices that contribute to environmental conservation and cost savings. For the most up-to-date and detailed information on these laws, it is recommended to refer to official government sources or relevant regulatory bodies.

2.6.6 United Nations Sustainable Development Goals (SDGs)

Bangladesh, as a signatory to various international agreements and commitments, is committed to advancing sustainable development, environmental protection, and social responsibility. Among these commitments, the United Nations Sustainable Development Goals (SDGs) provide a comprehensive framework for Bangladesh, encompassing objectives such as poverty reduction, gender equality, clean energy, responsible consumption and production, and climate action. The Paris Agreement, to which Bangladesh is a party, focuses on mitigating climate change and emphasizes reducing greenhouse gas emissions, aligning with sustainable procurement goals. Additionally, Bangladesh's participation in the Basel Convention underscores its dedication to minimizing hazardous waste generation and ensuring environmentally sound waste management, influencing procurement choices. As a member of the International Labor Organization (ILO), Bangladesh adheres to various ILO conventions that address labor rights and social standards, encouraging fair labor practices and worker well-being in procurement decisions. Membership in the World Trade Organization (WTO) means that Bangladesh follows trade agreements that indirectly impact sustainability aspects in procurement. Commitment to the Montreal Protocol further influences procurement by favoring products and services that do not contribute to ozone depletion. Overall, these international agreements and commitments collectively shape a framework for sustainable development, guiding procurement decisions in Bangladesh toward considerations of environmental, social, and ethical factors. For the latest and detailed

information on Bangladesh's international commitments, it is recommended to refer to official government sources and relevant international organizations.

2.7 Implementation Challenges

2.7.1 Lack of Awareness and Understanding

Addressing the lack of awareness and understanding stands as a critical imperative in the successful implementation of sustainable procurement practices in Bangladesh. Various factors, such as limited information dissemination, insufficient training and capacity-building programs, misconceptions about costs, and cultural barriers, contribute to this challenge. In addition, competing priorities, regulatory and policy gaps, and a dearth of clear guidelines further impede the integration of sustainable procurement. To surmount these obstacles, strategic measures are essential. Initiatives include targeted awareness campaigns through workshops and training sessions, specialized capacity-building programs, and the establishment of knowledge-sharing platforms connecting sustainable suppliers with procurement entities. Government support plays a pivotal role, emphasizing the adoption of sustainable practices in its operations and advocating for sustainable procurement guidelines across sectors.[61] Offering incentives and recognition to organizations excelling in sustainable practices, engaging stakeholders, and implementing robust monitoring and evaluation mechanisms are integral components of the comprehensive strategy. By implementing these measures, Bangladesh can overcome the challenges associated with awareness and understanding, paving the way for a more sustainable procurement system that contributes to environmental conservation, social development, and economic growth.

2.7.2 Limited Availability of Sustainable Products and Services

The limited availability of sustainable products and services poses a significant challenge to the successful implementation of sustainable procurement practices in Bangladesh. Underlying issues such as underdeveloped sustainable supply chains, low awareness among suppliers, economic constraints, inadequate government support, limited market demand, and import dependency contribute to this challenge. To effectively address the limited availability, strategic measures are essential. These include government incentives, such as tax breaks or subsidies, aimed at businesses adopting sustainable practices and investing in sustainable product manufacturing. Capacity-building programs for suppliers can enhance

their understanding and facilitate a transition to more sustainable production methods. Initiatives to support sustainable supply chains, including access to sustainable raw materials and collaborations among suppliers, manufacturers, and retailers, are crucial. Additionally, launching awareness campaigns to educate consumers and procurers about the benefits of sustainable products, integrating sustainability criteria into public procurement processes, fostering partnerships, and investing in research and development for innovative sustainable solutions are integral components of the comprehensive strategy. By implementing these measures, Bangladesh can create a more favorable environment for sustainable procurement practices, fostering the growth of sustainable industries and ultimately benefiting the environment, society, and the economy in the long run.

2.7.3 Cost Consideration

Cost considerations pose a significant challenge to the implementation of sustainable procurement practices in Bangladesh, as they do in many countries. Several factors contribute to this challenge, including higher initial costs for sustainable products or services, limited availability within the local supply chain, and a lack of awareness among businesses about the long-term benefits associated with sustainable procurement. The prioritization of short-term cost savings over long-term advantages, budget constraints, and the competing priorities within organizations further complicate the adoption of sustainable practices. Additionally, the complexity of measuring the exact financial impact of sustainable procurement practices presents a barrier to justifying the initial investment to stakeholders.

To overcome these cost-related challenges, strategies can be implemented. Emphasizing the long-term cost savings and benefits, such as reduced energy costs, decreased waste disposal expenses, and enhanced brand reputation, can help shift the perspective toward sustainable procurement. Encouraging the development of local suppliers offering sustainable products, advocating for government incentives and policies supporting sustainable practices, and conducting education and awareness programs are essential steps. Collaboration and networking within sustainable business communities can also facilitate knowledge sharing and resource pooling, reducing costs through collective efforts. By addressing these challenges and promoting the long-term benefits of sustainable procurement, Bangladesh can make strides toward building a more environmentally and socially responsible economy.

2.7.4 Capacity and Capability of Suppliers

The capacity and capability of suppliers emerge as crucial factors posing implementation challenges for sustainable procurement in Bangladesh. The limited availability of sustainable suppliers, coupled with a lack of technical expertise in areas such as renewable energy and eco-friendly materials, presents significant obstacles. Suppliers may struggle to comply with sustainability standards, and financial constraints may impede investments in sustainable practices. Awareness gaps, coupled with the challenges of accessing sustainable raw materials and concerns about increased costs, further complicate the adoption of sustainable procurement.

To address these challenges, a collaborative effort involving the government, industry associations, and non-governmental organizations is essential. Implementing supplier development programs, offering incentives and support, promoting certifications and standards, fostering supplier collaboration, and encouraging sustainable innovation are critical strategies. Additionally, incorporating sustainability criteria into public procurement policies can play a pivotal role in encouraging suppliers to align with sustainable practices. By addressing the capacity and capability challenges of suppliers, Bangladesh can cultivate a more robust and sustainable supply chain, fostering positive changes in environmental and social practices across industries.

2.7.5 Regulatory and Policy Framework

The regulatory and policy framework in Bangladesh plays a pivotal role in shaping the implementation of sustainable procurement practices, where the absence or inadequacy of clear guidelines can lead to confusion and uncertainty among businesses. Inconsistent enforcement and a lack of supportive policies, such as tax incentives or grants for sustainable procurement, may discourage businesses from investing in sustainable alternatives. Resistance to change, stemming from perceived costs and efforts, is a common challenge, exacerbated by a complex regulatory environment and limited capacity within government agencies. Moreover, the limited awareness and integration of sustainable procurement in existing processes pose additional obstacles. To overcome these challenges, it is crucial to develop a comprehensive and clear policy framework, provide capacity-building programs, introduce incentives and rewards, integrate sustainable criteria into public procurement processes, foster collaboration, and conduct awareness campaigns. By addressing these

aspects and establishing a robust regulatory and policy framework, Bangladesh can create an enabling environment for sustainable procurement practices, fostering positive environmental, social, and economic outcomes.

2.7.6 Infrastructure and Supply Chain Complexity

Implementing sustainable procurement procedures, particularly within the intricate context of infrastructure and supply chain complexity, presents several challenges in Bangladesh. The limited availability of sustainable suppliers, coupled with a lack of awareness and education among suppliers and procurement officials, poses difficulties in effectively managing sustainable practices. The complexity of Bangladesh's supply chains, involving multiple tiers of suppliers, requires thorough monitoring and engagement to ensure sustainability across all levels. Inadequate infrastructure for waste management, recycling, and eco-friendly practices further hinders the adoption of sustainable procurement. Additionally, a lack of technical expertise, cost considerations, resistance to change, and the absence of proper incentives for suppliers contribute to the challenge. Regulatory inconsistencies and capacity constraints within procurement departments pose further obstacles, impacting effective implementation. Challenges related to data collection and reporting, limited supplier diversity, cultural factors, and the need for coordination among stakeholders add complexity to the sustainable procurement landscape. To address these multifaceted challenges, a comprehensive approach involving government commitment, stakeholder engagement, capacity building, awareness campaigns, regulatory reforms, and the development of sustainable supply chain networks is essential.

2.7.7 Resistance to Change

Resistance to change poses a common and significant challenge in the implementation of sustainable procurement practices in Bangladesh. Various factors contribute to this resistance, including a traditional mindset among stakeholders, limited awareness of the benefits of sustainable procurement, perceived short-term costs, risk aversion, and a preference for the comfort of established routines. Organizational culture, the absence of clear incentives, insufficient skills and training, communication gaps, skepticism about impact, and the lack of visible leadership support further exacerbate the challenge. Peer influence, unclear vision, change fatigue, and the additional time and effort required for sustainable procurement implementation also contribute to resistance. To overcome these obstacles, thorough

stakeholder engagement, clear communication about the benefits, capacity-building programs, successful case studies, and visible leadership commitment are crucial. Gradual efforts to build awareness, understanding, and stakeholder buy-in can help overcome resistance and cultivate a sustainable procurement culture in Bangladesh.

2.7.8 Performance Measurement and Reporting

Implementing performance measurement and reporting for sustainable procurement in Bangladesh presents a range of challenges that need careful consideration. Key obstacles include the limited availability of accurate and comprehensive sustainability data, concerns about data quality and reliability, variability in metrics across sectors, complexities in tracing sustainability performance through intricate supply chains, and a shortage of technical expertise. Resource constraints, including financial and human resources, further impact the ability to establish robust measurement and reporting systems. Resistance to data sharing from suppliers, misalignment of metrics among stakeholders, inconsistent reporting frequencies, and a lack of transparency in reporting processes add to the challenges. Regulatory uncertainties, capacity gaps among procurement officials, the integration of sustainability metrics into existing systems, and difficulties in stakeholder engagement are additional hurdles. Moreover, the absence of standardized reporting formats and industry-specific standards complicates reporting efforts. Addressing these challenges demands a comprehensive approach involving capacity-building initiatives, stakeholder engagement strategies, enhanced data transparency, collaboration with industry partners, regulatory alignment, and the adoption of standardized reporting frameworks. Successfully navigating these obstacles is crucial for ensuring accurate, reliable, and meaningful performance measurement and reporting in sustainable procurement practices in Bangladesh.

Chapter 3: Research Methodology

The success of any research endeavor hinges on a well-defined and meticulously executed research methodology. This chapter delineates the methods employed to collect, sample, and analyze the data pertinent to the study on sustainable procurement practices in the Bangladesh government. The structured approach encompasses data collection methods, sampling techniques, and data analysis approaches.

3.1 Data Collection Methods

The foundation of this research rests on insights gathered through a comprehensive survey conducted via a Google Form. Leveraging the accessibility and convenience offered by online surveys, this method facilitated the acquisition of valuable information from 23 procurement-related official personnel across various ministries within the Bangladesh government.

The survey instrument was designed to extract nuanced perspectives on sustainable procurement practices, including awareness, challenges, and current implementation status. The use of a Google Form allowed for structured responses, ensuring consistency and ease of data processing during subsequent analysis.

3.2 Sampling Techniques

Given the specialized nature of the study population, a purposive sampling technique was deemed most fitting. The survey targeted 23 official personnel directly involved in procurement activities across diverse ministries within the Bangladesh government. This deliberate selection ensured that the respondents possessed the requisite knowledge and experience to provide informed insights into sustainable procurement practices within their respective domains.

The purposive sampling approach is particularly advantageous when the research aims to capture the perspectives of a specific, knowledgeable group, in this case, procurement officials intimately acquainted with the intricacies of the Bangladesh government's procurement processes.

3.3 Data Analysis Approaches

The data analysis for this study adopts an exploratory approach. Given the complex and multifaceted nature of sustainable procurement practices, an exploratory analysis allows for an in-depth investigation into the various dimensions of the topic. The goal is to uncover patterns, trends, and potential correlations within the data set.

The collected survey responses will be subjected to rigorous qualitative and quantitative analysis. Qualitative data will be categorized, and thematic analysis will be employed to identify recurring patterns and themes. Quantitative data, including numerical responses, will be subjected to statistical analysis to derive meaningful insights.

The utilization of both qualitative and quantitative analysis methods ensures a comprehensive exploration of the research questions, offering a nuanced understanding of sustainable procurement practices within the context of the Bangladesh government.

In summary, the chosen research methodology aligns with the specific objectives of this study, allowing for a detailed exploration of sustainable procurement practices in the Bangladesh government through the lenses of those directly involved in the procurement processes.

Chapter 4: Results and Discussions

4.1 Familiarity with Sustainable Procurement

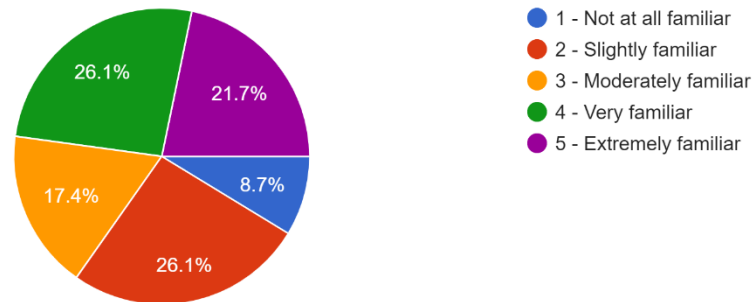


Figure 1: Familiarity with Sustainable Procurement

In terms of familiarity with sustainable procurement practices, the survey results, as depicted in Fig 1, reveal a diverse range of responses. A small percentage (8.7%) of respondents indicated not being familiar with sustainable procurement, emphasizing a potential knowledge gap that could be addressed through awareness programs or targeted training initiatives. Additionally, a huge portion (26.1%) reported being slightly familiar, signifying a foundational understanding with room for improvement. For this group, implementing training programs may prove beneficial in enhancing their familiarity. Furthermore, 17.4% of respondents demonstrated a moderate level of familiarity, suggesting that efforts can be directed towards consolidating and building upon this existing foundation. The survey indicates that 26.1% of respondents are very familiar with sustainable procurement, reflecting a positive trend and a potential readiness for more advanced sustainable practices. Notably, 21.7% of respondents express an extremely high level of familiarity, providing promising insights into a strong foundation for the successful implementation of sustainable procurement practices in the surveyed context.

4.2 Importance of Sustainable Procurement

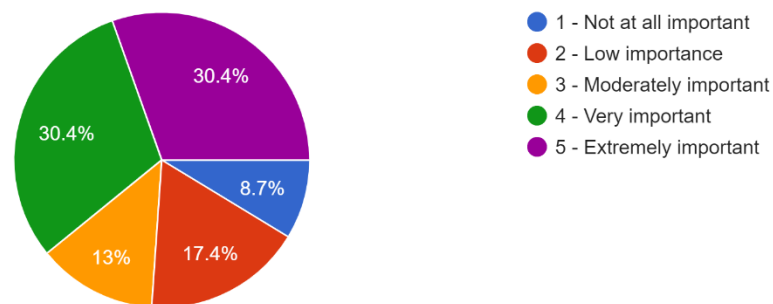


Figure 2: Importance of Sustainable Procurement

The survey's second aspect, gauging the perceived importance of sustainable procurement, is illustrated in Fig 2. A small percentage (8.7%) of respondents indicated that they perceive sustainable procurement as not important. Understanding the factors contributing to this perception can inform targeted interventions to address potential gaps in awareness or understanding. Furthermore, 17.4% of respondents expressed a belief in the low importance of sustainable procurement, indicating a segment that may benefit from strategies highlighting the immediate and long-term advantages of sustainable practices. Additionally, 13% of respondents considered sustainable procurement to be moderately important, suggesting that efforts can be directed toward showcasing the multifaceted benefits of integrating sustainability into procurement processes. Importantly, a substantial portion (30.4%) of respondents recognized the very high importance of sustainable procurement, offering a positive indication for the widespread adoption of sustainable practices. Similarly, another 30.4% of respondents placed extreme importance on sustainable procurement, showcasing a robust foundation for the integration of sustainability principles into procurement decision-making processes. This collective acknowledgment of the importance of sustainable procurement forms a promising basis for further advocacy and implementation efforts.

4.3 Defined Policies and Procedures

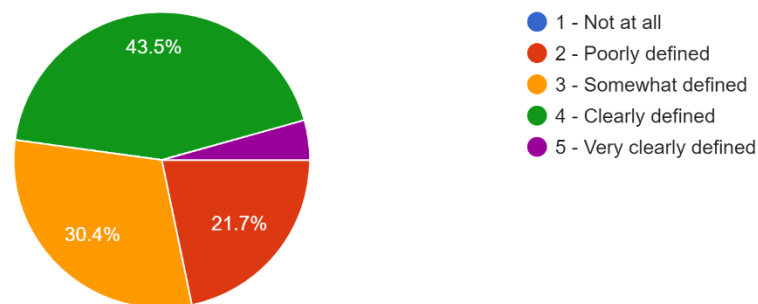


Figure 3: Defined Policies and Procedures

The third facet explored in the survey pertains to the integration of sustainability criteria into procurement decision-making processes, as depicted in Fig 4: Pie Chart. A small percentage (4.3%) of respondents signaled a lack of integration, highlighting a potential gap that calls for initiatives aiming to seamlessly embed sustainability considerations into decision-making frameworks. Furthermore, 17.4% of respondents expressed that sustainability criteria are poorly integrated, emphasizing the need for efforts to enhance the alignment of sustainability principles with procurement decisions. On a positive note, 34.8% of respondents indicated a moderate level of integration, showcasing progress and suggesting a foundation that can be built upon for more comprehensive integration. Moreover, a considerable 39.1% reported well-integrated sustainability criteria, indicating a positive trend towards aligning procurement processes with sustainability objectives. Although a small percentage, the presence of respondents (4.3%) indicating fully integrated sustainability criteria is promising, signifying advanced practices in sustainable procurement within a subset of organizations. This diverse spectrum of responses provides valuable insights into the current state of sustainability integration in procurement decision-making processes, allowing for targeted interventions and improvements where necessary.

4.4 Integration of Sustainability Criteria

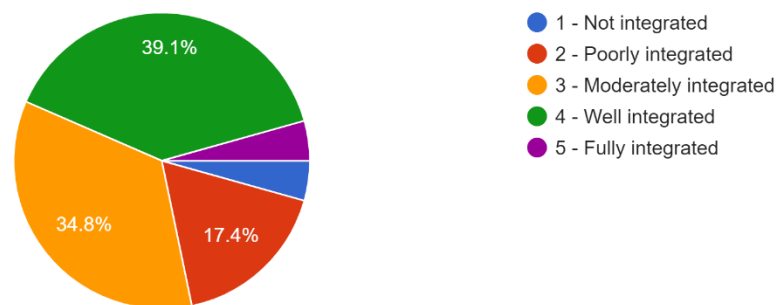


Figure 4: Integration of Sustainability Criteria

The fourth dimension explored in the survey revolves around the integration of sustainability criteria into procurement decision-making processes, as represented in Fig 4: Pie Chart. A small percentage (4.3%) of respondents indicated a lack of integration, highlighting the need for initiatives to seamlessly embed sustainability considerations into decision-making processes. Notably, 17.4% of respondents expressed that sustainability criteria are poorly integrated, suggesting the necessity of efforts to enhance the alignment of sustainability with procurement decisions. On a positive note, a significant 34.8% indicated moderate integration, showcasing progress and laying a foundation that can be built upon for more comprehensive integration. Furthermore, 39.1% of respondents reported well-integrated sustainability criteria, indicating a positive trend towards aligning procurement processes with sustainability objectives. Although a smaller percentage (4.3%) reported fully integrated sustainability criteria, this presence is promising, signifying advanced practices in sustainable procurement within a subset of organizations. This nuanced interpretation underscores the diverse landscape of sustainability integration in procurement processes, providing valuable insights for targeted improvements and advancements.

4.5 Monitoring Human Rights and Fair Labor Practices

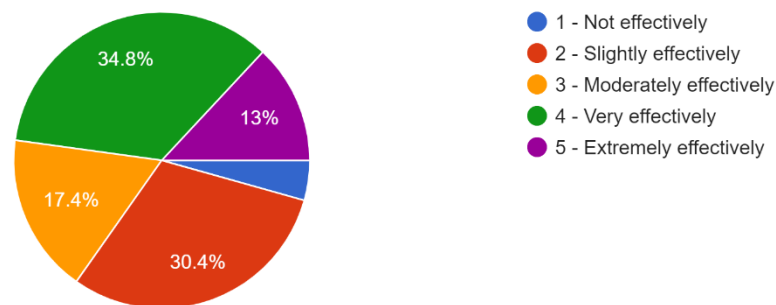


Figure 5: Monitoring Human Rights and Fair Labor Practices

The fifth aspect examined in the survey pertains to the effectiveness of monitoring human rights and fair labor practices, as depicted in Fig 5: Pie Chart. A small percentage (4.3%) of respondents indicated a perception that monitoring in this regard is not effective, highlighting a potential area for improvement and the need for strategies to enhance monitoring mechanisms. Notably, 30.4% of respondents expressed a perception of slight effectiveness, emphasizing the importance of strategies to strengthen monitoring systems and practices. On the positive side, 17.4% of respondents indicated a moderate level of effectiveness, suggesting a good foundation that can be built upon for more comprehensive monitoring. Moreover, a considerable 34.8% reported very effective monitoring, showcasing a positive trend and indicating a solid foundation for ensuring adherence to human rights and fair labor practices. Although a smaller percentage (13%), the presence of respondents indicating extremely effective monitoring is promising, signifying advanced practices in monitoring these critical aspects within a subset of organizations. This diverse range of responses provides valuable insights into the current state of monitoring human rights and fair labor practices, allowing for targeted interventions and improvements where necessary.

4.6 Prompt Corrective Actions for Violations of Labor Policies

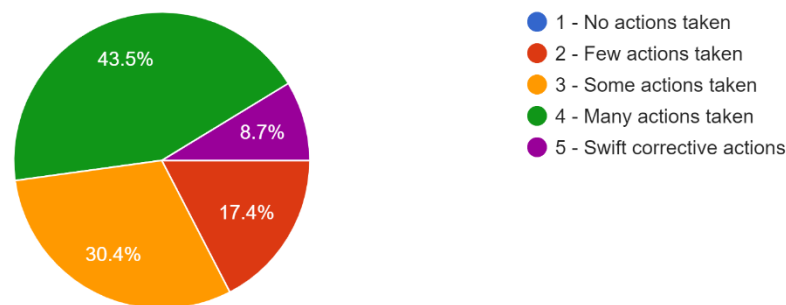


Figure 6: Prompt Corrective Actions for Violations of Labor Policies

The survey delved into the prompt corrective actions taken for violations of labor policies, as illustrated in Fig 6: Pie Chart. A notable portion of respondents (17.4%) indicated that few actions are taken in response to labor policy violations. This suggests an area where organizations may need to strengthen their response mechanisms to ensure a more effective and consistent approach. Meanwhile, a significant percentage (30.4%) reported taking some actions for violations, indicating room for improvement to ensure more consistent and comprehensive corrective actions. On a positive note, a considerable number (43.5%) reported taking many actions for violations, showcasing a proactive approach in addressing labor policy violations. Additionally, although a smaller percentage (8.7%), the presence of organizations taking swift corrective actions is a positive sign, indicating a robust response to labor policy violations within a subset of organizations. This nuanced analysis sheds light on the varied approaches organizations take in responding to labor policy violations, offering insights for refining strategies and promoting best practices in this critical aspect of sustainable procurement.

4.7 Consideration of Environmental Impact in Procurement

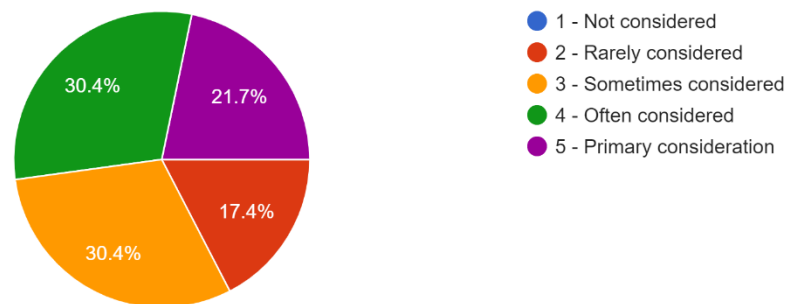


Figure 7: Consideration of Environmental Impact in Procurement

The survey findings pertaining to the consideration of environmental impact in the procurement process, as depicted in Fig 7: Pie Chart, reveal distinct patterns. A notable portion of respondents (17.4%) indicated that environmental impact is rarely considered in their procurement processes. This emphasizes the need for strategic interventions to elevate the consideration of environmental factors, promoting a more environmentally conscious approach within organizations. On a positive note, a significant percentage (30.4%) suggested that environmental impact is sometimes considered, indicating room for improvement to increase the frequency of incorporating environmental factors into procurement decisions. Moreover, a considerable number (30.4%) reported that environmental impact is often considered, signifying a positive trend and showcasing a good foundation for environmentally conscious procurement practices within this subset of organizations. Additionally, although a smaller percentage (21.7%), the primary consideration of environmental impact represents an advanced stage of sustainable procurement practices. This nuanced analysis provides valuable insights into the current landscape of environmental considerations in procurement, guiding efforts to enhance sustainability practices across organizations.

4.8 Supply Chain Transparency and Risk Management Practices

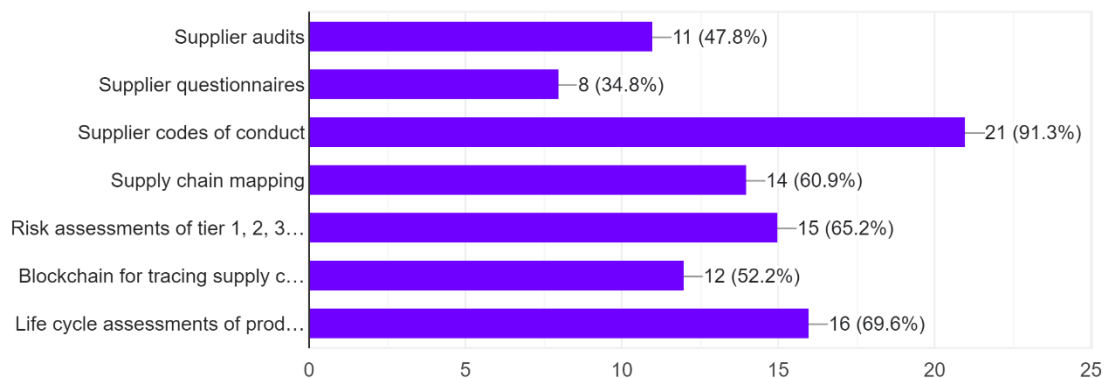


Figure 8: Supply Chain Transparency and Risk Management Practices

The findings depicted in Fig 8: Bar Chart provide insights into the widespread adoption of supply chain transparency and risk management practices among the surveyed procurement officials. Supplier audits emerge as a common practice, with 47.8% of respondents indicating their utilization. This underscores the importance placed on thorough assessments to ensure transparency and mitigate risks within the supply chain. Additionally, 34.8% of respondents reported employing supplier questionnaires, showcasing an additional layer of information gathering and risk assessment methods in their supply chain management practices. A striking highlight is the extensive adoption of supplier codes of conduct, with a remarkable 91.3% of respondents indicating their use. This widespread commitment emphasizes the significance placed on ethical practices and adherence to standards within the supply chain, contributing to a more responsible and sustainable procurement approach. Furthermore, 60.9% of respondents engage in supply chain mapping, showcasing efforts to visualize and understand the complexities of their supply chains, a crucial step in effective risk management. The survey also reveals a substantial emphasis on risk assessment across different tiers of suppliers, with 65.2% of respondents actively practicing this approach. This indicates a comprehensive strategy to manage risks at various levels of the supply chain hierarchy. Additionally, the adoption of blockchain for tracing supply chain transactions is observed among a significant proportion (52.2%), signifying a technological approach to enhance transparency and traceability, aligning with modern advancements in supply chain management. Moreover, life cycle assessment of products is conducted by 69.6% of

respondents, reflecting a commitment to understanding and minimizing the environmental impact of products. This practice contributes to the overall sustainability of procurement processes by considering the complete life cycle of products. Collectively, these findings demonstrate a multifaceted and proactive approach to supply chain transparency and risk management practices among the surveyed procurement officials, highlighting their commitment to ethical, sustainable, and responsible procurement processes.

4.9 Review of Sustainable Procurement Standards and Regulations

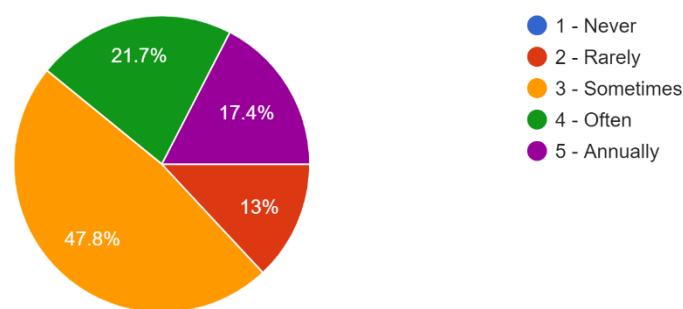


Figure 9: Review of Sustainable Procurement Standards and Regulations

The findings illustrated in Fig 9: Pie Chart shed light on the frequency of reviewing sustainable procurement standards and regulations among the surveyed procurement officials. A small percentage, representing 13% of respondents, indicates a rare review of these standards and regulations. This highlights a potential gap in staying updated with the evolving landscape of sustainable procurement, suggesting a need for more frequent updates and awareness initiatives. A significant portion of respondents, accounting for 47.8%, reported periodic reviews of sustainable procurement standards. While this demonstrates a commendable effort to stay informed, continuous endeavors are essential to ensure ongoing alignment with the dynamic nature of sustainable procurement practices. Furthermore, a considerable number of respondents, totaling 21.7%, indicated frequent reviews of sustainable procurement standards, showcasing a proactive approach to staying abreast of the latest developments in the field. Although a smaller percentage, representing 17.4%, reported annual reviews, this still signifies a noteworthy commitment to regularly updating their understanding of sustainable procurement practices. This deliberate and periodic review approach indicates a dedication to maintaining a current and informed perspective on the

standards and regulations governing sustainable procurement. In conclusion, the survey results emphasize the importance of continuous efforts to stay informed and up to date with evolving sustainable procurement standards, ensuring that procurement practices align with the latest guidelines and best practices in sustainability.

4.10 Tracking Key Performance Indicators (KPIs)

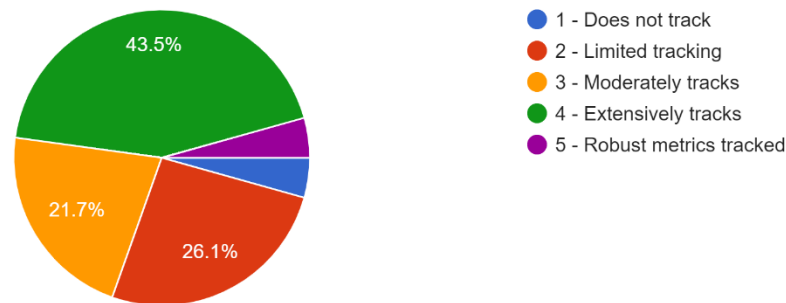


Figure 10: Tracking Key Performance Indicators (KPIs)

The data presented in Fig 10: Pie Chart provides insights into the tracking of key performance indicators (KPIs) related to sustainable procurement among the surveyed procurement officials. A small percentage, representing 4.3% of respondents, indicated that their organizations do not track KPIs in the context of sustainable procurement. This finding emphasizes a potential area for improvement, suggesting a need for the implementation of tracking mechanisms to effectively measure and evaluate the impact of sustainability efforts within procurement processes. A notable portion of respondents, accounting for 26.1%, reported limited tracking of KPIs. This signals an opportunity for organizations to enhance the breadth and depth of their tracking mechanisms, ensuring a more comprehensive evaluation of sustainable procurement practices. On a positive note, a significant percentage, totaling 21.7%, indicated that their organizations moderately track KPIs, showcasing a foundational approach to measuring the impact of sustainable procurement initiatives. A considerable number of respondents, comprising 43.5%, reported extensive tracking of KPIs. This highlights a commendable commitment to not only measuring but also continually improving sustainable procurement practices. Although a smaller percentage, representing 4.3%, mentioned robust metrics tracking, this finding indicates advanced capabilities in measuring the impact of sustainable procurement efforts, signifying a sophisticated and well-established approach to KPI tracking. In conclusion, the survey results underscore the

importance of organizations implementing and refining tracking mechanisms for KPIs, facilitating a more informed and data-driven approach to sustainable procurement practices.

4.11 Training to Procurement Managers on Sustainability

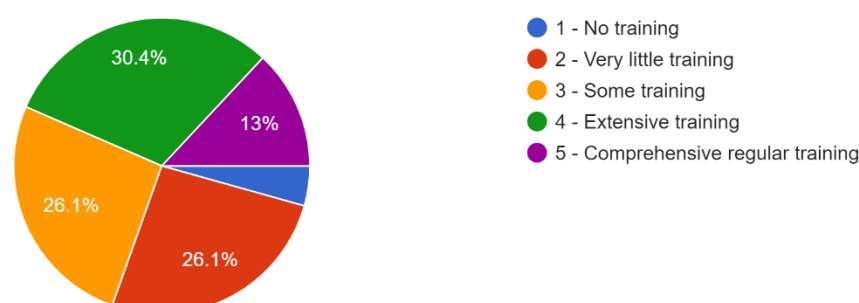


Figure 11: Training to Procurement Managers on Sustainability

The analysis of Fig 11: Pie Chart sheds light on the training initiatives for procurement managers regarding sustainability practices among the surveyed officials. A small percentage, representing 4.3% of respondents, indicated that their organizations provide no training for procurement managers on sustainability. This finding underscores a critical area for improvement, suggesting the need for targeted initiatives to build the capacity and knowledge of procurement managers in sustainable procurement practices. A notable portion of respondents, comprising 26.1%, reported receiving very little training. This highlights an opportunity for organizations to develop more comprehensive and in-depth training programs to ensure that procurement managers are well-equipped with the necessary knowledge and skills to integrate sustainability into their decision-making processes. On a positive note, a significant percentage, totaling 26.1%, reported receiving some training, indicating a positive trend in efforts to enhance the sustainability skills of procurement managers. A considerable number of respondents, accounting for 30.4%, mentioned receiving extensive training in sustainable procurement. This showcases a commendable commitment to providing procurement managers with the knowledge and skills needed to navigate and implement sustainable practices effectively. Although a smaller percentage, representing 13%, reported comprehensive regular training, this finding indicates advanced efforts in maintaining a consistently skilled workforce for sustainable procurement. In summary, the survey results underscore the importance of continuous and comprehensive training programs for

procurement managers, ensuring they are well-prepared to contribute to sustainable procurement practices within their organizations.

4.12 Alignment of Procurement Strategy with Local Community Development Priorities

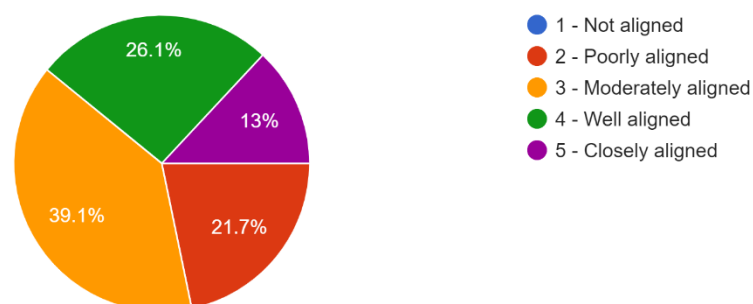


Figure 12: Alignment of Procurement Strategy with Local Community Development Priorities

Examining Fig 12: Pie Chart, which gauges the alignment of procurement strategy with local community development priorities, reveals insightful perspectives among the surveyed procurement officials in the Bangladesh government. A notable 21.7% of respondents perceive that their procurement strategy is poorly aligned with local community development priorities. This finding suggests that there is a substantial need for strategic interventions to enhance the alignment of procurement practices with the broader socio-economic goals of the local communities. On a positive note, a significant 39.1% of respondents perceive a moderate alignment, indicating a foundation that can be built upon for closer integration with community development priorities. This signifies a recognition among a considerable portion of officials that efforts are already underway, providing an opportunity to further strengthen and fine-tune these alignment strategies. Furthermore, a considerable number of respondents, totaling 26.1%, perceive a well-aligned procurement strategy. This finding is encouraging, suggesting that a substantial portion of procurement practices is positively contributing to local community development. It reflects the effectiveness of existing initiatives and demonstrates a commitment to ensuring that procurement strategies align with and positively impact the socio-economic priorities of the local communities. Finally, although a smaller percentage at 13%, the perception of a closely aligned procurement strategy is promising. This subset of respondents likely represents advanced practices in community development

integration within procurement processes. The recognition of such closely aligned strategies highlights the potential for best practices and advanced models that can be shared and replicated to enhance the overall impact of procurement on local community development. Collectively, these findings underscore the importance of ongoing efforts to align procurement strategies with local community development priorities, recognizing both existing successes and areas for improvement. Strengthening these alignments can further contribute to sustainable and inclusive development practices within the context of public procurement in Bangladesh.

4.13 Challenges in Identifying Sustainability-related Risks and Opportunities

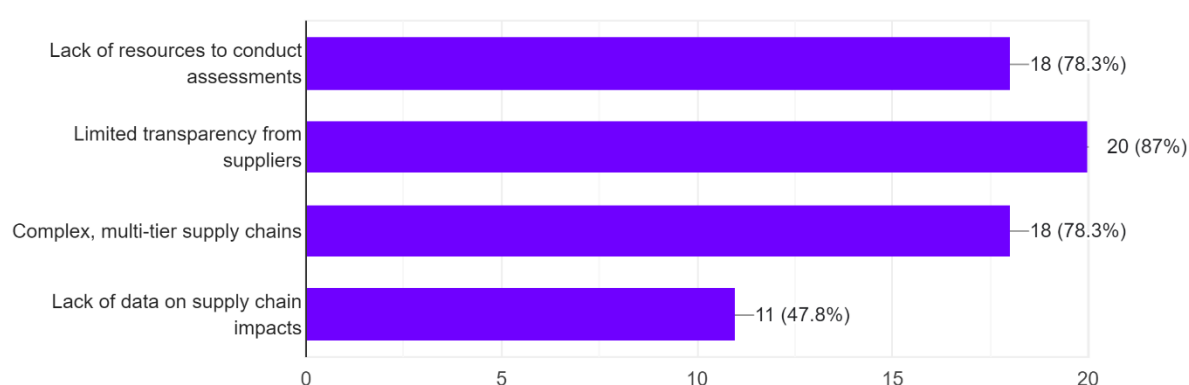


Figure 13: Challenges in Identifying Sustainability-related Risks and Opportunities

Examining Fig 13: Bar Chart, which outlines the challenges faced by organizations in identifying sustainability-related risks and opportunities within their supply chain operations in Bangladesh, reveals critical insights into the hurdles faced by procurement officials. The most prevalent challenge, reported by a substantial 78.3% of respondents, is a lack of resources to conduct assessments. This underscores a clear need for strategic investments in assessment capabilities, including financial and technological resources, to bolster the capacity of organizations to identify and address sustainability-related risks and opportunities effectively. Another significant challenge, reported by 87% of respondents, is the limited transparency from suppliers. This highlights the critical importance of establishing open and transparent communication channels with suppliers. Improving transparency can contribute to better understanding and cooperation between organizations and their suppliers, ultimately fostering a more sustainable and responsible supply chain. The complexity of multi-tier

supply chains emerges as a substantial challenge, as reported by 78.3% of respondents. This complexity necessitates the development of strategies and technologies to better map and understand the intricate structures of multi-tier supply chains. Enhanced visibility and comprehension of these structures can facilitate more effective risk assessment and management. Furthermore, a notable but comparatively lower percentage of 47.8% indicates a challenge stemming from a lack of data on supply chain impacts. This finding underscores the importance of data collection and analysis as fundamental components of sustainable procurement practices. Organizations need to prioritize efforts to gather comprehensive and accurate data to assess the environmental, social, and economic impacts across their supply chains. In summary, these challenges collectively emphasize the need for organizations to invest in resources, enhance transparency with suppliers, develop strategies to navigate complex supply chains, and prioritize data collection and analysis. Addressing these challenges is crucial for building resilient and sustainable procurement practices in Bangladesh.

4.14 Barriers to Greater Sustainable Procurement Participation from Suppliers

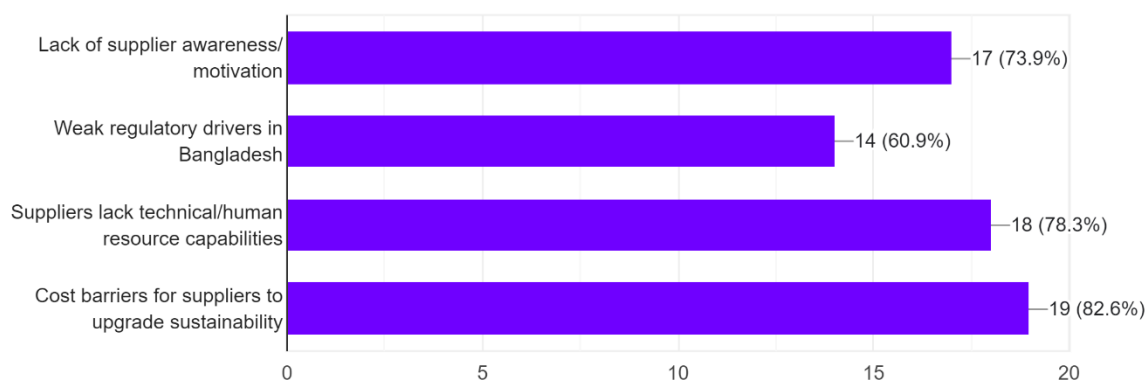


Figure 14: Barriers to Greater Sustainable Procurement Participation from Suppliers

Analyzing Fig 14: Bar Chart, which outlines the barriers hindering greater sustainable procurement participation from suppliers in Bangladesh, provides valuable insights into the challenges faced by suppliers in aligning with sustainable practices. The predominant barrier, identified by 73.9% of respondents, is the lack of supplier awareness and motivation. This underscores the crucial need for robust supplier engagement initiatives to raise awareness, provide education, and motivate suppliers to embrace sustainable procurement practices.

Another substantial challenge, reported by 60.9% of respondents, is the presence of weak regulatory drivers in Bangladesh. This highlights a significant hurdle that may be addressed through policy advocacy and the development of regulatory frameworks that incentivize and mandate sustainable practices. Strengthening regulatory mechanisms can play a pivotal role in creating an environment conducive to sustainable procurement adoption. The capacity of suppliers emerges as a critical barrier, with 78.3% of respondents citing a lack of technical and human resource capabilities. To overcome this challenge, it becomes imperative to implement capacity-building programs and offer support mechanisms that enhance the skills and resources of suppliers. Such initiatives can empower suppliers to align with sustainability standards and contribute to the overall success of sustainable procurement practices. Cost barriers represent a considerable challenge, reported by 82.6% of respondents, indicating that financial considerations pose a significant obstacle for suppliers to upgrade their sustainability practices. Addressing this challenge requires the development of financial incentives or support mechanisms that alleviate the economic burden on suppliers transitioning to more sustainable processes. In summary, addressing these identified barriers requires a multifaceted approach, including targeted supplier engagement initiatives, policy advocacy for stronger regulatory frameworks, capacity-building programs for suppliers, and the establishment of financial support mechanisms. Overcoming these barriers is essential for fostering a collaborative and sustainable procurement ecosystem in Bangladesh.

4.15 Supply Chain Complexity as a Barrier

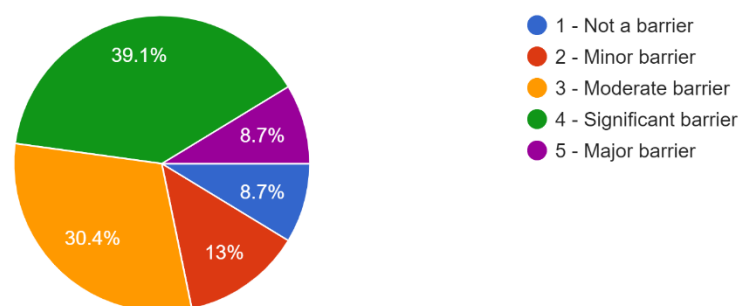


Figure 15: Supply Chain Complexity as a Barrier

Analyzing Fig 15: Pie Chart, which illustrates the perceived impact of supply chain complexity as a barrier to sustainable procurement, provides crucial insights into the challenges faced by organizations in Bangladesh. A small percentage (8.7%) perceives supply

chain complexity as not a barrier, underscoring the need for a nuanced understanding of the intricacies within the supply chain to effectively implement sustainable procurement practices. A notable but lower percentage (13%) views supply chain complexity as a minor barrier, suggesting that strategies can be implemented to mitigate minor complexities. This indicates the importance of targeted interventions to streamline certain aspects of the supply chain and enhance overall efficiency. A significant percentage (30.4%) perceives supply chain complexity as a moderate barrier, signaling the presence of challenges that require focused interventions. This highlights the need for strategies that address specific complexities within the supply chain to facilitate the seamless integration of sustainable procurement practices. A considerable number (39.1%) views supply chain complexity as a significant barrier, emphasizing the necessity for comprehensive strategies to overcome the challenges posed by intricate supply chains. Tackling issues such as transparency, traceability, and coordination becomes crucial to enhance sustainability across the supply chain. Although a smaller percentage identifies supply chain complexity as a major barrier (8.7%), this perception underscores the critical nature of addressing intricate challenges within the supply chain. Implementing advanced technologies, fostering collaboration among stakeholders, and enhancing visibility are potential strategies to alleviate the impact of major barriers posed by complex supply chains. In summary, addressing supply chain complexity as a barrier requires a tailored approach that considers the specific challenges identified by respondents. Strategies should encompass a combination of targeted interventions, technological advancements, and collaborative initiatives to navigate and overcome the complexities inherent in supply chain operations.

4.16 Challenges in Measuring Sustainability Performance

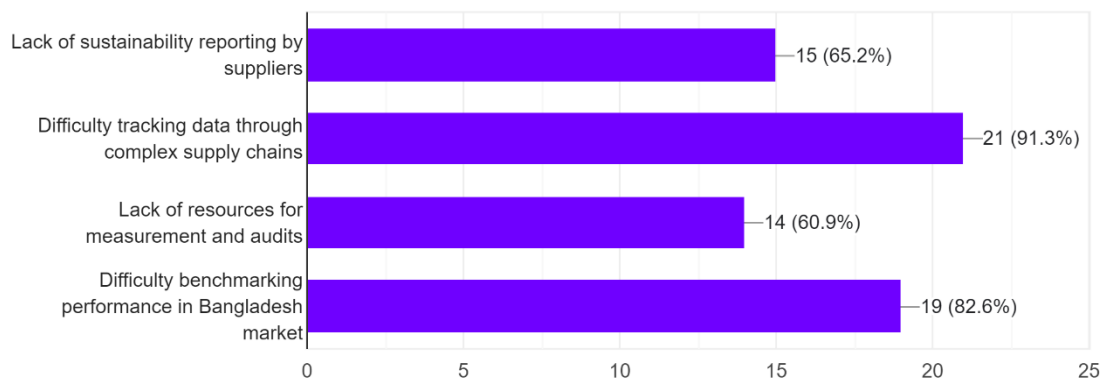


Figure 16: Challenges in Measuring Sustainability Performance

Examining Fig 16: Bar Chart, which outlines the challenges faced in measuring sustainability performance within procurement operations, provides valuable insights into the hurdles encountered by organizations in Bangladesh. The predominant challenge identified is the lack of sustainability reporting by suppliers (65.2%). This highlights a critical need for initiatives aimed at encouraging and standardizing sustainability reporting practices among suppliers. Implementing transparent reporting mechanisms can enhance visibility into the sustainability practices of suppliers, facilitating more informed procurement decisions. Another substantial challenge reported is the difficulty in tracking data through complex supply chains (91.3%). This underscores the complexity associated with supply chain operations in Bangladesh and emphasizes the necessity for advanced tracking mechanisms or simplified supply chain structures. Streamlining data flows and adopting technologies like blockchain for enhanced traceability can contribute to more effective and transparent supply chain management. Limited resources for measurement and audits (60.9%) represent a significant challenge in ensuring robust sustainability performance measurement. Allocating resources and building capacity for comprehensive measurement and audit processes is crucial for obtaining accurate and reliable data on sustainability practices. Difficulty benchmarking performance in the Bangladesh market (82.6%) is another noteworthy challenge. This indicates the need for standardized metrics and benchmarks tailored to the specific context of the Bangladesh market. Developing industry-specific benchmarks and collaborating with stakeholders to establish common standards can facilitate more effective benchmarking and performance evaluation. In summary, addressing these challenges in measuring sustainability performance requires a multi-faceted approach. Initiatives should focus on encouraging sustainability

reporting, implementing advanced tracking mechanisms, allocating resources for measurement and audits, and developing context-specific benchmarks. A comprehensive strategy that considers the unique aspects of the Bangladesh market and supply chain landscape is essential for overcoming these challenges and promoting sustainable procurement practices.

4.17 Lack of Dedicated Sustainable Procurement Personnel

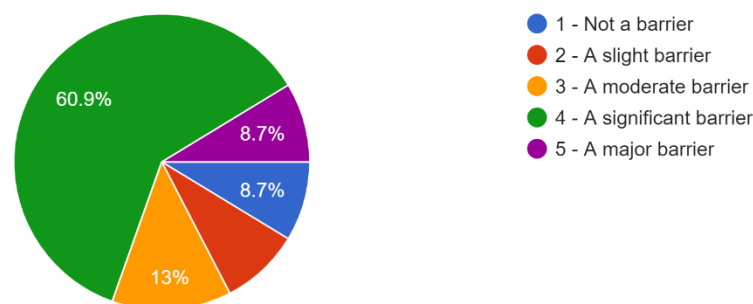


Figure 17: Lack of Dedicated Sustainable Procurement Personnel

Analyzing Fig 17: Pie Chart sheds light on the perceived barriers related to the lack of dedicated personnel for sustainable procurement initiatives. Notably, a small percentage (8.7%) of respondents perceives the absence of dedicated sustainable procurement personnel as not a barrier. This could suggest that some organizations already possess internal capabilities or have integrated sustainable practices into existing roles. Another comparable percentage (8.7%) perceives it as a slight barrier. This suggests potential gaps in expertise that can be addressed with targeted strategies, such as training programs or hiring initiatives aimed at building a workforce with specialized knowledge in sustainable procurement. A notable portion (13%) perceives a moderate barrier, indicating that there might be a need for additional personnel or specialized roles dedicated to supporting sustainable procurement efforts. This highlights the importance of having individuals with the expertise and focus to navigate the complexities of sustainable procurement. The most significant finding is that a substantial percentage (60.9%) perceives the lack of dedicated sustainable procurement personnel as a significant barrier. This emphasizes the critical importance of having specialized professionals to drive the effective implementation of sustainable procurement initiatives. Organizations may need to prioritize the creation of dedicated roles, invest in

training programs, or hire personnel with a specific focus on sustainable procurement. Although a smaller percentage perceives it as a major barrier (8.7%), this underscores the urgent need for organizations to recognize the strategic value of having dedicated sustainable procurement personnel. Addressing this barrier may involve organizational restructuring, capacity-building initiatives, and the establishment of clear roles and responsibilities to ensure the success of sustainable procurement practices.

4.18 Challenges for Suppliers in Complying with Global Sustainability Standards

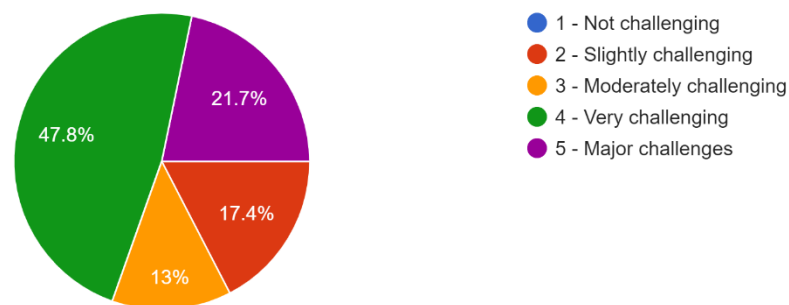


Figure 18: Challenges for Suppliers in Complying with Global Sustainability Standards

Examining Fig 18: Pie Chart provides insights into the perceived challenges suppliers face in complying with global sustainability standards. A small percentage (17.4%) of respondents perceives compliance as slightly challenging. This could suggest a positive inclination among suppliers to align with global sustainability standards, indicating a readiness to embrace and implement sustainable practices. A notable but lower percentage (13%) perceives compliance as moderately challenging. While this indicates a relatively lower level of perceived difficulty, it suggests potential areas for support and capacity-building for suppliers. Organizations and stakeholders may explore initiatives to address these moderate challenges, enhancing supplier capabilities to meet global sustainability standards. A significant percentage (47.8%) perceives compliance as very challenging. This finding emphasizes the substantial hurdles that suppliers face in aligning with global sustainability standards. Targeted support mechanisms, collaboration between organizations and suppliers, and capacity-building programs may be crucial in overcoming these challenges and facilitating greater compliance. Although a smaller percentage perceives it as major challenges (21.7%), this highlights critical areas requiring intervention. Organizations and stakeholders should

focus on understanding and addressing the specific challenges identified by suppliers as major obstacles to compliance with global sustainability standards. This could involve tailored support, resource allocation, and collaborative efforts to create an enabling environment for suppliers to meet these standards effectively.

4.19 Impactful Initiatives for Building Sustainable Procurement Capacity

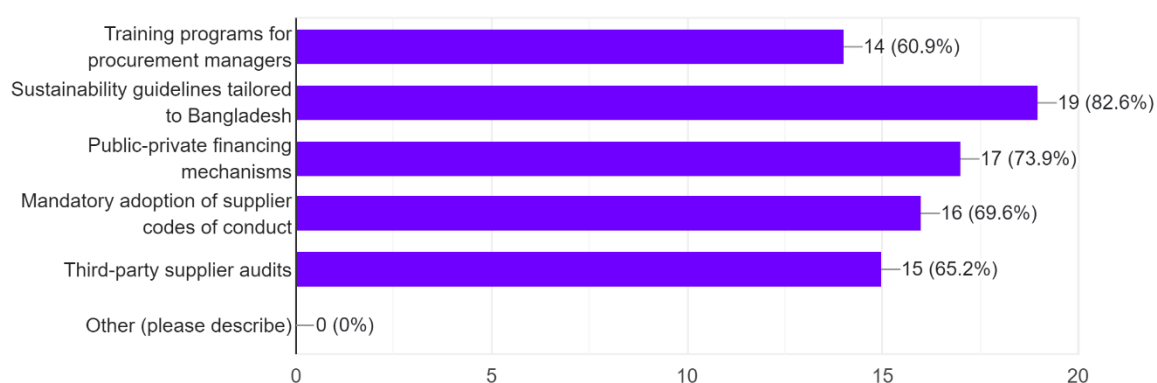


Figure 19: Impactful Initiatives for Building Sustainable Procurement Capacity

Examining Fig 19: Bar Chart sheds light on the initiatives considered impactful for building sustainable procurement capacity. The majority of respondents (60.9%) identify training programs for procurement managers as a crucial initiative. This underscores the significance of internal capacity-building, indicating a recognized need for equipping procurement managers with the knowledge and skills necessary for effective sustainable practices. A high percentage (82.6%) acknowledges the importance of sustainability guidelines tailored to Bangladesh. This highlights a strong preference for context-specific frameworks and standards that consider the unique socio-economic and environmental landscape of the country. Tailored guidelines can provide a more relevant and practical roadmap for organizations navigating sustainable procurement in the Bangladesh context. The endorsement of public-private financing mechanisms by 73.9% of respondents suggests a recognition of the value of collaborative approaches. Public-private partnerships can play a vital role in providing financial support, fostering innovation, and enhancing the overall effectiveness of sustainable procurement initiatives. Furthermore, the call for the mandatory adoption of supplier codes of conduct by 69.6% of respondents indicates a desire for a regulatory framework. This signals a need for enforceable ethical and sustainable practices

among suppliers, emphasizing the importance of regulatory measures to drive industry-wide compliance. Lastly, the recognition of third-party supplier audits as impactful by 65.2% of respondents underscores the value placed on external verification and accountability. Third-party audits contribute to transparency and trust in the supply chain, ensuring that sustainable practices are adhered to and verified by independent entities. Together, these impactful initiatives reflect a comprehensive approach to building sustainable procurement capacity in Bangladesh.

4.20 Prioritizing Sustainable Procurement Focus Areas for Policy and Reporting

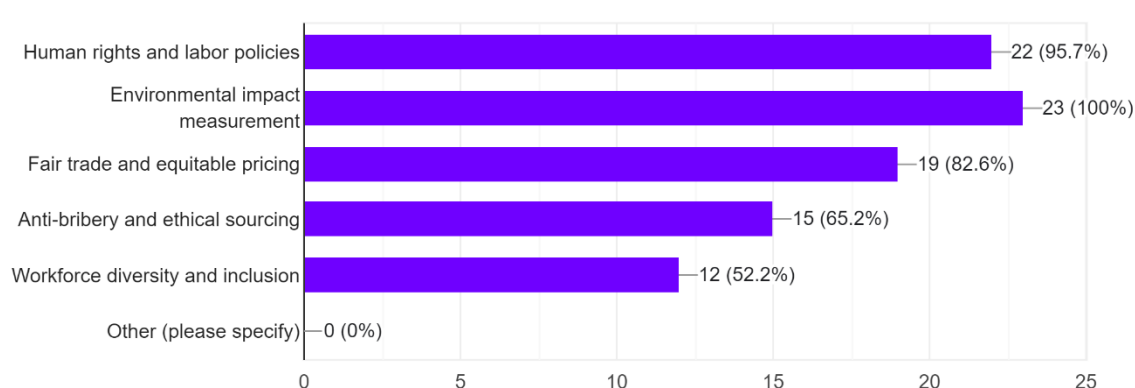


Figure 20: Prioritizing Sustainable Procurement Focus Areas for Policy and Reporting

Analyzing Fig 20: Bar Chart provides valuable insights into the prioritization of sustainable procurement focus areas for policy and reporting. Human rights and labor policies stand out as the foremost priority, with an overwhelming 95.7% of respondents recognizing their centrality. This emphasizes the critical importance of ethical considerations and the protection of human rights within the realm of sustainable procurement. Environmental impact measurement receives unanimous acknowledgment as a top priority, with 100% of respondents highlighting its significance. This unanimous agreement underscores the universal recognition of the crucial role environmental sustainability plays in shaping procurement practices. Organizations are evidently prioritizing efforts to measure and mitigate their environmental footprint. Fair trade and equitable pricing are identified as crucial by 82.6% of respondents, indicating a commitment to ethical sourcing practices and social responsibility. This reflects a growing awareness of the impact of procurement decisions on the fair treatment of suppliers and a desire to contribute positively to the

economic well-being of communities. Anti-bribery and ethical sourcing, recognized as important by 65.2% of respondents, signal a commitment to integrity and ethical conduct in procurement processes. This underscores the need for measures to prevent corruption and ensure that sourcing practices align with ethical standards. Lastly, workforce diversity and inclusion, acknowledged by 52.2% of respondents, highlight a commitment to promoting diversity and equal opportunities within the supply chain. This indicates a growing awareness of the importance of fostering an inclusive and diverse workforce as an integral part of sustainable procurement practices. Together, these prioritized focus areas form a comprehensive framework for ethical, environmentally conscious, and socially responsible procurement policies and reporting.

Chapter 5: Conclusion

6.1 Recapitulation of Key Findings

This research delved into the intricate landscape of sustainable procurement practices in Bangladesh, exploring the challenges, opportunities, and policy recommendations essential for fostering a more sustainable and ethical approach to procurement. The findings illuminated the multifaceted nature of sustainable procurement, unraveling critical insights into the hurdles faced by organizations, the perspectives of suppliers, and the perceptions of stakeholders within the Bangladeshi market. The challenges identified encompassed a spectrum ranging from the lack of sustainability reporting by suppliers to the intricate task of tracking data through complex supply chains. These challenges underscored the need for targeted interventions, such as initiatives to encourage reporting, advanced tracking mechanisms, and the development of context-specific benchmarks. The study emphasized the necessity for a comprehensive strategy tailored to the unique aspects of the Bangladesh market and supply chain landscape.

6.2 Implications of Challenges on Sustainable Procurement Practices

The challenges identified in sustainable procurement practices have far-reaching implications for the broader objectives of ethical sourcing, environmental conservation, and social responsibility. The lack of sustainability reporting by suppliers, identified by a significant percentage of respondents, underscores the urgent need for initiatives promoting transparency. The difficulty in tracking data through complex supply chains not only points to operational inefficiencies but also highlights the necessity for advanced technological solutions, including blockchain, to enhance traceability. Limited resources for measurement and audits emerged as a substantial challenge, indicating the importance of resource allocation and capacity building for robust sustainability performance measurement. Additionally, the difficulty in benchmarking performance in the Bangladesh market emphasized the need for standardized metrics and benchmarks tailored to the specific context, allowing for effective performance evaluation.

6.3 Addressing Challenges through Policy Recommendations

In response to the identified challenges, a set of robust policy recommendations has been formulated. These recommendations span various dimensions of sustainable procurement, including mandatory adoption, development of guidelines, impactful initiatives for building capacity, and prioritizing focus areas for policy and reporting. The policy recommendations advocate for a legal and policy framework that promotes sustainable procurement, stakeholder engagement, and collaboration between organizations and development partners. They emphasize the importance of supplier certification and qualification, transparency, and the integration of sustainability into public procurement regulations. The development of guidelines is proposed to be a comprehensive approach involving legal frameworks, stakeholder consultation, and capacity building.

6.4 The Road Ahead: A Call for Holistic Approaches

As organizations navigate the evolving landscape of sustainable procurement in Bangladesh, it is evident that a holistic approach is imperative. This involves not only addressing the challenges head-on but also fostering a culture of sustainability within organizational structures. Allocating resources, investing in training programs, and creating dedicated roles for sustainable procurement personnel are pivotal steps toward building the necessary internal capacities. The prioritization of focus areas, as revealed by stakeholders, underscores the interconnectedness of human rights, environmental impact measurement, fair trade, anti-bribery measures, and workforce diversity. A holistic approach to sustainable procurement must consider and balance these focus areas to ensure a well-rounded and ethical procurement process.

6.5 Recommendations:

1. Mandatory Adoption of Sustainable Procurement:

- Enact policies compelling organizations to integrate sustainability criteria into procurement.
- Back legal requirements with legislation, regulations, or directives.

- Establish specific sustainability criteria for organizations to consider in procurement decisions.
- Monitor compliance and encourage supplier dialogue on sustainability.

2. Development of Sustainable Procurement Guidelines:

- Establish a legal framework incorporating sustainability into procurement laws.
- Conduct stakeholder consultations for diverse input.
- Define sustainability criteria covering environmental, social, and economic dimensions.
- Implement capacity-building programs, supplier engagement, and life cycle assessments.

3. Supplier Certification and Qualification:

- Evaluate suppliers against recognized sustainability standards.
- Assess potential suppliers for alignment with sustainability requirements.
- Conduct regular audits and monitoring of certified and qualified suppliers.
- Engage in supplier development programs for collaborative improvement.

4. Incentives for Sustainable Procurement:

- Offer grants or funding opportunities to alleviate initial costs.
- Enhance organizational reputation and brand image through sustainable practices.
- Mitigate supply chain risks associated with environmental, social, and governance issues.
- Leverage benchmarking for performance improvement and target setting.

5. Collaboration with Development Partners and NGOs:

- Establish clear and internationally recognized sustainable procurement guidelines.
- Conduct collaborative capacity-building and training initiatives.
- Engage stakeholders in the supplier evaluation process for comprehensive sustainability assessment.
- Collaborate on joint projects, advocacy efforts, and policy influence.

6. Awareness and Capacity Building:

- Develop comprehensive training programs for procurement professionals and suppliers.
- Conduct awareness campaigns through various communication channels.

- Engage with stakeholders for input and collaboration.
- Collaborate with industry associations and chambers of commerce.
- Develop e-learning modules and online resources for widespread adoption.
- Share case studies and best practices to inspire other organizations.

7. Integration of Sustainability in Public Procurement Regulations:

- Establish clear and measurable sustainability goals in public procurement regulations.
- Make sustainability criteria mandatory in bid evaluations.
- Incorporate comprehensive life cycle assessment and cost-benefit analysis.
- Promote green public procurement and track progress through robust reporting.
- Introduce socially responsible contract clauses.

8. Monitoring, Reporting, and Accountability:

- Define specific performance indicators aligning with sustainability goals.
- Implement systematic monitoring and evaluation processes.
- Develop a standardized system for collecting data on sustainable procurement practices.
- Ensure transparency through public availability of procurement data and sustainability reports.
- Establish accountability mechanisms with penalties and incentives.
- Assign internal responsibility and consider third-party verification.

9. Research and Development:

- Encourage investment in sustainable innovation through financial incentives.
- Foster partnerships between government procurement agencies and research institutions.
- Use public procurement as a catalyst for driving innovation.
- Launch challenge-based innovation programs.
- Support sustainability standards and certifications.
- Establish platforms for data sharing and collaboration.
- Consider longer-term contracts to incentivize investment in R&D.
- Create a Sustainable Public Procurement Research Fund.
- Monitor and evaluate the impact of R&D initiatives regularly.

6.6 Final Thoughts

In conclusion, this study sheds light on the complex dynamics of sustainable procurement in Bangladesh. The challenges unveiled are not roadblocks but rather signposts directing organizations toward strategic interventions. The policy recommendations presented serve as a roadmap for stakeholders, guiding them in the adoption of sustainable procurement practices that align with global standards while considering the unique socio-economic and environmental landscape of Bangladesh. Moving forward, organizations are urged to view sustainable procurement not merely as a compliance requirement but as a strategic imperative for long-term resilience, reputation enhancement, and positive contributions to societal and environmental well-being. The journey toward sustainable procurement in Bangladesh is ongoing, and this research endeavors to be a catalyst for positive change, laying the foundation for a more sustainable and ethically conscious future in procurement practices.

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Appendix