

The Possibilities and Implementation Practice of Sustainable Procurement in Local Government Engineering Department (LGED)

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

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It is hereby declared that

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2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Approval

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Ethics Statement

This research has been conducted in full compliance with academic integrity and ethical standards. All respondents participated voluntarily, with their informed consent obtained prior to data collection. Confidentiality and anonymity of participants have been strictly maintained, and no information has been disclosed that could identify individuals or organizations.

The study avoided any form of plagiarism, data fabrication, or misrepresentation, and all sources of information have been properly acknowledged through accurate referencing. The findings are presented solely for academic purposes, with no conflict of interest influencing the outcomes. The research adhered to the ethical guidelines and policies of BRAC Institute of Governance and Development (BIGD), BRAC University.

Abstract

Sustainable Procurement (SP) incorporates environmental, social, and economic sustainability into procurement methods, guaranteeing long-term advantages for public sector entities. The Local Government Engineering Department (LGED) in Bangladesh is crucial in the development of rural, urban, and water infrastructure via comprehensive procurement initiatives. Nonetheless, current public procurement systems lack systematic frameworks to evaluate contractors' environmental and social performance, obstructing the incorporation of sustainability principles. This study examines the potential and implementation practices of SP within LGED, highlighting significant problems including insufficient policy enforcement, limited knowledge, and budgetary constraints. The results demonstrate that whereas Development Partner (DP)-funded projects integrate sustainability measures, Government of Bangladesh (GOB)-funded projects predominantly emphasize social and ethical dimensions, frequently overlooking environmental and economic factors. Enhancing sustainability in public procurement necessitates a comprehensive policy framework, robust governmental commitment, and capacity-building programs for stakeholders. The report advocates for strategic measures, such as sustainable procurement policies, contractor assessment criteria, and training initiatives, to promote the implementation of sustainable practices within LGED. Additionally, collaboration with development partners, private sector stakeholders, and regulatory bodies can facilitate knowledge exchange and resource mobilization to support sustainable procurement initiatives.

In summary, incorporating sustainability into public procurement is crucial for realizing sustainable economic, environmental, and social advantages. Despite existing limitations, effective policy interventions and capacity-building initiatives can markedly enhance sustainable procurement processes within LGED. Additional research is advised to investigate the long-term effects of SP implementation, evaluate the efficacy of suggested interventions, and determine optimal strategies for expanding sustainable procurement throughout Bangladesh's public sector.

Keywords: Sustainable Procurement (SP), Public Procurement, LGED, Policy and capacity gaps, DP and GOB funded projects.

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List of Abbreviations and Acronyms

CIPS	- Chartered Institute of Procurement & Supply
CPTU	- Central Procurement Technical Unit
CSR	- Corporate Social Responsibility
DP	- Development Partner
EU	- European Union
FSC	- Forest Stewardship Council
GOB	- Government of Bangladesh
GPP	- Green Public Procurement
GRI	- Global Reporting Initiative
ICT	- Information and Communication Technology
IMED	- Implementation Monitoring and Evaluation Division
ISO	- International Organization for Standardization
LCA	- Life Cycle Assessment
LEED	- Leadership in Energy and Environmental Design
LGED	- Local Government Engineering Department
LGRD	- Ministry of Local Government, Rural Development, and Cooperatives
MPSM	- Masters in Procurement and Supply Chain Management
PWD	- Public Works Department
SD	- Sustainable Development
SP	- Sustainable Procurement
SPP	- Sustainable Public Procurement
SPPSC	- Sustainable Public Procurement Steering Committee
TBL	- Triple Bottom Line
UNEP	- United Nations Environment Programme
VFM	- Value for Money
WB	- World Bank

Glossary

Term	Definition
Corporate Social Responsibility (CSR)	A business approach that integrates social and environmental concerns into operations and interactions with stakeholders.
Development Partner (DP)	International organizations or donors (e.g., World Bank, ADB, JICA) that provide financial or technical assistance for development projects.
Government of Bangladesh (GOB) Funded Project	A project financed through the national budget of Bangladesh, usually under the Ministry of Finance or relevant ministries.
Green Public Procurement (GPP)	A subset of sustainable procurement that emphasizes purchasing environmentally friendly goods, services, and works.
Life Cycle Assessment (LCA)	A systematic method of assessing the environmental impact of a product, process, or service throughout its entire life cycle—from raw material extraction to disposal.
Sustainable Procurement (SP)	The process of acquiring goods, works, and services in a way that ensures value for money while minimizing negative environmental impacts, promoting social equity, and supporting economic development.
Sustainable Public Procurement (SPP)	A government-led procurement approach that incorporates environmental, social, and economic sustainability considerations into public sector purchasing decisions.
SWOT Analysis	A strategic tool used to evaluate Strengths, Weaknesses, Opportunities, and Threats of procurement practices within LGED.
Triple Bottom Line (TBL)	A sustainability framework that evaluates performance based on three dimensions—economic, environmental, and social.
Value for Money (VFM)	Achieving the best balance of cost, quality, and sustainability in procurement decisions over the life cycle of goods, works, or services.

CHAPTER 1

EXPERIENCE IN ENGINEERING AND PUBLIC PROCUREMENT AT LGED

1.1 About

Md. Shahrior Alam currently working as an Assistant Engineer in Road Maintenance and Road Safety unit (RMRSU) of Local Government Engineering Department (LGED) actively engages in the maintenance and partaking of the rural and regional road infrastructure of Bangladesh. Academic Profile: He has a B.Sc. Civil Engineering degree (MIST) and an M.Sc Civil Engineering (Structures) degree (BUET) and with the experience of implanting the procurement system, working in construction supervision, and participating in quality assurance, equipped him to take up the multidimensional challenges of infrastructure maintenance.

1.2 Responsibilities in the Maintenance Unit

The key responsibilities include:

- **Tender Documents:** Preparation of tender documents such as drafting and reviewing of tender documents and operational guidelines of Routine Maintenance Contracts (RMC) as per discussed in the Public Procurement Rules (PPR) 2008 as well as LGED processes.
- **Maintenance Planning and Resource Allocation:** assist the senior engineers in road planning, scheduling activities and allocation of resources and budgets to road maintenance on district and Upazila levels.
- **Field Supervision and Implementation Oversight:** Supervising the routine and emergency works of the interest of the maintenance, such as patch repairs, surface dressing, hard bed preparation, and carpeting, the need to ensure that the implemented works happened successfully by matching the agreed upon the technical specifications.

- **Quality Control and workmanship standards:** Construction quality and workmanship that ensure that all of the maintenance activity is in LGED standard and performance guidelines.
- **Documentation and Reporting:** To review and prepare all the available maintenance documents and to make the related submissions of the documentation and photographs and inspection notes and physical progress statements.
- **Cooperation with Field Offices and Contractors:** Liaising with Upazila Engineers, contractors and district-level teams on a regular basis to maintain coordination, solve any problems at field-level, and eliminate delays and technical differences.
- **Assistance in Procurement and evaluation Procedures:** Responsible in assisting in bid evaluation, award of contracts, performance monitoring to realize timely and cost-effective project delivery.

1.3 Technical Proficiency, Impact in the Field, and Navigating Challenges

Md. Shahrior Alam is an expert in tender preparation and contract management and has experience in the drafting of technical specifications, the management of the various procurement processes, and more importantly, partaking of processes in the evaluation of Tender Opening and Evaluation Committees (TOC and TEC). He has experimental use with most of the laboratory equipment used in testing and quality control which include core drill machines, Los Angeles Abrasion (LAA) machines, Dynamic Cone Penetrometers (DCP), rebound hammers and some of the commonly used equipment in the quality check. His research career involved working in data analysis, modelling, whereby he used machine learning to estimate concrete strength and assess environmental performance. His involvement with academics and research though not stated openly shows that he is familiar with the structural analysis and design engineering software tools.

Sustainability, he has a solid interest in conducting research on sustainable procurement, and an active interest in supporting environmentally friendly and cost-effective maintenance practices. In his continued attention, there is:

- Promotion of use of local materials and also use of recycled aggregates as they are feasible;

- Assisting in flood-safe and low-lying road resorting to climatic conditions;
- The promotion of life-cycle cost analysis during choice of maintenance options;
- Empowering the community in the maintenance of minor activities.

Such initiatives also commensurate with this thesis and professional association, especially his being a Member of Chartered Institute of Procurement and Supply (MCIPS) and Institution of Engineers, Bangladesh (IEB). He also attempts to counter these challenges by actively participating in the process, flexible work schedule, and keep in constant contact with the upper management and representatives of the field.

CHAPTER 2

OVERVIEW OF ORGANIZATION

2.1 Introduction to LGED

Local Government Engineering Department (LGED) is an important public sector institution of Bangladesh and its prevalence is of great significance in carrying out the rural, urban and water infrastructure development projects. LGED has been functioning under the Ministry of Local Government, Rural Development and Cooperatives (LGRD&C), whose mission is to achieve poverty alleviation, improvement of connectivity and realization of inclusive growth by developing infrastructures and providing technical assistance to the local government institutions.

2.2 Core Responsibilities

LGED undertakes diverse development activities including:

- Rural road improvement and maintenance
- Construction of bridges, culverts, and growth center
- Small-scale water resource development (SSWRDP)
- Urban and municipal services improvement
- Primary school construction and disaster-resilient shelters
- Poverty alleviation and employment generation (e.g., LCS programs)

2.3 Organizational Structure

LGED operates through a decentralized organizational structure that enables timely and effective infrastructure service delivery across the country. At the apex is the Head Office in Dhaka, led by the Chief Engineer, who oversees key functional units including Planning, Design, Monitoring, ICT, Audit, Procurement, Quality Control and Projects of LGED. These central units are responsible for strategic planning, regulatory compliance, and technical

oversight. At the field level, Divisional, Regional, and District Offices are managed by Additional Chief Engineer, Superintending Engineers and Executive Engineers, who coordinate and supervise project implementation across their respective jurisdictions. At the grassroots, Upazila Offices, led by Upazila Engineers, are tasked with the direct execution of construction, maintenance, and community-based infrastructure projects. This multi-tiered framework ensures efficient coordination, localized decision-making, and enhanced responsiveness to regional development needs.

2.4 Overview of LGED Procurement Practices

Local Government Engineering Department (LGED) has procurement as its core business activity since it is required to stage a huge number of development projects annually. The principles that govern the procurement process undertaken by LGED are transparency, accountability, efficiency, and value for money. All is followed by the legal and regulatory framework which is put in place under:

- The Public Procurement Act, 2006
- The Rules on Public Procurement (PPR), 2008

LGED is an executing agency having a wide range of projects portfolio with both Government of Bangladesh and its development partners (e.g., World Bank, ADB, JICA, IFAD) funding. It is on continuous path to improving its procurement systems to achieve the international best practices in procurement and indeed in delivering sustainable infrastructures.

2.5 Types of Procurement in LGED

LGED undertakes the following types of procurement:

- **Works:** Construction of roads, bridges, school buildings, embankments, etc.
- **Goods:** Procurement of laboratory equipment, construction materials, IT equipment, vehicles, and office supplies.
- **Services:** Hiring of consultants for design, supervision, feasibility, and third-party monitoring.

2.6 Procurement Procedures

The Open Tendering Method (OTM) is also the most widely used method as it entails a wide-ranging competition and transparency of construction works and large supply contracts. In lower value procurement, mainly Upazila and district wise procurement, LGED applies the method of Request for Quotation (RFQ) that is quicker, easier and does not compromise the minimum competitive standards. There are situations when a good or service can be provided by one and only one source or time is heavily restricted, the Direct Procurement Method (DPM) is used in close justification. In case of a call to action or specialized work where there is little competition due to knowhow or availability, the Limited Tendering Method (LTM) is adopted. When the consulting services are complex, or have a high value to LGED, the Two-Stage Tendering or the Quality- and Cost-Based Selection (QCBS) method will be used, hence offering a balance of technical competencies and financial worth. The adaptable self-regulated program will permit LGED to fulfill its various procurement requirements successfully yet be capable of abiding by the guidelines of both national and donor.

The standard tender document (PW3) is used in civil works as well as tender document (PG3) used in procurement of equipment, materials and supplies. LGED uses the Standard Request for Proposals (SRFP) in the choice of consulting firms or individual consultants. Under the donor funded projects LGED develops the PPA/PPR compliant bidding documents, which parallel national stipulations and development partner specific demands. Application of such standardized templates will help foster fairness, minimize ambiguity, as well as assist in proper management of procurement across all levels of projects.

2.7 Sustainable Procurement Practices

Recently, LGED has started integrating **sustainability considerations** in procurement, especially in donor-funded projects. This includes:

- Environmental safeguards (eco-friendly materials)
- Social safeguards (gender participation, fair labor practices)
- Economic value (life-cycle costing, local supplier development)

Although full-scale implementation of Sustainable Procurement (SP) is in early stages, there are number of things need to analyze here.

2.8 Key Achievements and Challenges in Procurement

Over the past years, LGED has adopted a number of innovative processes to reinforce procurement system, inspire transparency, efficiency, and inclusivity. It is interesting to note that published over 90 percent tenders are made using the e-GP (Electronic Government Procurement) system, which is much more convenient, competitive, and efficient in terms of procedures. LGED has implemented framework contracts in some categories in order to facilitate easy procurement of items and services that are frequently demanded. With regard to regulatory integrity and accountability, the department adheres strictly to audit recommendations by the Central Procurement Technical Unit (CPTU). In addition, LGED in the bidding documents has issued ethical procurement provisions comprising of anti-corruption and conflict-of-interest statements. Another socially responsive aspect of the procurement strategy of LGED is the involvement of Labour Contracting Societies (LCS), especially groups run by women, in the small maintenance jobs which facilitated the development of the community as well as women empowerment. Also, it is imperative to identify the challenges through evidence-based assessment in order to come up with specific solutions, optimize institutional effectiveness, and guarantee value-for-money in the delivery of public infrastructure. LGED takes the initiative as the leaders in the development of responsible and inclusive public procurement processes in Bangladesh.

CHAPTER 3

INTRODUCTION

3.1 Background

Sustainable procurement (SP) is defined as procurement that aligns with the tenets of sustainable development, which include upholding the rule of law, fostering good governance, and guaranteeing a robust, equitable, and healthy society. Sustainable procurement maximizes the effects on the environment, society, and economy over the course of the product or service's life cycle and meets the organization's sustainability goals (CIPS, 2024). Three pillars support the idea of sustainability: social, environmental, and economic (Enel, 2023). Sustainable procurement is a technique that incorporates sustainability concerns at every level of the procurement process in order to attain optimal value for money (VFM) when accomplishing development objectives (Zhao et al, 2023). Behravesh et al, 2022 suggested four important factors that influence SP adoption: institutional, stakeholders, culture, and capability.

In Bangladesh, the Local Government Engineering Department (LGED) is essential for the planning and execution of local infrastructure projects. LGED, as a prominent public sector entity, oversees the development of rural, urban, and small-scale water resource infrastructure, positioning it as a crucial contributor to the incorporation of sustainable procurement methods into national development initiatives (Sharmin, 2022). The implementation of SP in LGED can greatly enhance the nation's sustainable development goals by promoting efficient resource use, minimizing environmental harm, and encouraging equitable economic growth.

This study seeks to examine the potential and challenges related to the adoption of sustainable procurement within LGED. This research aims to find potential for improving SP adoption in the public sector by examining current procurement methods, legislative frameworks, and stakeholder responsibilities. Comprehending these dynamics is essential for policymakers, procurement specialists, and development practitioners aiming to

establish a procurement system that achieves economic efficiency while fostering sustainability in Bangladesh's infrastructure development.

3.2 Research Objectives

The study aims to comprehend the ways in which public procurement might promote social, environmental, and economic factors. Understanding the potential and limitations for applying sustainability standards to the LGED's procurement procedure is also being attempted.

- To identify and examine the current sustainable issues like policies, procedures, and implementation shortcomings, as well as the current state of sustainable procurement at LGED.
- To find the opportunities and challenges to implement those current sustainable issues in procurement structure.
- To provide suggestions for resolving the issues and enhancing sustainability in LGED procurement practices.

3.3 Significance of the Study

Sustainable procurement is vital for achieving economic efficiency, environmental conservation, and social accountability in public sector initiatives. This study is of considerable importance to various stakeholders:

- The study highlights best techniques and areas for enhancement, facilitating the formulation of efficient procurement strategies within LGED.
- Understanding sustainability requirements can help suppliers align their practices with evolving procurement standards, enhancing competitiveness for suppliers and contractors.
- It provides insights into existing procurement challenges and recommendations for integrating sustainability criteria into national procurement policies.
- The study contributes to the existing literature on sustainable procurement, serving as a reference for future research in Bangladesh and other developing countries.

This research seeks to rectify deficiencies in sustainable procurement procedures within LGED, hence facilitating the adoption of more efficient, transparent, and environmentally responsible procurement policies in Bangladesh's public sector.

3.4 Scope of Research

Sustainable Public Procurement (SPP) is the term used to describe sustainable procurement activities conducted by public authorities or government agencies, bodies, or institutions. (WB, 2024). From a supply chain perspective, procurement must also examine how choices affect manufacturers' Triple Bottom Line (TBL). The findings of a survey on sustainable procurement practices conducted by 44 Housing Associations (HAs) in the United Kingdom (UK) with an English base and responsibility for social housing provision, support previous research from other sectors that indicates that: 1) there is a lack of progress in breaking through the inertia surrounding sustainable procurement; and 2) in the few instances where practices have been established, only the environmental component of the TBL is taken into account. (Walker & Brammer, 2009). In addition to these mandated duties, purchasing organizations have the authority to impose extra demands on suppliers, such as environmental and social standards, which the supplier must meet for the duration of the contract (Hunt, 2018). The goals of sustainable procurement policies and public procurement initiatives may need to be better matched by policymakers (Walker & Brammer, 2012).

There is few research on compared to studies of sustainable procurement conducted in the public sector of Bangladesh (Hoque, 2018, Sharmin, 2022). Here, analysing Sustainable Public Procurement (SPP) offers a chance to promote sustainability for this research. This study will continue to be primarily focused on public sector procurement. The purpose of the study is to determine the level of sustainability practices currently implemented by public sector organizations in Bangladesh, with a focus on the Local Government Engineering Department (LGED). Data will be collected via in-depth interviews with LGED officials, a comprehensive questionnaire, and analysis.

3.5 Limitations of The Research

The primary constraint of this investigation was both conceptual and technical. Due to the lack of comprehensive understanding and research conducted inside this sector, it was challenging to locate relevant data. The absence of practice has diminished the importance of sustainability among decision-makers in LGED. The time available for comprehending such an extensive subject was severely constrained. The study timeframe and data collection methods were selected due to budgetary limitations. These limitations must be acknowledged when interpreting the data, as they can affect the depth, accuracy, and generalizability of the study's conclusions.

3.6 Organization of The Thesis

The outcomes of the research carried out have been divided into different topics and presented in five chapters.

The lists the author as the practical experience in engineering and the procurement in the staff of LGED at Chapter 1. It outlines professional duty, technical competence, involvement in procurement activities, such as contract administration, quality assurance, and sustainability-oriented project.

Descriptive outline in Chapter 2 of the Local Government Engineering Department (LGED) in Bangladesh in taking into consideration its primary functions, structure, and its system of procurement. It explains the kind and process of procurement followed by LGED especially the most recent sustainable procurement processes. Identification of both major successes and remaining issues in terms of matching procurement activities with sustainability goals is also discovered in the chapter.

A general introduction to sustainable procurement is provided in Chapter 3. The chapter also covers the study's overall objectives, including the scope of the research, the methodology, and the report's organization.

To provide a theoretical overview of the topic, Chapter 4, "Literature Review," presents the concepts of sustainability, sustainable development, and sustainable procurement. This

chapter also elaborates on the numerous terminologies used in sustainable procurement. Additionally, the historical context and progression of LGED and public procurement have been illustrated. The chapter also discusses Bangladesh's general public procurement situations, including the legal framework, procurement procedures, and general principles.

Methodology, research design, sampling, and data collecting method are all covered in detail in chapter 5. The results of gathering and examining primary and secondary data are presented in this study. There will be questionnaires available to help identify current practices, possibilities, and barriers to implementing sustainable issues. Case studies of different projects will be examined to make sure the data is a valid statement of sustainability for use with LGED. Additionally, a SWOT analysis will be carried out to determine the advantages and disadvantages of sustainable buying methods in LGED.

Chapter 6 examines, presents, and discusses data and information about sustainable procurement that were gathered using LGED questionnaires. This chapter provides a comprehensive overview of sustainable procurement procedures in Bangladesh's public sector, with a focus on LGED. Finding the advantages and difficulties of sustainable procurement methods is another.

Finally, Chapter 7 concluded with some recommendations and closing thoughts. The study concludes with Appendices and References to bolster the research effort. Based on the findings of the fourth chapter, a detailed conclusion is presented in this final chapter. Additionally, this chapter offers potential directions for future research.

CHAPTER 4

LITERATURE REVIEW

4.1 General

Sustainable procurement refers to the acquisition of goods and services that meets social, economic, and environmental criteria. We evaluate long-term sustainability issues, including the reduction of carbon emissions, the promotion of ethical labor practices, and the assurance of ethical procurement of resources and materials. Governmental entities like LGED, responsible for reconciling development objectives with sustainability requirements, have progressively adopted sustainable procurement strategies (Walker & Brammer, 2012).

4.2 The Concept of Sustainable Procurement

The UK Sustainable Procurement Task Force has developed the notion of sustainable procurement, which has been embraced by other organizations, including CIPS. Sustainable procurement is defined as the process through which firms fulfill their requirements for labor, utilities, goods, and services in a manner that maximizes value for money over the company's lifespan, benefiting the company, the environment, society, and the economy. Thus, it is a strategy that considers economic, social, and environmental sustainability while making purchasing decisions. Aroonsrimorakot & Laiphrakpam, 2024 created Fig. 4.1, illustrating how procurement can enhance a holistic approach that considers the impact of current decisions and actions on the economy, society, and environment.

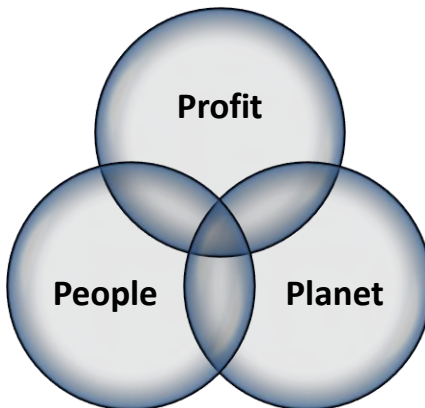


Fig 4.1: The 3 pillars of sustainability

4.3 Theoretical Framework of Sustainable Procurement

Sustainable procurement incorporates environmental, social, and economic factors into purchasing decisions, guaranteeing enduring advantages for companies and society. Numerous theoretical frameworks elucidate the factors that facilitate and hinder the adoption of sustainable procurement.

4.4 The Triple Bottom Line (TBL)

The Triple Bottom Line (TBL) concept, established by Elkington (1997), emphasizes the necessity of harmonizing three fundamental dimensions: economic, environmental, and social sustainability. The implementation of TBL in procurement allows firms to realize sustained cost reductions, improve corporate image, and reduce environmental impact (Walker & Brammer, 2012). Research indicates that firms adopting TBL principles achieve enhanced stakeholder trust, diminished operational risks, and competitive benefits (Gimenez, Sierra, & Rodon, 2012). Furthermore, procurement strategies that correspond with the Triple Bottom Line (TBL) support corporate social responsibility (CSR) goals, enhancing ethical sourcing and adherence to labor rights (Carter & Rogers, 2008).

4.5 Institutional Theory

Institutional theory elucidates how organizational behavior is influenced by regulatory pressures, stakeholder expectations, and prevailing institutional norms (DiMaggio & Powell, 1983). Public sector entities are substantially impacted by government policies, international standards, and sustainability rules within the framework of sustainable procurement (Cheng, Appolloni, D'Amato, & Zhu, 2018). Research suggests that nations with strong sustainability policies, like the European Union's Green Public Procurement (GPP) framework, exhibit greater adoption of sustainable procurement methods (Testa, Annunziata, Iraldo, & Frey, 2016). Institutional constraints from global development organizations, including the World Bank and United Nations, propel the incorporation of sustainability in procurement, especially in donor-funded projects (McCrudden, 2004).

4.6 Stakeholder theory

Stakeholder theory asserts that organizations must reconcile the interests of various stakeholders, such as government entities, suppliers, local communities, and non-governmental groups (Freeman, 1984). Involving stakeholders in procurement decisions promotes openness, accountability, and improved sustainability results (Meehan & Bryde, 2011). In public sector procurement, robust collaboration with suppliers and contractors enhances adherence to environmental and social criteria (Brammer & Walker, 2011). Furthermore, stakeholder engagement fosters innovation in sustainable procurement by promoting the creation of environmentally friendly products and ethical supply chain practices (Erdmenger, 2003).

4.7 Development of Hypotheses

Drawing on theoretical foundations and empirical literature, the subsequent hypotheses are posited:

The integration of sustainable public procurement practices in LGED is positively influenced by policy enforcement and regulatory frameworks. Institutional theory posits that organizations implement sustainability practices in reaction to regulatory requirements (DiMaggio & Powell, 1983). Research demonstrates that public sector organizations with rigorous rules and legal structures show enhanced compliance with sustainable procurement procedures (Cheng et al., 2018). The efficacy of policy enforcement in advancing sustainable procurement has been noted in areas where explicit guidelines and compliance monitoring systems are established (Testa et al., 2016).

Projects sponsored by development partners (DP) exhibit more sustainable integration compared to those funded by the government (GOB). Studies demonstrate that donor-funded initiatives adopt more rigorous sustainability standards owing to international procurement norms and compliance obligations (Brammer & Walker, 2011). Institutions like the World Bank and Asian Development Bank (ADB) implement environmental and social protections, promoting enhanced sustainability integration relative to domestic government-funded projects (McCrudden, 2004). Empirical research in developing

economies indicates that externally financed projects frequently emphasize environmental and social implications within their procurement framework (Amann, Roehrich, Eßig, & Harland, 2014).

The absence of financial incentives and limitations in supplier capabilities adversely affect the execution of sustainable procurement within LGED. The implementation of sustainable procurement in poor nations is frequently obstructed by budgetary constraints and supplier preparedness (Uyarra, Edler, Garcia-Estevez, Georghiou, & Yeow, 2020). Research indicates that small and medium-sized firms (SMEs) face challenges in fulfilling sustainability mandates due to constrained resources, insufficient technical skills, and elevated compliance expenses (Walker & Preuss, 2008). The lack of financial incentives deters suppliers from engaging in sustainable production techniques (Geng & Doberstein, 2008).

Capacity-building activities and stakeholder involvement significantly enhance the adoption of sustainable procurement in LGED. Rationale: Stakeholder theory posits that effective interaction with procurement officials, suppliers, and contractors improves the execution of sustainable procurement (Freeman, 1984). Capacity-building activities, including training programs, knowledge-sharing platforms, and supplier development schemes, substantially enhance procurement professionals' capacity to incorporate sustainability criteria (Meehan & Bryde, 2011). Empirical evidence indicates that nations that invest in procurement training programs see increased adoption rates of sustainable practices (Gimenez et al., 2012).

Projects that integrate sustainability strategies yield enhanced economic efficiency, environmental advantages, and social effect. The TBL framework highlights the enduring economic, environmental, and social benefits of sustainable procurement (Elkington, 1997). Studies indicate that firms emphasizing sustainability in procurement realize cost savings via energy efficiency, waste reduction, and enhanced resource management (Carter & Rogers, 2008). Moreover, sustainable procurement improves corporate reputation, community welfare, and adherence to international sustainability norms (Testa et al., 2016).

4.8 Global Trends in Sustainable Procurement of Developed and Developing Countries

Governments all throughout the world are realizing how important sustainable procurement (SP) is to accomplishing larger sustainable objectives. In nations like the UK and Canada, sustainable procurement has been deep-rooted into public policy frameworks (McCrudden, 2004). These countries have implemented procurement strategies (PS) that give preference to purchase eco-friendly goods, promote waste minimization, and assist local contractor. Green public procurement (GPP) is a cornerstone of the EU's sustainability agenda, mandated by EU regulations in all member states (Testa et al, 2016).

Although developed nations have a considerable amount of experience with sustainable procurement procedures, emerging countries have unique issues. Insufficient financial resources, insufficient understanding, and weak legal frameworks are frequently the obstacles that prevent these nations from adopting sustainable procurement practices (Brammer & Walker, 2011). However, according to recent research, public sector organizations in developing nations are beginning to understand the value of sustainability in procurement due to donor mandates, global pressure, and environmental concerns (Uyarra et al, 2020).

4.9 LGED: A Regional View of Sustainable Procurement

In Bangladesh, the Local Government Engineering Department (LGED) is working on the development of infrastructure, especially in rural and semi-urban areas as public organization. Projects related to schools, water supply systems, bridges, and road building are under the supervision of LGED. LGED suggestively contributes to the nation's sustainable development (SD) initiatives owing to its extensive mission. Sustainable procurement practice is essential for LGED since it promotes community welfare, enhances local economies, and markedly diminishes the environmental impact of construction activities (Sharmin, 2022).

4.10 Possibilities for Sustainable Procurement in LGED

There are numerous opportunities for LGED to successfully implement sustainable procurement practices:

- **Environmental Guidelines and Certifications:** Through environmental certification, an organization can freely choose to adhere to specified processes or goals established by the certification body (Nebel et al, 2005). Certification is a type of environmental control and development. Procurement criteria can guarantee that products and services fulfill sustainability requirements by incorporating eco-labels and environmental standards (Testa et al, 2016). For example, obtaining building supplies from vendors certified by ISO 14001 can significantly lessen the environmental impact.
- **Local Contractor/Supplier Involvement:** Supporting local suppliers can enhance the social sustainability of procurement by fostering local economic growth and employment creation. This is particularly significant in rural regions where most LGED projects are situated (Sharmin, 2022).
- **Developing Capabilities and Training:** Enhancing the capacity of procurement officers to understand and apply sustainable procurement principles is essential. Training programs enable employees to align their behaviors with sustainability objectives (Preuss, 2009).
- **Frameworks for Policies and Regulations:** Establishing explicit standards that prioritize sustainability in purchasing decisions will create a robust framework for execution. To ensure adherence from suppliers and contractors, LGED may integrate sustainable criteria into contracts and tender agreements (Brammer & Walker, 2011).

4.11 Implementation Techniques of sustainable procurement in LGED

A multifaceted strategy is necessary for the real implementation of sustainable procurement procedures in LGED.

- **Education and Awareness:** The initial measure to advocate for the significance of sustainable procurement among LGED stakeholders and staff is education. This involves engaging with contractors and suppliers to ensure they understand the

specifications. This collaboration highlights the significance of involving suppliers via instructional programs to promote sustainable buying practices (Walker et al, 2012).

- **Pilot Projects:** Implementing pilot projects to demonstrate the feasibility of sustainable procurement is one of the most effective methods for its adoption. For example, LGED may opt to utilize energy-efficient technologies in construction projects or prioritize the use of recyclable materials in road development. The Waste Isolation Pilot Plant of the U.S. Department of Energy exemplifies the integration of sustainable procurement practices into its operations, prioritizing energy-efficient products, those containing recycled materials, and other environmentally beneficial attributes (Walker et al, 2012).
- **Monitoring and Evaluation:** LGED must establish monitoring measures to ensure the proper implementation of sustainable procurement procedures. This may entail performing regular audits and assessments of procurement processes to determine their alignment with sustainability objectives (Walker et al, 2012).

It functions as the government's construction agency and a regulatory body, overseeing and project-managing the country's construction industry under LGED's watchful eye. The sustainability factor for LGED is displayed in Fig. 4.2 (Sharmin, 2022).



Fig 4.2: Sustainability consideration in public procurement in LGED

4.12 Obstacles to Sustainable Procurement in LGED

Despite the potential, a number of barriers may stand in the way of successfully integrating sustainable procurement into LGED:

- **Financial Concerns:** The perception that sustainable procurement incurs higher costs than conventional approaches is a significant barrier (Brammer & Walker, 2011). Research demonstrates that sustainable procurement often produces long-term benefits that outweigh initial costs.
- **The Insufficient Experience:** Personnel at LGED may lack the specific expertise required for sustainable procurement. Procurement officers may struggle to include sustainability factors into their decision-making if they lack adequate training (McCrudden, 2004).
- **Limited Capacity of Supplier/Contractor:** Local providers, particularly in rural regions with insufficient infrastructure and technology, may not consistently fulfill the sustainability criteria established by LGED.

4.13 Sustainable Public Procurement

The term "sustainable public procurement" (SPP) describes how public organizations purchase goods, services, and construction projects while taking into account the social and environmental effects in addition to the financial ones. SPP's main objective is to make sure that decisions made about procurement support sustainable development by adhering to the values of minimizing harm to the environment, advancing social justice, and guaranteeing long-term economic viability (Preuss, 2009). Public institutions have the power to significantly influence changes in the direction of more sustainable patterns of production and consumption since they are large consumers in national economies.

4.14 Evolution of Sustainable Public Procurement

In recent decades, global initiatives and the growing importance of sustainability in international governance have influenced the development of the concept of SPP. Goal 12 of the United Nations Sustainable Development Goals (SDGs) explicitly highlights the importance of sustainable procurement practices including responsible consumption and production. Moreover, Agenda 21 from the 1992 Earth Summit acknowledged the

potential for public institutions to exemplify sustainable practices, so establishing the foundation for integrating environmental considerations into public procurement (UNEP, 2017).

4.15 Theoretical Foundations of SPP

The principles of sustainable development, which seek to harmonize social equity, environmental preservation, and economic advancement, constitute the theoretical foundation of SPP. The SPP is based on the Triple Bottom Line (TBL) framework, introduced by Elkington in 1997, which asserts that enterprises, including public entities, must account for the social, environmental, and financial impacts of their activities. This method ensures that procurement decisions consider broader sustainability objectives, such as reducing carbon emissions, promoting ethical employment practices, and minimizing waste.

4.16 Global Implementation of SPP

In order to harmonize public procurement with national sustainability goals, several nations have implemented SPP methods. In order to encourage public bodies to purchase environmentally friendly goods and services, the European Union (EU) has taken the lead in promoting Green Public Procurement (GPP). The necessity of taking life-cycle costs, environmental effects, and social factors into account in procurement processes is emphasized by the EU's guidelines on public procurement (Testa et al, 2016). According to Brammer and Walker, 2011 nations such as the United States, Canada, and Japan have established strong SPP frameworks that integrate sustainability standards into government contracts and tenders.

4.17 SPP in Developing Countries

Developing countries have unique obstacles in implementing SPP, even if developed countries have made considerable progress in this area. In underdeveloped nations, weak legislative frameworks, a lack of knowledge, scarce financial resources, and insufficient capability among procurement officials are frequently the obstacles to supply chain partnerships (SPP) (Walker et al, 2012). But emerging markets are starting to see how critical SPP is to curbing environmental damage, advancing social justice, and creating long-term, sustainable economic growth. As an example, nations in Africa, Latin America,

and Southeast Asia have started implementing sustainability standards in their procurement laws, frequently at the request of foreign donors and multilateral institutions (Cheng et al, 2018).

4.17.1 Environmental Impacts of SPP

The most well-known benefit of SPP is perhaps its positive effects on the environment. Public institutions can drastically lessen their ecological footprint by giving priority to eco-friendly goods, services, and projects. This entails cutting back on pollution, resource depletion, and greenhouse gas emissions. One way to significantly lessen the environmental impact of government operations is through the public purchase of energy-efficient technologies, renewable energy sources, and sustainable construction materials (Kunzlik, 2013). Additionally, by utilizing SPP, governments can increase consumer demand for environmentally friendly goods, fostering private sector innovation and market expansion.

4.17.2 Social Impacts of SPP

SPP emphasizes social sustainability, which covers labor practices, human rights, and community well-being, in addition to environmental issues. By requiring suppliers to follow moral labor laws, public institutions can utilize procurement as a vehicle to support equitable pay, secure working conditions, and nondiscrimination. By assisting small and medium-sized firms (SMEs) and minority-owned enterprises, SPP can help promote local economic growth (Preuss, 2009). Governments can affect beneficial social outcomes by using SPP as a tool to influence their buying decisions.

4.17.3 Economic Considerations of SPP

Implementing SPP enables public entities to mitigate economic risks associated with price volatility, resource scarcity, and adherence to forthcoming environmental rules. By acquiring items with sustainable characteristics, such as renewable materials, governments can mitigate risks linked to the volatility of non-renewable resource prices (Walker & Brammer, 2009). Furthermore, sustainable procurement can protect firms from prospective regulatory expenses associated with environmental compliance. Sustainable procurement strategies can yield substantial cost savings by improving resource efficiency, minimizing waste, and decreasing energy consumption. Public entities that use green technology or

practices, such as energy-efficient construction materials or renewable energy sources, may realize long-term savings that counterbalance early expenditures (Brammer & Walker, 2011). The acquisition of fuel-efficient vehicles can substantially decrease fuel expenses during the fleet's lifespan.

4.17.4 Challenges in Implementing SPP

Despite the numerous advantages of SPP, some hurdles hinder its broader implementation.

Included are:

- **Regulatory and Policy Barriers:** Brammer and Walker, 2011 assert that numerous countries lack comprehensive policies or guidelines mandating the incorporation of sustainability criteria in public procurement. Procurement officials may be reluctant to incorporate sustainability into their decision-making processes due to ambiguous legislation.
- **Financial constraints:** Public entities operating under stringent budgetary limitations may experience financial concerns stemming from the belief that sustainable products and services incur higher costs (Kunzlik, 2013).
- **Lack of Awareness and Expertise:** Cheng et al, 2018 indicate that public procurement officers may lack the requisite information and experience to effectively integrate sustainability into procurement processes. This involves understanding how to evaluate sustainability standards and applying them consistently in all purchasing decisions.
- **Contractor/Supplier Engagement:** Suppliers may occasionally be unable or unprepared to meet the sustainability criteria set by public procurement agencies. This is especially applicable in impoverished areas, where the supply chain for sustainable commodities may be underdeveloped Walker et al, 2012.

4.18 Future Directions for SPP

The future of SPP depends on addressing these problems and incorporating sustainability into all phases of the procurement process. Governments will need to set clear regulations and guidelines, provide training and capacity building for procurement officials, and engage with suppliers to promote sustainable practices. Furthermore, SPP should be

viewed as an essential component of national sustainability initiatives, rather than a stand-alone policy tool. By doing so, public institutions can set a good example, promoting sustainable practices across entire economies and helping to meet global sustainability goals (UNEP, 2017).

4.19 Sustainability Addressed in Public Procurement Documents

This section addresses the sustainability issues encompassed by the current public procurement structure. The Public Procurement Act of 2006 and the Public Procurement Rules of 2008 are the primary legislative frameworks regulating public procurement in Bangladesh. Furthermore, based on the scale or extent of the procurement, CPTU has developed an array of Standard Request for Proposals (SRFPs) for services and Standard Tender Documents (STDs) for goods and works. Table 4.1 presents the sustainability components addressed in public procurement literature. This section addresses the sustainability issues encompassed by the current public procurement structure. The Public Procurement Act of 2006 and the Public Procurement Rules of 2008 are the primary legislative frameworks regulating public procurement in Bangladesh. Moreover, based on the scale of the procurement, CPTU has developed various Standard Request for Proposals (SRFPs) for services and Standard Tender Documents (STDs) for goods and works. Table 4.1 presents the sustainability components addressed in public procurement literature.

Table 4.1: Sustainability aspects addressed in Public Procurement Documents.

Area of Sustainability	Article relevant to sustainable issue.
Economic (Profit)	• [Rule 15(2), PPR-2008] When choosing the method of procurement and aggregating goods packages, the Procuring Entity will consider the following: (c) the accessibility of the relevant products on the local market; (d) the quality, origins, and brand of the goods on the local market; (e) the costs associated with the designated goods; (k) supply-related risks in both the domestic and foreign markets. • [Rule 15(7), PPR-2008] When choosing the method of procurement for works, the procuring entity will take the following into account: the general circumstances facing the contracting sector; (c) the ability of

Area of Sustainability	Article relevant to sustainable issue.
	regional contractors; (d) anticipated competition; • [Rule 29(2), PPR-2008] Technical specifications created by procuring entities must, when applicable, be: (a) articulated in terms of output or performance criteria rather than design or descriptive features, which may tend to restrict competition; • [Rule 29(3), PPR-2008] The technical specifications of Goods shall not reference any specific trademark, trade name, patent, design, and kind, place of origin, producer, or service supplier.
Environmental (Planet)	• [GCC 27.1, STD-PW3] During the execution, completion, and correction of any flaws in the Works, the Contractor shall: a) take all appropriate action to safeguard the environment both on and off the site, as well as to prevent harm or disturbance to individuals or their property that may arise from noise, pollution, or other issues brought on by the Contractor's operations. • [GCC 29.2, STD-PW3] In accordance with all applicable laws, rules, and directives from the government, the Contractor in particular is responsible for providing adequate housing for his or her workers and setting up appropriate water supply, conservation, and sanitation arrangements at the site for all hygienic requirements and for the prevention of epidemics.
Social/Ethical (People)	• [Rule 15(2), PPR-2008] When choosing the method of procurement and aggregating goods packages, the Procuring Entity will consider the following: (f) the ability of regional suppliers to provide the necessary quantities; (g) the strength and caliber of the country's industry; (h) the state of

Area of Sustainability	Article relevant to sustainable issue.
	the market and the level of anticipated competition; • [Rule 15(7), PPR- 2008] When choosing a procurement method for works, the procuring entity will take the following into account: (c) the ability of regional contractors; • [Rule 29(5), PPR-2008] When feasible, procuring entities should work closely with the user or beneficiary of the goods, works, or services to establish the requirements. • [GCC 27.1, STD-PW3] Throughout the execution, completion, and correction of any flaws in the Works, the Contractor shall: (a) take all reasonable precautions to ensure the health and safety of all workers and other authorized individuals on the Site, as well as to maintain the Site in an orderly manner; • [GCC 28.1, STD-PW3] Without the Project Manager's prior written consent, the Contractor is not permitted to work on the Site on any public or religious holiday, during the night, after regular business hours, or on weekly holidays. • [GCC 29.1, STD-PW3] Regarding the workers' employment, health, safety, welfare, and immigration, the Contractor shall abide by all applicable labor laws and grant them all of their legal rights. • [GCC 29.3, STD-PW3] Furthermore, the Contractor expressly promises to pay his or her workers on time and equitably. In the event that payment is delayed, the Procuring Entity may deduct laborer's wages and demand payment from the contractor.

Area of Sustainability	Article relevant to sustainable issue.
	• [GCC 30.1, STD-PW3] In accordance with the applicable labor laws and other pertinent treaties ratified by the government, the Contractor shall not employ any child to perform any work that is economically exploitative, or that is likely to be hazardous to, or to interfere with, the child's education, or that is harmful to the child's health or physical, mental, spiritual, moral, or social development. • [GCC 37.1, STD-PW3] From the Start Date until the conclusion of the Defects Liability Period, the Contractor shall furnish insurance coverage in the amounts and deductibles indicated in the PCC for the following events that are attributable to the Contractor's risks, in the joint names of the Procuring Entity and the Contractor: (d) Death or serious injury to the body.

4.20 Summary of Sustainable Public Procurement (SPP) Policy in Bangladesh

Value for money is ensured throughout a product's lifecycle through sustainable procurement, which boosts the economy, society, and reduces environmental damage. The three pillars of environmental, social, and economic sustainability serve as its foundation (Walker & Brammer, 2009).

4.20.1 SPP Standards in Public Procurement Cycle

The procurement cycle consists of multiple stages, and the procedures for a sustainable public procurement cycle are shown below (CPTU, 2023).

- **Pre-procurement:** In order to acquire goods or services, PEs (Procuring Entities) must evaluate market alternatives, needs, and sustainable possibilities.
- **Procurement Procedure:** Splitting contracts or streamlining documentation to allow for the inclusion of SMEs and WOE is flexible, but competitive bidding is still necessary.

- **Subject of Contract:** Contracts ought to provide a minimum norm for sustainability.
- **Bidder Selection:** Procurement documents encompass recommendations that suppliers must follow to in order to achieve certain sustainability standards.
- **Technical Specifications:** Suppliers/Contractors are urged to best regulatory requirements, but all products are required to fulfill them.
- **Award Criteria:** A devised system will be used to score bids based on the social, economic, and environmental sustainability criteria.
- **Contract Management:** Performance evaluations and audits will be used to track adherence to sustainability and procurement regulations.

4.20.2 Governance of SPP Policy

The regulations set to govern procurement activities in alignment with an organization's strategic plan are referred to as the Strategic Procurement Planning (SPP) Policy. The subsequent elements are critical components commonly associated with the administration of SPP policies:

- The Ministry of Planning, CPTU/IMED, and a Sustainable Public Procurement Steering Committee (SPPSC) will be responsible for executing the policy.
- The Ministry of Planning, CPTU/IMED, and a Sustainable Public Procurement Steering Committee (SPPSC) will be tasked with implementing the policy.
- CPTU/IMED will provide guidelines and standards that collaborate with suppliers/contractors to guarantee that goods and services are sustainable, and an annual "champion" will be chosen to promote awareness.
- The SP Policy will be updated and modified every two years.
- For sustainable procurement, CPTU/IMED will take the lead in integration, capacity building, and legislative changes (CPTU, 2023)

CHAPTER 5

METHODOLOGY

5.1 General

The research design, data collection strategies, and analysis procedures used in the study are described in this chapter to guarantee a methodical and exacting approach to answering the research objectives.

5.2 Methodology

This study is the result of the collection and analysis of both primary and secondary data. It has been made sure that no factors could influence the study's goal. To gather the required information, a variety of primary and secondary sources have been used. Questionnaires to identify present practices, opportunities, and obstacles to implementing sustainable concerns will be available. To ensure that the data provided is a suitable statement of sustainability for use with LGED, case studies of various projects will be analyzed. Moreover, SWOT analysis will be performed to identify the opportunities and challenges of sustainable procurement practices in LGED. This Fig 5.1 illustrates the step-by-step research approach adopted to examine the possibilities and implementation practices of sustainable procurement.

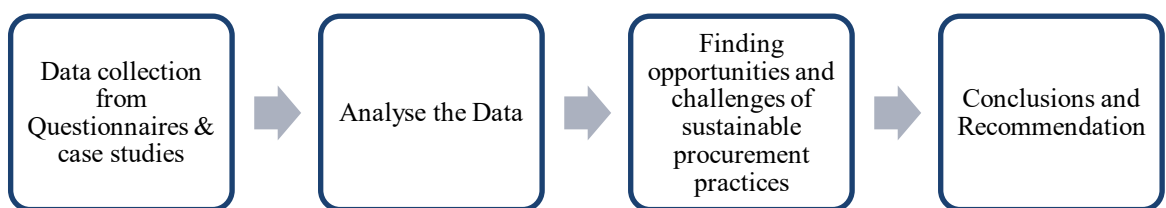


Fig 5.1: Methodology of possibilities and implementation practice of sustainable procurement

5.3 Sampling Plan and Sample Size

- **Primary Data Collection:**
 - **Questionnaires & Surveys:** Distributed to decision-makers, engineers, and procurement officers within LGED.
 - **Sample Size:** 20 participants from various LGED projects.

- **Sampling Method:** Stratified random sampling to ensure representation across different functional and geographic sectors.
- **Interviews:**
 - Conducted with senior procurement officials and sustainability experts.
 - **Sample Size:** 20 key informants.
 - **Sampling Method:** Purposive sampling to ensure knowledgeable respondents.

5.4 Analysis Methods

1. **Questionnaire Analysis:** Evaluating responses to assess sustainable procurement practices.
2. **SWOT Analysis:** Identifying strengths, weaknesses, opportunities, and threats in LGED's sustainable procurement.
3. **Case Study Analysis:** Reviewing sustainability practices in selected LGED projects.
4. **Comparative Analysis:** Examining differences between government-funded (GOB) and development partner (DP)-funded projects.

5.5 Data Collection Methods

To gather comprehensive and reliable data, the following techniques were employed:

5.5.1 Primary Data

Primary data was collected from key stakeholders within LGED using:

- Questionnaires and Surveys: Within LGED, decision-makers, engineers, and procurement officers received structured questionnaires. Their knowledge, behaviors, and difficulties with sustainable procurement were the main topics of the survey.
 - Sample size: 20 participants from diverse LGED projects.
 - Sampling method: stratified random sampling, which guarantees representation from various LGED functional and geographic sectors.
- Interviews: Senior procurement officials, leaders of procurement divisions, and sustainability experts within LGED participated in semi-structured

interviews. The purpose of the interviews was to get their perspectives on the real-world difficulties associated with incorporating sustainability into procurement procedures.

- Twenty key informants make up the sample size.
- Technique: Purposive sampling to guarantee the presence of informed informants.

5.5.2 Secondary Data

The following sources of secondary data were examined:

- LGED procurement policy and guidelines: An internal document examination was conducted to comprehend the existing framework for procurement.
- Publications and reports from the government: evaluation of national procurement and sustainable development policies and guidelines.
- Academic and industrial literature that is pertinent: A thorough analysis of the literature on sustainable procurement is necessary to comprehend global best practices and how LGED might use them.

5.6 Questionnaire For Data Collection

A questionnaire is a set of inquiries or items intended to elicit information from respondents regarding their beliefs, encounters, or viewpoints. It is possible to gather qualitative and/or quantitative data using questionnaires.

5.6.1 Criteria data collection

A series of standards was developed for assessing the viability and application procedures of sustainable procurement at LGED in order to guarantee that the information gathered for this research is both thorough and pertinent. These standards are divided into six primary categories, each of which focuses on important facets of sustainable procurement: environmental, social, and economic sustainability. Fig 5.2 outlines the key criteria considered for collecting relevant data to analyze sustainable procurement practice



Fig 5.2 Data Collection Criteria

The questionnaire is developed for the analysis of possibilities and implementation practice of sustainable procurement is attached in Appendix A

5.7 SWOT Analysis

An organizational SWOT analysis examines the possibilities, threats, and internal and external strengths and weaknesses of the company. The examination of a procurement department's external opportunities and threats in addition to its internal strengths and weaknesses is known as a SWOT analysis at the departmental or procurement function level. The SWOT analysis from the research perspective is displayed in Table 5.1.

- **Strengths:** Well-executed key competences or capabilities of the procurement function. They could provide a competitive edge and a point of strategic cohesion.
- **Weaknesses:** Are there drawbacks to the procurement function?
- **Opportunities:** these are outside variables that, when properly utilized, can provide a competitive edge and improve the procurement function.
- **Threats:** they are outside forces that, should they materialize, have the potential to limit the Procurement Function, harm the brand, and aggravate customers. As a result, they call for strong risk-reduction tactics.

Table 5.1 SWOT Analysis

INTERNAL FACTORS

STRENGTHS +	WEAKNESSES –

EXTERNAL FACTORS

OPPORTUNITIES +	THREATS –

5.8 Case study for Analysing Sustainability

In essence, the case study analyzes the LGED Project's sustainability. The process through which businesses satisfy their needs for works, goods and services while taking the social, economic, and environmental effects into account is known as sustainable procurement. This idea seeks to encourage sustainability while lessening the detrimental effects of procurement operations. Bangladesh's Local Government Engineering Department (LGED), which oversees regional development and infrastructure projects, is a prime example of how to research sustainable procurement methods. Based on a case study, this synopsis investigates the possibilities for implementing sustainable procurement in LGED and looks at the methods already in use. To create criteria for it, the SPP Public Procurement Cycle is employed in Figure 5.3.

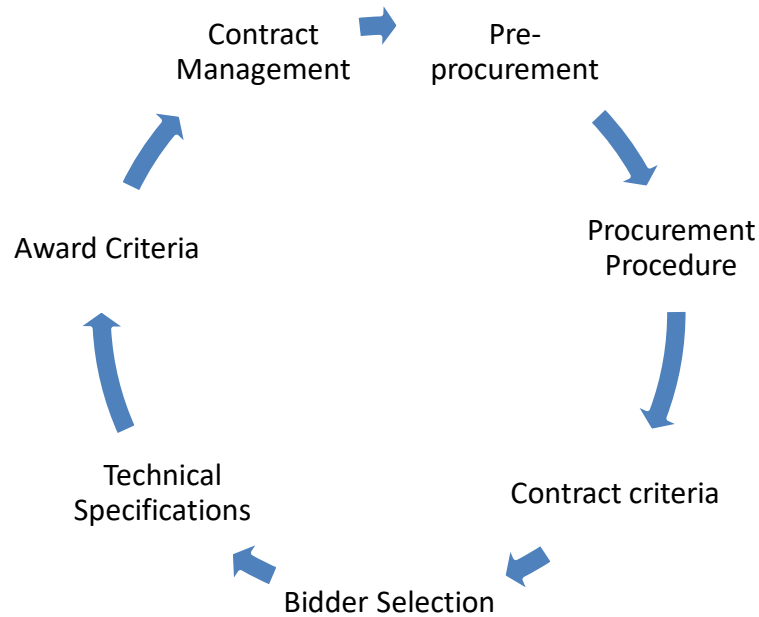


Fig 5.3 SPP Public procurement cycle (CPTU, 2023).

5.9 Reliability and Validity

- **Reliability:** To guarantee consistency, pre-tests of the study tools (questionnaires and interview guides) were conducted. After distributing the survey to a test sample of respondents, changes were made in response to their comments.
- **Validity:** Triangulating data from several sources (surveys, interviews, and document analysis) and using a well-defined sampling approach to reflect various regions and levels within LGED were two steps taken to assure the validity of the research.

5.10 Limitations

- **Time constraints:** The extent of data collection may have been impacted by the short amount of time allotted for completing surveys and interviews across several districts.

- Information access: It was difficult to completely comprehend the inner workings of LGED procurement due to the restriction of certain important papers on procurement practices.

The present technique offers a methodical and sturdy foundation for examining the present condition and prospects of sustainable procurement in LGED. By using this method, the study hopes to offer practical advice and insights for improving the department's sustainable procurement procedures.

CHAPTER 6

ANALYSIS, FINDINGS AND DISCUSSION

6.1 General

The analysis identifies essential characteristics and classifications of 22 distinct projects. The assessment centers on six key factors: procurement policy, contractor/supplier evaluation, environmental impact, social responsibility, economic impact, and ethical considerations. The projects are classified according to financing sources (Government of Bangladesh or Development Partner) and project size (Small, Medium, Large). The data reveals a clear disparity between DP and GOB-funded projects in terms of compliance with evaluation criteria. Development Partner (DP) funded initiatives show a holistic approach, incorporating all facets, while GOB-funded projects primarily focus on social responsibility and ethical concerns, often ignoring procurement, supplier evaluation, environmental, and economic ramifications. This highlights the necessity for GOB-funded projects to enhance their evaluation framework and implement methodologies that align with global standards for sustainable and equitable development.

6.2 Discussion on the Analysis of the Project Regarding Sustainability

The table 4-1 highlights significant disparities between Development Partner (DP)-funded and Government of Bangladesh (GOB)-funded projects in terms of sustainable procurement implementation. The evaluation of 22 projects reveals a significant contrast between development partner (DP)-funded and government of Bangladesh (GOB)-funded initiatives. Following discussion are given below Table 6.1.

Table 6.1 Details Observation

Project	Source of Fund	Budget Of Project	Procurement Policy	Contractor/Supplier Evaluation	Environmental Impact	Social Responsibility	Economic Impact	Ethical Factors
1	GOB	Small	x	x	x	✓	x	✓
2	GOB	Small	x	x	x	✓	x	✓
3	GOB	Small	x	x	x	x	x	✓
4	GOB	Medium	x	x	x	✓	x	✓
5	GOB	Medium	x	x	x	✓	x	✓
6	DP	Large	✓	✓	✓	✓	✓	✓
7	DP	Large	✓	✓	✓	✓	✓	✓
8	DP	Large	✓	✓	✓	✓	✓	✓
9	GOB	Large	x	x	x	✓	x	✓
10	GOB	Medium	x	x	x	✓	x	✓
11	DP	Medium	✓	✓	1	✓	✓	✓
12	GOB	Small	x	x	x	✓	x	✓
13	GOB	Medium	x	x	x	✓	x	✓
14	DP	Large	✓	✓	✓	✓	✓	✓
15	DP	Large	✓	✓	✓	✓	✓	✓
16	DP	Medium	✓	✓	✓	✓	✓	✓
17	GOB	Small	x	x	x	x	x	✓
18	GOB	Small	x	x	x	x	x	✓
19	GOB	Small	x	x	x	x	x	✓
20	DP	Large	✓	✓	✓	✓	✓	✓
21	GOB	Large	x	x	x	✓	x	✓
22	GOB	Small	x	x	x	x	x	✓

6.2.1 Procurement Policy and Contractor/Supplier Evaluation:

Merely eight projects yielded affirmative responses to the procurement policy and contractor/supplier assessment. These initiatives, financed by development partners (DP), demonstrate a systematic approach to procurement and supplier accountability. All GOB-funded initiatives exhibited adverse feedback, indicating a lack of active application of these principles. The Procurement Policy and Contractor/Supplier Evaluation data are shown in Fig. 6.1, and 36% of the assessed projects have a sustainable procurement policy.

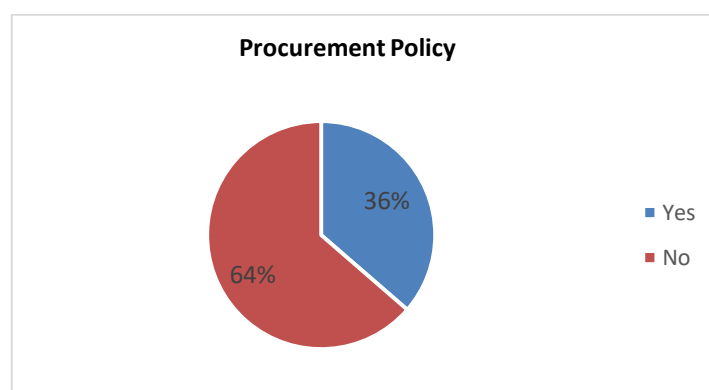


Fig 6.1: Assessed procurement policy

6.2.2 Environmental and Economic Effects

Favourable reactions to environmental and economic effects are confined to the eight DP-funded projects already referenced. All GOB-funded projects received unfavourable feedback, indicating insufficient or absent consideration of environmental sustainability and economic effect in their development and implementation.

6.2.3 Social Responsibility:

Social responsibility garnered the most extensive favorable feedback, with 17 of 22 initiatives exhibiting adherence. This encompasses a combination of DP- and GOB-funded initiatives, signifying greater acknowledgment of this criterion relative to others. Also, the small projects do not prioritize their social responsibilities within the initiative. Figure 6.2 illustrates the current state of social obligations within the procurement process at LGED. Seventy-seven percent of projects incorporate considerations of social responsibility in procurement.

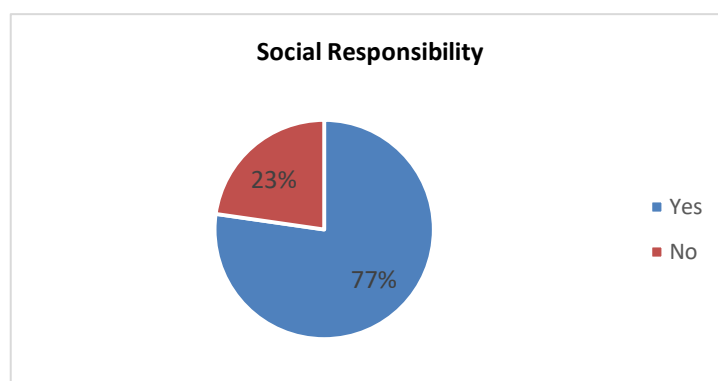


Fig 6.2: Presence of Social Responsibility in LGED

6.2.4 Ethical Factors

Ethical considerations received universal positive responses across all 22 projects. This highlights a strong shared commitment to ethical standards, irrespective of funding source or project size. The policies are structured to minimize potential for unethical practices; yet, the reality may differ significantly.

6.2.5 Funding Source Analysis:

DP-funded projects exhibit consistent positive responses across all six evaluation criteria, emphasizing their comprehensive approach.

GOB-funded projects are largely limited to positive responses for social responsibility and ethical factors, with negative responses for procurement policy, contractor/supplier evaluation, environmental impact, and economic impact.

6.2.6 Project Size and Scope:

Development partners primarily finance large and medium-sized projects, suggesting a relationship between project scale and the use of thorough evaluation methodologies. Small-scale projects, entirely financed by GOB, demonstrate restricted adherence to evaluation standards and a more limited field of consideration.

6.2.7 The disparity underscores several critical implications

- **Requirement for Institutional Reforms:** Projects sponsored by GOB should use integrated evaluation frameworks to conform to global best practices.
- **Capacity Building:** Enhancing training and resource allocation for GOB-funded projects could improve adherence to procurement, environmental, and economic standards.
- **Policy implementation:** Robust standards and procedures help guarantee that even minor projects comply with sustainability and transparency principles.
- By addressing these gaps, GOB-funded initiatives can improve their effectiveness, efficiency, and compatibility with sustainable development objectives.

6.3 SWOT Analysis

The sustainability of procurement is affected by internal and external influences. Internally, strengths encompass robust procurement processes, supplier partnerships, ethical practices, and a dedication to sustainability. Nonetheless, deficiencies including restricted expertise, insufficient enforcement of standards, minimal supplier engagement, and poor oversight impede advancement. Opportunities emerge externally from the adoption of international sustainability standards, partnerships with development organizations and the corporate sector, policy evolution, and breakthroughs in green technology. Conversely, issues such as financial limitations, supply chain interruptions, stakeholder opposition, and regulatory ambiguities present considerable obstacles. A detailed summary is provided in Table 6.2.

Table 6.2: A detailed summary of SWOT Analysis

INTERNAL FACTORS	
STRENGTHS +	WEAKNESSES –
• Procurement policies • Supplier/ Contractor relationships • Ethical procurement practices • Awareness and commitment	• Limited expertise and training • Weak enforcement of sustainability standards • Low supplier participation • Insufficient monitoring and evaluation mechanisms
EXTERNAL FACTORS	
OPPORTUNITIES +	THREATS –
• Adoption of international standards • Collaboration with DP and private sectors • Evolving policies promoting sustainability • Green technology and sustainable materials	• Budget constraints • Supply chain disruptions • Resistance from stakeholders • Regulatory uncertainties

6.3.1 Strengths

- Well-established procurement policies supporting sustainability: LGED possesses established frameworks that include sustainability principles, offering a robust basis for additional enhancements.
- Strong contractor and supplier relationships: LGED maintains enduring partnerships with diverse suppliers and contractors, promoting seamless transitions to sustainable practices.
- Implementation of ethical procurement practices: Procurement policies prioritize openness, equitable competition, and social accountability, guaranteeing ethical considerations in purchase choices.
- Growing awareness and commitment towards sustainability: As global and national focus on sustainability intensifies, stakeholders within LGED are demonstrating heightened interest in implementing sustainable procurement methods.

6.3.2 Weaknesses

- Limited expertise and training in sustainable procurement: Numerous procurement officers and suppliers possess insufficient understanding and training on sustainable procurement principles, resulting in inconsistent execution.
- Weak enforcement of sustainability standards: Although policies exist, the enforcement procedures lack sufficient strength to guarantee compliance across all projects.
- Low supplier participation in sustainability initiatives: A multitude of local suppliers fail to satisfy sustainability standards owing to insufficient incentives, awareness, or capabilities.
- Insufficient monitoring and evaluation mechanisms: The lack of explicit performance metrics and systematic oversight hinders the evaluation of the effectiveness of sustainable procurement programs.

6.3.3 Opportunities

- Adoption of international sustainability standards and certifications: Harmonizing LGED procurement regulations with international standards like ISO 14001 and LEED can augment credibility and efficacy.
- Increased collaboration with development partners and private sectors: Collaborations with international organizations, NGOs, and the commercial sector can offer technical experience, financial resources, and exemplary practices for sustainable procurement.
- Government support and evolving policies promoting sustainability: National policies are progressively transitioning towards sustainability, fostering an atmosphere conducive for LGED to improve its sustainable procurement practices.
- Advancements in green technology and sustainable materials: The accessibility of novel, economical sustainable materials and construction methods presents new options for LGED projects to reduce environmental impact.

6.3.4 Threats

- Budget constraints affecting procurement of sustainable materials: Sustainable procurement strategies may entail elevated initial expenses, posing a challenge due to budgetary constraints.
- Supply chain disruptions limiting availability of eco-friendly resources: Volatile supply chains, reliance on imported sustainable resources, and market changes might provide obstacles to procurement.
- Resistance from stakeholders due to perceived high costs: Certain stakeholders, such as contractors and suppliers, may hesitate to embrace sustainable procurement due to misconceptions over elevated prices and operational difficulties.
- Regulatory uncertainties affecting long-term sustainability planning: Frequent alterations in governmental policies, insufficient regulatory support, and deficiencies in policy enforcement might generate uncertainty in the execution of sustainable procurement programs.

By addressing these challenges and leveraging opportunities, LGED may enhance its dedication to sustainable procurement, guaranteeing enduring economic, social, and environmental advantages.

6.4 Case Study for Analysing Sustainability

Sustainability in procurement is essential for public sector initiatives, guaranteeing enduring economic, environmental, and social advantages. This case study analyzes the sustainable practices in procurement within the Local Government Engineering Department (LGED), highlighting significant successes, problems, and opportunities for enhancement. The aims of sustainable infrastructure development emphasize bolstering resilience to climate change, advocating for the utilization of environmentally friendly construction materials, incorporating social and economic sustainability into procurement practices, and enhancing accessibility and quality of public services. The objectives encompass the construction of environmentally sustainable roads and bridges utilizing recycled materials, the implementation of solar-powered street lighting in rural regions, the establishment of rainwater harvesting and sustainable drainage systems, and the integration of green building practices for public infrastructure.

6.4.1 Key Stakeholders

Following the review of several projects, the stakeholder list is provided below.

- Local Government Engineering Department (LGED)
- Ministry of Local Government, Rural Development, and Cooperatives (LGRD), Planning & Finance
- Political stakeholders
- International development organizations and non-governmental organizations (NGOs)
- Local contractors and suppliers
- Community representatives and beneficiaries

6.4.2 Sustainability Measures Need to be Implemented

6.4.2.1 4.4.4.1 Environmental Sustainability

- To reduce the carbon footprint, using recycled and locally sourced materials.
- Adopting energy-efficient technologies in infrastructure projects.
- To minimize construction waste, implementation of waste management strategies.
- Compliance with environmental guidelines and impact assessments.

6.4.2.2 Social Sustainability

- Confirming fair wages and safe working conditions for laborers.
- Encouraging involvement from local suppliers.
- Promoting gender inclusivity by engaging woman.
- Accompanying community engagement programs for project transparency.

6.4.2.3 Economic Sustainability

- Conducting cost-benefit analysis to reconcile long-term savings with initial investment.
- Promoting innovative financing methods for sustainable initiatives.
- Establishing a green supplier database to facilitate ecologically sustainable procurement.

6.4.3 Challenges Faced

- **Elevated Initial Expenditures:** Sustainable materials and technology frequently necessitate a greater initial expenditure.
- **Restricted Supplier Capacity:** Local suppliers may be deficient in the requisite resources to fulfil sustainability criteria.
- **Regulatory Barriers:** Inconsistent policies and inadequate enforcement impede the incorporation of sustainability.
- **Stakeholder Resistance:** Certain stakeholders view sustainability initiatives as expensive and superfluous.

This case study highlights the significance of incorporating sustainability into buying strategies. Despite existing limitations, implementing strategic strategies can substantially improve the efficacy and influence of sustainable procurement in LGED projects.

CHAPTER 7

CONCLUSIONS & RECOMMENDATIONS

7.1 General

This study emphasizes the need of sustainable procurement practices within the Local Government Engineering Department (LGED). Sustainable public procurement assurances economic effectiveness, environmental conservation, and social responsibility in public sector projects. Nevertheless, certain progressions, challenges such as poor application, lack of information, and budget constraints impede widespread adoption.

7.2 Research Findings

This study examined the potential and implementation techniques of sustainable public procurement within the Local Government Engineering Department (LGED) of Bangladesh. The research findings suggest multiple implications.

- The study found that sustainable procurement practices in LGED are still in their promising stage. While some development partner (DP)-funded projects incorporate sustainability measures, most government-funded (GOB) projects lack a planned approach.
- Most of LGED projects do not integrate environmental sustainability criteria, such as waste management, resource efficiency, and carbon footprint reduction, into their procurement policies.
- Most projects of LGED prioritize social responsibility, encompassing fair labor standards and ethical considerations, yet inadequately incorporate economic and environmental sustainability.
- Bangladesh has procurement regulations that address sustainability, including sustainable procurement standards; nevertheless, their enforcement is insufficient, leading to inconsistent application among LGED projects.
- Insufficient awareness and competence among procurement officials and contractors limit the extensive implementation of sustainable procurement practices.
- There exists a prevalent belief that sustainable procurement incurs high costs, notwithstanding its long-term advantages.

7.3 RECOMMENDATIONS FOR FUTURE STUDY

To improve the acceptance and effectiveness of sustainable procurement within LGED, the following proposals are proposed:

- Integrate sustainability into procurement rules and procedures while implementing rigorous enforcement mechanisms.
- Conduct frequent training sessions to enhance awareness and skills among procurement officials and suppliers/contractors.
- Encourage local suppliers and contractors to implement sustainability criteria and establish a database of environmentally responsible suppliers and contractors.
- Execute pilot initiatives to illustrate viability and enduring advantages.
- Formulate financial and non-financial incentives to promote sustainable procurement practices.
- Define key performance indicators (KPIs) to monitor sustainable advancement.
- Evaluate long-term effects, contrast with other industries, and assess financial feasibility to eliminate cost fallacies.

By implementing these recommendations, LGED can move towards a more sustainable procurement framework that aligns with global best practices, ensuring environmental protection, social responsibility, and economic efficiency.

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APPENDIX A: QUESTIONNAIRE

Section 1: General Information

Department/Unit/Project:

Date:

Contact Person:

Name:

Position:

Work Experience:

Email:

Phone:

Section 2: Procurement Policy

Does your organization (Project) have a formal sustainable procurement policy?

- ☐ ☐ Yes
- ☐ ☐ No
- ☐ ☐ In development

If yes, please respond to the following query.

What are the main goals of this policy? (Check all that apply)

- ☐ ☐ Reducing carbon footprint
- ☐ ☐ Supporting fair trade
- ☐ ☐ Environmental issues
- ☐ ☐ CSR
- ☐ ☐ Other (please specify):

1. How frequently is the sustainable procurement policy reviewed and updated?

- ☐ ☐ Annually
- ☐ ☐ Biennially (every 2 year)
- ☐ ☐ As needed
- ☐ ☐ Not sure

Section 3: Contractor/Supplier Evaluation

2. Do you assess contractor/suppliers based on sustainability criteria?

- ☐ ☐ Yes
- ☐ ☐ No

If yes, please respond to the following query.

3. What sustainability criteria do you use in Contractor/supplier evaluation? (Check all that apply)

- ☐ ☐ Environmental impact (e.g., energy use, waste management)
- ☐ ☐ Social practices (e.g., labor conditions, community impact)
- ☐ ☐ Economic factors (e.g., fair pricing, financial stability)
- ☐ ☐ Certifications (e.g., ISO 14001, Fair Trade)
- ☐ ☐ Other (please specify):

4. How do you verify the sustainability claims of your contractor/suppliers? (Check all that apply)

- ☐ ☐ Documentation review
- ☐ ☐ Site visits
- ☐ ☐ Third-party audits
- ☐ ☐ Self-assessment by suppliers
- ☐ ☐ Other (please specify):

Section 4: Environmental Impact

1. Do you require contractor/suppliers to report their environmental impact?

- ☐ ☐ Yes
- ☐ ☐ No

If yes, please respond to the following query.

2. What environmental factors are most important in your procurement decisions? (Check all that apply)

- ☐ ☐ Carbon emissions
- ☐ ☐ Water usage
- ☐ ☐ Waste management
- ☐ ☐ Resource use (e.g., raw materials, energy)
- ☐ ☐ Other (please specify):

3. How do you track and measure the environmental impact of your procurement activities? (Check all that apply)

- ☐ ☐ Internal reporting systems
- ☐ ☐ External reporting standards (e.g., GRI)
- ☐ ☐ Supplier reports

- ☐ Other (please specify):

Section 5: Social Responsibility

1. Do you consider social responsibility in your procurement processes?

- ☐ Yes
- ☐ No

If yes, please respond to the following query.

2. What social criteria are evaluated? (Check all that apply)

- ☐ Fair labor practices
- ☐ Human rights
- ☐ Community engagement
- ☐ Employee health and safety
- ☐ Other (please specify):

3. How do you ensure that suppliers adhere to social responsibility standards? (Check all that apply)

- ☐ Contracts with social responsibility clauses
- ☐ Supplier code of conduct
- ☐ Regular audits
- ☐ Other (please specify):

Section 6: Economic Impact

1. Do you consider the long-term economic impacts of procurement decisions?

- ☐ Yes
- ☐ No
-

If yes, please respond to the following query.

2. What economic factors are prioritized? (Check all that apply)

- ☐ Total cost of ownership
- ☐ Contractor/Supplier stability and reliability
- ☐ Local economic impact
- ☐ Innovation and value-added services
- ☐ Other (please specify):

3. How do you balance cost with sustainability in your procurement decisions? (Check all that apply)

- ☐ Prioritize Long-Term Value
- ☐ Volume and Scale
- ☐ Continuous Improvement:
- ☐ Set Clear Criteria

- ☐ Other (please specify):

Section 7: Ethical factors

4. Do you consider the Ethical factors of procurement decisions?

- ☐ Yes
- ☐ No

If yes, please respond to the following query.

5. What Ethical factors are prioritized? (Check all that apply)

- ☐ No Forced or Child Labor
- ☐ Contractor/Supplier stability and reliability
- ☐ Anti-Corruption Measures
- ☐ Gender Equity
- ☐ Other (please specify):

Section 8: Challenges and Opportunities

1. What are the main challenges you face in implementing sustainable procurement practices? (Check all that apply)

- ☐ Lack of supplier transparency
- ☐ High costs
- ☐ Limited availability of sustainable products
- ☐ Internal resistance
- ☐ Other (please specify):

2. What are the current strengths of your organization's sustainable procurement practices? (Check all that apply)

- ☐ Established policies
- ☐ Strong Contractor relationships
- ☐ Effective Monitoring systems
- ☐ Not integrated
- ☐ Other (please specify):

3. How well is sustainable procurement integrated into the organization's overall procurement strategy?

- ☐ Very well
- ☐ Moderately well
- ☐ Poorly
- ☐ Not integrated

4. **What are the main challenges or weaknesses in your current sustainable procurement practices?** (Check all that apply)
- ☐ Lack of expertise
 - ☐ Insufficient policy enforcement
 - ☐ Inadequate supplier engagement
 - ☐ Other (please specify):
5. **Are there any gaps in your sustainable procurement policy or procedures?** (Check all that apply)
- ☐ Missing sustainability criteria
 - ☐ lack of clear guidelines
 - ☐ Ineffective procedures
 - ☐ Other (please specify):
6. **What opportunities exist for improving your organization's sustainable procurement practices?** (Check all that apply)
- ☐ new technologies
 - ☐ emerging sustainability standards
 - ☐ partnerships with Contractor
 - ☐ Other (please specify):
7. **What potential collaborations or partnerships could enhance your sustainable procurement practices?** (Check all that apply)
- ☐ working with sustainability experts
 - ☐ engaging with local suppliers
 - ☐ Engaging supplier at the bargaining of contract
 - ☐ Other (please specify):
 -
8. **What external threats could hinder the effectiveness of your sustainable procurement practices?** (Check all that apply)
- ☐ economic recessions
 - ☐ supply chain disruptions
 - ☐ regulatory changes
 - ☐ Other (please specify):

9. **Are there any risks associated with your current sustainable procurement practices that need to be addressed?** (Check all that apply)

- ☐ Greenwashing
- ☐ Compliance issues
- ☐ Regulatory changes
- ☐ Other (please specify):

Additional Comments:

Section 9: Case Study (Organization Overview)

- Name of Project:
 - Industry/Sector:
 - Budget of Project (e.g., small, medium, large) and Source (GOB & Foreign):
 - Geographical Locations:
1. **Does your organization/Project have sustainability criteria (TBL, CSR Green procurement, Continuous Improvement & LCA) in procurement policy?**
 - ☐ Yes
 - ☐ No
 2. **Do you have a process for engaging with contactor/suppliers in procurement practices?**
 - ☐ Yes
 - ☐ No
 3. **Were environmental factors such as energy efficiency, waste reduction, or recycling considered in the procurement of materials and services for this project?**
 - ☐ Yes
 - ☐ No
 4. **Did the procurement process include considerations for ethical labor practices and fair trade?**
 - ☐ Yes
 - ☐ No
 5. **Did the procurement process considered lifecycle costs (e.g., long-term maintenance, disposal, or recycling)?**
 - ☐ Yes
 - ☐ No
 6. **How sustainability can be integrated into your procurement decision-making process? (Check all that apply)**
 - ☐ Selection criteria
 - ☐ Supplier evaluation
 - ☐ Contract terms
 - ☐ Other (please specify):
 7. **What specific sustainability standards or certifications do you want to require from your suppliers? (Check all that apply)**
 - ☐ ISO 14001 (Environmental Management)
 - ☐ Fair Trade
 - ☐ Other (please specify):

8. What are the main environmental goals of your sustainable procurement practices?
(Check all that apply)

- ☐ Reduction in carbon footprint
- ☐ Waste reduction
- ☐ Water conservation
- ☐ Other (please specify):

9. How can your project address social responsibility in procurement? (Check all that apply)

- ☐ Fair labor practices
- ☐ Community support
- ☐ Other (please specify):

10. How can have sustainable procurement practices impacted your project's overall costs?
(Check all that apply)

- ☐ Cost savings
- ☐ Increased costs
- ☐ Neutral impact
- ☐ Please explain.

11. How can be sustainable procurement practices motivate the procurement process?
(Check all that apply)

- ☐ Regulatory Compliance
- ☐ Reputation and Brand Value
- ☐ Innovation and Competitive Advantage
- ☐ Stakeholder Pressure
- ☐ Long-term Viability
- ☐ Other (please specify):

12. Which procurement stage considers sustainability? (Check all that apply)

- ☐ Pre-procurement
- ☐ Procurement Procedure
- ☐ Contract criteria
- ☐ Bidder Selection
- ☐ Technical Specifications
- ☐ Award Criteria
- ☐ Contract Management
- ☐ Other (please specify):

Additional Comments

- **Please provide any additional comments or insights related to sustainable procurement:**

Appendix B

LGED projects and unit:

1. **PU: Procurement Unit**
2. **Maintenance Unit.**
3. **ICT Unit**
4. **RDRIDP:** Greater Rajshahi District Rural Infrastructure Development Project.
5. **CIBRR-2:** Construction of Important Bridges on Rural Roads (Phase II).
6. **CRIMP:** Coastal Rural Infrastructure Improvement Project.
7. **EAP:** Emergency Assistance Project.
8. **SCRDP:** Second Chittagong Rural Development Project.
9. **CRMIDP:** Char Development and Settlement Project.
10. **NDRIDP:** Northern Districts Rural Infrastructure Development Project.
11. **UIIP:** Urban Infrastructure Improvement Project.
12. **DRIDP:** District Rural Infrastructure Development Project.
13. **FDRIRP:** Faridpur District Rural Infrastructure Rehabilitation Project.
14. **SupRB:** Supporting Rural Bridge Program.
15. **SSWRDP-2:** Second Small Scale Water Resources Development Project.
16. **DRMEP:** Disaster Risk Mitigation and Enhancement Project.
17. **Admin Unit**
18. **Planning Unit**
19. **QCU:** Quality Control Unit
20. **RCIP:** Rural Connectivity Improvement Project.
21. **RERMP-3:** Third Rural Employment and Road Maintenance Program-3.
22. **CDWSP:** Community-Driven Water Supply Project.