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1. Please write your Name, Roll No. etc. at the specified space otherwise may cause cancellation of your answer script.
2. Put tick (✓) marks on Evaluation method and Institution's Name.

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Roll No. 106

Title of The Research:

**Effectiveness of One Stop Service (OSS) of Bangladesh Investment Development Authority
(BIDA)**

Submitted to:

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Bangladesh Public Administration Training Centre

Abstract

This study aims to assess the One Stop Service (OSS) system of the Bangladesh Investment Development Authority (BIDA) in cultivating a more conducive investment climate in Bangladesh. Despite recent consistent GDP growth, Bangladesh trails regional competitors in attracting foreign direct investment (FDI), partially due to intricate regulations and protracted licensing processes. The BIDA OSS system was aimed to digitize and optimize these processes, with the objective of eliminating administrative barriers and ensuring transparency. This study used a qualitative research approach utilizing secondary data from BIDA reports, stakeholder comments, and comparison analysis with regional OSS systems to assess the implementation and impact of the system. Despite the significant advancements made by the BIDA OSS in centralizing services and efficiently processing numerous internal applications, challenges persist, including insufficient agency integration, institutional fragmentation, incomplete digitization, accountability deficiencies, inadequate coordination, IT vendor complications, low staffing levels, limited user awareness, payment constraints, user behavior challenges, and complexities associated with traditional form formats. Successful regional OSS models suggest the need for more automation, central oversight, and inter-agency coordination. It is crucial that the BIDA OSS address these obstacles to fully realize its potential with the enhancement of investor confidence so that a substantial contribution to Bangladesh's digital transformation and economic growth can be rendered, particularly in the aftermath of its post-LDC graduation. Though BIDA has a number of activities to improve the investment climate and to attract FDI in Bangladesh, this study is limited to dealing with the effectiveness of BIDA OSS only.

Keywords: One Stop Service, Investment Facilitation, Digital Governance, Bangladesh, Ease of Doing Business, Policy Implementation, Bureaucracy, Service Delivery

1.0 Introduction

1.1 Background

Bangladesh's economy has opportunities and challenges. Bangladesh has maintained steady GDP growth of 6-7% per year for the past decade (Bangladesh Bank, 2023). However, its 2022 FDI inflows of \$3.48 billion were significantly below regional rivals Vietnam (\$18 billion) and India (\$49 billion) (UNCTAD, 2023). As per the World Bank (2020), Bangladesh's Foreign Direct Investment (FDI) deficit is related in part to its 168th rank in the World Bank's Ease of Doing Business Index (2020) due to lengthy approval processes and complicated regulatory requirements. Foreign direct investment is crucial for economic growth, job creation, and industrial development in Bangladesh (Rahman, 2015; OECD, 2023).

The One Stop Service (OSS) system of Bangladesh Investment Development Authority (BIDA) uses digitization to reduce physical documentation, link services from the government, track in real-time, ensure transparency, and attract FDI (Bhuiyan & Alam, 2022; BRCP-1, 2023). The One-stop Service Act 2018 (GOB, 2018) and OSS (BIDA) Rules 2020 (GOB, 2020) provide the OSS system, which is important to Bangladesh's digital governance (BIDA, 2024). On the platform, 52+ agencies are targeted to offer more than 150 services, including project registration, immigration advice, work permits, tax clearances, and environmental certifications (World Bank, 2023; BIDA OSS, 2020). To reduce bureaucratic barriers to foreign direct investment in Bangladesh, the site currently offers 135 services (24 from BIDA and 111 from others) across 44 agencies (BIDA, 2025).

Real-time data validation, QR code documentation, and online payment methods make the OSS portal user-friendly. Automation, digital submissions, and alerts reduce human involvement and the potential for corruption (BIDA, 2025). The system follows an architecture which enables independent E-Systems of other agencies to connect with it (BIDA OSS, 2024). According to Kamal et al. (2021), the approach supports the government's primary objective of making business easier, promoting FDI, and boosting economic growth.

The impact of the OSS portal on the business climate and implementation issues in Bangladesh is the focus of this research. The OSS system can be improved and domestic and foreign investment can be attracted by addressing these issues.

1.2 Problem Statement

BIDA OSS system suffers despite its potential. Documentation and approval speed have been accelerated, but technical issues, data integration, and user dissatisfaction persist (Moazzem & Jafrin, 2024). OSS agencies lack online payment options and perform manual processing due to restricted infrastructure (Dhaka Tribune, 2022; Hossain et al., 2020). Distinct OSS systems inside IPAs may induce investor confusion, and Unnoticed OSS delays impact system performance (Raihan et al., 2023). In 2023, only 43.5% of services were fully automated, resulting in intricate online-offline processes that hamper paperless transactions (BIDA, 2023).

Coordination issues between service delivery authorities cause data and action inconsistencies (BIDA, 2025; White Paper Committee, 2024; Hossain, 2020). Change resistance, interoperability issues, personnel hesitation, and poor digital training impede OSS. Very few organisations have professional IT vendors, delaying system integration and reducing transparency (BIDA, 2024; UNDP, 2023; World Bank, 2023). BIDA offices have few workers and poor service due to high demand (The Financial Express, 2022). SME's unawareness of OSS portal benefits limits its impact (DCCI, 2023). Till 2021, just 35% of agencies accept electronic payments, restricting OSS efficiency (The Business Standard, 2021). User behaviour issues like bypassing the OSS for direct agency interactions reveal system limits (The Daily Star, 2024).

After exiting LDC status, Bangladesh has to face structural issues (Raihan, 2025). Bangladesh may fail to benefit from its digital revolution without better investment facilitation (World Bank, 2023). A critical review of the BIDA OSS system's efficacy can guide alterations and ensure global best practices.

1.3 Significance of the Research

This research has close affinity to academia, policy, and businesses. To find out how bureaucratic route dependencies hinder e-government implementation in developing nations, institutional theory (North, 1990) and transaction cost economics (Williamson, 1985) improve digital governance research. Bangladesh's technical systems and institutional frameworks are examined to enhance Heeks' (2003) digital governance theory.

The findings will affect BIDA's Bangladesh FDI Hitmap (BIDA, 2025), future BIDA OSS Rules 2020 revisions to address implementation challenges, and Bangladesh's substantial Post-LDC Investment Strategy (Raihan, 2025).

More private investment will be necessary to sustain economic growth in order to eliminate the trade advantages of LDCs (UNCTAD, 2022; Bhattacharya, 2023). The country may experience a \$2.5 billion export deficit following graduation unless foreign direct investment increases (CPD, 2021).

With nearly 2,300 participants from 50 countries, the Bangladesh Investment Summit 2025 emphasised the importance of addressing such issues to build investor trust (Dhaka Tribune, 2025). For the government to attain middle-income status by 2026, digital governance and regulatory efficiency must improve to attract foreign direct investment.

The study will assess the OSS system's administrative issues and suggest global digital governance with best practices. It finds systemic shortcomings in improving user experience, technical infrastructure, and service delivery, making Bangladesh more efficient, transparent, and investor-friendly and setting realistic business expectations (Policy Exchange Bangladesh, 2024).

1.4 Research Objectives

The objectives of the study are:

- a) To evaluate the One Stop Service (OSS) system, assessing its effectiveness to improve the investment climate in Bangladesh, and
- b) To identify the hindrances of using the One-Stop Service system effectively along with some proposed policy measures in line with international best practices and investors' expectations.

1.5 Research Questions

This research was designed to get answers to the following questions:

- a) How can the OSS system's functionality and user experience be improved for investors and government agencies?
- b) Does OSS gateway reduce administrative delays and improve Bangladesh's business climate?
- c) How do investors count the OSS system's usability and efficiency, and what improvements do they suggest?
- d) What advantages and disadvantages does the OSS offer over other South Asian or ASEAN systems?

2.0 Literature Review

2.1 Conceptual Foundations of One-Stop Service

One-Stop Service (OSS) systems leverage late 20th-century New Public Management (NPM) reforms that prioritised citizen-centric governance and administrative efficiency (OECD, 2020). TradeNet, launched in 1989 in Singapore, simplified trade paperwork by consolidating 35 forms into one automated submission (Cho et al., 2021). Many Asian countries use OSS systems to improve regulatory transparency and service accessibility (OECD, 2020). Globally successful OSS platforms employ digital integration to reduce business transaction costs and raise government efficiency (Kunicova, Bhatti & Umarova, 2017).

2.2 Different Schools of Thought

OSS theories comprise different paradigms. Williamson's Transaction Cost Economics (1985) advocates Open Source Software as it can reduce bureaucratic "friction" in service delivery

and raise productivity. According to Heeks' Digital Governance Theory (2003), ICTs may reduce public sector institutional fragmentation. The Whole-of-Government Approach (Christensen & Lægreid, 2007) is vital for understanding horizontal agency cooperation for OSS system effectiveness. These theoretical frameworks explain why OSS systems are essential for global administrative transformation, especially in developing nations pursuing investment climates (OECD, 2018). OSS is a public service delivery system that links many regulatory services into one interface, improving corporate and citizen access and compliance (Kamal et al., 2021).

2.3 Global Evolution of OSS Systems

Three OSS generations have existed globally. Like South Korea's EDI (Electronic Data Interchange) in 1989, which lowered export processing costs by 40%, the 1990s-2000s generation prioritised trade facilitation (Koh J, 2024). Commercial services increased in the 2010s, as shown by Malaysia's MyGOV platform, which integrated 1,200 services from 28 ministries (My Government, 2024). Third-generation machine learning algorithms predict application results and enhance decision-making on Singapore's GoBusiness platform (Nguyen, 2024). The timeline shows the evolution of OSS systems from standalone tools to entire digital governance ecosystems that affect entire organizations.

2.4 Success of OSS in Public Service Delivery

OSS systems flourish in three public service delivery areas. The Vietnam National Business Registration Portal lowered the incorporation time from 15 to 3 days (Vietnam Law, 2024). The National Single Window system in Thailand cut customs processing times by 70% using digital documentation (UNESCAP, 2018). India's NSW and Malaysia's OBRS show how centralised service delivery reduces administrative costs and expedites clearance (UNCTAD, 2023; MIDA, 2024). OSS platforms like Indonesia's BKPM system, which keeps 30 license types in one interface, have altered emerging economy investment approval processes (BKPM, 2023). User input, continual system updates, and stakeholder capacity-building can help Bangladesh grow its OSS portal by following those frameworks (BRCP-1, 2023; Policy Exchange Bangladesh, 2024).

2.5 Bangladesh's journey with OSS systems

Bangladesh's OSS development is three-phased. The conceptual phase (2016-2018) comprised OSS integration into the 7th Five-Year Plan (GOB, 2016) and OSS Act 2018 (GOB, 2018) implementation. Inter-agency cooperation and data sharing between BIDA and sector-specific regulators like BEZA and BEPZA were expected to be problematic throughout implementation (2019-2021). Current expansion (2022-present) raised services to 135. (BIDA, 2025)

2.6 Salient Features of BIDA OSS

BIDA OSS has been developed to simplify workflows by connecting different government agencies and providing investors with different services. The system can communicate with the various government departments through APIs, linking all of their services (BIDA, 2024). The system provides a number of facilities to the users, such as an integrated platform, automated services, maximum delivery time for each service, Real-Time Data Validation and Tracking, Online Payment System, E-Document Submission and Digital Signatures, Security and Data Protection, Public service Performance data and periodic updates on users' feedback. These features enable the OSS system to reduce administrative delays, improve service delivery, and boost local and foreign direct investment. Thus, better, smoother, faster, and more transparent investor experiences are ensured. (BIDA, 2025; BIDA, 2024; Business Automation, 2025)

2.7 Challenges in Implementing OSS: Global and Local Context

OSS implementation has distinct challenges. Business registration times improved via the National Single Window System in Vietnam despite data integration, user accessibility, and technical inefficiencies (Vietnam Plus, 2024). Bangladesh's OSS system has encountered issues with technology, data delivery, and user interface (BIDA OSS, 2020). Technology, staff training, and interagency cooperation may hinder OSS system installation. Technology and government agencies' data integration have impeded OSS implementation in Bangladesh (The Daily Star, 2024). Investors' and government leaders' digital illiteracy has hampered the OSS regulation shift (The Financial Express, 2022). India's NSW also suffers from legal and framework requirements, rigidity to change, costing, technical requirements, Lack of Coordination and government support, communication gap, etc (Patel & Nair, 2023). Implementation challenges are similar to those faced by other nations during early OSS adoption, suggesting Bangladesh's system may evolve similarly with appropriate initiatives.

2.8 Role of Legal Framework implementing OSS

There are many examples of global OSS success before Bangladesh. Vietnam's Decree 61/2018 requires that all government agencies link to the national portal, making legislation vital (Nguyen, 2024). The Indian NSWS Act forces 72-hour SLAs (UNCTAD, 2021). Singapore's API-driven interface for instantaneous agency data interchange (World Bank, 2022) and the UAE's blockchain document verification technology highlight the importance of technical architecture (UAE Verify, 2024). Change management is crucial for government and private sector approval, as Rwanda's rigorous civil service training and Malaysia's extensive public awareness efforts show (World Bank, 2022; MIDA, 2024; My Government, 2024; Invest Malaysia, 2024).

3. Research Methodology

To evaluate BIDA's OSS portal, this qualitative study has used secondary data from key sources. The method combines qualitative research paradigms (Creswell, 2014; Patton, 2015) to digital governance evaluation.

The study evaluates secondary data sources from BIDA reports on OSS portal usage, operation, and investors' feedback. Meeting minutes of stakeholders' orientation and consultation on the OSS portal with investors, government officials, and stakeholders, have been analysed. Information from BIDA's portal and official sources has been taken into consideration. OSS act and rules, system usage, response times, and investor satisfaction across five years (BIDA OSS, 2020) are discussed. Transferable best practices of OSS deployments in regional peers like Singapore (GoBusiness), India (National Single Window System), Thailand (OSOS, 2025; UNESCAP, 2018) and Vietnam (National Public Service Portal) (BRCP-1, 2023; GOVTech Singapore, 2024; Nguyen, 2024) are also evaluated.

Thematic analysis (Braun & Clarke, 2006) identifies documentary source themes in data analysis. An institutional analysis examines how official and informal restrictions affect implementation efficiency (North, 1990). This study has followed secondary research ethics (Israel & Hay, 2006) to attribute sources and protect confidential information correctly.

4.0 Data Analysis:

In this section, a critical assessment will be made of the effectiveness of BIDA's OSS portal in streamlining investor services, incorporating the empirical information of this study in line with the research questions. This chapter analyses systemic strengths, existing issues, and their policy implications through quantitative data from BIDA's application disposal records (BIDA OSS Data, 2025; BIDA OSS Performance Data, 2025), stakeholder service statistics (BIDA OSS Data, 2025), feedback from users (BIDA 2024; Business Automation, 2025), and qualitative insights comparing regional analyses (BRCP-1, 2023). The important features of the system, along with its progress in integrating services from different government agencies and a comparison with OSS systems in other countries in the region, will be incorporated in this part (BRCP-1, 2023).

4.1 Overall Progress of BIDA OSS in Service Delivery:

4.1.1 Services provided by different agencies in BIDA OSS

BIDA has engaged in a systematic partnership with agencies across different phases, culminating in the signing of MoUs with 52 agencies to incorporate their services into the OSS platform. So far, the BIDA OSS portal offers 135 services from 44 connected agencies. Among them, BIDA deals with 24 services, while the other 43 agencies render the remaining 111 services. 15,723 applications from different companies have been processed and 184,161 services have been delivered. 4,581 local projects, 363 foreign projects, and 356 joint venture projects have been registered. Though remarkable progress has been made, the total integration

process is still partial. BIDA, along with 36 agencies, has completely unified all its services into the system. Eight agencies have partially integrated with 20 of 37 services through the OSS. Nine agencies fail to incorporate any of their 24 services with OSS. (BIDA, 2025; BIDA Newsletter, 2025)

4.1.2 Success of BIDA OSS providing service delivery

BIDA OSS makes prolific progress in disposing of applications from Table A. The initial year of starting OSS, 2019, shows 100% disposal of a total of 4879 applications, which jumped to 21,423 in the next year, 2020, with the same disposal rate. It certainly indicates that the system

Table-A

BIDA Internal Services			
Year	Application	Process	Disposed
2019	4879		4879
2020	21423		21423
2021	29548		29548
2022	36435		36435
2023	41237		41237
2024	37566		37566
2025 (Up to April)	12962	1315	11647
Total	184050	1315	182735

is capable of handling a large and increasing number of applications. The trend continued into subsequent years, with 29,548 applications in 2021, 36,435 in 2022, 41,237 in 2023, and 37566 in 2024, all of which were processed and disposed of efficiently. (BIDA OSS, 2025; BIDA OSS Data, 2025).

4.1.3 Performance of BIDA OSS delivering services in stipulated time

The key services provided by the OSS, including project registration, permissions for a branch, liaison and representative offices, visa recommendations, work permits, and various licenses and certificates, from BIDA and other agencies have shown contrasting performances. Services of BIDA consistently met the SLA requirements by delivering services within stipulated time. Complying with the due timeline has increased significantly. In 2024, the SLA compliance was nearly 96% for BIDA services in OSS (Table-B) (BIDA OSS Performance Data, 2025). For instance, "Work Permit Extension" services processed more than ten thousand applications each year from 2020 to 2024, with a compliance rate of nearly 100%, ensuring that businesses could continue their operations without unnecessary delays (BIDA OSS Data, 2025).

On the other hand, other agencies' performances in meeting the SLA requirements were really unsatisfactory. Out of 111 services of other 41 agencies, only 3 services were transacted through BIDA OSS. Among them, the average SLA compliance is only 52% (Table-C).

Table B : Services Provided by BIDA in BIDA OSS in 2024 with SLAs

Service	Stipulated Delivery Timeline	Disposed Applications	% Within Stipulated Timelines
BIDA Registration (BIDA/ Local)	1 Day	925	89%
BIDA Registration Amendment (BIDA/ Foreign)	3 Days	555	99%
BIDA Registration Amendment (BIDA/ Local)	3 Days	1,803	99%
Import Permission (BIDA/ Foreign)	3 Days	74	99%
IRC Recommendation New (BIDA/ Foreign)	10 Days	67	97%
IRC Recommendation New (BIDA/ Local)	10 Days	539	97%
IRC Recommendation Regular (BIDA/ Foreign)	10 Days	31	97%
IRC Recommendation Regular (BIDA/ Local)	10 Days	140	99%
IRC Recommendation Second Adhoc (BIDA/ Foreign)	10 Days	18	100%
IRC Recommendation Second Adhoc (BIDA/ Local)	10 Days	180	100%
IRC Recommendation Third Adhoc (BIDA/ Foreign)	10 Days	19	89%
IRC Recommendation Third Adhoc (BIDA/ Local)	10 Days	166	99%
Office Permission Amendment (BIDA/ Commercial)	10 Days	133	77%
Office Permission Cancellation (BIDA/ Commercial)	15 Days	28	89%
Office Permission Extension (BIDA/ Commercial)	15 Days	426	94%
Office Permission New (BIDA/ Commercial)	15 Days	75	87%
Outward Remittance Approval (BIDA/ Commercial)	1 Day	-	-
Outward Remittance Approval (BIDA/ Foreign)	7 Days	-	-
VIP Lounge (BIDA/ Commercial)	30 Days	670	100%
VIP Lounge (BIDA/ Foreign)	30 Days	-	-
Visa Recommendation Amendment (BIDA/ Commercial)	3 Days	46	100%
Visa Recommendation Amendment (BIDA/ Foreign)	3 Days	76	99%
Visa Recommendation New (BIDA/ Commercial)	1 Day	3,419	87%
Visa Recommendation New (BIDA/ Foreign)	1 Day	3,047	93%
Visa Recommendation New (BIDA/ Communication)	1 Day	-	-
Waiver Condition 7 (BIDA/ Commercial)	16 Days	108	92%
Waiver Condition 8 (BIDA/ Commercial)	16 Days	6	0%
Work Permit Amendment (BIDA/ Commercial)	10 Days	1,660	73%
Work Permit Amendment (BIDA/ Foreign)	10 Days	950	100%
Work Permit Cancellation (BIDA/ Commercial)	15 Days	2,008	85%
Work Permit Cancellation (BIDA/ Foreign)	15 Days	1,445	100%
Work Permit Extension (BIDA/ Commercial)	16 Days	6,346	98%
Work Permit Extension (BIDA/ Foreign)	3 Days	3,895	97%
Work Permit New (BIDA/ Commercial)	16 Days	3,814	97%
Work Permit New (BIDA/ Foreign)	3 Days	1,717	98%

Table C: Services Provided by Other Agencies in BIDA OSS in 2024 with SLAs

Service	Stipulated Delivery Timeline	Disposed Applications	% Within Stipulated Timelines
Industrial IRC (First Adhoc) (CCI&E)	15 Days	84	65%
Environmental Clearance Certificate (DoE)	45 Days	5	20%
Individual eTIN Foreigner (NBR)	3 Days	795	71%

Thus, it is evident that despite negligence and inertia from other agencies, BIDA OSS is gradually providing better service delivery and reducing administrative delays to improve the investment climate in Bangladesh.

4.1.4 Insignificant Service Delivery from other agencies

While the OSS system has made substantial progress, challenges remain. Submission of applications to other agencies except BIDA is very insignificant in numbers (Table D) (BIDA OSS Data, 2025). Since its initiation, the total number of applications disposed of in OSS for

Table D

Stakeholder Services			
Year	Application	Process	Disposed
2019	15		15
2020	15		15
2021	39		39
2022	252		252
2023	1002		1002
2024	1424		1424
2025 (Up to April)	532		532
Total	3279		3279

other agencies stand at only 3279 (1.52%), compared to 182,735 (98.48%) from BIDA, which indicates reluctance and non-compliance from other agencies to use OSS for providing service delivery. Some agencies, like the Department of Immigration and Passport (DIP) and the Department of Registration, are yet to be integrated with OSS. Again, some agencies, such as the National Board of Revenue (NBR), still require physical documentation for a portion of transactions. This slows down the overall process and limits the full realisation of the paperless goals outlined in the OSS Rules (BIDA, 2025). This dismal picture indicates the unwillingness, clash of interest, and lack of coordination from other agencies to be connected with BIDA OSS.

4.1.5 Users' Satisfaction at BIDA OSS

Since the initiation of BIDA OSS, users have been invited to express their comments and suggestions about their experiences using OSS. Feedback from the users is collected in several ways. In the BIDA OSS portal, an option is included to rate the system by the users (BIDA OSS 2025). Besides, BIDA, through its vendor Business Automation, sent more than 13000 emails to the users in 2023 and 2024 to get their feedback and received more than 5000 replies (Business Automation, 2025). Again, BIDA arranges regular workshops and meetings with the stakeholders to get their opinions (BIDA OSS, 2024). According to the latest information published in the BIDA Newsletter (January-March 2025), 79,887 feedbacks have been received, and users have ranked BIDA OSS highly, providing 4.5 out of 5 stars. This ranking reveals that despite several issues, BIDA OSS has been well-acclaimed by users.

4.2 Advantages and disadvantages of OSS over other Asian countries:

Although Bangladesh's OSS system has made significant strides in simplifying services for investors, it still lags in comparison to regional leaders like Singapore, Thailand, Malaysia, and India, as evident in Table- E (BRCP-1, 2023)

Table-E: Comparison between OSS of BIDA and Other Asian countries

Aspect	BIDA OSS	India OSS (NSWS)	Thailand OSS (OSOS)	Singapore OSS (GoBusiness)	Vietnam OSS (Single Window System)
How many agencies are integrated?	44 agencies, 134 services (Expanding to 154)	32 Central Ministries/ Departments and 29 State Governments, 70+ services	38 agencies Comprehensive services	29 agencies Comprehensive services	28 agencies Extensive services
Is Service Delivery Centralized?	Partially, Other IPAs and agencies have separate online systems	Yes, fully centralized (NSWS)	Yes, fully centralized (OSOS)	Yes, fully centralized (GoBusiness)	Yes, fully centralized (Single Window)
Is OSS fully automated?	Partial automation in eight agencies and no automation in nine agencies out of 44	Fully automated	Fully automated	Fully automated	Fully automated
Does OSS still require Paperwork?	Manual paperwork is still required in some agencies	Minimal paperwork, automated processes	Minimal paperwork, fully digital	Minimal paperwork, fully digital	Minimal paperwork, fully digital
Is Service Delivery done in stipulated Time (SLA)?	Clash of interest among the agencies often causes delay	Timely service delivery	Timely service delivery	Timely service delivery	Timely service delivery
Does OSS have inter-agencies Coordination?	Lack of coordination, no supervising authority	Well-coordinated with clear leadership	Excellent coordination with authority	Excellent coordination with oversight	Good coordination and leadership
Is OSS Integrated with National Single Window?	Partial integration with customs and tax agencies	Full integration	Fully integrated with trade systems	Fully integrated with trade systems	Fully integrated with trade systems
What are the Challenges?	Inter-agency delays, several OSS, limited automation, additional paperwork	Limited to customs, other processes integrated	Effective, but can be complex for newcomers	Simplified, but limited by language barrier	Effective, with a focus on exports
FDI Attraction	Growing, FDI fluctuates in last several years	Leading in FDI, highly competitive	Strong, with advanced FDI tracking	Strong, globally recognized FDI hub	Growing, focused on manufacturing and tech

Analyzing the comparison, the following key insights are evident:

4.2.1 Centralization and Service Delivery:

The BIDA OSS system aims to centralize services from different concerned agencies. However, other IPAs and agencies like BEZA, BEPZA, Hi-Tech Park, BISCIC, and NBR have their own OSS systems (Raihan et al. 2023). BIDA OSS also has partial and non-integration issues that hinder better service delivery (Islam, 2021). The competitive countries' OSS systems are fully centralized, which gives them the upper hand.

4.2.2 Automation and Paperwork:

OSS systems of other countries require minimal Paperwork as they are almost entirely automated, offering smooth transactions for users. In the case of BIDA OSS, manual Paperwork is still needed due to the partial automation of some agencies.

4.2.3 Institutional Coordination and Oversight:

BIDA OSS suffers from strong enforcing authority. As many of the services and decisions are related to other ministries and agencies, Coordination and co-integration among inter-agencies often become tough to maintain. On the contrary, other rival countries, such as India, do have a unified agency, Invest India or MIDA in Malaysia, possessing overarching authorities regarding investment-related issues. (White Paper Committee, 2024)

4.2.4 FDI Attraction:

FDI growth in Bangladesh has seen ups and downs in the last several years (The Daily Star 2025). Meanwhile, other countries offer full automation, better service delivery, and inter-agency Coordination, resulting in more foreign investment than ours (BRCP-1, 2023).

4.3 Findings of the Study:

In the opinion of a number of stakeholders, government agency representatives, BIDA personnel, and investors, the BIDA OSS system has a multitude of difficulties despite its enormous potential to streamline the investment process. The efficacy and user satisfaction of the system are adversely affected by these problems. Feedback gathered from workshops (BIDA, 2024) and surveys (Business Automation, 2025) offers important insights into these problems. Examining the legislation and its regulations, as well as journal, newspaper, and other source articles, helps identify areas that need improvement.

4.3.1 Incomplete digitisation

Huge service providers lack internet infrastructure, which is a significant problem. Only 67 of 154 projected services (43.5%) were fully automated in 2023. (The Daily Star, 2024). Investors are to operate complex online processes for tax clearance and environmental licenses. Without online payment and interoperability, the OSS portal is less efficient and beneficial (BIDA, 2025; Dhaka Tribune, 2022; Hossain et al., 2020). The Land Ministry and municipal

corporations without electronic systems need human processing (The Daily Star, 2024). 60% of agencies manually process online applications after submission due to workflow issues (CPD, 2023). Dhaka North City Corporation trade license renewals demand cash payments in person (Dhaka Tribune, 2022). To prevent long processing times, 65% of service recipients avoid OSS and work directly with agencies (The Daily Star, 2024).

4.3.2 Institutional fragmentation due to legislation

One-stop Service Act, 2018 (GOB, 2018) does have some issues to execute a unified OSS entity among all the IPAs. According to 4 of the acts, every Investment Promotional Agency (IPA) (BIDA, BEZA, BEPZA, BHTPA and BSCIC) under the purview of this act should have individual OSS authority. Accordingly, all IPAs have the portal individually without any integration (Raihan et al., 2023; Islam, 2021). Institutional fragmentation and inconsistent directives confuse investors (The Financial Express, 2022).

4.3.3 Lack of Coordination and Cooperation

The One Stop Service (OSS) portal suffers as Bangladesh's service delivery authorities lack Coordination. OSS, as a unified service platform, demands consistent data and coordinated actions for success. Many organisations prefer manual or regional solutions over centralised OSS. Employee unwillingness, bureaucratic inertia, and poor digital platform training may cause change resistance. Some agencies have delayed digitising their procedures, preventing OSS system adoption. (BIDA, 2025; Hossain et al., 2020)

4.3.4 Accountability Issues

OSS lacks accountability. While Singapore's GoBusiness enforces service level agreements (SLAs) with fines for delays, Bangladesh's OSS system lacks them (World Bank, 2023; GOVTech Singapore, 2024).

4.3.5 IT Vendor Issues

Service providers lack experienced IT staff or vendors to integrate services into the OSS system, delaying operations. 48% of agencies lack IT staff or OSS integration providers (UNDP, 2023). Due to complexity, 72% of investors use intermediaries, decreasing OSS transparency (World Bank, 2023). Service clients can contact agencies through third parties even without using the OSS system (The Daily Star, 2024).

4.3.6 Inadequate staffing

BIDA's Head Office and sub-divisional branches need staff to manage Bangladesh's One Stop Service (OSS) site (White Paper Committee, 2024). Many local BIDA offices are inundated by requests due to a lack of trained staff and technology, according to The Financial Express (2022). Thus, local branches cannot provide the service quality needed to run the OSS portal, jeopardising service delivery and user experience.

4.3.7 Lack of Awareness

Bangladesh's economy relies on SMES, which rarely adopt OSS. 68% of SMES were unaware of the OSS portal's full potential or used older methods due to mistrust or inadequate digital literacy (DCCI, 2023). Besides, all potential users, particularly those who hold higher positions

in business companies, are not fully aware of the activities of BIDA OSS. So, they are compelled to employ third parties or to apply directly through individual agencies. This gap in knowledge certainly affects the platform's impact (BIDA, 2024).

4.3.8 Absence of the checklist and simplified forms for services

Most of the agencies integrated into OSS do not provide a written and clear checklist of documents for the investors. It confuses investors when deciding which documents, they will submit to get the desired service (BIDA, 2025). Many of the agencies, like RJSC, use traditional forms in the OSS system, which are so difficult for the investors to fill out. Finding no other alternatives, they are compelled to opt for legal firms or go for a manual solution (Business Automation, 2025).

4.3.9 Inadequate funding for local government bodies

Integrating local government bodies like City Corporations and Municipalities faces specific challenges, including the need for standardised software, adequate funding, and staff training to enable online service delivery (BIDA, 2025).

4.3.10 System Functionality and Technical Issues

Feedback from users and stakeholders (BIDA, 2024) points to several challenges related to the system's functionality and technical aspects. Some notable include the Lack of clear information within the OSS system regarding expected processing times for each service after application submission, delay in data migration to the national data center causing restrictive attachment size limits, difficulty in understanding the reasons for application "shortfalls" (requests for corrections or additional information), submission of additional documents for some services, and Lack of video conferencing system to provide clarification of shortfalls. There is no option for data synchronisation in the current OSS system. The agencies cannot pull data against prior documents of other agencies. As a result, the investors are required to submit the same documents again and again, which proves to be a burden for them and also occupies huge spaces on the server.

5. Conclusion:

The assessment of the OSS system of the Bangladesh Investment Development Authority (BIDA) highlights significant progress in streamlining the investment processes through digital integration. The OSS system's aim of minimising administrative hurdles to improve service delivery has been accomplished to some extent, though some agencies remain dependent on traditional approaches. A comparative analysis of the region's competitors, including GoBusiness in Singapore and NSWS in India, reveals weaknesses in automation, accountability, and centralized surveillance. The stakeholders and investors additionally pointed out some more issues, such as incomplete service integration, the lethargic adoption and conflict of interests of specific agencies, and technological limitations. The system has thrived despite these obstacles, resulting in an increase in the number of applications and BIDA demonstrating exceptional compliance rates. It is essential to address these issues in order to align the OSS with global best practices, boost investors' trust, and fulfill its role as an integral part of Bangladesh's digital transformation.

6. Policy Recommendations:

- Steps should be taken to establish a centralised overarching authority with statutory powers to enforce SLA compliance, resolve inter-agency conflicts, and integrate all existing parallel systems (e.g., BEZA, BEPZA) into a unified OSS platform. In the “One Stop Service act, 2018” individual OSS for separate IPA has been mentioned. So, there should be an amendment of this act or a new act has to be promulgated. A centralised monitoring and support unit needs to be set up to address system glitches, improve user support, and manage complaints more efficiently.
- Full automation with online payment gateways, complete data synchronization and inter-operability across all integrated agencies must be established to eliminate incomplete digitisation and align with the OSS's paperless mandate.
- Nationwide awareness campaigns should be launched targeting SMEs, local and foreign investors, emphasising the OSS portal's benefits through workshops, multilingual tutorials, and collaboration with chambers of commerce.
- Service Level Agreements (SLAs), in consultation with all participating agencies, have to be re-fixed to ensure that service delivery timelines are adhered to and that there are penalties for delays.
- IT infrastructure is to be upgraded, and dedicated vendor support is to be provided to agencies lacking technical capacity, ensuring seamless API integration and real-time data sharing.
- The OSS portal's user interfaces need to be simplified by introducing smart dashboards with real-time application tracking, automated document resizing, AI-driven predictive analytics, video conferencing and multilingual chatbots for instant support.
- Officers from critical agencies (e.g., NBR, DoE) require to be deputed at BIDA offices to expedite decision-making and reduce processing delays for complex applications.
- The government should develop a phased roadmap to integrate municipal corporations and local bodies into the OSS, addressing funding gaps.
- The system can include some new public services, like driving licenses for foreign nationals and Trademark registration. Service delivery time should be reduced, accelerating processes for some specific services, like the work permit processing time from 15 to 10 days.
- OSS data should be transferred to the National Data Centre immediately to ensure cybersecurity and increase server space.
- Checklists and application forms for digital platform services should be simplified, mentioning the maximum stipulated time. The visa service process through DIP has to be streamlined.
- Continuous updates and enhancements to the OSS portal have to be focused on ensuring it remains competitive with regional OSS systems, such as those in Singapore and India, in terms of functionality and service offerings.

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. A K M ALI AZAM

Evaluation of Pre-deployment Training and Challenges Ahead

Abstract

The ongoing evolution of United Nations peacekeeping operations requires troop-contributing countries, including Bangladesh, to modify their roles and responsibilities. The exceptional dedication of Bangladeshi contingents remains evident, but modern peace operations present substantial operational and strategic challenges because of their dynamic and volatile nature. The research demonstrates that peacekeeping missions require immediate context-based training programs which address the diverse needs of contemporary peacekeeping operations. The effectiveness and safety of Bangladeshi peacekeepers will improve when training methods match actual ground operations while maintaining traditional peacekeeping principles and teaching personnel to handle asymmetric threats. The resolution of these challenges remains essential for both UN peace operation success and the protection of humanitarian goals across the world.

Keywords: Peacekeeping Training, Multidimensional, Complex Operation, Institutional, Peace Support, Organization, Training Curriculum, Environment, Lodger Formation, Core pre-deployment Training Materials, United Nations, Scenario-Based, Emerging Trend.

1.0 Introduction

1.1 Background

Peacekeeping is one of the cornerstones of the United Nations and will remain an essential element for creating lasting peace in war-torn societies (Rakibul,2023;). Bangladesh is one of the largest troop-contributing countries to the United Nations peace operations. Bangladeshi contingents have earned an extraordinary reputation for their outstanding performance. Yet, the journey of Bangladeshi contingents was not smooth due to the constant changes in the nature and scope of

UN peacekeeping operations. In this context, the contingents face numerous challenges that have an impact on the contingents operating in the multidimensional environment of UN peace operations. In view of above, an endeavor is taken in this paper to analyze the current operational environment in UN peace operations and eventual impacts on the contingents to bring out the appropriate training modalities to address the core issues.

Most ongoing peace operations are multi-dimensional, involving military, police and civilians and spanning over a diverse range of functions, ensuring protection, supporting governance, electoral assistance, and promoting human rights. Peace operations are no longer monitoring and observation missions, as soldiers must confront complex threats from armed groups using terrorist tactics.

This exploratory study sheds light on theoretical and fundamental aspects of UN peace operations and the necessary training that needs to be imparted. The UN peace operations are evolving continuously as they must confront an ever-changing nature and intensity of conflicts over the decades since their inception. The study attempted to identify the theoretical insights of UN peace operations and then explored the setting and environments surrounding present-day operations, and suggested plausible training needed to address the emerging trend of multidimensional operations.

In the process of reckoning the status, related predicament, and the implications of such differences and limitations for the performance of the peacekeepers have been analyzed. The research findings indicate the need for capacity enhancements that correspond to the realities of the field. The research recommends fixing fundamental dilemmas and sticking to traditional principles and roles of the peacekeeping contingents and enhancing the capacity to counter emerging threats, and equipping UN peacekeepers with matching outfits to deal with a growing challenge.

1.2 Problem Statement and Research Question

Effective training is one of the predominant factors of the present-day mission environment. With the diverse cultural and operational contexts, training plays a pivotal role in shaping the operational environment. However, there is a lack of effective training in all the training curricula that prevail in the training institutions and other training support formations. Special emphasis may be given

to comprehensive, scenario-based training, cultural competency, human rights, conflict resolution, and cross-cutting issues, are few grey areas where modifications and emphasis may be given to address the gap in the existing peacekeeping training.

This evaluation aims to analyze the existing training modalities prevailing at the training institutions of Bangladesh, assess the alignment with the operational needs of UN missions, and propose policy recommendations for enhancing the peacekeeping training processes. By doing so, the paper seeks to contribute to the comprehensive preparedness of contingents, ultimately enhancing the effectiveness of the training of UN peacekeeping Mission. The research question is what are the pre-deployment training needed to enhance the peacekeepers to effectively function in the multidimensional environment? Again what are the adverse effect will have if contingent members join late in the contingent?

1.3 Objectives of the study

The objectives for the following circumstances are given below:

- a. To evaluate the existing pre-deployment training at BIPSOT and lodger formation.
- b. To impart realistic training to adapt the multidimensional operational environment in order to address the emerging trend of peace operations.

1.4 Significance of Research

Participation in peacekeeping missions is crucial for boosting its global reputation, enhancing bilateral relations, and strengthening its engagements with the United Nations. It also provides a platform for showcasing the nation's commitment to peace and stability, contributing to global efforts in peacekeeping missions. The active role of Bangladesh as a blue helmet boosts its image on the global platform and also influences the international forum. As such, Bangladesh should be more concerned about the training methodologies based on the contemporary scenario.

This study allows training institutions to provide insights to assist in framing policy evaluation on mission training curriculum. In the process, this paper finds out the actual gap in peacekeeping training that prevails in the institutions with special emphasis to lodger formation.

2.0 Literature Review

The existing Mission policy was circulated in 2024. Though there were many criticisms about the existing peacekeeping training curriculum, hardly any research was carried out on the effectiveness of training, particularly identifying the gap in the ongoing peacekeeping training system. The researchers explored a good number of articles on the websites about the CPTM system. During the entire duration of service of any soldier's, no mission-oriented training is imparted to promote the training curriculum of a mission environment. Hossain (2021) in his article has expressed that too much importance has been given to the knowledge and theoretical aspects of peacekeeping training. The writer argued that military personnel should develop professional skills, not confined to theoretical aspects only. However, in his article individual did not analyze the effects of peacekeeping training on dynamic changes of the operational environment. Haque (2023) in his article mentioned the eventual challenges of the changing environment of Bangladesh contingent at the mission. The researcher discussed various measures for better performance, but didn't mention the suggested training needed to acquire knowledge.

Hasan (2023) articulated that the changing environment of UN peace operation, Multidimensional Peace Operation, and increasing trend of Asymmetric Conflict. This publication did not highlight the training requirement to promote peacekeepers training. However, the writer has given his opinion based on basic experience and wisdom that individuals have acquired in his profession.

From the aforementioned secondary papers, it is well understood that very few researchers analyzed the performance of Bangladesh contingent members in the mission environment. That is why the researcher has felt the necessity of carrying out research on the existing peacekeeping training system to identify the effectiveness of peacekeeping training. Thereby enhance the reputation of the country in the global platform as Blue helmet.

3.0 Research Methodology

For this policy evaluation, a qualitative method was followed. Firstly, a review of official and academic literature was conducted to identify the gap in the present Core Pre-Deployment Training Materials (CPTM). Data for this research have been collected from both primary and secondary

sources. Primary data was derived from interviewing experts and policymakers, and surveys conducted within the various rank structures of the Bangladesh Army personnel. Besides, Contingent Commanders of numerous outfits were also interviewed. Secondary data was collected from content analysis of related reports and surveys, different academics and non-academic materials such as related policies, journals, magazines, and publications, both from home and abroad. Apart from this, interviews of relevant senior officers over the telephone and via email were also conducted. Finally, focus group discussion is also carried out at different Headquarters, and institutions were consulted.

4.0 Data Analysis and Findings

The researcher has collected data from respondents through interviews and FGD. Details of the analysis of data and findings are discussed chronologically. An overview of the existing Peacekeepers training system and inference is given at the beginning of this paper. Thereafter, major findings from the analyses are appended in subsequent paragraphs.

4.1 The Existing Peacekeeping Training

Bangladesh Army has implemented the establishment Peacekeeping training system in the year 1999 with the establishment of the Peace Operation Training Centre (PKOTC). This institution was later renamed as the Bangladesh Institute of Peace Support Operation Training (BIPSOT) in 2002 to reflect its expanded role and capabilities. A separate syllabus has been formulated for respective arms and services based on the roles of mission-specific requirements. Notable changes in the new system are: development of infrastructure, duration of the training has been increased, scenario-based training, and enhanced communication barriers are a few key areas. The reasons behind the inclusion of new classes are: educating the new peacekeepers so that they can handle modern arms and equipment with ease, and also to be accustomed to the challenges of change in the emerging trend of peacekeeping operations. However, the objectives of CPTM training in BIPSOT, more particularly at the lodger formation, have been kept the same as follows: To enhance the capacity building of the trainers to promote the promoters of peace. To educate peacekeepers in modern, smart technology-based training to address the emerging trend of peace operations. To make peacekeepers physically and mentally robust. To train in a scenario-based training to confront the challenges of change.

UN CPTM as a foundation and structured training packages, and lays out the rest of the learning journey for all peacekeepers. UN Pre-Deployment training is mandatory for all categories of UN peacekeeping personnel. Completing the UN CPTM is a requirement to improve knowledge, upgrade skills, and gain the right mindset to support peace in the communities and countries to which peacekeepers are deployed. Given on physical training, Mission-specific training, Language training, principles of UN peacekeeping, Mission partners, Gender violence, Women Peace and Security (WPS), Rules of Engagement (ROE), Sexual Exploitation and Abuse (SEA), Protection of Civilians (POC), Mandates, International Humanitarian Law (IHL), Protection of Child (POC), Host nations' law.

At present, the Peacekeepers' mission has become more challenging. As the world is changing frequently, the dynamics of peacekeeping missions are also shaped at the same pace. Peacekeeping operations have evolved beyond traditional roles, encompassing complex tasks. The spectrum of today's UN Peacekeeping includes challenging tasks such as counterterrorism, post-conflict recovery so on. To do so, the effectiveness of the peacekeeping training of the personnel needs to be improved. Many of the participants of mission contingents are not well-trained before deployment to any mission area (Pasha, 2025).

4.2 Major Findings

4.2.1 Effectiveness of CPTM Training. Training is considered as the best welfare of a man in uniform. Most of the soldiers are not undergoing any training related to peacekeeping operations before joining the mission contingent (Pasha, 2025). The same observation has been reiterated by different stakeholders during the FGD. Most importantly, they become extremely weak in the English language. All of the aforementioned opinions/ observations/ remarks of the senior officers reveal that absolute military traits among the soldiers have reduced significantly. Moreover, the peacekeeping training imparted by the lodge formation is not adequate. Therefore, it is evident that existing training is insufficient to develop ideal Peacekeepers. A survey was conducted among 50 peacekeepers, where 20 officers, 15 JCOS and 15 Other ranks were considered. Out of all, most of them agreed upon regarding the efficiency of peacekeeping training at the lodge formation. It is

evident that while imparting training to the trainer at BIPSOT, the assimilation is 80%, whereas when the trainer transfers the lesson to the contingent members, it is reduced to 60%.

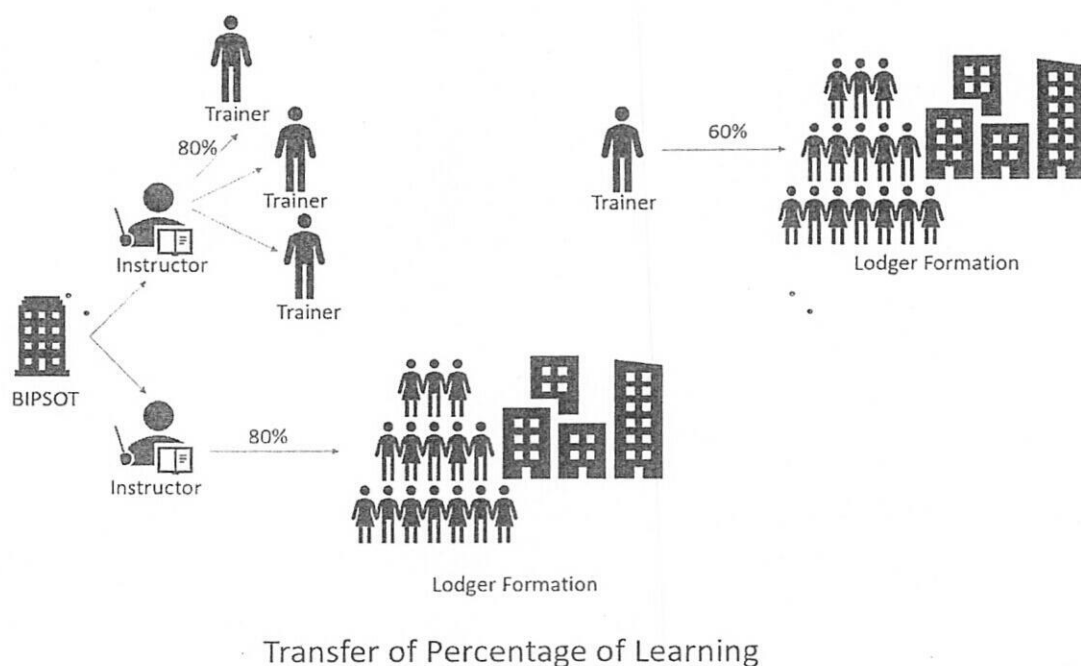


Figure 4.2.1: Transfer of percentage of learning in BIPSOT trainings

4.2.2 Infrastructure of Training Centre: In Bangladesh, BIPSOT is the place where peacekeepers' training is being imparted to the mission personnel before deployment in the mission areas. Significant numbers of contingents are trained at BIPSOT simultaneously. As such, all the members of the contingent do not have the scope to acquire mission-oriented knowledge. Often, we found that Mission contingents are trained at different division locations where adequate training facilities are absent. Therefore, the infrastructure capability of the lodger formation needs to be enhanced to accommodate the maximum trainees (Kabir, 2025). Besides, qualified instructors, scenario-based UN village complex, and training on engagement on short notice are also insufficient to meet the existing need. A survey was conducted comprising 20 officers, 20 JCOS, 30 NCOS, and 30 Soldiers. Based on the challenges of the twenty-first century, the infrastructure of the existing institution is insufficient training structure, as surveys have shown.

Sufficiency of BIPSOT training

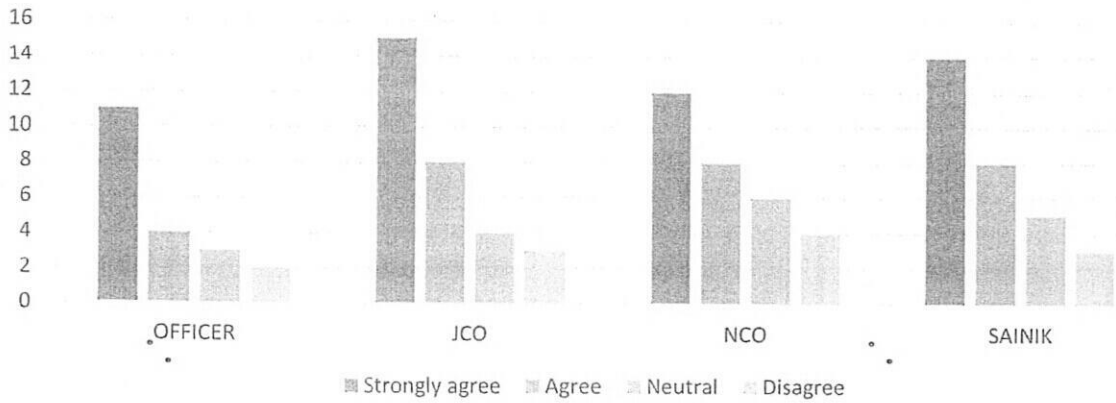


Figure 4.2.2: Sufficiency of BIPSOT Training

4.2.3. Duration of CPTM Training: Core Pre-Deployment Training Materials (CPTM) contain essential knowledge required by all peacekeeping personnel- Military, Police, and Civilian. The duration of CPTM is four weeks, which is less than the requirements. To be deployed in a mission environment, a peacekeeper needs to learn many things. But with this short duration, it is arduous to impart the entire gamut of the mission environment. Thus, the duration of the CPTM needs to be increased and comprehensive. A survey is conducted among the officers, JCOS, NCOS, and Sainiks where most of them are agreed upon that duration of Pre-Deployment Training is less than requirement.

Duration of peacekeeping training

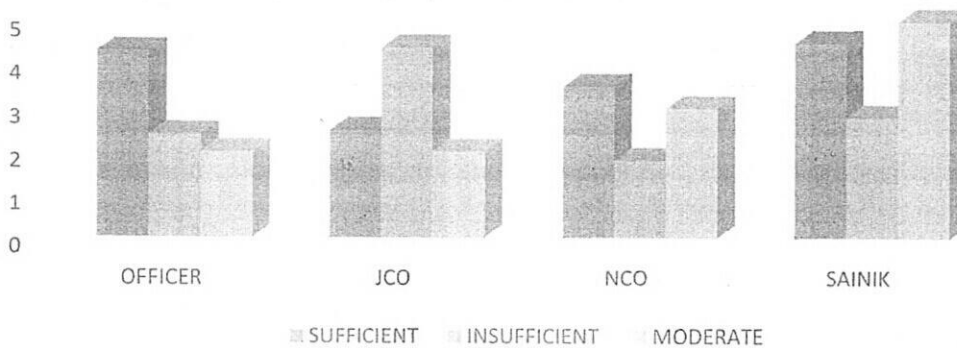


Figure 4.2.3: Duration of Peacekeeping Training at BIPSOT

4.2.4 Language Barrier: Language is the most important communication tool for interacting with all stakeholders operating in the mission environment. It can be a significant barrier in mission areas as it is closely connected to culture and tradition. Without understanding the local language, anyone may interpret wrongly and be offended unintentionally. Language barriers can hinder trust and relationships, which are vital for a mission environment. At times, linguistic nuisance may occur due to confusion and miscommunication. In the FDG at BIPSOT, it is mentioned by most of the instructors that language is one of the important barriers for the peacekeepers. A survey was conducted among 15 officers, 20 JCOS and 30 Other Ranks, where most of them confessed to the language barrier.

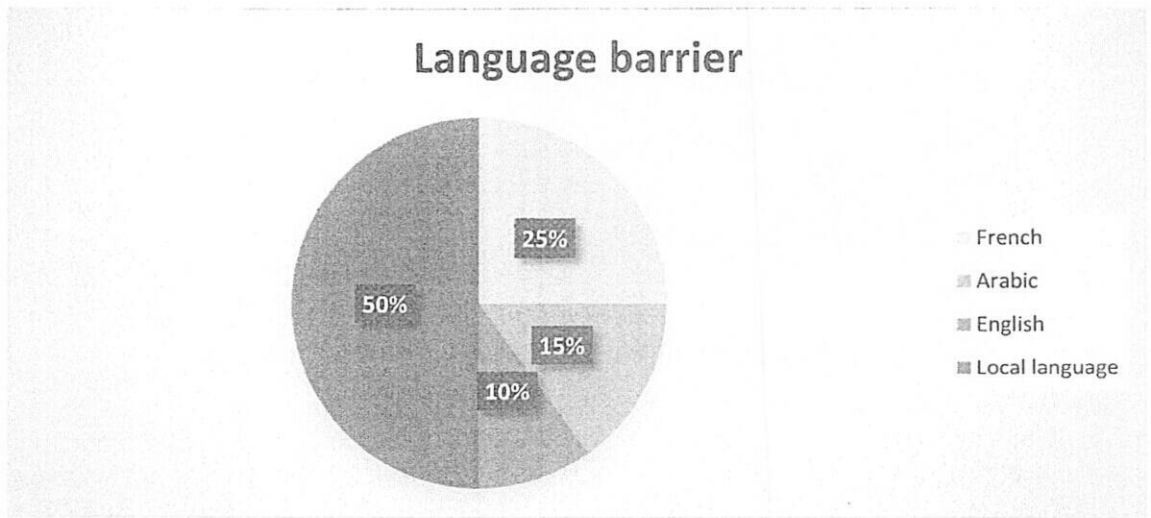


Figure 4.2.4: Barrier among the common Languages at mission

4.2.5 Classroom-Based Training: Training is the most important welfare of the man in uniform. But, it has to be oriented to the current scenario of the mission environment. At the same time, a traditional base training learners receive instruction mostly in theoretical knowledge. It is mostly passive and less engaging in a mission environment, particularly in the multidimensional complex operational environment. As a result, the effectiveness of classroom-based training is difficult to identify. Longer sessions in the classroom lead to fatigue and reduced attention spans. Few instructors of BIPSOT also highlighted the training shortfall of the institution mostly at the lodger formation where classroom training is being imparted to the contingent members during

the training session. While interviewing three contingent commanders, all of them mentioned that the training at the lodger Formation is class-based and stereotypical.

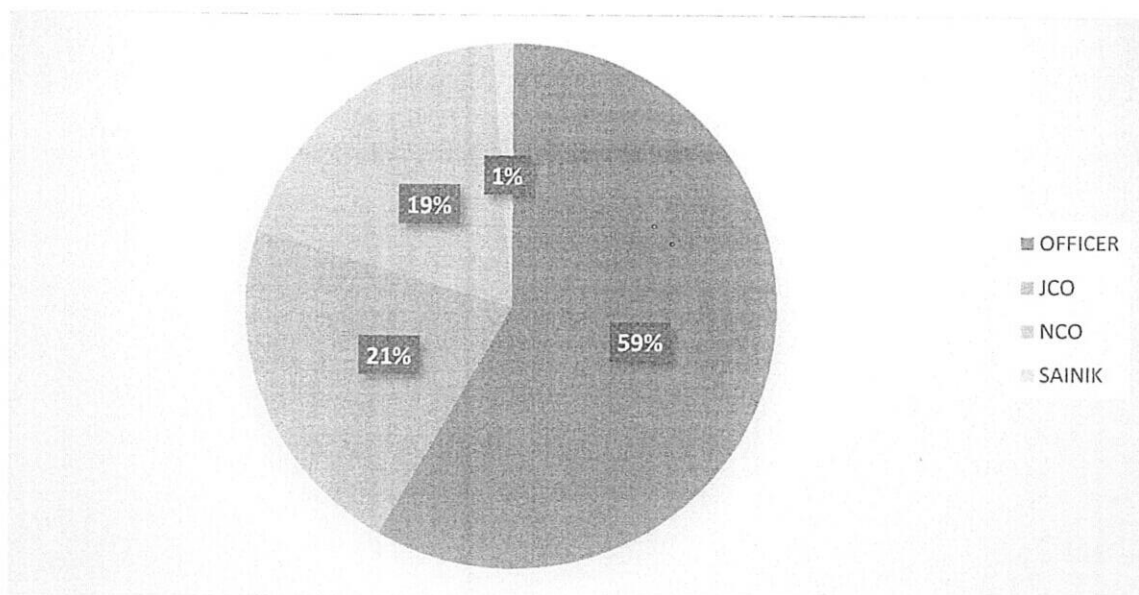


Figure 4.2.5: Preference for improved training outside the classroom

4.2.6 Joining Late in the Mission Contingent: All members are expected to join the contingent timely as they designated for a particular mission. As a result, contingent suffers heavily in terms of training and other administrative aspects. Contingent needs to be trained as a unit entity to build cohesion. But most of the key appointment holders don't join in the contingent designated time, thus posing significant challenges to the cohesion within the contingent members. Besides, the maximum troops don't get the required training as needed. So, the training of the contingent was hampered significantly. Several contingent commanders mentioned about the late joining of the contingent members. A survey was conducted within 20 officers, 30 JCOS and 30 Other Ranks where all have mentioned about the late joining of members in the mission contingent.

4.2.7 Balance between Admin and Training: To prepare a contingent for a UN mission is of mammoth task. Mere's providing required training to the contingent members is not the only issue

to prepare for the contingent. There are multifaceted administrative jobs to be addressed concurrently. Mentionable few are preparing passports, medical fitness of each individual, mental robustness, accommodation, salary, and collection of various equipment that warrant close supervision and deep monitoring. Therefore, there has to be a fine balance of training and administrative requirements. It is highlighted by the instructors of BIPSOT as well as contingent commanders that balancing between admin affairs with training is of great challenge.

4.2.8 Shortage of Specialized Equipment. Logistics and equipment are the key requirements for the successful preparation of any contingencies. In most cases, it is observed that contingents are not provided with the necessary equipment. Due to the absence of a left-hand drive vehicle, the drivers could not practice left-hand driving. A shortage of some of the equipment, like riot control equipment and walkie-talkie sets, hampered pre-deployed training in the lodger formation. Lack of APCs and training aids caused difficulty in providing realistic training during PDT, more particularly at the lodger formation (Pasha, 2025).

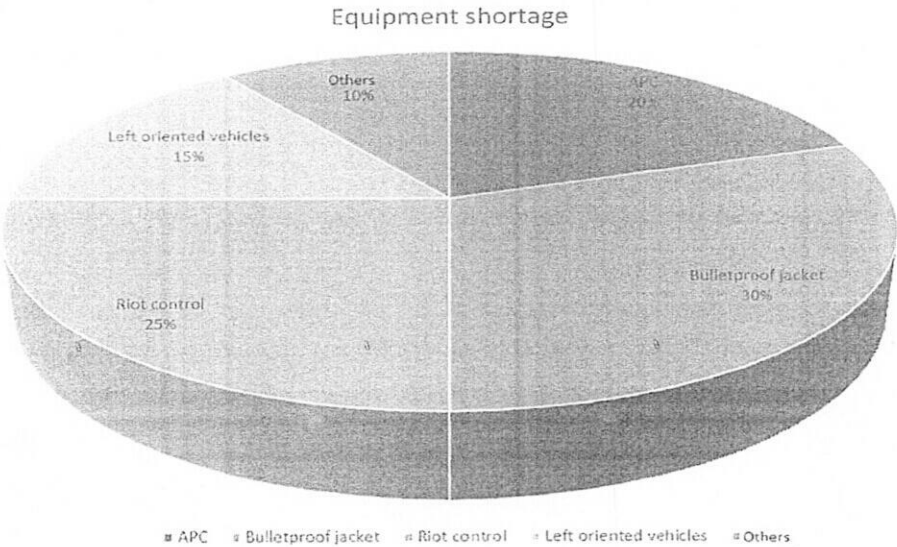


Figure 4.2.8: Shortage of different specialized equipment

4.2.9 Peacekeeping Training System in Other Armies. Armies of India, Pakistan, Sri Lanka, and Nepal's regular troops also actively participate in peacekeeping training. Peacekeeping

training of these armies encompasses only modules on military affairs and other dimensions of training as needed. Armies of Asian countries focus on regional stability, soft power, and UN contribution legacy whereas western countries concentrate on global security alliances, strategic interest, and multi-domain intelligence are a few prominent examples of western armies.

4.3 Measures of overcoming the challenges

To overcome the challenges, the troops contributing country must adopt a collaborative, well-coordinated and comprehensive training module. However, to address the challenges few modifications at training curriculum may be adopted. To mitigate the challenges, suggested measures are discussed subsequently.

4.3.1 Capacity Building during imparted Training at Lodger Formation: The challenges faced by peacekeepers are multifaceted and daunting. To meet the challenges of the twenty-first century, training must be robust, responsive. Here lies the importance of fostering the capacity building at the lodger formation training structure. To do so, enhancing the infrastructure development of formation is imperative. Scenario-based and technology-driven training also be equipped. Infrastructure should be incorporated based on quality, rather than quantity. Comprehensive and familiarization training for peacekeeping personnel on the operation and utilization of technology is a key feature to promote peacekeeping operations.

4.3.2 Increase the Duration of CPTM: The overall module of CPTM is vast and difficult to undergo such training in four weeks. So, to ensure comprehensive training, the duration should be increased. Peacekeepers need greater operational capability to deliver on complex mandates in extremely difficult situations. Training on IED, patrolling, occupation of TOB, logistics, Special force Operations are a few areas where special emphasis must be given, which warrants expansion of training duration to impart quality training to the peacekeepers.

4.3.3 Reduce Language Barrier: Language training should be prioritized to enhance negotiation, mediation, and liaison capabilities. It has significant negative impact on both, the execution and the results of any task. Inadequate proficiency in the local language can hinder successful contact with all stakeholders, particularly with the local community. It is imperative to educate our troops to succeed in community engagement and also to reach out to the local

administration and civil society. The Chief Instructor of BIPSOT mentioned during his interview that language is one of the prime barrier for the peacekeepers. Language may be given additional priority to address the core issue.

4.3.4 Scenario-Based Training: In the present context, peacekeeping missions have become more challenging due to complex scenarios and the evolving trend of new actors. In the existing CPTM, there is a great quantity of training packages, but they are all heavily theoretically based. While interviewing with chief instructor of BIPSOT, individual also mention highlighted the shortcoming of scenario based training. Considering that peacekeeping is not a theoretical practice, done within the confines of an office, it is a huge limitation that peacekeepers are only provided with a theoretical class. Therefore, special emphasis must be given to focus on the scenario-based training, like state-centric conflicts, non-state threats and internal conflicts within countries.

4.3.5 Ensure Timely joining of Contingent Members: The members of the mission contingent must join at the scheduled time. As the key appointment holders are not joining the contingent, there is negative impact on training and overall administration process. Poor coordination, teamwork, cohesion building, and related logistic supply will be challenging. Necessary measures must be taken so that all peacekeepers can join the contingent on the specific schedule. During the interview session one of the contingent commanders highlighted the delay joining of key appointment holders. Thus, all stakeholders must take immediate steps to ensure the timely joining of the contingent members as promoter of the peace.

4.3.6 Shifting the Balance between Admin and Training: To make a fine tuning, the balance between the training and administration need to be addressed judiciously. As preparing passport, medical formalities, and collection of various logistic equipment are vital, therefore due attention need to be given. Besides, impart multifaceted training to contingent members to promote global peace and security as premier peace keeping training.

5.0 Conclusion & Recommendations

Peacekeeping missions function as essential instruments for international peace maintenance. The success depends heavily on the quality of pre-deployment training received by the peacekeepers. The research demonstrates that peacekeeping training has advanced significantly regarding

cultural sensitivity and conflict de-escalation, civilian protection, yet, multiple ongoing challenges persist. The implementation of peacekeeping operations faces a few obstacles, which include the Infrastructure of training institutions, language barriers, duration of training, delay in joining the contingent, and balancing between administration affairs and training matters.

The solution to these challenges requires a unified approach to systematize the training protocols of troops contributing nations. To address the issues, special emphasis should be given to scenario-based learning, educating peacekeepers on language training, ensuring timely joining of personnel in the contingent, and finally, the development of capacity building of training curricula is vital to promote the training of peacekeepers. The implementation of continuous evaluation and feedback systems should be established to allow training to adapt to new threats and operational realities.

Today, Bangladesh stands as one of the world's leading contributors to the blue helmets. Meanwhile, the Bangladesh Institute of Peace Support and Training Centre remains a cornerstone to promote training to the next generation of peacekeepers. The future success of peacekeeping missions requires a forward-looking, cooperative training approach that prepares personnel for complex ground realities.

Recommendations

As Blue Helmets confront the future challenges of UNPKO, proactive training modules are imperative to ensure the effectiveness of peacekeeping training. Based on findings, this study offers a few recommendations.

The infrastructure of lodger formation training may be enhanced to promote the capacity building of future peacekeepers.

Strict compliance with timely joining of the members in the mission contingent should be maintained to have better performance.

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Interview

1. Pasha, K (2025) Contingent Commander [Interview] (12 May 2025)
2. Hossain, M (2025) Chief Instructor [Interview] (11 May 2025)
3. Hasan, M (2025) Previous-Instructor BIPSOT [Interview] (12 May 2025)
4. Mahi, A (2025) Contingent Commander[Interview] (12 May 2025)
5. Nazmul, M (2025) Contingent Commander[Interview] (12 May 2025)



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117th Senior Staff Course

Individual Assignment/Report/Exercise

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MODULE: 03

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1. Please write your Name, Roll No. etc. at the specified space otherwise may cause cancellation of your answer script.
2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name: Dr. Shaikh Mohammad Jobayed Hossain

Roll No. 108

Examining Policy Coherence in the Development of Youth Entrepreneurship in Bangladesh

Abstract

Unemployment is one of the key challenges in Bangladesh towards the sustainable economic growth. Bangladesh's burgeoning youth population presents a significant opportunity for boosting up the socioeconomic development through entrepreneurship. Despite numerous government initiatives and strategic frameworks promoting youth entrepreneurship, policy outcomes have been inconsistent and often fragmented. This study investigates the coherence of youth entrepreneurship policies in Bangladesh using the OECD's Policy Coherence for Sustainable Development (PCSD) framework, focusing on horizontal, vertical, and temporal coherence. Through analysis of key policies—including the National Youth Policy 2017, SME Policy 2019, National ICT Policy 2018, National Industrial Policy 2022, and the Draft Youth Entrepreneurship Policy 2025—and stakeholder interviews, the research identifies critical gaps in coordination, implementation, and monitoring. Findings reveal that while several policies incorporate entrepreneurship development components, they often lack integration, sectoral alignment, and sustainability measures. Challenges include fragmented government efforts, insufficient stakeholder engagement, skill mismatch, barriers to financing and resources, and weak monitoring mechanisms. The study concludes with policy recommendations to enhance inter-ministerial coordination, data-driven planning, capacity building, and youth-centric implementation frameworks, ultimately advocating for a more unified and strategic approach to youth entrepreneurship development in Bangladesh.

Keywords: Youth Entrepreneurship, Entrepreneurship, Policy Coherence.

1. Introduction

Bangladesh is a country of youthful folks comprising almost one-third of its total population aged 18 to 35. According to the Population Census and Household Survey 2022, the estimated youth population is 55.53 million (BBS, 2022). Bangladesh is experiencing a significant bulge of youth with an increasing uncertainty in employment, creating frustration among young population. It is one of the key challenges (UNDP, 2021) that is impeding the national development. Therefore, to create employment as well as self-employment youth entrepreneurship is extremely necessary to utilize the demographic dividend for socioeconomic development (Roy & Roy, 2014). Entrepreneurial activity is now recognized as a powerful engine of economic growth and innovation. Self-employment is an important source of new jobs and an alternative to paid employment (Kim, 2008). Although youth entrepreneurship is increasingly promoted as a viable pathway to address youth unemployment, foster innovation, and support inclusive economic growth as well as numerous initiatives taken by the government, development partners, and private sector actors, the outcomes have often been fragmented and inconsistent (UNDP, 2021). This suggests a potential lack of policy coherence, where policies and programs may be overlapping, conflicting, or failing to reinforce each other (OECD, 2019). Hence, this study seeks to examine the policy landscape for youth entrepreneurship in Bangladesh, identify areas of incoherence or misalignment, and suggest ways to improve policy synergy and effectiveness.

2. Problem Statement

In Bangladesh, youth unemployment and underemployment are persistent challenges as the large number of the youth population, struggling to secure sustainable employment (Razzaque et al., 2018). In this situation, youth entrepreneurship has emerged as a key solution for fostering economic independence and reducing unemployment among the youth (Zwane et al., 2021). Entrepreneurship is increasingly accepted as an important means and a valuable strategy to create jobs and improve livelihoods and economic independence of young people (Gazi & Akhter, 2014). This is recognized as a sustainable way of eliminating unemployment and providing economic stability (Aceleanu et al., 2015) of this large youth population those are within the age group of 18-35 and they passing the demographic dividend (Habib & Shuvo, 2024; Matin, 2012) are right now. Young people are mostly treated as part of the general adult population, while their specific needs and particular entrepreneurial potential as well as their critical contribution to economic and social progress are underestimated (Ulrich, 2006). That is why, arguably, the policies those are related to entrepreneurial development often misses the youth population specifically. Targeted programs for youth entrepreneurs, including mentorship, funding, and access to markets as well as encouragement in innovation in emerging sectors are crucial ((Habib & Shuvo, 2024) as it is an innovative approach to integrating youth into today's changing labor markets (Ulrich, 2006).

The Government of Bangladesh, has introduced numerous policies, programs/projects and initiatives aimed at enhancing youth entrepreneurship. However, despite such efforts, the outcomes have been inconsistent, and the expected impact in reducing economic insufficiency of young people has often been inadequate (UNDP, IsDB & Startup Bangladesh, 2021). It is assumed that one of the primary reasons for the inadequacy of these initiatives may lie in the lack of policy coherence (OECD, 2023). This refers to the absence of alignment and synergy among different policies, programs/projects, and institutions involved in supporting youth entrepreneurship (Commonwealth, 2018). While some policies may not be pragmatic, some are overlapping, others may conflict or fail to complement each other, some may not be implemented properly which leads to fragmented support and inefficiencies in various ways including in resource allocation (McConnell, 2010). Moreover, there is a significant gap in understanding how these various policies and programs are coordinated across different levels of government, sectors, and stakeholders (OECD, 2023).

This research aims to examine the policy coherence of youth entrepreneurship in Bangladesh. It seeks to identify the degree of alignment or disconnection between the policies, institutions, and programs designed to foster youth entrepreneurship. By understanding the gaps, redundancies, and contradictions in existing policies, this study intends to provide insights into how the policy framework can be improved to create a more supportive, integrated, and efficient environment for enhancing youth entrepreneurship. The findings of this study are expected to contribute to shaping more coherent and impactful policies that can drive sustainable economic growth, enhance job creation as well as self-employment, and empower young entrepreneurs in Bangladesh.

3. Research Objectives

The overall objective of this research is to assess the existing policies that are related to development of entrepreneurship of young people and find out the inconsistency and incoherence due to institutional and structural disconnection. The specific objectives of this research are as follows:

- 1) To map the current youth entrepreneurship policies and programs in Bangladesh;
- 2) To assess the coherence of these policies across sectors and levels of governance;
- 3) To identify institutional and structural challenges that hinder policy coherence; and
- 4) To provide policy recommendations to enhance coordination, alignment, and impact.

4. Research Questions

To meet up the objectives of this study aims to answer the following research questions that are adopted considering the methodological dimension and scope of analysis:

- 1) What are the major public policies, programs, and institutional frameworks targeting youth entrepreneurship in Bangladesh?
- 2) How aligned are these policies with each other in terms of goals, implementation strategies, and outcomes?
- 3) What are the key factors contributing to policy incoherence or fragmentation?
- 4) What strategies can be adopted to ensure better alignment and synergy among youth entrepreneurship policies?

5. Literature Review

Unemployment is one of the key challenges facing Bangladesh's young people. Youth entrepreneurship is a potential solution to address this challenge and achieve positive impacts at scale (UNDP, 2021). Youth entrepreneurship is increasingly recognized as a key strategy to combat youth unemployment globally. According to the ILO (2020), entrepreneurship provides young people with an alternative to traditional employment, empowering them as job creators rather than job seekers. It has become a strategic focus for reducing dependency on public sector employment and stimulating private sector growth. However, despite a proliferation of policies and programs, outcomes remain limited—suggesting that the issue may lie in the coherence and coordination of these efforts. In the context of developing countries like Bangladesh—where youth (aged 18–35) make up nearly 30% of the population—entrepreneurship is viewed as a vital engine for inclusive economic development, innovation, and poverty reduction (World Bank, 2022). Despite multiple policy/program initiatives, coordination among implementing agencies remains weak, with overlapping mandates, fragmented service delivery, and inadequate monitoring frameworks (Rahman et al., 2021). However, to combat the youth unemployment and to foster the youth entrepreneurship, Bangladesh has introduced several policies and strategic frameworks. Among the various

policies, the important policies that are connected to youth entrepreneurship are as follows in Table 1.

Table 1. Policies Relevant with Youth Entrepreneurships.

Policies	Issues of Entrepreneurship
National Youth Policy 2017	Skill development, innovation, and youth-led enterprises.
Youth Entrepreneurship Policy 2022 & Draft National Youth Entrepreneurship Development Policy 2025	Ease access to finance and business development services for small and medium enterprises, including those run by youth.
SME Policy 2019 & Draft National SME Policy 2025	Targeting the growth of tech-based entrepreneurship and incubation through digital skill development and innovation infrastructure
National ICT Policy 2018	Designed to consolidate and tailor support mechanisms specifically for young entrepreneurs including credit, capacity-building, and digital tools.
National Industrial Policy 2022	Specifically emphasizes on entrepreneurship of industrial establishment both formal and informal sector.

Source: Developed by Author.

Studies indicate challenges in programs of policy implementation under different ministries that often lack coordination, leading to duplication or exclusion (UNDP Bangladesh, 2021). Youth are facing significant hurdles in accessing finance, regulatory support, and information, particularly in rural areas (Khatun & Haque, 2020). Urban youth have greater access to entrepreneurship resources than their rural counterparts (BYEAH, 2022). At the same time, many vocational and academic curricula are misaligned with market demands, limiting the entrepreneurial capacity of graduates (ILO, 2020). Development partners like the UNDP, ILO, and World Bank have also supported youth entrepreneurship programs in collaboration with local government bodies and NGOs. However, the lack of a unified implementation mechanism has diluted their impact (UNDP, 2021).

Existing literature on entrepreneurship in Bangladesh highlights a wide range of government and donor-led interventions aimed at promoting youth self-employment. However, scholars have noted a lack of coordination among ministries, mismatches between education and entrepreneurial needs, and limited integration of rural and marginalized youth. Globally, the concept of policy coherence, as promoted by the OECD and UN, emphasizes cross-sectoral alignment to maximize development outcomes. But all those literatures have not revealed the empirical evidence with scientific analysis.

Policy coherence refers to the alignment and mutual reinforcement of policies across different sectors, levels of government, and timeframes (OECD, 2019). It is essential for sustainable development, and in the context of youth entrepreneurship, it ensures that initiatives in education, employment, innovation, and social protection reinforce rather than undermine one another. The ILO (2015) emphasizes that entrepreneurship policies should align with national employment strategies, youth policies, and broader economic development plans. This alignment improves program effectiveness and avoids policy duplication or misalignment that may create structural barriers for young entrepreneurs. Among others education plays a foundational role in entrepreneurial development. However, the literature (GEM Report, 2020;

UNESCO, 2018) reveals that entrepreneurship education often operates in isolation from national innovation or employment policies. Lack of coordination between ministries of education and industry leads to a skills mismatch.

One of the most discussed challenges is the fragmentation of youth entrepreneurship policy across multiple ministries and agencies. Without coordination, policies may overlap or contradict, resulting in inefficiencies and reduced impact. Studies from UNCTAD (2020) and the European Commission (2021) underline the importance of “whole-of-government” approaches. National Youth Strategies that include entrepreneurship goals, and are backed by inter-ministerial coordination bodies, tend to perform better in terms of delivery and scalability.

OECD (2019) identified the types of policy coherence, which includes horizontal coherence (across ministries and sectors), vertical coherence (between central and local governments), and inter-temporal coherence (sustainability over time). For youth entrepreneurship, coherent policy means harmonizing efforts in education, finance, labor, innovation, and social welfare so that they support, rather than contradict, each other. Specifically in case of Bangladesh, the National Youth Policy (2017) calls for entrepreneurship development, but studies (Hasan & Alam, 2021) indicate challenges in policy coherence due to weak institutional coordination and lack of regional policy integration.

While entrepreneurship development is some extent well-documented in Bangladesh, few studies systematically assess the coherence of youth entrepreneurship policies. There is also limited empirical work examining how youth navigate the fragmented policy ecosystem or experience its gaps and overlaps. Hence, this study will build on both national and international frameworks to assess how coherent Bangladesh’s youth entrepreneurship ecosystem truly is.

6. Methodology

6.1. Research Design:

This research is qualitative and exploratory in nature, using policy analysis and key stakeholder interviews.

6.2. Data Collection Methods:

- **Policy Document Analysis:** The national policies related to the entrepreneurship development are reviewed and analyzed (e.g., National Youth Policy and Plan of Action for Implementation of National Youth Policy, Draft National Youth Entrepreneurship Development Policy, SME Policy, ICT Policy, National Industrial Policy) and relevant plans and programs report.
- **Key Informant Interviews (KIIs):** Interviews were conducted with the key policy-makers and stakeholders, such as Ministry of Youth & Sports, Ministry of Industries, ICT Division, SME Foundation, Bangladesh Bank, NGO, Development Partners, Youth Entrepreneurs, and Academics.

6.3. Analytical Framework:

The Policy Coherence for Sustainable Development (PCSD) framework of OECD is adopted as the guide of analysis (OECD, 2019), with dimensions, such as horizontal coherence (across ministries/departments/agencies), vertical coherence (between national, regional and local), and temporal coherence (time-bound and sustainability over time).

7. Discussion and Results

7.1 Mapping and Examination of Policy Coherence

1) National Youth Policy 2017:

The National Youth Policy 2017 of Bangladesh places significant emphasis on fostering entrepreneurship among the youth, recognizing it as a pivotal strategy for economic empowerment and national development. One of the key objectives of this policy is to Promote self-employment and entrepreneurship among youth by creating enabling environments through policy, training, financial support, and infrastructure. The principles of the policy are to ensure inclusiveness through providing special emphasis on marginalized youth (women, rural, disabled) to ensure equal access to entrepreneurship opportunities as well as encouraging youth-led enterprises and decision-making in economic activities. The strategic areas that are directly focused to entrepreneurship are given in the following Table 2.

Table 2. Mapping of National Youth Policy 2017

Strategic Areas in Policy	Focus on Entrepreneurship
Education, Skills, and Training	Technical, vocational, and entrepreneurship education integrated into youth training programs.
Employment and Economic Participation	Emphasis on developing young entrepreneurs through start-up support, job creation, and innovation encouragement.
Access to Resources	Providing access to credit, small loans, seed funding, and resource centers for start-ups.
Use of ICT and Innovation	Promoting ICT-based entrepreneurship, digital literacy, and innovation-driven businesses.

Source: Developed by Author.

Key Provisions on Youth Entrepreneurship

- Skill Development and Training:** The policy underscores the importance of comprehensive entrepreneurship training for youth. It advocates for equipping young individuals with the necessary skills to initiate and manage their own enterprises. Operating under the Ministry of Youth and Sports, the DYD has been instrumental in providing training to over 6.5 million youths. Annually, it offers training programs to more than 300,000 youths, focusing on skill development and entrepreneurship (MOYS, 2024). But it has limitations because it is focused to certain sector such as agriculture and handicrafts (Roy & Bhattacharjee, 2013).

- **Financial Support Mechanisms:** To facilitate youth-led ventures, the policy recommends providing access to small loans and credit facilities. This financial support aims to empower young entrepreneurs to establish and expand their businesses.
- **Targeted Support for Diverse Youth Groups:** Acknowledging the varied backgrounds of the youth population, the policy includes provisions to support unemployed youths, young females, expatriate youths, and young entrepreneurs, ensuring inclusive development.
- **Recognition and Incentives:** To encourage and motivate young entrepreneurs, the Ministry observes National Youth Day on November 1st each year, during which National Youth Awards are conferred for outstanding achievements in self-employment and entrepreneurship.

In summary, the National Youth Policy 2017 of Bangladesh lays a robust foundation for promoting youth entrepreneurship through skill development, financial support, and institutional recognition, aligning with the broader goal of harnessing the potential of the youth for national progress. But it has limitations because it is focused to certain sector such as agriculture and handicrafts (Roy & Bhattacharjee, 2013). An '**National Plan of Action for Implementation of National Youth Policy 2017**' was formulated in 2020, after 3 years of promulgation of the policy. So, it is clear that the implementation of the policy was not taken place timely. Moreover, although the Plan of Action has strategic objectives, activities under such objectives, the responsible government agencies and supporting government agencies, but there is no timeline of implementation. Therefore, the policy has missed the temporal coherence as per the OECD Policy Coherence for Sustainable Development (PCSD) framework and sustainability over time is questioned. Secondly, the Plan of Action distributed responsibilities of implementation across the ministries/agencies, but there is no coordination framework of implementation clearly mentioned. Hence, the horizontal coherence of policy was not also clearly reflected in this Plan of Action. Thirdly, the vertical coherence was not address properly, so that the agencies under the Ministry of Youth and Sports (MOYS) can play proper roles of implementation with the delegated and discretionary ways. As a result, the policy is consistently under-implemented and expected outcomes were not achieved.

2) Youth Entrepreneurship Policy 2022 and Draft National Youth Entrepreneurship Development Policy 2025:

The MOYS formulated the Youth Entrepreneurship Policy 2022, which has not come into implementation as no Plan of Action was made for this policy. Moreover, the policy itself was not comprehensive to encompass required actions for enhancement of youth entrepreneurship. Considering the limitation of this Policy a new Draft is made under the title of "National Youth Entrepreneurship Development Policy 2025", which is now waiting for approval by the Cabinet Committee. The formulation processes of this new draft include several consultations with the relevant government, non-government, private organizations, academia, researchers, youth entrepreneurs, youths those are aiming to be entrepreneurs, students of different government and private universities etc. The inter-ministerial meetings were also held for twice to get the feedback. The written feedback and inputs were asked to the relevant ministries and agencies. The draft policy was published in the website of MOYS so that any enthusiastic citizens

including youths can send their inputs. After receiving all such inputs/feedbacks/recommendations/suggestions many of them were considered and included in the final draft policy. Then the final draft policy was sent to the Cabinet Division for approval. The Council of Advisers approved the Final Draft on 6th May 2025. The strategic areas are shown in the Table 3.

Table 3. Mapping of National Youth Entrepreneurship Development Policy 2025

Strategic Areas in Policy	Specific Focuses on Entrepreneurship
Skill mapping and classification of skills	Survey on existing skills among the youth as well as demand forecasting for the prospective youth entrepreneurs along with classification of skills.
Training and skill development	All sorts of capacity will be built to be an entrepreneur including artificial intelligence, digital skills, e-commerce, financial literacy, leadership etc.
Establishment of coordination mechanisms and Digital Platform	Youths from all folk would coordinate in one platform so that they can share their best practices among each other and find out the possible best ways to be successful entrepreneurs. A digital network will also be established.
Emphasis on Small and Medium Entrepreneurships	Providing special attention to SMEs run by youth.
Support for Funding	Revolving Fund would be established for providing soft loan to youth entrepreneurs up to Tk. 10 lakhs. The entrepreneurs will be integrated with the National Human Resource Development Fund (NHRDF), supply of start-up capital. Moreover, equity investment facilities will be introduced.
Tax Exemption	Special provision would be created for youth entrepreneurs so that they can get tax rebate on their certain amount of income as well as exemption of import and export duties.
Establish industry-educational institutions-entrepreneurs' relations	A tripartite relationship will be established among industry-academies and prospective entrepreneurs for sustainable establishment of enterprises.
Inclusivity & Diversity	Special focus on marginalized groups, including women, rural youth, and persons with disabilities, to ensure equitable access to entrepreneurial opportunities.
Institutional Governance	The vertical institutional arrangement for implementation would be establish from local to national level for better implementation and governance.
Monitoring and reporting	Different level officials of DYD will monitor the activities of youth entrepreneurs regularly and report the status so that possible measures could be adopted.

Source: Developed by Author.

This recently promulgated policy yet to start its implementation as the Plan of Action yet to be formulated. Therefore, this policy also lacking coherence as per PCSD framework of OECD in all the ways of vertical, horizontal and temporal.

3) SME Policy 2019 and Draft National SME Policy 2025:

The SME Policy 2019 was envisaged to strengthen SME sector with a mission enhance skills, creating enabling business environment, facilitate easy financing, increasing market facilities and creating opportunities for employment. In the objectives of this policy although it does not specifically mention on the youth entrepreneurial issues, it has given emphasis on developing the women entrepreneurship. Youth entrepreneurship is slightly covered by another objective, where it is mentioned to support in creating new SME enterprises e.g. start-up. The Draft National SME Policy 2025 has almost the same vision and mission. It is found that the objectives are also in much extent similar to the previous version. One new thing is introduced in the strategic objective of new policy of 2025 which is digital transformation and Industry 4.0. It includes the use of technology such as, automation, IoT and AI etc. The strategic areas are shown in the Table 4.

Table 4. Mapping of SME Policy 2019 and Draft National SME Policy 2025

Strategic Areas	Specific Focuses	
	SME Policy 2019	Draft National SME Policy 2025
Access to Finance	Proposed credit guarantee schemes and SME-specific loan products.	Emphasizes green financing, including green bonds, angel funds, and crowdfunding.
Technology & Innovation	Encouraged adoption of technology and innovation in SMEs.	Plans to establish a Youth Entrepreneur Research and Monitoring Centre
Market Access	Supported participation in trade fairs and development of e-commerce platforms	Proposes creation of 'Youth Shops' and expansion into international markets
Skill Development	Implemented training programs for entrepreneurial and managerial skills	Introduces annual Entrepreneurs' Fairs at district and upazila levels
Inclusivity	Focused on women, rural youth, and marginalized groups.	Continues inclusivity with added support for persons with disabilities.
Monitoring Mechanism	Periodic assessments through predefined indicators.	Emphasizes regular coordination meetings and consistent monitoring
Evaluation Metrics	Number of SMEs accessing finance, employment generated, and market participation.	Includes short-term (1 year), medium-term (2-3 years), and long-term (4-5 years) strategies.

Source: Developed by Author.

The issues that are highlighted in the above tables are seemed practically sound. But studies shows that there are bottlenecks in implementation. As per the Global Entrepreneurship Index (GEI), Bangladesh ranks 134 among 137 countries in SME development. The GEI is an annual

index that measures the health of entrepreneurship ecosystems (GEDI, 2019). Moreover, there are numerous problems and challenges in SME sector of Bangladesh identified by studies (Jahur, 2020; Thakur & Alam, 2022). Both of the policies have time-bound action plan that ensured the temporal coherence of PCSD is maintained, although there is no mechanism to examine it. The action plan also addresses the responsible ministries and agencies to implement the strategic objectives. So, horizontal coherence is also present here as per PCSD. But the vertical responsibilities among the agencies of the Ministry of Industries are seemed not well defined. Therefore, complete vertical coherence is missing in these policies.

4) National ICT Policy 2018:

The National ICT Policy 2018 serves as a comprehensive framework to transform the nation into a knowledge-based, digitally empowered society. While the policy does not explicitly delineate a separate section for entrepreneurship vis-à-vis youth entrepreneurship, it embeds entrepreneurial development across various strategic themes and action plans. The strategic areas are shown in the Table 5.

Table 5. Mapping of National ICT Policy 2018

Strategic Areas in Policy	Specific Focuses on Entrepreneurship
Skill Development and Employment Generation	Providing appropriate training to develop skilled manpower and generate employment.
Strengthening Domestic Capability	Encouraging homegrown business and investment in ICT sector. Support the growth of e-commerce platforms to provide entrepreneurs with broader market access. Facilitate the development of ICT-enabled services tailored for SMEs and startups.
Enhancing Productivity	Increased use of ICT in health, education, agriculture, communications, business and financial sector to boost up the productivity and encouraging the digital entrepreneurship.
Connecting Citizens	Expand digital infrastructure to rural and underserved areas, enabling entrepreneurs to access information and services. And promote digital literacy to empower individuals to initiate and manage online businesses.
Research and Innovation	Establish innovation hubs and incubators to nurture startup ecosystems. Provide grants and funding opportunities for research projects with commercial potential.
Policy Ownership and Monitoring	Defined the role of stakeholders in implementation in their respective areas and monitor accordingly.

Source: Developed by Author.

From the above mapping of the National ICT Policy 2018, it is found that the entrepreneurship has been addresses in various ways. It is implied that entrepreneurship in ICT sector mainly geared by the young people, especially startups and incubations. The policy has an elaborative action plan at its end, which has given the detail strategic objectives along with the responsible and supporting ministries/agencies, which has ensured the horizontal policy coherence. But there is no hierarchical committee for implementation monitoring, which is missing the vertical

coherence as per PCSD of OECD. At the same time, the action plan mentioned short-term, medium-term and long-term actions, which seems that the temporal policy coherence is not tight. That is why sustainability is not certainly confirmed.

5) National Industrial Policy 2022:

National Industrial Policy 2022 has focused on the entrepreneurial exploration through different policy support by the government. At the very outset of NIP in article 2.2 in its objectives it is mentioned that this policy will enhance the support to the local entrepreneur for development and expansion of their enterprises. The special emphasis is given also in the article 2.3 to develop local and foreign entrepreneurs focusing to the industrial establishment. For the women entrepreneurs detail provisions have been created under Chapter 6 considering their advancement in the entrepreneurial expansion. But there are no specific provisions for Youth Entrepreneurship although some indirect provisions are present in this policy. The strategic areas are shown in the Table 6.

Table 6. Mapping of National Industrial Policy 2022

Strategic Areas in Policy	Specific Focuses on Entrepreneurship
Skill Development and Training	The policy underscores the importance of enhancing workforce skills and productivity. While not youth-exclusive, such initiatives provide young entrepreneurs with the necessary competencies to establish and manage industrial ventures.
Promotion of Entrepreneurship	The policy emphasizes nurturing domestic industries through interest protection, development, and expansion. It encourages innovation via research and aims to protect local technology and intellectual property.
Empowerment of SMEs	By creating an enabling environment for small, cottage, and medium enterprises (SMEs), the policy positions them as primary drivers of industrialization. This focus inherently supports young entrepreneurs who often initiate ventures within the SME sector.
Adaptation to Technological Advancements	The policy seeks to develop the capacity of public and private sectors to adapt to rapidly changing technologies, including those associated with the Fourth Industrial Revolution. This adaptability is crucial for youth-led enterprises aiming to innovate and remain competitive.
Research and Innovation	Establish innovation hubs and incubators to nurture startup ecosystems. Provide grants and funding opportunities for research projects with commercial potential.
Policy Ownership and Monitoring	Defined the role of stakeholders in implementation in their respective areas and monitor accordingly.

Source: Developed by Author.

The policy is lacking the specific policy provisions as it does not explicitly address youth entrepreneurship, which may result in young entrepreneurs facing challenges in accessing tailored support and resources. Effective implementation requires coordination among various government agencies and stakeholders to ensure that the policy's provisions translate into tangible support for young entrepreneurs. This Policy also has a detail action plan that includes the responsible and supporting agencies for strategic objective implementation, which has given the legitimacy of maintaining horizontal coherence as per PCSD. But coordination mechanism across the government agencies always difficult to ensure, which hinder the implementation. The Policy also created provisions of various level committees that provide a vertical coherence. But the top-level committee sometimes not effective as it meets very rarely. It has specific time-bound actions that reflect the temporal policy coherence, although sustainability is concerned.

From the above mapping of five policies that are related to enhance the youth entrepreneurship, the policy coherences are examined by the PCSD framework of OECD. The following table reflects policy coherence in different signs. Here '+' means policy coherence is present, '-' means policy coherence is absent, and '?' means ambiguous.

Table 7. Policy Coherence as per PCSD Framework

Name of Policy	Policy Coherence as per PCSD		
	Horizontal Coherence	Vertical Coherence	Temporal Coherence
National Youth Policy 2017	+	+	-
Youth Entrepreneurship Policy 2022 & Draft National Youth Entrepreneurship Development Policy 2025	-	-	+
SME Policy 2019 & Draft National SME Policy 2025	+	-	+
National ICT Policy 2018	+	-	+
National Industrial Policy 2022	+	+	+

Source: Developed by Author.

Therefore, among the reviewed five policies related to development youth entrepreneurship, there are various lacking in policy coherence. The Policies related to entrepreneurship in general, and youth entrepreneurship policy in particular, are still fairly recent and evolving areas. Therefore, it is crucial to understand where these policies are or should be situated. Youth entrepreneurship policy is cross-cutting in nature and therefore necessitates a collaborative multi-stakeholder approach on the part of government and society. This means that for successful policy development in youth entrepreneurship collaboration between different line ministries is vital. As a matter of fact, it is almost impossible to outline the entire array of policies that affect entrepreneurship.

7.2 Challenges in Establishing Policy Coherent

In Bangladesh, challenges to policy coherence in youth entrepreneurship include fragmented government initiatives, lack of data-driven planning, and insufficient coordination among various stakeholders (MOYS, 2017). These are the major issues identified by the key stakeholders of the reviewed policies during Key Informant Interviews and other studies identified the similar. The specific challenges are further elaborated here:

1) Fragmented Government Initiatives:

Bangladesh faces the issue of various government agencies and ministries each having their own policies and programs related to youth entrepreneurship, leading to a lack of unified vision and coordination (YBI & GEN, 2024). Almost all the KII respondents similarly opined that policies in Bangladesh are some extent silos in nature as there is gap in inter-ministerial and inter-agency coordination. Therefore, this can result in overlapping or conflicting initiatives, making it difficult for youth entrepreneurs to navigate the system and policy incoherence exists in all the ways.

2) Lack of Data-Driven Policy Planning:

During the policy formulation enough background studies are not conducted by the policy formulating ministries as KII respondents identified. Moreover, data availability and data authenticity are also a big concern. The absence of robust data and evidence-based policy planning for youth entrepreneurship development can lead to ineffective policies and programs. These issues can make it challenging to identify the specific needs of young entrepreneurs and tailor interventions accordingly.

3) Insufficient Stakeholder Engagement and Coordination:

A lack of effective collaboration among the government, private sector, NGOs, youth-led platforms, and other stakeholders can hinder the overall effectiveness of youth entrepreneurship initiatives. This can lead to inefficiencies in program implementation and a missed opportunity to leverage the diverse expertise of different actors.

4) Gaps in Education and Skill Development:

The current education system in Bangladesh does not adequately equip students with entrepreneurship-specific skills. This mismatch between the skills taught and the demands of the entrepreneurial ecosystem limits the capacity of youth to start and sustain businesses.

5) Barriers to Accessing Resources:

Young entrepreneurs often face challenges in accessing necessary resources such as capital, mentorship, and business support services, hindering their ability to start and grow their businesses. This can be due to limited access to financial institutions, a lack of relevant training and skills, and inadequate infrastructure.

6) Challenges in Navigating the Business Environment:

Young entrepreneurs may encounter difficulties navigating complex regulations, dealing with bureaucratic hurdles, and accessing markets. These challenges can disproportionately affect youth entrepreneurs who may lack the experience and networks to navigate these complexities.

7) Challenges Related to Personal Traits and Beliefs:

Some young people may view their own personality traits or believe they have limited control over outcomes, which can hinder their entrepreneurial aspirations. Addressing these psychological barriers is crucial to fostering a more entrepreneurial mindset among youth.

8) Monitoring Mechanisms:

There is a lack monitoring mechanisms by the implementing agencies. The policy impact are not evaluated and there is no feedback and adjustment mechanisms also.

8. Policy Recommendations and Conclusion

8.1 Policy Recommendations

The following are the policy recommendations based on the discussion and results of this study:

- 1) Develop a robust policy and regulatory framework for entrepreneurship that is responsive to youth-specific needs. In this regard, participatory space for dialogue could be introduced to with stakeholders.
- 2) Establish strong inter-ministerial coordination mechanisms, so that implementation of policies could follow the horizontal, vertical and temporal coherence. Create a permanent inter-ministerial coordination body to ensure policy alignment, reduce duplication, and promote synergy. Every policy must have the specific time-bound activities and implementation plan.
- 3) Integrate sufficient resources along with time-bound programs in implementing the policies to implement provisions for quick actions towards new youth entrepreneurs.
- 4) Decentralize implementation with capacity-building at local levels and define roles of regional and local bodies in national policies.
- 5) Strengthen the capacity of the system to collect and use data that is relevant to enable a thriving youth entrepreneurship ecosystem. Because most policies of youth entrepreneurship lack empirical grounding. In that way evidence-based policy planning could be materialized as well as real-time response mechanisms could be maintained.
- 6) Embed entrepreneurship education, digital literacy, financial skills, and problem-solving into national curricula; foster academia-industry linkages.
- 7) Develop and scale access to capacity building opportunities and business development support services for young entrepreneurs.
- 8) Ease the business establishment, operation, and expansion processes for youth-led enterprises.
- 9) Increase advocacy, awareness, and provision of entrepreneur-specific finance for SMEs, start-ups and social entrepreneurs.
- 10) Develop targeted means to enhance youth-led businesses' access to market, especially in rural areas.
- 11) Ensure inclusiveness during formulation of policies focused to youth entrepreneurship. Diversity must be ensured to make it comprehensive and acceptable to all stakeholders.

8.2 Conclusion

Youth entrepreneurship holds tremendous potential to address the dual challenges of youth unemployment and underemployment in Bangladesh, especially amid its ongoing demographic dividend. This study critically examined the policy landscape governing youth entrepreneurship in the country and identified significant gaps in policy coherence—horizontal, vertical, and temporal—using the OECD’s Policy Coherence for Sustainable Development (PCSD) framework.

Despite a growing number of policy initiatives, including the National Youth Policy 2017, SME Policy 2019, National ICT Policy 2018, National Industrial Policy 2022 and the Draft Youth Entrepreneurship Development Policy 2025, the analysis revealed persistent fragmentation, limited inter-ministerial coordination, inconsistent implementation, and lack of sustainability planning. These weaknesses undermine the effectiveness of otherwise well-intentioned policies and fail to create a comprehensive, youth-centered entrepreneurial ecosystem.

Challenges such as insufficient stakeholder engagement, inadequate data systems, lack of youth-specific policy targeting, and skill mismatches further aggravate the problem. In many instances, policies were found to overlap or operate in silos without unified direction or accountability mechanisms. Moreover, youth—especially those in rural or marginalized communities—continue to face barriers in accessing finance, mentorship, markets, and regulatory support.

To harness the full potential of Bangladesh’s youth, it is imperative to move beyond fragmented strategies and develop a coherent, inclusive, and integrated policy approach. A unified vision supported by cross-sectoral collaboration, timely implementation, rigorous monitoring, and youth participation in decision-making can transform youth entrepreneurship from a policy aspiration into a powerful engine for inclusive and sustainable development. By addressing these coherence challenges, Bangladesh can better capitalize on its youthful population and drive forward a more resilient and dynamic economy.

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117th Senior Staff Course (SSC)

Research Paper on Public Policy Evaluation

Title

**Public-Private Collaboration in Community-Based Forest Management (CBFM) in the Rural
Areas of Bangladesh: A Case Examination into the effectiveness of Such Collaboration**

Module- 03; Part 2



Submitted by

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Submitted to

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Submission date: May 28, 2025

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Abstract

Environmental scientists are of the opinion that at least twenty five percent of a geographical land mass requires forest to maintain environmental and ecological balance. However, in Bangladesh we have only twelve to sixteen percent of forest. This is due to deforestation and depletion of forest caused by the pressure of rapidly expanding population. Therefore, we urgently need massive reforestation and afforestation. But without the participation of the community people that cannot be achieved. Community-based Forest Management (CBFM), which is predicated on community participation in afforestation, is a hugely potential framework that can radically change the way we raise, replenish and maintain our forest resources.

CBFM framework is rapidly expanding globally. In Bangladesh the concept started to take shape in the early 1970s. Since then, the country has experienced CBFM in various forms and frameworks. However, there hasn't been much research in the area of community forestry (CF) in the country. For instance, public-private partnership in CF is stills a less talked-about area. The current study wanted to fill that vacuum of scholarship. The research embarked upon the examination of public-private collaboration in community-based forest management (CBFM) in the rural areas of Bangladesh with a case study at Paba Upazila, Rajshahi.

The objectives of the study were three-folds. Firstly, it wanted to examine the possibilities of public-private collaboration in the areas of community forestry in the rural areas in Bangladesh. Secondly, it attempted to identify the major impediments in the areas of such collaboration. Thirdly, it intended to find out the ways of eliminating the impediments hindering such collaboration. The research was conducted with both primary and secondary data. Primary data included questionnaire survey (QS), focus group discussion (FGD) and key informant interview (KII). Secondary data included book, grey literature and website contents.

The study found that public-private collaboration in CBFM is not only viable, but essential. Non-governmental organizations (NGOs), non-profit organizations (NPOs) and private voluntary organizations (PVOs) need to be taken on board to infuse synergy in this grand initiative of afforestation and reforestation. However, there are a number of impediments acting to hinder CBFM's scale-up. Lack of initiatives of the forest department, paucity of assistance of the local governments, and lack of training to the community people are some of the bottlenecks.

The study also found that coastal green-belt and some other projects are the successful examples of CBFM initiatives that can be replicated in other parts of the country. Community involvement in decision making, effective public-private partnership, proper training, livelihood diversification and government coordination are critical success factors (CSFs) of CBFM. It is strongly felt that NGOs, NPOs and PVOs need to be integrated in the CBFM effort. Finally, in light of the current findings of the paper, government policy needs to be redesigned overarchingly to make CBFM framework successful.

[Key-words: Community, Deforestation, Reforestation, Afforestation, Collaboration, Stakeholder, Desertification, Replication, livelihood, Environment, Ecology]

Section-1: Introduction

Vegetation plays a crucial role in maintaining environmental balance. Environmental scientists argue that at least twenty five percent of any geographical land mass requires forest to ensure that balance. But in Bangladesh only twelve to sixteen percent of the land is covered with forest. Bangladesh is a densely populated country with 1301 people living in per square kilometer. (World Bank 2022) The population of the country is increasing by leaps and bounds. As a result, the density of forests and the area covered by forests are fast decreasing. Forests are the natural sinks of carbon dioxide that constitutes a large part of greenhouse gases which are responsible for the rise of atmospheric temperature of the earth. Depletion of forest is therefore extremely harmful for the environment. In view of such scenario, afforestation and reforestation are critically important to minimize environmental degradation.

1.1 Background of the Study

Deforestation in Bangladesh is being caused due to the increasing population of the country. On the other hand, there is a lack of people's participation in the process of afforestation and reforestation. But without such participation it is impossible to increase forest. Although there have been government efforts all over the country in community or social afforestation, the push for that is still at its embryonic stage. United Nations Development Program (UNDP) has in the recent past sponsored a number of projects, a few in the coastal belt areas, to include local people in afforestation. The outcomes of the projects are quite encouraging as the coastal green belt created by some of those projects are playing a crucial role in reducing the intensity and effect of cyclones and tornados.

However, public-private collaboration in community forestry is still a less talked about subject. Study shows that there has not been a lot of research conducted in the field of community or social afforestation to see its effectiveness, the impediments that lie on its way and measures needed to eliminate those hindrances. The current research intends to fill that void. It is assumed that the research results of the current study will be helpful in getting an insight into the issue. The study findings may enhance our current knowledge afforestation in the country which is currently threatened by a whole slew of natural calamities and environmental disasters.

1.2 Statement of the Problem

The current issue of environmental degradation and ecological imbalance caused by deforestation is the precursor to this study. The lack of people's participation and public-private collaboration is one of the main problems in not achieving the goal of afforestation which is a major component of sustainable development goals (SDGs). Therefore, the current study addresses this problem to understand the effectiveness of public-private collaboration in community-based forest management (*henceforth CBFM as well*) in the rural areas of Bangladesh. The research deals with this issue and further undertakes an in-depth examination to identify the impediments on the way to such framework and come up with viable suggestions to overcome those hindrances.

1.3 Objectives of the Study

As stated above, the current study deals with examination of the effectiveness of public-private collaboration in community afforestation in the rural areas of Bangladesh. Around that issue, the objectives of the current study are stated below.

1. To examine the potentials of public-private collaboration in the area of community forestry in the rural areas in Bangladesh
2. To identify the major impediments in the area of such collaboration

1.4 Research Questions

This research paper deals with three questions, the answers of which will supposedly throw light on the two objectives of the paper. Those three questions are:

1. Is the public-private collaboration in the field of community forestry in the rural areas in Bangladesh really viable?
2. Can the local non-governmental organizations (NGOs)/ non-profit organizations (NPOs)/ private voluntary organizations (PVOs) be integrated in such drives?
3. What are the major impediments that are likely to affect the proposed framework?

1.5 Scope of the Study

The paper does not deal with the afforestation issue in public-private partnership (PPP) framework. It is worthwhile to mention that PPP is a public project financing framework which is governed by a rigorously structured contractual agreement between the government and the private financier(s). Therefore, the public-private collaboration in community afforestation, proposed in this study, should not be misunderstood for PPP project implementation framework. Secondly, the paper does not intend to get into any detail about scientific impact of afforestation on environment. In other words, the paper is limited to examining only the social and economic viability of public-private collaboration in community afforestation.

1.6 Rationales of the Study

There is no known research to examine the effectiveness of community afforestation in the rural areas of Bangladesh through public-private collaboration although it is deemed to be a highly potential way of implementing afforestation. So, the current study tries to embark on that to understand the unknown which may be immensely beneficial to the society. The research result may be of some food for thought for further research in this field and hopefully render some input to help formulate future afforestation policy. It is to be noted that environmental conservation is closely related to SDG. Therefore, the rationale of the current study is to fill the void of scholarship in an area of knowledge where little research has been conducted earlier.

1.7 Conceptual framework

The issue of public-private collaboration is predicated on inclusive development. Good governance cannot be ensured without taking people on board in every stage of development initiative. The role of non-governmental organizations in the contribution to national development cannot be over-emphasized. This is the generic concept on which the proposition of the current paper is underpinned. Moreover, goal 17 of the SDGs does put emphasis on partnerships for achieving all the other 16 goals of the same. Goal 13, climate Action, which is the ultimate target of afforestation, can only be achieved through a comprehensive partnership of all the major stakeholders in afforestation, namely, governmental organization, local government, community people and the non-governmental organizations.

Section-2: Methodology

The research intends to use both the primary and secondary data for analysis and discussion. Primary source includes questionnaire survey (QS), focus group discussion (FGD and key informant interview (KII). For questionnaire a sample of one hundred persons was taken (which include both male and female and respondents from a variety of cross-sections). Focus group discussion included participants representing all key stake-holders, like, government officials, non-government officials, people from local government and common people who might be potential beneficiaries of the project. Key informant interview included interview of the Upazila Nirbahi Officer, Union Parishad Chairmen, Upazila Agriculture Officer and the Upazila Forester. The questionnaire included ten questions (six were closed-ended and the rest four were open-ended).

Secondary data were derived from various web-based articles, grey literatures, like project reports, annual reports, contract documents, case studies etc. It is mentioned above that not a lot of study had been conducted earlier in this field. The researcher therefore planned to scan through community afforestation related case studies, in other countries, that could be replicable to the context of Bangladesh. The data derived from primary and secondary sources were analyzed quantitatively and qualitatively.

Section -3: Literature Review

FAO published forestry paper, *'Forty years of community-based forestry: A review of its extent and effectiveness in community-based forestry'*, suggests that CBF has been steadily increasing over the last forty years in many countries of the world with different political, cultural, historic and economic background. FAO estimates that at present at least one third of world's total forest is under some form of CBF arrangement. 'Smallholder forestry is the main type of CBF regime in the global North and is expanding rapidly in countries in global South particularly China and Viet Nam.' (FAO 2016) In Europe more than 50 percent forest land is held by smallholders. On the basis of FAO's Global Forest Resources Assessment 2015, the abovementioned paper estimates that CBF framework covers about 28 percent (732 million hectares) of forest in surveyed 62 countries of the world.

The paper (FAO 2016) opines that CBF as a management framework is playing an important role in ensuring sustainable forest management (SFM) and improved livelihood for the local people dependent on community forestry. A strong CBF framework is resilient to internal and external shocks including hazards associated with climate change. But the existing CBF framework has not yet been able to reap the full benefits in most of the countries because of a number of hurdles in its way to its full and effective implementation. One of the problems currently faced by CBF is the partial implementation of decentralization and devolution where government still retains significant authority. Community is given responsibility to protection of the degraded forests, not the right to management of its resources. *'Without real devolution of power'*, the paper suggests, *'the objectives of CBF will be difficult to achieve'*.

The paper (FAO 2016) is of the opinion that for CBF to be able to fully attain its objectives there are six preconditions. The paper puts them as 'a door with many (six) keys. Those include: right to forestry land, a comprehensive regulation that puts a balance between the community's rights and responsibilities, strong management, sustainable and state-of-the-art technology to raise and continue production, good market knowledge for goods and services and supportive bureaucracy. Even if the above conditions are met, the CBF beneficiaries need to be given good time to go through a process of learning and adaptation. The paper concludes that a strong political will is of utmost importance, because without political commitment the policy formulation required for supporting and scaling up CBF is not possible.

In a voluntary paper for presentation at the 12th World Forestry Congress in 2003 in Canada, Malabika Ray, Scientist C, Indian Council of Forestry Research and Education (ICFRE) says that community forestry projects started in India since the turn of the twentieth century. The projects included state forest department, subsidiary organizations under the government of India, voluntary organizations, non-governmental organizations (NGOs) and individuals. The government realized since the 1990s that without the participation and cooperation of the people living around the forests it would be unrealistic to manage the forest resources. The strategic management of forests by forest department and local community gave rise to the concept of joint forest management (JFM). (Ray 2003)

Ray (2003) emphasized the role of NGOs in the drive for social forestry. She saw NGOs as a bridge building between the government and the community for the management and protection of degenerated forests. NGOs had facilitated the work by arranging meeting, training and workshop for the key stake-holders dependent on forest. The grey literatures, produced by NGOs, like, meeting/conference proceedings, project reports, manuals, brochures, pamphlets and leaflets highlighting their activities were immensely critical in creating public awareness.

In her paper, Ray (2003) stressed on the role of media for dissemination of information to the community and the forest departments. Since the larger section of the community, dependent on agro-forestry, was illiterate, video films played a crucial role in creating awareness and interest and popularizing the concept of social forestry among the community people. Various information regarding plantation, like, type of trees, size of seedlings, pit size, plantation season, fertilizer application, watering method, pruning, thinning, inter-cropping, plant rotation in the form of audio-visual and writing in the daily newspapers and periodicals in vernacular could grab attention of the community and the other stakeholders.

Ray (2003) finally put emphasis on the role of government departments and women as a critical success factor (CSF) for community afforestation. The forest department must take initiatives to get all the stakeholders together, arrange seminars on issues such as new technology, government policy and management, practical tools to carry out field activities, participatory rural appraisal and micro-planning. On the other hand, women must have active participation in community afforestation. They must be included in all interventions, like, training, awareness, motivation programs. A study was conducted to examine the role of women in contributing to family's food security through social forestry and their role in community afforestation. The result of the study was quite positive in acknowledging women's contribution to the above areas.

In Bangladesh CBFM came into being in the early 1970s and that proved to be a successful model for reforestation and afforestation rendering alternative economic opportunities to the rural people. Since early 1980s a number of projects were undertaken with CBFM paradigm. Some of the projects were very successful, while others could not post the pre-set targets. The Forest Policy, 1994, the Forest (Amendment) Act, 2000 and the Social Forestry Rules, 2004 played important roles in the successful implementation of CBFM in Bangladesh. In many areas

of the country CBFM has been instrumental in mitigating distrust among the forestry official and the local community people. But the implementation of CBFM has faced many hindrances especially because of top-down decision making and lack of good governance. (Nath et. al 2016)

Nath et. al (2016) tried to evaluate the 35 years old Betagi-Pomra community forest (CF) as a test case. Evaluation was done by using DFID's sustainable livelihood framework. Respondents were requested to recall data at the beginning of the project (BP) and the corresponding data at present (AP). Analysis of BP and AP data clearly showed significant positive changes owing to community forestry (CF). Besides, the degraded forests regenerated into thick plantation. However, the project was being threatened by continuous fragmentation of plots due to increased population and family division.

UNDP undertook a project of coastal afforestation with CBFM framework in Bangladesh in the year 2009. The project, entitled, 'Community Based Adaptation to Climate Change through Coastal Afforestation' ended in 2015. The aim of the project was to mitigate the vulnerability of the communities living in coastal areas to the impact of climate change through afforestation and livelihood diversification. The project was a great success. As a result of the project around 6372 hectares of coastal land have been afforested which resulted in strengthening of local ecosystem. 637200 tons of carbon is being absorbed by the newly raised forest. 20027 coastal people have come under the livelihood diversification programs. 988 government officials have received various capacity development trainings in the field of community forestry and climate change adaptation and 440 landless people were settled around the project area. The innovative approach used in the project has earned it the '*Earth Care Award-2012*'. (UNDP 2016)

Section -4: Data Analysis and Discussion

For the purpose of the study primary data was collected from Paba, one of the western upazilas of the country in the district of Rajshahi. Primary data included structured questionnaire survey, key informant interview and focus group discussion.

The questionnaire survey was conducted on one hundred persons of whom fifty were men and fifty were women. The survey population was selected by random sampling from a list of three thousand four hundred twenty persons collected from the Office of the Upazila Nirbahi Officer

(UNO), 35 of who were under one of the many social safety net programs (SSNP) of the government. The first question of the questionnaire was how much knowledge the respondent had on community forestry (CF). The question was a closed-ended question and had a scale of 0 to 5 with 0 bearing no knowledge and 5 for full knowledge. 74 respondents ticked 4, 21 ticked 3, 2 ticked 2 the rest 3 ticked 1. That gives a notion that the people in that locality had fairly good knowledge about community forestry.

Question no. 2 (closed-ended) was about the respondent's knowledge about the existence of any CF in the locality. 65 respondents answered positively, while the rest 35 answered that they had no knowledge of it. Question no.3 (open-ended) was about the partners of the CF (if any). Fifty-five respondents said that local Union Parishad (UP), NGO and local community are involved, 22 respondents said that NGO and local community are involved while the rest of the respondents were ambivalent in their answers. Question no.4 (closed question) was about whether the village had tree plantation on both the sides of the local roads. The answer to that was unanimous with everyone answering positively.

Question no.5 (Closed-ended) was about cutting of trees. Eighty respondents said the tree cutting in their locality is acute, while the rest twenty respondents said that it is medium (i.e. not very threatening). Question no.6 (closed-ended) asked whether it was feasible to raise community forestry through public-private collaboration. 89 respondents answered positively, where the rest of the respondents were ambivalent. Question no.7 (open-ended) was about the critical role for successful implementation of CBFM. 72 respondents had the role of UP in common, 65 respondents had Department of Forest in common, 75 responded that the role of NGO was critical, while 77 respondents said that the UNO's intervention was of utmost importance.

Question no. 8 dealt (open-ended) with the impediments on the way to CBFM's successful implementations. 78 respondents believed that lack of government initiative was the major hindrance. 76 respondent believed lack of publicity was an impediment. 66 respondents said that lack of cooperation of the Forest Department was a bottleneck. 60 respondents said they felt that stealing of trees by wicked people was responsible. Question no. 9 was related to the critical success factors behind CBFM's expansion. 82 respondents said it was the role of UNO. 68 respondents said clear-cut profit-sharing mechanism was important. 65 respondents felt local NGO could play a crucial role in bridge-building between the community people and the Forest

Department. Finally, question no. (closed-ended) was whether the respondent knew of any NGO working with CF. To that 76 answered positively and the rest 24 were ambivalent.

A focus group discussion (FGD) was conducted with participants from different stakeholders. That included local administration, local government, forest department, community people dependent on forest, NGOs, school teachers, timber-traders, local elites. The FGD was basically confined to four areas – viability of CBFM framework, feasibility of NGO/NPO/PVO participation in the arrangement, impediments and the measures to overcome the impediments to CBFM implementation.

Every participant in the FGD were of the opinion that public-private partnership in CF is not only feasible, but very essential. Some of them said that if the local community is not integrated in afforestation and reforestation, there may occur environmental imbalance due to depletion of the existing forests. There was unanimity as regards the integration of NGO/NPO/PVO as critical partners. There was general consensus regarding the impediments to CBFM implementation. Lack of support of the forest department, lack of cooperation of the local government, lack of awareness and publicity, stealing of trees by the wicked people and wrong selection of plants were identified as major impediments. For CF to be successful, they argued, the above hindrances need to be removed.

Key informant interview (KII) was conducted on the UNO, Upazila Agriculture Officer (UAO), Upazila Forester (UF), and UP chairmen. The UNO mentioned that CF is already running in his upazila in some form, but that need to be reorganized. He opined that CBFM is the only way to increase our forest coverage. He said that he had plans to scale up the project in his upazila. The UFO said that agro-forestry is a popular concept. Communities and NGOs need to be taken on board in that venture. The UF said that more trees are being cut than being planted. If the trend is allowed to continue, it will cause huge environmental degradation. CF can be a very useful paradigm to reverse the trend. However, government alone cannot organize that. Local NGOs need to be integrated in the process. The UP chairman said that in his union already one CBFM is running. His UP is a stakeholder to the project and is providing every support to that.

Section -5: Research Findings

Both the secondary source (literature review) and primary source (QS, FGD & KII) data analysis and discussion point to a great degree of similarity in their inferences. Secondary data had national, sub continental and global context. However, the trend in each of the contexts supports that in the others. Based on the analysis of all primary and secondary data, the findings of the study are summarized below.

CBFM is gradually increasing in the rural areas of Bangladesh, though in different forms and frameworks. The coastal area of the country has experienced huge success in CBFM chiefly due to interventions from the donor agencies and partnerships of the local NGOs. The project has been a great success in terms of afforestation, environmental protection and livelihood diversification of the local community people. The coastal green belt created as an outcome of the project is acting as a first line of defense for the coastal people against cyclone, tsunami and tidal surge. The project can be replicated elsewhere in the country. Also, in other areas of the country CBFM is getting popularity and being adopted. That points to the fact that the CBFM framework is very much viable in the rural areas of Bangladesh.

Everywhere in the country, as is the case globally, more and more NGOs, NPOs and PVOs are getting involved to get the act of CBFM together. Their inclusion is expediting the process of CBFM because they are acting as the intermediaries between the communities and the government forest department and local government (UP). They are imparting valuable training to the communities regarding plant selection, seedling size, pit size, fertilizer application, plantation season, watering method, pruning, thinning, and inter-cropping and plant rotation. Their participation has created employment generation for educated men and women who are working with them. Therefore, the inclusion of NGOs, NPOs and PVOs in CBFM seems necessary.

Although CBFM paradigm is on the rise in the country, the framework is facing a number of impediments in its way to full-scale implementation. Lack of government initiative in popularizing the concept, lack of publicity, non-cooperation (in some cases) of local UP Chairman and forest department, stealing of trees by wicked people, selection of wrong type of

plant, premature cutting of trees, non-replantation of the depleted areas are the major bottle-necks that are hindering the sustainability of CBFM arrangement.

The identified bottle-necks need to be removed to make the CF framework successful. CF concept must be given due publicity. The government forest department needs to play more proactive role in coordination among all the stakeholders including the union parishad. Local NGOs should impart more training to the communities. Grass-root level law enforcing agencies should provide all helps so that those behind stealing of trees are brought to book. Reforestation of the depleted places must be undertaken to make CBFM sustainable.

Section -6: Recommendations

Firstly, public-private partnership is the most important factor for the success of CBFM. Without the participation of local NGOs, NPOs or PVOs it is impossible for the government (forest department) to organize it only by itself. It does not have the manpower to coordinate the huge task. Moreover, inclusion of non-government organizations will infuse enterprise into it.

Secondly, the Department of Forest needs to be more proactive in coordinating among the stakeholders. It should identify areas where CBFM can be implemented. The UNO, as the coordinator of development activities in the upazila, should render all cooperation to the Upazila Forester and select NGO for a particular project implementation.

Thirdly, training should be imparted to the community regarding plant type, seedling size, pit size, fertilizer application, plantation season, watering method, pruning, thinning. Sustainability factor needs to be addressed. When trees are extracted, they should be replenished by replantation. Communities should be taught agro-forestry, so that they know inter-cropping.

Finally, the lesson learnt from other successful project, like the good practices of 'Community Based Adaptation to Climate Change through Coastal Afforestation' (2009-2015), 35 years old Betagi-Pomra community forest (CF), projects need to be replicated. Livelihood diversification of the community people should be a major outcome of all CBFM projects.

All the above recommendations should be reflected in the overarching government policy formulation regarding community-based forest management.

Section -7: Conclusion

In spite of all those hurdles community forestry projects are expanding all over the country. For CBFM projects to be successful, the forest department needs to be more proactive. Local NGOs, NPOs and PVOs need to be integrated in CF projects. Community and other stakeholders' rights and responsibilities need to be well-defined at the beginning of the project. Agro-forestry should be incorporated with CF. Training of the community people is crucial for the success of the project. Selection of the right type of plant is important. Finally, good lessons learnt from the other successful projects need to be put into practice in course of project implementation. Finally, government should formulate comprehensive policies to redress all the problems of community-based forest management.

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MODULE: 03

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Protap Chandra Biswas

Roll No. 110

ABSTRACT

The ship recycling has been posing a considerable harm to the environment. Water, soil and air are polluted by this industry that result in the damage to the surrounding ecosystem and biodiversity. Along with the negative impacts, this study found some positive impacts of ship recycling if it is done in accordance with internationally recognized guidelines. A responsible ship recycling may ensure less CO₂ emission in still production, ensue saving of natural resources by reusing and recycling of the 98% of a end-of-life ship and reduce pollution by managing waste using modern technology. This study looked into the concern policies of the state and found that they were not aligned with international legislation and guidelines. So, Bangladesh needs to amend its policy, especially Bangladesh Ship Breaking and Recycling Rules, 2011, in line with Hong Kong International Convention for Safe and Environmentally Sound Recycling of Ships (HKC) to impose international standards to be followed by our ship recycling industry. The country also requires to establish a Treatment, Storage and Disposal Facility (TSDF), having modern technology, to allow all the hazardous waste, responsible for the environmental degradation, generated in the industry to be received and treated accordingly to make our environment pollution free.

Key words: HKC, TSDF, Recycling, End-of-life

Impact of Ship Recycling on Environment: A Policy Evaluation

1. INTRODUCTION:

1.1 Background of the study:

Ship recycling refers to dismantling of a ship once it has ended its operational life (Abdullah et. Al., 2023). The recovery of useful material from recycling of end-of-life ships are considered as one of the important economic activities for growth of countries like Bangladesh, India, Pakistan and China (Mikelis, 2013, Hiremath et al., 2025,2016, Watagawa et al., 2016). Bangladesh promulgated The Ship Breaking and Recycling Rules, 2011 as a guiding policy for ship recycling industry in the country. The rules were made following a order of the High Court Division of Bangladesh Supreme Court.

The ship recycling activities in Bangladesh have been started back in 1960 when a Greek vessel named MV Alphine got stuck of at Sitakunda, Chattogram following a mighty hurricane. A local merchant group purchased that one and dismantled subsequently. After the independence war in 1971, a war-ravaged Pakistani ship was purchased by a local Bangladeshi trader and they needed to dismantle that. These incidents spurred local merchants to get themselves interested in ship recycling activities. Since 1980s ship recycling industry has undergone significant evolution in Bangladesh (Rabbi and Rahman, 2017). For the last four decades Bangladeshi investors expanded this industry following the advantageous geographical position, availability of low cost labour and cost effectiveness.

Bangladesh is not endowed with iron ores and so we need to depend on import for the want of our steel. As ship recycling can supply this steel to our economy, this industry proves an important one for us. But it is assumed that the way end-of-life ships are recycled in Bangladesh, it's not friendly to our environment.

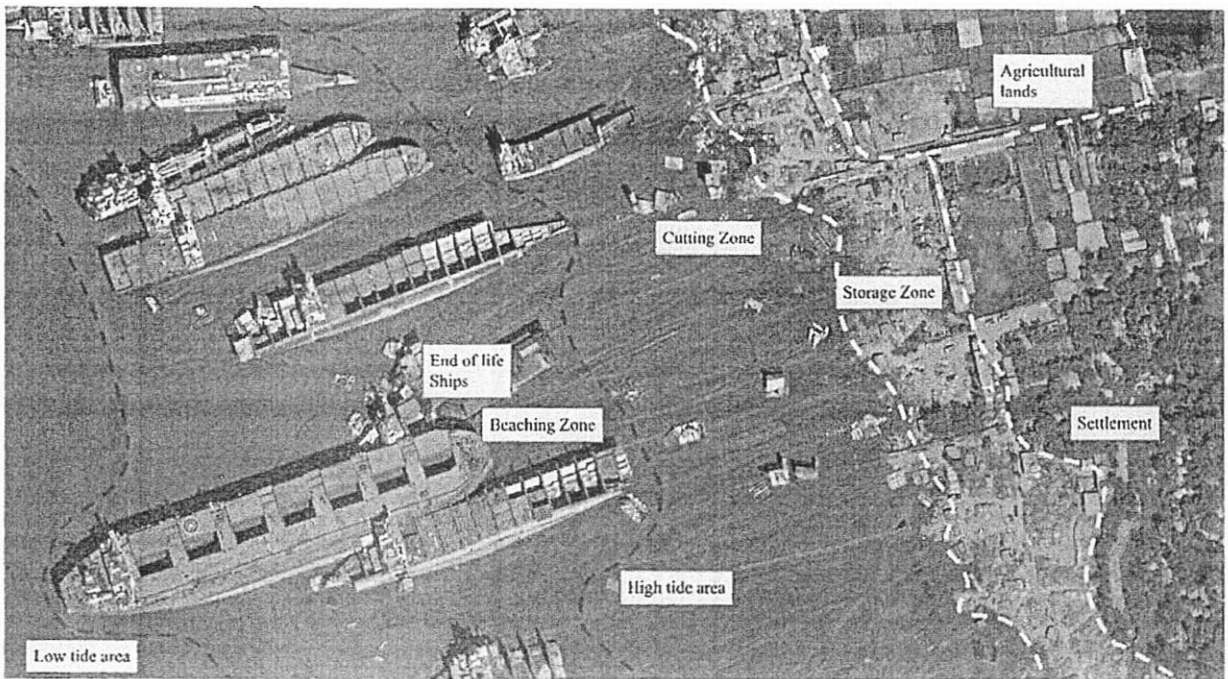


Fig. 1: Aerial view of a segment from the ship recycling industry in Chattogram, Bangladesh.

1.2 Problem Statement:

It is considered that ship recycling has a substantial impact on environment. Some chemicals generated from the ship recycling process are proved to be very detrimental to the environment. That causes serious pollution to the water and affect the food chain that results in harmful consequences for the human bodies. As the ship recycling yards are located close to sea shore they are imposing a great threat for the marine fish population and ecosystem. The alarming issue is that yards those are not environmentally compliant they are not paying heed to this concern and continuing their business and thus unabatedly posing huge threat to our population and environment.

PCBs (Polychlorinated organic compounds) those are used in plastics (floor covering) and as insulators (cable insulator) are highly toxic and persist in the environment. Reproductive diseases, cancers, liver and immune system damage may be caused by PCBs. In thermal system insulation and materials used for surfacing in a ship may be provided with asbestos or asbestos containing material (ACM). At the time of dismantling an end-of-life ship asbestos might be broken into fine

fibers, if not handled with a designated way, that can remain suspended in the air for a prolonged period of time and that may be inhaled by workers and other staffs at the recycling facilities. As asbestos fibers are invisible and may be carried away by air, people living in nearby locality can be victim to this by having lung cancer.

Lead (Pb), mercury (Hg) and cadmium (Cd) are the toxic heavy metals that are found through dismantling of ships. These heavy metals cause great harm to the ecosystem and human health. These metals found in battery, paints and in some electrical goods are bio accumulative pollutant and damage nervous system and cause impairment of hearing, vision and muscle coordination. Oil, bilge, ballast water and sludge are among the other things that are the concern of environmental degradation. Oils are basically composed of hydrocarbon and sulfur and causes great harm when it spills over during irresponsible handling that result in coming into contact with soil and water. Both fisheries of aquatic environment and human health might be fell victim to this disaster.

In these very perspectives, it is needed to look into the government policies under which ship recycling activities are guided. It is also very important to understand if these policies can ensure the protection of environment of Chattogram ship recycling zone.

1.3 Rationale of the study:

It can be understood that ship recycling activities are most hazardous occupation (ILO, 2004). However, the ship recycling industry plays a pivotal role in Bangladesh's economy by supplying a considerable amount of rerollable scrap steel for the rerolling factories and other iron and steel industries. The industry supplies more than half of the steel demand of the country and also creates hundreds of thousands of job opportunities, directly or indirectly, for the most poor and marginalized population of the country.

On the other hand, it is assumed that the ecosystem of ship recycling zone is greatly hampered by the activities of this industries. The people, flora and fauna those are living beings in that ecosystem are falling victim to this activity. So, this study would be important to understand how does ship recycling industry impact on environment and what extent government policies are playing role to protect our environment from the impact caused by ship recycling.

1.4 Research objectives:

The objectives set to understand the aforesaid target are to

1. Examine how ship recycling does impact the environment.
2. Analyze the extent to which these policies are playing role to protect environment.

2. LITERATURE REVIEW:

Persistent Organic Pollutants (POPs) are detrimental for population, wildlife and environment as these chemicals are highly toxic and persist a long time to the environment. These chemicals also widely disseminated biologically and deposited in the fat tissues of living organism (Jobaid et.al. 2014). Physician and doctors realized that human body might be affected heavily with cancer threat by these pollutants (Ministry of Environment and Forest, GOB, 2011)

When we evaluate the environmental impact of oxygen-fuel cutting method from the perspective of ship recycling it is found that it has the heavy impact on terrestrial ecotoxicity, marine aquatic ecotoxicity, abiotic depletion, global warming potential and eutrophication. If we compare this with the abrasive and electrical inputs of water jet cutting process we find a lesser environmental impact. It is found that water jet cutting process for the same tonnage the global warming potential is approximately one-third of the oxygen fuel cutting (Onal, 2023).

It is found that large amount of fumes and particulate matter are generated from metal cutting process that causes air pollution. When oil and sludge are ignited by the torch that also create small fire. He opined that improper disposal or storage of scrap metal and other wastes that are generated from metal cutting, primarily from lead and other metal, causes soil and water contamination (Hossain, 2015).

Lead that is a toxic metal can be found in batteries, paints, cables, piping, generators and in the component of motors. The fatal effects of lead upon human body have been diagnosed for a long time. Long term exposure to even low level of the detrimental metal into environment may cause mental retardation, irreversible learning impairment and delayed physical and neurological development for the young children. And for adults, this can attack peripheral nervous system that may results in impairment of muscle coordination, hearing and vision (Rahman, 2017).

The paint and coatings cladding the hull of the ship may be inflammable and may be provided with toxic substance like heavy metals, polychlorinated biphenyl (PCBs) and pesticides. During the blowtorch-cutting process toxic fumes are released and the paint and coatings may continue to smolder afterwards. When the workers use cutting torches they routinely inhale toxic fumes from the still coated with toxic paints (Chang et. al., 2010).

It is estimated that, on an average, 95% of a ship, depends on their size, is painted with 10 to 100 tons of mercury, lead, arsenic, chromium, zinc and other heavy metals. When ships are broken for scrap, asbestos, PCBs and a huge amount of oil pollute the environment. Intertidal zones on the beach are contaminated with these hazardous materials when tidal water wash away these from the ship breaking yards. Combined with the improper storage of the hazardous material and release of poisonous fumes into the open air, ship recycling activities are likely to impact local ecology. Local communities who depends on fisheries and agriculture are heavily affected by coastal soil, sea, air and ground water pollution (Hasan et al., 2013).

The ship recycling facilities in India re-roll and refurbish 70% of steel scrap-generated compared to that of Turkish facilities that melt all steel scrap (Mikelis, 2020). The methods used for recycling steel in South Asia and Turkey contribute to less use of energy and CO₂ emissions. It is estimated that on average, 1.9 tonnes of CO₂ are emitted for every tonne of steel produced (World Steel Association, 2019).

Material hierarchies, often referred to as R-hierarchies, are developed to operationalize the concept of a circular economy. Ship recycling is an example of the traditional 3R model of Reduce / Reuse / Recycle. Recently, more detailed hierarchies have been drafted as individual sectors look to understand how circularity principles can be applied to their activities, reaching as many as 10 levels (Reike, Vermeulen, & Witjes, 2018).

Bangladesh ratified the International Convention for the Safe and Environmentally Sound Recycling of Ships (HKC) on 26 June 2023. The Convention will come into force globally on 26 June 2025. Although the Ship Breaking and Recycling Rules, 2011 are not fully HKC-compliant, they provide a legal foundation for conditional authorizations through administrative action. Comprehensive reforms are expected with the new 2025 Rules currently being prepared by the government (Ahmed, 2025).

The law requires Indian ship recyclers to register as a member of the Treatment, Storage and Disposal Facility (TSDF). It is TSDF where the hazardous material generated from the ship recycling yards is to be transported and is disposed of in environmentally friendly way. Once the hazardous material reaches in TSDF, the obligation and responsibility of the ship recycling yard owners virtually ends (Ahmad, 2022).

3. RESEARCH METHODOLOGY:

3.1 Research philosophy:

This research pursued two objectives. First objective was to examine how ship recycling did impact on environment. In order to understand the context of government policies and to develop explanations of phenomena the research needed to assume an inductive approach. It was important to assess the effectiveness of these policies and that is why the second objective was to analyze the extent to which these policies were playing role to protect environment.

3.2 Qualitative methodology:

A qualitative research framework was assumed to examine how ship recycling did cause of environmental impact and in what extent the policies were effective to protect the environment. In contrast of quantitative methodology, qualitative methodology is pluralistic, diverse and even ridden with internal contradictions in some cases (Jacob, 1987; 1988). The reason behind this is that it has ingredient from many different schools of thoughts that are integrated within this research model. The belief of some writers that there have been not one but many qualitative methodologies covering almost everything in social research, even there has not been any common denominator in the different qualitative directions (Maindok, 1996).

3.3 Data Collection:

The perceptions of several stakeholders in the ship recycling industry in Chattogram were considered important for examining the prevailing ship recycling policies especially its effectiveness to control over the impacts it had on the environment. Knowledge of those perceptions can contribute to find ways of sustaining the industry.

Beside stakeholders, how researchers perceive impact of ship recycling in Chattogram and subsequent ecological changes happening there was important to be studied. By these perceptions it could be understood in which way the ship recycling process hampered the surrounding environment and whether government policies were enough to make their role to manage those issues.

The research conducted by collecting data through interviewing stakeholders of the ship recycling industry and researchers, mainly university professors, to understand the perception of aforesaid

issues towards ship recycling and its impacts on environment and role of government policies as to the environmental pollution.

The researcher generated four questions for interviewing stakeholders and researchers. Among the stakeholders there were yard owners, government officials and policy makers and technical experts working as consultants in the yards who provided their first-hand knowledge and opinion through the structured interview. The respondents who were not possible to meet in person by the researcher for time constraint responded through WhatsApp. As many as ten respondents were interviewed of whom two were policy maker, one was policy enforcement official, one was industry owner, three were technical experts who work as independent consultant for the industry and another three were researcher, to be specific, university professors.

There are a few acts and rules to guide the ship recycling industry in Bangladesh. The Ship Recycling Act, 2018 is the principal policy for this sector. But, actual guideline for keeping the environmental compliances are laid down in the Ship Breaking and Recycling Rules, 2011. Rule 18,19,20 and 21 under the chapter five of the Ship Breaking and Recycling Rules, 2011 deals with the issues of environmental compliances. So, data were analyzed in line with that policy.

3.5 Data analysis:

Thematic analysis was used in this research to analyze the collected data, which was considered as a method for identifying, analyzing and reporting themes within data (Braun and Clarke, 2006). In this way, themes in a text are uncovered by thematic analysis that draw ups a web-like network to facilitate the interpretation and structuring of these themes. Braun and Clarke (2006) argued that was a worthy research tool that can explain a detailed even complex account of data. This process brings about order to the data and organizes these into themes, sub-themes and looks for co-relation within data. Themes are often meaningless, when viewed alone, but can be identified by bringing together of components or experiences of idea (Leilinger, 1998). Leilinger (ibid.) opined that the association of ideas rely on the analyst who has studied rigorously that, when linked together, how different components and ideas match together in a meaningful way.

The rationale for using a thematic analysis in this study was that it could exhibit proper interpretation for interpretively rich data (Braun and Clark, 2006). The theme taken in this analysis reflected appropriate information those were pertinent to the research objectives mentioned earlier in the introduction chapter. The themes, sub themes and sub-sub themes that were arisen out of the

collected data were shown in the figure 2 and 3. Figure 2 showed data collected from stake holders and researchers who identified various positive and negative impacts posed by ship recycling and in the same way figure 3 showed different aspects of policies in relation to ship recycling.

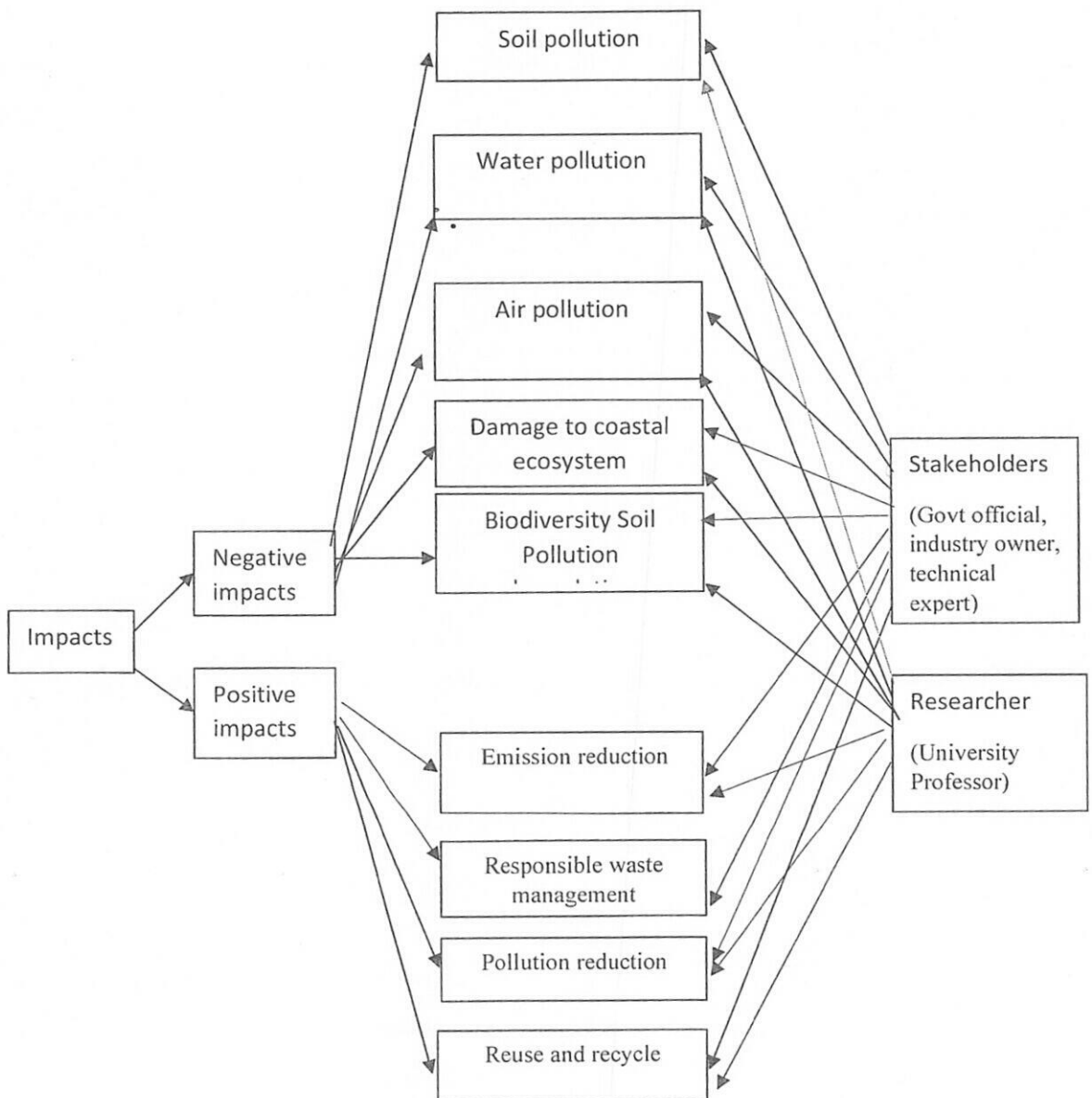


Figure-2: Thematic analysis showing the factors arising out of ship recycling process and impacting environment

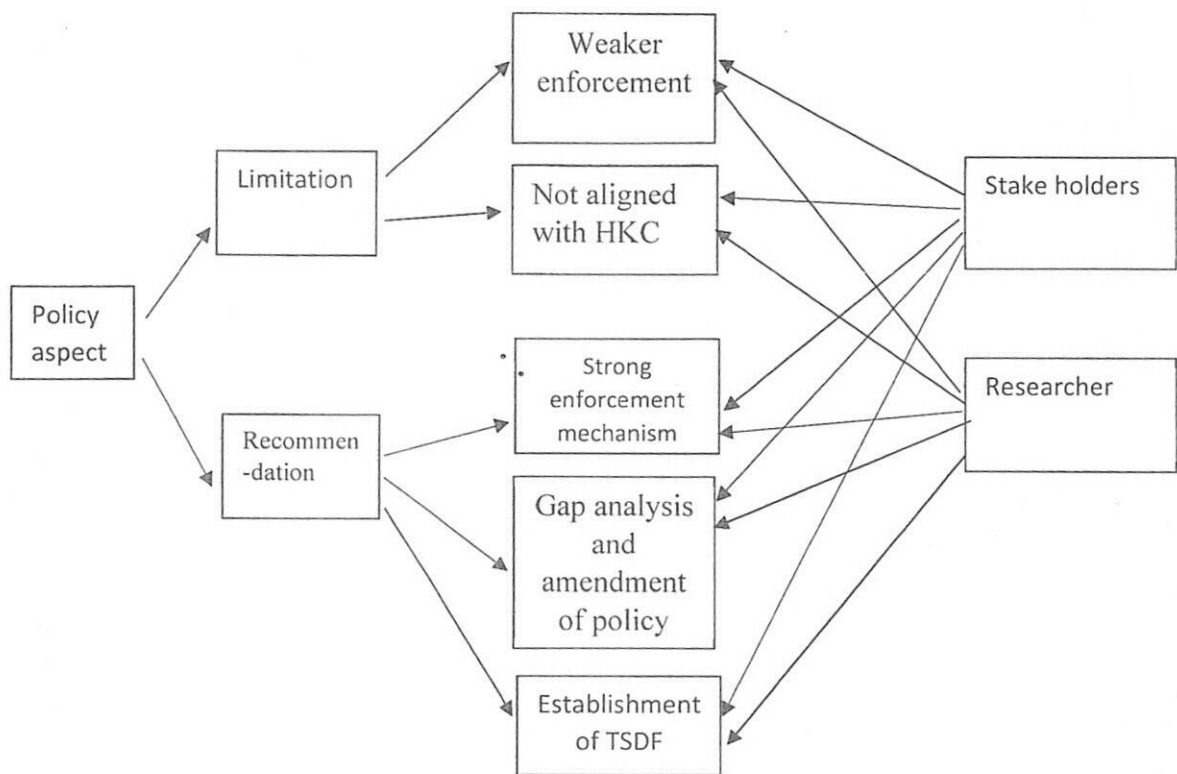


Figure-3: Thematic analysis showing different aspect of policy in relation to ship recycling

4. DATA ANALYSIS AND FINDINGS:

The data collected from interview have been presented and discussed in this chapter. Data that were obtained from the researcher, ship recycling yard owners, consultants who work for the recycling yards and government policy makers are taken into this chapter. The information which depicts the impact of ship recycling on the environment and the effectiveness of the policy to deal with the issue are presented here.

4.1 Impact of ship recycling on environment:

During the research it was found that ship recycling has both the negative and positive impacts on the environment.

4.1.1 Negative impacts of ship recycling:

Data shows that ship recycling poses a great impact on air, water and soil and thus they are polluted. Improper handling of hazardous material and accidental exposure of those might be cause of the pollution. Though data collected from yard owner shows a tendency of being reluctant to acknowledge these sort of negative phenomena, other respondents confirm that the impact is a reality.

4.1.1.1 Impact on air, water and soil:

It is found that air, water and soil are polluted in various ways by the ship recycling activities. Following data shows how that pollution occurred in the industry. Hossain (2015) found that when oil and sludge are ignited by the torch that also create small fire. He also opined that improper disposal or storage of scrap metal and other wastes that are generated from metal cutting, primarily from lead and other metal, causes soil and water contamination. This study found the same impact on environment caused by ship recycling.

Data collected from stakeholders:

Burning fuels can release, Polycyclic aromatic hydrocarbons (PAHs) which are organic compounds that can be carcinogenic into the atmosphere along

including sulfur oxides (SOx), nitrogen oxides (NOx), and particulate matter. Also Polychlorinated biphenyls are a group of persistent organic pollutants that can contaminate the air produced recycling. Great danger is when cable sheathing is burnt that produces Dioxin. Some emissions from ship recycling, such as greenhouse gases, can contribute to climate change. The dismantling of ships involves processes like cutting steel with gas cutters and using fuel, which are major contributors to CO2 emissions. If paint is stripped prior cutting that greatly impact environment with heavy metal mist. Energy Forms i.e., electricity, LPG, bunker fuel, and diesel, are considered for the processes - cutting, welding, crane operations can increase the Greenhouse gas emissions.

PHP Ship Recycling Yard has set a remarkable standard in environmentally responsible ship recycling. By implementing 100% lifting of cut blocks either dropping on double bottom without dropping them onto the seabed, and strictly ensuring zero contamination, PHP has effectively eliminated the risk of environmental pollution and seabed damage. The operations are fully complying with the highest environmental standards, showcasing a model of sustainable recycling in line with the Hong Kong Convention and EU Ship Recycling Regulation. The commitment to green practices proves that ship recycling can be done safely without harming the environment.

Data obtained from researcher:

The accumulation of metal fragments and rust in the soil can affect plant growth and disrupt the food chain. Improper handling of hazardous materials contaminates land. Accidental release of oil, chemical, HAZMATs on the land greatly contaminate the soil. A deteriorated or badly organized drainage system can lead the soiled run-off from the land to the sea. Scrap and other materials left on the beach can contaminate the soil with heavy metals and other pollutants.

Oil spillage, which can impact the surrounding intertidal zone (sand) soil, and can also impact the seawater. Heavy metals and paint chips, which may impact the soil and contaminate the soil surface, resulting in the loss of the adjacent soil's arability for crop cultivation. Heavy metal deposits in seawater can pose negative impacts on the fisheries, reducing their breeding capability, resulting in loss of the fish population.

4.1.1.2 Impact on coastal ecosystem and biodiversity:

Data shows that ship recycling industry is making damage to the biodiversity. Data shows that environmental damages done by the industry brings a great impact on our biodiversity. Hasan et al. (2013) found that ship recycling activities are likely to impact local ecology combined with the improper storage of the hazardous material and release of poisonous fumes into the open air. So, this study reveals the similar findings regarding this issue though some data suggest that damage of biodiversity might be prevented through practice of environment friendly methods in accordance with Hong Kong International Convention (HKC).

Data collected from stakeholders:

Ship recycling activities can disrupt coastal ecosystems and negatively impact marine life, including fish and other native species. Beaching methods damage sensitive inter tidal zones like mangroves and mudflats which directly reduce the habitats for birds, mammals, and other wildlife. The overall environmental damage puts many species, including endemic ones, at risk of extinction. The pollution and habitat loss disrupt the delicate balance of the coastal ecosystem, impacting the food web and overall health of the area.

Ship recycling, when conducted using environmentally friendly methods in accordance with the Hong Kong Convention, has minimal environmental impact. With the enforcement of the Hong Kong Convention from June 26, 2025, such environmentally responsible practices will become mandatory, significantly reducing the industry's environmental footprint.

Data obtained from researcher:

Ship recycling can negatively impact the environment. Release of hazardous substances (asbestos, PCBs, heavy metals, oil residues) to coastal water and soil might cause heavily harm to the coastal biodiversity.

4.1.2 Positive impacts of ship recycling

It was revealed that ship recycling has some positive impact on the environment. If ship is recycled in a internationally compliant manner then it can ensure reduction of carbon emission and environmental degradation by proper management of hazardous material. Reusing and recycling of various items found in a ship also save our natural resources and help us to protect our environment.

4.1.2.1 Emission reduction:

Producing still from iron ore causes huge carbon emission and thus still collected from ship recycling and reusing them in the still factory ensures carbon emission. World Steel Association (2019) estimated that on average, 1.9 tons of CO₂ are emitted for every tons of steel produced. So, it's an important finding that is revealed in this study.

Data collected from stakeholders:

Ship recycling has a positive environmental impact, as the recycled steel recovered from end-of-life vessels is used in steel mills, significantly reducing CO₂ emissions. According to scientific studies, producing one metric ton of steel from iron ore emits approximately 1.6 to 1.7 metric tons of CO₂, whereas using scrap steel from ship recycling reduces emissions to around 0.6 metric tons of CO₂ per ton of steel produced. This shift greatly minimizes the overall carbon footprint of steel production.

Ship recycling definitely has a positive impact on the environment — especially when it's done the right way. The steel from old ships gets a new life, reducing the need for new steel production — and that means less mining, less energy use, and lower carbon emissions.

Data obtained from researcher:

Recycling steel scrap greatly decreases energy use compared to manufacturing steel from iron ore, resulting in reduced greenhouse gas emissions and helping to combat climate change

4.1.2.2 Responsible waste management:

It is found in the study that waste are managed in a very responsible way in a green ship recycling yards and it helps to restore our environment when a derelict ship becomes a danger to the environmental degradation.

Data collected from stakeholders:

Instead of derelict ships becoming marine dangers or taking up valuable space, recycling offers a structured approach to managing their decommissioning, minimizing overall waste. Properly managed recycling ensures that hazardous materials are handled and disposed of safely, preventing their improper dumping in landfills and the potential contamination of soil and groundwater.

4.1.2.3 Reusing and recycling:

Data shows that even 98% of a end of life ship are reused and recycled and thus they contributes' to save our natural resources. As the world is focusing on three R (reduce, reuse, recycle) principle to save the environment, this ship recycling also helps us to follow the principle of circular economy. Reike et. al. (2018) asserted this phenomenon in their study commenting that ship recycling is an example of the traditional 3R model of Reduce / Reuse / Recycle.

Data collected from stakeholders:

What's even more impressive is how furniture and other usable items like generators, motors, pipes, and other machineries are carefully recovered and reused. This not only cuts down on waste but also helps protect our natural resources. It's a great example of how ship recycling, when done responsibly, can actually help the environment instead of harming it. At PHP Ship Recycling Yard, up to 98% of the ship's materials are reused or recycle, which is a big win for sustainability.

Data obtained from researcher:

Ships contain substantial amounts of valuable materials, especially steel, but also non-ferrous metals like aluminum and copper. Recycling these materials recovers them for reuse, lessening the need for energy-intensive and environmentally impactful primary extraction (mining and processing) of virgin resources.

4.1.2.4 Pollution reduction:

The study depicts the fact that ‘recycling of a ship’ itself is a process of reducing environmental pollution since a scrap ship is considered to be a hazardous material. Both stakeholders and researchers responded in a same way saying ship recycling reduces pollution.

Data collected from stakeholders:

It removes the scrap vessel from water body of the world that could gradually rusted and diminish in the water with all of its in build and stored wastes if not recycled in due course. And thus, it prevents water pollution.

Data obtained from researcher:

The ship recycling process helps to reduce air and water pollution linked to new steel production. By reusing materials, the demand for mining and processing fresh ore is decreased, thereby minimizing environmental harm.

4.2 Effectiveness of the policy to protect environment:

The second research objective was to examine what extent present policies are playing role to protect environment. Among the policies Bangladesh ship breaking and recycling rules, 2011 is the principal one that contains all the details to regulate the environmental issues arisen out of the industry. Among the respondents both stakeholders and researchers were in the opinion that existing policies have some limitation and they put some recommendation as to the amendment of those. The data are discussed here under two sub-sub head naming limitation of existing policy and recommended amendments in existing policy.

4.2.1 Limitation of existing policy:

Data shows that the existing policies have some limitations to address environmental impact issues. Enforcement problem and non-alignment of the policy with HKC are found the key limitation of the policy.

4.2.1.1 Weaker enforcement:

Enforcement of law was identified by both the stakeholders and researchers as one of the cases of limitation of the policy. Though the enforcement issue is not a weakness of policy but respondents identified it as a limitation. It is the duty of the government agencies to enforce the law

Data collected from stakeholders:

While Bangladesh has made substantial improvement in establishing policies for ship recycling, despite that there are significant limitations in the current framework to fully control the environmental impacts effectively. Ensuring strict enforcement of these regulations remains a significant challenge. Monitoring adherence across numerous ship recycling yards is difficult due to limited resources, insufficient manpower within regulatory agencies, and the extensive scale of the industry.

Data obtained from researcher:

Current policies in Bangladesh have limitations, such as: inadequate enforcement and monitoring, lack of hazardous waste treatment infrastructure, weak implementation of international standards (e.g., Basel, Hong Kong Convention), insufficient training for the workers and lack of awareness among the yard owners.

The economic significance gained from the ship recycling industry can occasionally lead to pressures to favor economic gains over the strict enforcement of environmental regulations. Ship recyclers are still reluctant to embrace the new changes due to economical reason.

4.2.1.2 Policy not aligned with HKC:

The principle policy for ship recycling industry in Bangladesh is Bangladesh ship breaking and recycling rules 2011. Data reveals the fact that this rules in which guidelines for the protection of environment are laid down is not enough to protect our environment as this rule are not made in line with the Hong Kong Convention (HKC). Since HKC ensures the provision for environmental protection from the ship recycling process, we need to amend our rules complying that very international guideline. Ahmed (2025) commented that the Ship Breaking and Recycling Rules, 2011 of Bangladesh are not fully HKC-compliant but they provide a legal foundation for conditional authorizations through administrative action. So, it was also founded in the previous study that our policy is not aligned with international guidelines like HKC.

Data collected from stakeholders

Although advancements have been achieved, fully aligning with international best practices and conventions such as the Hong Kong International Convention (HKC) for the Safe and Environmentally Sound Recycling of Ships remains an ongoing effort, and certain existing laws and regulations may still fall short of these standards.

Data collected from the researcher:

The Ship breaking and recycling rules, 2011 needs to be amended in line with Hong Kong International Convention (HKC) for safe and environmentally sound recycling of ships.

4.2.2 Recommendation as to existing policy:

When interviewed, respondents were asked what should we do to overcome the limitations of our policy, if any. Respondents suggested for formulating enforcement mechanism and amending our policies after gap analysis between our own legislation and international laws and guidelines. They also suggested for establishing a Treatment, Storage and Disposal Facilities (TSDF) in which hazardous material generated from ship recycling industry will be recycled and treated in a environment friendly way.

4.2.2.1 Strong enforcement mechanism:

Data shows that formulation of enforcement mechanism was identified as one of the key measures for the protection our environment. It was suggested that Bangladesh Ship Recycling Board should be strengthened so that they play a vital role for the restoration of the environment.

Data collected from stakeholders:

The Ministry of Industries also needs to strengthen inspection and environmental oversight and invest in worker training and institutional capacity building.

To effectively monitor the recycling facilities, Bangladesh Ship Recycling Board, with its all resources and workforce, can play a vital role in implementing safety and environmental impact.

Data obtained from researcher:

Strengthened enforcement of existing regulations is a much-needed issue. This includes increasing the number of environmental inspectors, providing them with better resources and training, and implementing stricter penalties for non-compliance. Regular and transparent monitoring of ship recycling facilities is essential.

4.2.2.2 Gap analysis and amendment of policy:

- The most weightage was put on to the amendment of our policy as per the findings following gap analysis. Everybody responded in the way that as our policy is not properly aligned with the guidelines laid down in HKC, we need to analyze the gaps prevailing between these.. Data reveals the fact that our current legislation falls short of the standard of recycling procedure set in HKC. Bangladesh Ship Recycling Act, 2018 tells that it shall confirm the practice of international laws and convention in recycling of ships. But, seven years after passing of enactment of the law, government yet to align its rules and guideline in line with international laws, especially HKC.

But during literature review it was learnt that expected amendment of the ship recycling rules was in process. Ahmed (2025) informed that though Ship Breaking and Recycling Rules, 2011 are not fully HKC-compliant, comprehensive reforms are expected with the new 2025 Rules currently being prepared by the government. So, it's a good news for the industry that the concern policy is going to be amended as per requirement.

Data collected from stakeholders:

It is essential to conduct a comprehensive gap analysis between the existing national regulations—such as the Ship Recycling Act 2018, the Ship Recycling Rules 2011, and the Hazardous Waste and Ship Breaking Waste Management Rules—and the requirements of the Hong Kong Convention (HKC). This analysis will help identify areas where current legislation falls short of HKC compliance. Based on the findings, the relevant acts and rules should be amended without delay to ensure full alignment with the Convention before its enforcement on June 26, 2025. Timely legislative updates will also strengthen the industry's credibility and ensure continued access to the global ship recycling market.

Infrastructure upgrades in ship recycling facilities is critical. This includes the development of proper hazardous waste reception and treatment facilities, ensuring impermeable surfaces in dismantling areas to prevent soil and groundwater contamination, and establishing dedicated areas for the safe storage of different waste streams.

Currently, ship recycling in Bangladesh is regulated by the Ship Recycling Act 2018, the Ship Recycling Rules 2011, and the Hazardous Waste and Ship Breaking Waste Management Rules. All these regulations will need to be amended accordingly to align with the requirements of the Hong Kong Convention (HKC).

Data obtained from researcher:

In line with the HKC (Hong Kong Convention) and MEPC (Marine Environment Protection Committee) Guidelines under the International Maritime Organization (IMO) mandate, the new Bangladesh Ship Recycling Rules, BSRR-2025, will strictly include some critical points regarding environmental protection. Thus, the present limitations of the Ship Breaking and Recycling Rules-2011 can be addressed.

4.2.2.3 Need for a Treatment, Storage and Disposal Facility (TSDF):

Among the respondents both stakeholders and researchers urged for the necessity of a TSDF for the ship recycling industry in Bangladesh. A TSDF is a facility where the wastes generated from the ship recycling industry or other industries come through and are treated in an environmentally sound manner. Ahmad (2024) mentioned in his study that ship recyclers in India are legally bound to send wastes generated from their industry to TSDF to be treated in an internationally compliant way. So, it is a must for Bangladesh to establish such a facility in the country to dispose off the wastes of the ship recycling industry.

Section 17(2) of the Bangladesh ship recycling act, 2018 says that government shall establish a TSDF within three years of the enforcement of the act. But reality is that we couldn't make this happen for various reasons. It is a matter of satisfaction that one of the

respondent, a policy level government official, confirmed that Ministry of Industries had taken the initiative to establish a TSDF that would be in operation within 2030.

Data collected from stakeholders:

One of the major gaps in the current framework is the absence of a dedicated Treatment, Storage, and Disposal Facility (TSDF) in the country. The lack of such a facility poses challenges for the safe and sustainable disposal of hazardous waste generated during ship recycling. Ultimately, the ship recycling facility needs to store certain types of waste within its premises, which requires a significant amount of space.

The Ministry of Industries is going to establish a TSDF at Mirsharai, Chattogram with the financial and technical support of a development partner. It is believed that within 2030 the facilities will be in operation and help country to dispose of the wastes generated from all the industries of Chattogram area.

Data obtained from researcher:

From the Government side, they need strong enforcement mechanisms and facilitate downstream management infrastructure by constructing TSDF for the yards.

To improve, Bangladesh should fully enforce the 2025 Rules (proposed) aligned with the Hong Kong Convention and establish Treatment, Storage, and Disposal Facilities (TSDFs) in line with the Basel Convention and HKC.

5. POLICY RECOMMEDATION AND CONCLUSION:

5.1 Policy recommendations:

The study found that ship recycling impacted environment in both ways, negative and positive. Data showed that the negative impact might be curbed if the recycling operation is done in a internationally recognized way. The government policies are not articulated enough to protect the environment from the irresponsible act done by the ship recycling industry people. So, amendment of the policies in line with the international legislation and guidelines is required. The wastes generated by the industry are need to be treated in treatment plant that is yet to be established by the government. In this aspect, policy recommendations are discussed below:

5.1.1 Gap analysis and amendment of policies:

Data suggest that a comprehensive gap analysis between the Bangladesh Ship Breaking and Recycling Rules, 2011 and the requirements of Hong Kong Convention (HKC) is necessary. It is revealed that what we have in Rule 18, 19, 20 and 21 of Bangladesh Ship Breaking and Recycling Rules, 2011 are not aligned with HKC and so they are not enough to protect our environment from the misdeeds ship recycling industry. So, the policies should be amended in accordance with the findings of gap analysis work.

5.1.2 Enforcement of policies:

Whatever regulatory measures are in the Bangladesh Ship Breaking and Recycling Rules, 2011 even that are not enforced properly due to the weakness of government regulatory body. Primarily Bangladesh Ship Recycling Board (BSRB), a recently formed body, is responsible to enforce the laws for the ship recycling industry. But as a matter of fact, this very government agency is very understaffed and incapable of enforcing government regulations to restore our environment. Department of Environment is also responsible to look after the industry but they cannot cope up with their busy schedules for other engagements. It is evident that enforcement of government regulations is a key way to restore our environment and so, we need to empower BSRB to a expected level to ensure prevailing of law.

5.1.3 Need for a Treatment, Storage and Disposal Facilities (TSDF)

A TSDF is a facility where wastes are taken from the industries to be treated. Ship is recycled in Bangladesh from the early eighty's without having any dedicated waste treatment plant and that triggered environmental pollution. So, it's a ardent need for the industry to have a treatment plant having international standard so that it can receive all the hazardous waste and treat those to save the environment. This study found that Ministry of Industries initiated a process to establish a TSDF at Mirsharai, Chattogram. The Government of Bangladesh should ensure urgent implementation of the project to establish TSDF and it should also confirm that the standard of the facility will be of international level.

5.2 Conclusion

Bangladesh doesn't have any source of iron of its own. We have complete import dependency for iron or steel. The still we collect from ship recycling amounts to almost 50% of our yearly need. About 300 still and re-rolling mills of the country are dependent on this recycled still. The light engineering industry of Bangladesh also has dependency on this steel. There are 156 ship recycling yards in Chattogram in which seven yards have attained internationally recognized compliant certificate. There are 30,000 to 50,000 workers have been directly working in this industry. If we consider other dependent industries then the number of workers will rise up to 0.8 million. Considering all these facts it is evident that ship recycling industry is playing a pivotal role for our economy. Bangladesh ranks first in ship recycling, on the basis of total amount of steel recycled in a year, keeping India, Pakistan, Turkey and China behind. Since country like Turkey and China are recycling ships, it can be understood that ship can be recycled in a responsible way. This study has found that if ships are recycled following international standards and guidelines, it can be considered as an environment friendly industry. So, government policies should be amended in line with the Hong Kong International Convention to ensure the industry to be environment friendly. Moreover, the country should establish a Treatment, Storage and Disposal Facility (TSDF) so that wastes generated from the industry can be brought to the facility and treated accordingly. Since the still collected from the scrap ships are considered as green still, Bangladesh might think over exporting this as a value-added item after meeting its own domestic demand. So, this is the way Bangladesh may diversify its export basket by exploiting its unique physical features of sea-shore and reasonable labor cost.

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APPENDIX

Interview Question

1. Do you think ship recycling poses any negative impact on environment? If yes, what are the negative impacts?
2. Do you think ship recycling has any positive impact on environment? If yes, what are those?
3. Do you think the present policies of Bangladesh (laws and rules) are sufficient to control this environmental impact (if any) done by ship recycling? If not, what limitations are there?
4. If you think that present policies are having with limitations to control environmental impact then what should be done?



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117th Senior Staff Course

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NAME OF THE MODULE : RESEARCH AND POLICY EVALUATION

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Instructions to be followed

(Please read carefully)

1. Please write your Name, Roll No. etc. at the specified space otherwise may cause cancellation of your answer script.
2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Paritosh Ghosh, ndc

Research and Policy Evaluation
On
TOURIST POLICE AND THE PROMISE OF SAFE TOURISM:
AN EVALUATION OF POLICY IMPACT IN COX'S BAZAR, BANGLADESH

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Date: 28 May, 2025

Abstract

This study evaluates the effectiveness of the Tourist Police Policy in enhancing safety and satisfaction among visitors to Cox's Bazar, Bangladesh, while also identifying the challenges and opportunities for promoting safer and more sustainable tourism. Drawing on field data collected from 25 tourists, along with, key informant interviews, Focus Group Discussion, stakeholder perspectives, and operational records from the Tourist Police headquarters (2022–2024), the study presents a comprehensive analysis of the policy's impact. Findings reveal that the Tourist Police are perceived positively, with 76% of tourists acknowledging a strong to very strong influence of their presence on safety. Most respondents identified travel safety and personal security as top concerns, although no direct incidents of crime or harassment were reported by the surveyed tourists. However, perceptions of potential threats such as theft and eve-teasing, especially among female visitors, remain prevalent. Tourists strongly recommended increasing the visibility of Tourist Police, setting up help desks, expanding rescue operations, and activating digital platforms for real-time support. Operational data show a declining trend in patrols, recoveries, and lawful actions over the three years, despite a significant increase in stakeholders' engagement in 2024. These trends suggest a strategic pivot but also indicate potential resource or capacity constraints. The study concludes with actionable recommendations to enhance safety through institutional strengthening, community engagement, and the integration of digital solutions. The findings underscore the critical role of the Tourist Police in fostering a secure and welcoming environment for both domestic and foreign tourists in Bangladesh.

1. INTRODUCTION

1.1 Background

Tourism has played a pivotal role in Bangladesh's economy, with Cox's Bazar, renowned for being the world's longest sea beach, serving as the premier destination for both domestic and international tourists. It has been a key contributor to the country's economic development, providing employment, supporting local businesses, and boosting foreign exchange earnings. The Cox's Bazar region alone has drawn millions of visitors every year, attracted by its natural beauty, vibrant culture, and the promise of a safe and enjoyable experience.

However, with the rapid growth of the tourism sector, tourist safety became a pressing concern. In response to increasing fears over the safety and security of tourists, Article 6.9 of the National Tourism Policy 2010 was introduced with the mandate of deploying Tourist Police at major tourist sites, including Cox's Bazar. This initiative aimed to address various safety issues, ranging from petty crimes to more serious security threats, in an effort to ensure tourist satisfaction and safeguard the tourism sector's long-term sustainability.

The Tourist Police were formally inaugurated on November 6, 2013, under the auspices of the Bangladesh Police, with the objective of ensuring security and safety at various tourist destinations across the country. Their roles and responsibilities were initially codified through SRO No. 248-Act/2015, issued on August 5, 2015. Subsequently, under the authority of Section 5 of the Police Act, 1861 (Act V of 1861), the Inspector General of Police, with prior approval from the government, formulated the Tourist Police Regulations 2020. These regulations were published in the official gazette on June 3, 2020 (SRO No. 119-Act/2020).

The Tourist Police Regulations established a comprehensive legal framework defining the operational scope of the unit, including responsibilities such as tourist assistance, law enforcement, and emergency response. Despite these efforts, questions remained regarding the effectiveness of the Tourist Police in fulfilling their mandate, particularly in high-traffic tourist spots like Cox's Bazar. Issues such as limited resources, coordination challenges, service gaps, and implementation hurdles raised doubts about the actual impact of the Tourist

Police on tourist safety and satisfaction. Moreover, with the growing number of tourists visiting the area, these challenges became more pronounced.

In light of the strategic importance of tourism to the national economy, it was crucial to evaluate the performance of the Tourist Police and their role in promoting safe tourism. This study critically examined how effective the Tourist Police have been in enhancing tourist safety, addressing service gaps, and improving overall tourist satisfaction in Cox's Bazar, with a view to informing future policy improvements and ensuring the sustainable growth of tourism in the region.

1.2 Problem Statement

While the establishment of the Tourist Police in Cox's Bazar aimed to ensure tourist safety, service quality, and law enforcement, there remained a notable gap in understanding regarding their actual effectiveness. Despite the Tourist Police's established mandate and the growing number of tourists in Cox's Bazar, concerns related to safety, harassment, and service quality continued to be raised by tourists, local stakeholders, and tourism industry players. These persistent issues suggested a disconnect between the policy objectives of the Tourist Police and the ground realities faced by tourists.

Existing research on tourism development in Bangladesh often focused on general aspects of the sector, such as economic growth, infrastructure development, and marketing strategies; but little attention had been given to the specific role of the Tourist Police and their policy impact. Most studies either overlooked or underestimated the Tourist Police's role in enhancing tourist safety and satisfaction, creating a significant knowledge gap. Without a thorough evaluation of the Tourist Police's operations, it was difficult to assess their true impact and identify areas for improvement.

This knowledge gap limited the potential for policy refinement and improvement in tourist security. Therefore, this study sought to bridge this gap by evaluating the effectiveness of the Tourist Police's policy in Cox's Bazar. The research specifically focused on understanding how the Tourist Police contributed to the safety and satisfaction of tourists, identifying key challenges and policy shortcomings, and proposing strategies to enhance tourism safety for a more sustainable tourism experience.

By filling this knowledge gap, this study provided critical insights into the policy impact of the Tourist Police and offered recommendations for enhancing their role in securing safe tourism in Cox's Bazar, a region that holds tremendous potential for Bangladesh's tourism industry.

1.3 Research Objectives

The study pursued the following objectives:

- (a) To evaluate the effectiveness of the Tourist Police Policy in enhancing the safety and satisfaction of tourists in Cox's Bazar.
- (b) To identify challenges and opportunities in the implementation of the Tourist Police Policy for promoting safer and more sustainable tourism in Bangladesh.

1.4 Justification of Research

This study evaluated the effectiveness of the Tourist Police in ensuring the safety and security of tourists in Cox's Bazar, Bangladesh's premier tourist destination. With tourism rapidly expanding, ensuring tourist protection was essential for the sector's sustainable growth and the country's socio-economic development.

1.4.1 Enhancing Tourist Safety and Confidence

Safety is a key determinant in attracting and retaining tourists. This research assessed how the presence of Tourist Police influenced visitors' perceptions of safety and their overall confidence in tourism infrastructure. A secure environment encourages repeat visits and positive word-of-mouth, contributing to long-term growth.

1.4.2 Policy Impact and Evaluation

As the Tourist Police is a relatively new initiative, evaluating its policy implementation, strengths, and challenges was vital. This study offered evidence-based insights and suggested reforms to improve its operational effectiveness and resource use.

1.4.3 Contribution to Academic Literature

There is limited scholarly work on tourism policing in Bangladesh. By focusing on Cox's Bazar, this study enriched academic discourse on tourism management and public safety in developing countries.

1.4.4 Promoting Sustainable Tourism

Security is a foundation of sustainable tourism. The findings highlighted areas for improvement that support conservation of local culture and natural assets, while promoting responsible tourism practices.

1.4.5 Socio-Economic Development

Improved tourist safety can lead to economic benefits for local communities through job creation, increased commerce, and community engagement. The study also explored potential partnerships between law enforcement and tourism stakeholders.

1.4.6 Policy Implications for Future Tourism Development

The research provided actionable recommendations to strengthen the Tourist Police's framework, aiding policymakers in aligning tourism safety with national development goals and LDC graduation targets.

2. LITERATURE REVIEW

2.1 Review of Literature

Tourism safety and security are essential components of sustainable tourism development. Globally, the establishment of specialized units like the Tourist Police has played a significant role in enhancing tourists' confidence and ensuring their safety. Researchers and policymakers increasingly recognize the strong link between perceived safety and sustainable tourism growth, as safety directly influences tourists' destination choices, length of stay, and spending behavior (Pizam and Mansfeld, 2006).

In Bangladesh, the Tourist Police was established in 2013 under the Bangladesh Police to strengthen security across major tourist zones, including Cox's Bazar, Sylhet, Chattogram, and the Sundarbans. Their mandate goes beyond law enforcement to include public relations and support services that help build a secure and welcoming image of Bangladesh. Cox's Bazar, being the most popular tourist destination, was prioritized due to its high influx of visitors and vulnerability to crimes such as harassment, theft, and unregulated activities (Bangladesh Police, 2015).

Similar to global trends, countries around the world have introduced specialized tourist police units to ensure a safe environment for travelers. These forces often serve dual functions: enforcing laws and acting as cultural mediators and information providers (Chhetri, Arrowsmith, and Jackson, 2013). Such a multifaceted role contributes significantly to both tourist satisfaction and the positive branding of destinations.

Recent studies in Bangladesh have highlighted both progress and persistent challenges facing the Tourist Police. According to Jalal, Hasan, and Akter (2024), limitations such as insufficient manpower, inadequate logistical support, lack of ICT-based tools, and minimal training hinder the unit's effectiveness, particularly in high-density areas like Cox's Bazar. Despite their presence, the ability of the Tourist Police to address emerging safety concerns is often constrained by structural and operational deficiencies.

Ahmed and Hossain (2017) emphasized the growing stakeholder awareness that effective tourist safety mechanisms are fundamental to creating a competitive and responsible tourism sector. However, mixed assessments remain. Rahman and Kabir (2020) noted improvements in tourist confidence and incident response times due to the presence of the Tourist Police but pointed out continuing issues such as limited coordination with local agencies and infrastructural gaps.

Capacity building is widely acknowledged as a key area for development. Ali (2022) stressed the need for ongoing training, inter-agency collaboration, and the integration of modern technology to enhance the capacity and responsiveness of the Tourist Police. The introduction of ICT tools, digital surveillance, and multilingual training could improve service delivery and tourist satisfaction significantly.

Comparative lessons from countries like Thailand and Turkey show that the success of tourist police units depends on professional development, community engagement, and alignment with national tourism policies (Gursoy and Chi, 2008). These insights underscore the need to view the Tourist Police not just as a law enforcement body but as an integral part of tourism governance and development.

2.2 Conclusion

The literature highlights the vital role of safety in sustainable tourism, with specialized units like the Tourist Police enhancing tourist confidence, especially in high-traffic areas like Cox's Bazar. While their presence has improved security, challenges such as limited resources, inadequate training, and weak coordination remain. Global best practices emphasize the need for professional development, ICT integration, and stakeholder collaboration. To strengthen the Tourist Police's effectiveness and support tourism growth in Bangladesh, targeted reforms, increased funding, and continuous capacity building are essential. These measures will improve safety standards, reinforce positive tourist experiences, and promote the long-term sustainability of the tourism sector.

3. RESEARCH METHODOLOGY

3.1 Research Design

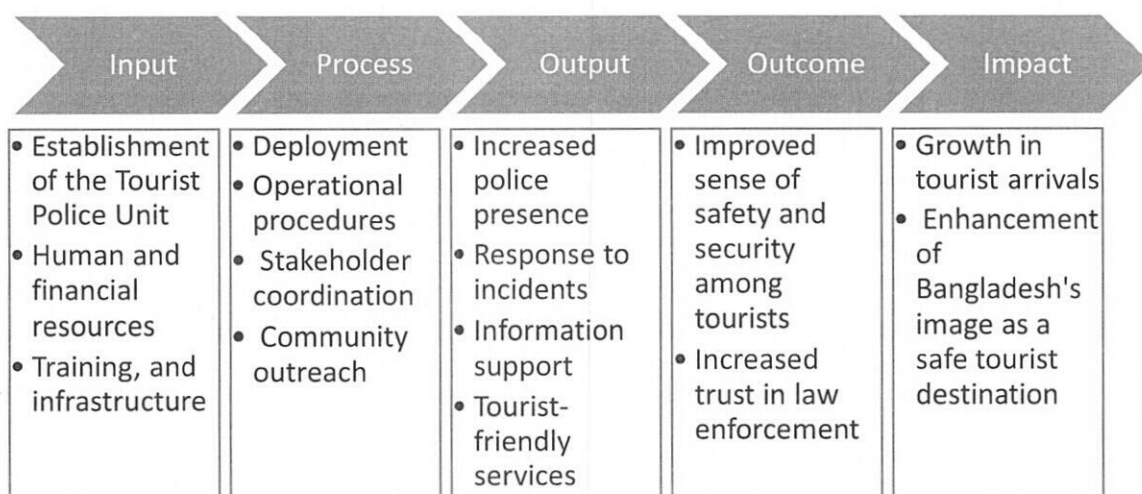
This study employed a qualitative-dominant mixed-methods approach to evaluate the impact of the Tourist Police in ensuring safe tourism in Cox's Bazar. Both primary and secondary data were used. The design was descriptive and analytical, focusing on effectiveness, challenges, and outcomes of policy implementation.

3.2 Study Area

Cox's Bazar, home to the world's longest sea beach and Bangladesh's most visited tourist destination, was selected as the study site. Its heavy tourist traffic made it ideal for assessing the role of the Tourist Police.

3.3 Conceptual Framework

The study was guided by a framework integrating public policy impact analysis and stakeholder perception theory. It emphasized the perspectives of both service providers (Tourist Police) and beneficiaries (tourists and local stakeholders).



3.4 Data Collection Methods

- a) **Key Informant Interviews (KII):** Semi-structured interviews with Tourist Police officials, Ministry representatives, local authorities, and tourism business leaders captured expert insights on policy design, implementation, and institutional challenges.
- b) **Focus Group Discussions (FGD):** FGDs with local residents, tourism workers, and hotel staff explored collective experiences and community feedback.
- c) **Tourist Interviews:** Domestic and international tourists were surveyed through semi-structured and digital questionnaires to understand their experiences, sense of safety, and views on the Tourist Police.
- d) **Direct Observation:** On-site observation of Tourist Police behavior and interactions provided real-time insights, guided by a structured checklist.
- e) **Literature and Document Review:** Academic texts, government reports, policy documents, operational manuals, and media coverage were analyzed to build theoretical grounding, identify research gaps, and assess the Tourist Police's public image and performance.

3.5 Sampling Strategy

- a) **Tourists:** A mix of purposive (targeting specific types) and random sampling ensured respondent diversity.
- b) **Key Informants and Stakeholders:** Selected purposively based on expertise or direct involvement in tourism safety.
- c) **Local Community:** Stratified random sampling covered varied stakeholder groups such as business owners, leaders, and workers.

3.6 Data Analysis

- a) **Qualitative Data:** Thematic analysis was used for KIIs, FGDs, and observations, with manual coding to identify core themes such as safety perceptions and operational challenges.
- b) **Quantitative Data:** Descriptive statistics (percentages, frequencies) summarized tourist survey responses.

- c) **Triangulation:** Cross-validation of data from multiple sources enhanced reliability and validity.

3.7 Ethical Considerations

Informed consent was obtained from all participants. Confidentiality and anonymity were strictly maintained, ensuring ethical standards and respect for participants' rights throughout the research process.

3.8 Limitations of the Study

3.8.1 Time Constraints: The research was conducted within a fixed timeframe, which limited the sample size and the depth of data collection in certain areas.

3.8.2 Geographical Limitations: Data collection focused on Cox's Bazar, which may not fully represent other tourist locations in Bangladesh.

3.8.3 Language Barriers: Some tourists faced language difficulties, especially non-Bengali speakers. To mitigate this, interviews were conducted in English or Bengali, depending on the tourist's preference.

4. ANALYTICAL DISCUSSIONS

4.1 Analysis of Data

4.1.1 Respondent Demographics

I conducted a survey with twenty-five visitors to the Cox's Bazar sea beach. Of them, 56 percent are men and 44 percent are women. Respondents' ages ranged from 4% under the age of 18, 60% between the ages of 18 and 30, 20% between the ages of 30 and 45, 12% between the ages of 45 and 60, and the remaining 4% over the age of 60. Eighty-eight percent were domestic tourists, and twelve percent were foreign tourists. 8 percent of visitors were by themselves, 36 percent were with friends, and 56 percent were with relatives. In the sea beach, none of the respondents reported any incidents of harassment, crime, or discomfort.

4.1.2 Perception of Tourist Safety

4.1.2.1 Respondents' Satisfaction: Forty percent of respondents thought Cox's Bazar's tourist security were good, fifty-two percent thought it was average, and the remaining eight percent said it was inadequate.

Table-1: Respondents' Satisfaction on Beach Security

	Good	Average	Not Good
No. of respondents	10	13	02
%	40%	52%	8%

Source: Tourists' Survey made by the Author

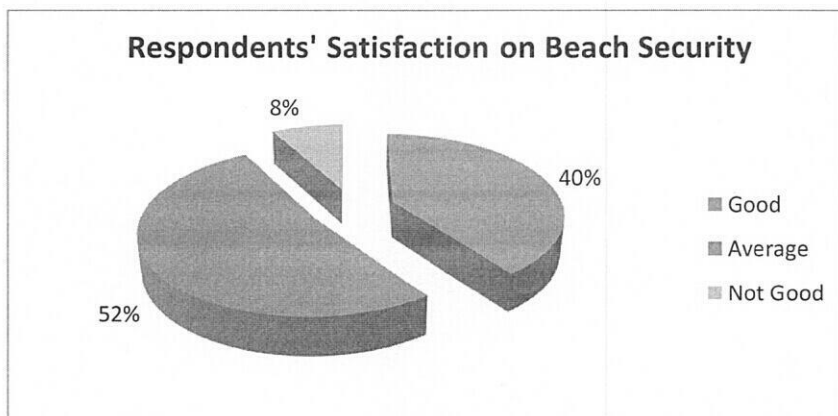


Figure-2: Pie chart showing Respondents' Satisfaction on Beach Security

4.1.2.2 Influence of Tourist Police: The tourists' security concerns were greatly impacted by the presence of tourist police. It has a satisfactory influence on 40% respondents; a strong influence on 32% of respondents and to the remaining 28%, the presence of tourist police has a very strong positive impact on their security concerns.

Table- 2: Influence of the presence of the Tourist Police

	Very Strongly	Strongly	Satisfactorily	No Influence
No. of Respondents	7	8	10	0
Percentage	28%	32%	40%	0%

Source: Tourists' Survey made by the Author

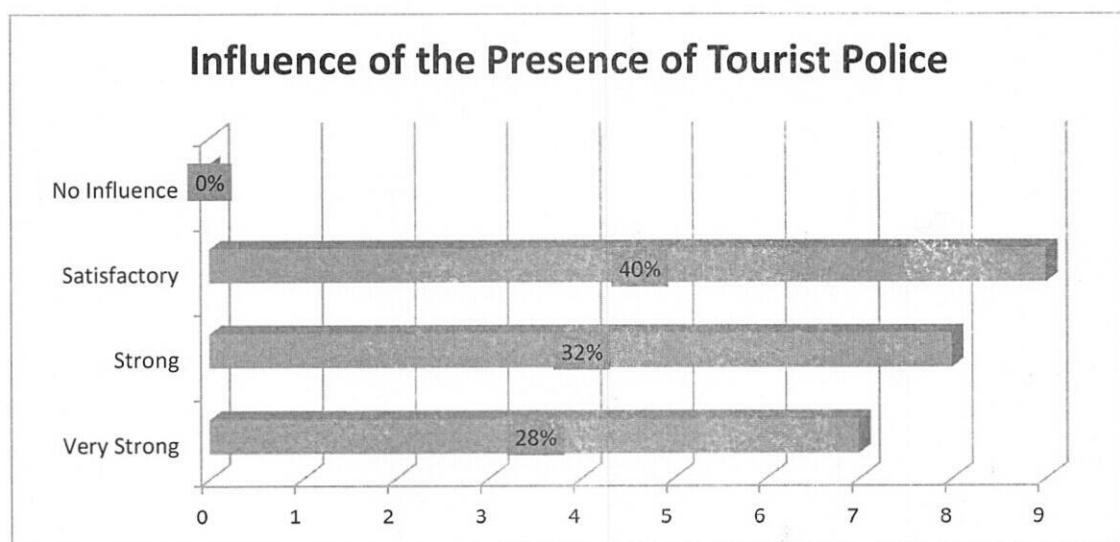


Figure- 3: Bar diagram showing Influence of the presence of the Tourist Police

4.1.3 Tourists' Priority Concerns

For 16% of the respondents, their affordability or financial situation is their top worry. Security is the top issue for 64% of respondents. Twenty percent of respondents said that their top concern was safe accommodations. Travel safety is the top concern for 84% of respondents, while time availability is the top concern for 12% of respondents.

Table- 3: Tourists' Priority Concern for Tourism

Priority Concern	Affordability	Security	Safe Accommodation	Safe Travel	Time
No. of Respondents	4	16	5	21	3
Percentage	16%	64%	20%	84%	12%

Source: Tourists' Survey made by the Author

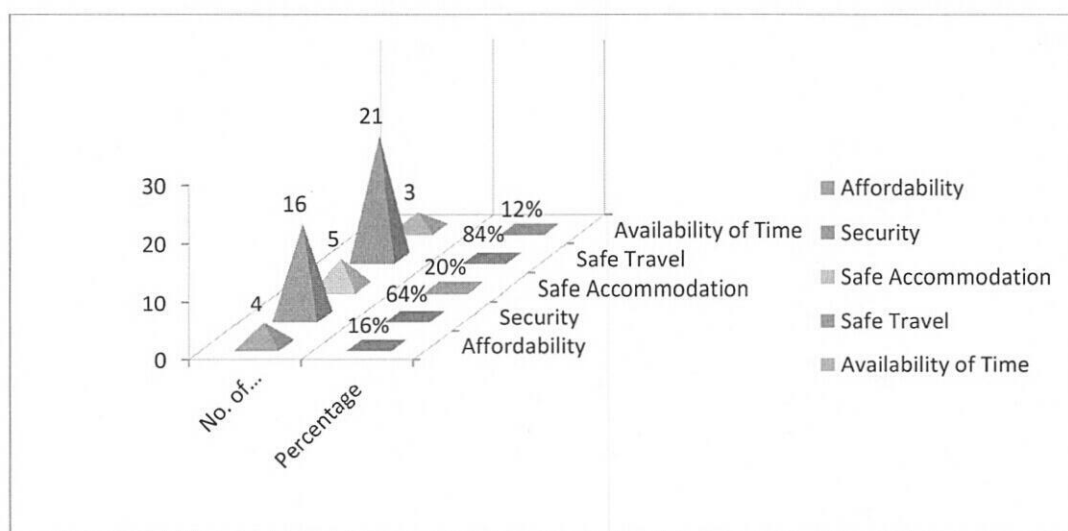


Figure-4: Diagram showing Priority Concerns of Tourists

4.1.4 Crime and Harassment Concerns

The tourists primarily express concerns around snatching and sexual harassment at tourist locations. 48% expressed concerns over snatching, while 56%, most of them are female, indicated concerns about eve-teasing. Concerns over theft, pick pocketing, and physical assault were expressed by 36%, 28%, and 4% of respondents, respectively.

Table- 4: Crime and Harassment Concerns of Tourists in the tourist spot

	Theft	Snatching	Pick-pocketing	Eve-teasing	Physical Violence
No. of Respondents	9	12	7	14	1
Percentages	36%	48%	28%	56%	4%

Source: Tourists' Survey made by the Author

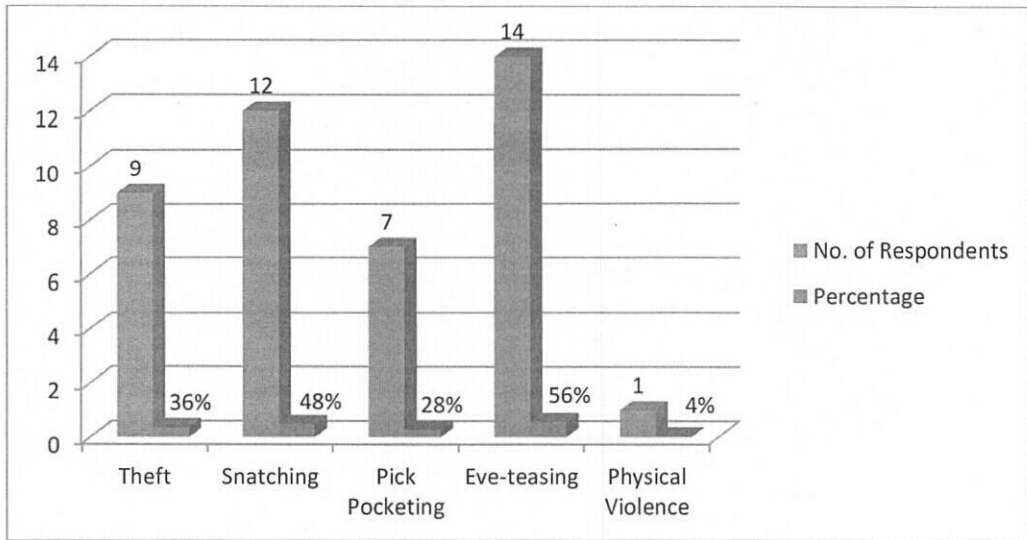


Figure-5: Bar diagram showing Crime and Harassment Concerns of Tourists

4.1.5 Tourists' Recommendations for Tourist Police

Among the respondents, 84% put their opinion that in favor of ensuring the presence of tourist police within the eye sight. For introducing Tourist Police help desk in the sea beach at regular distances, increasing rescue teams and boats, increasing tourist police patrol team, activating tourist police hotline number and mobile apps the the percentage of respondents are 80%, 72%, 64% and 64% respectively.

Table-5: The Tourists' Recommendations for capacity building of Tourist Police

Capacity Building Components	No. of Respondent	Percentages
Introduce new PS or OP in the beach	8	32%
Ensure the presence of TP within the eye sight	14	84%
Construct adequate number of Observation Tower	9	36%
Increase tourist police patrol team	16	64%
Tourist Police campaign through signboard, billboard etc.	13	52%
Increase rescue teams and boats	14	72%
Activate tourist police hotline number and mobile apps	15	64%
Introduce Tourist Police help desk in the sea beach at regular distances	17	80%
Others	6	24%

Source: Tourists' Survey made by the Author

All respondents indicated that the presence of tourist police is necessary for ensuring the safety and security of tourists at Cox’s Bazar sea beach. The tourists’ recommendations for tourist police have been given below.

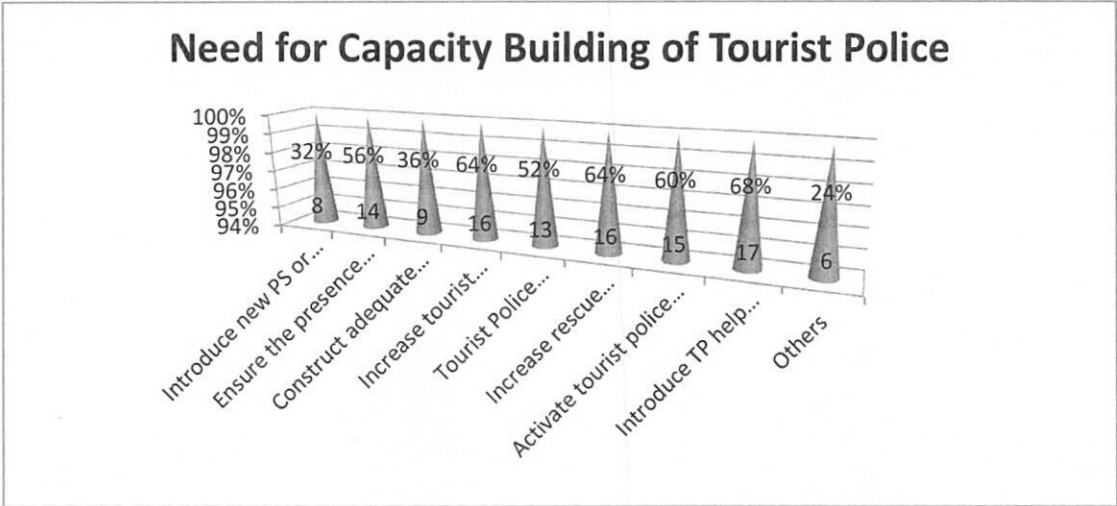


Figure-6: Diagram showing The Tourists’ Recommendations for capacity building of Tourist Police

4.1.6 Operational Trends of Tourist Police (2022–2024)

The data collected from the Tourist Police headquarters in Dhaka provides an overview of the operational trends of the Tourist Police in Cox's Bazar over the years 2022 to 2024. The number of patrols decreased from 38.15 thousand in 2022 to 37.33 thousand in 2023, and further to 32.47 thousand in 2024. This indicates a gradual reduction in patrol activities over the three-year period.

There was a significant drop in stakeholder meetings from 399 in 2022 to 160 in 2023, followed by a substantial increase to 522 in 2024. This suggests fluctuating engagement levels with stakeholders, with a notable rebound in 2024. The number of children rescued remained relatively stable, with 313 in 2022, 296 in 2023, and slightly increasing to 307 in 2024. Tourist rescues slightly decreased from 29 in 2022 to 32 in 2023, then dropped to 27 in 2024, indicating a minor fluctuation in rescue operations. Theft mobile recoveries declined from 78 in 2022 to 58 in 2023, and further down to 36 in 2024, showing a decreasing trend in mobile theft recoveries. Recovery of stolen money decreased sharply from 429 in 2022 to just 64 in 2023, and further to 12 in 2024, indicating a significant decline in monetary theft

recoveries. The number of lawful actions taken decreased from 114 in 2022 to 99 in 2023, then decreased to 87 in 2024.

Table- 6: Operational Trends of Tourist Police in Cox's Bazar

Years	Patrols (Thousands)	Meeting with Stakeholders	Children Rescued	Tourists Rescued	Theft Mobile Recovery	Theft Money Recovery (Thousands)	Lawful Action
2022	38.15	399	313	29	78	429	114
2023	37.33	160	296	32	58	64	99
2024	32.47	522	307	27	36	12	87

Source: Tourist Police Headquarters, Dhaka

The data suggests that while patrol activities and certain recovery actions (such as theft recoveries) have decreased over the years, stakeholder engagement experienced a notable increase in 2024. The stability in children rescue numbers indicates consistent efforts in that area. The overall operational intensity appears to have diminished, but the increased stakeholders' meetings in 2024 could reflect a strategic shift towards collaboration or community engagement.

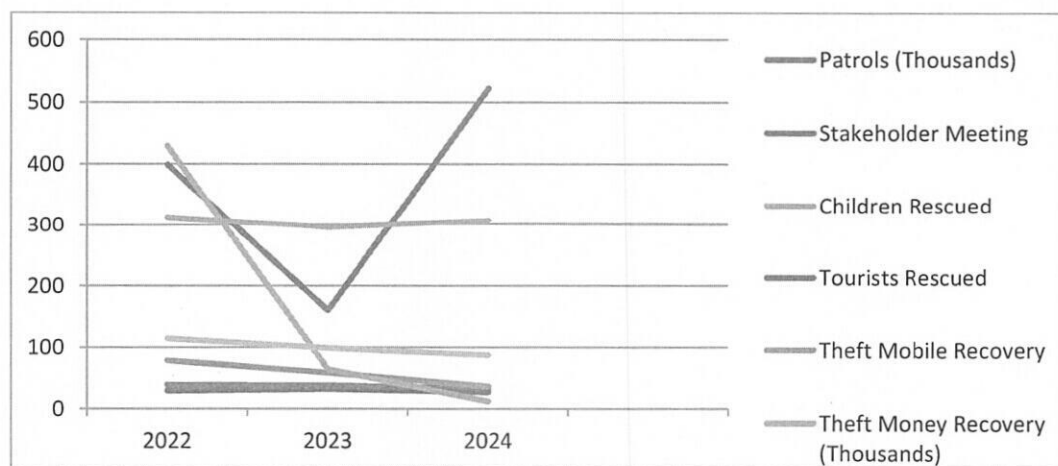


Figure-7: The line diagram showing operational trend of Tourist Police in Cox's Bazar.

4.2 Research Findings

Based on the above analysis, the following key findings emerge:

- a) Tourist Police presence is strongly associated with improved perception of safety, but this perception varies by gender, age group, and location. Younger and female tourists were more sensitive to visible policing and expressed greater safety concerns.
- b) Operational achievements are notable, especially in patrols, rescues, and stakeholder engagement; however, limited deterrence and preventive visibility constrain the policy's broader effectiveness.
- c) Technological integration remains minimal, limiting real-time responsiveness, data transparency, and incident documentation.
- d) Community engagement has improved in 2024 but lacks structured partnerships, local leadership involvement, and systematic feedback mechanisms.
- e) Tourists widely appreciate Tourist Police efforts but demand higher visibility, on-demand access, and mobile/web-based grievance tools.
- f) Gender-sensitive services are insufficient, especially in preventive policing, female staffing, and response to gender-based complaints.
- g) Stakeholder engagement rose sharply in 2024, signaling a shift towards participatory tourism policing, potentially correlating with a decline in visible crime and increased trust.
- h) Child rescue operations show consistent attention and stability, reflecting a strong operational priority in child safety.
- i) The decline in patrols, recovery of stolen items, and enforcement actions suggests emerging resource, coordination, or morale-related constraints.
- j) Absence of multilingual support limits engagement with foreign tourists and reduces the inclusivity of policing services.
- k) Help desk facilities and hotline services are currently inadequate or underutilized, despite strong tourist demand for these services.
- l) There is a policy-level gap in evaluating the long-term impact of the Tourist Police initiative through measurable indicators and feedback loops.
- m) Tourist safety policy is reactive rather than anticipatory, with insufficient integration of risk mapping, crowd forecasting, and peak season preparation.

- n) Tourists' perception of safety does not always align with actual crime statistics, indicating a perception-reality gap that must be managed through better communication and transparency.

4.3 Discussion

4.3.1 Comparative Overview of Tourist Policing Practices in Different Countries

Bangladesh: Established in 2013, Bangladesh's Tourist Police aims to ensure tourist safety, but with only 1,400 personnel covering 130 of 1,600 sites, challenges persist. Key issues include limited manpower, inadequate infrastructure, and minimal technological integration. Although the "Hello Tourist" app was launched, broader ICT use remains low (Jalal, 2024; Dhaka Tribune, 2025).

India: India's tourist policing is state-specific, with some regions forming dedicated units. However, short training periods and institutional gaps hamper effectiveness, particularly in handling complex crimes like harassment (Pradeep, 2015).

South Korea: South Korea has multilingual tourist police units that enhance visitor experience and deter crime. Yet, high costs and privacy issues associated with advanced technology are notable challenges (Credence Research, 2025).

New Zealand: The "Walk Wise" program employs trained civilian officers to assist tourists. Biometric eGates at airports further streamline security and border control (Wikipedia, 2025).

Switzerland: Switzerland lacks a separate tourist police force due to low crime rates and efficient cantonal policing. General public safety systems are deemed sufficient (IITTM, n.d.).

France: France integrates AI-driven video surveillance, especially for large events like the Paris 2024 Olympics. While efficient, these systems spark privacy and ethical concerns (Le Monde, 2024).

Brazil: Over 30,000 body-worn cameras have been deployed to improve transparency and police-public interactions. However, challenges include ensuring consistent use and managing data (IITTM, n.d.).

Pakistan: Safe City projects in Pakistan utilize surveillance for urban security, but suffer from resource constraints, slow response systems, and public mistrust. Reforms and awareness campaigns are essential (Pakistan Today, 2025; J-PAL, n.d.).

China: China's Skynet project uses AI and facial recognition for surveillance, aiding public order but raising debates over privacy and individual rights (Wikipedia, 2025).

United Kingdom: The UK does not have any national tourist police force, but uses body cameras; outdated infrastructure hampers efficiency (HMICFRS, 2021).

United States: The USA also does not have any national tourist police force. Cities like Miami and Las Vegas use specialized units and predictive policing, though data privacy remains a concern (Wikipedia, 2025).

Australia: Australia relies on federal police and invests in smart policing tools. Budget limitations and resistance to change pose hurdles (Credence Research, 2025).

4.3.2 Effectiveness of Tourist Police in Enhancing Safety and Satisfaction

The field survey reveals that many tourists link their sense of safety to the visible presence and supportive role of the Tourist Police. Around 70% rated their influence on personal safety as "strong" or "very strong," indicating a positive association between presence and perceived security.

The Tourist Police have widened their operations, conducting over 32.47 thousands patrols in 2024, rescuing 334 individuals, and participating in over 500 community and stakeholder meetings. These figures reflect their extensive field-level engagement.

However, perceived safety remains moderate. Over 52% of tourists rated security as "average," with women still facing risks like eve-teasing and unauthorized photography. Moreover, despite appreciation for physical assistance, the absence of technological tools, such as mobile apps, QR-based complaints, and smart surveillance; limits real-time responsiveness.

4.3.3 Impact Assessment for Tourist Police Effectiveness

The resultant impact of the tourist police effectiveness has been shown in the following flow chart.

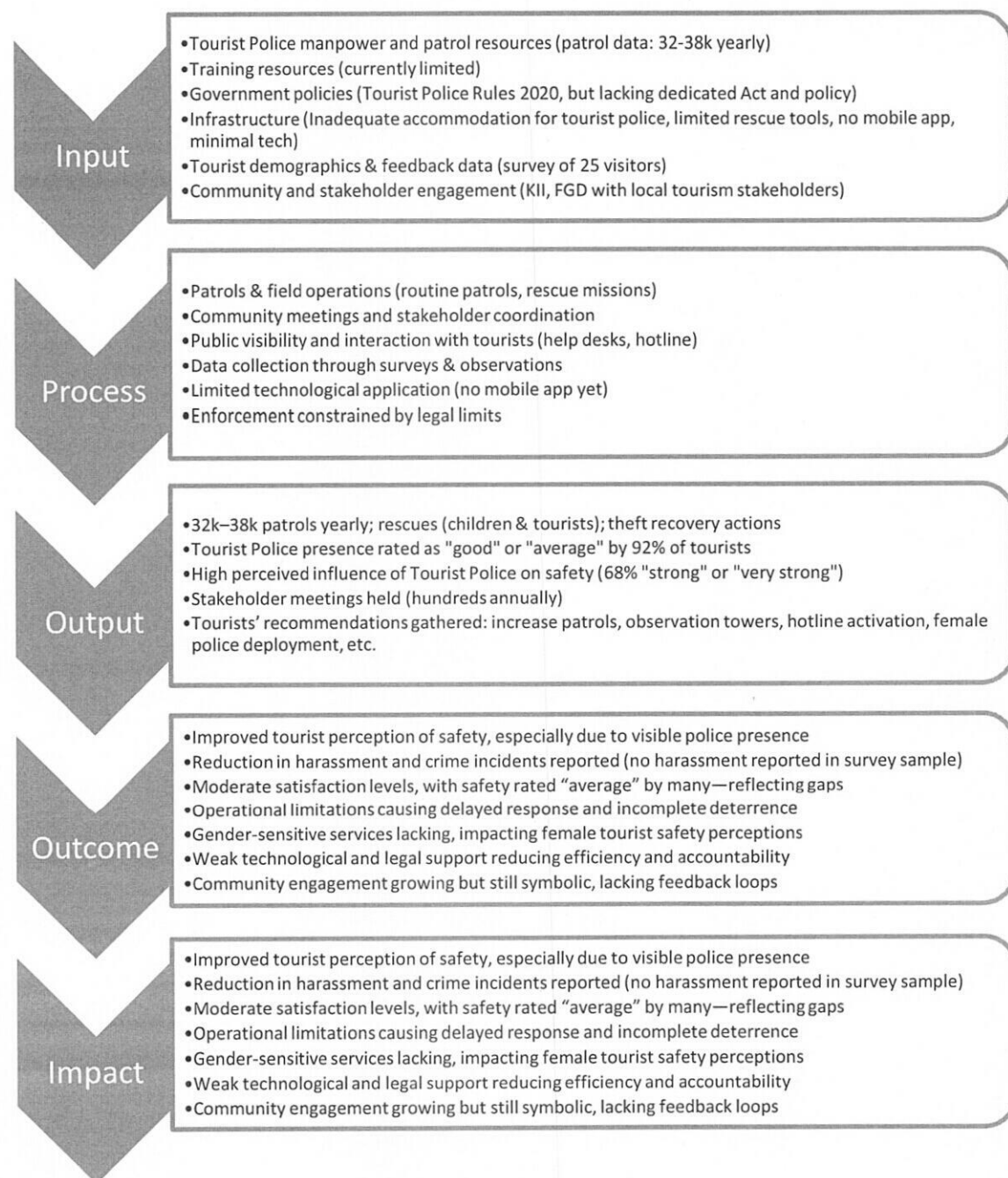


Figure 8: Flowchart of Tourist Police Impact Assessment in Cox's Bazar

4.3.4 Challenges and Opportunities in Implementing the Tourist Police Policy for Safer and Sustainable Tourism in Bangladesh

5.3.4.1 Key Challenges

- a) *Institutional and Resource Constraints:* Tourist Police face shortages in skilled manpower, insufficient peak-season deployment, and limited budgets, which affect mobility, logistics, and emergency response. High staff turnover undermines professionalism and trust, while a lack of career incentives hampers specialization.
- b) *Infrastructural and Technological Limitations:* Critical infrastructure like mobile command units and control rooms is missing. Rescue tools (e.g., speedboats, jet skis) are inadequate. There is no multilingual mobile app or real-time reporting system. Modern technologies like AI-based analytics, GIS crime mapping, and mobile complaint logging remain underutilized.
- c) *Legal and Policy Barriers:* Tourist Police lack a legal mandate or dedicated legislation, limiting their authority. They cannot make decisions independently without the help of local police. Poor alignment with national safety policies and unclear jurisdictional boundaries hamper coordination.
- d) *Training and Capacity Gaps:* There is no structured, tourism-focused training in hospitality, trauma care, or crisis handling. Officers lack exposure to global best practices and have minimal psychological readiness for high-stress situations.
- e) *Coordination and Community Engagement Deficits:* Poor coordination exists among agencies and stakeholders. Safety plans are often top-down, lacking community input or structured public-private partnerships.
- f) *Gender-Sensitive Gaps:* Female tourists face issues like eve-teasing and lack of safe infrastructure. Few female officers are visibly deployed, and gender-sensitive reporting mechanisms are absent.
- g) *Awareness and Communication Issues:* Many tourists are unaware of the Tourist Police. Communication barriers, minimal signage, and lack of multilingual tools reduce engagement and reporting.
- h) *Policy and Implementation Bottlenecks:* There are no operational framework or performance indicators in Tourist Police. Action plans are delayed, and budget cycles ignore tourism seasonality. Data systems for crime tracking and institutional learning are absent.

- i) *Environmental and Disaster Preparedness*: Tourist Police are unprepared for climate-related disasters. They lack training in evacuation and are not integrated into local disaster response systems.

4.3.4.2 Key Opportunities

- a) *Expanding Tourism Sector*: The rising number of tourists calls for an empowered Tourist Police force and better infrastructure (e.g., safety booths, multilingual helplines). Seasonal surges can be met with flexible deployment and targeted safety campaigns.
 - b) *Technology Integration*: ICT tools like safety apps, AI surveillance, and real-time reporting can boost transparency and efficiency. Centralized digital dashboards can enable coordinated responses among stakeholders.
 - c) *Capacity Building*: Partnerships with tourism institutes, donors, and foreign missions can deliver training in languages, cultural sensitivity, trauma care, and tech use. A structured training curriculum and global best practices can enhance professionalism.
 - d) *Community Participation*: Collaborations with local businesses, NGOs, and civil society can create shared safety accountability. Awareness campaigns and participatory audits can improve legitimacy and responsiveness.
 - e) *Policy Reform*: A dedicated **Tourist Protection Act** and a formal operational charter with KPIs can strengthen mandates. Strategic integration into national tourism and security policies ensures sustained funding and oversight.
 - f) *Disaster Preparedness*: The Tourist Police can expand their coastal presence to support early warnings and evacuations in disaster-prone zones, working with disaster agencies to build tourism resilience.
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5. RECOMMENDATIONS AND CONCLUSION

5.1 Recommendations

To strengthen the role of the Tourist Police and advance safe and sustainable tourism in Bangladesh, especially in Cox's Bazar, the following actionable recommendations are proposed:

5.1.1 Policy and Legal Reforms

- A. **Enact a Dedicated Legal Framework:** Introduce a comprehensive Tourist Protection Act that clearly defines the legal authority, jurisdiction, responsibilities, and accountability mechanisms of the Tourist Police.
- B. **Integrate into National Tourism Strategy:** Ensure formal recognition and integration of the Tourist Police within the national tourism policy framework to enable cross-ministerial coordination and support long-term strategic planning.

5.1.2 Institutional Strengthening

A. Enhance Human Resources and Logistics

- a) Recruit specialized personnel with expertise in hospitality, foreign languages, ICT, and crisis management.
- b) Allocate manpower strategically based on tourist density and risk assessments.
- c) Equip the Tourist Police with modern logistics, including mobile command units, drones, GPS-enabled tracking, and essential rescue equipment such as speedboats and lifesaving kits.

B. Establish Female Help Desks and Gender Units

- a) Deploy dedicated female Tourist Police teams in key tourist zones to address gender-specific safety concerns.
- b) Set up gender-sensitive help desks to provide tailored support to female tourists.

5.1.3 Capacity Building and Professional Development

A. Institutionalize Structured Training Programs

- a) Develop and implement training modules covering cultural sensitivity, trauma-informed policing, crowd management, multilingual communication, and tourist etiquette.
- b) Collaborate with tourism training institutes and international development partners to facilitate knowledge exchange and refresher courses.

B. Introduce Performance Metrics: Establish measurable performance indicators to assess service delivery, complaint handling efficiency, and public satisfaction.

5.1.4 Technology Integration

A. Develop a Digital Tourist Safety Platform

- a) Launch a user-friendly mobile application and web portal offering safety information, emergency contacts, tourist assistance, and complaint submission.
- b) Integrate real-time GPS tracking of patrols, CCTV surveillance, and online feedback systems to enhance responsiveness and transparency.

B. Adopt Data-Driven Policing: Utilize data analytics to monitor crime trends, identify hotspots, and optimize resource allocation for proactive policing.

5.1.5 Stakeholder Engagement and Community Participation

A. Strengthen Inter-Agency Coordination: Establish a Tourism Safety Coordination Cell that includes the Tourist Police, local government bodies, hotel associations, NGOs, and other relevant stakeholders to foster regular collaboration and joint problem-solving.

B. Promote a Participatory Safety Culture

- a) Organize collaborative safety campaigns involving civil society and tourism actors.
- b) Implement transparent follow-up mechanisms and co-design localized safety solutions with community and industry partners.

5.1.6 Awareness and Visibility

A. Increase Public Awareness and Accessibility

- a) Launch nationwide and localized campaigns to raise awareness about the Tourist Police's presence, roles, and services.
- b) Enhance signage, improve visibility, and ensure easy accessibility of Tourist Police booths and services in high-traffic tourist areas.

5.2 Conclusion

This research has examined the critical role of the Tourist Police in ensuring safe tourism in Cox's Bazar, one of Bangladesh's foremost tourist destinations. While the establishment of this specialized unit marks a significant step forward, its effectiveness is currently limited by legal ambiguities, resource constraints, inadequate training, weak coordination among stakeholders, and low public awareness.

Field findings indicate that tourists and tourism stakeholders value the presence of the Tourist Police, yet they raise valid concerns regarding limited visibility, gender insensitivity, and operational challenges. Insights from officers echo these concerns, highlighting gaps in training, logistical support, and institutional integration.

Despite these challenges, the future presents considerable opportunities. The rapid growth of both domestic and international tourism creates an urgent policy window to revitalize the Tourist Police as a modern, inclusive, and technologically advanced force. By implementing targeted legal reforms, investing strategically in human and technical resources, fostering community partnerships, and adopting data-driven policing practices, the Tourist Police can evolve into a benchmark institution for safety, trust, and sustainable tourism in Bangladesh.

Strengthening this vital institution will not only enhance the overall tourist experience but also contribute significantly to national development objectives, bolster the country's international image, and drive economic prosperity through a thriving tourism sector.

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Dr. Laila Akhter

Roll No. 112

Labeling Compliance of Packaged Drinking Water in Bangladesh – A Case Study

Abstract

This study investigates the labeling compliance of packaged drinking water products in Bangladesh against established national regulatory frameworks. It examines adherence to the Bangladesh Food Safety Authority's (BFSA) Labeling Regulations (2017), the Bangladesh Standards and Testing Institution's (BSTI) standard BDS 1240:2021, and the Directorate of National Consumers' Right Protection (DNCRP) Act, 2009. Field observations and stakeholder interviews revealed widespread violations, including absence of mandatory Bengali labeling, misleading branding elements, and lack of critical consumer information such as manufacturing details and license numbers and seal of BSTI. The findings highlight deliberate attempts to mislead consumers through foreign language text, false claims of product origin, and inflated pricing. The study underscores the urgent need for stringent enforcement, increased regulatory coordination, and public awareness to ensure consumer protection and uphold food safety standards. bottled water quality control has become necessary, with the aim of having correct information on the label to reliably inform consumers and ensure human health.

Key Words: Food Safety, Labeling of Packaged Food, Policy Compliance, Food Business Operators (FBOs)

Labeling Compliance of Packaged Drinking Water in Bangladesh - A Case Study

1. Introduction

1.1 Background of the study:

From the public health perspective and national productivity concern, Food safety in Bangladesh is a burning issue for now days. Huge practice of adulteration and fraudulence in food businesses making it a matter of great worry to the consumers. The Bangladesh Food Safety Authority (BFSA), which was established in 2015, under the Food Safety Act 2013, is a regulatory body in overseeing food safety throughout all phases of the food chain such as food production, import, storage, and supply and sell as well as regulating food adulteration. Bangladesh Standard and Testing Institution (BSTI) is concerned with setting standard of foods as well as other goods. This institute has several policy documents in lieu of maintaining standards. Another prime government body "Directorate of National Consumers' Right Protection (DNCRP)" is ensuring consumers right throughout the country. In Bangladesh BSTI and The Islamic Foundation issued Halal Certification mark to food products on the basis of fulfilling the designated criteria. So, there are many organizations and related policy documents adhered to food safety issues in Bangladesh.

Although advancements are being made, there are still challenges in maintaining consistent food safety practices, especially among traditional markets and Food Business Operators (FBOs). From the commencement of the BFSA, three rules and twelve regulations has been formulated by this authority which are on board for compliance by different stakeholders to hold the rein back on food adulteration and fraudulent practices. Among the regulations "Food Safety (Labelling of Packaged Food) Regulations-2017" has deserve much attention for the sake of consumers right standpoint. It's a Legal requirement that have to be followed by food business operators. In today's fast-paced world, where food is processed, packaged, and distributed across long distances; ensuring proper labeling is more important than ever. Labeling is regulated not only to protect consumers right but to protect also consumers' health who should have the correct information to make confident and informed food choices based on diet, allergens, personal taste or cost. Mislabeled food deceives the consumer, prevents ethical purchasing and creates unfair competition with manufacturers or traders. Everyone has the right to know that the food they have bought matches the description given on the label.

Part of BFSA's role is to help prevent mislabeling or misleading descriptions of foods. Among other packaged food, bottled drinking water plays a crucial role in our daily lives by providing a convenient, safe and readily available source of hydration. The consumption of bottled water has been steadily increasing globally over the years and is considered the fastest expanding and most dynamic sector within all food and beverage industries. Its portability and ease of access make it a valuable tool for promoting healthy hydration habits and supporting overall wellness. Labeling of drinking water bottle is crucial for ensuring consumer safety, providing transparency, promoting informed choices and compliance with the legal bindings. The study case was triggered by a customer's concern who was served a bottle of drinking water by a restaurant. He observed that, the bottle's label did not depict clear information about the origin, ingredients, manufacturer and such other labeling characteristics. Not seeing the concerned authority's seal, he became confused the water bottle imported or produced by any local company.

Definition of labeling: A food 'label' refers to the display of written, printed, or graphic material on the packaging, container, or wrapper directly surrounding a food product.

Key Labelling Requirements:

Label should be written in Bengali (other languages may be used additionally if needed). In case of imported food, an additional sub-label in Bangla must be used. Font size must be illegible according to national and international standard. The Front-Pack-Label should be imprinted with the following:

- Name of the food product
- List of ingredients
- Net quantity
- Manufacturing and expiry dates
- Date of best before use (for some product like oil etc.)
- Batch or code number
- Lot number
- Name and address of the manufacturer, importer, Packer, marketer
- Nutritional information per unit
- Allergen declaration
- Storage instructions
- Preparation/cooking instructions (in some cases)
- Country of origin (if imported)

- Allergen information
- Used food additives, Sweeteners or sugars or salt
- Vegetarian/non-vegetarian sign
- Maximum Retail Price (MRP)
- Certifications (e.g., BSTI mark etc.)

[Ref: Food Safety (Labelling of Packaged Food) Regulations 2017; BDS 1240:2021 (2nd Revision) and The Consumers' Right Protection Act, 2009]

Albeit there are some global studies on food labeling but in Bangladesh scarcity is remaining in that area. In Bangladesh a study was performed to assess consumers' knowledge, perception, and practical understanding of food labels (Islam *et. al.*, 2024) but no study was performed to assess the knowledge and practice of FBOs about packaged food labeling. In a study in Tanzania, it was revealed that, the inadequate adherence to mandatory labeling standards highlighted the need to strengthen labeling practices and potential challenges faced by consumers in understanding nutritional information. Thus, the researchers emphasized on urgent need of strengthening and accentuating good labelling practices (Rusobya *et. al.*, 2024). In Bangladesh, the labeling regulation has been enacted in 2017, so the FBOs as well as consumers are not much aware of that regulation.

1.2 Problem Statement:

In Bangladesh many researchers have performed studies on consumers' knowledge, perception and practical understanding of food labels but no researches were done about the knowledge and practice of FBOs to comply with the existing Acts or Rules or Regulations regarding labeling of packaged food especially of drinking water. This research aimed at digging out the actual causes behind the knowledge and practice of this particular policy documents in a pragmatic case regarding labeling of drinking water bottle.

1.3 Objectives:

- i) To assess the level of knowledge and compliance of Food Business Operators (FBOs) about policy documents regarding Labeling of Packaged Drinking Water
- ii) To find out the causes of non-compliance (if any) with the policy documents regarding Labeling of Packaged Drinking Water

public health experts note that effective labeling can “protect and improve our health” by helping consumers opt for healthier options, which in turn may reduce obesity and diet-related chronic diseases (Viola *et. al.*, 2016). Well-designed labels thus encourage healthier eating habits and give vulnerable individuals the information they need to prevent and manage illnesses.

In Bangladesh; the Bangladesh Food Safety Authority (BFSA) was established by the Government in 2015 to coordinate the multi-sectoral efforts needed to address the country’s diet-related disease burden including informing policies on food regulation. From a study in Fiji, it was revealed that, officers authorized by the Government of Fiji are responsible for periodic monitoring of compliance with the labelling regulations, with fines and/or imprisonment incurred for noncompliance. However, to date, compliance with Fiji nutrient labelling regulations across the entire Fijian packaged food supply has not been assessed (Shahid *et. al.*, 2021). In a study the relationship between demographic attributes and respondents' practical understanding of food labels were assessed. The majority of participants (52.5%) actively read food labels when purchasing a product for the first time. Food labels are regarded as “very important” by 56.2% of respondents and “important” by 35.7% of respondents. Label information is prioritized to highlight the importance of clear production and expiration dates (70%), followed by nutritional composition (56.7%) and source of raw material (52.5%). Despite this, over half of the participants demonstrated a limited practical understanding of the nutritional components on labels (Islam *et. al.*, 2024). Label compliance analysis according to the restrictive approach revealed that none of the products accurately reported the salt, sugar, saturated fat, and trans-fat content on the label (Shaheen *et. al.*, 2024).

Expiration or “use-by” dates on labels are critical for food safety. These dates tell consumers until when a product is expected to remain fresh or safe if stored properly. Health agencies stress that eating foods past their use-by dates can be dangerous. U.S. regulators require date labels on high-risk foods (like infant formula) to ensure safety. When in doubt, consumers are encouraged to follow these dates—discarding foods past “use-by” (safety) dates and preferring “best if used by” dates (quality dates) for other items to reduce spoilage-related illness. Allergen labels prevent life-threatening reactions. Strict avoidance of allergens, guided by label reading, is the only way for allergic people to stay healthy (WHO,

1.4. Justification of the study:

The labelling of packaged food is a vital component of food safety, consumer protection, and regulatory compliance. It is mandated by national (BFSA, BSTI, DNCRP in Bangladesh) and international (CODEX Alimentarius Commission, EU and other neighboring countries) regulatory bodies. Its importance spans multiple dimensions; from health and nutrition to legal and commercial aspects. Non-compliance with this regulation can lead to health hazards to consumers, penalties for FBOs and product recalls, or bans. Consequently, business and economic progress of the country will be hindered. Through this study the root causes are unveiled about the non-compliance, knowledge scarcity and reluctance to follow/practice the regulations. The Regulatory bodies would find data-driven insights to strengthen monitoring, enforcement, and policy design to make it more effective. This study has provided evidence on gaps in compliance and inform targeted interventions.

2. Literature Review

A healthy diet is essential for good health and nutrition. An unhealthy diet is a major contributor to the development of non-communicable diseases (NCDs) like hypertension, cardiovascular disease, cancer, diabetes, and obesity. Non-communicable disease (NCD) is a worldwide crisis as well as in Bangladesh. NCD account for about 80 % of all deaths and 50 % of all premature mortality (death under 70 years of age) in the Pacific Islands (Abegunde *et. al.*, 2007). Labeling of packaged food can help to prevent NCDs making capable the consumers to choose their right food. Front-of-package labels (FOPL, like "traffic light" colors or warning symbols) are being adopted worldwide to make nutrition information even more accessible. Effective labeling not only helps consumers but also encourages the food industry to reformulate products (reducing added sugars, salt or fat etc.) in order to earn favorable labels (WHO, 2024). In 2016, Sri Lanka pioneered a 'traffic light' labelling system for all beverages sold in the country, creating a simple way for consumers to be made aware of the sugar contained in pre-packaged drinks and make informed decisions to regulate their consumption (WHO, Dr. Poonam, 2018). Food labels serve as the "identity card" for packaged foods, listing everything consumers need to know about a product. Labels reveal the ingredients and nutritional composition (calories, fat, sugar, etc.), as well as expiration dates, origin, and lot numbers. By making this information transparent, labels let people choose foods that fit their dietary needs and health goals. Indeed,

Nutrition labelling). This is especially vital given that food allergies can cause rapid anaphylaxis if exposure is not avoided (Martini and Menozzi, 2021).

Effective nutrition labelling, including FOPL has been identified as one of the strategies that countries should use to address the growing global concern of unhealthy diets. The development, implementation, monitoring and evaluation of FOPL should be government led, iterative and collaborative process. FOPL should provide convenient, relevant and readily understood nutrition information or guidance on food packs, to assist all consumers to make informed food purchases and healthier eating decisions. An additional benefit is to stimulate favorable compositional changes to food products (Taillie *et. al.*, 2024). In a study, it was found that the detailed examination of the drinking water bottle labels confirmed their adherence to water standards in Benghazi, Libya, demonstrating the trustworthiness of the labels in relation to the standards. However, the values printed on the water bottles still varied from the actual values measured in the laboratory (Buzgeia *et. al.*, 2024).

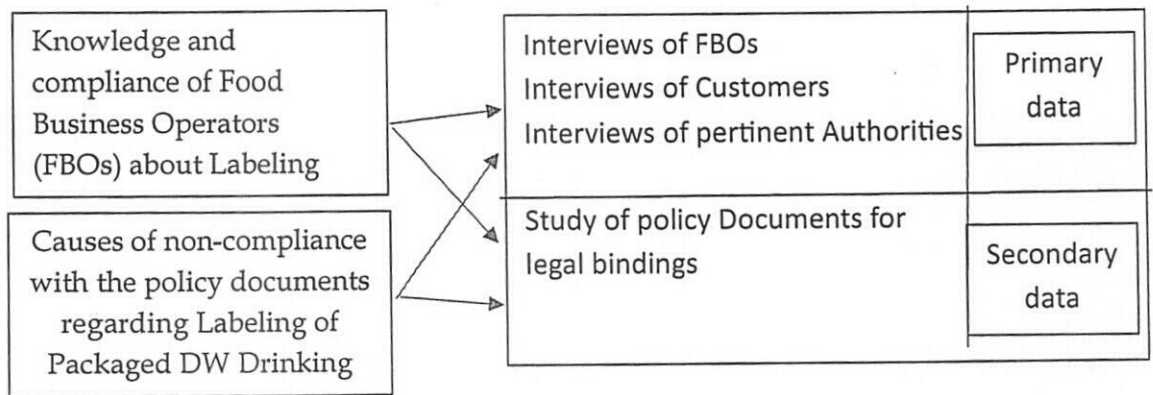
3. Methodology

This study has followed a case study method. The case is the marketing of bottled water in a restaurant in a posh area of Dhaka city. It is selected on the information provided by one of the acquaintances of this researcher, who one day went to a restaurant to have lunch with his friends. The restaurant barred its customer to carry any food or beverages or any drinking water from outside with them when they enter to take food. While taking food, they were provided with drinking water (half litter each) packaged in plastic bottles. They have noticed that the labeling of the bottle didn't contain sufficient information about the producer and other labeling criteria which usually have in other water bottle labels commonly used in Bangladesh. After finishing their lunch, the bill came to them charging the price of that half litter water bottle five times higher than that of open market water bottles. As the acquaintance knew that this researcher was working at Bangladesh Food Safety Authority; he took out one of the empty bottles to show her the labeling properties. Then it has stroked on this researcher's mind that what are the lacking or noncompliance of this label with the Acts and Regulations prevailing in Bangladesh? And what are the causes behind not to following the national policies? What are the things to do the responsible authorities or organizations? To explore the answers of these questions this researcher has committed to perform this case study under the following methodology.

3.1 Research Design:

This case study uses qualitative method and policy compliance-based approach to examine how a bottled water labeling complies with national labeling requirements and what are the causes behind if so. For this purpose, legal document analysis and in-depth interviews of stakeholders were done.

Conceptual Framework:



3.2 Case Selection:

A specific bottled water brand was selected based on customer's information and its market presence and accessibility (true case). The case represents a typical bottled water product available in the posh/aristocrat commercial restaurants and super shops in Bangladesh.

3.3 Data Collection:

Primary Data was collected in May 2025 from Dhaka city by interviewing the stakeholders. Two FBOs engaged with this particular restaurant business and Two employees of that particular manufacturer of this drinking water mentioned in the case study were interviewed. One of the customers was interviewed receiving food in the restaurant. In-depth interviews of six officials of regulatory Authorities or Organizations who have the responsibilities to monitor this and ensuring food safety and consumers right were done. To verify compliance, the physical label of the chosen water bottle was observed and examined. Secondary data was gathered by reviewing of Acts and Regulations from relevant authorities regarding labeling.

3.4 Data Analysis:

Legal documents analysis and in-depth interview outcomes were used to identify compliance gaps and recommendations to over-come the situation. The water bottle label was compared against regulatory checklists covering:

- Product name
- Source of water
- Composition/ mineral content/ ingredients
- Nutritional information per unit
- Net quantity
- Manufacturer's name and address
- Importers name and address (if imported)
- Country of origin (if imported)
- Date of bottling/ expiry
- Batch number, lot number
- Instructions for storage
- Certifications mark (e.g., BSTI mark etc.)
- Maximum Retail Price (MRP)
- Allergen declaration
- Used food additives, Sweeteners or sugars or salt
- Vegetarian/ non-vegetarian sign
- Maximum Retail Price (MRP)

3.5 Ethical Considerations:

The name of respondents, name of restaurant and the name of the company was not disclosed due to ethical reason. The study will not involve personal or sensitive data and informed consent was obtained from interview participants.

3.6 Limitations:

This case study focuses on a single product and may not represent practices across all bottled water brands. The main limitation was the time constraint for this study. And it was hard to manage and get the appointment of business related personnels within this short tenure of research. Unavailability of required policy documents. Access to internal company documentation will be limited.

4. Data Analysis and Findings

4.1 Compliance with Policy Documents

4.1.1 Bangladesh Food Safety Authority (BFSA): "The Food Safety (Labeling of Packaged Food) Regulations, 2017":

"The Food Safety (Labeling of Packaged Food) Regulations, 2017", promulgated by the Bangladesh Food Safety Authority (BFSA), serves as the principal legislation overseeing the labeling of all packaged food goods in Bangladesh. This regulation is a legal binding and aims to ensure consumers protection, transparency, and food safety through standardized and truthful labeling practices.

According to this Regulations, the following general conditions should be followed regarding the labeling of packaged food, such as: "(A) The relevant information provided on the label of the packaged food prepared in the country should be recorded in Bengali language; However, if necessary, one or more foreign languages can be used besides Bengali; (B) In case of sale of imported packaged food in the domestic market of the country, if the label is in foreign language, a label or a sub-label should also be attached in Bengali. (E) The label should be uncovered, easily visible and easy to read, and the font size should be determined in proportion to the size of the packaging, following international standards. (J) Any kind of claim like 'curative' or 'prevents' or 'improving' or any false or misleading information should not be inscribed on label to increase the importance of food." And in clause 17 the following instructions are given to avoid disseminating misleading information- "(1) Misleading, untrue or falsely dependent information may not be inserted on the label in violation of any provision of this Regulation and no advertisement may be prepared, printed or disseminated using such information. (2) If any person violates the provisions of sub-regulation (1), it shall be deemed to be in violation of sections 41 and 42 of the Food Safety Act 2013."

In this case study, the producer took a subtle strategy to deceive consumers. They do not use Bengali name at front label, instead they hide it on the opposite of front label which was not visible from the outside of bottle. Moreover, the name and address of the producer/ company /importer was not inscribed on the label. Even the seal or license number of BSTI was not inscribed on the label. In advertisement they used different health claim such as: "i) It prevents diabetes development, ii)

Detox the body, iii) boost immune system, iv) Helps cure psoriasis, v) Helps fight cancer.” According to the regulations they should not do it.

“(C) Packaged food labels, containers or packaging should contain declarations of information on food and food additives inside”; in this study the producer mentioned the water is alkalized i.e., mixed with additional Oxygen (PH 8.5) that was in compliance but the ingredients and nutrient information was not mentioned per volume of water (packaged food) was considered as a case of non-compliance with this clause of regulation.

4.1.2 Bangladesh Standard and Testing Institution (BSTI): BDS 1240:2021 (2nd Revision):

BSTI has 619 Bangladesh Standards (BDS) on Agricultural and Food Products. Among these, 25 standards are for Soft Drinks and Beverages Sectional Committee, AFSC - 22 and Drinking water is distributed within this section. BDS 1240:2021 (2nd Revision) is the official Bangladeshi Standard for Packaged Drinking Water, issued by the Bangladesh Standards and Testing Institution (BSTI). This revised standard outlines the specifications, labeling requirements, and safety guidelines for packaged drinking water sold in Bangladesh. The key labeling requirements under BDS 1240:2021 relevant to labeling compliance for this case study are mentioned here:

For each packaged bottle/container, the label must contain clearly and legibly:

(1). Brand/Trade Name (Distinct and registered brand name) (2). "Packaged Drinking Water" Declaration (This phrase must be printed clearly and visibly on the label) (3). Net Volume (In liters or milliliters (e.g., 500 mL, 1 L); (4). Batch or Code Number (5). Manufacture Date & Expiry/Best Before Date; (6). License Number (Valid BSTI certification license number e.g., "BSTI License No: XXXX"), (8). Name and Address of the Manufacturer/Distributor (Full address for contact and traceability); (9). Storage Instructions; (e.g., "Store in a cool and dry place, away from direct sunlight); 9. Nutritional Information (if applicable; Required if additives or treatment agents are used); (10). Water Treatment Process Description (Optional but Recommended) (e.g., "Processed by Reverse Osmosis and UV Treatment"). We have noticed that in this case study the label does not use the logo and License Number (Valid BSTI certification license number e.g., "BSTI License No: XXXX"); is a significant violence of this BDS 1240:2021 (2nd Revision)

otherwise most of the conditions were endorsed. Avoiding BSTI logo/seal from front label, they are again trying to deceive people that this water is imported. There are some Prohibited Labeling Claims according to this standard BDS 1240:2021 (2nd Revision) are: manufacturers are not allowed to: (1). Make therapeutic or medicinal claims (e.g., "cures stomach problems"); (2). Use words like "pure" or "100% safe" without scientific validation; (3). Display misleading graphics or language. In this case study it was observed that, the water manufacturing company has violated all the three boundaries. They claimed that this water will improve stomach condition, it prevents acidity, ulcers and improves digestion, can help prevent skin diseases etc. It used Japanese language pretending that it is imported from Japan.

About Halal mark/logo:

BSTI has set standard about Halal Food and the conditions developed by the Agricultural and Food Standards Committee (AFSC-26) under BSTI for regulating halal food in Bangladesh. The logo 'Halal' typically used for Muslim consumers to Facilitate them making decisions. Food products labeled as "halal" meet Islamic dietary laws and are free from any haram (forbidden) substances alcohol, pork etc. This mark also used to Facilitate trade of certified halal products. This standard sets the criteria for what qualifies as halal, including ingredient sourcing, processing, labeling, and certification requirements. In Bangladesh BSTI and The Islamic Foundation issued Halal Certification mark against food products on basis of fulfilling the designated criteria.

In this case study the company have used Halal food tag which was in compliance with the standard specified in AFSC-26, they claimed.

4.1.3 Directorate of National Consumers' Right Protection (DNCRP): "Consumers' Right Protection Act, 2009":

The DNCRP ensures consumers' right through implementing the "Consumers' Right Protection Act, 2009". The Consumers' Right Protection Act, 2009 is a cornerstone of consumer protection in Bangladesh. The act was enacted by the government in 2009 to make provision for the rights of consumes, prevention of anti-consumer right practices and for matters connected therewith. The Act

containing 82 sections regarding different types of fraudulent activities against consumers' right. Among this section 37 is directly related to perfect labeling.

"37. Punishment for not using cover of goods etc. If any person violates any obligation, imposed by any Act or rules, of selling any goods within cover and inscribing weight, amount, ingredients, instructions for use, maximum, retail; price, date of manufacture, date of packaging and date of expiry of those goods on the label, he/she shall be punished with imprisonment for a term not exceeding 1 (one) year, or with fine not exceeding Taka 50 (fifty) thousands, or with both." In this section there is legal obligation that the Maximum Retail Price (MRP) of a product must be inscribed on its label or package with other labeling characteristics. The MRP was inscribed on the label of the sample.

Selling off goods at higher price is also a punishable offence depicted in section 40 of this Act. "40. Punishment for selling goods, medicine or service at higher price than fixed one. If any person sells or offers to sell any goods, medicine or service at a price higher than the price fixed under any Act or rules, he shall be punished with imprisonment for a term not exceeding 1 (one) year, or with fine not exceeding Taka 50 (fifty) thousands, or with both." In this case study, the MRP of the water bottles were higher than that of other bottled drinking water available at market. 500 ml water bottle costs 30 taka instead of 20 taka and alkaline water bottle of 650 ml costs 65 taka. In the restaurant under study the alkaline water bottle of 650 ml was selling at a price of 100 taka. Customers present in restaurant on that day while researcher went there; were very much annoyed with that high price. Then the restaurant personnels trying to justify the price claiming the water bottles were imported from Japan.

4.2 In-Depth Interview

4.2.1 Interview of Company personnels:

The food and beverages company which is producing that drinking water under this study was located at old Dhaka. It was visited by the researcher and two personnels were interviewed. Although they use the name "Food and beverages" but their main business was producing bottled drinking water. No remarkable food item was producing by them. They were confident enough that they are supplying the customers the country's healthiest food and beverage products although they do not know about any other national food regulatory organization except the BSTI. They claimed that, the company meet the BSTI's standards as well as other national and international regulatory criteria by producing three different

types of consumable bottled water: i) alkaline water, ii) natural mineral water, and plain drinking water. This company regularly tests its goods to guarantee a supply of safe, pure drinking water of the highest quality in order to prove compliance with the BSTI drinking water requirements. They were very complacent, believing they were the leading companies and brands of bottled drinking water in Bangladesh, according to their speech. However, the BSTI certification symbol and registration number are not used on the label of the water bottle sample. They don't know about BFSA or its regulations regarding labeling packaged food. So, it's a long shot to obey the rules.

4.2.2 Interview with Restaurant personnels and customer:

To gather information from restaurant personnels and customer, the researcher visited to this restaurant. It was located at Banani of Dhaka city, was well aesthetically decorated, one story building claiming as a Thai restaurant. In fact, they have Thai cook and cousins. The customers are usually of young age who gathered there to spend time solemnly and calmly. The restaurant personnels when asked about the drinking water they said that, the water is imported from Japan and a company imported it supply to them. Nothing more they know about it. Then the customers taking food there, complained about the high price of this water but they were happy having the quality of food and the ambient environment of this restaurant.

4.2.3 Interview with Regulatory Officials:

The government officials of different regulatory bodies were interviewed for their views and thoughts about increasing implementation of the policy documents and ensuring compliance among FBOs at different level. Most them argued that the enforcement should be increased exponentially. The acts or regulations should be amended and upgraded aligning with international Laws if needed. There should have action plans against all policy documents. They have given emphasis on developing skilled and efficient personnels in every government organization to ensure implementation of government policies. Registration and Licensing Authority should be only one for doing any kind of food business in Bangladesh. Now FBOs have to get trade License from City corporation along with other type of business persons/organizations; who is doing business of Rod, cement, garments etc. for example. Lots of ministries and organizations like Ministry of

Food, Ministry of Industry, Ministry of Commerce, LGRD etc. are involved giving different type of services to the Food Business persons. Actually, they have to run through different govt bodies for different legal bindings. Thus, they sometimes become confused what to do and where to go for which service? So, Food business service should be controlled under one umbrella. The govt officials opined that, every ready food seller and packaged food seller should be under monitoring and licensing control of BFSA. The respondents from govt authorities said that, Customers' awareness have immense importance and it plays a vital role in maintaining and promoting food safety. When consumers are informed, they become active participants in preventing foodborne illnesses and supporting safe food practices. Advertisement in different platforms may help to increase awareness among Customers and FBOs. Awareness and motivational spirit of FBOs should be increased for doing ethical business through seminar, symposium, workshop and training. Shortage of Resources like expert manpower, Laboratory facilities, annual budget and other logistics are the main constraint to implement holistic monitoring and enforcement to ensure food safety.

4.3 Findings

4.3.1 Lack of Awareness among FBOs:

The lack of awareness among Food Business Operators (FBOs) regarding the labeling of packaged food has significant implications for public health, regulatory compliance, and consumer trust. In this case study it was revealed that the FBOs do not know about all the concerned organizations as well as all the policy requirements or legal bindings. They only know about BSTI because they have to take Certification mark (CM) license from that organization to start any formal business.

4.3.2 Tendency of making more money Deceiving consumers:

Besides these, it was presumed that they have a tendency to deceive people pretending the product is imported from Japan. They imprinted the name in Japanese language on FOPL avoiding the obligation to write it in Bengali. Bengali name was written on the opposite sight of the label which was not visible from outside of the bottle which clearly meant their ill motive. Moreover, they claimed that the product is producing the Japanese technology and machineries. The

matter of grave concern is that, the price of the product they are selling is not in consistent with the price of other water bottle of same amount in Bangladesh. Customers know the water is imported that's why they are compelled to expense higher prices. It's a major non-conformity with consumers right protection Act 2009.

4.3.2 Lack of Comprehensiveness and coordination among Government organizations:

In Bangladesh different ministries and organizations like Ministry of Food, Ministry of Industry, Ministry of Commerce, LGRD etc. are involved giving different types of services to the Food Business Operators. The Food Business related services should not be given from more than one or two points.

4.3.3 Lack of monitoring and Enforcement and thus Implementation of relevant policies:

Insufficient resources and logistics are the prime cause to ensure monitoring. The government regulating bodies (BFSA, BSTI, DNRCP) has limited capacity for nationwide monitoring and enforcement. Policy documents (Acts, Rules, Regulations and Strategies) need to be upgraded regularly according to findings from practical inferences.

5. Conclusion and Recommendations

5.1 Recommendations:

The findings of this study indicate room for improvement in front-of-pack labeling (FOPL) of drinking water bottles, as well as a need for further improvement in awareness building program of concerned Authorities. Need to strengthen enforcement and monitoring system to ensure positive changes among FBOs. The proper labeling of packaged food not only important for regulatory compliance but also for ensuring consumers' safety, promoting informed choices, and maintaining the integrity and success of the food business ecosystem.

a) Training of FBOs could be arranged for Capacity Building and to give knowledge on labeling standards. b) Awareness Campaigns should be Conducted by government and NGOs, though seminar, symposium and publishing advertisement on Radio, Television, Billboard, Leaflet etc. c) Strengthening of

Monitoring and enforcement capacity should be Expanded by the concerned government Organizations. e) Public Awareness should be increased through Educating consumers to demand properly labeled food products. f) Field of Collaboration and cooperation should be found out with Trade Bodies like chambers of commerce to promote compliance. g) The FBOs become confused dealing so many government organizations for regulatory compliance. So regulatory consolidation is urgently needed. Food-related business approvals and licensing should be brought under one or two umbrella organizations (preferably BFSa). h) Modernization and updating existing policies to align with international best practices and to address current market realities.

5.2 Conclusion

In conclusion, improving front-of-pack labeling and strengthening awareness, enforcement, and regulatory frameworks are essential steps toward fostering a healthier and more transparent food safety environment in Bangladesh. The main purview of the government authority is to create a conducive environment for FBOs to smoothly operate their business ensuring the rights of consumers. The government and food industry must work collaboratively to ensure that consumers are empowered with accurate information, enabling them to make informed choices. At the same time, food business operators should be supported in meeting compliance with standards and legal documents through a clear, consistent, and well-enforced regulatory system. By upholding both consumer rights and industry sustainability, Bangladesh can move toward a more health-conscious and accountable food ecosystem.

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Evaluation department

117th Senior Staff Course

Individual Assignment/Report/Exercise

NAME OF THE MODULE : Public Policy Formulation

MODULE :03

Marks Obtained

DATE: 28.05.2025

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DATE:28.05.2025

Instructions to be followed

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Parimal Sarker

Roll No. 113

Effectiveness of Development Project Processing procedure of 2022 in Bangladesh

Abstract

The study was conducted to assess the effectiveness of the development project planning process procedure of 2022 in Bangladesh. It provided a comprehensive evaluation of the existing rules and procedures of development project planning in terms of institutional capacity and inter-agency coordination. The objectives of the study are to examine rules and procedures, assess institutional capacity to see how well inter-agency influences process effectiveness. The study adopted a qualitative approach. A combination of interviews, KII and content analysis was used to assess the effectiveness of the procedure for project planning. The research prepared an analytical framework comprising three independent variables i.e. rules and procedure, institutional capacity and inter-agency coordination. Process effectiveness is the dependent variable of the study. It was found that the independent variables indicated a moderate level of influence to facilitate smooth process effectiveness. The study also identified some factors, i.e. lack clarity of rules and procedures, institutional inefficiency, lack of provision of budget which created barriers for effective project processing. The study suggested for some measures like streamlining rules and procedure, enhancing capacity of institutions involved in project processing, provision of budget and inter-agency coordination for achieving effective project processing of development projects in Bangladesh.

Key Words: Development projects, institutional capacity and inter-agency coordination, effectiveness of process

1.0 Introduction:

Public policies play a very important role in realizing the developmental objectives of a country. These policies are formulated through ‘complex social and political processes. Once implemented, public policies are implemented by public sector entities’ Flynn (2017) & Asquer (2017)’. Policies for Development Projects are formulated in a centralized manner in Bangladesh. Bangladesh has achieved remarkable success in socio-economic sectors for the last decade and a half. The average growth of gross national income was more than 6.7% during this time (Budget Speech of Finance Minister, 2024-2025). It was argued that weak screening of project and appraisal prevailed at the project preparation stage. Weaknesses in project preparation, financing and execution are likely to have contributed inefficiency. (Sabbih 2017). Hamiduzzaman (2014) observes that planning stage of development projects is the most important part for successful implementation’ of development projects. In Bangladesh policy formulation is influenced by political elites, bureaucrats as well as development partners (Aminuzzaman2013). Traditional planning process undergoes a complex and time-consuming process which results delays in project formulation. Policy Agencies and ministries initiate Development Project Proposals (DPPs) and send them to the Planning Commission for appraisal. These DPPs are appraised by Project Evaluation Committee (PEC) meetings. After appraisal, the Planning Commission sends these projects to the planning

minister/State Minister if investment project is below 50 crores or to the Economic Committee of National Economic Council (ECNEC) for approval if investment project amounts 50 crores plus. As Bangladesh is moving towards achieving development milestone i.e. graduation from Least Developed Country category (LDC), the demand for financing of development projects is growing. However, the planning procedure of 2022 is followed in formulation of development projects in Bangladesh. The general objective of this study is to assess the effectiveness of development project planning procedure in respect of rules and procedures, institutional capacity and inter-agency coordination.

Background of study

In Bangladesh the Planning Ministry is mandated to formulate policy guidelines for preparation and processing of development projects. The legal basis of this mandate originates from the Allocation of Business Among Different Ministries and Divisions Rules of Business 1996 revised in 2017 (PIM2023). The planning Ministry has already formulated “Procedures for preparation, processing, approval and revision of development projects in 2022. After emergence of Bangladesh as an independent state, the Government was established Planning Commission in 1972, and external resources mobilization was entrusted to Economic Relations Division in 1975. Planning cells were established in all ministries/Divisions in 1975 to initiate development projects. Agencies/Ministries initiate development projects in line with their priority and development targets and prepare Development Project Proposals (DPPs). They follow the planning Commission guidelines and instructions. The National Economic Council (NEC) is the highest body to decide on economic affairs of the country as well as provide guidance to formulate various development plans, programs and economic policies. The Prime Minister/ Chief Adviser is the Chairperson, and all Ministers are the members of the committee. The Executive Committee of the National Economic Council (ECNEC) approves DPPs of all investment projects. The Planning commission takes inputs from Economic Relations (ERD), Finance Division, Bangladesh Bank, Internal Resources division while reviewing and recommending development project proposal to ECNEC for approval.

1.1 Problem statement

Despite some challenges, Bangladesh has made significant progress in the socio-economic sectors. Hamiduzzaman (2014) observes that traditional planning process is complex, time consuming and it ignores people’s participation. Stakeholders like agencies and ministries are not properly aware of the procedures of project processing, approval and revision process (Ahuja et.al.,1994). Lack of expertise in formulation of development project proposals (DPP), absence of adequate training, lack of clarity of standard operating procedure, institutional efficiency are the main barriers to formulation of development projects (Mozumder2019). It was argued that weak project screening and appraisal at the preparation stage create delays in project formulation. Weaknesses in project preparation, financing and execution also lead to inefficiencies (Sabbih2017). Sometimes project formulation depends on the commitment and persuasion of

development partners. Aminuzzaman (2013) states factors like institutional capacity, influence of development partners and politics influence policy formulation and implementation in Bangladesh. Mohosin (2024) and Shamima (2024) argue that policy implementation is hampered by constraints like reluctance of implementers, political influence, lack of awareness of policy process, inadequate monitoring and lack of enforcement of laws.

1.2 Objective of the study

This study focuses on the effectiveness of development project processing in Bangladesh. The main objectives of the study are:

- 1) To examine existing development project processing in Bangladesh.
- 2) To assess the institutional capacity of project processing?
- 3) To what extent does inter-agency coordination facilitate effectiveness of project processing?

1.3 Significance of the study

This study was conducted to examine the existing processes and rules to process development projects to see whether the existing procedure leads to process effectiveness. Most of the studies were conducted both from policy formulation and policy implementation perspective. Assessing effectiveness of development project processing has not been conducted by the researchers. Hence this study contributes to the academic domain of policy evaluation. It will help the policy makers to understand the existing problems as well as identify factors affecting process effectiveness. Therefore, this study can be useful to policy makers, policy practitioners, and researchers.

2.0 Literature Review

Public policy evaluation helps to assess the effectiveness of policy in terms of its perceived intentions and results. There was no specific study on the effectiveness of development project processing in Bangladesh. Most studies were conducted from an institutional perspective. Hence this study was dedicated to assessing the effectiveness of the development project processing. Mozumder (2019) focuses on public policy analysis in terms of formulation, implementation and evaluation. He states that 'evaluation facilitates smart policy implementation' through assessing degree of compliance, identifying obstacles to implementation and factors leading to 'departure from policy objectives.' Evaluation also provides reliable information about the 'level of policy efficiency and effectiveness.' He also discusses policy evaluation techniques, and the engagement of actors engaged in policy formulation and implementation.

Gerston (20210) focuses his analysis on public policy making Process and principles. He focuses on public policy agenda, policy makers roles and responsibilities, policy implementation and policy evaluation. He states that policy evaluation measures whether policy objectives are achieved within the timeframe, whether institutions with responsibility of formulation and approval of projects. Evaluation of policy also leads to policy change. (Gerston.N.L. 2010)

Hamiduzzaman, M. (2014) conducts a study on planning and managing of developing projects in Bangladesh: Future Challenges for Government and Private organizations. He identifies institutional inefficiency and challenges in planning and managing procedures of development projects. He mentions instruments and mechanisms of project planning process, identifies challenges and finally suggests measures for short term, medium term and long-term measures for improving planning process.

Follett's () theory of coordination included four principles of coordination such as coordination by direct contact, coordination in the early stages, coordination as reciprocal and coordination as continuing process.

Jabbar, A.M(2024) conducted a study on delays in local government projects in Bangladesh and its causes and impacts. He argued that lack of trained personnel, absence of clarity of process create delays in project formulation. He also focused on compliance and suggested that compliance with planning procedures could ensure project activities were aligned with development projects and sectoral goals.

Mintzberg (1979) advocated five principles of effective coordination i.e. mutual adjustment, direct supervision, work processes, outputs and standard skills and knowledge.

Scott (2001) presented the theory of institutions which included regulative pillars, normative and cultural-cognitive aspects to support institutions for achieving institutional outcome. Regulative pillars refer to rules and regulations, normative refers to norms and values of professionals, cultural cognitive refers to shared beliefs and understanding and this relates to inter-agency coordination.

World Bank (2011) mentions that many projects are placed without conducting feasibility studies because of the absence of clear and detailed guidelines. Inadequate training and weak capacity of officials engaged in policy appraisal and screening lead to poor quality of projects.

3.0 Methodology

A qualitative method was applied in this study. This approach helps to examine and understand the opinions of the respondents on social problems.

3.1 Data Collection

A combination of an interview with a semi-structured questionnaire, KII and content analysis was used in the research. A total of 25 respondents were interviewed. The respondents were from the Planning, Economic Relations Division, Finance Division, Agencies, Implementation Monitoring and Evaluation Division, Agencies. 3 respondents were taken for KII. Interview is a systematic method by which a person can bring out required information and data for research proposals.

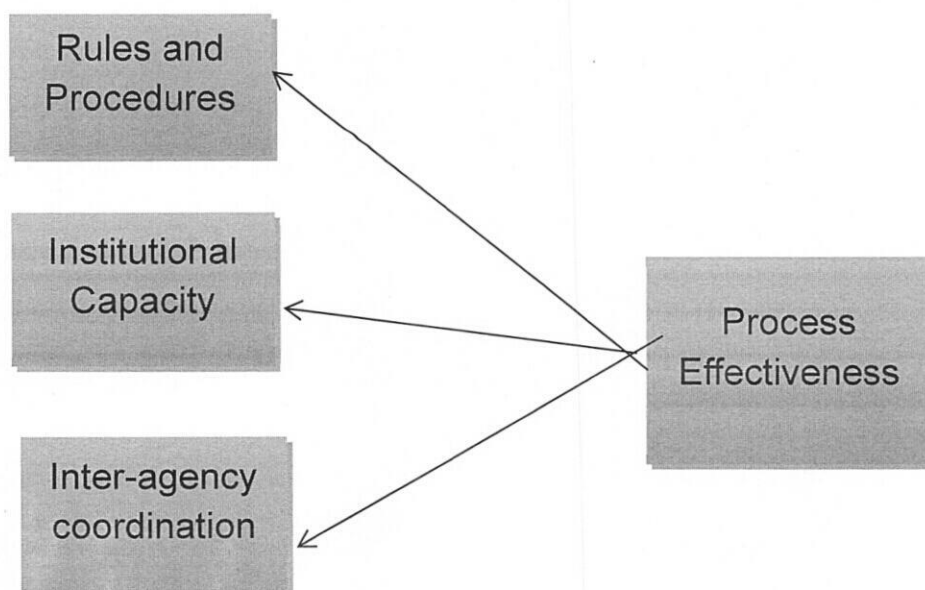
Content analysis was based on reviewing various published and unpublished books, journals, research works, articles, government policy papers, rules, regulations, acts and relevant documents, newspapers and internet sources.

Theoretical and Analytical Framework:

The analytical framework was developed from Mintzberg and Follett's theory of coordination as well as Scott's theory of institutions, literature study and content analysis. Inter-agency coordination and rules and procedure were adopted from Mintzberg's theory where mutual adjustment and standard work processes were also identified for effective coordination mechanism. In terms of capacity Mintzberg also focused on standardization of skills and knowledge. Scott's theory of institutions presented three key principles, i.e. regulative pillar, normative and cultural cognitive pillar. Rules and procedure come from the regulation pillar, and this influenced positively process effectiveness. The cultural pillar refers to inter-agency coordination and this principle facilitated effective planning process.

The following analytical framework was used to explain relationship between dependent variable and independent variables for achieving better process outcomes in terms of development project processing in Bangladesh. Process effectiveness is dependent variable and rules and procedures, capacity of institutions and inter-agency coordination are independent variables.

Figure-1: Analytical Framework



3.1 Data Collection

Both primary and secondary sources of data were used. **Primary sources** of data are firsthand data collected from study area. Primary data was collected through interviews as well as Key Informant Interview methods.

Secondary sources of data were collected from different relevant publications, dissertations, books, journal articles, reports, government publications, rules, regulations and acts, websites etc.

3.2 Data Analysis

The data collected data has been analyzed using simple mathematical tools like tabulation, percentage, and frequency. This study also used some charts and graphs to present data in a graphic manner. As regards KII, the principle of authenticity and objectivity was maintained.

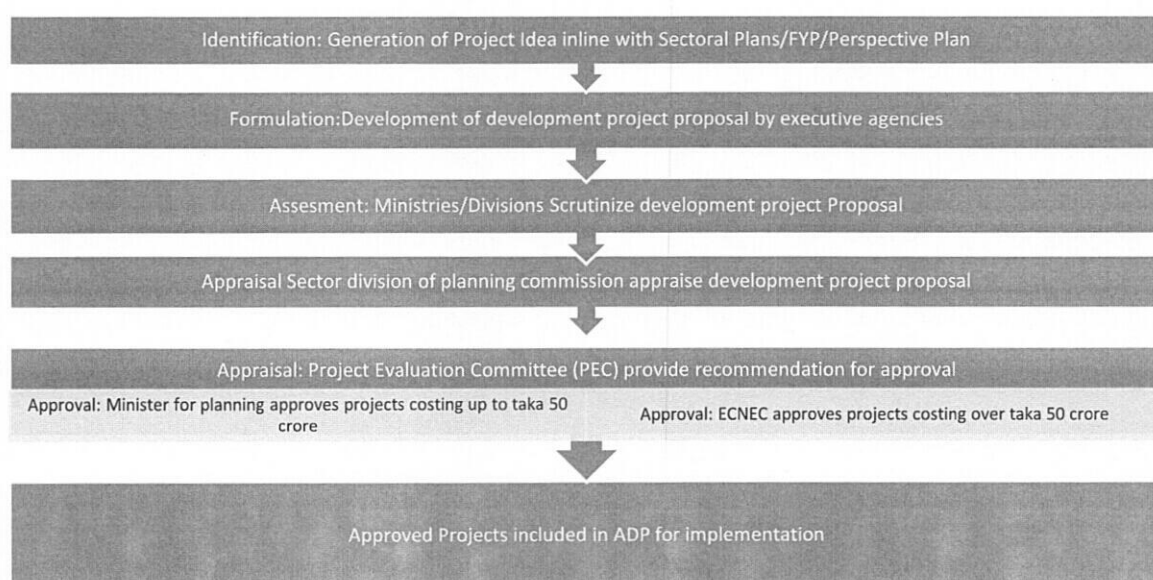
3.3 Limitation

This study experienced some limitations like time constraints and budget constraints. The respondents might not respond spontaneously to disclose the real situation. They might think that it might offend their supervisors and senior officials.

4. 0 Data Analysis

This study was conducted to assess the effectiveness of the Procedure for preparation, processing, approval and revision of development projects in the Public sector 2022. The following procedure is maintained for processing development projects in Bangladesh.

Figure 2: Overall procedure for project planning



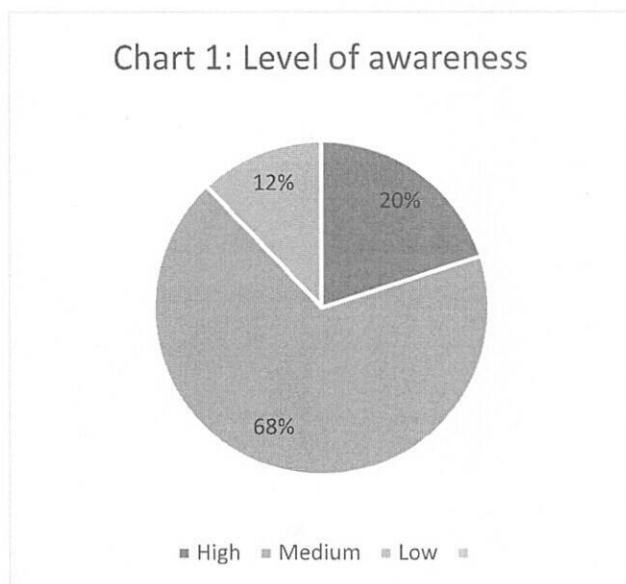
Source: Public Investment Management Guidelines 2023

4.0 Rules and procedures

4.1.1 Awareness of rules and procedure

The rules and procedures were identified from the information of using interview of 25 respondents, content analysis and discussion with Key Informant Interviewees. The key rules and procedures included are Procedure for preparation, processing, approval and revision of development projects in the Public sector 2022, Allocation of Business among different ministries and division 1996 (revised in 2023), the public Money and Budget Management Act 2009, the Procurement Act 2006 and Public Procurement Rules 2008. The study also found that the officials engaged in project planning process were moderately aware of the existing rules and procedure for development project planning, revision and approval. Panday (2006) argued that rules should be clearly specified, and everybody should be aware of the rules. Van Meter and Van Horn (1975) argued that people engaged in project formulation and implementation required to have a clear understanding of the program standards and objectives.

Opinions of the respondents are reflected in the following chart:



The respondents revealed that the majority (68%) were moderately aware of the existing rules and procedures. Only 20% were aware of the existing rules and procedure. 12% were somewhat aware of the rules and procedure for development project processing. The opinion suggests for undertaking some orientation program regarding rules and procedure in processing development projects.

4.1.2 Appropriateness of the rules and procedure

The study asked the respondents to express their opinions about the appropriateness of the existing rules and procedure in processing development projects effectively. Regarding acceptability, majority of respondents (56%) replied in the affirmative whereas 44% replied in the negative. Mujeri and Alam (2011) stated that current practice of processing and implementation is not effective in meeting demands and challenges in the changing context.

Table 1: Appropriateness of the existing rules and procedure (In percentage)

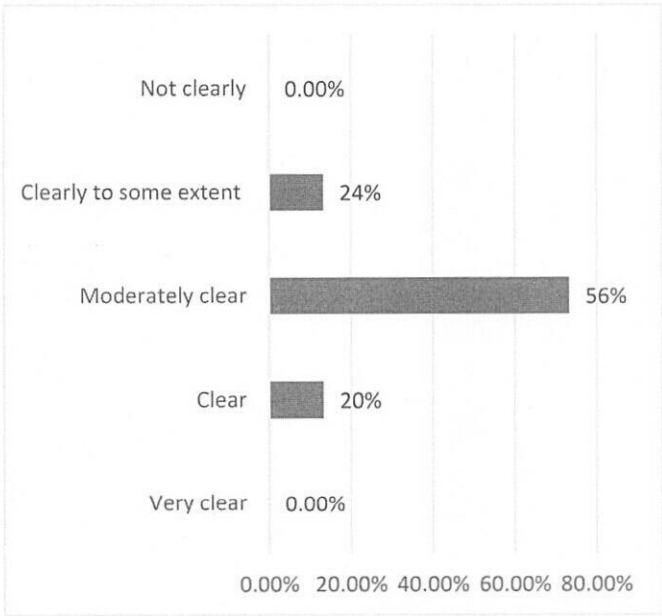
Options	n-25	
Yes	14	56%
No	11	44%

When asked, the respondents opined that the existing rules and procedures require to be reviewed and clearly understandable as well as flexible to expedite project processing.

4.1.3 Clarity of rules and procedure

The study revealed that majority of the respondents had a moderate level of clarity of the existing rules and procedure specified and stipulated in the procedure of 2022. They were given five options such as very clearly, clearly, moderately clear, clear to some extent and not clearly.

Figure 3: Clarity of Rules and Procedure



The figure shows that 56% respondent expressed that they have a moderately clear understanding about the rules and procedure of development project processing. Only 20% expressed that they had a clear understanding of rules and procedures. It indicates that the rules and procedures need to be reviewed and made flexible for the officials engaged in project processing. Pandey (2009) also supports the view that structured rules facilitate the process of coordination of development projects and management.

Moderate level of understanding is not adequate to facilitate smooth process effectiveness. Mohsin and Shamima (2024) also support the view that lack of awareness of rules creates barriers to effective project processing.

4.1.4 Required time for processing development projects

The study found that it took one year and more to process development projects under the existing rules and procedure. The majority (64%) opined that it required one year and more from initiation to project approval. Only 20% replied that it took 9 months for processing a development project

in Bangladesh. About 12% opined that it took 6 months to process a project. This indicates that the project approval time in Bangladesh is time consuming. Hamiduzzaman (2014) also supports this view that it takes much time to process a development project in Bangladesh. The figure 4 shows required time for development project processing in Bangladesh.

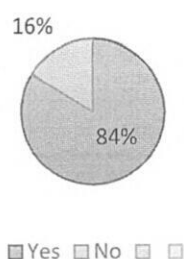
Figure 4: Required time for processing development projects



4.1.5 Penalty provision for not complying with rules

The respondents were asked if the relevant authority took penalty measures in case of not complying with rules and procedure. Majority of the respondents (84%) opined that the authority did not take any penalty measures for non-compliance. Only 16% of respondents revealed that they were asked informally not to do it again. This indicates that there is an absence of accountability in terms of complying with the existing rules and procedures of development project processing.

Chart 2 : Penalty provision



Majority of the respondents (84%) opined that the authority did not take any penalty measures for non-compliance. Only 16% of respondents revealed that they were asked informally not to do it again. This suggests that the procedure needs to be reviewed.

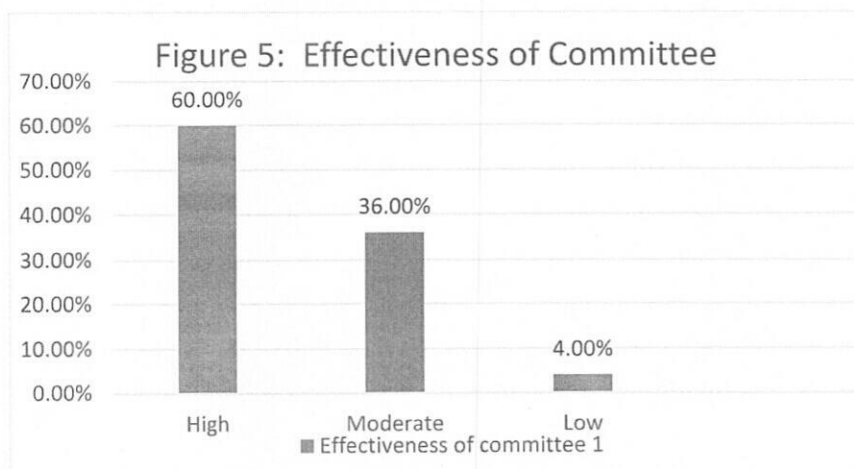
4.2.0 Institutional Capacity

This study assessed institutional capacity to examine how well it had contributed to achieving effective project processing in Bangladesh. Institutional capacity was examined from the perspective of expertise of officials, resources and committee system in development project processing. It was found from the interview and content study that agencies, Ministry/Division, Planning commission and Finance Division are the key institutions that are engaged in project processing of development projects.

4.2.2 Role of Committee in project processing

Under the existing rule and procedure *Committee system* is an important institutional process to affect process effectiveness. This study shows that majority of respondents (60%) expressed that committee played a high level of contribution in influencing effective project processing in Bangladesh. On the other hand, only 36% revealed that the committee contributed moderately to facilitate effective project processing. Only 4% respondents opined that committee had a low level of influence in facilitating effective project processing. This suggests that committee system is required and needs to be functional for improving project processing.

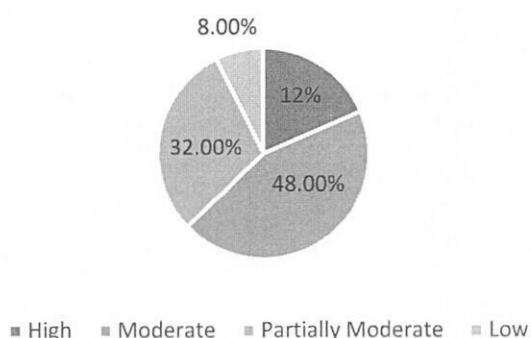
Figure 5: Role of Committee for effective project processing



5.2.3 Expertise of agencies in formulation of development projects

The agencies play a key role in initiating development projects and formulating development project proposal (DPP) aligned with priorities and targets of their ministry. Regarding expertise of agencies in formulation of development projects, 48% respondents stated that agencies had a moderate level of expertise in development project processing. It was argued that institutional inefficiencies and challenges hampered planning and managing process of development projects (Hamiduzzaman2014). The study revealed that their opinion demands for undertaking capacity enhancement program for them.

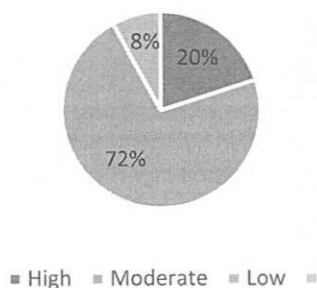
Figure 6: Expertise in Project formulation



The figure 6 below shows that only 4% respondents have moderate level of expertise in development project processing in Bangladesh. On the other hand, only 32% opined that they have a partially moderate level of expertise in project processing. About 12% revealed that they had a high level of expertise in project processing. Only 8% opined that they had low level of expertise in development project processing.

5.2.4 Expertise of Planning Commission in Project appraisal

Expertise of planning Commission



This study revealed that 72% of respondents expressed that the Planning Commission demonstrated a moderate level of expertise in appraising development project proposals. On the other hand, 20% of respondents opined that Planning Commission showed a high level of expertise in development project appraisal. Only 8% mentioned that the Planning Commission showed a low level of expertise in development project proposal appraisal.

5.2.5 Resources

The institutions were assessed from the provision of resources for capacity development. The respondents opined those institutions engaged in development project planning lacked adequate

resources for conducting feasibility study, developing project proposals and enhancing capacity building programs. About 84% of respondents expressed that these institutions did not have adequate resources i.e. budget for enhancing capacity building programs for their officials. During discussion it was found that National Academy for Planning and Development under Ministry of Public Administration provides some training on development project preparation and capacity development. The study indicates that training is required for their capacity enhancement in project processing.

Table 2: Provision of resources i.e. budget

Option	percentage
Yes	16%
No	84%

Source: field data

5.2.6 Timely approval of development projects

The respondents were asked whether they got timely appraisal as well as approval of development projects. The majority (76%) of the respondents opined that project appraisal and approval were not done timely. Only 24% of respondents replied that they received timely appraisal and approval. Hamiduzzaman (2014) supported the view that project processing was time consuming and ignores stakeholder participation.

Table 3: Timely approval

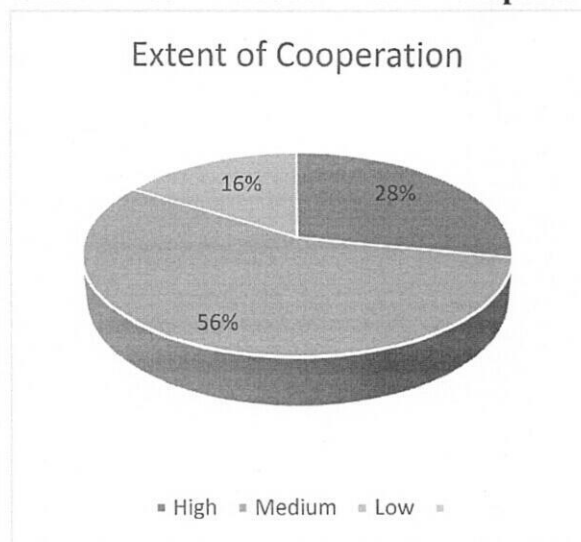
Option	percentage
Yes	24%
No	76%

5.3.0 Inter-agency Coordination

This study adopted inter-agency coordination as an independent variable to explain the relationship between inter-agency coordination and effective project processing. Inter-agency coordination was assessed from the perspective of cooperation, mutual adjustment, direct contact and informal communication. It was found from the interview and content study that *direct contact*, *mutual respect* and *informal communication* are frequently used for inter-agency coordination.

5.3.1 Existing level of Cooperation

Chart 3: Level of cooperation



About 56% respondents revealed that there existed a moderate level of cooperation between agencies and planning commission. 28% of respondents expressed that there existed a high level of cooperation. Only 16% of respondents claimed that there prevailed a low level of cooperation between agencies and planning commission.

Source: field data

The study revealed that there existed a moderate level of cooperation between agencies and Planning Commission in Bangladesh.

5.3.2 Direct Contact

Most of the respondents opined that *direct contact* plays an important role in facilitating inter-agency coordination.

About 72% of respondents opined that direct contact had a high level of influence in facilitating inter-agency coordination. Sarker (2014) also supports the view that direct contact significantly facilitates interagency coordination. Only 20% of respondents expressed that it exerted a medium level of influence in inter-agency coordination. Their opinion is reflected in the following table:

Table 4: Influence of direct Contact

Option	Percentage
High	72% (18)
Medium	20% (5)
Low	8% (2)

5.3.3 Mutual Respect

Table 9: Mutual Respect

About 64% of respondents opined that mutual respect exerted a high level of influence in facilitating inter-agency coordination. Only 24% of respondents expressed that it exerted a medium level of influence in inter-agency coordination. Mintzberg (1979) also emphasizes the need for mutual adjustment to achieve effective coordination. Their opinion is reflected in the following table:

Table 5: Mutual respect

Option	Percentage
High	64% (16)
Medium	24% (6)
Low	12% (3)

5.3.4 Informal Communication

About 68% of respondents opined that mutual respect exerted a high level of influence in affecting inter-agency coordination. Only 20% of respondents expressed that it exerted a medium level of influence in inter-agency coordination. Their opinion is reflected in the following table:

Table 6: Informal Communication

Option	Percentage
High	68% (17)
Medium	20% (5)
Low	12% (3)

5.3.5 Effect of independent variables on process effectiveness

This study assessed how the independent variables i.e. rules, and procedure, institutional capacity and inter-agency coordination facilitated smooth project processing of development projects.

Effect of rules and procedure on process effectiveness

The respondents were asked to assess the degree of influence of rules and procedures on process effectiveness. Majority of respondents (44%) opined those rules and procedures moderately influenced process effectiveness. About 32% of respondents expressed that these rules and procedure moderately influenced project processing of development projects. Only 24% mentioned that rules and procedure had a low level of influence on process effectiveness.

Table 7: Effect of rules and procedure

option	Percentage
High	8(32%)
Medium	11(44%)
Low	6(24%)

5.3.6 Effect of institutional capacity on process effectiveness

The study found that capacity of institutions highly influenced effective processing of development projects. About 52% of respondents revealed that institutional capacity exerted a high level of effect on process effectiveness. On the other hand, 32% of respondents expressed that capacity of institutions moderately influenced effective project processing. Only 16% expressed that institutional capacity had a low level of influence in process effectiveness.

Table 8: Effect of institutional capacity on process effectiveness

option	Percentage
High	13(52%)
Medium	8(32%)
Low	4(16%)

5.3.7 Effect of Inter-agency coordination on process effectiveness**Table 13: Effect of Inter-agency coordination on process effectiveness**

It was found from the study that inter-agency coordination highly influenced effective processing of development projects. About 48% of respondents revealed that inter-agency coordination exerted a high level of effect on process effectiveness. Inter-agency cooperation facilitates interorganizational relations and information sharing works as basis of coordination and coherence (Bouckaert, G and Peters, G 2010). On the other hand, 32% of respondents claimed that inter-agency coordination moderately influenced effective project processing. Only 16% expressed that institutional capacity had a low level of influence process effectiveness.

Their opinions are reflected in the table:

Table 9: Effect of Inter-agency coordination

Option	Percentage
High	12(48%)
Medium	8(32%)
Low	5(20%)

5.3.8 Analysis of the opinions of Key Informant Interviewee (KII)

The study also undertook opinions of 03 experts which included senior officials like Secretary, Additional Secretary and member of Planning Commission. They opined that for effective project processing the existing rules and procedure need to be streamlined because these procedures were not clearly specified, flexibility was not maintained and timeline for different stages of approval procedures were not realistic. They also opined that some factors which hinder smooth project processing, and these factors include lack of appropriate rules and procedure, weak capacity of institutions, absence of strategic thinking in project design and planning, inadequate resources and lack of monitoring and accountability mechanism.

One respected member of the Planning Commission expressed that *“lack of capacity of agencies in project formulation, low priority and strategic thinking in DPP preparation and sometimes pressure from higher authority create barriers for effective processing of development projects”*.

Another KII opined that *“some factors like procedural flaws, lack of technical capacity, flaws in DPP and absence of due diligence in project design and planning lead to poor quality of DPP and this ultimately results in delay of project approval.”*

Another KII suggested that *“streamlining the existing procedure of development project processing, provision of budget for Feasibility study and project preparation and rigorous hands-on training for the officials of institutions involved in project processing should be undertaken for effective project processing.”* The opinions also support the findings of the study to a great extent.

5.3.9 Linking with theories and analytical framework.

The study revealed that capacity of institutions in terms of skills and knowledge influenced positively in delivering effective project processing. It was also found that interagency coordination also moderately influenced institutions for approval of development projects in a better way. *Standards work processes* means procedure for planning also facilitated smooth project processing in Bangladesh. The results of the study have moderate level of influence to the objectives of the study. It was found from the study that the three independent variables, i.e. rules and procedure, institutional capacity and inter-agency coordination are critical factors influencing process effectiveness.

5.4: Findings /Results and Discussion

The study was conducted to assess the effectiveness of the development project processing procedure “Procedures for preparation, processing, approval and revision of development projects in 2022. Three independent variables, i.e. rules and procedure, institutional capacity and inter-agency cooperation were taken to assess how well these variables affect effective project processing.

It was found from the study that the existing rules and procedure are moderately clarified and appropriate. Most of the respondents observed that one year or more was required from initiation

to approval of a project. The projects were not appraised by the stipulated time by the Project Evaluation committee of Planning Commission. The respondents also had a moderate level of awareness of the rules and procedure. The rules and procedure have moderately influenced effective development project processing.

The study also revealed that there existed a moderate level of institutional capacity in terms of development project processing and approval. Agencies engaged in project preparation and approval lacked strong technical capacity to prepare quality development project proposal. Most of the respondents opined that it took one year and more to process a development project from initiation to approval. The study also revealed that the timeline for approval of development projects was not followed properly. Planning Commission officials required training on technical aspects to appraise complex and megaprojects. Agency officials also had a moderate level of expertise in terms of appraisal of development projects.

The study identified that there had been a moderate level of inter-agency coordination among the agencies involved in development project processing and approval. This inter-agency coordination was assessed from the perspective of cooperation, mutual respect and informal communication. It was found that the agencies received a more than moderate level of cooperation from the Planning Commission in terms of project appraisal and recommendation for approval. direct contact, mutual respect and informal communication were frequently followed to facilitate inter-agency coordination which ultimately influenced effective process effectiveness.

The study revealed that clarity of rules and procedure, strong capacity of institutions in terms of project design and planning, provision of resources and inter-agency coordination could be the critical factors for achieving effective processing of development projects in Bangladesh.

5.4: Policy recommendations and Conclusions

This study was conducted to assess the effectiveness of the development project processing procedure “Procedures for preparation, processing, approval and revision of development projects in 2022.” The results showed that some critical factors like clarity of rules and procedure, strong institutional capacity and inter-agency coordination influenced positively effective project processing of development projects.

Some policy recommendations can be undertaken to facilitate smooth project processing of development projects in Bangladesh.

There should be clear streamlining of the existing procedures for efficient and quality project preparation of development projects. The capacity of the institutions involved in development project processing need to be enhanced through provision of training on development project design and planning. The effective functioning of the committees, particularly Project scrutiny Committee, and the Project Evaluation Committee need to be provided with appropriate training on technical, complex and mega project analysis. There should be provision for adequate

resources, i.e. budget and staff for undertaking feasibility study and preparation of quality development project proposal. Proper accountability and compliance mechanism should be developed by the Planning Commission for effective project processing of development projects in Bangladesh.

Conclusion

In fine, it can be stated that this study identified some critical factors which hinder the smooth processing of development projects in Bangladesh. These factors include lack of capacity of institutions, systemic hurdles in project approval procedure, inadequate budget for feasibility and project preparation and lack of accountability mechanism create delays in project processing. The study showed that if proper initiatives like streamlining the project planning procedure, enhancing capacity of institutions and people involved in project planning and provision of budget for feasibility study and project design are undertaken, effective processing of development projects can be achieved. This study can be useful to the body of literature on development project processing in Bangladesh. There is very limited study on the effectiveness of the development project processing procedure, this study can be useful to researchers, policy planners, policy practitioners, policy implementers and The study makes room for further research. An in-depth assessment of the public investment project guidelines and planning perspective can be undertaken for further research.

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EXPLORING THE CONTRIBUTING FACTORS FOR NET-METERING SYSTEM OF RENEWABLE ENERGY: A POLICY INTERVENTION

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Instructions to be followed

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1. Please write your Name, Roll No. etc. at the specified space otherwise may cause cancellation of your answer script.
2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Dr. Mohammed Amjed Hossain

Roll No. 114



117TH SENIOR STAFF COURSE

(20 April- 03 June 2025)

Policy Evaluation Paper

EXPLORING THE CONTRIBUTING FACTORS FOR NET-METERING SYSTEM OF RENEWABLE ENERGY: A POLICY INTERVENTION

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[Submitted to meet the requirements of
Module 3: Research and Policy Evaluation]

Submission Date: 28 May, 2025



BANGLADESH PUBLIC ADMINISTRATION TRAINING CENTRE

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Exploring the Contributing Factors for Net-Metering System of Renewable Energy: A Policy Intervention

Abstract

This study examines the policy, technical, and institutional barriers impeding the widespread adoption of the Net Energy Metering (NEM) system in Bangladesh, a country with ambitious renewable energy targets but limited implementation success. Despite achieving near-universal electrification, renewables constitute less than 5% of the national energy mix, with minimal contributions from net-metered rooftop solar installations. Introduced in 2017 and revised in 2019, the NEM framework has encountered challenges such as restrictive policies, insufficient utility cooperation, and low consumer awareness. Using a mixed-methods approach, the study gathered data through surveys, key informant interviews, and focus group discussions across three regions, engaging stakeholders including prosumers, utility officials, and policymakers. Findings indicate that high upfront costs, cumbersome application processes, grid instability, and a lack of financial incentives significantly hinder NEM adoption. Utilities often view NEM as a revenue threat, leading to passive resistance, while policy inconsistencies in tariff calculations and metering standards further complicate implementation. The study recommends harmonizing regulatory frameworks, strengthening financial and technical support, incentivizing utilities, and launching nationwide awareness campaigns. It also emphasizes the need for inclusivity to ensure low-income and marginalized groups benefit from NEM opportunities. By implementing targeted reforms and fostering institutional alignment, Bangladesh can enhance energy security, reduce carbon emissions, and advance its renewable energy objectives. This research offers actionable insights for policymakers and stakeholders aiming to scale up decentralized clean energy systems through effective net-metering implementation.

Key-Words: Net Energy Metering (NEM), Renewable Energy, Policy Intervention, Prosumers, Grid Integration, Financial Incentives, Technical Barriers, Utility Companies, Awareness Campaigns, Energy Transition

Exploring the Contributing Factors for Net-Metering System of Renewable Energy: A Policy Intervention

INTRODUCTION

1.0 Introduction

The introduction section of this paper outlines the background and importance of net-metering in supporting renewable energy in Bangladesh. It establishes the groundwork for the research by outlining its aims, key questions, and reasons for undertaking the study.

1.1 Background

Bangladesh has witnessed remarkable advancements in electrification over the past decade, nearly achieving universal electricity access in grid-connected areas. According to the Government of Bangladesh (GoB), as of 2025, the country has maintained minimal load shedding even during peak demand periods such as Ramadan and the irrigation season (GoB, 2025). However, this progress is heavily reliant on fossil fuel-based energy sources. To address environmental concerns and meet long-term sustainability goals, the country introduced its Renewable Energy Policy in 2008, which set a target for renewables to contribute 10% of total electricity generation by 2020. Despite this, the contribution of renewable energy remains a modest 4.5%, which includes off-grid solutions like solar home systems (SREDA, 2025a).

In light of these challenges, Net Energy Metering (NEM) has emerged as a promising mechanism to integrate renewable energy—especially solar photovoltaics (PV)—into the national grid. Net metering allows consumers who generate renewable energy to export their surplus electricity back to the grid in exchange for credits, effectively lowering their utility bills. This dual role of consumers as "prosumers" has significant implications for promoting distributed renewable energy generation and enhancing energy security. (Guidelines). Globally, net metering systems have proven instrumental in driving clean energy adoption. As of 2022, more than 66 countries, including the United States, Canada, Germany, Australia, and India, have adopted net metering policies to various extents (Hosen et al., 2022). Among South Asian countries, Bangladesh joined this trend by launching its first net-metered connection in February 2017, followed by the release of the Net Metering Guidelines in July 2018, later revised in November 2019 (Pavel M, 2020).

According to the Sustainable and Renewable Energy Development Authority (SREDA), by May 2025, Bangladesh had installed 2,709 rooftop solar systems under the NEM policy, totaling 117.843 MW of capacity (SREDA, 2025b, 2025c). However, this growth has not met expectations, and adoption remains limited, raising questions about the effectiveness of current policies and implementation frameworks.

1.2 Problem Statement

Although introduced with high expectations, the Net Metering System (NEM) in Bangladesh has seen limited adoption due to a combination of regulatory, technical, and institutional challenges. Key barriers include restrictive policy provisions—such as the 70% cap on AC output relative to sanctioned load, low consumer awareness, inadequate incentives for utility companies, and poor coordination among implementing agencies (BSW-Solar, 2018). Utility providers often view net metering as a threat to revenue, leading to lukewarm support for its expansion. Technical issues like grid integration difficulties and outdated metering infrastructure further impede progress. Additionally, inconsistencies in policy implementation and lack of alignment with national energy strategies contribute to the underperformance of a system that holds significant promise for Bangladesh's clean energy transition (Saqib et al., 2021). Therefore, this study surveyed and examined to identify the factors hindering the progress of the system in Bangladesh.

1.3 Objective of the Study

The primary objective of this study is:

To identify key factors that might be hindering the adoption of the Net-Metering System in Bangladesh.

Research Questions

To achieve the stated objective, the study will address the following research questions:

1. What are the possible causes hindering the advancement of the net metering system in Bangladesh?
2. Are there any inconsistencies or inadequacies in existing net metering policies? If so, what are they?
3. What policy interventions or strategic measures can be implemented to promote wider adoption of net metering in the country?

1.4 Rationale of the Study

Considering Bangladesh's increasing energy needs and vulnerability to climate change, it is essential to expedite the move towards clean energy alternatives. The Net Metering System presents an opportunity to enable consumers, reduce carbon emissions, and diversify the energy portfolio. Nonetheless, various challenges regarding policy, technical factors, and institutional frameworks need to be tackled for net metering to achieve its maximum effectiveness. This study explores the obstacles that impede its successful execution, including the lack of policy alignment, regulatory limitations, perceptions of stakeholders, and operational inefficiencies. The results will offer important insights for policymakers and energy professionals, assisting in pinpointing gaps and recommending specific measures to enhance the accessibility and benefits of net metering for all involved parties.

LITERATURE REVIEW

2.0 Introduction

This literature review explores the conceptual, technical, economic, and regulatory foundations of net metering (NEM), with a particular focus on global best practices and their relevance to Bangladesh. It synthesizes existing studies on policy effectiveness, grid integration, consumer behavior, and financial models while identifying gaps in empirical research. The review aims to contextualize Bangladesh's NEM journey within broader international experiences and highlight key challenges and opportunities for more inclusive and scalable implementation.

2.1 Concept of Net Metering System

Net metering allows consumers who generate their own electricity using solar photovoltaic (PV) systems to feed excess electricity back into the grid in exchange for credits (James Lee & Lee, 2015). These credits offset future electricity bills, making renewable energy investments more economically attractive. According to the U.S. Department of Energy, NEM has played a crucial role in accelerating the uptake of residential solar PV in over 40 states in the U.S. (SEIA, 2025), with similar trends observable in Australia, the EU, India, and parts of Southeast Asia. (Hosen et al., 2022) emphasize that net metering is not merely a technical arrangement but a policy instrument that necessitates strategic regulatory alignment, incentive design, and stakeholder coordination. Their findings from South Asian countries suggest that the successful deployment of net metering systems is closely linked to tariff structures, regulatory transparency, and the willingness of utility providers to support distributed generation.

2.2 Global Perspectives and Takeaways for Bangladesh

Countries with advanced NEM systems offer instructive lessons. For instance, Germany's 'Energiewende' model has integrated net metering into broader energy transition policies, offering feed-in tariffs and tax credits to small-scale producers (BSW-Solar, 2018). In India, as per the Ministry of New and Renewable Energy (MNRE, 2024), net metering was scaled through state-specific regulations and aggressive solar rooftop schemes, resulting in the installation of over 2.7 GW of rooftop solar capacity by 2023. Sri Lanka's 'Soorya Bala Sangramaya' initiative, launched in 2016, closely resembles Bangladesh's trajectory. It offers different metering options (net metering, net billing, and net plus), providing flexibility to consumers and encouraging participation. According to a report by the Asian Development Bank, (2023), the diversity of offerings and integration with financial subsidies were critical to its relative success. Bangladesh initiated its net metering system in 2017 and issued the first guidelines in 2018. These were revised in 2019 to address technical capacity limitations and streamline grid integration (Pavel M, 2020). As of May 2025, 2,709 rooftop solar systems had been installed, with a combined capacity of 117.843 MW (SREDA, 2025b). Despite this progress, adoption remains modest compared to national renewable energy targets.

2.3 Economic and Technical Feasibility

The economic benefits of net metering are substantial. (Mahmud et al., 2024) mentioned that residential net metering can reduce electricity bills by up to 30%, improving payback periods and return on investment. In Bangladesh, (Saqib et al., 2021) conducted a cost-benefit analysis of rooftop solar installations in urban households, finding a payback period of 4–6 years under current tariff structures. However, economic feasibility alone is insufficient. Grid compatibility, inverter specifications, system sizing, and maintenance are technical considerations that significantly affect the performance and reliability of net-metered systems (A K M Alamgir, 2024; Hossain et al., 2019). In Bangladesh, the 70% limit on output AC capacity (relative to sanctioned load) under the revised 2019 guideline has been cited as a barrier to scaling larger installations, especially in commercial and industrial sectors. Grid stability is another concern. The influx of decentralized solar energy into a traditionally centralized grid poses voltage fluctuation risks. Studies by the SAARC Energy Centre (SEC, 2021) suggest that distribution utilities must invest in smart inverters, voltage regulators, and demand-side management systems to accommodate NEM effectively.

2.4 Policy and Regulatory Framework in Bangladesh

The Renewable Energy Policy 2008 established the foundation for Net Energy Metering (NEM) in Bangladesh by aiming for a 10% share of renewable energy by 2020—an objective that has yet to be achieved, with only 4.5% realized by 2025 (SREDA, 2025b). Although NEM was officially launched in 2017, its regulatory framework continues to face numerous inconsistencies and uncertainties. For instance, the uneven application across utility providers such as REB, NESCO, and BPDB generates confusion among potential prosumers. Interviews conducted by (Habib et al., 2024; Mahmud et al., 2024) with policymakers and solar business owners indicate that variations in netting processes, documentation requirements, and metering equipment standards discourage participation. Furthermore, the financial disinterest of utility companies poses a significant barrier. Utilities experience revenue loss from net-metered customers while still incurring grid maintenance costs. Without government-supported incentive programs or cost-recovery solutions, utilities have little incentive to actively support NEM (BSW-Solar, 2018; SEC, 2021).

2.5 Consumer Awareness and Behavioral Barriers

Awareness is a critical component of policy adoption. (M. Hasan, 2023) found that nearly 60% of household respondents were unaware of the net metering option. Among those aware, over half perceived the process as bureaucratically cumbersome or financially nonviable. Inadequate technical knowledge among local contractors and electricians also hinders quality installations and after-sales service, which are vital for system performance and consumer satisfaction. This gap in human resource capacity was highlighted in a report by UNDP, 2021, which recommended vocational training programs for solar technicians to improve service quality and boost consumer confidence.

2.6 Incentives and Funding Structures

The availability of low-cost financing is a key enabler of net metering systems. In India and Sri Lanka, concessional loans and interest subsidies have been pivotal. In contrast, Bangladesh's financing ecosystem for residential solar systems remains underdeveloped. IDCOL has historically played a central role in financing off-grid solar home systems, but its role in supporting grid-tied systems under NEM is limited. According to the Energy and Power Magazine (Pavel M, 2020), prospective prosumers face difficulties in securing loans for rooftop PV installations due to the lack of collateral and unclear return prospects. Recent recommendations from the Bangladesh Solar and Renewable Energy Association (BSREA) include establishing a Solar Financing Facility supported by the Bangladesh Bank, offering interest buy-down schemes for rooftop solar investments, and mandating commercial banks to disburse green loans under their CSR obligations (Alam, 2025).

2.7 Equity and Inclusiveness

An emerging body of literature emphasizes the importance of equity in energy transitions. Women, rural populations, and low-income households often face greater obstacles in accessing net metering benefits due to financial constraints, limited access to property ownership, or digital illiteracy (IRENA, 2023). In the Bangladesh context, few studies explicitly address these dimensions. However, stakeholder consultations conducted by SREDA in 2023 along with the European Union acknowledged the need for inclusive policies that ensure equitable access to subsidies and technical assistance (EEAS, 2023). There is a growing consensus that future NEM policy revisions must include provisions for social equity and inclusiveness.

2.8 Identifying Gaps and Justifying Objectives

There is a notable gap in empirical research on the challenges hindering the full-scale implementation of net metering (NEM) in Bangladesh. While existing literature touches on policy inconsistencies and implementation issues, few studies thoroughly analyze these inconsistencies across utility providers (REB, NESCO, BPDB), institutional inertia within public agencies, and the perspectives of prosumers and utility actors. This study aims to fill this gap by examining policy effectiveness, stakeholder challenges, and reform opportunities, focusing on identifying barriers, exploring inconsistencies, and recommending user-friendly measures.

METHODOLOGY

3.0 Introduction

A mixed-method approach was employed in this study to explore the policy deficiencies and challenges within the net-metering framework in Bangladesh. The research followed a sequential explanatory design, starting with a structured survey and subsequently involving key informant interviews and a focus group discussion (FGD) to enhance the insights obtained from the quantitative results.

3.1 Study Area and Target Groups

The research was carried out in three districts—Rajshahi, Dhaka, and Noakhali—chosen to represent the diverse power distribution entities in Bangladesh (NESCO, REB, and BPDB). Five specific stakeholder groups were identified: prosumers, utility officials, policymakers, renewable energy experts, and other relevant participants. Respondents needed to be residents of these districts or work there and have firsthand experience with solar rooftop systems to be eligible for participation.

3.2 Data Collection

In the quantitative stage, a 10-item questionnaire was distributed through email using Google Forms, entitled "Questionnaire to Identify Policy Gaps and Barriers in the Net-Metering System in Bangladesh." The survey included check-all-that-apply and ranking formats to assess perceived obstacles, awareness levels, and policy coherence. A total of 32 valid responses were gathered, ensuring a well-distributed sample across the different stakeholder categories.

The qualitative phase involved 5 key informant interviews (KIIs) with a prosumer, utility officials, policymakers, and specialists. In addition, a focus group discussion was held in Rajshahi with 10 representatives from each stakeholder sector.

Secondary data from SREDA, BPDB, and the Power Division—comprising statistics, policies, and guidelines related to net-metering installation—were utilized to contextualize the primary findings.

3.3 Data Analysis

Quantitative data were processed using Google analytics and MS Excel, while content and narrative analyses were conducted for qualitative data. Result of the analyzed data have been visualized in Data analysis and Findings section.

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.0 Introduction

This chapter presents the findings derived from both primary and secondary data sources, offering a comprehensive understanding of the current status, challenges, and opportunities related to Net Energy Metering (NEM) in Bangladesh. Quantitative data from surveys were analyzed using Google Analytics and Excel, while qualitative insights were drawn from Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs). Additionally, secondary data on energy production and installed NEM systems were examined to contextualize stakeholder perceptions within the broader energy landscape.

4.1 Data Analysis and Findings

4.1.1 Quantitative Data

4.1.1a Category of respondents and their understanding of NEM:

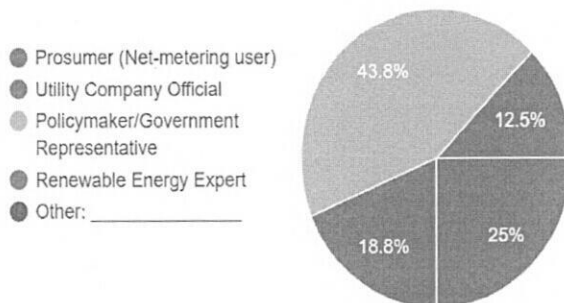


Figure 1: Category of respondent of the survey

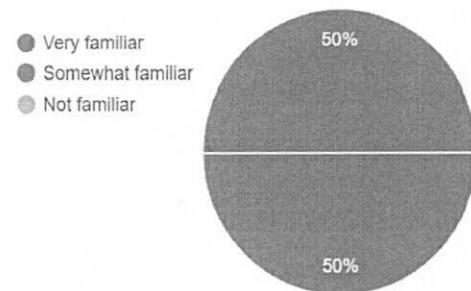


Figure 2: Respondent Familiarity with NEM

The survey included diverse stakeholders: 43.8% policy makers, 25% prosumers, along with utility officials and renewable energy experts (Figure 1). Notably, 100% of the respondents were at least somewhat familiar with the current Net Metering policies (Figure 2) of which 50% were very familiar, and the remaining 50% were moderately familiar.

This high level of awareness among stakeholders aligns with recent research that indicates growing policy engagement in Bangladesh's renewable energy sector. According to M. Hasan, (2023) and SREDA, (2025b), professionals in energy and policy sectors are increasingly informed about the NEM system, although broader public understanding still lags behind.

4.1.1b Barriers of Adoption of NEM

Respondents identified some major barriers to the adoption of NEM (Figure 3); such as Lack of awareness (68.8%), High upfront cost (56.3%), Complicated application process (34.4%), Inconsistent policy framework (31.3%). These findings are consistent with studies by M. Hasan, (2023) and Rahman et al., (2024), which identified public knowledge gaps and high initial investment as primary obstacles to renewable energy adoption in Bangladesh.

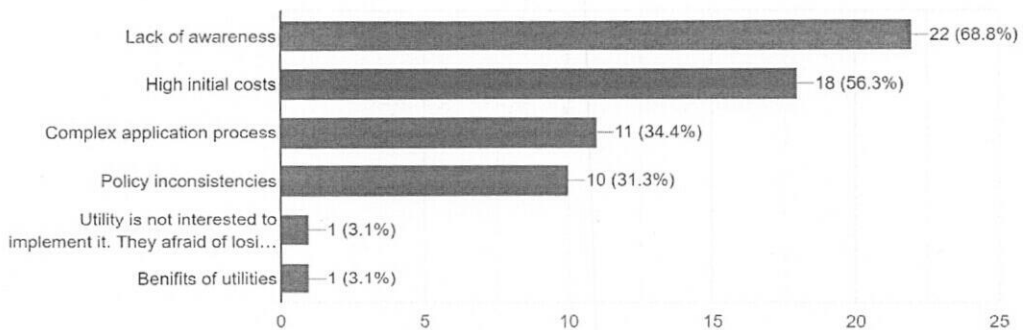


Figure 3: Primary Reasons for slow adoption of NEM in Bangladesh

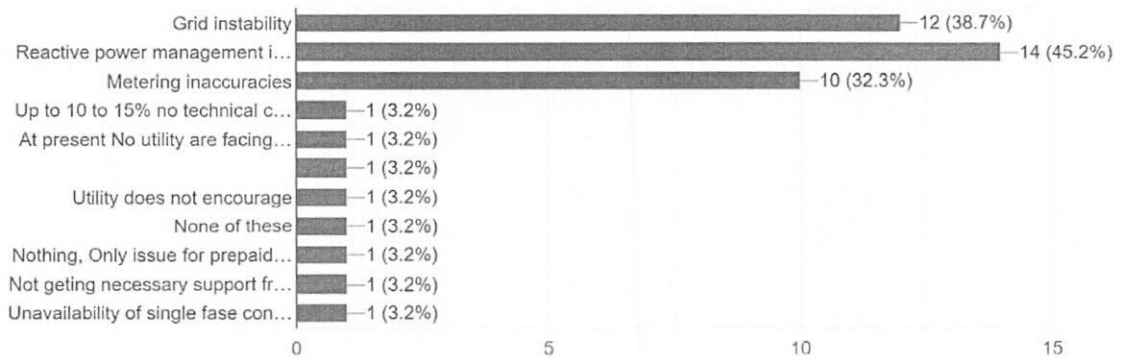


Figure 4. Technical Challenges faced in integrating NEM with National grid

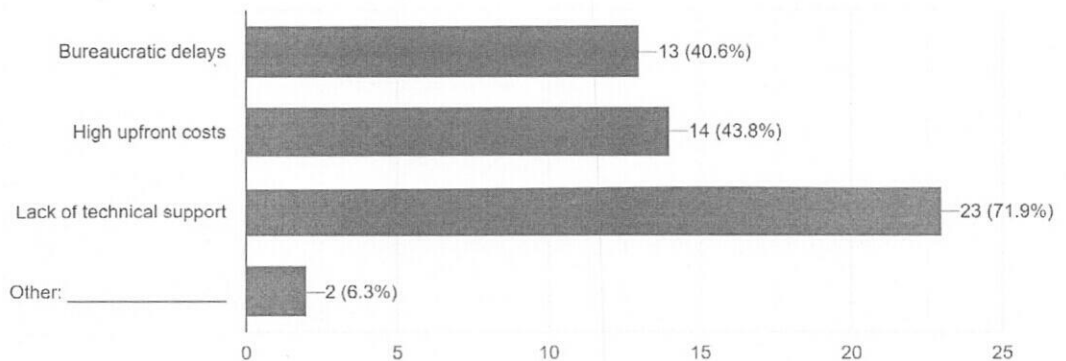


Figure 5: Barriers that Prosumers Face in accessing NEM Benefits

From a technical standpoint, significant challenges were also highlighted (Figure 4). The identified challenges are: Reactive power management (45.2%), Grid stability issues (38.7%) and Metering inaccuracies (32.3%). This mirrors the findings of (Hosen et al., 2022) noted that Bangladesh's current grid infrastructure lacks the robustness to effectively integrate distributed renewable energy systems like NEM.

Prosumers are specifically facing potentials barriers, such as technical barriers (71.9%), High capital cost (43.8%) and Bureaucratic delays (40.6%). These challenges reinforce the ADB, (2023) assessment that both systemic inefficiencies and regulatory bottlenecks hinder the scalability of net metering in South Asian contexts.

4.1.1c Existing Policy-Guidelines analysis



Figure 6: Policy Inconsistencies in the current net-metering framework

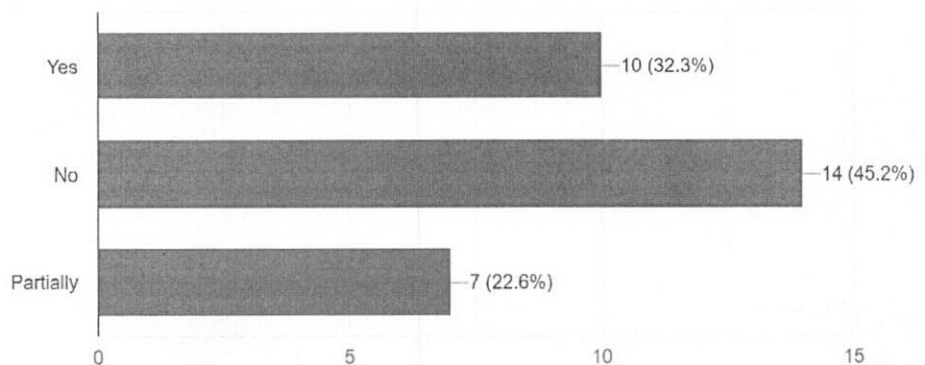


Figure 7: Respondent satisfaction regarding existing financial incentives

A substantial 87% of respondents believe that the current policy framework for NEM has significant inconsistencies. Specifically- Inconsistent tariff calculations (45.2%) and Lack of metering standardization (25.8%). However, only 12% believe there are no significant policy gaps (Figure 6). These perceptions align with the conclusions of Ahasan Habib et al., (2024) and Mahmud et al., (2024), who emphasized the need for harmonized policy design, standardization in system implementation, and regulatory clarity across different regions and agencies.

Additionally, as the Figure 7, 45.2% of respondents were dissatisfied with the existing financial incentives provided for NEM adoption, while 32.3% were satisfied, and 22.6% partially satisfied. The literature, such as UNDP, (2024), similarly critiques the limited scope and effectiveness of current incentive structures, particularly in promoting adoption among low- and middle-income households.

4.1.1d Utility Companies and NEM

Regarding the perception of utilities, the majority of respondents (67.7%) believe that utility companies perceive NEM as a threat to their revenue. Meanwhile, 42% consider NEM a sustainable opportunity and 38.7% see it as a grid management challenge (Figure 8). These views reflect a known tension identified in BSW-Solar, (2018) and SEC, (2021), where utilities

resist distributed energy systems like NEM due to fears of revenue loss and control over energy distribution. However, as Hossain et al., (2019) notes, with appropriate grid modernization and regulation, NEM can be integrated as a utility-supportive system rather than a disruptive force.

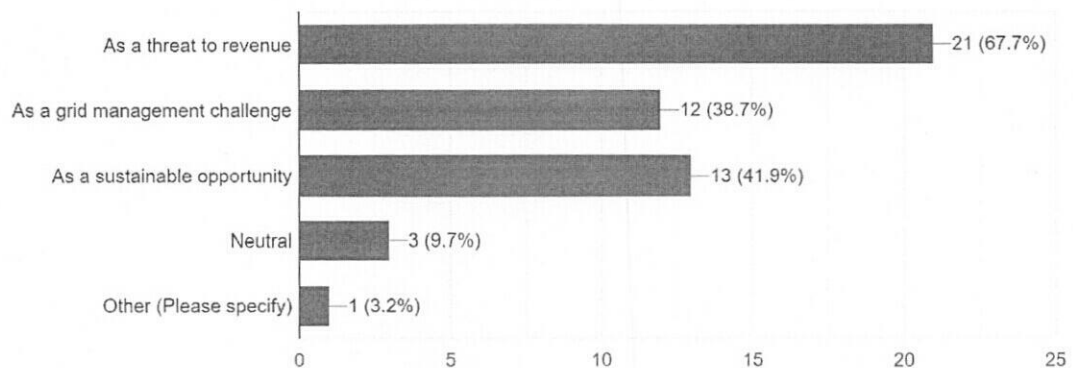


Figure 8: Perception of Utility Companies about NEM system

4.1.1e Suggestions for Improvement

Respondents offered a number of strategic suggestions to improve the NEM framework (Figure 9); such as Enhanced technical support (71.9%), Improved financial incentives (65.6%); Simplified application procedures (62.5%) as well as Policy harmonization (53.1%). These proposals are echoed in the literature, particularly by (Habib et al., 2024) and (Hosen et al., 2022), who advocate for cohesive national-level policy reform, better service delivery, and increased investment in technical infrastructure.

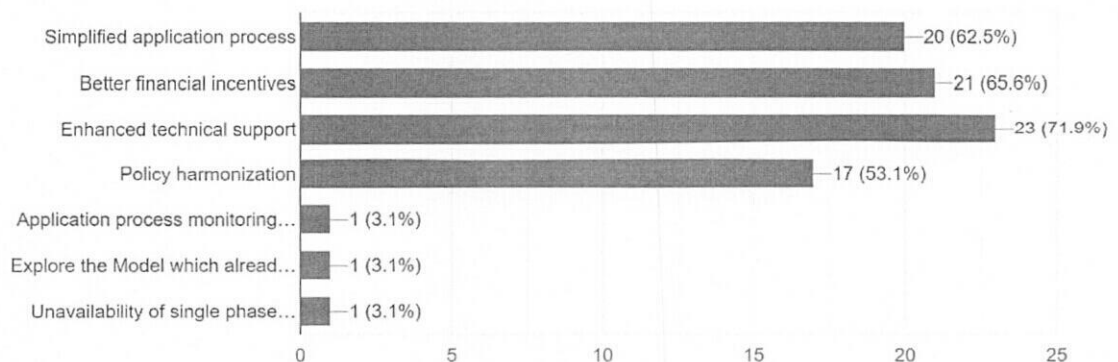


Figure 9: Respondent Suggestions for improvement for making NEM user friendly

Regarding the government's role, figure 10 revealed that 87.5% of the respondents suggested that government increase public awareness campaigns, they also suggest for streamlining regulatory processes (56.3%) and increase Subsidies or tax benefits (43.8%). Such policy recommendations are consistent with strategies proposed by UNDP, (2024) and M. Hasan, (2023), which call for stronger institutional leadership and public-private collaboration to accelerate renewable energy transitions.

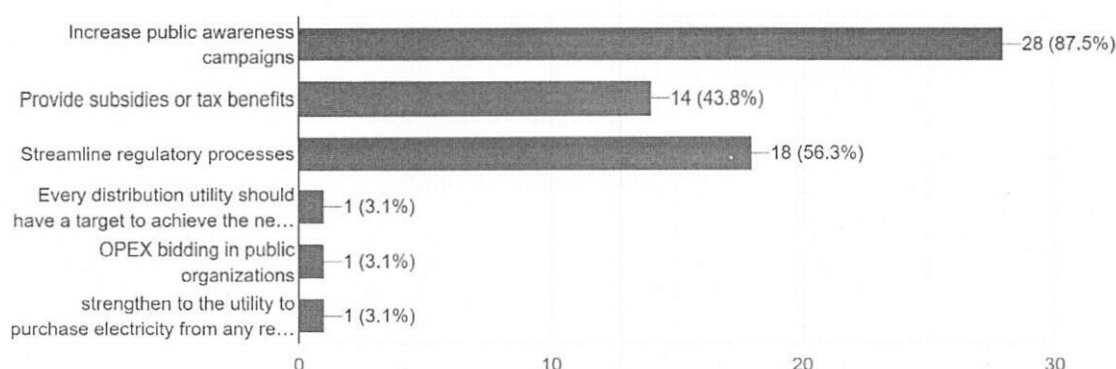


Figure 10: Government Role for accelerating the NEM

The survey findings clearly illustrate that while stakeholder awareness of NEM is high, numerous institutional, financial, and technical challenges persist that hinder its broader implementation in Bangladesh. The data aligns with existing research emphasizing the need for clearer, harmonized policies, infrastructure upgradation to support distributed energy, tailored financial incentives to attract prosumers and greater government engagement in public awareness and regulatory reform.

4.1.2 Qualitative Data

4.1.2a Focus Group Discussion (FGD)

The Focus Group Discussion (FGD) conducted in Rajshahi with representatives from key stakeholder groups—prosumers, utility officials, policymakers, and renewable energy experts—provided in-depth qualitative insights that complemented the quantitative survey findings. Participants collectively emphasized major barriers to effective net-metering (NEM) implementation, such as policy inconsistencies, high upfront costs, and a lack of public awareness. These barriers are consistent with previous studies by Habib et al., (2024) and UNDP, (2024), which also reported that a lack of awareness and complex regulatory structures hinder NEM expansion. Utility officials in the FGD expressed concerns over grid stability and potential revenue losses, which align with earlier findings from Hossain et al., (2019) and SREDA (2025a), noting NEM’s impact on grid management and financial viability. Prosumers highlighted technical complications and bureaucratic delays—barriers also echoed in the findings of the ADB, (2023). The discussion underscored the need for harmonized policies, improved technical support, and robust government initiatives like awareness campaigns and financial incentives, further supported by (Hasan, 2022) and Hosen et al. (2022).

4.1.2b Key Informant Interview (KII) – With Citations

Five Key Informant Interviews (KIIs) were conducted with a prosumer, a utility official, two policymakers, and a renewable energy expert. These interviews validated the survey and FGD findings by offering expert-level views on policy shortcomings and technical constraints in the NEM system. Policymakers emphasized inconsistent tariff calculations and the absence of standardized metering protocols—challenges previously noted by Habib et al., (2024) and (Hosen et al., 2022). Utility officials shared concerns about reduced revenue and grid

complexity, which resonate with survey findings and literature by (Hosen et al., 2022). Technical experts highlighted issues such as reactive power management and lack of utility readiness, aligning with the observations in (Hasan, (2023). The prosumer also underscored bureaucratic delays and financial barriers, consistent with barriers identified by ADB, (2023). Overall, the KIIs enriched the study's findings by offering nuanced, stakeholder-specific perspectives and reinforcing the urgent need for improved coordination, transparency, and investment in technical infrastructure.

4.1.3 Secondary Data Analysis

4.1.3a Electricity Generation Mix in Bangladesh

Fuel/Resource	Installed Capacity	Share
Coal	7179 MW	22.97%
Gas	12384 MW	39.62%
HFO	5885 MW	18.83%
HSD	290 MW	0.93%
Imported	1160 MW	3.71%
Renewable	1559.8 MW	4.99%
Captive	2800 MW	8.96%
Total	31258 MW	

Source: (SREDA, 2025c)

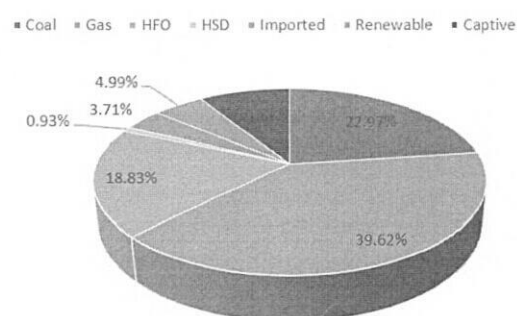


Figure 11: Electricity Generation Mix in Bangladesh

4.1.3b Statistics of Installed Net Metering System

Utility Name	Installed Capacity	Quantity
BPDB	17.809 MWp	531
BREB	68.707 MWp	438
DPDC	3.728 MWp	356
DESCO	8.996 MWp	826
WZPDCL	13.452 MWp	466
NESCO	5.62 MWp	119
TOTAL	118.311 MWp	2736

Source: (SREDA, 2025c)

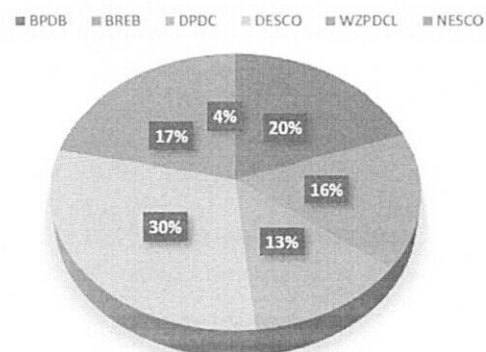


Figure 12: Statistics of Installed Net Metering System

Analyzing the secondary information, literature and the analysis of the electricity generation mix (Figure 11 and Table 4.2.1) reveals that Bangladesh remains heavily reliant on fossil fuels, particularly natural gas (39.62%), coal (22.97%), and heavy fuel oil (HFO) (18.83%), while renewables contribute a mere 4.99% of the total installed capacity (SREDA, 2025b). This dominance of non-renewable sources indicates a systemic inertia in transitioning to clean energy, which inherently restricts the expansion of net-metering systems that depend on renewable energy uptake.

Moreover, Figure 12 and Table 4.2.2 indicate that despite having policies in place, the total installed net-metering capacity is only 118.311 MWp across 2736 installations—a minimal fraction considering the national generation capacity of over 31,000 MW. This reflects a low adoption rate, potentially caused by several interlinked barriers.

4.2 Discussion:

The findings of this study directly address the primary objective, “to identify the key factors hindering the adoption of the Net Metering (NEM) system in Bangladesh.”

In response to Research Question 1, the survey data indicate that lack of awareness (68.8%), high upfront costs (56.3%), and complicated application procedures (34.4%) are major impediments. These are compounded by technical barriers such as reactive power management and grid instability, reinforcing the operational difficulties cited by Hossain et al., (2019).

Addressing Research Question 2, the results reveal that 87% of respondents believe existing NEM policies suffer from inconsistencies. Notably, issues like inconsistent tariff calculations (45.2%) and the lack of standardized metering protocols (25.8%) were highlighted. These findings confirm similar conclusions from Habib et al., (2024) and Hosen et al., (2022) regarding policy fragmentation and regulatory inadequacies.

For Research Question 3, respondents proposed critical policy interventions to enhance adoption: enhanced technical support (71.9%), better financial incentives (65.6%), and simplified application processes (62.5%). Furthermore, 87.5% emphasized the need for government-led awareness campaigns, aligning with recommendations from (UNDP, 2024) and M. Hasan, (2023).

Despite high familiarity with NEM among stakeholders, actual implementation remains limited, evidenced by only 118.311 MWp installed net-metering capacity (SREDA, 2025c), representing a small portion of national potential. These gaps between awareness and execution highlight the urgent need for strategic reforms, better policy coordination, and institutional support to scale NEM across Bangladesh.

CONCLUSION AND POLICY RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the key findings of the study and provides actionable recommendations to address the identified policy, technical, and institutional barriers in the net-metering system, aiming to support its effective implementation and expansion in Bangladesh.

5.1 Conclusion

The study explored the factors that hinder the implementation of the Net-Metering System (NEM) in Bangladesh, aiming to identify significant obstacles and suggest practical solutions. Although the country has made strides in electrification, the contribution of renewable energy is still limited to 4.99%, with NEM installations reaching only 118.311 MWp by 2025 (SREDA, 2025c). The results indicate several complex challenges:

- A. Policy and Regulatory Challenges:** Inconsistencies in tariff calculations (identified by 45.2% of respondents), a lack of standardized metering, and inconsistent application among utilities (such as REB and BPDB) create barriers for prosumers (Habib et al., 2024). The 70% limit on AC output further limits scalability (Hosen et al., 2022).
- B. Financial and Technical Challenges:** Substantial initial costs (cited by 56.3% of respondents) and bureaucratic delays (40.6%) hinder adoption, while grid instability (38.7%) and reactive power management issues (45.2%) point to infrastructure shortcomings.
- C. Awareness and Institutional Resistance:** A lack of public awareness (68.8%) and utility companies viewing NEM as a threat to revenue (67.7%) highlight systemic resistance (BSW-Solar, 2018).

The study reinforces that the NEM framework in Bangladesh is plagued by misaligned incentives, inadequate coordination among stakeholders, and a lack of financial support mechanisms, reflecting insights from global experiences in Germany and India (Hosen et al., 2022; MNRE, 2024)

5.2 Policy Recommendations

To accelerate NEM adoption and achieve renewable energy targets, the following interventions are proposed:

1. Policy Harmonization and Regulatory Reforms

- **Standardize Policies:** Establish uniform guidelines for tariffs, metering protocols, and capacity limits across all utilities (e.g., REB, NESCO) to reduce confusion (Hosen et al., 2022).
- **Revise the 70% Cap:** Allow higher AC output limits for commercial/industrial sectors to incentivize larger installations (Hosen et al., 2022).

2. Financial Incentives and Support Mechanisms

- **Subsidies and Tax Benefits:** Capital subsidies may introduce (e.g., upfront cost reduction) and tax holidays for prosumers, mirroring India's rooftop solar schemes (MNRE, 2024).
- **Green Financing:** Expand Bangladesh Bank's Solar Financing Facility to offer low-interest loans for NEM projects, with risk-sharing mechanisms for utilities (Alam, 2025).

3. Grid Modernization and Technical Assistance

- **Upgrade Infrastructure:** Invest in smart inverters and voltage regulators to address grid instability.
- **Technical Training:** Launch vocational programs for solar technicians to improve installation quality.

4. Stakeholder Engagement and Awareness

- **National Awareness Campaigns:** Utilize media and utility partnerships to educate consumers on NEM benefits, targeting urban and rural households (M. Hasan, 2023).
- **Utility Incentivization:** Compensate utilities for revenue losses via feed-in tariffs or grid-service fees to align their interests with NEM expansion (BSW-Solar, 2018).

5. Inclusive and Equitable Access

- **Pro-Poor Schemes:** Design subsidized NEM packages for low-income households and streamline property ownership requirements (IRENA, 2023).

Bangladesh's NEM system holds transformative potential for energy security and decarbonization. By addressing policy gaps, financial barriers, and institutional resistance, the country can emulate global successes like Germany's Energiewende (BSW-Solar, 2018). This study's recommendations provide an actionable pathway to unlock NEM's benefits, ensuring alignment with the national vision of 10% renewable energy by 2030.

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MODULE :03

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Md Jahirul Islam Khan

Designation: Joint Secretary

Roll No. 115

Place of Posting: Ministry of Housing and Public Works

Abstracts

Rajdhani Unnayan Kartripakkha (Allotment of Lands) Rules 2009 was amended in 2024 with further preferences to a number of sections of the people like Ministers, MPs, Freedom Fighters, Martyrs' Families, other professionals or non-professionals who made extraordinary contributions to the nation. Even after the 2009 rules came into practice, people from different walks including front line media raised their voice pointing the rules were beyond the constitutional equal rights and social justice. In response to that, the rules were again amended within a few months repealing all the preferences save only for the affected people. This study focused on why the latest amendment appeared to have been a must and also whether the amendments satisfied the questions raised by the people of different corners and if the latest rules finally stood in compliance with the constitutional provisions of Equal Rights and Social Justice. It was an observational study based mainly on secondary data analyzed through qualitative method which found a little opportunity to justify the findings from a small sample of primary data collected by interviewing random target groups, though small. The study found that a number of provisions in the previous rules was withstanding people's Constitutional Rights of Equality of Opportunity and Social Equity inscribed in Part II and III of the Constitution of Bangladesh. The study concludes with inferences that the Rajdhani Unnayan Kartripakkha(Allotment of Land, Plot, Space and Flat) Rules, 2024 had unjustified inclusion of certain provisions that affected or deemed to have affected common applicants in the name of Quota, reservation etc. which created the issue. The study also indicates that there are scopes for further research on whether the final amendments have created any resentment both in the Government officials and also in the socially backward section of citizens or those who sacrificed a lot for the nation due to losing hopes for special consideration by the Government.

[**Key Words:** *Allotment, Rules, Reservations, Quota, Preference, Constitution, Compliance, Equal, Rights, Justice, Affected.*]

Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules, 2024: A Policy Review

1.0 Introduction

1.1 Background

Rajdhani Unnayan Kartripakkha (RAJUK), an authority under the Ministry of Housing and Public Works, has the institutional responsibility to develop urban facilities in the capital city of Bangladesh for all sections of its population ranging from ultra-poor to super-rich. This responsibility includes allotment of land, plot, flat, floor space etc. and also management and administration of the same with sustainable building constructions as well. With intent to deliver these services in a flawless and transparent process, the Ministry of Housing and Public Works formulated a set of rules following the Town Improvement Act of 1953. The-then existing set of rules named The Dhaka Town Improvement Trust (Allotment of Lands) Rules of 1969 was first amended in 1986 and then again in 2009. After that, “Rajdhani Unnayan Kartripakkha (Allotment of Lands) Rules 2009 was further amended in April 2024 with an approach to put some preferences to a number of sections of the people beyond the Constitutional equal rights. Soon after, strong voices were on the rise from different corners of the society including front-line media as published in News Bangla 24 (Merina, 2020) pointing to the misgovernance and violation of constitutional equal rights especially in the process of allotment of plots, flats and spaces under the said amendment. The sound was strong enough for the incumbent Government to re-amend the said rules within a few months resulting withdrawal of almost all types of preferences, reservations and quota from the rules. Now, it is the time to review these latest amended rules if the amendments eradicated the root causes of adverse social response of the previous rules and stand aligned with constitutional provisions of equal rights.

1.2 Problem Statement and Research Questions

1.2.1 Problem Statement

People from different sections of the society around Dhaka showed significant resentment over the years against the allotment process of residential plots of the on-going projects of Rajdhani Unnayan Kartripakkho (RAJUK) under

various types of reservations, quota and preferences underpinned in Rule 13(A) of “Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules 2009” and later that of 2024. The study focused on finding the root causes of amending the said rules times and again, in particular, in November 2024 the latest, in response to a huge social voice caused by this resentment pointing inequalities and disparities in the-then existing rules with respect to the provisions of equal rights in the Constitution of Bangladesh. At the same time, there is potential demand for searching out whether those root causes were retaliated satisfactorily after the latest amendment. This study also focused on calibrating the sustainability of the amended rules to ensure Constitutional approach towards good governance. The questions that master the study are why the latest amendment was made happen and what changes were incorporated in the latest one? Did the changes comply with making up the shortcomings of the previous rules?

1.2.2 Research Questions

- (i) What were the provisions in the Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules 2024 that created inequalities and disparities among the citizens in and around Dhaka?
- (ii) Did the amended rules eradicate the inequalities and disparities and address the Constitutional non-compliances?

1.3 Research Objectives

1.3.1 General Objectives

The General Objectives of this study are as follows:

- (a) Finding the root causes of the latest amendment of “Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules 2024”; and
- (b) To scale out if the amendments comply with eradicating those root causes and stand sustainable in the light of the constitutional provisions of equal rights.

1.3.2 Specific Objectives

The Specific Objectives that led to the General Objectives are

- (a) Identifying the specific rules of “Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules 2024” that have been amended in the latest amendment;
- (b) Checking out whether these amendments eradicated the issues of social inequalities and disparities existed in the previous rule in the light of relevant constitutional obligations of equal rights.

1.4 Justification of the study

Following an exhaustive procedure, the “Rajdhani Unnayan Kartripakkha (Land, Plot, Space and Flat) Rules 2024” were amended once in 2009 and then again in April 2024. The amendments were made with an approach to address the social necessity of a number of sections of people who were preferred for their extraordinary contributions to the nation, like the freedom fighters, martyr families, Law makers etc. which also included high society members and officials like Ministers, MPs, Officials and other professionals etc. Immediately after the amended rule came into effect, a high- sounding voice from different corners of the society including media outlets broke out pointing the amended rule is a violation of equal rights and causing disparity which resulted in another vigorous amendment within a few months of the previous amendment which is very uncommon. This required an insightful review of the latest amended rule if it responded to the issues.

2.0 Literature Review

There are a number of attempts that had been taken to govern the allotment of lands under the Town Improvement Act of 1953. The first initiative was found to have been undertaken in 1969 by formulating a set of rules named “The Dhaka Improvement Trust (allotment Of Lands) Rules, 1969. With an approach to bring forth some sort of authoritarian preferences and administrative opportunities, the rule was first amended in 1986 which was further amended in 2009. While practicing this rule, people’s

dissatisfaction on the amendments putting up reservations of plots for certain classes of people including Government officials started coming up both in the civil society and in the front-line media. Among many of the media outlets, as in a recent case, one Daily Sun reported on 14 September 2024 an informative story under the heading of “RAJUK plot allotment: A game of privilege” (Hasan, 2024) about unjustified use of Rule 13(A) of the existing Allotment Rules of RAJUK. This social voice connotes our constitutional obligations of equality of opportunity and social disparity as reflected in Part-II,

Article-19 (1) “The State shall endeavor to ensure equality of opportunity to all citizens”

Article -19(2) “The State shall adopt effective measures to remove social and economic inequality between man and man and to ensure the equitable distribution of wealth among citizens, and of opportunities in order to attain a uniform level of economic development throughout the republic” (GoB, 1972).

Also, Article -27 of the constitution says “All citizens are equal before law and are entitled to equal protection of law”.

Overriding these provisions of equality, the said rule of 1969 comes with rule-12 “The Government by order may direct the Trust to reserve certain number of plots for the members of the Armed Services, ex-Servicemen and Officers and staff of Pakistan Foreign Service in East Pakistan” (Dhaka Gazette, 1970) which was later amended twice, in 1986 and 2009, before 2024 finally proposing-

Rule-13(A)(1): Subject to the provisions of Rule 9, the Kartipakkha may, notwithstanding anything contained in this Chapter, allot a plot to a person

- (a) Who is, or has been, a Minister, a Minister of State, or a Deputy Minister,
- (b) Who is, or has been, a Member of Parliament,
- (c) who has rendered remarkable contributions to the service of the republic or any public service including the professionals who are not in the service of the republic or any public service or any other field of national importance as the Government may determine from time to time or who is a freedom fighter or a direct family member of Martyred freedom fighter or a dedicated social activist. (Bangladesh gazette, 2009).

The issue on the table was caused by this amendment which had further aggravated when another move for amending the rules happened in April, 2024 bringing forth the following provisions:

Section-7(1): Reservation of Quota: Notwithstanding anything contained in any other rules stated in this Rule, the Government may reserve certain number of residential plots for Ministers, State Ministers, Deputy Ministers, Members of Parliament including persons holding the status of these ranks, different professionals, Freedom Fighters and wounded Freedom Fighters or Families of Martyred Freedom Fighters, Government and nongovernment servants, affected and original inhabitants of the project area and so on (Bangladesh gazette, 2024).

Section-7(2): From the residential plots of any projects of RAJUK, 2% for officials of the Ministry of Housing and Public Works, 2% for the Development Authorities under this Ministry, and 2% for the officials of RAJUK may be preserved.

Section-7(3): Notwithstanding anything contained in any other rules stated in this Rule, the Authority may, with the approval of Government, allot residential plots to Ministers, State Ministers, Deputy Ministers including persons holding the status of these ranks, Members of Parliament, Freedom Fighters and wounded Freedom Fighters or Families of Martyred Freedom Fighters, Government servant who made special or extraordinary contributions to public services or who played special role in formulating laws and rules of the Authority, or any person, not being Government servant, made special contributions in the field of national importance.

3.0 Research Methodology

The very objectives of reviewing the policy mentioned above, by default, asked for qualitative methodology as the study itself did not put a step on any type of hypothetical inferences. The study focused on looking for the corrections made in the previous rules by the latest amendment, i.e. which sections of the rules were changed or repealed or edited for what reasons. Did the amended rules stand complied with addressing the issues of inequalities and disparities that had caused the amendments a must? The study was collectively based on secondary data that are available at GoB while a scanty area of cross-checking the impacts might depend on informal interview with small target groups and also KI officials for more clarifications of the findings. Collecting data

regarding percentage of residential plots allotted under the amended sections might be a leading factor to analyze the impacts that created the issue. This data should be available in RAJUK office. Content analysis has led to detect the number of rules that had been changed or repealed or edited in the latest amendment. When the identifications of the changes were done, an insightful analysis with comparison to relevant Constitutional provisions underlined the compliances of the reasons for changes and examined the constitutional alignment of the new approaches.

4.0 Data Analysis and Research Findings

4.1 Data Analysis

4.1.1 The Rules under observation was first brought into light in 1969 named as the Town Improvement Trust Rules, 1969. There were two specific provisions in this rule that opted preferences for allotment of residential plots. Rule-11 made first preference for those who hadn't yet had or received any such plot from DIT (Dhaka Improvement Trust) which sounded accommodative but limiting constitutional equal rights (open for all). Likewise, Rule-12 came up with a further step forward that reserved plots for the members of the Armed Services, ex-Servicemen and Officers and staff of Pakistan Foreign Service in East Pakistan. After the emergence of Bangladesh in 1971, the Constitution of the People's Republic of Bangladesh 1972 put special emphasis on equality of opportunities, social justice and equal rights for all citizens of the country in its chapters as described in part-II and part-III. In part-II, Article 19(1) under Fundamental Principles of State Policy, says that the State shall endeavour to ensure equality of opportunity to all citizens. Article 19(2) elaborates further saying that the State shall take measures to remove social and economic inequality and to ensure the equitable distribution of wealth among citizens, and create opportunities for citizens to facilitate a uniform level of economic development throughout the country. In part-III, Article 27 under Fundamental Rights confirms that all citizens of the republic are equal before law.

4.1.2 The first amendments were made to DIT (allotment of lands) rules in 1986 incorporating a sub-rule 13(A)(1) after rule 13 which said "the Trust may allot plots to persons who have rendered remarkable contributions in Government service, public

service and in such other field of national importance as the Government may determine from time to time”. This provision had offered an opportunity for the Government to supersede the constitutional obligations of equality before law and equality of opportunities. In 2009, the rule was further amended by the incumbent Government substituting Rule 13(A)(1) by 13(A)(1) (a) which had further extended the opportunities for the Government to allot plots to Ministers, Ministers of State, Deputy Ministers, Members of Parliament, Freedom Fighters, direct Family members of Martyred Freedom Fighters or dedicated social activist. These amended provisions withstood the aforesaid Constitutional provisions though no such reactions were marked during its practice in first few years of the amendments. 2020 around, the number of plots allotted under these amended provisions mounted to such a stunning figure that created a social turbulence in different sections of people including media outlets.

4.1.3 Amid these adverse voices raised in the society, the Government made another extension of reservation and preferences in the April 2024 amendment which included all the reservations and preferences of rule 13(A) of 2009 Rules with addition of almost all other professionals in the list of reservations in Rule 7(1). In Rule 7(2), an authoritarian approach was made for reservation of plots for the officials of the Ministry of Housing and Public Works, RAJUK, Other Authorities under this Ministry 2% each and also plots to be allotted by the Secretary of the Ministry and Chairman, RAJUK 2% each. Most significantly, addition of Rule 7(3)(ka), (Kha), (Ga) and (Gha) opened a wide door for the Government to allot plots to the Ministers, State Ministers, MPs, Other high officials and high-ups of the society including celebrities etc. with practically no care to the constitutional rights of the remaining. These provisions when justified with the aforesaid sections of the Constitution, gave a clear sense of disrespect to the relevant sections under Fundamental State Policy and Fundamental Rights in Part-I and Part-II.

4.1.4 Owing to the spirit of equality in the constitution and responding to the public demand, the Government finally stepped in to amend the said provisions with some other relevant sub-rules of the Rajdhani Unnayan Karttripakkha (Allotment of Land, Plot, Space and Flat) Rules 2024 again in November 2024.

4.1.5 Official data from RAJUK collected on 12 May, 2025 shows that in case of two major housing projects namely “Purbachal New Town Project” and “Jhilmil Abason

Project”, the number of residential plots that have been allotted under rule 13(A) of the Rules of 1986 and later of 2009 from 2001 to 2024 is fairly high compared to the total number of plots. The official records reveal that 957 of total 26213 residential plots were allotted under this particular provision in Purbachal Project which is 3.6% of the total where the allottees were selected in such a manner anyone can raise questions about the fairness and justifications thereof. The same picture is found in case of Jhilmil Project where 207 of total 1774 residential plots were allotted in the same manner under rule 13(A) and this is as high as 11.6% of the total. GoB data also shows that the percentages of the total numbers of plots leased out (allotted) under rule 13(A) in both the projects had been gradually increasing in every 4 years spell (considered for convenience of calculation) from 2001 to 2024 as presented in the **Table-1** below which represents the numbers of plots allotted under the said rule 13(A) in every 4 years and also the percentages of the remaining totals for both the projects. The increment mentioned above out of the data accumulated in the table was also shown pictorially in the Bar-Diagram (Figure-1) below for better understanding. That should be one of the prime causes of adverse reactions among people who could not participate in the process not being that intimate to the incumbent Governments. They should have strongly felt that they had been unfairly deprived of their equal rights in the name of rule 13(A).

Table-1: Plots allotted under Rule 13(A) in Purbachal and Jhilmil from 2001 to 2024

Time span	Res. Plots Remaining (Purbachal/Jhilmil)	Plots Allotted [13(A)] (Purbachal/Jhilmil)	Percentage (%) (Purbachal/Jhilmil)
2001 – 2004	22050/1774	125/46	0.56/2.59
2005 – 2008	20010/1206	100/32	0.49/2.65
2009 – 2012	16006/1027	151/38	0.94/3.70
2013 – 2016	11230/725	168/30	1.49/4.13
2017 – 2020	8025/500	197/33	2.45/6.60
2021 – 2024	5224/277	216/28	4.13/16.96

Comparative Pictures of Plots allotted under Rule 13(A) in Purbachal and Jhilmil

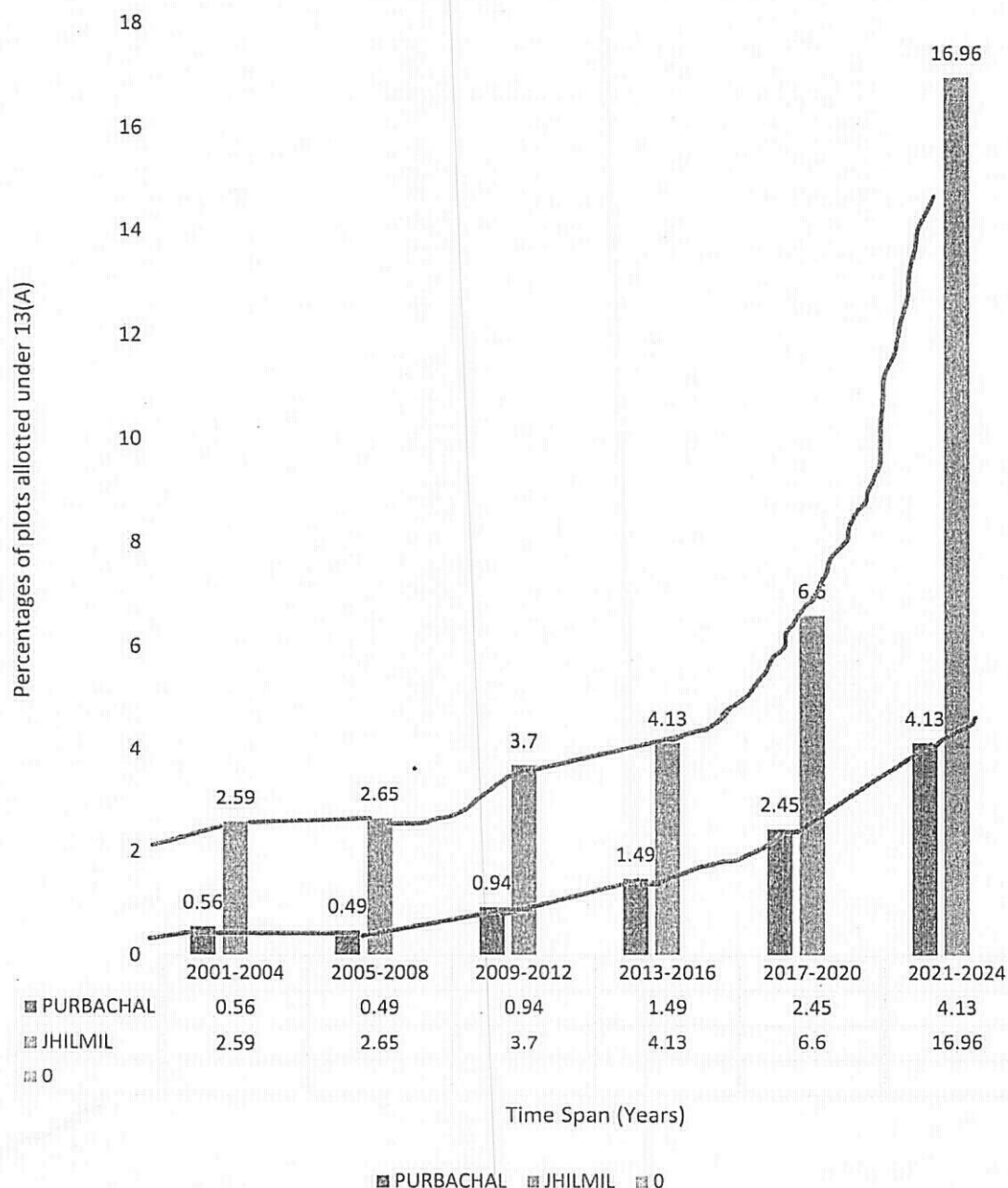


Figure-1: Comparative Pictures of Plots allotted under Rule 13(A) in Purbachal and Jhilmil

4.1.6 After the latest amendments were done in November 2024, a scrutiny of both the rules of April 2024 and November 2024 led to the inference that repealing Rule-7, sub-rules (1), (2), and (3)(ka), (Kha), (Ga), and (Gha) of April 2024 Rules have specifically addressed the most disputed constitutional issues of public interests mentioned above. By doing so, the Constitutional non-compliances due to unjustified reservations and

privileges have been clearly retaliated which is thought to have reduced social agitation and discomfort.

4.1.7 To cross-check the acceptability of the inferences made so far, a small sample of 30 people who are stakeholders from different sections of the society have been interviewed informally on the reactions to the latest amendments about how they evaluate the changes in the rules. The **table-2** below weighs the satisfaction levels of the interviewees in a scale of 25 which has been equally distributed to 5 groups of people each having 6 members.

Table-2: Weights implied to satisfaction on the latest amendment

Group name	Issue	Weight (25)
Officials including KI of RAJUK	Level of satisfaction on the latest amendments repealing Rule 7(1), (2), (3)(Ka) (Kha) (Ga) and (Gha) of 2009 rules.	3
General Applicants		4.5
Residents of Dhaka		3.5
Professionals deserving 13(A)		3.5
Others deserving 13(A)		2.5
	Total Weight	17

This weight score of 17 out of 25 as shown in the table above derived from primary data, though the sample size is very small, apparently stands in conformance to the research findings with an acceptable deviation from that of the secondary data analysis. People's resentment is thus found to have been retaliated to a significant extent.

4.2 Research Findings

4.2.1 The study finds that the latest (November 2024) amendments brought in changes in the following rules/sub-rules if the April 2024 Rules:

1. Rule-2, sub-rule-1 (Cha) and (Ta) which define the affected and original inhabitants of the project area.

2. Rule-4, sub-rule-9 which clarifies possible disqualifications of applying for plots.
3. Rule-5, sub-rule-6 which is an addition that clarifies provisions for husband-wife, if both win lottery.
4. Rule-7, sub-rules (1), (2), and (3)(ka), 3(Kha), 3(Ga), and 3(Gha) of April 2024 Rules which has been replaced by Rule-7 in a new description that repealed all types of reservations and preferences excepting only for those who are affected.
5. Rule-21, which has made an equally applicable mode of payment for all applicants irrespective of their social status and professions.

Identification of these amended rules satisfied the Specific Objective (a) that leads to the General Objective (a) as analyzed in Para-4.1.5 pointing out the root causes of social repercussion.

4.2.2 Among all those, amendments made in Rule-7, sub-rules (1), (2), and (3)(ka), (Kha), (Ga), and (Gha) of April 2024 Rules have specifically addressed the most disputed constitutional issues discussed above. By repealing all these provisions of reservations and preferences saving only the affected people, the Constitutional non-compliances have been clearly retaliated which might have reduced social agitation and discomfort. This finding met the Specific Objective (b) leading to exploring the General Objective (b) as discussed above including that analyzed in para 4.1.3 to 4.1.5 pointing Constitutional issues of equal rights and social justice had been addressed keeping aside whether other Articles like Article 29(3)(a) of the Constitution had been disrespected or not.

4.2.3 The latest amendments made in November 2024 have stood in conformance with the social equality provisions of the Constitution which otherwise has mitigated public resentment and dissatisfactions as inferred by cross-checking with small sample of primary data.

5.0 Limitations

The research was limited to contextual analysis based on basically the GoB sources which has led to observational study. Due to a short duration for field study, the impacts of the amendments made in the rules couldn't have been verified extensively through survey or interview of considerably large sample of target groups. The word limit of the report also restrained from going deeper in the analysis with intent to understand if

there are any further discrepancy elsewhere in the latest rules with the other provisions of fundamental state policies and fundamental rights inscribed in the Constitution of Bangladesh. Besides these, the latest amendment of the said rules has been made as recently as it appears too young to create any remarkable reflections in the society so far.

6.0 Conclusion

The study shows that the root causes of people's reactions against certain provisions of the Rajdhani Unnayan Kartripakkha (Allotment of Land, Plot, Space and Flat) Rules, 2024 that led to a number of amendments within a few months from the publication of the said rule are unjustified inclusion of certain provisions that affected or deemed to have affected common applicants in the name of Quota, reservation etc. These provisions tend to withstand Articles 19 and 27 of the constitution of Bangladesh which basically ensure social equality. Rule 7(1), (2) and (3) of the said rules are found to be on the steering for creating opportunities to go beyond constitutional obligations of equal rights in an unjustified and arbitrary nature which has led the Government or the Authority to an unaccountable misgovernance. These findings are supported while cross-checked by both content and data analysis made on the basis of official data collected from mainly GoB sources. The latest amendments of the said rule repealed all the provisions under rules 7(1), (2) and (3) saving a new provision for reservation of certain plots only for the affected applicants irrespective of their social and economic status. This attempt has practically complied with the constitutional demand of social justice and equal rights. At the same time, removal of the said rules has put in a strong bundle of limitations for the authority to malpractice the vested power in the name of public interest but on the other side, this could create a sense of hopelessness among people who deserve special attention of the Government. There are scopes for further research on whether a complete removal of the said provisions has created resentment both in the Government officials and also in the socially backward section of citizens or those who sacrificed a lot for the nation due to losing hopes for special consideration by the Government.

7.0 Recommendations

(a) The study indicates that a quite frequent amendments of the rules under investigation have created some sort of instability among the Government officials who are subject to account for their works to all sections of people including media. Besides these, the latest amendments did not give any solutions to the plots that had already been allotted under the amended rules. So, there is a legal and humanitarian necessity of further investigations of the latest rules as to find out more applicable and socially and constitutionally acceptable solutions that will bring down people's voice of grievance into a peaceful applaud.

(b) Before going to formulate or amend any such Rules or Acts or Policies, a vigorous and effective stakeholder consultation should be arranged to accommodate and adjust public opinions and legal requirements.

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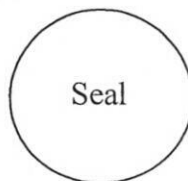
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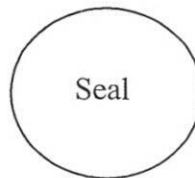
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2. Writing Name, Roll No. etc. at any other place or making the script otherwise may cause cancellation of your answer script.
1. Put tick (✓) marks on Evaluation method and Institute's Name.

Name: Md Jashim Uddin

Roll No: 116

Impact of Agricultural Rehabilitation Assistance through Farmer Incentives on Summer Onion Production

ABSTRACT

The title of the study was “Impact of Agricultural Rehabilitation Assistance through Farmer Incentives on Summer Onion Production”. The study was conducted in Bhanga upazila of Faridpur district. The study consisted of 20 randomly selected farmers of two groups. The study revealed that level of education of the farmers had highly positive and significant relationship with their adoption with impact of climate change. Most of the farmers were having primary to secondary level of education. Findings reveal that average yield of summer onion 2.20 t ha⁻¹ and 3.17t ha⁻¹ in no incentive and incentive group of farmers. The study reveals that education, training duration and knowledge had positive significant relationship with yield of summer onion both study group as well as higher the education, training duration and knowledge may be ensured the higher summer onion yield. Findings showed that majority of the farmers had high problems in different issue. Among the different problems in no incentive farmer group “Availability of Seed” and “Low land” got the highest rank of problem. On the other hand, in incentive farmer group “Pest and Diseases” and “Weather problem” rank the highest problem.

Keywords: Agricultural Rehabilitation, Farmer Incentives, Summer Onion Production, Yield, Education, Training, Climate Change, Seed Availability, Pest and Diseases, Weather Problems.

Impact of Agricultural Rehabilitation Assistance through Farmer Incentives on Summer Onion Production

1.0 Introduction

1.1 Background

About 40% of Bangladesh's workforce is employed in agriculture, which also accounts for about 12% of the nation's GDP, making it the foundation of the country's economy (Bangladesh Bureau of Statistics (BBS, 2022)). As a mainstay in Bangladeshis' everyday diets, onions are one of the most important agricultural commodities, both commercially and culturally. Onion production in Bangladesh frequently suffers major obstacles despite its significance, including low seed quality, pest infestations, environmental shocks, and restricted access to contemporary agricultural technologies (Rahman et al., 2021). These elements frequently result in production shortages, which raise prices and make imports more expensive.

Agricultural Rehabilitation Program have been put in place by the Bangladeshi government. In order to increase crop productivity and guarantee the sustainability of rural livelihoods, these programs usually entail offering farmers cash subsidies, fertilizers, high-quality seeds, and technical assistance (MoA, 2021). Farmer incentives are essential instruments for boosting the agricultural sector's long-term resilience and productivity as well as for aiding in the immediate recovery following natural disasters.

The present agriculture-friendly government is well known for its diverse production efforts and projects aimed at achieving the Sustainable Development Goals (SDG) by 2030. Reducing hunger, guaranteeing food security, raising nutritional standards, and developing agriculture by creating high-yield crop varieties and introducing and utilizing cutting-edge agricultural technologies are all essential components of the continuous agricultural development process.

Onion is one of the major spice crops in Bangladesh. In 2023–2024, onions were grown on 266,500 hectares of land nationwide, yielding 3.611 million metric tons, according to field data gathered by the Department of Agricultural Extension. Among them, 182,100 hectares

were used to grow seedling onions, which produced 2.7194 million metric tons; 67,000 hectares were used to cultivate bulb onions, which produced 0.9544 million metric tons; and 7,700 hectares were used to grow summer onions, which produced 0.1212 million metric tons.

For the purpose of improving policy and optimizing resources, it is crucial to comprehend how such rehabilitation initiatives affect particular crops, such as onions. Although ARA programs are widely used, little empirical study has been done to assess their impact on onion yield in particular. Thus, the purpose of this study is to evaluate the impact of farmer incentives under agricultural rehabilitation programs on Bangladesh's onion crop productivity.

1.2 Problem Statement

The production of summer onions in Bangladesh remains insufficient to meet domestic demand, leading to significant imports and price volatility. Despite various government and institutional efforts to boost agricultural productivity, the impact of agricultural incentives—such as subsidies, access to credit, and training—on summer onion cultivation remains underexplored. Farmers often lack awareness or face barriers in accessing these incentives, resulting in suboptimal production levels. Understanding how these incentives influence yield, cost efficiency, and farmer adoption is critical to enhancing local production. Therefore, describing and exploring the relationship of a set of individual characteristics of respondent's and getting incentives was considered in conducting this study. In view of the foregoing discussion, the researcher undertook a study entitled 'Impact of agricultural incentives and its impact on summer onion production. This study attempted to answer the following questions:

- "What are the characteristics of respondents? "
- "What are the extent of response getting agriculture incentives?
- "Is there any relationship of getting agricultural incentives and summer onion production?"

1.3. Significance of the study

For Bangladesh, where agriculture is essential to the country's economy and food security, this study is extremely important. As a vital crop, onions frequently experience output

shortages as a result of weather patterns and resource limitations, which raises their price volatility and increases their reliance on imports. This study offers important insights into the efficacy of existing support programs by evaluating the effects of agricultural rehabilitation aid through farmer incentives. In order to boost onion production and guarantee higher yields, steady market prices, and higher farmer incomes, the results will assist policymakers in creating more focused interventions. Additionally, bolstering summer onion producers' resilience with efficient incentives promotes rural development and reduces poverty. In the end, this study will help Bangladesh achieve its larger objectives of food self-sufficiency and sustainable agricultural expansion by acting as a model for enhancing other crop sectors dealing with comparable difficulties.

1.4 Objectives of Research

The proposed research aims to achieve the following objectives:

- To evaluate the impact of different types of incentives (input support, financial aid, technical assistance) on summer onion crop production.
- To identify the key challenges and problems in existing incentive delivery mechanisms.
- To recommend policy measures for enhancing the design and delivery of agricultural incentives to improve summer onion production.

2.0 Literature Review

The role of incentives in increasing agricultural productivity and aiding in post-disaster rehabilitation has been widely discussed in development literature. Studies from both international and national contexts emphasize that input-based support—such as subsidized seeds, fertilizers, irrigation tools, cash transfers, and training—significantly improves farmers' capacity to recover and increase crop yields.

World Bank (2020) report that when smallholder farmers are supported through timely incentives, they are more likely to adopt improved agricultural practices and invest in inputs that boost productivity. These supports are particularly effective in post-crisis recovery, where quick action is essential for restoring the agricultural cycle and ensuring food security. In the context of Bangladesh, onion cultivation has received growing attention due to its market demand and frequent supply shortages.

Duflo *et al.* (2011) emphasize that providing subsidized agricultural inputs such as seeds and fertilizers has a positive effect on smallholder productivity. Their study shows that timely input delivery results in significant yield increases, particularly in vulnerable farming systems.

When examining crop-specific impacts, particularly for onions, the literature indicates that onion production is highly responsive to support interventions due to its intensive input requirements and sensitivity to market dynamics (FAO, 2017). Onions are a critical cash crop in many developing countries but face frequent production and price fluctuations caused by pests, storage limitations, and supply chain inefficiencies.

Singh *et al.* (2018) emphasized that providing timely support—such as access to high-quality seeds, irrigation assistance, and market linkages—has a measurable effect on onion yields and farmer income.

Numerous studies have demonstrated the positive correlation between well-targeted incentives and increased crop production. For instance, Babu and Blom (2014) found that smallholder farmers who received input subsidies for seeds and fertilizers significantly improved their output levels.

Similarly, research by Dorward et al. (2009) highlighted that productivity-focused subsidies can serve as a catalyst for long-term agricultural transformation when combined with adequate training and infrastructure support.

Research by Islam et al. (2021) shows that farmers who received rehabilitation support—including improved onion seeds, fertilizers, and extension advice—reported 20–30% higher yields than those who did not receive such assistance. Additionally, training in storage and pest control practices helped reduce post-harvest losses, further contributing to profitability. However, the success of such incentive programs often depends on their design and implementation.

Rahman and Sultana (2020) point out several challenges, including lack of transparency, political influence in beneficiary selection, and weak monitoring mechanisms. These issues can reduce the overall impact of incentive policies and erode trust among farmers.

In summary, the literature supports the idea that targeted, transparent, and timely incentives are effective tools for boosting onion production and promoting agricultural recovery. However, addressing governance and accountability issues remains essential to achieving long-term impact.

3.0 Methodology

This study adopts a mixed-method approach to evaluate the process of providing incentives to farmers and its impact on summer onion production. The research will be conducted through field-level data collection, structured questionnaires, interviews, and analysis of relevant documents and reports.

Selection of Study Area: A district namely Faridpur Bangladesh where onion cultivation is widely practiced and where farmers have received incentives from government will be selected for the study. The study was conducted in Bhanga upazila of Faridpur district.

Sampling Method and Size: Using purposive sampling, a total of 20 farmers among 10 who received incentives and 10 farmers who did not receive any incentives will be selected. This allows for comparative analysis between the two groups.

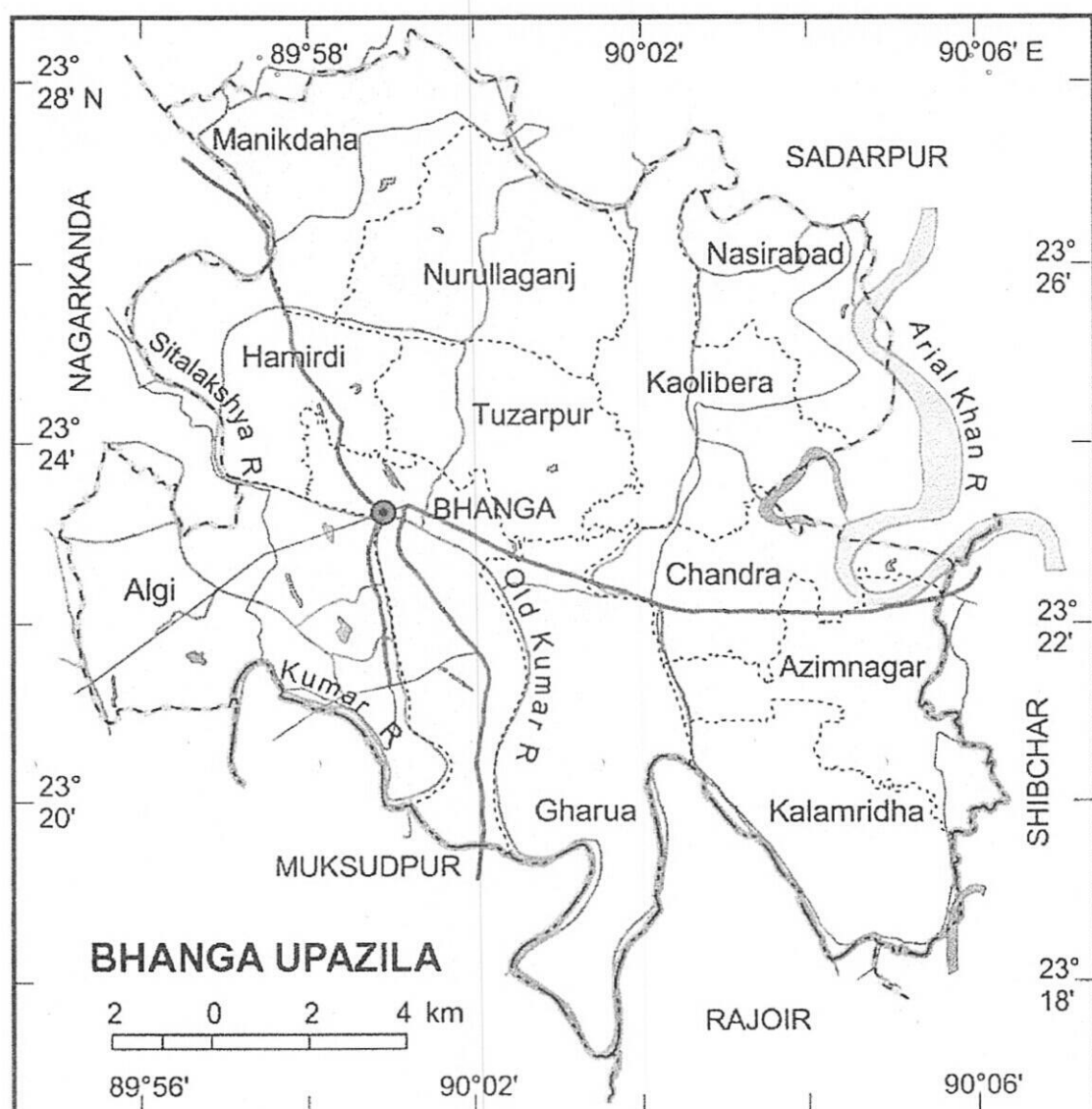


Fig: 3.1 A Map of Bhanga Upazila of Faridpur District showing the study area

3.1 Research Instrument/data collection method

For conducting a study every research method has their own instruments of data collection. Data need to be consciously identified, carefully selected, methodologically collected and accuracy and precision are obviously important quality in research measurement. In this study face to face interview method was used. This survey method can be useful for descriptive, explanatory and exploratory purposes. This method is probably the best method in social research as it easy to collect empirical data with limited time and money. In order to collect relevant data, a pre tested structured interview schedule was carefully prepared keeping the objectives of the study in mind. The questions and statements contained in the schedule were simple, direct and easily understandable by the respondents. The schedule contained both closed form and open form questions. Scales were included in the schedule, wherever necessary. The draft interview schedule was prepared in English and attached in Appendix-A.

3.2 Data Analysis Techniques:

Both qualitative and quantitative data was analyzed. Statistical tools such as Excel and SPSS were used to conduct quantitative analysis. The impact of incentives was evaluated based on indicators such as production volume, cost, profit, and crop quality.

3.3 Limitations:

Since some of the information relied on farmers' memory, there may be a degree of recall bias. Additionally, not all farmers had equal awareness of the incentives they received, which may have influenced the study outcomes.

4. Result and discussion

In this chapter the results of the study and their interpretations have been presented according to the objectives of the study.

In Non-Incentive group, the age of the farmers ranged from 23 to 65 years with an average of 41.50 year and standard deviation of 14.93 year. On the basis of their age, the farmers were classified into three categories as young (up to 30), middle age (31-50) and old aged (>50) are presented in Table 1. Data contained in Table 1 reveal that 30 percent of the farmers were middle aged, 30 percent of them belonged to young age category and 20 percent of the farmers belonged to the old age category having age above 50 years.

In Incentive group, the age of the farmers ranged from 24 to 67 years with an average of 53.12 year and standard deviation of 17.34 year. Data contained in Table 1 reveal that 10 percent of the farmers were middle aged, 60 percent of them belonged to young age category and 30 percent of the farmers belonged to the old age category having age above 50 years.

Table 1. Salient features of the age of the respondents of two group

Categories	Category	Respondents		Mean	SD
		Number	Percent		
Non Incentive group	Young (up to 30)	3	30	41.50	14.93
	Middle aged (31 – 50)	5	50		
	Old (>50)	2	20		
Incentive group	Young (up to 30)	1	10	53.12	17.34
	Middle aged (31 – 50)	6	60		
	Old (>50)	3	30		

Source: Field Survey, 2025

Salient features of the age of the respondents of two group

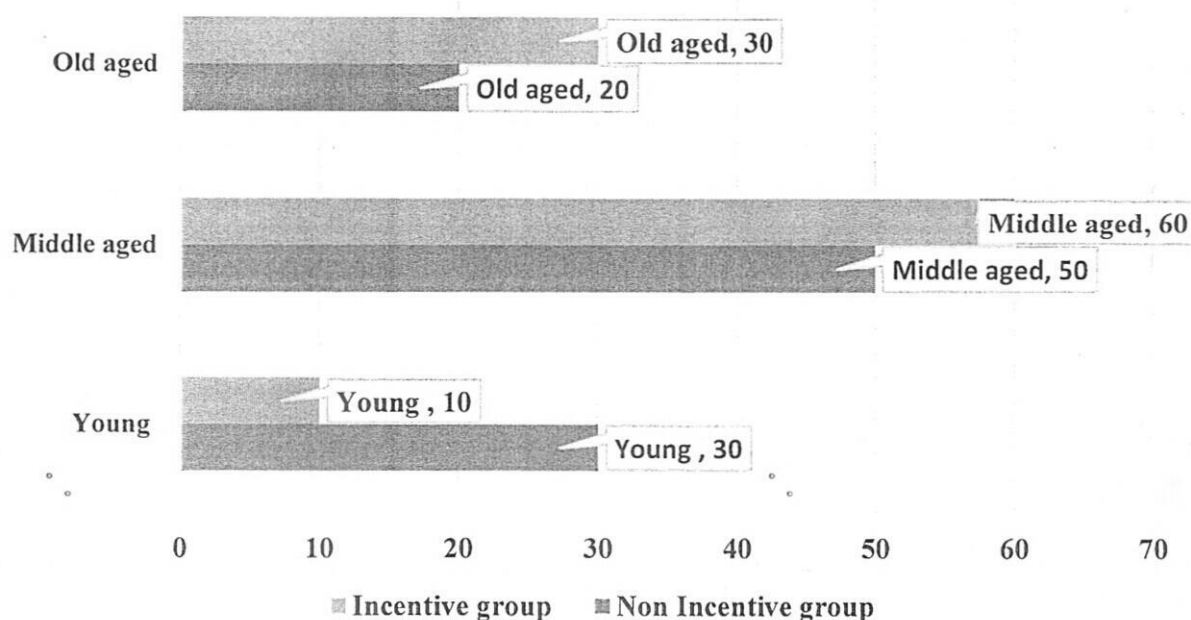


Figure: 1

Education

Education of the farmers non-Incentive group of Bhanga upazila ranged from 0 to 14 years of schooling having an average of 5.10 and standard deviation of 5.09. On the basis of their level of education, the farmers were classified into four categories as Can sign only (0), up to SSSC (I-X), and above secondary (>X) are presented in the Table 2.

Data contained in Table 2 revealed that 40 percent of the farmers had up to secondary level of education and 20 percent of the farmers having above secondary level of education, whereas 40 percent of them having can signing only.

Education of the farmers of Incentive group Bhanga Upazila ranged from 0 to 14 years of schooling having an average of 5.10 and standard deviation of 6.12. Data contained in Table 2 revealed that 60 percent of the farmers had up to secondary level of education and 40 percent of the farmers having above secondary level of education, whereas 40 percent of them having can signing only.

Table 2. Salient features of the education of the respondents of two group

Categories	Category	Respondents		Mean	SD
		Number	Percent		
Non Incentive group	Can sign only	4	40	5.10	5.09
	Up to SSC	4	40		
	SSC Above	2	20		
Incentive group	Can sign only	0	0	8.13	6.12
	Up to SSC	6	60		
	SSC Above	4	40		

Source: Field Survey, 2025

Salient features of the education of the respondents of two group

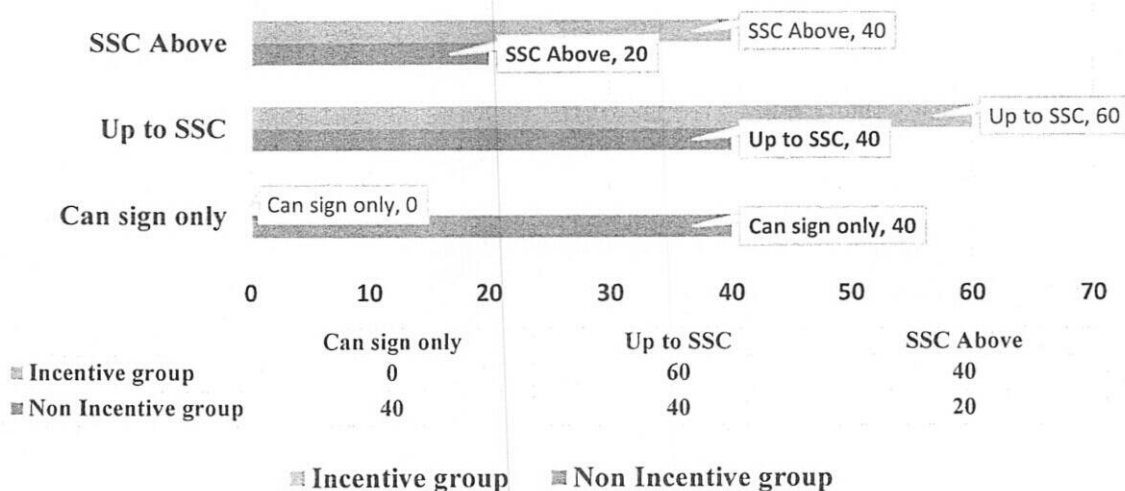


Figure: 2

Training of the farmers of non-incentive and incentive group shown in Table 3. Data contained in Table 3 revealed that in non-incentive group 40 percent of the farmers get training from Department of Agricultural Extension (DAE), 60 percent of the farmers have not get any training and the average training duration was 1.6 days.

From Table 3 revealed that in incentive group 100 percent of the farmers get training from Department of Agricultural Extension (DAE) and the average training duration was 4.7 days.

Table 3. Salient features of the training of the respondents of two group

Categories	Category	Respondents		Average training days
		Number	Percent	
Non Incentive group	Yes	4	40	1.6
	No	6	60	
Incentive group	Yes	10	100	4.7
	No	0	0	

Source: Field Survey, 2025

Salient features of the training of the respondents of two group

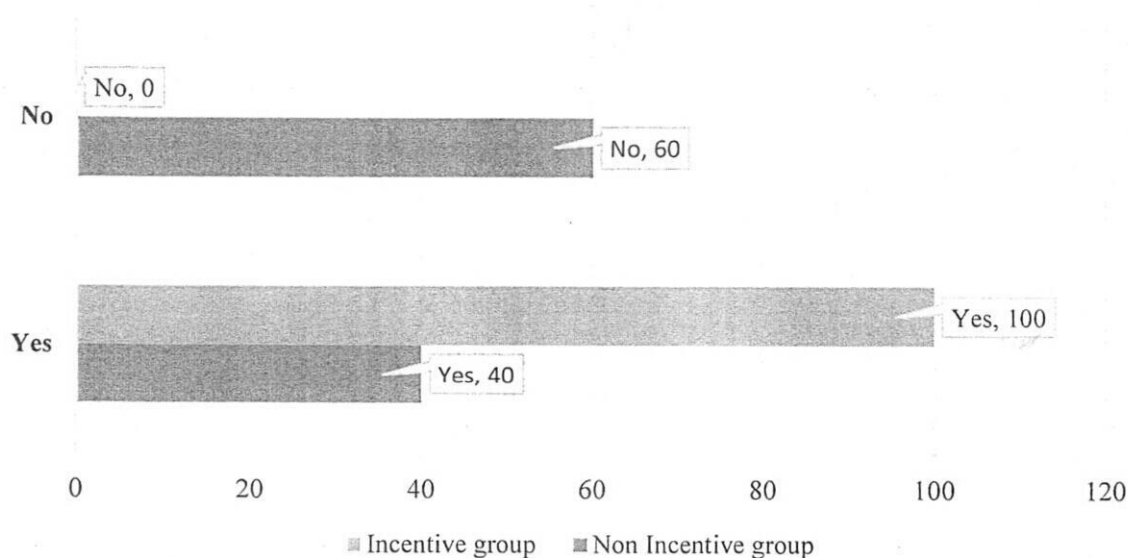


Figure: 3

Training of the farmers of non-incentive and incentive group shown in Table 4. Data contained in Table 4 revealed that in no incentive group 20 percent of the farmers prefer cash incentive from Department of Agricultural Extension (DAE) and 80 percent of the farmers prefer inputs support from incentive from Department of Agricultural Extension (DAE). From Table 4 also revealed that in non-incentive group 10 percent of the farmers prefer cash incentive from Department of Agricultural Extension (DAE) and 90 percent of the farmers prefer inputs support from incentive from Department of Agricultural Extension (DAE).

Table 4. Salient features of the incentives of the respondents of two group

Categories	Category	Respondents	
		Number	Percent
Non Incentive group	Cash	2	20
	Inputs	8	80
Incentive group	Cash	1	10
	Inputs	9	90

Source: Field Survey, 2025

Salient features of the incentives of the respondents of two group

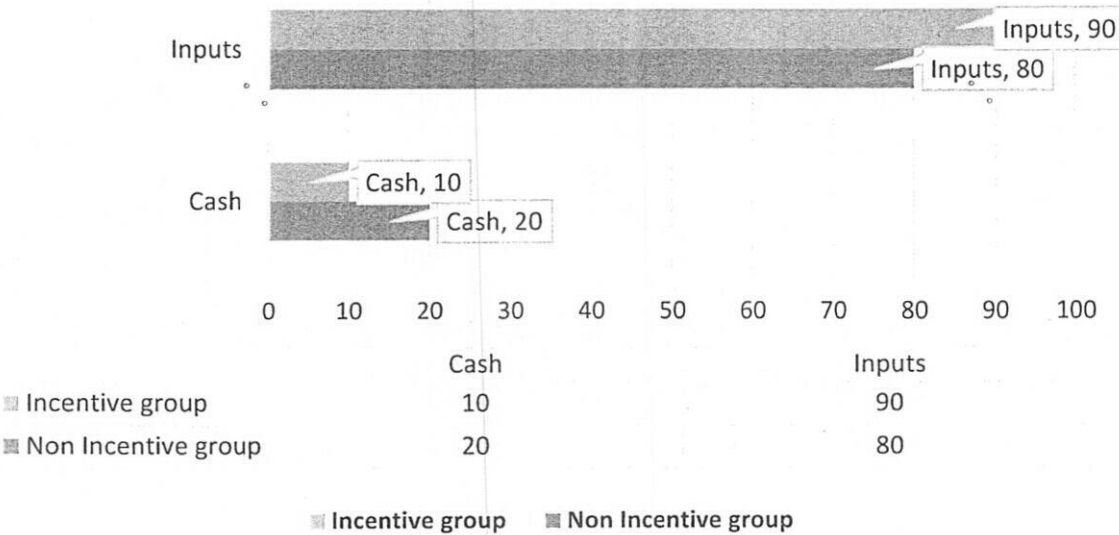


Figure: 4

Table 5. Salient features of the knowledge of the respondents of two group

Categories	Category	Respondents		Mean	SD
		Number	Percent		
Non Incentive group	Low (0-5)	4	40	6.40	1.26
	Medium (5-10)	6	60		
	High (11-15)	0	0		
Incentive group	Low (0-5)	0	0	13.2	1.59
	Medium (5-10)	4	40		
	High (11-15)	6	60		

Source: Field Survey, 2025

Salient features of the knowledge of the respondents of two group

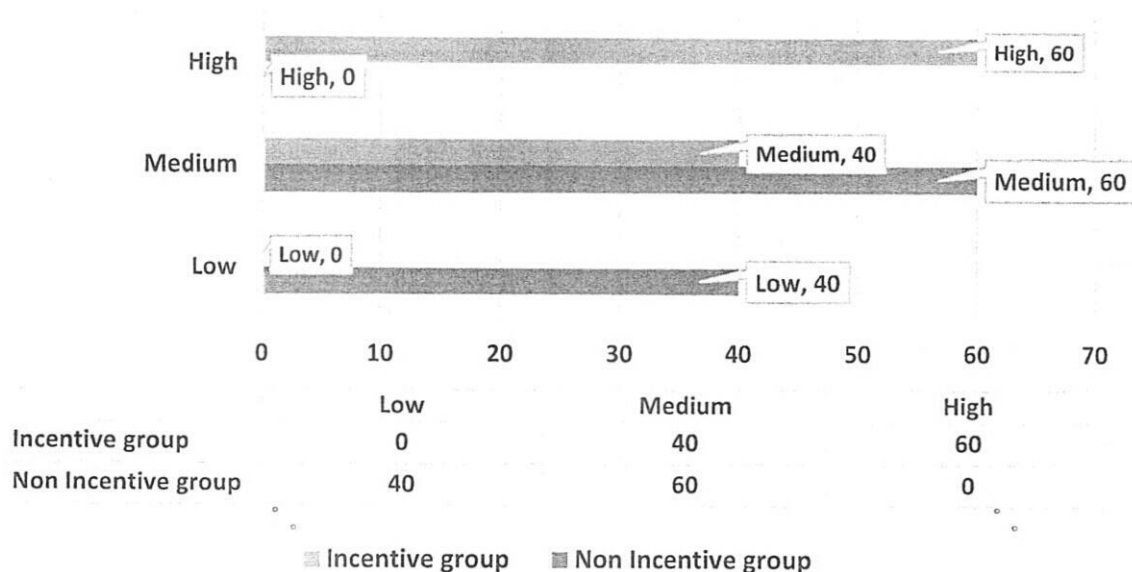


Figure: 5

Training of the farmers of non-incentive and incentive group shown in Table 6. Data contained in Table 6 revealed that in non-incentive group farmers got average yield 2.20 t ha⁻¹- and 47.50-taka kg⁻¹. Data also revealed that in incentive group farmers got average yield 3.17t ha⁻¹- and 56.70-taka kg⁻¹

Table 6. Salient features of the yield and price of the respondents of two group

Categories	Category	Number
Non-Incentive group	Yield (ton/ha)	2.20
	Price (Taka/kg)	47.50
Incentive group	Yield (ton/ha)	3.17
	Price (Taka/kg)	56.70

Source: Field Survey, 2025

Salient features of the yield and price of the respondents of two group

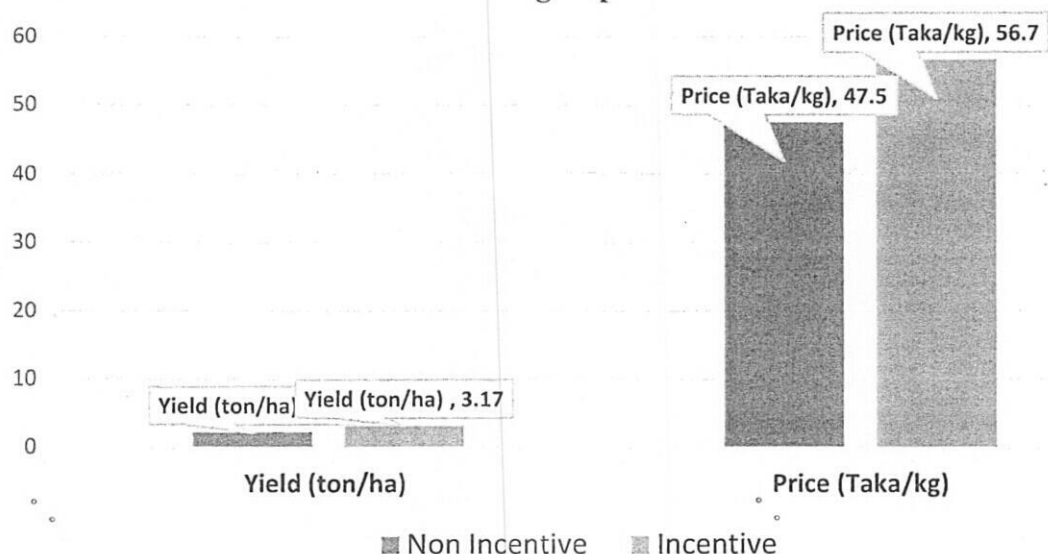


Figure: 6

The extent of problem against each statement as perceived by the farmers was assessed in this regard. Problem score for each statement was calculated by using Problem index (PI) and it has been arranged in rank order according to their extent of adaptation level which appears in Table 6. The Problem Index (PI) could range from 0 to 30, where 0 indicating no problem and 30 indicating maximum problem of a single statement on summer onion cultivation. In no incentive farmer group Table 6 shows that, “Availability of Seed” got the 1st rank among the statements with the total PI of 30. And 2nd position “Low Land” got the among the problem statements with the total PI of 29. In incentive farmer group Table 6 shows that, “Pest and Diseases” got the 1st rank among the statements with the total PI of 29. And 2nd position “Weather problem” got the among the problem statements with the total PI of 28.

Table 7. Salient features of the yield and price of the respondents of two group

Categories	Problem	Extent of Opinion				PI	Rank
		High	Medium	Low	Not ever		
No Incentive group	Availability of Seed	10	0	0	0	30	1
	Pest and Diseases	8	1	1	0	27	3
	Low Land	9	1	0	0	29	2
	Price of Onion	2	2	6	0	16	5
	Lack of knowledge	4	4	2	0	22	4
Incentive group	Weather problem	8	2	0	0	28	2
	Low land	7	2	1	0	26	3
	Pest and Diseases	9	1	0	0	29	1
	Lack of Knowledge	1	3	6	0	15	5
	Most of land occupied by other crops	2	5	3	0	19	4

Source: Field Survey, 2025

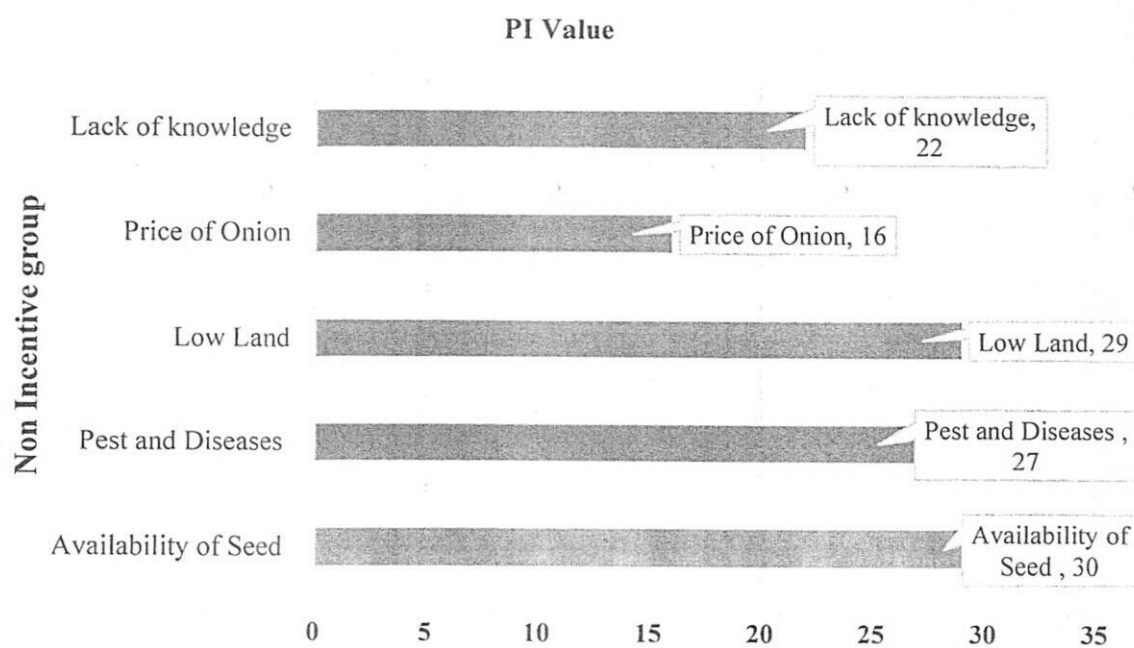


Figure: 7.1

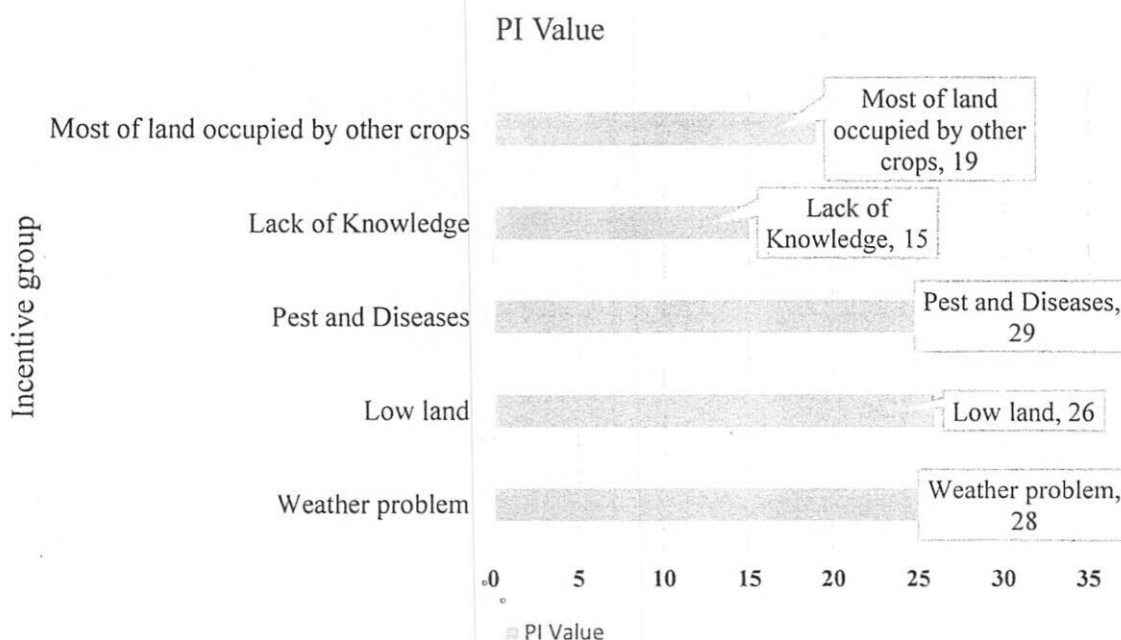


Figure: 7.2

Relationship between selected characteristics of the farmers and yield of summer onion

This section deals with the findings exploring the relationships between the selected independent and dependent variables of the study. The independent variables were age, education, training duration and knowledge. The dependent variable was yield of summer onion.

Pearson's Product Moment Co-efficient of Correlation (r) was used to test the null hypothesis concerning the relationships between two variables. One percent (0.01) level of probability was used as the basis for rejecting the null hypothesis. The result of correlation of co-efficient test between the dependent and independent variables have been shown in Table 7.

Table 8. Correlation between dependent variable and independent variables.

Dependent variable	Independent variable	Correlation Co-efficient (r) at 8 df (N=10)	
		No Incentive group	Incentive group
Yield	Age	-0.167	-.177
	Education	0.187	0.695*
	Training	0.306	0.648*
	Knowledge	0.515	0.728*

Source: Field Survey, 2025

*=Significant at 0.05 level

Age and yield of summer onion

In non-incentive group, the correlation coefficient between age of the respondent and yield of summer onion ($r = -0.167$) being non-significant, the concerned null hypothesis was accepted. It is, therefore, concluded that age of the farmers had a negative relationship with yield of summer onion.

In incentive group, the correlation coefficient between age of the respondent and yield of summer onion ($r = -0.177$) being non-significant, the concerned null hypothesis was accepted. It is, therefore, concluded that age of the farmers had a negative relationship with yield of summer onion.

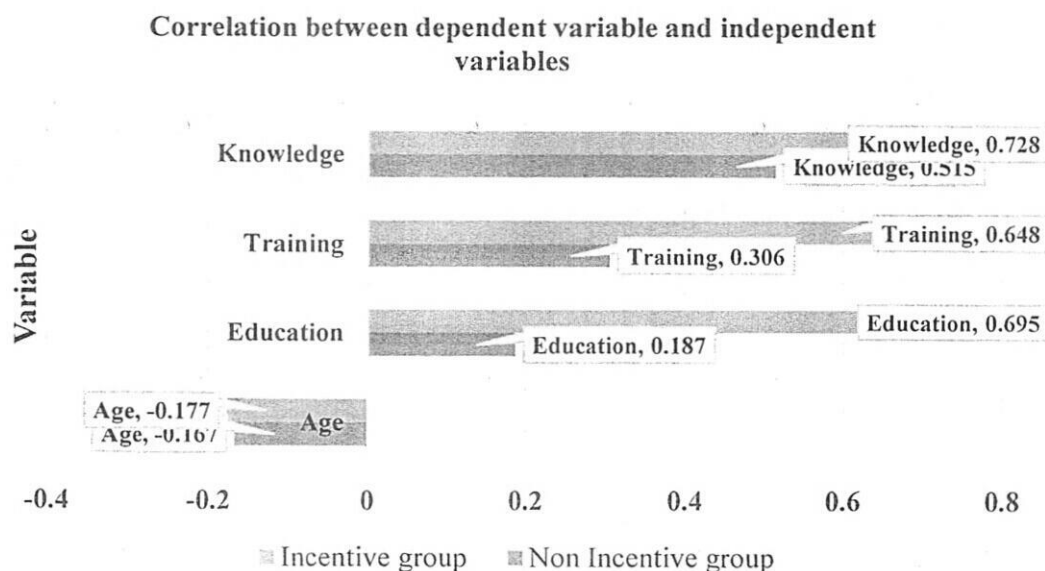


Figure: 8

Education and yield of summer onion

In non-incentive group, the correlation coefficient between education of the respondent and yield of summer onion ($r = 0.187$) being non-significant, the concerned null hypothesis was accepted. It is, therefore, concluded that education of the farmers had a positive relationship with yield of summer onion.

In non-incentive group, the correlation coefficient between education of the respondent and yield of summer onion ($r = 0.695^*$) being significant, the concerned null hypothesis was accepted. It is, therefore, concluded that education of the farmers had a positive relationship with yield of summer onion.

Training and yield of summer onion

In non-incentive group, the correlation coefficient between training duration of the respondent and yield of summer onion ($r = 0.306$) being non-significant, the concerned null hypothesis was accepted. It is, therefore, concluded that training duration of the farmers had a positive relationship with yield of summer onion.

In non-incentive group, the correlation coefficient between training duration of the respondent and yield of summer onion ($r = 0.648^*$) being significant, the concerned null hypothesis was accepted. It is, therefore, concluded that training duration of the farmers had a positive relationship with yield of summer onion.

Knowledge and yield of summer onion

In non-incentive group, the correlation coefficient between knowledge of the respondent and yield of summer onion ($r = 0.515$) being non-significant, the concerned null hypothesis was accepted. It is, therefore, concluded that knowledge of the farmers had a positive relationship with yield of summer onion.

In non-incentive group, the correlation coefficient between knowledge of the respondent and yield of summer onion ($r = 0.728^*$) being significant, the concerned null hypothesis was accepted. It is, therefore, concluded that knowledge of the farmers had a positive relationship with yield of summer onion.

5. Conclusions

Findings of the present study and the logical interpretation of other relevant facts, promoted the researchers to draw the following conclusion.

- i. The study revealed that level of education of the farmers had highly positive and significant relationship with their adoption with impact of climate change. Most of the farmers were having primary to secondary level of education. Education brings a positive change in the behavior of human life and enhances the ability of individuals to pursue some activities that leads a desirable goal. Thus, it may be concluded that having higher education for farmers is an important factor for bringing change yield of summer onion.
- ii. Findings reveal that average yield of summer onion 2.20 t ha^{-1} and 3.17 t ha^{-1} in no incentive and incentive group of farmers.
- iii. The study reveals that education, training duration and knowledge had positive significant relationship with yield of summer onion both study group as well as higher the education, training duration and knowledge may be ensured the higher summer onion yield.
- iv. Findings showed that majority of the farmers had high problems in different issue. Among the different problems in no incentive farmer group "Availability of Seed" and "Low land" got the highest rank of problem. On the other hand, in incentive farmer group "Pest and Diseases" and "Weather problem" rank the highest problem.

6. Recommendations

Based on findings and conclusion of the study, the following recommendations are presented below:

- i. Massive and relevant training program should be conducted for farmers to upgrade their awareness and understandings of the knowledge about summer onion production. The various NGOs may be involved in the conduction of training program.
- ii. Steps should be taken that farmers can easily get necessary production inputs specially seeds of summer onion in lesser cost.
- iii. Department of Environment, Department of Agricultural Extension and other concerned organizations should realize the existing problems of the farmers and necessary steps to overcome these problems.
- iv. Extension services should provide improved farm management practices among the all categories of farmers in order to enhance their farm income so that they can further enhance their income.

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Instruction to be followed

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1. Please write your Name, Roll No etc. at the specified space.
2. Writing Name, Roll No. etc. at any other place or making the script otherwise may cause cancellation of your answer script.
1. Put tick (✓) marks on Evaluation method and Institute's Name.

Name: Dr. M.A Mannam

Roll No: 117

Abstract

The National Reshom (Silk) Policy 2005 was formulated to revive and promote the silk industry in Bangladesh through institutional strengthening and strategic interventions. This study aims to assess the effectiveness of the policy, focusing particularly on the coordination between the Bangladesh Sericulture Development Board (BSDB) and other key stakeholders including government departments, NGOs, private sector and research institutions. Using qualitative and quantitative methods, data were collected through interviews, surveys, and document analysis. Findings indicate that although the policy outlined a comprehensive vision for the sericulture sector, coordination among stakeholders remains fragmented and inconsistent. Lack of communication, overlapping responsibilities, insufficient funding, and limited technical capacity hinder the implementation of policy objectives. Furthermore, the absence of a centralized monitoring mechanism and regular inter-agency consultations reduces policy coherence and impacts project outcomes. Despite these challenges, opportunities exist for improving collaboration through structured institutional reforms, capacity building, and private sector engagement. The study concludes that without effective coordination, the full potential of the National Reshom Policy 2005 cannot be realized. Strengthening inter-agency communication and fostering stakeholder participation are critical to promoting a sustainable silk industry in Bangladesh.

Keywords: National Reshom Policy, BSDB, coordination, sericulture, stakeholders.

Effectiveness of National Reshom (Silk) Policy 2005: An Examination of the Coordination Between Bangladesh Sericulture Development Board (BSDB) and Other Organization/Stakeholders

Introduction:

1.1 Background of the study

Bangladesh has a long and glorious history in sericulture, as her agro-climatic conditions are very favorable for the development of this industry. 'Bengal Silk' was highly prominent throughout Asia. It was known as "Ganges Silk" in distant Italy as early as the 13th century (*Ahmed, 1988*). Bengal produced much more silk than was consumed locally and boasted a vigorous export trade in both textiles and raw silk (*Banerjee, 1990*). This trade was what first attracted European traders to Bengal (*Salam, 1981; Davini, 2008, 2009*). Gradually, European traders began to influence the course of the industry.

Sericulture has long been an integral part of the socio-economic fabric of rural Bangladesh, particularly in the northern regions such as Rajshahi, known as the country's silk capital city. Traditionally, the silk industry has provided employment opportunities to a large number of rural people, particularly women, making it a tool for both income generation and poverty alleviation (*Hasan and Akter (2016)*). About 80 percent of the workforce involved in sericulture are poor rural women who engage in various stages of silk production, from mulberry cultivation to reeling, weaving, and dyeing. This labor-intensive industry contributes not only to the livelihood of marginalized communities but also to the preservation of cultural heritage and the promotion of local craftsmanship.

Despite its historical and economic importance, the silk industry in Bangladesh has faced several challenges, including declining productivity, outdated technology, weak infrastructure, and insufficient institutional coordination (*Huq (1997)*). The government introduced the National Reshom (Silk) Policy in 2005 to address these issues and revitalize the sector. The primary objective of the policy was to enhance productivity, improve product quality, and ensure the competitiveness of locally produced silk in both domestic and international markets. A critical element of the policy's success lies in the effective coordination among the key organizations involved, notably the Bangladesh Sericulture Development Board (BSDB), the Sericulture Research and Training Institute (SRTI), NGOs, and private sector stakeholders.

According to Banglapedia (National Encyclopedia of Bangladesh), by 1835, the British East India Company operated over a hundred filatures in the region and exported about 400 tons of raw silk. Later, private companies took over, and the export trade boomed until the 1870s, when epidemics of silkworm diseases and technological stagnation caused Bengal to lose most of its foreign markets. At the same time, Japan emerged as a major silk exporter. By the early 20th century, Bengal silk was pushed out of South Asian markets, especially by Kashmir and Mysore silk (Ahmed, 1997). By the 1930s, Chinese and Japanese silk began replacing Bengal silk even within Bengal itself.

1.2 Problem Statement

Despite the formulation of the National Reshom Policy in 2005 to revitalize and sustain the silk industry in Bangladesh, its effectiveness remains a subject of concern. The Bangladesh Sericulture Development Board (BSDB), established to oversee sericulture development, faces considerable challenges in coordinating effectively with other relevant organizations, including government agencies, NGOs, and private stakeholders. Lack of synchronized policy implementation, resource constraints, and weak institutional linkages have hindered the achievement of policy goals. Although sericulture holds significant potential for rural employment, especially for women, fragmented coordination mechanisms have limited the impact of the policy. The absence of a structured framework for collaboration and monitoring has further contributed to inefficiencies in program delivery and reduced the scope for scaling up successful initiatives. This study will seek to critically examine these coordination gaps and evaluate how they affect the overall effectiveness of the National Reshom Policy 2005 in promoting a sustainable and inclusive silk industry in Bangladesh.

1.3 Objectives of the study:

- i. To assess the effectiveness of coordination mechanisms between the Bangladesh Sericulture Development Board (BSDB) and related government and non-government organizations.
- ii. To identify key challenges and opportunities in inter-agency collaboration for the sustainable development of the silk industry.

1.4 Significance of the study

The significance of this study lies in its potential to enhance the effectiveness of the National Reshom Policy 2005 by examining the coordination between the Bangladesh Sericulture Development Board (BSDB) and other relevant organizations or stakeholders. Effective coordination is essential to ensure efficient resource use, reduce duplication of efforts, and foster innovation in silk production. By identifying the gaps and challenges in institutional collaboration, the study can contribute to policy reforms that support sustainable growth, poverty reduction, and the empowerment of rural women who form the backbone of this labor-intensive industry. The findings will be valuable for policymakers and development practitioners alike.

2.0 Literature Review

The silk industry in Bangladesh has a long-standing historical, economic, and cultural significance. The introduction of the National Reshom Policy 2005 was intended to provide a coordinated and structured development framework for the silk sector, primarily through the engagement of the Bangladesh Sericulture Development Board (BSDB) and related organizations. This literature review evaluates previous studies and findings related to the policy's implementation, coordination mechanisms, and the impact on the silk industry's sustainability.

The development of the silk industry in Bangladesh dates back centuries, where 'Bengal Silk' was renowned globally (*Ahmed, 1988*). After the 1947 partition and the establishment of Bangladesh, the industry declined due to infrastructural and administrative neglect. In the post-independence period, however, efforts were undertaken to revitalize the industry. BSDB was formed in 1978 to coordinate sericulture development. The National Reshom Policy 2005 was introduced as a comprehensive framework aimed at sustainable sericulture development, employment generation, and poverty alleviation (*Rahman et al., 2007*).

Several studies highlight the critical role of institutional coordination in policy success. Alam (2010) found that lack of communication and overlap of responsibilities among organizations like BSDB, BSCIC, and NGOs has hindered policy execution. *Islam and Hossain (2012)* argue that although the National Reshom Policy 2005 articulates clear goals, coordination gaps have restricted its outcomes. There is often a mismatch between policy planning and implementation due to bureaucratic fragmentation.

Furthermore, a study by *Karim (2015)* emphasized that BSDB suffers from inadequate resources, lack of autonomy, and political interference, affecting its capability to lead coordinated efforts. NGO involvement has helped fill some gaps, but without an integrated institutional platform, duplication and inefficiencies persist.

The National Reshom Policy 2005 aimed to support rural livelihoods, particularly those of poor women, who constitute the majority of the workforce in the sericulture sector. *Huq (1997)* notes that NGOs have empowered rural women by providing training and support in silk weaving. However, the sustainability of these efforts is contingent on continued coordination and support from public institutions.

Hasan and Akter (2016) conducted field studies in Rajshahi and found that many stakeholders were unaware of the Reshom Policy or did not receive direct support from BSDB. This reflects a disconnect between policy formulation and field-level implementation. Additionally, weak linkages between research, training, and commercial production units have limited the policy's impact on productivity and competitiveness.

The role of research and technology dissemination in sericulture has also been underwhelming. *Ahmed (2011)* stated that while the policy encourages modernization, limited infrastructure and weak collaboration with research institutions have stymied progress. Lack of standardized practices and poor-quality control mechanisms further reduce the appeal of Bangladeshi silk in international markets. In terms of market integration, Rahman and Kabir (2013) suggest that the absence of a unified market strategy and weak coordination between BSDB and the Ministry of Commerce has led to uncompetitive pricing and reduced export potentials. Other emerging silk-exporting countries like India and China have adopted more cohesive policies and stronger institutional collaboration.

Despite several evaluations of the Reshom Policy 2005, a major gap exists in examining the vertical and horizontal coordination among stakeholders. Few studies focus on real-time monitoring mechanisms or feedback loops that connect local producers with policymakers. Moreover, gender-specific impacts of the policy remain underexplored. There is also a lack of comparative analysis between Bangladesh and other sericulture-intensive countries, which could yield valuable policy lessons. Future research should explore digital platforms for coordination, the impact of decentralization, and public-private partnerships in policy execution.

The literature on the National Reshom Policy 2005 reveals both its potential and limitations. While the policy framework is robust, its effectiveness is undermined by weak coordination, limited stakeholder engagement, and underfunded institutions. There is an urgent need for more integrated governance, stakeholder inclusion, and evidence-based policy revisions to ensure the long-term sustainability of the silk industry.

3.0 Methodology

Research Design

This study adopts a qualitative and descriptive research design, supplemented by limited quantitative data, to explore the current challenges and potential strategies for revitalizing the silk industry in Bangladesh. It involves analyzing historical trends, current practices and future opportunities through both primary and secondary data sources.

Data Collection Methods

a. Primary Data:

- ✓ Key Informant Interviews (KIIs): Interviews were conducted with government officials (Bangladesh Sericulture Development Board representatives), silk farmers, industry experts, NGO workers, and entrepreneurs involved in silk production and marketing.
- ✓ Focus Group Discussions (FGDs): FGDs were arranged with silk farmers and rural weavers to understand ground-level challenges and opportunities.
- ✓ Surveys: A structured questionnaire was administered to a sample of silk producers and traders to collect quantifiable data on production, challenges and market access.

b. Secondary Data:

Review of government reports, policy documents, past research studies, articles and publications from institutions such as BSCIC, BSDB and International Sericulture Commission (ISC).

Data Analysis

Qualitative data was analyzed through thematic analysis to identify patterns, challenges and strategic needs. Quantitative data collected from surveys was analyzed using simple descriptive statistics (e.g., frequency, percentage, mean) to support qualitative findings.

4.0 Data Analysis and Findings

4.1 Data Collocation:

The first objective of the study was to assess the effectiveness of the coordination mechanism between the Bangladesh Sericulture Development Board (BSDB) and related government and non-government organizations. The second objective was to identify the key challenges and opportunities for inter-agency cooperation for the sustainable development of the silk industry. Data were collected from both primary and secondary sources, aligned with these objectives. Primary data were collected through key informant interviews (KIIs) with a few stakeholders from the Bangladesh Sericulture Development Board (BSDB) and other organizations/partners.

The main objective of the interviews was to gather information from professionals working with the Bangladesh Sericulture Development Board (BSDB) and other organizations/partners. They shared their views on the key challenges and opportunities for inter-agency cooperation for the sustainable development of the silk industry and made recommendations to overcome those challenges. To collect relevant information, interviews were conducted using checklists and verbal discussions based on the objectives and vision of the study. The interviews included both open- and closed-ended questions. The checklist contained a few questions that were simple and easy to elaborate on.

4.2 Data Analysis:

The researcher himself collected the data by supplying checklist containing few questions among the respondents.

The data analysis has been shown in the table below: -

4.2.1 Effectiveness of Coordination Mechanisms

Table-1:

How would you rate the effectiveness of coordination between BSDB and your organization?	Percent (%)
Joint training programs	33%
Information sharing	21%
Joint planning or project implementation	29%
Funding or resource sharing	7%
Policy consultations	10%
Total	100

Source: Questionnaire survey, 2025

33% of respondents said joint training programs, 21% of respondents said information sharing, 29% of respondents said joint planning or project implementation, 7% of respondents said funding or resource sharing, and 10% of respondents said policy advice.

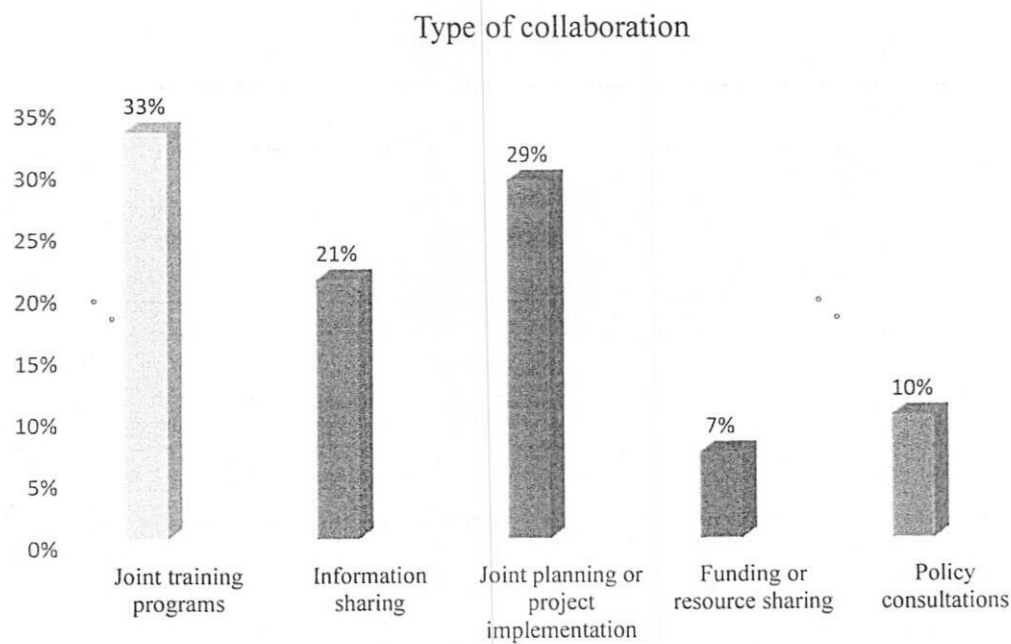


Figure-1

4.2.2 Are their mechanisms to ensure coordination

Table-2:

Are there formal mechanisms in place to ensure coordination?	Percent (%)
Yes	57%
No	16%
Not Sure	27%
Total	100

Source: Questionnaire survey, 2025

57% of respondents said yes, 16% of respondents said no, and 27% of respondents said they were not sure.

Are their mechanisms to ensure coordination

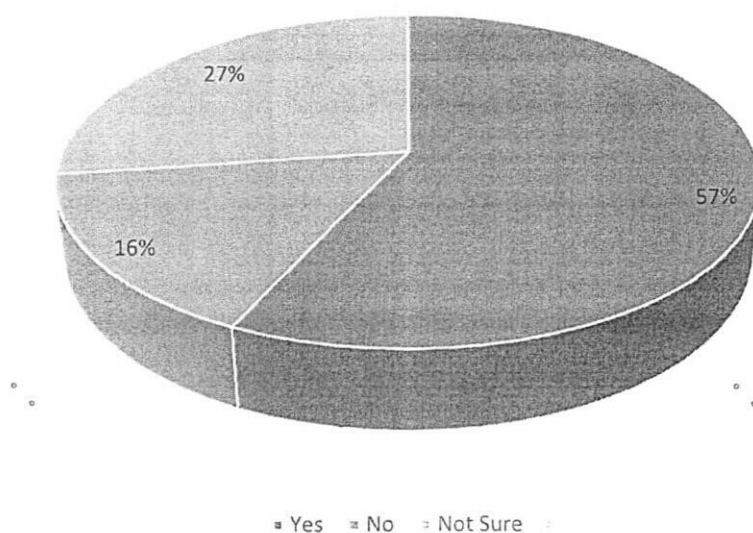


Figure-2

4.2.3 Interaction with BSDB

Table-3:

How frequently does your organization interact with BSDB for silk industry-related activities?	Percent (%)
Weekly	13%
Monthly	43%
Quarterly	9%
Annually	11%
Rarely	24%
Total	100

Source: Questionnaire survey, 2025

13% of respondents said weekly, 43% of respondents said monthly, 9% of respondents said quarterly, 11% of respondents said annually and 24% of respondents said rarely.

Interaction with BSDB

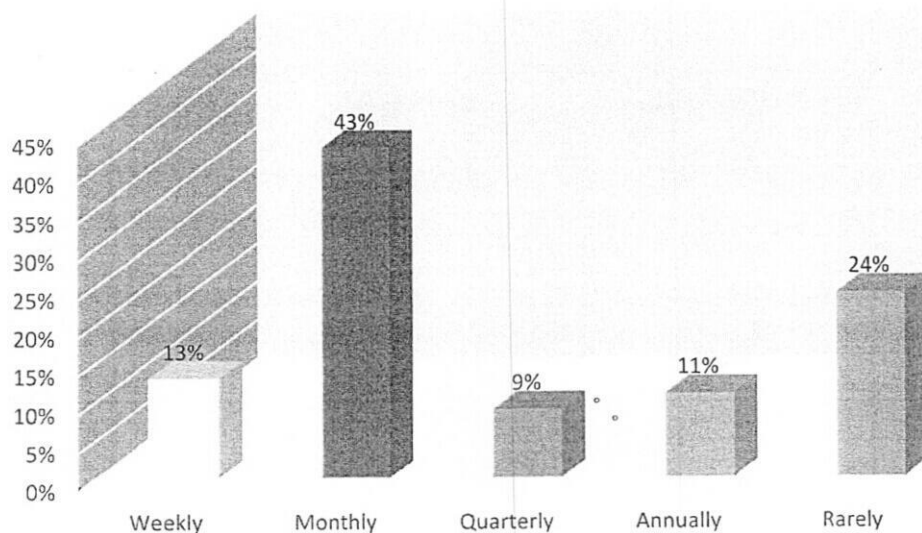


Figure-3

4.2.4 Improved by the Silk Road Policy cooperation

Table-4:

To what extent do you think the Reshom Policy 2005 has improved inter-agency collaboration?	Percent (%)
Significantly	31%
Moderately	63%
Slightly	6%
Total	100

Source: Questionnaire survey, 2025

31% of respondents said significantly, 63% of respondents said moderately and 6% of respondents said slightly.

Improved by the Silk Road Policy cooperation

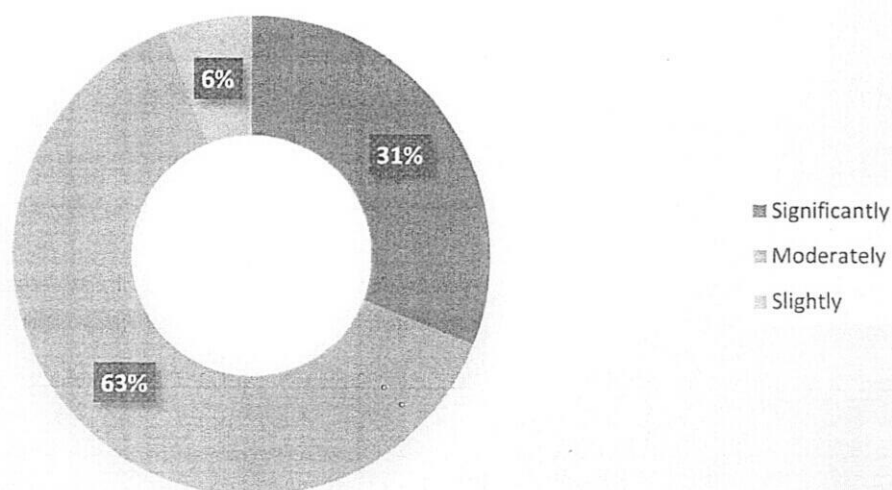


Figure-4

Challenges and Opportunities

4.2.5 Main challenges

Table-5:

What are the main challenges in coordination between BSDB and other organizations?	Percent (%)
Lack of communication	29%
Overlapping roles	21%
Insufficient resources	36%
Weak institutional capacity	11%
Political or bureaucratic barriers	3%
Total	100

Source: Questionnaire survey, 2025

29% of respondents said lack of communication, 21% of respondents said overlapping roles, 36% of respondents said insufficient resources, 11% of respondents said weak institutional capacity, and 3% of respondents said political or bureaucratic obstacles.

Main challenges

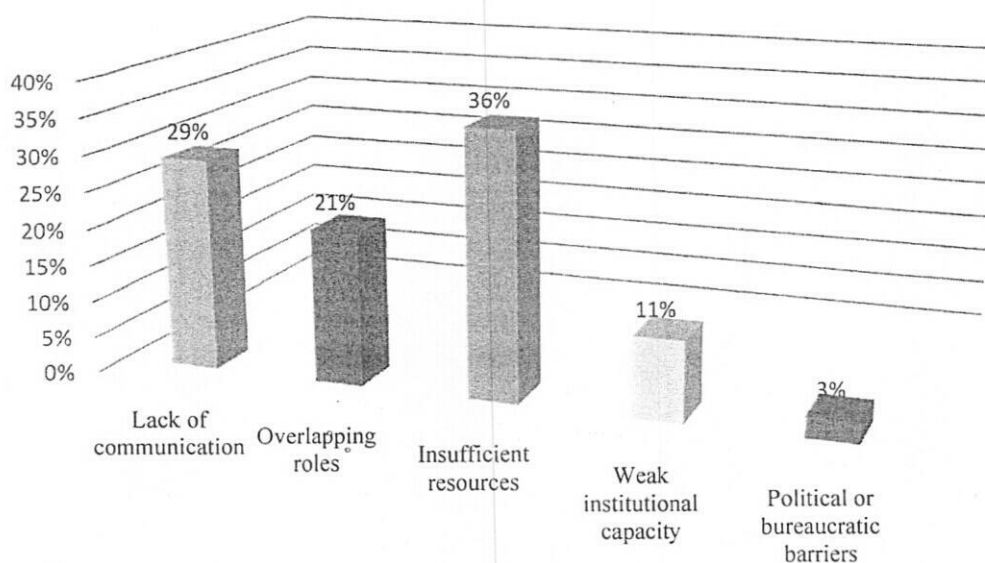


Figure-5

4.2.6 Opportunities to improve

Table-6:

What opportunities exist to improve coordination for sustainable sericulture development?	Percent (%)
Digital data-sharing platforms	33%
Increased joint funding	20%
Policy-level collaboration	17%
Community-based partnerships	30%
Total	100

Source: Questionnaire survey, 2025

33% of respondents said digital data-sharing platforms, 20% of respondents said increased joint funding, 17% of respondents said policy-level collaboration, and 30% of respondents said community-based partnerships.

Opportunities to improve

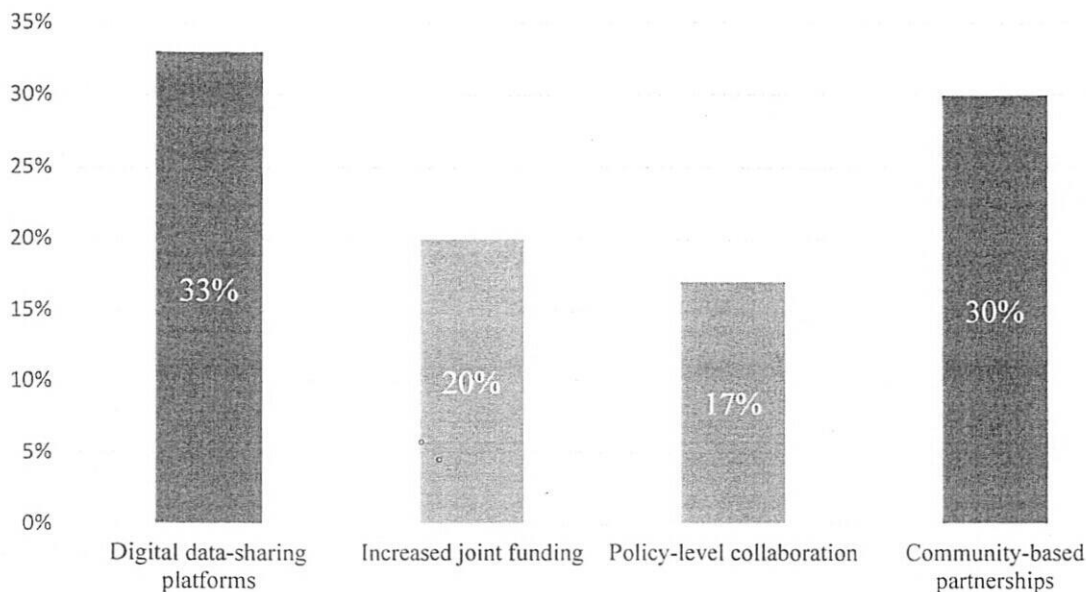


Figure-6

4.3 Recommendations to improve performance

The question was about improving the effectiveness of the National Reshom Policy 2005 in terms of inter-agency coordination. All the respondents expressed positive views and commented on this issue.

Issue Identified	Recommended Change	Expected Outcome
Lack of clear roles and responsibilities among agencies	Define and formalize agency roles through a coordination framework	Reduced overlap and conflict; better accountability
Weak collaboration between BSDB and research institutions	Establish joint task forces or MoUs with universities and research centers	Enhanced innovation in silkworm breeding and reeling techniques
Minimal engagement with private sector and NGOs	Create Public-Private Partnership (PPP) models and multi-stakeholder platforms	Increased investment and market-driven production

Poor information-sharing mechanisms	Develop an integrated digital information portal for sericulture data and activities	Real-time decision-making; increased transparency
Infrequent coordination meetings	Institutionalize quarterly coordination meetings among BSDB, Ministry of Textiles & Jutes and other stakeholders	Regular monitoring and timely resolution of implementation issues
Limited local government involvement	Delegate specific responsibilities to local bodies (e.g., training, extension support)	Strengthened grassroots-level implementation
Inadequate performance monitoring	Implement inter-agency KPIs and a central performance dashboard	Better policy evaluation and impact tracking
Fragmented funding and resource allocation	Develop a pooled funding mechanism involving all stakeholders	Optimized resource use and reduced duplication
Absence of a national coordination committee	Establish a National Sericulture Coordination Council under Ministry of Textiles & Jutes (MoTJ)	Central oversight and strategic direction for all stakeholders

4.4 Qualitative Data Analysis

The qualitative data analysis for this study was conducted through thematic evaluation based on interviews, focus group discussions (FGDs), and document reviews involving key stakeholders from the Bangladesh Sericulture Development Board (BSDB), representatives from NGOs, local government officials, private silk entrepreneurs, and sericulture farmers.

Thematic Analysis:

A recurring theme across interviews and FGDs was the lack of formal and structured communication channels among institutions. Respondents from BSDB and NGOs noted that coordination efforts are often ad hoc rather than institutionalized, resulting in duplication of initiatives and misaligned priorities.

Multiple participants highlighted confusion about the roles and responsibilities of various stakeholders involved in the implementation of the National Reshom Policy-2005. This lack of clarity has led to inefficiencies in project execution and resource allocation.

Field-level officers and sericulture farmers expressed limited awareness of the National Reshom Policy 2005. This gap in communication from central to grassroots level impedes effective policy implementation and prevents local stakeholders from actively engaging in sericulture development.

Participants from BSDB and private silk farm owners reported significant resource limitations, both in terms of funding and skilled personnel. Many projects related to sericulture have been delayed or downscaled due to budget shortfalls and lack of technical expertise.

Training and capacity-building programs were described as infrequent and lacking in coverage. NGO representatives noted that although some training initiatives exist, they are not aligned with the latest technology or market needs, reducing their impact.

Despite these challenges, there was a general consensus among stakeholders about the importance of improved coordination. Most participants welcomed the idea of forming a centralized coordination committee or mechanism to streamline sericulture activities and align stakeholder efforts.

Stakeholder Perspectives:

- BSDB Officials: Stressed the need for legal and institutional reforms to strengthen their role and enhance inter-agency coordination.
- NGOs and Private Sector: Emphasized the potential for public-private partnerships and requested inclusion in planning and implementation processes.
- Farmers and Local Officers: Called for more inclusive decision-making, better access to information, and decentralized resource distribution.

Document Review Findings:

A review of the National Reshom Policy 2005 and related BSDB reports revealed a lack of concrete implementation guidelines for inter-agency collaboration. While the policy outlines strategic goals,

the absence of detailed coordination frameworks and performance monitoring tools has contributed to the ineffective execution of initiatives.

5.0 Challenges of the study

- ✓ **Lack of Updated and Accessible Data:** One of the major challenges faced during the study is the unavailability of updated and comprehensive data on the implementation of the National Reshom Policy 2005. Many records are either outdated or not publicly accessible, making it difficult to evaluate the effectiveness and coordination mechanisms among stakeholders accurately.
- ✓ **Limited Stakeholder Cooperation:** The study may encounter resistance or limited cooperation from relevant organizations, including governmental and non-governmental actors. Some stakeholders might be reluctant to disclose information that reflects inefficiencies or coordination failures, affecting the objectivity of findings.
- ✓ **Inadequate Documentation of Policy Outcomes:** There is a lack of documented evidence on measurable outcomes resulting from the National Reshom Policy 2005. Without clear indicators or benchmarks, it becomes challenging to assess the policy's effectiveness or its actual impact on the sericulture sector.
- ✓ **Geographical Constraints:** Since sericulture activities are spread across various remote rural regions, field visits and data collection can be logistically challenging and resource-intensive, potentially limiting the sample size and scope of primary data.
- ✓ **Institutional Overlaps and Ambiguity:** The overlapping roles and responsibilities of different organizations involved in sericulture development create ambiguity in accountability. This institutional complexity complicates the analysis of coordination and policy execution.
- ✓ **Lack of Awareness Among Beneficiaries:** Many primary stakeholders, such as farmers and silk producers, have limited understanding or awareness of the policy. This hampers the collection of informed opinions from grassroots-level participants.

6.0 Conclusion and Recommendations

6.1 Conclusion

The National Reshom Policy 2005 was introduced with the aim of revitalizing the silk industry in Bangladesh by ensuring improved coordination among relevant institutions and enhancing the productivity and quality of domestic silk. However, the findings of this study suggest that while the policy laid a foundational framework, its implementation has faced several structural and operational challenges. Coordination between the Bangladesh Sericulture Development Board (BSDB) and other governmental and non-governmental organizations remains limited and fragmented. The lack of integrated planning, overlapping responsibilities, and insufficient communication among stakeholders has hindered the development of a cohesive and sustainable sericulture sector. Furthermore, resource constraints, outdated practices, and the absence of monitoring and evaluation mechanisms have weakened the policy's impact on rural livelihoods, especially for poor women who constitute a significant portion of the workforce in this industry. Despite the potential of the silk sector to contribute to poverty alleviation rural employment and mostly women empowerment, the benefits have not been fully realized due to institutional inefficiencies.

To achieve the intended goals of the Reshom Policy-2005, there is a critical need for reforms that strengthen inter-agency coordination, allocate adequate resources, and build technical capacities at all levels. A revised and dynamic national reshom strategy is essential to guide future actions and ensure sustainable development of the silk industry in Bangladesh.

6.2 Recommendations

- ✓ Establish a National Silk Coordination Committee to align goals and activities among all stakeholders.
- ✓ Regular inter-agency meetings should be mandated to discuss progress and bottlenecks.
- ✓ Clearly define roles and responsibilities of BSDB and other related organizations to avoid overlap.
- ✓ Develop a centralized silk industry database for better information sharing and planning.
- ✓ Enhance capacity building programs for BSDB officials and partnering organizations.
- ✓ Ensure sufficient financial allocation to BSDB for executing development initiatives.

- ✓ Promote public-private partnerships (PPP) to attract investment and innovation in sericulture.
- ✓ Integrate sericulture with rural development projects for inclusive growth.
- ✓ Introduce a performance-based evaluation system for measuring institutional coordination.
- ✓ Update and revise the Reshom Policy 2005 to meet current industry demands.
- ✓ Promote research and development (R\&D) in silkworm breeding and mulberry cultivation.
- ✓ Encourage market linkages between silk producers and buyers for better value chain integration.
- ✓ Create awareness programs for farmers on modern silk farming techniques.
- ✓ Simplify bureaucratic procedures for accessing support services and funding.
- ✓ Monitor and evaluate policy implementation through third-party assessments.

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NAME OF THE MODULE : Research and Policy Evaluation

MODULE :03

DATE:28.05.2025

Instructions to be followed

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Dr. Md. Didarul Alam

Roll No. 118

Research on

Aviation Fuel Pricing in Bangladesh: Policy Directives, Compliances and Implications

Abstract:

Aviation fuel tariff methodology was made available by BERC in 2012; in spite of that, price was being determined by BPC through administrative pricing keeping aside the policy directives of section 34 of BERC Act, 2003 . BERC determined tariff for the first time in 2025 as per policy directives in BERC Act, 2003. A qualitative study was conducted based on content analysis, FGDs and KIIs to evaluate the policy directives considering compliances and implications and to recommend some policy interventions to make aviation fuel pricing more rational identifying the areas of improvement. A significant implication was found due to noncompliance of Policy directives until the BERC was involved in pricing as legitimate authority and this was perceived as predatory as a number of domestic aviation operators had to terminate their business. In contrast, BERC's recent tariff orders complying all policy directives following appropriate methodology addressing the issues of cost rationalization, cost recovery, efficiency, quality service, participatory pricing mechanism etc. brought apparent relief in the aviation sector. Improvements were recommended in the areas of:

1. Operationalization of tariff regulations through immediate legal effect;
2. Elimination of subjective aspects in cost estimations;
3. Rationalization of non-product cost elements (tax, vat etc.) for developing cargo aviation sector in the context of India's unilateral withdrawal of 3rd country transit for Bangladesh.

Key words: aviation fuel, tariff methodology, cargo aviation, administrative pricing, regulated pricing, predatory pricing

1. Introduction:

Energy pricing is within the legitimate scope of Bangladesh Energy Regulatory Commission-BERC and is recognized as an important regulatory tool to bring good governance throughout the value chain of energy sector. In the preamble of the BEREC Act- 2003, it is very clearly stated that an independent and impartial Commission has to be in existence to create environment conducive to the private investment, bring efficiency in operation and management and tariff determination, protect consumers' interests and establish a competitive energy market (GOB,2003). In line with that Chapter 4, section 22(kha) of BEREC Act-2003 fixes tariff to be one of the important functional responsibilities of BEREC. Chapter 7 covering section 34 of the act has been dedicated as a comprehensive policy directive for tariff determination where sub section (1) emphasized on methodology of tariff determination to be developed in consultation with the government where sub section-(3) dictates methodology to be scheduled in Tariff regulations formulated through the provision of section 59 of BEREC Act. Sub-section (2) emphasizes on compliance of legal provisions, cost recovery, efficiency, cost optimization, quality service, better investment, consumers' interests, commercial basis of operations, national energy development plans, commission's discretions to fulfill the objectives of BEREC Act etc. The unique feature of participatory, inclusive and transparent pricing is the provision of public hearing which is stated in subsection (4). Sub section (5) is about tariff to be yearly fixed unless there is a price difference of energy and subsection (6) dictates the requirement of submission of applications from the licensees and tariff disposal to be done within 90 days by BEREC completing all the procedures (GOB, 2003).

In line with the section 34 of BEREC Act-2003 BEREC formulated Petroleum Products Tariff Regulations and sent it to the Energy and Mineral Resource division for legal vetting back in the year 2012. But the legal vetting of proposed tariff regulations is still under finalization in spite of the several reminders were issued by the commission to comply the legal provision (BEREC, 2013).

In 2023, there was an amendment in the BEREC Act 2003, Section 34 by empowering government in energy tariff determination (GOB, 2023); which again repealed by BEREC (Amendment) Ordinance, 2024 (GOB, 2024). In BEREC (amendment) Act 2023 the disposal time of any tariff proposal has been decreased to 60 days instead of 90 days (GOB, 2023).

On 15 September, 2024 government decided Aviation fuel pricing (tariff) to be determined by BEREC complying the provision of section 34 of BEREC Act (BEREC, 2025).

Aviation fuel pricing by BERC is a new phenomenon. This legitimate function of BERC was being done by BPC on behalf of the government through administrative pricing. In response to recent Government's decision that the tariff of aviation fuel- JetA1 to be determined by BERC, BERC took necessary steps accordingly.

1.1 Research Problem: Tariff regulations although was made available by BERC in 2012 complying legal provision of section 34 of BERC Act,2003, Aviation fuel pricing was being done by administrative pricing mechanism keeping it aside for more than a decade. So present study is undertaken to solve the **research questions as follows.**

1.2 Research Questions:

- i. Given all the policy directives, what were the underlying causes of noncompliance of Aviation fuel pricing with the underlying implications if there is any;
- i. To what extent BERC has become able to determine Aviation fuel pricing upholding the regulatory spirit of BERC and if there is any deviation what are the factors;

1.3 Research Objectives:

The research objectives are:

- i. To evaluate the policy directives of Aviation fuel pricing in Bangladesh considering compliances and implications;
- ii. To recommend some policy interventions to make aviation fuel pricing more effective identifying the areas of improvement.

1.4 Rationale:

The Rationale of Study is that –BERC has been established with a commitment of independently and impartially regulating energy sector bringing efficiency in operation and management, transparency in tariff determination, protecting consumers interests and promoting competitive energy market (GOB, 2003). Aviation fuel pricing is very crucial as Bangladesh is opting for large scale cargo aviation services in response to the recent India's unilateral suspension of third-country transshipment (Daily Star, April 27, 2025). So, this study can give some insights for aviation fuel pricing decision that could be conducive for opening new opportunity for configuring aviation sector in Bangladesh in the new context.

2. Review of Literature

Total aviation fuel, Jet A1 consumption in Bangladesh for the financial year 2023-24 was 541033 metric ton (MT) and estimated demand for 2024-25 is 680000 MT. The source of Jet A1 in Bangladesh is fully import dependent, 50% through G to G and 50% through international tendering from Singapore, UAE, China, Malaysia, Indonesia, India, Oman, Thailand etc. Present Jet A1 storage capacity in the country is 62721 MT and average monthly demand for the fuel in the FY 2023-24 was 45086 MT. Bangladesh Petroleum corporation supplies Jet A1 to the 5 airports viz. Hazrat Shahjalal International airport, Dhaka, Hazrat Shah Amanat International Airport, Chattogram, Osmani International Airport, Sylhet, Jessore Airport and Cox's Bazar Airport exclusively through its marketing company Padma Oil Company Limited (POCL). Presently 90% of the Jet A1 is being supplied to the international flights enjoying duty free tariff and 10% to the domestic flights with duty paid tariff arrangement (Hearing Report, BERC, 2025).

POCL has 42 Jet A1 storage tanks countrywide and Shell UK Oil Products Limited is engaged to inspect and certify the international standard of the product and supply management. (Hearing Report, BERC, 2025).

Aviation fuel pricing was being determined by the government through administrative pricing framework and on 15 September, 2024 government decided Aviation fuel pricing (tariff) to be determined by BERC complying the provision of section 34 of BERC Act (BERC, 2025). Although the Tariff regulations for the purpose is still to be vetted by the law ministry. As an interim arrangement, following draft regulations, the first aviation fuel tariff determination initiative has been undertaken by the Commission (Technical Evaluation Report, BERC, 2025).

Representative from Aviation Operators Association of Bangladesh said that 40-46% of the operational cost is for the aviation fuel, overpricing results in bankruptcy and creates discrimination between domestic and international flight operators (Hearing Report, BERC, 2025).

Bangladesh is racing to expand its air cargo capacity after India's abrupt suspension of third country transshipment on April 8, 2025 (The Daily Star, April 27, 2025).

In these contexts, aviation fuel pricing is a serious policy issue and this study is undertaken to have some insights evaluating existing policy.

3. Methodology:

The research was a qualitative study based on both primary and secondary data. The secondary data were based mainly on content analysis of public documents those were available in relevant offices of BERC, BPC, POCL, EMRD, Aviation Authority, Biman Bangladesh Airlines and their websites. For collecting primary data, FGDs and KIIs were strategically chosen to have practical insights from the sector insiders. For in-depth study, 2 FGDs, one employing 4 concerned desk officials of BERC and the another employing the 5 aviation fuel consumers were conducted respectively on 12 May, 2025 at BERC; and on 13 May, 2025 at Shahjalal International Airport. In addition to those two methods, 3 Key Informant Interviews (KIIs) also were conducted, one was with a member of BERC (KII-1), interview was held on 12 May, 2025; one was with DGM (Aviation Fuel) (KII-2), Padma Oil Company Limited (POCL), interview was held on 13 May, 2025 and the last was with DGM (Finance) (KII-3), Bangladesh Petroleum Corporation (BPC), interview was taken on 14 May, 2025 over WhatsApp conversation (1 hr 23 minute at 3:42 pm). The collected data then were processed and analyzed following the procedure of qualitative data analysis (Kumar, 2011).

4. Results and Discussion:

Aviation fuel, Jet-A1 constitute about 34 to 40% of the costs of aviation operations (FGD-2, 2025) (Table 1) (Figure 1).

Bangladesh Petroleum Corporation – BPC imports Jet-A1 and market it through its marketing company Padma Oil Company Limited- POCL. Since 2008 BPC has been determining Jet- A1 price on commercial basis following a price structure given by the government where main price components were import price, duty and taxes, margins for BPC and POCL and system loss (FGD1, 2025; KII-3). Before that, Govt had been determining the price. In the financial year 2023-24 the POCL distributed 120 crore takas to the shareholders as profit

Serial Nos.	Cost components	%
1	Aviation Fuel	34
2	Labor	29
3	Maintenance	12
4	Aircraft ownership	11
5	Facilities	6
6	Food	2
7	Landing fees	2
8	Interest	2
9	Advertising	1
10	Commission	1

Table 1: A Typical Airline expenses

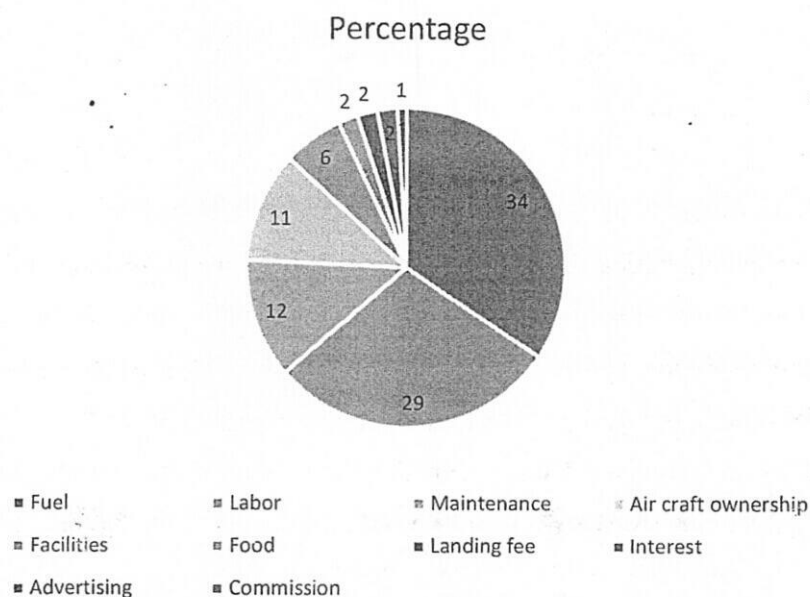


Figure 1: Cost Components of a typical Airlines

which was 140% (BERC, 2025). Although component-wise international standard for fuel cost is 35- 40% of aviation operations, in Bangladesh the figure is 40 to 46%. So, aviation sector is suffering from predatory fuel pricing and many international flight operators are skeptical to continue their operations in Bangladesh and some domestic flight operators already have failed to continue their operations (FGD-2, 2025). At least eight private airlines were forced to shut down their operations in the last 25 years, according to aviation experts. The aviation industry in Bangladesh could not grow due to regulatory malfunction, excessive tariffs, high jet fuel prices (The Daily Star, April 17, 2025). A relatively higher price of Jet A1 in comparison to neighboring countries was being maintained to keep balance between supply and demand as BPC's storage and supply capacity is limited (KII-3).

Chapter 4, section 22(kha) of BERC Act-2003 fixes tariff to be one of the important functional responsibilities of BERC. Chapter 7 covering section 34 of the act has been dedicated as a comprehensive policy directive for tariff determination. So BERC is determining gas and electricity tariff from 2008 and onward complying the policy directives mentioned here (FGD-1, 2025). For Petroleum product pricing, BERC determined tariff of diesel and kerosine in 2009 through BERC Order No. 2009/1 and tariff of LPG and Furnace oil through BERC Order No. 2009/2 in response to BPC's proposal complying the section 22(kha) and section 34 of BERC Act-2003 although Petroleum tariff regulations were not available (BERC, 2025); but

regulations were in exercise stage at drafting phase (FGD-1, 2025). Except these few instances, the tariff of petroleum products was determined by the government or some of them, Jet A1 for example, by BPC as delegated by the government following the administrative pricing mechanism not complying the provisions of BERC Act, 2003 (FGD-1, 2025).

In 2012, BERC formulated 3 relevant petroleum products tariff regulations complying section 34, 59 of BERC Act, 2003 and sent to EMRD for legal vetting. In 2023, there was an amendment in the BERC Act 2003, Section 34 by empowering government in energy tariff determination (GOB, 2023); which again repealed by BERC (Amendment) Ordinance, 2024 (GOB, 2024).

4.1 Pricing Methodology

The policy directive given through section 34(1) is that there should be a methodology of tariff determination of aviation fuel developed in consultation with the government. Methodology was made in 2012 through 3 tariff regulations and sent to the ministry for legal vetting but the process was delayed due to bivalent stance of the government whether the price should be determined by administrative pricing through BPC or regulated pricing by BERC. However, tariff determination methodologies were integrated, defined in regulation 2(Cha) and attached as schedule to the BERC Petroleum Products Transmission, Storage, Supply, Marketing, Distribution and Retail Tariff Regulations (draft), 2024. Regarding consultation with the government, there was no formal one to one consultation, but the condition was met during stakeholders' consultation where government representative usually participates in the process of draft finalization of the regulations and as well as in the process of legal vetting through the EMRD (FGD-1, 2025).

4.2 integration in Tariff Regulation:

In compliance of the policy directives given in the section 34(1) and 34(3) BERC formulated three draft Petroleum Products Tariff regulations namely 1) Petroleum Product Retails Tariff Regulations, 2012, 2) Petroleum Products Storage, Marketing and Distribution Tariff Regulations, 2012 and 3) Petroleum Products Transportation Tariff Regulations, 2012 following the provision of section 59 of the same act and sent to ministry for legal vetting from the ministry of Law, Justice and Parliamentary Affairs in 2012. In a meeting held on 22 July, 2012 in EMRD, presided over by the then state minister concluded with the following decision:

‘As administrative pricing is effective on the petroleum products the proposed draft tariff regulations are to be sent back to BERC for further legal scrutiny and review the relevance in

the present context.’ BERC responded immediately saying that ‘to operationalize section 34(1) and 34(2) of BERC Act, 2003, it is urgent to promulgate these regulations and requested EMRD for legal vetting from Ministry of Law and Parliamentary Affairs. (MOL&PA). Decision in another meeting in this connection chaired by the then secretary directing BPC to update EMRD about writ petition submitted to the high court by CAB on the issue of recent fuel price hike has not yet been intimated to BERC as yet. So pricing was continued to be determined by the government/ BPC as earlier practice. On 10 January, 2023 EMRD sent back the afore-said draft regulations requesting BERC to resubmit these after a thorough review and readjust with the contemporary contexts. Accordingly, BERC sent these revised regulations for legal vetting on 26 July, 2023 and again on 29 August, 2024. Later BERC sent the draft Petroleum Products Transmission, Storage, Supply, Marketing, Distribution and Retail Tariff Regulations, 2024 accommodating all the three regulations in a single instrument which is still to be vetted by ML& PA. So, gap between BERC and EMRD is an area to be solved to create good governance in Aviation fuel price as per legal provision under BERC Act, 2023 (FGD-1).

4.3 Cost Recovery:

The basic element of policy directive for aviation fuel pricing is to ensure cost recovery which is stated in the section 34(2) of BERC Act, 2003. In compliance, the methodology for tariff determination has been designed in such a way to include all cost components during technical evaluation of the price proposal of the operators. The cost components in the aviation fuel, Jet A1 tariff declared by BERC on 13th May 23, 2025 are shown below (BERC, Tariff Order, 2025).

Serial Nos.	Cost components	Tariff for domestic flights BDT/ liter	Tariff for International flights USD /liter
1	CF price of JetA1	64.94	0.5295
2	Import duty	4.91	0.0
3	Advance Tax	0.98	0.0
4	Cargo handling charge	0.06	0.0005
5	Jetty through put charge	0.02	0.0001
6	River Dues of import cargo	0.03	0.0003
7	Ocean loss	0.20	0.0016
8	Discharge Port Survey Fee (foreign)	0.001	0.00001
9	Discharge Port survey fee	0.001	0.00001
10	LC commission	0.15	0.0012
11	Other statutory charges (Inland River dues, throughput and terminal charges)	0.06	0.005
12	Financing charge of BPC	1.07	0.0088
13	Storage and Supply Charge of BPC	4.04	0.0329

Serial Nos.	Cost components	Tariff for domestic flights BDT/ liter	Tariff for International flights USD /liter
14	VAT	11.47	0.00
15	VAT at business level	1.83	0.00
16	Fuel oil Development Fund	0.25	0.0020
17	Transit loss	0.16	0.0013
18	Depot Freight (Depot Transportation cost)	0.78	0.0064
19	POCL's margin	0.88	0.0072
20	Transportation cost	0.89	0.0073
21	Air Port cost for BPC	0.50	0.0041
22	Air Port cost for POCL	0.35	0.0029
	Total Cost at Consumers' end	93.57	0.6066

Table 2: Cost components of Jet A1 Tariff declared by BERC on 13th May, 2025.

4.4 Compliances with legal provisions

Sub-section (2) of section 34 of BERC Act, 2003 emphasizes on compliance of legal provisions during tariff determination. Relevant legal provisions of any domestic international compliances applicable in aviation fuel tariff have to be brought into consideration. So, taxes, VAT, tax or International Air Transport Association (IATA) or Petroleum Act, BPC Act etc. and rules and regulations if there is any are to be complied. These all obviously become cost component or regulatory directives in tariff determination for aviation fuel.

4.5 Efficiency

The policy directives for considering efficiency in tariff determination is another very important aspect mentioned in section 34(2) of BERC Act, 2003. Efficiency in terms of operation & maintenance, equipment throughout the supply chain is very important and very effectively justified both in tariff determination and the accountability arrangement through the process of public hearing. Any inefficient element will be going to the cost components and is subject to be justified by cross examination (FGD-1). But pricing mechanism followed by BPC does have any aspect of efficiency verification although efficiency is considered for profit maximization (KII-2 & KII-3). Bench marking in operation, management, and equipment may be introduced to consider efficiency factor during tariff calculation (KII-1).

4.6 Cost Optimization:

Cost optimization is another very important policy directives mentioned in section 34(2) of BERC Act, 2003. All cost components are technically analyzed and justified as per the methodology of tariff regulations before public hearing. These cost components are presented with detail elaboration by the operators and technical committee during public hearing session

where costs are optimized through the process of cross examination and other stakeholder engagement, even in the post hearing adjustments (FGD-1). In the recent aviation fuel Jet A1 tariff order, BERC has given several regulatory directives to optimize costs, such as- tariff adjustment in monthly interval based on Platts rate and dollar conversion rate, a committee represented by Consumer's Association Bangladesh, BERC, BPC, Biman Bangladesh Airlines, Aviation Operators Association of Bangladesh, Aviation Operators Committee has been formed to optimize the cost during tariff adjustment. Other directives are- Lifting Product financing charge and depot financing charge, rationalization of ocean loss complying the international standards, measures to be taken by BPC to avoid late payment surcharge and demurrage, domestic refinery of Jet A1 to reduce import costs etc. (BERC, Tariff order, 2025). For rationalizing costs, periodic cost auditing system, international best practices and benchmarking can be introduced (KII-1). Other income issues are deducted during calculation of revenue requirement of the operators (table 3 and 4; BERC, Tariff order, 2025). But there is ample scope of cost optimization by rationalizing duty, VAT and income tax ramification imposed on aviation fuel sector, especially for domestic flights. Out of 93.57-taka fuel price at consumers' end, the NBR's share is taka 19.19 which is 20.5% of the total cost; if corporate income tax of BPC and POCL is considered, the figure reaches to taka 21.25 and 22.71% respectively (Table 2,3,4 and BERC, tariff order, 2025). In case of tariff reduction, if the fuel price is less than that of other neighboring country's airports, the international flight operators will create high pressure on supply system for which BPC is not having that capacity in terms of storage facility, refueling equipment, technical man power etc. (KII-3). Fuel transportation cost will be reduced once the ongoing fuel oil transmission pipeline projects will be completed and brought into operation (KII-2, KII-3).

4.7 Quality Service:

Quality service includes quality product, quality equipment, quality Operation and maintenance, quality supply chain up to the consumers end.

Section 34(2) of BERC Act, 2003 emphasizes on quality service in tariff determination. This is considered in technical calculation of tariff, cross examined during public hearing. In administrative pricing mechanism, there is no scope for the consumers to question operators about the quality service. Sometimes, aviation operators had to suffer delay complications when fuel supply chain fails to ensure timely supply. Penalty measures should be introduced against this delay cases (FGD-2). Enhancement of storage capacity and more fuel hydrant

system to quickly dispense fuel into the aircraft are the areas of improvement to address this issue (KII-2 and KII-3).

4.8 Better Investment

The basic feature of the tariff determination methodology for aviation fuel is cost recovery and return on equity complying the policy directive through section 34(2) of BERC Act 2003. Return on equity is included in calculating Return on Rate base which is shown in Table 3 and for BPC and in table 4 for POCL respectively. Aviation fuel business is presently run by BPC which is a state own monopoly. More investment should be encouraged from public and private sector for a competitive and quality aviation fuel market (FGD 2, KII-1). For more investment friendly environment, return based tariff can be complemented by incentive-based tariff (FGD-1).

Serial Nos.	Cost components	Revenue Requirement million BDT
1	Import and Processing	7332.29
2	Manpower overhead	495.38
3	Administrative overhead	116.18
4	System operation license fee	2.0
5	Sales and distribution cost	263.47
6	Freight pool loss	829.37
7	Storage cost	62.63
8	Foreign currency adjustment	8410.43
9	ITFC debt management fee and Bank charge	338.13
10	Platts subscription	169.39
11	Depreciation	163.44
12	Return on Rate base	12384.21
13	Corporate income tax	14682.04 (tk1.81/L)
14	Total revenue requirement	45248.96
15	Other income	12579.64
16	Net Revenue Requirement	32669.32
17	Total Jet A1 sold in million litre	8094.41
14	BPC's Revenue margin, BDT per liter	4.04

Table 3: Revenue Requirement determination for BPC

Serial Nos.	Cost components	Revenue Requirements In million BDT
1	Jet A1 related direct cost	36.15
2	Sales, distribution and administrative costs	758.79
3	Bank charges and other costs	127.83
4	WPPF fund	168.62
5	Depreciation	220.71
6	Return on Rate base	3209.29
7	Corporate income tax	758.79 (0.25tk/L)
8	Total annual revenue requirement	6546.19
9	Other income	3815.36
10	Net Revenue Requirement	2730.83
12	Total Aviation fuel sold in million liter	3114.00
	POCL margin in BDT/ liter	0.88

Table 4: Revenue Requirement of POCL

4.9 Consumer's Interests:

Protecting Consumers' interest is very vital element of policy directives for aviation fuel pricing as mentioned in Section 34(2) (GOB, 2003). For that cost optimization, quality service and accountability through public hearing are the formal arrangement (FGD-1) In the public hearing held on March 23, 2025 representatives from Consumers Association of Bangladesh (CAB), Aviation Operators Association of Bangladesh (AOAB), Individual aviation operators, Aviation Operators Committee (AOC), Air Astra, US Bangla Airlines raised their voice to protect consumers interest tremendously (BERC, 2025).

4.10 Commercial Basis of Operation

Policy directives through section 34(2) emphasize upon commercial basis of aviation fuel operation so that it can be sustainable (GOB, 2003) FGD-1). It is done through the careful calculation of cost components, cost recovery and return on investment following the methodology such designed (FGD-1). BERC sometimes can give some discretionary directives for sustainable operation of aviation fuel. In the recent tariff order BERC instructed POCL to take necessary steps to reduce Accounts Receivable from Bangladesh Biman to keep up the spirit of commercial basis of operation (BERC, 2025).

4.11 National Energy Development Plans:

Aspects of National Energy Plans is another issue are directed to be considered in aviation fuel tariff determination through the methodology formulated following section 34(2) of BERC Act, 2003. This regulatory practice is common in Gas and Electricity tariff determination. Power Sector Development Fund (PSDF), Gas Development Fund (GDF), Energy Security Fund (ESF), BERC Energy Research Fund etc. have been created complying this policy directives to finance National Energy Development Plans (FGD-1). In recent aviation fuel tariff order, BERC kept provision of taka 0.25 per liter for Fuel Oil Development Fund and directed BPC to formulate appropriate policy for this fund management (BERC, 2025).

4.12 Commission's Discretions to Fulfill the Objectives of BERC Act.

BERC was established as an independent statutory body to ensure good governance and justice in the energy sector addressing issues of transparency in management, operation and tariff setting, protection of consumers' interests' and competition in energy market. Policy directives in Section 34(2) of BERC Act have given BERC ample authority to apply discretionary power to uphold such spirit (GOB, 2005). In recent tariff order BERC issued as many as 7 discretionary directives in the areas of use of Fuel Oil sector Development Fund, system loss, ongoing project management, Monthly adjustment of Tariff, sales statements, accounts receivables etc. (BERC, 2025).

4.13 Public Hearing

As per the policy directives in the section 34(2) of BERC Act, 2003 any tariff determination needs a public hearing (GOB, 2003). In case of recent tariff determination of aviation fuel, Jet A1, a well-organized public hearing took place on 23 March, 2025 in the hearing room of BERC and full commission heard the voices of all parties to take an appropriate decision in a participatory way complying the quasi-judicial process following section 12(3) of BERC Act, 2003. Among the parties present in the hearing, mentionable ones were- representatives from EMRD, NBR, Bangladesh Bank, Bangladesh Power and Energy Research council (BEPRC), Bangladesh Civil Aviation Authority (CAAB), Consumers' Association of Bangladesh (CAB), Biman Bangladesh Airlines, Aviation Operators of Bangladesh (AOAB), Airlines Operators Committee (AOC), US Bangla Airlines, Impress Aviation, Air Astra and different Print & Electronic Media. Hearing is a process of refining proposed and technically evaluated tariff proposals through analysis of rationality, accuracy and justification of cost components and returns on investment or equity in an intensive and inclusive manner (BERC, 2025).

4.14 Reactive or Proactive/ Suo moto time-efficient Tariff Adjustment

Sub section 5 of section 34 of BERC Act, 2003 is about tariff to be yearly fixed unless there is a price difference of energy and subsection 6 dictates the requirement of submission of applications from the licensees and tariff disposal to be done within 90 days by BERC completing all the procedures (GOB, 2003).

So, policy here emphasizes upon the requirement of tariff proposal to be submitted by the fuel operators with all necessary documents complying the provision of Tariff regulations. This proposal needs to be evaluated by a technical evaluation committee then public hearing will be arranged attended by all relevant parties. Commission then will decide and declare the tariff within 60 days considering all issues and hearing outcomes in a quasi-judicial manner. This sounds to be a reactive and time in-efficient kind of tariff setting and needs to be integrated with proactive or Suo moto provision when necessary (FGD-1). Although Suo moto provision of tariff setting has been integrated including relevant methodology in the draft BERC Petroleum tariff regulations awaiting legal vetting, in the form of periodic tariff adjustment and in recently declared tariff order of Aviation fuel Jet A1, BERC gave regulatory directive of monthly tariff adjustment through para 10.6 (BERC, 2025).

4.15 Cargo Aviation prospects in the New Contexts

Aviation fuel cost is the main concern of making a sustainable aviation sector. This is critically important in the context of recent unilateral withdraw of third country transit facility for Bangladesh by India. The country's largest export earning sector – garments manufacturing sector is going to face huge challenge due to this setback (FGD-1). BIDA Chairman in a quick reaction expressed his optimism of opening an opportunity to develop cargo aviation sector in Bangladesh (FGD-2). In global standard practice, the cost components of aviation sector are shown in Table 1(FGD-2). Here the cost share for aviation fuel is 34%, but in Bangladesh's case the share of fuel cost is more than 40-46 % due to predatory pricing as perceived by the aviation sector insiders and consequently a number of aviation business had to shut their businesses (Daily Star, 2025).

So, cost rationalization is critically important to make cargo aviation sector financially and economically viable. The legitimate authority of aviation fuel pricing is BERC as per BERC Act, 2003. But pricing was being done by BPC as delegated by the government through administrative pricing mechanism. Recently government took decision aviation fuel pricing to

be determined by BERC complying the legal provision. BERC, for the first time determined it and declared tariff order of Jet A1 complying all policy directives under section 34 of BERC Act, 2003. In an immediate reaction through a message in WhatsApp group JETA1, AOAB secretary general and CEO of NOVO Air expressed his immense satisfaction saying- 'A historical wrong has been rectified after long and assured with confidence 'NOVOAIR will fly in the sky soon (FGD-2); the country's leading aviation company suffers sudden shutdown due to predatory pricing of Jet A1 (Daily Star, 2025). Cargo aviation is also being operated by passenger aircrafts, so the policy should be uniformly designed to facilitate both type of aircrafts operators (FGD-2). Dhaka airport has only one runway, although 3rd terminal has been introduced the number of runways can not be increased due to space shortage and technical causes. So, Chittagong airport and Cox's bazar airport can be designated and established with special emphasis for cargo aviation leveraging their vicinity with seaports and hence reduction in fuel transportation costs and efficiency in operations (FGD-1, FGD-2, KII-1, KII-2, KII-3). But in case of levelized tariff, based on weighed average, cargo aviation operation from any airports can be of same transportation cost effects (FGD-1).

5 Conclusions:

Aviation fuel is the most impacting cost component of aviation operation worldwide sharing almost 35 to 40 percent of the total cost (Table 4). In contrast, Bangladesh's aviation sector had to endure heavy fuel cost burden ranging from 40 to 46% of the total cost over the decades which the industry insiders perceived as predatory pricing. As a consequence, many international flight operators are skeptical to continue their operations in Bangladesh and some domestic flight operators already have failed to continue their operations (FGD-2). At least eight private airlines were forced to shut down their operations in the last 25 years, according to aviation experts. The aviation industry in Bangladesh could not grow due to regulatory malfunction, excessive tariffs, high jet fuel prices (The Daily Star, 2025).

The another very important aspect is that Government has decided to develop hugely the cargo aviation sector in Bangladesh in response to the recent India's unilateral withdraw of third country transit facility for Bangladesh posing supply chain challenges of country's topmost exporting garments sector. In these contexts, policy directives for aviation fuel pricing were evaluated considering compliances and implications with relevant recommendations.

Result shows that policy directives given in section 34 of BERC Act- 2003 were not followed to have a rational fuel price although pricing methodology and relevant regulations were made available by BERC in 2012, and this noncompliance created a nonconductive environment to grow for aviation sector afterwards as aviation fuel sector is a public business monopoly. Authorities were in bivalence whether the aviation fuel price would be kept under administrative pricing or in regulated pricing regime although the policy directives in the preamble, section 22 and section 34 clearly mentioned that price would be regulated one following a methodology scheduled in tariff regulations that ensures – cost recovery and a rational return on investment for a sustainable commercial operation.

On 13 May, 2025 BERC determined and declared aviation fuel price with an effect from 0-hour of 14th May complying all policy directives mentioned in aforesaid preamble and sections of BERC Act, 2003 following a methodology and tariff regulations still pending for legal vetting in EMRD. Per liter aviation fuel, Jet- A was fixed for domestic flights at BDT 93.57 and for bonded international flights at USD 0.6066 against operators' proposal BDT 112 and USD 0.73 and technical committee's proposal BDT 105.51 and USD 0.6901 respectively due to fall in Jet A1 Platt's rate from USD89.01 to USD 76.78 (BERC, Tariff Order, 2025).

6 Recommendations:

The findings of the study, after a thorough analysis and review, yielded the following recommendations:

- Policy directives given through the BERC Act, 2003 are to be complied and BERC Petroleum products Transmission, Storage, Supply, Marketing, Distribution and Retail Tariff Regulations, 2024 is to be made operational immediately completing legal vetting to avoid any confusions or arbitrations in determining tariff of aviation fuel in Bangladesh;
- All cost components, especially the ocean loss and other subjective system loss elements should be reviewed and updated integrating international practices employing technical evaluation, inclusive public hearing and stakeholders' engagement;
- Aviation fuel cost can be substantially reduced by rationalizing duty- tax- VAT structure that contributes almost 20% of the costs due to multiple imposition;
- Quality service, efficiency and cost optimization are interrelated and very relevant for establishing sustainable aviation sector in the present context of India's unilateral

withdrawal of 3rd country transit for Bangladesh. For this regular cost auditing, benchmarking of operation, management and equipment are of immense importance;

- Aviation fuel supply is a state own monopoly presently run by BPC through its one marketing company POCL; for a competitive fuel market, other marketing companies of BPC and private sectors are recommended to be brought to the market as aviation sector is growing with a substantial pace.
- Storage facility has to be increased substantially to keep supply chain uninterrupted in the context of high demand and supply situation when fuel price is rationalized;
- Ongoing Fuel Oil transmission projects should be completed in time and brought into operation to reduce system loss and increase efficiency and quality service;
- Chittagong airport and Cox's bazar Airport should be dedicated for cargo aviation to reduce Jet A1 fuel transportation cost and bring efficiency in time and refuel schedules of aircrafts to avoid delay complications;
- Adequate number of fuel hydrant system should be installed in the airports for quick dispensing of JetA1 into the aircrafts to avoid que and delay costs.

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1. Please write your Name, Roll No. etc. at the specified space otherwise may cause cancellation of your answer script.
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Name. Mohammad Aatur Rahman ndc

Roll No. 119

**Title: An evaluation of Ecotourism in the Sundarbans of
Bangladesh focusing on eco-friendly approaches and community
engagement**

Abstract

Ecotourism, defined as responsible travel to natural areas that conserves the environment and benefits local communities, holds significant potential for sustainable development in the Sundarbans-the world's largest mangrove forest and a UNESCO World Heritage Site. Current research on tourism in the Sundarbans mainly emphasizes environmental degradation and economic prospects, yet it seldom examines how national policies influence ecotourism outcomes. There is a scarcity of empirical data connecting policy execution to grassroots community involvement, conservation success, and sustainable income generation. Furthermore, the incorporation of climate resilience into tourism planning has not been significantly studied. This research has specifically concentrated on the coherence between policy stipulations and actual practices, particularly regarding the implementation of eco-friendly approaches and community involvement.

The National Tourism Policy 2010 of Bangladesh highlights ecotourism as a key area for sustainable tourism development. The study evaluates the effectiveness of the National Tourism Policy 2010 in fostering sustainable ecotourism and provides policy-level recommendations essential for reconciling ecological preservation with socio-economic advancement in the Sundarbans.

Using qualitative research methods, including in-depth interviews, focus group discussions, key informant interview, participant observation, and document analysis, data were collected from key stakeholders such as local communities, tour operators, policymakers, tourism officials and conservationists. Findings reveal that while the policy articulates sustainable tourism goals, its implementation suffers from weak inter-agency coordination, lack of localized guidelines, and minimal community involvement. Eco-friendly practices like waste management, use of renewable energy, and low-impact infrastructure are unevenly applied, while benefit-sharing and participatory planning remain limited. Unregulated tourism, plastic pollution, and inadequate monitoring threaten biodiversity and ecosystem health. This research highlights the urgent need for a revised policy framework that integrates environmental conservation with local empowerment. It provides actionable insights for policymakers and practitioners to ensure ecotourism in the Sundarbans is both environmentally sustainable and socially inclusive.

1.Introduction

Ecotourism is defined as “responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education” (TIES, 2015)¹. Ecotourism is a responsible form of travel to natural areas that focuses on conservation, community empowerment, education, and interpretation. It helps protect the environment by promoting sustainable practices and reducing negative impacts on ecosystems, while also encouraging travelers to value and preserve the natural world. By creating job opportunities and enhancing local capacity, ecotourism can benefit communities and contribute to poverty reduction and sustainable development (Khan,2017; Taufiq et al., 2020).

Ecotourism has emerged as a vital strategy for conserving natural ecosystems while promoting sustainable development. In Bangladesh, the Sundarbans -the world’s largest mangrove forest and a UNESCO² World Heritage Site- presents a critical testing ground for sustainable tourism practices. The National Tourism Policy 2010 outlines objectives for promoting ecotourism, yet questions remain about its practical effectiveness in sensitive environments like the Sundarbans.

Bangladesh Government has taken some development projects and initiatives through establishing ten ecotourism centers, including Karamjal, Katka, Heron Point, Dubla, Herbaria, Kalagachia, and Kochikhali, Alibanda, Andamanik, Shekhertek, and Kalabagi. These sites offer unique experiences such as guided walks, boat rides, birdwatching, and wildlife safaris, allowing visitors to explore the forest’s biodiversity, including the Royal Bengal Tiger, diverse bird species, and indigenous culture. Accessibility improvements, like the Padma Bridge, have boosted tourism to the Sundarbans. Government has also made a provision of banning to enter the Sundarbans for protecting the biodiversity and ecosystem.

The adverse effects of tourism on the Sundarbans have not been fully understood or addressed, leading to damage in the absence of a comprehensive policy. Huge potentials exist and efforts are taken but less success is made (Ahmed et al., 2021). Ecotourism is a viable option to mitigate the negative environmental impact of tourism (Buckley,2012; Weaver, 2001; UNWTO, 2019³)

¹ The International Eco-Tourism Society

² United Nations Educational, Scientific and Cultural Organization

³ United Nations World Tourism Organization

2.Problem Statement

Despite policy commitments, the Sundarbans faces challenges such as environmental degradation, wildlife disturbance, and limited local community benefits, raising concerns about policy implementation and outcomes. It has been declared as ECA (Environmentally Critical Area). The UNESCO has already warned Bangladesh regarding damage of this unique Mangrove Forest regarding World Heritage Status. It is thought the National Tourism Policy especially ecotourism activities are not being maintained effectively because of inadequate support measures, lack of comprehensive and strategic plan, lack of coordination among concerned agencies and stakeholders, insufficient awareness program for the travelers and stakeholders, unsmart monitoring and enforcement mechanism and inadequate community engagement.

Existing studies on tourism in the Sundarbans primarily focus on its environmental degradation and economic opportunities, but few critically assess the role of national policy in shaping ecotourism outcomes. There is limited empirical evidence linking policy implementation with ground-level community participation, conservation effectiveness, and sustainable income generation. Additionally, the integration of climate resilience into tourism planning remains largely unexplored. This study has focused on alignment between policy provisions and actual practices especially the adoption of eco-friendly practices and community engagement. The study has also investigated the effectiveness of National Tourism Policy 2010 in promoting sustainable ecotourism and make policy-level insights and recommendations which are crucial for balancing ecological protection with socio-economic development in the Sundarbans.

3. Rationale of the Study

This study was conducted to evaluate how effectively the National Tourism Policy 2010 has achieved its stated ecotourism goals in the Sundarbans especially the adoption of eco-friendly activities and community engagement. It has sought to identify gaps between policy intentions and ground realities, focusing on environmental conservation, community participation, and sustainable livelihoods.

Findings will provide insights for policymakers, conservationists, and tourism stakeholders to refine strategies, ensuring that tourism development in the Sundarbans remains ecologically sustainable and socially equitable.

4. Research Objectives

- a) To assess the alignment between policy provisions and actual tourism eco-friendly practices in the Sundarbans.
- b) To examine the level of local community involvement and benefit-sharing mechanisms.

5. Research Questions

- a) To what extent has the National Tourism Policy (2010) been effectively implemented to promote sustainable ecotourism practices in the Sundarbans?
- b) How has the National Tourism Policy influenced local community participation and benefit-sharing in ecotourism activities in the Sundarbans?

These questions have helped me to cover policy effectiveness, community outcomes, and environmental sustainability - the three critical pillars for my study.

6. Literature Review

Khanom, Shahida. Rahman, Shah, Rahman Mohammad Aminur and Chaudhary, Amitendra. (2011) investigated the matters of current tourism practices in the Sundarbans and tourists' view regarding tourism services. The article pointed out that while boosting the local economy, ecotourism is also harming the health of the forest. The authors argue that a national policy and coordinated plan involving tour operators' technical and economic skills are crucial for developing ecotourism in the Sundarbans. They recommend further research into policy integration, community participation, expanding small businesses, and conservation methods to explore additional opportunities for ecotourism in the area.

In 2000, Md Abdus Salam, Lindsay Glenn Ross, and Malcolm Beveridge conducted a study titled "Ecotourism to Protect the Reserve Mangrove Forest the Sundarbans and its Flora and Fauna" which was published in Anatolia. The research recommended the implementation of ecotourism in the Sundarbans, involving local communities to bring economic benefits, thus encouraging them to protect the wildlife and forest. The study proposes the utilization of Geographical Information Systems (GIS) along with Landsat remote sensing imagery and Information Technology (IT) to reduce the negative effects of tourist activities in the Sundarbans.

Sinha, Vjaya. (2012) analytically discussed the five key principles of ecotourism and tried to find out the impact of ecotourism in some selected Asian countries focusing Hills and Mountains. This book illustrated the pressure of tourism on natural resources, how tourism can contribute to environmental conservation and the constructive and undesirable social and environmental effects of tourism. The author also highlighted comprehensive planning for tourism to protect the natural resources from degradation and destruction. P-218

Roy, Sanjay Chandra & Roy, Mallika. (2015) conducted a study to find out the present status, future prospect of ecotourism and tried to identify major tourist spots in Bangladesh. p-6

Kenny, Lissa. (2017) examined the impact of Relief International Sundarbans Tourism Projects on achieving Sustainable Development Goal focusing socio-cultural issues and income generation of the local community. P-24

Islam, Md. Saiful., Abubakar, Howlader and Islam, Md. Monirul. (2011) conducted a study on community based tourism in the Sundarbans and its impact on socio-economic development of the local people. P-12

Hassan, Md. Mehedi., Sabbir, Md. Mahiuddin and Jarin, Sadia Afrin. (2020) directed a study on assessment of ecotourism in Bangladesh focusing on the Sundarbans and also tried to find out

the relationship among community participation, environmental policies sustainability of ecotourism in Sundarbans. P-9

Afroz, Nushrat Nahida and Mahmud, Md. Shahed. (2017) conducted a study on analyzing the problems and prospects of ecotourism as well as identifying the socio-economic and environment of ecotourism in Bangladesh. P-3

Nicholls, Robert J., Hutton, Craig W., Adger, W. Neil., Hanson, Susan E., Rahman, Md. Mansur and Salehin, Mashfiqu. (2018) examined the dynamics of the Sundarbans Mangroves in Bangladesh under climate change . P-489

Chowdhury, Captain Mohammed Ali. (2018) directed a study on identifying the problems and challenges for transforming the Sundarbans as future destination of ecotourism. P-15

Khonder, Dr. Mubina and Anis, Adiba. (2016) tried to identify the constraints of ecotourism in Bangladesh and analyzed the tourism related rules and laws of Bangladesh. P-12

Bangladesh: Sundarbans Biodiversity Conservation Project. (2008). Validation Report. ADB. Project Number 30032 examined the effectiveness of the Sundarbans Biodiversity Conservation Project focusing on infrastructure, training, and awareness programs. Part-D

A 2021 study published in the Journal of Sustainable Tourism found that unregulated tourist activities in the Sundarbans, including boat trips, littering, and unauthorized anchoring, have led to habitat disturbance, soil erosion, and mangrove root damage. Increased plastic waste and noise pollution from motorboats disturb sensitive wildlife, especially endangered species like the Irrawaddy dolphin and Royal Bengal Tiger (Source: Ghosh et al., 2021).

Research by the International Union for Conservation of Nature (IUCN) (2020) noted that frequent human presence near core wildlife areas alters the natural behavior of animals, leading to increased human-wildlife conflicts and displacement of species from critical habitats.

A World Bank report (2018) on the Sundarbans highlighted that tourism benefits are unevenly distributed. Most profits are captured by external tour operators, while local communities receive minimal direct income, increasing economic disparity and resentment. Additionally, tourism-related inflation raises prices for basic goods, disproportionately affecting local poor households.

A 2019 study by Bangladesh Centre for Advanced Studies (BCAS) indicated that limited waste management and sanitation facilities near tourist hotspots, like Dublar Char and Kotka, have exacerbated water pollution and threatened both community health and marine life.

This study is guided by an integrated theoretical framework combining Sustainable Tourism Development (STD) theory and Community-Based Natural Resource Management (CBNRM). These frameworks offer a robust lens to evaluate the interconnected dimensions of environmental sustainability, local livelihoods, and governance in ecotourism practices.

7. Ecotourism and relevant theories

7.1 Sustainable Tourism Development (STD) Theory

STD emphasizes the need to balance environmental conservation with social and economic development. It promotes tourism practices that: Minimize ecological damage, Respect local cultures, Provide long-term economic benefits to host communities.

This theory aligns with the study's aim to evaluate eco-friendly approaches in the Sundarbans and assess their contribution to environmental sustainability and resilience in a climate-vulnerable region.

7.3 Community-Based Natural Resource Management (CBNRM)

CBNRM underscores the active participation of local communities in managing natural resources. It posits that when communities are given control, rights, and responsibilities, they are more likely to protect ecosystems while benefiting economically.

This framework is particularly relevant to assessing: How local people are engaged in ecotourism planning and operations, The distribution of tourism-derived benefits, Local empowerment and decision-making structures within governance systems.

By integrating STD and CBNRM, this research has critically examined whether ecotourism in the Sundarbans is both sustainable and equitable, and whether the current governance mechanisms effectively support long-term conservation and community well-being.

Theoretical Framework

A theoretical framework has been developed based on relevant theories, reviewing the literatures and author's insights. This Theoretical Framework is the guiding tool of my research and setting research methodology, integrating the key themes of sustainability, livelihood, and governance in ecotourism in the Sundarbans.

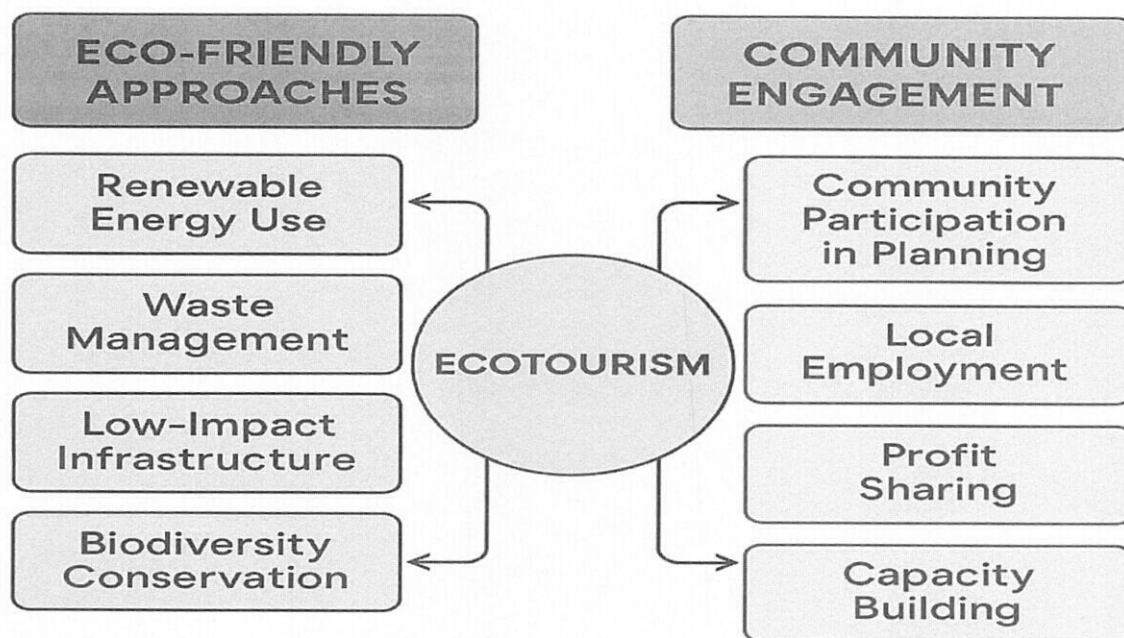


Figure 1: Theoretical framework of Ecotourism focusing on Eco-Friendly Approaches and community engagement

7. Methodology (Research Design)

Methodology Section for my research proposal on Ecotourism in the Sundarbans of Bangladesh, focusing on eco-friendly approaches and community engagement, using qualitative research methods:

7.1 Research Design

This study adopts a qualitative research approach to explore the dynamics of ecotourism in the Sundarbans, with an emphasis on eco-friendly practices and community engagement. Qualitative methods are appropriate for understanding complex social processes, capturing local voices, and evaluating context-specific practices that are not easily quantifiable.

7.2. Study Area

The research was conducted in selected ecotourism zones within the Sundarbans region, including areas in Khulna, Satkhira, and Bagerhat districts. These sites were chosen for their active tourism operations, community involvement, and environmental significance.

7.3 Data Collection Methods

a) In-Depth Interviews

Semi-structured interviews were conducted with key stakeholders, including local community members, tour operators, tourists, forest department officials, and concerned NGO representatives. This method has helped uncover personal experiences, perceptions of ecotourism benefits and challenges, and suggestions for improvement.

b) Focus Group Discussions (FGDs)

FGDs were organized with community groups, such as women's cooperatives, Field level officials of Bangladesh Tourism Board, Bangladesh Parjatan Corporation, Ministry of Civil Aviation and Tourism, and youth associations, to understand collective experiences and attitudes toward tourism. Group interaction will offer insights into shared concerns and community dynamics. Data have been collected through FGD on Eco Friendly Approaches/activities like renewable energy use, waste management, low impact infrastructure and biodiversity conservation. Data have also been collected on community engagement focusing on community participation in planning, local employment, profit sharing and capacity building.

c) Participant Observation

Field visits have been included non-intrusive observation of tourist behavior, guide practices, and eco-lodge operations. This will provide context-specific information on the actual implementation of eco-friendly measures.

d) Key Informant Interviews

Targeted interviews with policy makers especially high officials of Bangladesh Tourism Board, Bangladesh Parjatan Corporation, Ministry of Civil Aviation and Tourism, Tour Operators Association of Bangladesh, Academicians, tourism planners, and conservation experts have offered strategic perspectives on regulatory frameworks, policy gaps, and best practices.

e) Documents/contents Analysis

Relevant policy documents, tourism plans, community-based tourism models, Government and NGO reports have been reviewed to contextualize findings and assess alignment with national and international ecotourism standards.

7.4 Data Analysis

Data have been analyzed thematically, using coding techniques to identify patterns, themes, and contradictions. Triangulation across methods have enhanced the credibility and validity of the findings.

Focus Group Discussions (FGDs): Thematic Areas and Sub-Thematic Descriptions -To capture community perspectives and stakeholder insights, a series of Focus Group Discussions (FGDs) were conducted in various ecotourism zones of the Sundarbans. The FGDs were structured around two major thematic areas: Eco-Friendly Approaches and Community Engagement, each further categorized into relevant sub-thematic areas to ensure depth and clarity in discussion.

Thematic Area 1: Eco-Friendly Approaches

Sub-Thematic Areas:

a) Use of Renewable Energy

Discussions were held focused on the extent of solar energy adoption in eco-lodges, local homes, and tourism facilities, including challenges in accessibility, cost, and maintenance.

b) Waste Management Practices

Participants were asked about the presence and effectiveness of waste disposal systems, community awareness regarding plastic use, and the role of authorities in maintaining cleanliness.

c) Low-Impact Infrastructure

Explored were local perceptions of tourism facilities, such as eco-cottages, walkways, and boating structures, particularly their design compatibility with the fragile mangrove ecosystem.

d) Biodiversity Conservation Awareness

Discussions included how ecotourism activities influence wildlife, the understanding of protected species (e.g., Royal Bengal Tiger, crocodiles, birds), and the role of guides in educating visitors.

Thematic Area 2: Community Engagement

Sub-Thematic Areas:

a) Participation in Planning and Decision-Making

This sub-theme explored whether and how local community members are involved in tourism planning, stakeholder meetings, and conservation-related initiatives.

b) Local Employment Opportunities

The availability of jobs for locals—such as tour guides, boatmen, cooks, and lodge staff—was discussed, along with gender inclusiveness and skill requirements.

c) Benefit-Sharing Mechanisms

Focused on how tourism revenues are distributed, the transparency of these mechanisms, and whether local communities perceive tourism as economically beneficial.

d) Capacity Building and Training

Participants shared their experiences regarding skill development initiatives provided by NGOs or the government and highlighted areas where further training is needed (e.g., eco-guiding, hospitality, language skills).

These thematic areas provided rich, qualitative insights into the realities of ecotourism practices in the Sundarbans. The discussions revealed both opportunities and gaps in aligning policy with community needs and environmental sustainability.

For justification the use of Key Informant Interviews (KII) and Focus Group Discussions (FGD) in studying ecotourism in the Sundarbans, the study has focused on capturing diverse, context-specific insights from both experts and local stakeholders focusing on thematic areas as well as detailed description. KIIs were conducted with government officials, NGO representatives, tour operators, and ecologists to obtain expert opinions on eco-friendly practices and sustainable policy frameworks. For instance, a forest officer highlighted the need for stricter visitor caps to protect biodiversity.

FGDs were held with local communities, including boatmen, wood collector, honey collector, fishermen, homestay owners, and women's cooperatives, ensuring inclusive representation. These discussions revealed grassroots perspectives on how ecotourism affects livelihoods and the environment. One group emphasized the benefits of solar-powered boats and waste management training provided by NGOs.

Data collection was purposive and stratified to reflect variations across regions and stakeholder roles. Thematic analysis was applied to identify patterns in community engagement and sustainable practices. Findings were triangulated to validate consistency—community voices in FGDs reinforced concerns raised in KIIs about unregulated tourism harming mangroves.

This mixed qualitative approach allowed for a rich, grounded interpretation of data, aligning with the principles of participatory research and ensuring relevance for policy recommendations on sustainable ecotourism in the Sundarbans.

7.5 Ethical considerations, Limitations and Delimitations: Ethical considerations included informed consent, confidentiality, and respect for participants' cultural norms. Prior to KIIs and FGDs, participants were briefed about the study's purpose and assured their responses would remain anonymous. For example, local women participating in FGDs were given the option to speak in familiar settings and in their native dialect for comfort and openness.

Limitations: Limitations included potential bias in responses, especially from key informants with institutional affiliations, and limited generalizability due to the qualitative nature. Seasonal constraints and accessibility challenges in remote Sundarbans areas also restricted data collection.

Delimitations were intentional: The study has focused only on eco-friendly practices and community engagement, excluding broader tourism or conservation policies. Sampling was restricted to regions with active ecotourism initiatives. This allowed for in-depth understanding of specific community-driven practices, such as the use of solar energy in eco-lodges, without diluting the research scope. These boundaries ensured focused, ethical, and relevant findings.

8. Discussions and Findings

8.1 A Qualitative Analysis of Eco-Friendly Approaches

The Sundarbans, the world's largest mangrove forest and a UNESCO World Heritage Site, offers immense potential for ecotourism. However, a Focus Group Discussion (FGD) with 10

stakeholders—including local authorities, tour operators, environmental NGOs, and community members—revealed significant gaps in the implementation of eco-friendly practices. This report analyzes qualitative data from the FGD, interprets the findings, and offers policy recommendations aligned with sustainable development principles.

Key Findings

The FGD have focused on four major eco-friendly components: renewable energy use, waste management, low-impact infrastructure, and biodiversity conservation.

a) Renewable Energy Use: Participants unanimously reported that solar or wind energy use in the Sundarbans' tourism operations is negligible. One tour operator remarked, "All the boats still run on diesel, and there's no incentive to switch to solar."

b) Waste Management: The absence of structured waste management was a common concern. Local community leaders observed that plastic waste from tourists accumulates along the forest edge and riverbanks. A community leader stated, "There is no mechanism to dispose of or recycle waste, and littering is rampant."

c) Low-Impact Infrastructure: Participants noted that construction of lodges and jetties often fails to follow environmental guidelines. One NGO representative emphasized, "Some structures are built without any ecological assessments, disrupting natural habitats."

d) Biodiversity Conservation: Stakeholders expressed concern that ecotourism activities are often insensitive to wildlife and their habitats. A forest official mentioned, "Tourist noise and boat traffic disturb bird nesting areas and aquatic life."

Data Interpretation

The qualitative responses were categorized into levels of concern across the four eco-friendly parameters. The chart below illustrates the perceived implementation effectiveness:

The FGD findings demonstrate that the current ecotourism practices in the Sundarbans fall short of eco-friendly standards. Addressing these gaps through targeted, sustainable policies can ensure long-term ecological integrity and community benefits. Ecotourism in the Sundarbans must evolve to align with sustainable development goals, preserving this unique ecosystem for future generations.

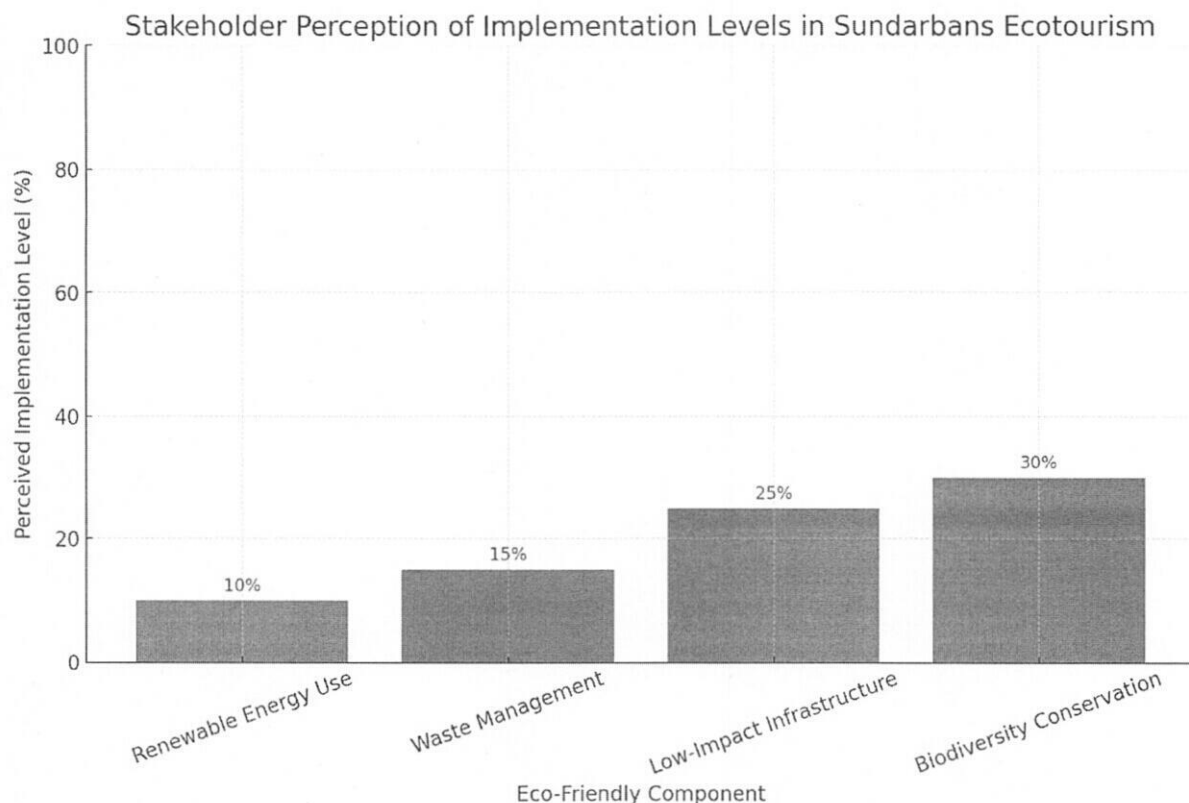


Figure 2 : Stakeholder Perception of Implementation Levels in the Sundarbans Ecotourism

8.2 Community Engagement: A Qualitative Assessment from KII

The Sundarbans, the world's largest mangrove forest and a UNESCO World Heritage Site, offers rich potential for ecotourism that supports both environmental conservation and socio-economic development. For ecotourism to be truly sustainable, the involvement of local communities is critical. This report is based on a Key Informant Interview (KII) conducted with 10 high-level stakeholders, including government officials, NGO representatives, and tourism professionals. The goal was to assess the current state of community engagement in four key areas: participation in planning, local employment, profit sharing, and capacity building.

Key Findings and Qualitative Analysis

The qualitative data derived from the KIIs points to a systemic lack of community involvement in ecotourism development in the Sundarbans.

- a) **Community Participation in Planning:** Most respondents reported that local communities are not involved in the planning phases of ecotourism projects. As one government official noted, "Communities are often informed after decisions are made rather than being consulted beforehand." This top-down approach diminishes local ownership and undermines long-term sustainability.

- b) **Local Employment:** Despite the potential of ecotourism to generate jobs, stakeholders admitted that local people are often excluded from employment opportunities due to a lack of training and qualifications. A private tour operator remarked, “We hire from outside because locals don’t have the required skills or hospitality training.”
- c) **Profit Sharing:** There is minimal evidence that tourism revenues are being shared with the local communities. According to an NGO representative, “Most of the profits go to private operators and a few elites. There’s no mechanism to ensure the community benefits financially.”
- d) **Capacity Building:** Nearly all stakeholders confirmed that there are no consistent or well-funded capacity-building programs in place. A local government official observed, “We’ve discussed training programs in eco-guiding and conservation, but nothing has been implemented due to budget constraints.”

Data Interpretation

Stakeholder perception of implementation levels in community engagement components:

Community Participation in Planning – 10%

Local Employment – 20%

Profit Sharing – 15%

Capacity Building – 5%

These figures highlight an overall lack of effort to include communities in the ecotourism value chain.

The KII reveals that community engagement in Sundarbans ecotourism is largely symbolic and underdeveloped. Without real inclusion in planning, employment, and revenue sharing, the local communities—who are the most affected by tourism—remain marginalized. To achieve sustainable ecotourism, a shift toward inclusive, community-driven policies and programs is essential. Only by empowering local populations can the dual goals of conservation and socio-economic development be realized.

8.3 To encourage and engage the local community in ensuring ecotourism in the Sundarbans, a bottom-up, incentive-driven approach is essential.

- a) **Firstly**, economic incentives must be direct and visible. Establishing community-managed eco-lodges, homestays, and boat services—like the successful community-run eco-resorts in the Chittagong Hill Tracts—can show locals the financial benefits of sustainable tourism. Revenue-sharing models where a percentage goes to village development (e.g., water, schools) will build local support.

- b) **Secondly**, capacity building is key. Regular training in eco-guiding, hospitality, first aid, and language skills can make locals preferred choices for tourism jobs. Partnering with NGOs like WildTeam or the Bangladesh Ecotourism Society can provide structured, credible training.
- c) **Thirdly**, community participation in planning builds ownership. Creating tourism committees at union or village levels can ensure locals help design tourism strategies, decide visitor limits, and manage seasonal activity—promoting a stewardship mindset.
- d) **Fourthly**, culturally integrating local folklore, cuisine, and crafts into the tourist experience offers pride and income. For example, showcasing Baul music or honey-collecting traditions enriches tourist engagement and honors local heritage.
- e) **Finally**, recognizing community eco-ambassadors through public platforms can inspire others. When locals see peers succeed through ecotourism, it builds trust and momentum for collective participation.

8.4 Livelihood challenges of the community people and policy approach

Ten stakeholders were engaged, including honey collectors, fishermen, craftswomen, Forest Department officials, local tour operators, NGO representatives, and local government officials. Key points include:

- a) **Livelihood Crisis:** Lack of income alternatives during the 3-month forest access ban.
- b) **Industrial Threats:** Factories are emerging dangerously close to the eco-sensitive zone.
- b) **Non-Eco-Friendly Infrastructure:** Forest Department's 10 (Ten) so-called eco-tourism centers are concrete, non-sustainable structures.
- c) **No Market Access:** Local products and crafts are excluded from the tourism value chain.
- d) **Policy Disjunction:** National Tourism Policy 2010 lacks alignment with environmental laws, creating regulatory conflicts and the Sundarbans is a classified forest. This forest is mainly governed by the Department of Forest under Ministry of Forest, Environment and Climate Change. The Eco Tourism Centers established in the Sundarbans area managed by the Department of Forest and lacks proper coordination with the Ministry of Civil Aviation and Tourism focusing the ecotourism objective of National Tourism Policy 2010.

8.5. Data Analysis & Interpretation

- 78% rely on forest-based income.
- 82% lose more than 50% income during the ban.
- 91% never received tourism training or engagement.
- Only 12% see any benefit from tourism infrastructure.

Interpretation: The ecotourism model is top-down, exclusionary, and fails both conservation and community objectives.

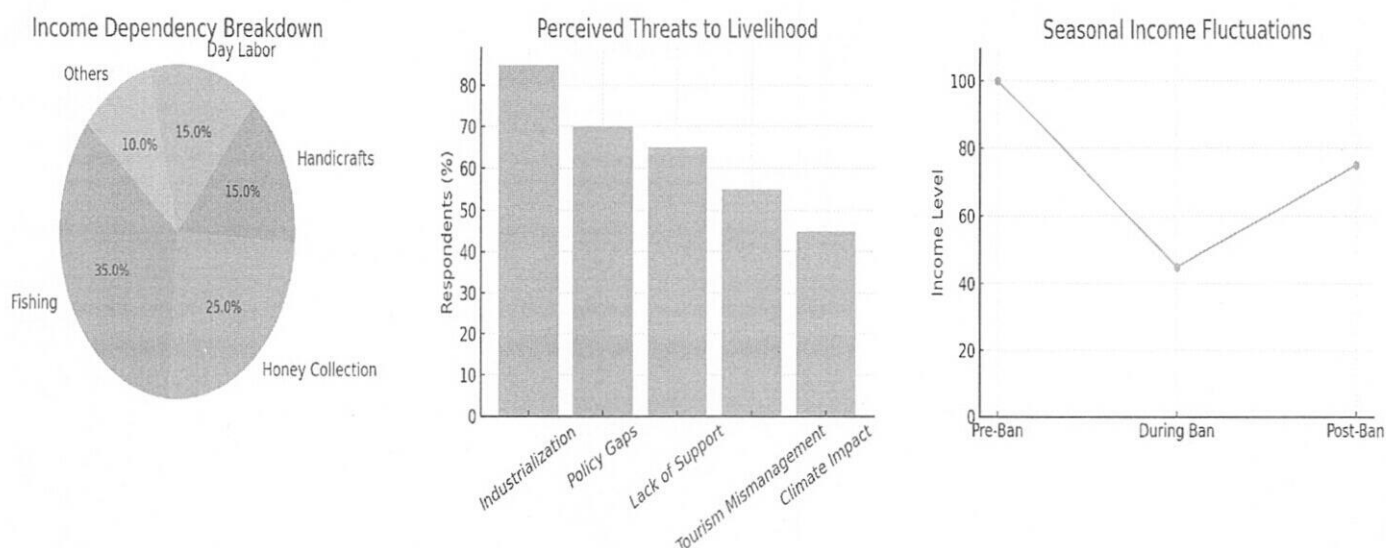


Figure 3: Income dependency, threats, and seasonal variation.

8.6 In-depth interviews and practical observations: In-depth interviews were conducted with policymakers and academicians, as well as an extensive review of literature and reports, to investigate ecotourism in the Sundarbans, emphasizing environmentally sustainable practices and community involvement. Field visits to the study areas also provided important insights and practical observations. These diverse approaches deepened our understanding of the challenges and opportunities present,

8.7 Major inconsistencies identified regarding policy implementations are:

The National Tourism Policy of Bangladesh, while outlining principles for sustainable tourism, has not effectively ensured ecotourism development in the Sundarbans due to several critical shortcomings in implementation, coordination, and enforcement.

- a) **Firstly**, the policy lacks specific, localized guidelines for ecotourism in sensitive ecosystems like the Sundarbans. Although it encourages sustainability, it does not provide actionable frameworks or regulatory mechanisms tailored to mangrove ecosystems. For instance, mass tourism is still prevalent in areas like Katka and Karamjal without adequate visitor caps or environmental safeguards, leading to habitat degradation.

- b) **Secondly**, inter-agency coordination is weak. The Ministry of Environment, Forest and Climate Change and the Ministry of Civil Aviation and Tourism operate in silos, resulting in conflicting priorities. While one prioritizes conservation, the other promotes visitor numbers, often at the expense of ecological integrity.
- c) **Thirdly**, community involvement remains minimal. The policy lacks enforcement provisions to ensure community participation in planning and benefit-sharing. Local residents are rarely consulted in tourism decisions and receive limited economic returns. For example, boat operators and guides are often hired from outside, bypassing trained locals.
- d) **Finally**, monitoring and evaluation mechanisms are inadequate, resulting in poor oversight. Without a strong institutional framework, the policy's goals remain aspirational rather than operational in the Sundarbans context.

8.8 Unregulated Tourism in the Sundarbans

The Sundarbans, despite its ecological richness and global recognition, faces increasing threats from pollution—particularly plastic and non-biodegradable waste. The root causes include:

- a) **Unregulated Tourism:** Visitors often bring single-use plastics (water bottles, food wrappers) with no disposal facilities in place. Popular spots like Karamjal and Kotka show visible littering due to lack of awareness and enforcement.
- b) **Lack of Waste Management Infrastructure:** The remote nature of the Sundarbans means there are no structured waste collection or disposal systems. Garbage is often dumped in waterways or burned.
- c) **River-borne Pollution:** Rivers like the Pasur and Shibsa carry industrial and household waste from upstream urban centers like Khulna and Mongla, including oil, plastics, and heavy metals.
- d) **Fishing and Boating Activities:** Local fishing communities often discard nets, oil containers, and plastic packaging into the forest waterways.

8.9 Possible Consequences

- a) **Wildlife Threats:** Plastic ingestion and entanglement threaten species like the Irrawaddy dolphin and estuarine crocodile.
- b) **Habitat Degradation:** Mangroves and aquatic ecosystems suffer from chemical and plastic pollution, reducing biodiversity and ecological resilience.

- c) **Tourism Decline:** Polluted surroundings deter responsible tourists and damage the Sundarbans' image as an ecotourism destination.

8.10 Triangulation on Community Engagement in Ecotourism in the Sundarbans

This report presents a triangulated analysis based on Key Informant Interviews (KII) and Focus Group Discussions (FGD) on community engagement in ecotourism in the Sundarbans, Bangladesh. The study focused on four key aspects: community participation in planning, local employment, profit sharing, and capacity building. The findings are aligned with relevant theories of ecotourism, particularly the Community-Based Ecotourism (CBET) and Sustainable Development frameworks.

8.11 Triangulated Findings

The table below summarizes and compares the results from KII and FGD and links them to theoretical perspectives:

- a. Community participation in planning is rare according to both sources.
- b. Local employment is limited, with few structured opportunities for local people.
- c. Profit sharing is not significant and not reaching local stakeholders.
- d. Capacity building initiatives have largely not been implemented.

These findings highlight a need for inclusive, community-driven tourism development.

8.12. Visual Representation of Triangulated Data

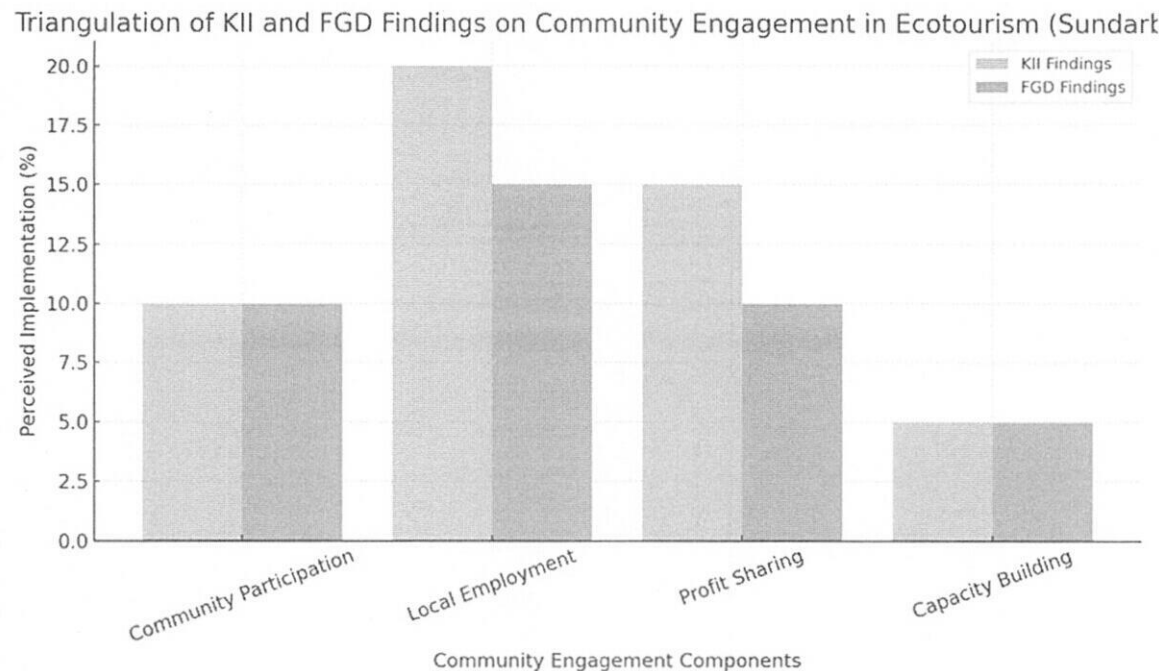


Figure 4: Perceived implementation levels of community engagement components based on KII and FGD.

8.13. Theoretical Integration and Implications

The findings align with gaps identified in CBET and Sustainable Development Theory. When tourism development is top-down, communities are excluded from both decision-making and benefit sharing. The lack of empowerment, capacity, and economic return prevents local people from acting as stewards of the ecosystem. Implementing inclusive and participatory models will not only enhance community ownership but also align tourism with ecological conservation and sustainable livelihoods.

Given the evolving socio-economic landscape and Bangladesh’s commitment to the Sustainable Development Goals (SDGs), the National Tourism Policy 2010 must be revisited to effectively promote ecotourism in the Sundarbans. The current policy lacks targeted strategies for environmental protection, community participation, and climate resilience—core elements of SDG-aligned tourism. For example, there are no specific mechanisms to ensure

profit-sharing with local communities or enforce eco-friendly infrastructure standards in sensitive zones like Kotka or Karamjal. A revised policy should integrate sustainable tourism practices, community-based management, and climate adaptation to safeguard both livelihoods and biodiversity in the Sundarbans.

A holistic, systems-based, and community-inclusive approach is essential to transform the Sundarbans into a model of sustainable ecotourism.

Component	KII Findings	FGD Findings	Relevant Theories	Insights & Justification
Renewable Energy Use	Very insignificant; no solar or alternative sources integrated in tourism setups	Stakeholders noted dependence on diesel generators and firewood	Ecological Modernization Theory: Advocates technological innovation to reduce ecological footprints	Lack of investment and technical know-how prevents integration of renewable systems
Waste Management	Systems not designed or implemented	Waste, including plastic, is left unmanaged, harming both water and land ecosystems	Circular Economy Theory: Promotes waste reduction, reuse, and recycling in tourism infrastructure	Absence of basic waste infrastructure and visitor regulation causes environmental degradation
Low-Impact Infrastructure	Poorly planned, with little consideration for environmental impacts	Concrete and unsustainable facilities built close to sensitive habitats	Carrying Capacity Theory: Stresses infrastructure must match environmental limits	Construction near mangroves risks erosion and habitat loss
Biodiversity Practices	Biodiversity not considered in tourism planning or activity management	Wildlife disturbance is common; no eco-guidelines for visitors	Biodiversity Conservation Theory: Tourism should support habitat preservation and species protection	Unregulated visitor flow disturbs breeding and feeding grounds for species like deer and dolphins

Figure 5: KII and FGD Findings and comparison with relevant theories focusing on Eco Friendly Approaches

9. Recommendations

To ensure effective ecotourism in the Sundarbans, Bangladesh should adopt a multidimensional strategy that aligns with sustainability, conservation, and community empowerment. Here are the best possible ways:

- a) Formulate a Dedicated Ecotourism Policy for the Sundarbans-Tailor regulations to the unique ecological and socio-economic context of the Sundarbans. Set clear guidelines on visitor limits, zoning, waste management, and eco-friendly infrastructure.
- b) Strengthen Inter-Ministerial Coordination-Establish a joint task force between the Ministry of Tourism and the Ministry of Environment. Align tourism promotion with conservation mandates through a unified action plan.
- c) Ensure Genuine Community Participation-Involve local communities in planning through village-level tourism committees. Use participatory rural appraisal (PRA) methods to identify local needs and ideas. Develop community-run eco-lodges and tour operations.
- d) Implement Equitable Benefit-Sharing Mechanisms-Create tourism profit-sharing models through cooperatives. Ensure that a fixed percentage of tourism revenue is reinvested in community development and conservation.
- e) Invest in Capacity Building and Green Skills-Offer training in eco-guiding, hospitality, conservation, and foreign languages. Partner with NGOs and educational institutions for local skill development.
- f) Enforce Monitoring, Evaluation & Environmental Standards -Deploy tourism impact monitoring systems using GIS and community feedback. Conduct annual environmental and social audits of tourism activities.
- g) Promote Responsible Marketing & Ecotourism Certification-Market the Sundarbans as a premium ecotourism destination with “green” certifications. Reward operators who meet eco-standards with incentives and recognition.

10. Conclusions:

Ecotourism in the Sundarbans holds great promise but faces significant implementation challenges. The National Tourism Policy’s goals remain largely unfulfilled due to weak coordination, limited community engagement, and inadequate environmental safeguards. Strengthening policy enforcement, promoting local participation, and adopting eco-friendly practices are essential to ensure sustainable, inclusive, and conservation-oriented tourism in this globally significant ecosystem.

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2. Put tick (✓) marks on Evaluation method and Institution's Name.

Name. Md Saiful Islam

Roll No. 120

Bangladesh Export Policy 2024–27: An Assessment of Sustainable Export Growth After LDC Graduation

Abstract

This review critically assesses the Bangladesh Export Policy 2024–2027 in the broader context of ensuring sustainable export growth as the country prepares for graduation from Least Developed Country (LDC) status by 2026. Graduation marks a major developmental milestone for Bangladesh but also brings substantial challenges, including the loss of preferential trade facilities such as duty-free quota-free (DFQF) market access, export subsidies, concessional finance, and simplified rules of origin. These changes will have direct implications for export competitiveness, especially in key sectors like ready-made garments (RMG), which account for over 85% of the country's total exports.

This study employs a mixed-methods approach, combining desk research of domestic and international policy frameworks with primary insights drawn from interviews with key stakeholders—government officials, exporters, trade experts, and business leaders. The findings indicate that while the Export Policy 2024–27 outlines ambitious goals such as achieving USD 110 billion in export earnings and emphasizes diversification and value addition, it falls short in terms of adequately preparing the economy for the post-LDC trade regime. Critical gaps exist in areas such as WTO-compliant incentive structures, legal and environmental compliance (e.g. due diligence directives), export readiness, and institutional capacity.

The review concludes that sustainable export growth in the post-graduation era will require a strategic policy shift—from dependence on fiscal subsidies to a more resilient support ecosystem involving technology upgrading, skills development, market intelligence, green production practices, and regional and global trade agreements (FTAs/PTAs). It also emphasizes the need for stronger public-private coordination and policy coherence to address emerging global trade standards. The findings aim to support policymakers in designing actionable reforms that ensure export resilience, competitiveness, and inclusiveness in a rapidly evolving global trade environment.

1. Introduction

1.1. Background

Bangladesh will have graduated from least developed countries (LDCs) to a developing country by 2026, representing a significant shift in its international standing. Exclusive commercial rights, advantageous conditions, and committed financial and technical support from development partners have all helped Bangladesh (Mohsin, 2023). However, when these benefits are taken away, the termination of LDC designation presents significant difficulties.

The purpose of this thesis is to identify the main problems resulting from this shift. The Ministry of Commerce of Bangladesh Government publishes the Export Policy in every three years in accordance with section 3(1) of the Import and Export (Control) Act, 1950. The Export Policy 2024–2027 sustained export growth following LDC graduation will be examined in this assessment. More than 85% of export revenue comes from ready-made clothing (RMG). With little export diversifications, it has grown to be a major challenge. However, Bangladesh will be promoted from LDC to developing country by the UN on November 24, 2026. It should be noted that, in accordance with the World Bank's criteria, the nation has already achieved lower middle income status by 2025. As a result, Bangladesh's export markets have been severely impacted by these multiple graduations. . Bangladesh's DFQF facility will be lost. Bangladesh will lose DFQF facility Developed and Developing countries specially from EU. Sixty percent of export goes to EU market. So after graduation 10%-12% tariffs will be charged to enter into EU markets. Carbon Border Adjustment Mechanism(CBAM) of European Union is set to go into force in 2026, which will impose a carbon fee on imports. Some EU countries like France, Germany enacted Due Diligence Law. On 25 July 2024, EU Directive on corporate sustainability due diligence (Directive 2024/1760) entered into force. The aim of this Directive is to foster sustainable and responsible corporate behavior in companies' operations and across their global value chains. Considering all these factors this review will try to analyze to what extent Bangladesh ongoing Export Policy will attain sustainable export growth after graduation.

1.2 Problem Statement

Bangladesh is set to transition from the least developed country to a developing country in 2026. The achievement holds significant importance for the nation. However, this endeavor is full of challenges. One of the most significant and demanding situations is the effect on Bangladesh's exports. Bangladesh enjoys advantageous market access to Developed countries under the Generalized System of Preferences, GSP, due to its classification as a least developed country. The withdrawal of LDC privileges will impact Bangladesh's competitiveness, particularly as exporters must contend with higher tariffs in important exporting markets. The nation has more significant macroeconomic issues that could make the transition more challenging in addition to the immediate effects of LDC graduation. (Rzzaque) .70 percent of Bangladesh's exports to other countries currently benefit from preferential trade agreements, which will be phased out after graduation and tariffs in the European Union (EU) market will increase by around 10-11.5 percent after LDC graduation.”. To circumvent these challenges a roadmap for sustainable export is required for our export products. (Prof Mustafizur Rahman). The objectives of this study is taken from chapter 2.2.1 of Export Policy 2024-27

1.3 Objective of the Study

The main objective of the study is to investigate the export status following Bangladesh's transition from LDC classification.

The specific objectives are-

- a. To explore the prospects of sustainable export growth after LDC graduation
- b. To examine the loss of trade privileges and the adverse effect of leaving the LDC status.

1.4 Significance

This study aims to assess and analyze the sustainable export growth, prospect and provide indirect support after graduation mentioned in the Export Policy 2024–2027. The Export Policy plays a vital role in shaping Bangladesh' export and, it should be evaluated regularly. However, evaluations by the Ministry of Commerce or the Export Promotion Bureau (EPB) have been notably absent. But some private think tank and business body conducted some evaluation. The findings are intended to provide policymakers with insights into potential challenges and offer informed policy recommendations. This research may serve as a valuable resource for policymakers, practitioners, and researchers. It may also encourage the Ministry of Commerce and relevant business bodies to undertake sector-wise evaluations of the export policy.

2.0 Literature Review

Export Policy 2024–27 – Summary Overview

The Ministry of Commerce has formulated the Export Policy 2024–27 with the aim of boosting the nation's export trade. This policy, updated every three years, sets an ambitious target of achieving USD 110 billion in exports by the end of the policy period. Export policy 2024-27 was formulated to create a friendly environment to boost the country's export trade.

The RMG sector is a bedrock of Bangladesh's economy, comprises 85 percent of the country's export earnings. This sector has seen tremendous growth from US\$14.6 billion in 2011-12 to \$ 44 billion in 2023-24.

Key Features and Structure: The Export Policy 2024-27 comprises nine chapters, each addressing a specific area of export development:

1. **Background and Context:** Discusses the rationale for the policy in light of Bangladesh's impending graduation from Least Developed Country (LDC) status and the global economic disruptions caused by the Russia-Ukraine war.
2. **Objectives and Strategies:** Lays out the core objectives of the policy along with strategic approaches and do FTA/PTA with some countries to meet sustainable export.
3. **Actions and Scope:** Specifies the action plans and broad scope for implementation across sectors.
4. **Definitions:** Clarifies key terminologies used throughout the policy.
5. **General Provisions on Exports:** Covers rules and regulations applicable to export operations.
6. **Export Diversification:** Encourages product and market diversification to reduce over-dependence on a few export items.

7. General Export Facilities: Lists facilities and incentives provided to exporters. Like support to build ETP and other technological upgradation. Reduce energy price for export led industries.
8. Product-Specific Export Facilities: Indirect support to 13 exportable items
 - Notably, Clause 8.1(13) states:
“Government will take initiative to develop a Standard Unified Code of Compliance for the export-oriented garment industries of the country by integrating the requirements of different countries and buyers.”
9. Export of Services: Highlights the policy’s approach toward promoting service sector exports (e.g., IT, freelancing, consulting).

This study also analyzes Vietnam Law *on* Foreign Trade Management 2017, Trade policies of Malaysia & Thailand, WTO rules on Export, EU Regulations on Export and some national and international journal/export policy review.

2.1 Limitation & Scope

This study has some limitations like time constraints and budget constraints. However, this study primarily aims to evaluate the sustainable export growth strategies after graduation, focusing Bangladesh export policies analyzing some regional countries policy, and to propose actionable recommendations

3.0 Methodology

Considering the given objectives, this research followed mixed methodologies. The methodology is based on two significant tasks.

- (i) Desk research of other relevant policy documents, literature, and secondary data
- (ii) Primary data collection and analysis by conducting Interviews & Key Informant Interviews (KIIs) with stakeholders relevant to the study.

3.1 Secondary Research Summary

This study followed secondary research to analyze Bangladesh’s export policy landscape in the context of sustainable export growth after LDC graduation. The study reviewed relevant policies, trade data, and to detect weaknesses how well Bangladesh’s strategies align with best international/regional practices.

- Export Policy 2021–24 and earlier policies
- WTO export regulations
- Export data from Bangladesh Bank, UNCTAD, World Bank, IMF, and EPB
- 8th Five-Year Plan
- Literature on export diversification and trade facilitation

During the desk research, the researcher reviewed relevant policies, laws, and international agreements to identify gaps and inconsistencies. The researcher also analyzed trade data from sources like UNCTAD, World Bank, and EPB, and assessed Bangladesh’s compliance with WTO trade facilitation standards. Finally, this study compared Bangladesh’s export policies with those of countries like Ecuador, India, and Vietnam to draw insights on better-performing export sectors.

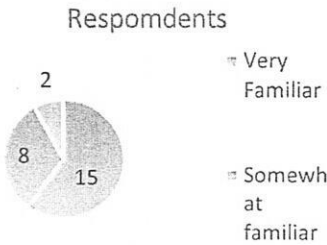
3.2 Primary data collection

For primary data collection, a qualitative approach was adopted. The researcher designed structured questionnaires for stakeholders and conducted key informant interviews with academicians, business community representatives, Official from trade bodies Ministry of Commerce and Export Promotion Bureau (EPB), and members of the customs authority.

3.3 Data analysis:

3.3(1) Awareness & Understanding of Export Policy 2024–27

Response Option	Number of Respondents	Percentage (%)
Very familiar	15	60%
Somewhat familiar	8	32%
Not familiar	2	8%



The study revealed a strong level of awareness among respondents regarding the Export Policy 2024–27. A majority (60%) reported being very familiar with the policy, while 32% indicated they are somewhat familiar. Only 8% of participants reported no familiarity, suggesting that most stakeholders are at least moderately aware of the policy's contents

3.3(2) Addressing of LDC Graduation Implications in the Export Policy 2024–27

Response Option	Number of Respondents	Percentage (%)
Yes	8	32%
No	14	56%
Partially	3	3%

This study identified most respondents (56%) believe the Export Policy 2024–27 does not adequately address the challenges of LDC graduation, while 32% think it does, and 12% feel

it is only partially sufficient. This suggests a clear concern about the policy's preparedness for the post-graduation phase.

3.3(3) Export Challenges Post-LDC Graduation

Challenge	Number of Mentions
Loss of DFQF access (GSP)	18
Higher tariffs	18
Carbon Border Adjustment Mechanism (CBAM)	Not quantified
Due diligence/legal compliance issues	10
Loss of concessional finance or support	18
Others (comments)	7 (noted potential benefits like increased investment despite DFQF loss)

The predominant concern identified by this study is the anticipated loss of DFQF market access, higher tariffs in the EU and other developed markets, and reduced concessional support—cited by 18 respondents as key risks to competitiveness post-LDC graduation. However, 7 participants also recognized potential upsides, including opportunities for increased investment.

3.3(4) Readiness for Post-LDC Graduation Challenges

Response Option	Number of Respondents	Percentage (%)
Well Prepared	08	32%
Moderately prepared	05	20%
Poorly prepared	12	48%

In response to the question on preparedness, only 8 respondents (32%) felt their business or sector is well-prepared, while 12 respondents (48%) indicated they are poorly prepared. Another 5 respondents (20%) reported being moderately prepared.

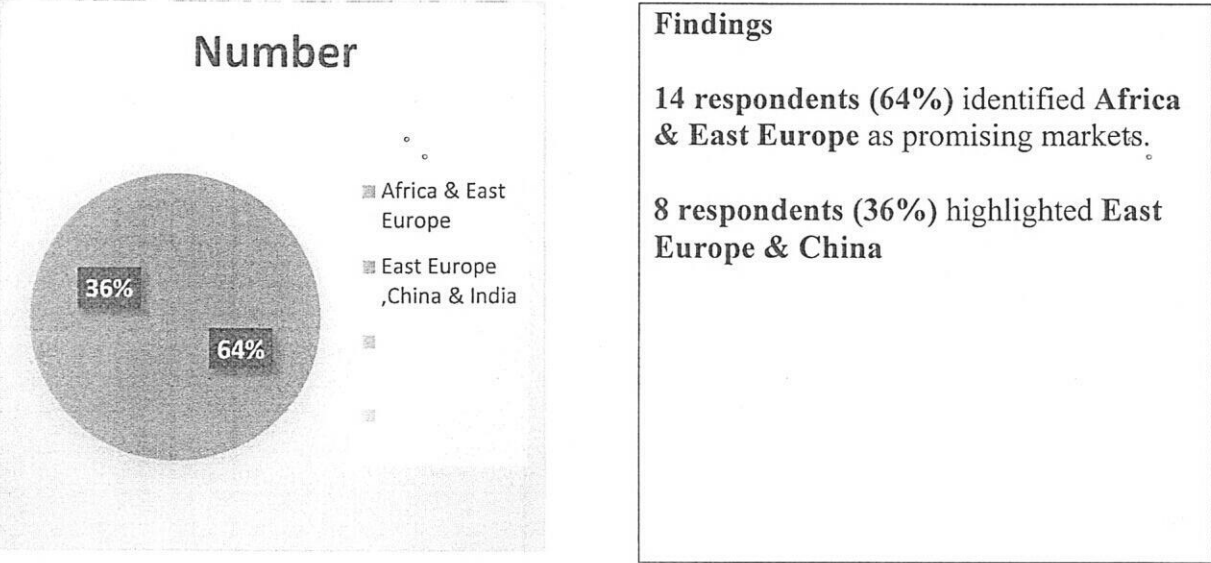
The data suggests that nearly half of the respondents perceive their sector as inadequately prepared to tackle post-graduation challenges. This indicates a significant readiness gap, underscoring the need for targeted policy support, capacity building, and strategic planning to enhance resilience after LDC graduation.

3.3(5) Effectiveness of the Export Policy in promoting export diversification Export Diversification & Market Development –

Response Option	Number of Respondents	Percentage (%)
Very effective	10	40%
Somewhat effective	12	48%
Not effective	3	12%

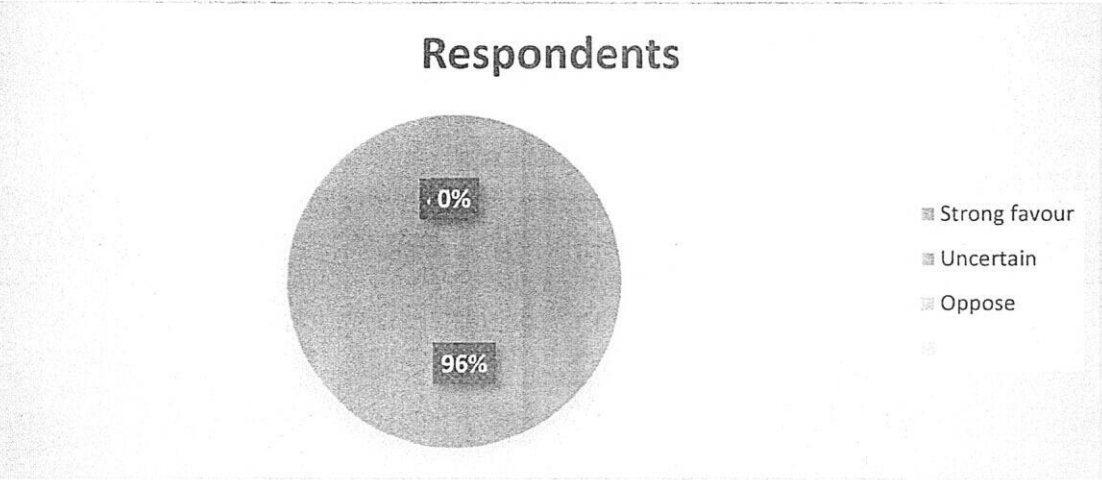
The study reveals that 88% of respondents consider the Export Policy at least somewhat effective in promoting diversification, with 40% rating it as very effective. However, the 12% who view it as ineffective highlight the need for more robust implementation strategies.

3.3(6) Promising Non-Traditional Export Markets



East Europe emerged as a common choice, indicating strong perceived potential. Africa and China were also seen as promising due to market size and diversification needs.

3.3(7) Bangladesh’s Pursuit of PTAs and FTAs for Post-LDC Export Growth

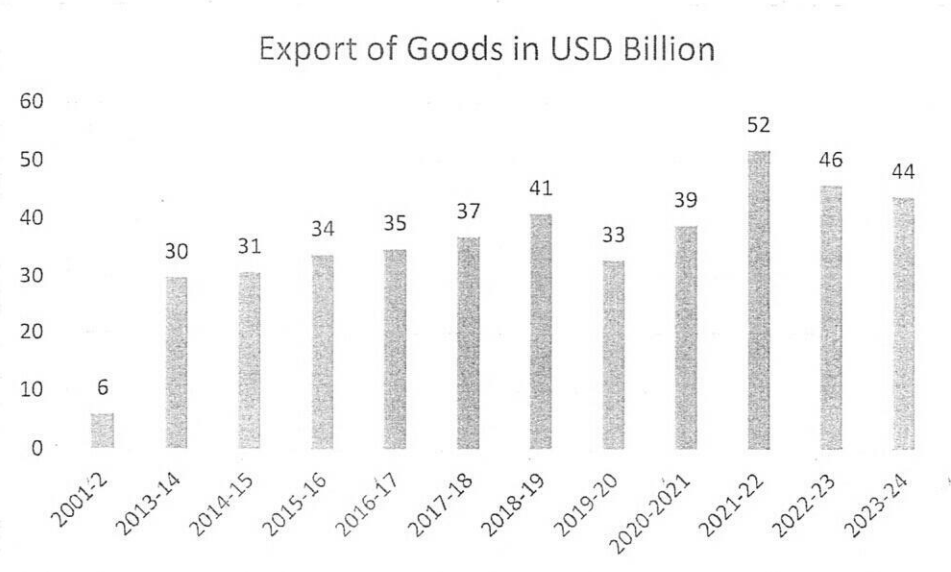


The study found an overwhelming majority (24 out of 25 respondents) support pursuing more Free Trade Agreements (FTAs) and Preferential Trade Agreements (PTAs), indicating strong consensus on the need for expanded trade partnerships. Only 1 respondent was uncertain, and none opposed. This reflects a clear policy direction favored by stakeholders to enhance market access post-LDC graduation.

4.0 Context and Challenges of the Export Policy 2024-27

4.1 Overview of the Export Sector

Over the past few decades, Bangladesh’s export sector has experienced significant growth. Although trade liberalization began in the 1980s, the pace accelerated markedly in the early 1990s (Hasan, 2005). Since the mid-1980s, the country has implemented a broad range of policy reforms—guided by the World Bank and the International Monetary Fund (IMF)—to facilitate export development. Extensive export promotion measures, along with preferential market access to the European Union (EU) and the United States (US), have played a key role in the impressive growth of Bangladesh’s export earnings over the last 25 years (Raihan and Khondker, 2013). Export earnings rose from US\$ 30 billion in the fiscal year 2013–14 to US\$ 44 billion in 2023–24.

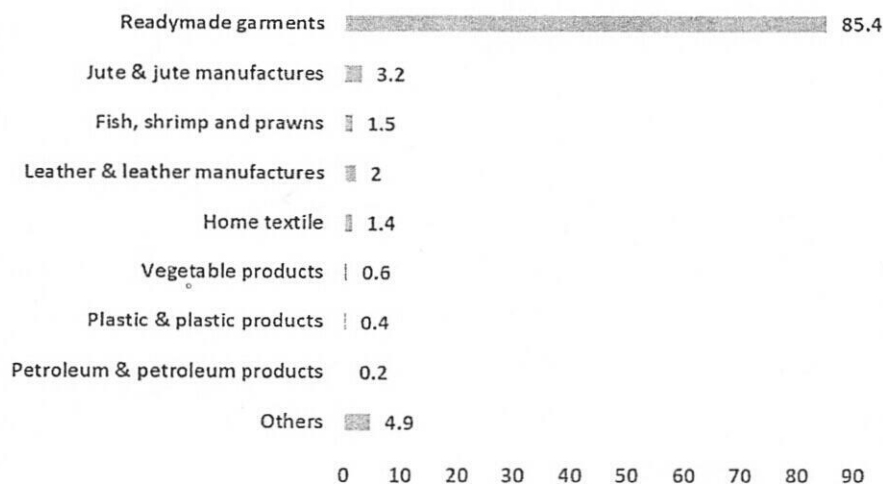


Despite this growth, Bangladesh's export base remains narrowly focused. The country relies heavily on a limited number of products, primarily cheap, labor-intensive, and low-value-added goods. Major export items include ready-made garments (RMG), seafood, raw jute, tea, vegetables, and fruits. The limited diversity of export products is a concern, particularly given the size and potential of the economy. As a result, the export sector’s contribution to GDP is not as robust as it could be, especially when compared to the high cost of imports, which continues to drive a persistent trade deficit (Saha, 2013).

The export basket is highly concentrated in the RMG sector, which accounts for the lion’s share of total export earnings. One major reason for this concentration is the availability of low-cost

labor—Bangladesh has some of the lowest wage rates in the world. This cost advantage has significantly contributed to the growth of the RMG industry, which now directly employs approximately 4 million unskilled or semi-skilled workers (Islam, 2021). While the RMG sector is a key driver of export growth, the overdependence on it also exposes the economy to sector-specific shocks (Sattar, 2015).

Figure 2: Commodity-wise export earnings (%) in 2019-20



Source: Bangladesh Bank

Looking ahead, Bangladesh is set to graduate from the Least Developed Country (LDC) category by 2026. This transition will bring challenges, particularly regarding the loss of preferential trade benefits. Therefore, rapid and sustainable growth in the export sector is critical to cushion the impact of LDC graduation. Currently, Bangladesh's main export destinations include the United States, Germany, the United Kingdom, Canada, Italy, Spain, France, Belgium, Japan, and China. Among these, the United States is the single largest export destination, accounting for approximately 17% of total exports. The European Union, as a bloc, accounts for about 56% of RMG exports.

Given this high concentration, both in terms of products and markets, diversification is essential. Emerging markets such as Australia, Brazil, Chile, India, South Korea, Mexico, Russia, Turkey, and South Africa present significant potential for Bangladeshi exports (Islam and Haque, 2018). Exploring these markets and broadening the product base will help mitigate the risks associated with overreliance on a single sector or a limited number of markets. Market and product diversification will also be critical for sustaining export earnings and strengthening resilience in the post-LDC graduation era.

4.2 Divergence from International Best Practices (Comparator Countries)

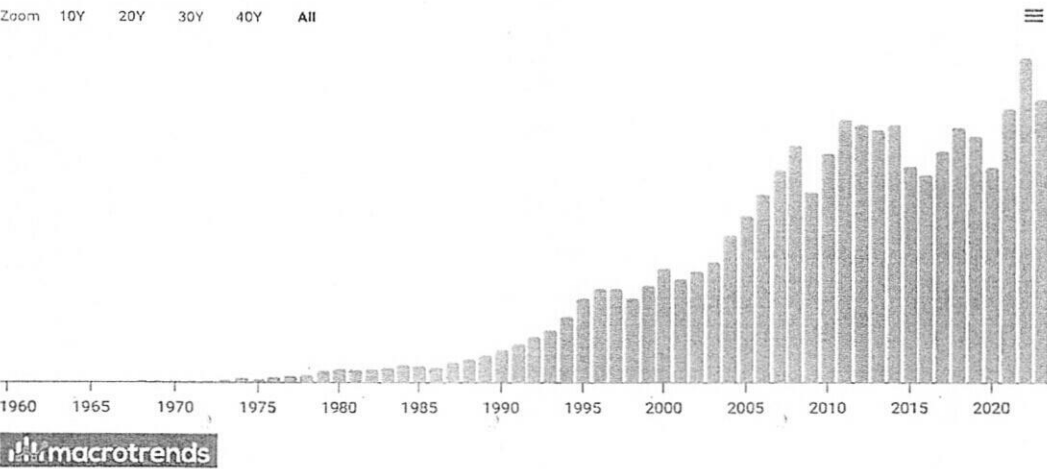
This section examines the trade and export policies of selected comparator countries—namely Malaysia, Thailand, and Vietnam—that have demonstrated significant export growth over the past decade. As Bangladesh prepares for its graduation from Least Developed Country (LDC) status and aspires to attain Upper Middle-Income Country (UMIC) status by 2031,

understanding the policy frameworks of these successful economies can offer valuable insights. This comparative analysis aims to highlight key differences and potential lessons for Bangladesh's export policy trajectory

Malaysia

Malaysia's export sector has evolved significantly over the five recent decades. In line with the nation's economic industrialization, the composition of exports had gradually shifted from comprising mainly of agricultural and mining products in the 1960s to manufactured goods in the 1980s. The development and growth of the manufacturing sector was so rapid that by the late 1990s, the sector accounted for more than 80% of total exports. Since 2000, two notable trends have emerged in Malaysia's export structure. First, the gradual move away from a heavy concentration in electrical and electronics (E&E) exports, towards non-E&E manufactured products and commodities. The second key trend is the diversification of Malaysia's export markets. Another key emerging trend is the greater diversification in the destination of Malaysia's exports. While the share of Malaysia's exports to traditional markets such as the US, Japan and the European Union (EU) remains high, demand from the regional economies, particularly East Asia, has risen substantially since 2000.

Malaysia exports trends



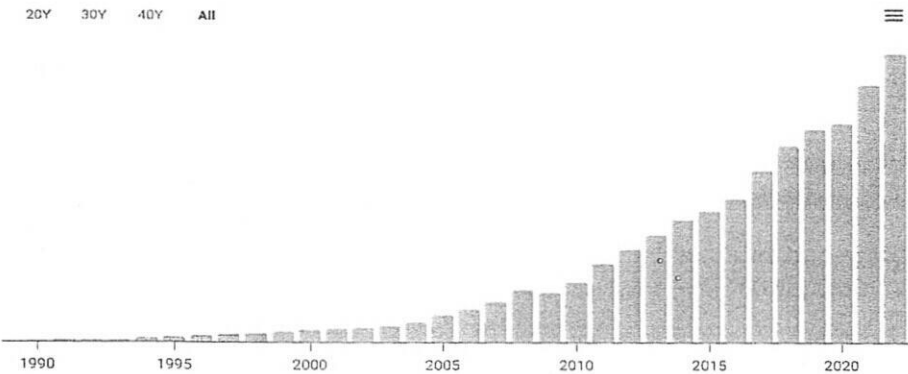
Malaysia's exports grew significantly from USD 112 billion in 2000 to USD 313.21 billion in 2022.

Vietnam

Economic and political reforms under Doi Moi, have spurred rapid economic growth. The export expansion has been a key focus of the reform process in Vietnam over the past few decades (Athukorala, 2009). Export response to Vietnam's liberalization (Doi Moi) reforms initiated in 1986 was quick and remarkable. The value of total merchandise exports quadrupled between 1985 and 1990. Until about 1992, crude petroleum accounted for a large share of export increment. After that non-oil exports started to take off, firstly agricultural products and

then manufactured products. Export diversification was significant and it contributed to the GDP of the economy. Shifts in the export commodity composition from primary products to manufactured products were noteworthy.

Vietnam exports trends



macrotrends

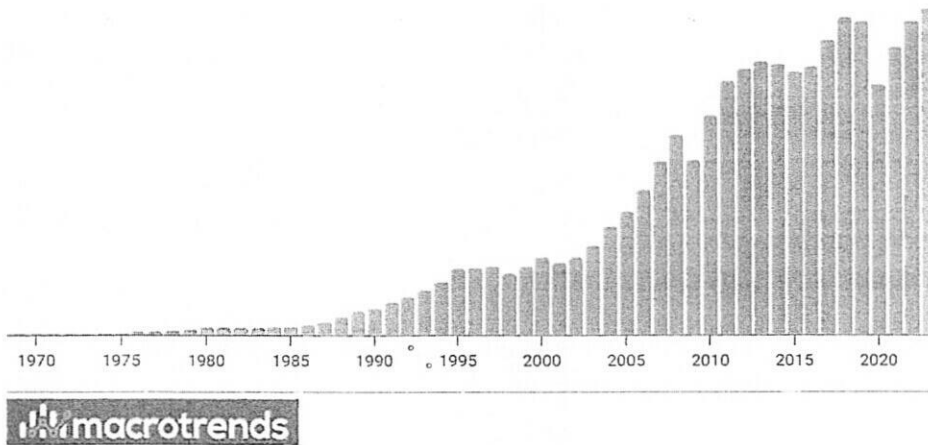
Vietnam exports for 2022 were 384.93 billion US dollars, in 2021 was 17 billion US dollars in 2010 was 80 billion USD. Despite global economic instability, Vietnam's exports maintained positive growth in 2024, reaching 405.53 billion USD. Vietnam's international trade agreements have significantly contributed to its impressive export performance. Trade pacts such as the Regional Comprehensive Economic Partnership (RCEP), the EU-Vietnam Free Trade Agreement (EVFTA), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) have helped Vietnam expand its markets and reduce tariff barriers, not only boosting exports but also creating opportunities to increase imports of modern technology and production equipment from partner countries.

Thailand

Thailand, the second largest economy in ASEAN after Indonesia, is an upper middle-income country with an open economy, a gross domestic product (GDP) of \$529 billion, and 4.1% annual growth in 2018.

An export-led growth strategy taken by the Thai government brought about a record of economic growth in Thailand. During 1981-1996, exports grew at an annual rate of 21%. A structural change of exports toward manufacturing products has also helped the country to maintain high export growth. Before the early 1990s, traditional export products of Thailand were clothing, footwear, toys, processed food products. Since then, machinery and transportation equipment, electronics, and electrical appliances have become the major export items. Several regional and bilateral trade contracts have facilitated the export of Thai products to different countries. Thailand has set up border economic zones to enhance export.

Thailand exports trends



An export-dependent economy, Thailand exported a total of \$324 billion worth of goods in 2022 but in 2001 export was \$ 65 billion dollars. The top ten export items were machinery including computers (17.2%), electrical equipment (14%), vehicles (12.2%), rubber (6.2%), plastics (5.8%), gems (4.8%), mineral fuels, (4.2%), meat/seafood preparations (2.6%), organic chemicals (2.5%), and cereals (2.3%).

5.0 Major Findings

1. Export Policy Awareness Is High, but Impact Preparedness Is Low
 - 60% of stakeholders are *very familiar* with the Export Policy 2024–27.
 - Despite awareness, 48% report being *poorly prepared* for post-LDC graduation challenges.
 - There is a significant readiness gap between policy awareness and institutional or sectoral preparedness.
2. Policy Partially Addresses LDC Graduation Challenges
 - A majority (56%) of respondents believe the current Export Policy does not sufficiently address LDC graduation impacts.
 - Only 32% believe it is adequate, indicating a clear policy blind spot regarding post-LDC risks like higher tariffs and legal compliance.
3. Key Threats Post-LDC Graduation Identified
 - The most pressing challenges cited include:
 - Loss of Duty-Free Quota-Free (DFQF) access (e.g., EU GSP)
 - Higher tariffs (10–12%) especially in EU markets
 - Loss of concessional finance and development support
 - Emerging compliance hurdles like the EU's Due Diligence Directives

4. Export Diversification Remains a Priority, But Progress Is Slow
 - 88% of respondents find the policy *somewhat or very effective* in promoting export diversification.
 - Despite policy efforts, over-dependence on the RMG sector (85% of exports) persists.
 - Non-RMG sectors (like IT, agro-processing, leather, etc.) still lack robust institutional support and market linkage mechanisms.
5. Export Policy 2024–27 Offers Positive Initiatives
 - Introduction of a Unified Code of Compliance for RMG industries under Clause 8.1(13) is a notable step towards meeting international standards.
 - Promises of technological upgrades, energy cost support, and exporter incentives are steps in the right direction.
6. Stakeholders Strongly Support Trade Agreements
 - 96% of respondents endorse negotiating more Free Trade Agreements (FTAs) and Preferential Trade Agreements (PTAs).
 - This reflects a consensus on the importance of expanding market access to offset post-graduation trade preference losses.
7. Institutional Evaluation Mechanisms Are Weak
 - No systematic evaluation of export policy has been conducted by the Ministry of Commerce or the Export Promotion Bureau (EPB).
 - Current monitoring relies heavily on private think tanks and external assessments, indicating a need for institutionalized evaluation mechanisms.
8. Comparative Policy Analysis Indicates Best Practices
 - Policies from Vietnam, India, and Pakistan demonstrate more integrated and forward-looking approaches toward export development.
 - Bangladesh’s policy lacks detailed sectoral roadmaps, actionable timelines, and climate-resilience measures compared to these countries.

6. Conclusion and Policy Recommendations

6.1 Conclusion

The Bangladesh Export Policy 2024–27 outlines an ambitious roadmap aimed at achieving USD 110 billion in export earnings by fostering diversification, boosting competitiveness, and enhancing institutional support. However, as Bangladesh approaches its 2026 graduation from Least Developed Country (LDC) status, the challenges of losing duty-free market access, concessional finance, and preferential trade privileges pose serious risks to export sustainability.

This policy review reveals that while awareness of the policy is relatively high among stakeholders, preparedness for post-LDC challenges is low. The policy only partially addresses critical issues such as WTO-compliant support schemes, legal compliance with EU

sustainability regulations (due diligence), and institutional readiness for evolving global trade standards. A heavy reliance on the Ready-Made Garments (RMG) sector persists, and the mechanisms to support non-RMG sectors remain underdeveloped.

To ensure a resilient export future, Bangladesh must strategically realign its policy priorities. This includes fast-tracking FTAs/PTAs, replacing cash incentives with WTO-compliant tools, investing in green production capabilities, and strengthening institutional evaluation and support mechanisms. Establishing a post-LDC export competitiveness framework, enhancing MSME readiness, and aligning with international compliance standards are also critical.

In conclusion, sustainable export growth after LDC graduation will require more than policy ambition—it demands a coherent, inclusive, and forward-looking strategy backed by strong implementation, public-private collaboration, and continuous institutional learning. The Export Policy 2024–27 is a step forward, but unless refined and rigorously enforced, it may fall short of securing Bangladesh's competitive position in a rapidly transforming global trade environment.

6.2 Specific Recommendations for Sustainable Export Growth Post-LDC Graduation

1. Develop a Post-LDC Graduation Export Strategy Framework

Introduce a dedicated chapter or annex in the Export Policy titled “*LDC Graduation Risk Mitigation and Market Competitiveness Plan*”. The policy currently lacks a structured roadmap to manage tariff shocks and compliance obligations post-2026.

2. Fast-Track Bilateral and Regional FTAs/PTAs

Free Trade Agreements (FTAs) and Preferential Trade Agreements (PTAs) FTAs and PTAs with major trading partners are considered as one of the vital tool for future market access once Bangladesh graduates from LDC to a developing nation in 2026. Bangladesh has taken some initiatives and undergoing negotiations with EU to achieve the Generalized System of Preferences (GSP) Plus after the expiry of the European GSP in 2029. Bangladesh and Bhutan have signed a preferential trade agreement (PTA) on 06 December 2020 to ease further trade barriers between the two countries and facilitate an increase in the volume of bilateral trade.

Presently, Bangladesh and Japan are set to finalize the Economic Partnership Agreement (EPA) to bolster bilateral trade and investment between the two nations This agreement is very important for both Bangladesh and Japan in the context of Bangladesh's graduation from the LDC status in November 2026. Because if Bangladesh graduates from the LDC status, it may lose the zero-duty export benefit currently available in the Japanese market. As a result, Bangladeshi exports to Japan may face tariffs of up to 18 percent.

and BIMSTEC FTA), only SAFTA has come into force.

3. Align Export Policy with EU Sustainability Requirements

Establish a dedicated Sustainability Compliance Cell under the EPB of Ministry of Commerce to help exporters comply with EU Due Diligence Law, Corporate Sustainability Reporting Directive (CSRD), Carbon Border Adjustment Mechanism (CBAM).

These are non-tariff barriers that will affect access to key EU markets from 2026 onward.

4. Accelerate the Development of the Unified Code of Compliance for RMG

Finalize and pilot the Unified Code of Compliance under Ministry of Commerce in partnership with BGMEA, BKMEA, FBCCI, MCCI, FICCI, Other Chamber and Ministry of Labour and Manpower by mid-2025. Harmonizing standards will reduce audit fatigue and help meet international buyers' ESG (Environmental, Social, and Governance) demands.

5. Replace Cash Incentives with WTO-Compliant Support Schemes

Gradually phase out direct cash subsidies by 2026 and replace them with: Production-based incentives (e.g., investment grants), Technology adoption support, Skills development reimbursements, Provide Soft Loans and Interest Subsidies via Development Banks. Redirect fiscal support from cash incentives to interest buy-downs on loans for export-enabling investments through: Bangladesh Bank & State-owned or development-oriented banks

6. Implement Green Transition Support for Exporters

Offer carbon audit support, green technology grants, and reduced electricity tariffs for certified green exporters. This will prepare exporters for CBAM and global green procurement standards.

7. Establish an Export Readiness Fund for MSMEs

Create a dedicated fund under the Export Policy to support MSMEs in: Product certification, Packaging and branding & E-commerce integration. Small exporters lack the resources to adapt to LDC graduation-related requirements.

8. Institutionalize Annual Export Policy Review

Mandate the Export Promotion Bureau (EPB) to publish an Annual Export Policy Implementation and Impact Report. Regular evaluation will ensure accountability, allow course correction, and improve policy responsiveness.

9. Strengthen Trade Facilitation and Customs Modernization

Ensure full implementation of the WTO Trade Facilitation Agreement through: Digital customs processing, Risk-based inspection systems & One-stop export clearance platform. Reducing cost and time of exports will enhance competitiveness post-graduation.

10. Create a High-Level LDC Graduation Taskforce

Form an inter-ministerial Export Competitiveness and Graduation Preparedness Taskforce led by the Ministry of Commerce. Coordination among trade, finance, industry, and foreign affairs ministries is critical for smooth transition and targeted support.

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DATE:28.05.2025

Name: Md. Bellal Hossain Khan

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117 Senior Staff Course

EXECUTIVE SUMMARY

Public Procurement in Bangladesh accounts for a significant share of national expenditure and plays a pivotal role in delivering public services and infrastructure. However, the system is increasingly vulnerable to anticompetitive practices such as bid rigging, collusion, favoritism, and abuse of market dominance. These unethical behaviors compromise transparency, increase costs, and limit opportunities for fair competition, undermining the very principles of good governance.

This report offers a regulatory analysis of these anticompetitive practices by reviewing the legal framework, identifying institutional actors, and assessing enforcement effectiveness. Key laws include the Public Procurement Act, 2006 and Public Procurement Rules, 2008, which govern procurement processes and the Bangladesh Competition Act, 2012, which aims to safeguard competitive practices in the broader market. The Bangladesh Competition Commission (BCC) and Central Procurement Technical Unit (CPTU), present name Bangladesh Public Procurement Authority (BPPA) are central to regulation and oversight.

The study finds that although the legal instruments are well structured, enforcement remains weak due to limited institutional capacity, poor inter-agency coordination, and low awareness among stakeholders. Cases of single-bid contracts, politically favored awards, and lack of monitoring mechanisms point to systemic vulnerabilities.

To address these issues, the report recommends strengthening the BCC's capacity, improving coordination with BPPA, introducing red-flag analytics in e-GP, and enhancing awareness through training and advocacy. These measures are critical for improving competitiveness, promoting efficiency, and ensuring value for public money.

The findings and recommendations in this report are intended to inform policymakers and senior public servants, contributing to policy reforms that ensure a transparent, accountable and competitive procurement environment in Bangladesh.

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REGULATORY ANALYSIS OF ANTICOMPETITIVE PRACTICES IN GOVERNMENT PROCUREMENT IN BANGLADESH

Introduction:

The proposition "Regulatory analysis of anti-competitive practices in Government Procurement in Bangladesh" suggests a specific type of research known as regulatory analysis. Regulatory analysis involves examining laws, regulations, and policies to understand their impact, effectiveness, and compliance. In this context, the research would focus on analyzing the regulatory framework governing government procurement in Bangladesh to identify and assess anti-competitive practices within the procurement process. The research may involve reviewing legal documents, conducting interviews with relevant stakeholders, and analyzing data on procurement activities to draw conclusions about the prevalence and impact of anti-competitive practices in Government Procurement in Bangladesh.

- To introduce the importance of fair and competitive government procurement briefly.
- To highlight the potential negative consequences of anti-competitive practices in this context (e.g. higher costs, lower quality goods/services, malpractices in procurement process by the contractors, Suppliers and service providers)

Government procurement is a critical component of public sector operations and economic development in Bangladesh, accounting for a significant portion of the national budget—nearly 70% of the Annual Development Programme (ADP) (World Bank, 2021). Through procurement, the government delivers Infrastructure, Public Services, and essential Goods. Given its scale and strategic importance, ensuring transparency, fairness, and competitiveness in procurement processes is essential for promoting good governance and economic efficiency.

However, the integrity of the procurement system in Bangladesh faces persistent threats from anticompetitive practices such as bid rigging, collusion, abuse of dominant positions, and favoritism. These practices not only inflate public expenditure but also limit market access, discourage innovation, and compromise service quality. In recent years, reports have highlighted that a large number of government contracts were awarded through single bids—raising concerns about systemic collusion among suppliers (Transparency International Bangladesh, 2023).

To address these challenges, Bangladesh has implemented a number of legal and institutional reforms. Key among these are the Public Procurement Act, 2006 and the Public Procurement Rules, 2008, which aim to create a transparent and competitive procurement environment. Additionally, the Bangladesh Competition Act, 2012 and the establishment of the Bangladesh Competition Commission (BCC) aim to detect and deter anticompetitive behavior more broadly.

Despite these frameworks, enforcement gaps, low awareness, and institutional limitations continue to hinder progress. This research report critically analyzes the extent to which current regulations prevent anticompetitive practices in government procurement. It examines existing legal provisions, enforcement mechanisms, and institutional capacities, and offers recommendations for strengthening competition and improving procurement outcomes in Bangladesh.

Background of the Research:

A democratic country like Bangladesh code of conduct, like ethics and issues of conflict interest have not been accorded a high priority in Government purchase. To discuss the regulatory analysis of anti-competitive practices in Government Procurement in Bangladesh the role of Bangladesh Competition Commission (BCC) and Bangladesh Public Procurement Authority (BPPA) is very significant. It is very important to adopt administrative actions and measures to be taken to prevent corruption in Public Procurement. In this regard, how Bangladesh Competition Commission (BCC) and Bangladesh Public Procurement Authority (BPPA) and procurement related agencies can regulate and practice the best ways of procurement techniques for controlling fraudulent or unethical ways for government procurement.

1. Problem Statement

Government procurement in Bangladesh plays a central role in delivering public infrastructure and services, comprising nearly 70% of the Annual Development Programme (ADP). To ensure transparency and competitiveness, the country has enacted several robust legal instruments, including the Public Procurement Act 2006, Public Procurement Rules 2008, and the Competition Act 2012. However, despite this regulatory framework, the procurement system remains highly susceptible to anticompetitive practices—notably bid rigging, collusion, favoritism, and abuse of dominant positions.

Recent findings, such as those reported by Transparency International Bangladesh (2023), show that contracts worth over BDT 600 billion have been awarded through single bids, raising serious concerns about systemic collusion and the lack of genuine competition. These practices not only inflate project costs and erode value for public money but also undermine public trust, reduce efficiency, and discourage participation by qualified vendors.

What intensifies the challenge is the disconnect between law and enforcement. The Bangladesh Competition Commission (BCC) and the Central Procurement Technical Unit (CPTU) suffer from limited capacity, poor inter-agency coordination, and low awareness among stakeholders. These systemic weaknesses allow anticompetitive behavior to persist unchecked, despite the existence of laws designed to prevent them.

This research, therefore, seeks to examine why existing legal and institutional mechanisms have failed to curb anticompetitive practices in government procurement, identifying the gaps in regulation, implementation, and enforcement. It aims to generate research tension by exposing the incongruity between policy intention and institutional practice, ultimately offering targeted recommendations for reform.

2. Research Objectives

This study is guided by the overarching goal of identifying regulatory and institutional limitations that enable anticompetitive practices in government procurement in Bangladesh. Specifically, the research aims to:

1. **Assess the effectiveness** of the existing legal and institutional framework—including the Public Procurement Act, Public Procurement Rules, and Competition Act—in preventing anticompetitive behaviors.

2. **Identify the nature and prevalence** of practices such as bid rigging, collusion, favoritism, and abuse of market dominance in public procurement processes.
3. **Analyze enforcement and institutional challenges** faced by key regulatory bodies such as the Bangladesh Competition Commission (BCC) and the Central Procurement Technical Unit (CPTU).
4. **Recommend actionable reforms** to strengthen regulatory enforcement, promote fair competition, and improve transparency in procurement.

3. Research Questions

To fulfill these objectives, the following interlinked research questions are explored:

1. To what extent do the current public procurement and competition laws in Bangladesh address anticompetitive practices?
2. What types of anticompetitive behaviors are most prevalent in government procurement, and in which sectors do they primarily occur?
3. What enforcement gaps or institutional limitations hinder the effectiveness of BCC and CPTU in regulating and deterring these practices?
4. How can regulatory coordination, institutional capacity, and technology (e.g., e-GP systems) be enhanced to mitigate anticompetitive practices?
5. What policy reforms and stakeholder interventions are necessary to promote fair competition and improve procurement outcomes?

4. Justification / Significance of the Study

Public procurement is not only a fiscal mechanism but also a critical instrument of governance, efficiency, and development. In Bangladesh, where procurement represents a dominant share of public expenditure, the integrity of procurement processes has direct implications for economic growth, poverty reduction, and public trust in institutions.

While substantial reforms have introduced regulatory frameworks such as the Public Procurement Act 2006, Public Procurement Rules 2008, and the Competition Act 2012, evidence suggests that anticompetitive practices remain deeply embedded in the system. The awarding of contracts through single bids—valued at over BDT 600 billion—points toward persistent collusion and favoritism, particularly in politically sensitive and infrastructure-heavy sectors.

Despite the presence of formal institutions like the Bangladesh Competition Commission (BCC) and the Central Procurement Technical Unit (CPTU), enforcement remains weak, coordination is fragmented, and stakeholders often lack awareness of applicable laws and ethical procurement standards. These gaps reflect not a deficiency in legislation but a failure in execution, capacity, and systemic alignment.

This study is significant because it addresses a critical regulatory paradox: strong legal foundations that fail to produce desired outcomes due to institutional shortcomings. Unlike existing literature that often treats procurement inefficiencies and competition issues in isolation, this research provides an integrated analysis of how regulatory design, institutional enforcement, and stakeholder behavior intersect to perpetuate anticompetitive conduct.

By offering policy-relevant insights and pragmatic reform suggestions, this study will benefit policymakers, procurement officials, anti-corruption agencies, and development partners. It aims to catalyze a shift from rule-based compliance to performance-driven enforcement—contributing to a more transparent, competitive, and accountable public procurement system in Bangladesh.

5. Literature Review

Government procurement is universally recognized as a high-risk area for corruption^o and anticompetitive behavior, especially in developing countries where enforcement mechanisms are weak and institutional capacity is limited. This literature review draws on national and international sources to examine how anticompetitive practices manifest in public procurement, the regulatory frameworks in place to address them, and where Bangladesh stands in this landscape.

Global Perspectives on Anticompetitive Procurement Practices: The Organisation for Economic Co-operation and Development (OECD, 2016) identifies bid rigging, collusion, and favoritism as persistent threats in public procurement systems globally. The OECD stresses the importance of competition law enforcement, real-time bid monitoring tools, and inter-agency collaboration.

Similarly, UNCTAD (2022) emphasizes that while competition laws exist in many developing countries, enforcement capacity remains a key challenge. Their peer review of Bangladesh's competition law highlights that the Bangladesh Competition Commission (BCC) lacks sufficient staff, technical expertise, and investigative authority, limiting its ability to respond to procurement-related collusion.

Bangladesh's Legal and Institutional Framework: Rahman (2020) evaluates the Public Procurement Act 2006 and highlights its potential to ensure transparency and value for money through open tendering, standard bidding documents, and complaint mechanisms. However, Rahman notes that political influence often overrides these procedural safeguards, leading to non-competitive outcomes.

Karim (2021) focuses on administrative constraints, arguing that public procurement in Bangladesh is vulnerable to manipulation due to subjective bid evaluation, poor oversight, and absence of digital enforcement tools.

In contrast, Hossain and Ahmed (2021) praise the e-Government Procurement (e-GP) platform introduced by the Central Procurement Technical Unit (CPTU) for improving transparency and efficiency. Yet, they caution that e-GP alone cannot detect collusion, especially when bidders coordinate externally to submit single bids or manipulate pricing.

Empirical Evidence of Anticompetitive Practices: Transparency International Bangladesh (2023) provides hard evidence of bid rigging and collusion through a trend analysis of the e-GP system. The report reveals that more than BDT 600 billion worth of contracts were awarded via single bids between 2012 and 2022. While not conclusive proof of collusion, this pattern signals a systemic vulnerability.

The Daily Star (2025) editorialized that exclusionary eligibility criteria are often embedded in tender documents to favor particular firms—typically those with political connections—resulting in a non-level playing field and chilling effect on competition from new or smaller bidders.

Institutional Limitations and Coordination Failures: The World Bank (2021) notes that while procurement reform in Bangladesh has digitized many processes, monitoring mechanisms remain weak, and there is a lack of cross-agency integration between the BCC and CPTU. Furthermore, the BCC has no real-time access to e-GP data, making it almost impossible to proactively investigate anticompetitive trends.

This is consistent with UNCTAD’s review (2022), which notes a lack of formal protocols for collaboration between BCC, CPTU, and IMED (Implementation Monitoring and Evaluation Division), despite overlapping responsibilities.

Comparative Analysis and Knowledge Gap

Aspect	Covered in Literature	Gap Identified
Legal Frameworks	Covered (Rahman, Karim, BCC Acts)	Not linked to real enforcement outcomes
e-GP System	Covered (Hossain & Ahmed, World Bank)	Lacks analysis of e-GP’s ability to detect collusion
Bid Rigging & Collusion	Covered (TI-Bangladesh, The Daily Star)	Not thoroughly studied as systemic trend
Institutional Weakness	Covered (UNCTAD, World Bank)	Lacks solution-focused cross-agency evaluation
Awareness & Capacity	Briefly discussed (UNCTAD)	No targeted strategy for stakeholder education

Knowledge Gap

While existing literature has successfully identified legal tools and high-level weaknesses, there is a lack of integrated research that evaluates the disconnect between regulatory design and enforcement performance. Few studies examine how institutional fragmentation, lack of inter-agency data flow, and insufficient digital tools undermine competition objectives in procurement. Moreover, existing works seldom propose actionable solutions tied to empirical findings.

Conclusion of Literature Review

The literature clearly confirms that anticompetitive practices are a significant threat to public procurement in Bangladesh, even in the presence of well-crafted laws. However, the persistent failure to translate legal intent into institutional action remains largely unaddressed. This study seeks to fill that gap by conducting a regulatory and institutional performance analysis with a solution-oriented approach—bringing together legal texts, implementation challenges, and policy recommendations under one analytical framework.

6. Methodology

This study adopts a qualitative research design using a regulatory and institutional analysis framework to examine how public procurement laws in Bangladesh are enforced in practice. It focuses on identifying gaps between legal provisions and actual implementation, particularly in addressing anticompetitive practices.

The research is based entirely on secondary data. Key sources include legal documents (Public Procurement Act 2006, PPR 2008, Bangladesh Competition Act 2012), institutional reports (UNCTAD, World Bank, TI-Bangladesh), media coverage (The Daily Star), and academic studies by Rahman, Karim, and others. While no fieldwork was conducted, the study considers potential insights from procurement officials, contractors, and legal experts had interviews been feasible.

A thematic content analysis was employed to organize findings around five core themes: legal provisions, enforcement capacity, institutional coordination, technological use (e.g., e-GP red flags), and stakeholder awareness. Triangulation of credible sources ensured validity.

The main limitation is the absence of primary data, though the breadth of reliable secondary material supports the study's conclusions. This approach enables a focused assessment of regulatory weaknesses and informs policy recommendations for more competitive and transparent procurement practices.

7. Findings and Discussion

The analysis reveals a stark mismatch between Bangladesh's well-formulated procurement and competition laws and their enforcement on the ground. The persistence of anticompetitive practices, despite regulatory efforts, highlights systemic and institutional weaknesses. The findings are organized into five major thematic areas:

7.1 Prevalence of Bid Rigging and Collusion

Key Finding: Reports indicate that since 2012, over BDT 600 billion worth of contracts were awarded through single bids, particularly in sectors like construction, roads, and local government (TI-Bangladesh, 2023).

Discussion: While single bidding does not automatically confirm collusion, its consistent recurrence in competitive sectors signals coordinated behavior among bidders. The lack of diversity in bidding indicates possible cartel arrangements, which inflate contract prices and reduce public value. Legal provisions under Section 15 of the Competition Act 2012 prohibit such collusive behavior. Yet, enforcement is negligible due to lack of market surveillance and analytics within the Bangladesh Competition Commission (BCC).

7.2 Abuse of Dominant Market Position

Key Finding: Large or politically connected firms use their market dominance to win contracts repeatedly, often through tailored eligibility criteria and exclusionary practices.

Discussion: This undermines competition by deterring new entrants or smaller firms. Section 16 of the Competition Act prohibits abuse of dominance, yet no major enforcement action has been taken in this regard (UNCTAD, 2022). This creates a non-level playing field, disincentivizing innovation and crowding out potentially capable vendors from government markets.

7.3 Favoritism and Political Influence

Key Finding: Media investigations reveal that some tender documents are drafted to **fit specific companies**, and contracts are often awarded through informal influence rather than merit.

Discussion: This constitutes a serious breach of transparency and violates the principles of the Public Procurement Act 2006. Favoritism often circumvents open competition and leads to substandard work and resource leakage.

The lack of a formal grievance redress mechanism at the enforcement level makes it difficult for aggrieved bidders to challenge such unfair practices.

7.4 Institutional Limitations in Enforcement

Key Finding: The BCC lacks sufficient human resources, investigation tools, and coordination protocols with the Central Procurement Technical Unit (CPTU).

Discussion: This institutional fragility severely limits the ability to investigate and sanction anticompetitive procurement practices. Although the e-GP system provides data on bidding behavior, it is not integrated with BCC's systems for real-time monitoring.

As a result, the regulatory agencies operate in silos, undermining enforcement efficiency and allowing anticompetitive behaviors to go unchecked.

7.5 Lack of Awareness and Reporting Mechanisms

Key Finding: There is a general lack of awareness among procurement officials, suppliers, and contractors regarding what constitutes anticompetitive behavior.

Discussion: Most stakeholders are unaware that pre-arranged bidding, exclusive partnerships, or manipulated eligibility criteria are legal violations. Moreover, there are no whistleblower protections or anonymous reporting tools, leading to underreporting of unethical conduct.

This contributes to a culture of tolerance toward collusion and favoritism, weakening the intent of competition laws.

Synthesis of Findings

Issue	Cause	Impact
Single bid contracts	Collusion and weak monitoring	Inflated costs, reduced value for money
Political favoritism	Informal networks override formal rules	Unfair awards, reputational loss
Institutional disconnection	No real-time data sharing between BCC & CPTU	Delayed enforcement, missed red flags
Legal awareness deficit	No stakeholder training or outreach programs	Normalization of unethical practices

The findings clearly illustrate that **legal frameworks alone are not sufficient** to prevent anticompetitive behavior in public procurement. **Institutional performance, inter-agency collaboration, digital surveillance capacity, and stakeholder education** play crucial roles in translating policy into practice. Without addressing these multi-layered weaknesses, Bangladesh's procurement system will remain vulnerable to manipulation, inefficiency, and erosion of public trust.

8. Conclusion and Policy Recommendations

Public procurement in Bangladesh is a critical driver of development, responsible for the implementation of infrastructure projects, service delivery, and poverty alleviation programs. Given its economic magnitude, ensuring fair competition in procurement is not merely a regulatory goal—it is essential for public sector efficiency, fiscal discipline, and citizen trust.

This report has examined the regulatory landscape governing public procurement and anticompetitive practices in Bangladesh. Laws such as the Public Procurement Act, 2006, the Public Procurement Rules, 2008, and the Competition Act, 2012 provide a solid legal foundation. The Bangladesh Competition Commission (BCC) and the Central Procurement Technical Unit (CPTU), present name Bangladesh Public Procurement Authority (BPPA) serve as the primary regulatory and oversight bodies.

Despite this structure, several forms of anticompetitive behavior—including bid rigging, collusion, favoritism, and abuse of dominance—persist in government procurement. These practices not only waste public funds but also weaken institutional credibility and restrict access for new or competent market players.

Enforcement challenges remain a significant barrier. The BCC is under-resourced, inter-agency coordination is weak, and many officials and stakeholders lack awareness of competition law provisions. Additionally, the e-GP system, while a step forward, lacks the analytical tools to detect collusive behavior in real-time.

To overcome these gaps, this report recommends enhancing the capacity of regulatory institutions, fostering coordination between agencies, upgrading procurement technology with red-flag analytics, and promoting widespread awareness of competitive practices. These reforms are essential to build a procurement system that rewards merit, ensures value for money, and supports sustainable development goals.

In conclusion, strengthening regulatory enforcement and promoting a culture of fair competition in procurement are vital steps toward achieving transparency, economic efficiency, and good governance in the Public Sector Bangladesh.

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