GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

Local Government Engineering Department (LGED)

Local Government Division

Ministry of Local Government, Rural Development and Cooperatives

ENVIRONMENTAL AND SOCIAL ASSESSMENT (ESA) REPORT FOR

Package No: RUTDP/BOD/2024-25/W-01
at
Boda Pourashava, Panchagarh

Resilient Urban and Territorial Development Project (RUTDP)

Sub-Project Preparation Team, RUTDP, LGED

Summary of ESA Report for RUTDP/BOD/2024-25/W-01

Project: Resilient Urban and Territorial Development Project (RUTDP)

Location: Boda Pourashava

1. Introduction

Subproject Background
Boda Pourashava, established in 2001, is a B-class municipality in Panchagarh District with 9 wards and 32 mahallas over 14.32 sq km. Despite rapid urban growth, the Pourashava suffers from inadequate drainage, sanitation, and road infrastructure. To address these gaps, LGED under the RUTDP has taken up **Package No: RUTDP/BOD/2024-25/W-01** to improve roads and drainage networks.

The project focuses on:

- Rehabilitation/replacement of **RCC pavements** and **BC roads**
- Construction of **RCC drains with footpaths and allied facilities**

Objectives
The ESA aims to:

- Establish baseline environmental and social conditions;
- Assess potential impacts during construction and operation;
- Formulate an Environmental and Social Management Plan (ESMP) with mitigation and enhancement measures.

Methodology
The study combined:

- **Desktop review:** of existing plans, maps, and policy documents (e.g., ECR 2023, ESMF 2022)
- **Field investigations:** site walks, stakeholder consultations, photography, and data collection
- **Analysis:** synthesis of field and secondary data to identify impacts and develop mitigation strategies.

2. Subproject Description

Project Area and Scope
Located in **wards 3, 4 & 5** of Boda Pourashava, the subproject involves about **2.83 km of BC road** and **2.73 km of RCC drain** from Boda Bazar to Daripara via Baniapara. The works include dismantling, earthworks, bituminous surfacing, reinforced concrete drain construction, and installation of streetlights.

Current Condition and Need
Existing BC roads are damaged with potholes, erosion, and waterlogging. Narrow ROW (2.5–4 m) and broken drains hinder traffic and drainage. The new road and drain network will improve connectivity, reduce flooding, and enhance safety and mobility for around **40,000 residents**.

Justification
The subproject was prioritized through the Pourashava's **Five-Year Municipal Development Plan (2022-2026)** and Feasibility Study. No private land acquisition is required; impacts are site-specific and manageable. The project is expected to stimulate commerce, employment, and urban growth.

Category and Risk

- **As per ECR 2023:** Orange Category
- **As per World Bank ESF:** Moderate Risk
  Impacts are localized and manageable through appropriate ESMP implementation.

3. Baseline Environmental Conditions

Physical Environment

- **Topography & Geology:** Flat terrain with black Terai soils; located in seismic Zone II (medium risk).
- **Climate:** Hot, humid summers (up to 99 °F in May) and cool winters (52 °F in January); heavy rain (July ≈ 13.5 inches).
- **Hydrology:** Karatoya, Tangon and Pathraj Rivers flow nearby; ponds and canals used for drainage and irrigation. Groundwater is shallow (0–5.3 m).
- **Flooding & Drainage:** Generally, flood-free, but faces waterlogging due to clogged drains and slow storm-water discharge to Zhinaikury River.
- **Air & Noise:** Air quality generally good; dust and vehicle emissions cause localized pollution. Noise mainly from traffic and bazaar activities.
- **Solid Waste:** Municipality has a dumping site, but community awareness and coverage are limited.

Biotic Environment

- Vegetation: Mixed agriculture and homestead species (mango, jackfruit, litchi, neem, koroi).
- Fauna: Common birds (bok, shalik, tiya) and reptiles (gui shap, tiktiki).
- No protected species or critical habitats identified.

Socio-economic Context

- Core urban area with mixed residential and commercial land use.
- Literacy rate ≈ 51.8% (below national average).
- Population ≈ 40,000 across wards 3–5.
- No Indigenous communities per WB ESS7.
- No land acquisition required; some minor encroachments removed voluntarily through community agreements.
- Major livelihoods: business, transport, service jobs. No archaeological or cultural heritage sites present.

4. Environmental and Social Impacts and Mitigation

Risk Classification

The subproject's impacts are classified as **Moderate risk**. Most impacts occur during construction and are temporary, localized, and manageable.

Key Environmental Impacts & Mitigation

Impact Area	Description	Mitigation Measures
Air & Dust	Dust from earthwork and vehicles	Regular water spraying; cover stockpiles; maintain equipment; limit work hours
Noise & Vibration	Machinery and traffic noise	Mufflers on equipment; limit work near schools/religious places; use daytime hours
Water Quality	Runoff and waste from construction	Avoid dumping in drains/rivers; proper waste management; train workers
Soil Quality	Spillage and erosion	Store fuels properly; dispose waste at designated site (Bhashainagar Shoshanghat)
Tree Felling	13 trees removed	Plant 150 replacement trees with bamboo fencing and maintenance up to DLP period
Solid Waste	Improper disposal risks pollution	Segregate and dispose through Pourashava dumping site
Occupational Health & Safety	Sun exposure, injuries, dust	PPE use, first aid kits, sanitary latrines, training and accident compensation
Community Health	Traffic and accident	Warning signs, traffic control, public

Impact Area	Description	Mitigation Measures
& Safety	risks	information and liaison
Labor Influx	Potential social conflicts or GBV risks	Hire local labor, code of conduct, monitor behavior, coordinate with local leaders

Positive Impacts

- Improved mobility and connectivity
- Reduced waterlogging and flood risks
- Increased local business and employment
- Enhanced environment through tree plantation
- Better public health and road safety

5. Environmental and Social Management Plan (ESMP)

Institutional Framework

- **PMU (LGED)** will oversee ESMP implementation and reporting.
- **DSM consultants** will monitor compliance and provide capacity building.
- **Contractor** responsible for site-level mitigation and reporting.

Key Components

1. **Mitigation Plan:** Measures for dust, noise, waste, and OHS during construction.
2. **Monitoring Plan:** Visual and analytical monitoring of air, noise, water, and solid waste management.
3. **Capacity Building:** Training of Pourashava staff and contractors on environmental and social compliance.
4. **Emergency Response:** Preparedness for accidents, fire, and natural disasters.
5. **Cost Estimation:** Environmental and social enhancement cost included in BOQ.
6. **Grievance Redress Mechanism (GRM):** Three-tier system at Pourashava, regional and PMU level to ensure timely resolution of complaints.
7. **Access to Information:** Display boards, public consultations and FGDs held to ensure community awareness.

6. Stakeholder Consultation and Community Feedback

Consultations

FGDs and public meetings were conducted with local residents, business owners, and officials.
Key issues raised included traffic management during construction, drainage continuity, and dust control.

Community Feedback

- Strong support for the project due to expected improvement in mobility and economic activities.
- Requests for regular monitoring, safety measures, and employment of local labor.
- Community agreed to remove minor encroachments voluntarily for the greater benefit.

7. Conclusion and Recommendations

The ESA identifies no major irreversible environmental or social impacts. Potential impacts are temporary and manageable through the ESMP. The subproject will deliver substantial positive benefits by improving transport, drainage, and living conditions in Boda Pourashava.

Recommendations

- Implement the ESMP strictly with dedicated supervision.
- Conduct environmental training for contractors and labor supervisors.
- Ensure GRM functionality and documentation of community feedback.
- Maintain post-construction monitoring of road and drain performance.
- Prioritize green initiatives (tree plantation, waste segregation, rainwater harvesting) to enhance resilience.

Overall Summary:

The RUTDP Boda Pourashava subproject is environmentally and socially feasible with manageable moderate risks. Its implementation will significantly enhance urban resilience, reduce drainage problems, and promote socio-economic development for the local community