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/PIG/2024-25/W-01**
**at**
**Pirganj Pourashava, Thakurgaon**

**Resilient Urban and Territorial Development Project (RUTDP)**

**Sub-Project Preparation Team, RUTDP, LGED**

**Summary of ESA Report**
**Package No: RUTDP/PIG/2024-25/W-01 at Pirganj Pourashava, Thakurgaon**

## 1. Introduction

Pirganj Pourashava, established in 1989, is an "A" grade municipality covering 16.84 sq. km with a population of about 32,509 (BBS 2022). Rapid urbanization and population growth have strained its road and drainage infrastructure. This subproject under the Resilient Urban and Territorial Development Project (RUTDP) focuses on rehabilitating and upgrading damaged bituminous carpeting (BC) and reinforced cement concrete (RCC) roads, constructing new RCC drains, and installing street lighting to improve mobility, drainage, and safety

**The objectives of the ESA study are to:**

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

Methodology involved desktop reviews, field visits, consultations with stakeholders, and data analysis.

## 2. Subproject Description

**Scope and Activities**

The project covers wards 1, 3, 4, 5, 7, and 8. Major activities include:

1. **Development of 1,500 m BC road, 500 m RCC drain, and 1,500 m street lighting** (Pirganj Birganj Road to Olimpia Rice Mill and link to college hostel).
2. **Rehabilitation of 2,057 m BC road, 420 m RCC drain, and 2,057 m street lighting** (Ragunathpur Kazi Nazrul Islam Road to Fokirganj Road including links).
3. **Rehabilitation of 1,313 m BC road, 1,250 m RCC drain, and 1,313 m street lighting** (Birganj Road to Godagari Road with multiple links).

**Current Situation and Need**

- Roads are narrow, potholed, and largely unusable for motorized vehicles.
- Existing brick drains are inadequate, broken, and silted up, causing severe waterlogging during monsoons.
- Absence of streetlights compromises road safety and security at night.

The project is justified as it will improve transport, drainage, and municipal governance, directly benefiting ~18,600 people. No private land acquisition is required; affected small roadside structures will be voluntarily removed with prior agreements

**Current Situation of the Subproject:**

**Categorization**

- As per **ECR 2023**: Orange (Moderate risk) for roads and drains, Green (Low risk) for streetlights.
- As per **World Bank ESF**: Overall risk classified as **Moderate**.

## 3. Baseline Environmental and Social Conditions

**Physical Environment**

- **Topography/Soils:** Elevation varies from 39.5–44.5 m PWD; soils are floodplain types (moderately drained, slightly acidic).
- **Climate:** Northwest climatic zone; hot summers (up to 38.5°C), cool winters (~10°C), annual rainfall ~1,463 mm, high humidity (68–83%).
- **Hydrology:** Influenced by Lacchi and Charna rivers; groundwater is available but iron-rich; ponds used for fish culture.
- **Flooding/Drainage:** Historically affected by 1988 and 1998 floods; inadequate drainage causes seasonal waterlogging.
- **Air/Noise:** Current levels acceptable, but dust from unpaved roads and traffic noise are common.
- **Solid Waste:** Poorly managed; residents often dump waste into drains, causing blockages

**Biotic Environment**

- Flora: Native trees (raintree, mahogany, mango, jackfruit, coconut, bamboo, etc.).
- Fauna: Birds, fish, reptiles, and occasional IUCN-listed mongooses.
- Wetlands and rivers serve as habitats for aquatic and terrestrial species.

**Socio-economic and Cultural Environment**

- Dense residential and commercial zones with mixed livelihoods (small businesses, transport, govt./private jobs).
- Literacy ~53.8%, lower than national average.
- No indigenous/tribal communities or protected cultural heritage within project influence.
- About 32,509 people (wards 1, 3, 4, 5, 7, 8) to benefit directly

## 4. Potential Impacts and Mitigation

**Construction Phase Risks**

- **Air pollution & dust** from excavation, vehicles, asphalt plants.
- **Noise & vibration** from heavy machinery.
- **Water pollution** due to runoff, spills, and improper waste disposal.
- **Soil disturbance** from excavation and material storage.
- **Loss of vegetation** from limited tree cutting.
- **Traffic congestion** during construction.
- **Occupational health & safety risks** (accidents, exposure to dust/noise).
- **Community safety concerns** due to open sites and construction traffic.

**Operation Phase Risks**

- Increased vehicle emissions and traffic noise.
- Improper solid waste disposal clogging new drains.
- Safety issues if road and lighting maintenance lapses.

**Social Impacts**

- No land acquisition; only minor voluntary structure relocation.
- No indigenous groups affected.
- Positive outcomes include better mobility, employment, business opportunities, reduced flooding, and safer night-time conditions

**Mitigation Measures**

- Dust suppression by water spraying, covered trucks, and speed control.
- Noise control via equipment maintenance and restricted work hours.
- Proper waste management and designated disposal sites.
- Temporary traffic diversions, signage, and community notifications.
- PPE, training, and safety protocols for workers.
- Tree replantation and greenbelt development to offset vegetation loss.

## 5. Environmental and Social Management Plan (ESMP)

The ESMP ensures compliance with national laws and World Bank standards. Key elements include:

- **Access to information:** Disclosure of plans to stakeholders.
- **Institutional arrangement:** Roles of PMU, PIU, DSM consultants, contractors, and Pourashava.
- **Capacity building:** Training for staff and contractors.
- **Emergency response:** Disaster management and OHS protocols.
- **Monitoring:** Visual and analytical monitoring during construction and operation phases.
- **Cost provisions:** Budget included in Bill of Quantities (BOQ).
- **Grievance Redress Mechanism (GRM):** To resolve complaints at local level quickly and transparently

## 6. Public Consultation

Stakeholder meetings included local residents, Pourashava officials, and beneficiaries. Key issues raised:

- Concern about traffic disruption and temporary business losses.
- Need for effective drainage to avoid waterlogging.
- Demand for durable roads and streetlights.
- Commitment to safeguard workers' and community safety.

Feedback emphasized timely project completion, community employment, proper waste management, and transparency

## 7. Conclusions and Recommendations

- The project is environmentally and socially **feasible with moderate risk**.
- Adverse impacts are mostly site-specific, temporary, and manageable.
- Significant long-term benefits include improved mobility, reduced waterlogging, enhanced business activities, and increased safety.

**Recommendations:**

- Strict enforcement of ESMP during construction and operation.
- Continuous community engagement.
- Regular monitoring of environmental indicators.
- Institutional strengthening of Pourashava for O&M.