



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/PAT/ 2024-25/W-01

at

Patiya Pourashava, Chattogram



Resilient Urban and Territorial Development Project (RUTDP)

Sub-Project Preparation Team, RUTDP, LGED

Summary of ESA Report – Patiya Pourashava, Chattogram

Package No: RUTDP/PAT/2024-25/W-01

1. Introduction

Patiya Pourashava (established 1990, population ~55,300, area 10.36 sq. km) is an A-type municipality facing significant infrastructure challenges, particularly inadequate drainage, damaged roads, and poor street lighting. These deficiencies result in waterlogging, traffic congestion, and safety issues.

The proposed subproject under the Resilient Urban and Territorial Development Project (RUTDP) aims to:

- **Rehabilitate and replace** existing RCC pavements and BC roads.
- **Construct new RCC drains** with proper outfall connections.
- **Install street lighting** to enhance traffic safety and night-time security.

Study Objectives: Assess baseline environmental and social conditions, identify impacts, and develop an Environmental and Social Management Plan (ESMP) to mitigate risks and enhance benefits

2. Subproject Description

Location and Scope

Located in **Wards 4, 6, and 8** of Patiya Pourashava.

Works include:

- 1,741 m BC road & 1,311 m RCC drain (Abul Masud Choudhari Road).
- 2,057 m RCC road & 1,950 m RCC drain (Annadatta Road).
- ~4 km of street lighting along both alignments.

Need for the Subproject

- Roads are severely damaged (potholes, undulations, insufficient width).
- Drains are narrow, silted, and without proper outfalls, leading to waterlogging.
- Absence of streetlights causes safety hazards.



Existing Road Condition with Drain

Benefits

- Improved traffic movement, business activity, and urbanization.
- Reduction in waterlogging.
- Enhanced night-time safety.
- Direct benefit to ~18,990 residents of the wards

3. Baseline Environmental and Social Conditions

Physical Environment

- **Topography/Geology:** Alluvial plain, earthquake Zone II, cyclone-prone.
- **Hydrology:** Four canals (Chankhali, Srimai, Hazirpara, Mora Khal) act as natural outfalls. Groundwater (5–7m depth) contains arsenic and iron.
- **Climate:** Moderate, 9–36°C, with heavy monsoon rains (up to 1,268 mm/month).
- **Environmental Concerns:** Dust, noise, improper solid waste disposal, and waterlogging during monsoon.

Biotic Environment

- **Common native flora:** Rain tree, Mahogany, Mango, Coconut, Jackfruit.
- **Fauna:** Birds, reptiles, amphibians, and some IUCN-listed species (e.g., mongoose).
- Impacts from project are expected to be minor and mitigable.

Socio-Economic & Cultural Context

- Mixed residential and commercial land use.
- Literacy ~68% (above national average).
- No indigenous/tribal communities identified.
- No cultural heritage or protected sites.
- Livelihoods: Small businesses, services, transport.
- **No private land acquisition required.** Only minor removal of roadside sheds and fencing, with community consent.

4. Environmental and Social Impacts

Positive Impacts

- Improved transport efficiency and connectivity.
- Reduced drainage congestion and waterlogging.
- Safer mobility due to street lighting.
- Employment opportunities during construction and operation.

Potential Negative Impacts (Construction Phase)

- **Dust & Air Pollution** from excavation, sand filling, asphalt plant.
- **Noise & Vibration** from machinery and vehicles.
- **Water Quality Impacts** from runoff and waste dumping.
- **Tree Felling:** ~30 trees to be removed.
- **Occupational Risks:** Heat exposure, dust inhalation, accidents.
- **Traffic Disruption** during construction.
- **Waste Generation:** Construction debris and improper disposal risks.

Social Impacts

- No land acquisition needed. Minor structures will be removed voluntarily.
- No indigenous or vulnerable groups affected.
- Risk of **labor influx** (temporary settlement of workers), but manageable.

5. Mitigation & Enhancement Measures

Environmental Measures

- **Dust control:** Sprinkling water, covering stockpiles.
- **Noise mitigation:** Mufflers, restricted working hours.
- **Waste disposal:** Use of designated dumping grounds near RHD road and Vatikhain Mouza.
- **Tree plantation:** 120 compensatory saplings (fruit, shade, medicinal trees) with bamboo fencing.
- **Drain protection:** Prevent dumping into khals and wetlands.

Occupational Health & Safety (OHS)

- PPE (helmets, gloves, masks, boots).
- First-aid kits and medical support.
- Safe storage of fuels and hazardous materials.
- Worker training on safe practices.

Social Measures

- **Grievance Redress Mechanism (GRM)** to handle complaints.
- Continuous **community consultation**.
- Work scheduling to minimize traffic disruption.
- Contractor to provide sanitation and waste facilities at labor sheds.

6. Environmental and Social Management Plan (ESMP)

The ESMP outlines responsibilities, monitoring, and budget allocation:

- **Institutional Setup:** LGED as implementing agency, Pourashava support, PMU oversight, DSM consultants for monitoring.
- **Capacity Building:** Training for contractors and local officials on ESMP implementation.
- **Emergency Response:** Disaster preparedness measures included.
- **Monitoring Plan:** Visual and analytical monitoring of air, noise, water quality, and waste management during construction and operation.
- **Cost Provision:** Environmental and social measures integrated into BOQ.

7. Conclusions & Recommendations

• The subproject is **categorized as Orange (ECR-2023) and Moderate Risk (World Bank ESF)**.

- Impacts are **localized, temporary, and manageable** with proper mitigation.
- No significant social or cultural risks identified.
- Strong community support exists for implementation.

Recommendations:

- Strict compliance with ESMP and occupational safety rules.
- Timely tree plantation and ecological restoration.
- Regular monitoring and transparent grievance handling.
- Active participation of Pourashava officials, local community, and contractors.