



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/MDI/2024-25/W-01

at

Madhabdi Pourashava, Narsingdi



Resilient Urban and Territorial Development Project (RUTDP)

Sub-Project Preparation Team, RUTDP, LGED

Summary of Environmental and Social Assessment (ESA)

Package No: RUTDP/MDI/2024-25/W-01 at Madhabdi Pourashava, Narsingdi

1. Introduction

Madhabdi Pourashava, an “A” grade municipality of Narsingdi district, has a population of ~73,910 and covers 6.09 sq. km. The area, known for its textile industries, requires urgent infrastructure development due to rapid urbanization and deteriorating municipal facilities.

This subproject under the **Resilient Urban and Territorial Development Project (RUTDP)** involves:

- **Rehabilitation of ~3.5 km of RCC roads.**
- **Replacement of existing damaged pipe drains with RCC drains.**
- **Installation of street lighting with allied works.**

The study aimed to identify environmental and social impacts, propose mitigation measures, and prepare a detailed Environmental and Social Management Plan (ESMP). Methodology included desktop study, field visits, baseline data collection, public consultations, and risk assessment

2. Subproject Description

- **Location:** Wards 2, 3, 10, 11, and 12 of Madhabdi Pourashava.
- **Activities:**
 - RCC roads and drains (3,505m combined length).
 - Streetlights along major corridors.
 - Site clearing, labor shed, and temporary site office establishment.

Need for the project:

- Current roads are narrow, damaged, and congested.
- Existing drainage is inadequate, silted, and lacks proper outfalls, leading to seasonal waterlogging.
- Absence of streetlights causes safety and security risks at night.

Current Situation:



The project is justified as it will improve transportation, drainage, business activity, and community safety. Approximately **32,500 residents** will directly benefit

3. Baseline Environmental and Social Conditions

- **Physical Environment:**
 - Located on Old Brahmaputra Floodplain (Zone 2 seismic risk).
 - Soils are loamy, sandy, and prone to shallow flooding.
 - Groundwater table is shallow (0–5.3m) with arsenic and iron contamination.
 - Normal flood zone; drainage to Old Brahmaputra River.
 - Climate: Tropical monsoon, prone to heavy rainfall and humidity.

- **Biotic Environment:**
 - Trees: Mango, Mahogany, Jackfruit, Rain tree, Coconut, etc.
 - Habitats: Ponds, wetlands, marshes support local fish, reptiles, and birds.
 - IUCN-listed vulnerable mongoose species observed.
- **Socio-economic Environment:**
 - Land use: Dense residential, commercial, industries, educational and health facilities.
 - Beneficiaries: ~32,500 directly, many more indirectly.
 - Literacy rate: 81.78% (above national average).
 - Livelihoods: Business, industry, transport, day labor, farming.
 - Cultural heritage: Nearby zamindar houses, museums, and Wari-Bateshwar archaeological site.
 - No indigenous communities present.
 - No land acquisition required; minor voluntary removal of roadside structures agreed by locals

4. Environmental and Social Impacts

Positive Impacts

- Improved traffic flow, drainage, and road safety.
- Reduction in waterlogging and road damage.
- Enhanced business opportunities, property values, and employment (construction and post-completion).
- Nighttime safety through street lighting.

Negative Impacts (Temporary & Manageable)

1. Construction Phase

- **Dust, air, and noise pollution** from excavation, machinery, and vehicle movement.
- **Tree cutting (~50 trees)**, loss of vegetation, minor ecological disturbance.
- **Health & safety risks:** exposure to heat, dust, machinery, accidents.
- **Waste generation:** construction debris, labor camp waste, fuel leakage.
- **Traffic congestion:** temporary blockages during construction.
- **Labor influx risks:** pressure on resources, risks of social tension, health and security concerns.

2. Operation Phase

- Increased noise and air pollution from traffic.
- Risks of poor waste management causing drain clogging.
- Public safety issues if traffic control and maintenance are neglected

5. Mitigation and Enhancement Measures

- **Air & Dust:** Water spraying, covering stockpiles, proper waste disposal.
- **Noise & Vibration:** Limit work during day, mufflers on equipment, traffic management.
- **Water Quality:** Avoid waste dumping in drains/rivers, ensure proper sanitation at labor sheds.
- **Tree Loss:** Compensatory plantation of **250 trees** (fruit, timber, medicinal species) with bamboo fencing and maintenance.
- **OHS:** PPEs, first aid facilities, safety training, accident compensation provisions.
- **Waste Management:** Designated dumping site near Old Rail Line.
- **Community Safety:** Signage, diversion plans, consultation, grievance redress mechanism (GRM).
- **Labor Influx:** Preference for local hiring, monitoring, awareness campaigns on social conduct.

6. Environmental and Social Management Plan (ESMP)

- **Access to Information:** Community disclosure and stakeholder engagement.

- **Institutional Arrangement:** Roles defined for LGED, DSM consultants, Pourashava, contractors, and World Bank.
- **Capacity Building:** Training for contractors and Pourashava staff on ES compliance.
- **Emergency Preparedness:** Disaster and accident response mechanisms.
- **Monitoring Plan:**
 - Visual and analytical monitoring of air, water, noise, and soil quality.
 - Budget allocated for environmental measurements.
- **Grievance Redress Mechanism (GRM):**
 - Grievance Redress Committees (GRCs) at Pourashava and project level.
 - Complaint boxes, hearings, and escalation pathways

7. Public Consultations and Participation

- Focus Group Discussions (FGDs) with Pourashava officials, engineers, and local residents.
- Key concerns: drainage congestion, sanitation, poor road communication, and waterlogging.
- Community welcomed the project, emphasized quality control, and sought employment opportunities.
- Suggestions included: solid waste management, sewerage treatment, recreational and educational facilities for future urban growth

8. Conclusion and Recommendations

The subproject is **environmentally feasible and socially acceptable**. Impacts are mostly temporary, site-specific, and manageable with proper ESMP implementation.

Key recommendations:

- Strict monitoring of dust, noise, and waste management.
- Enforcement of OHS standards for workers.
- Continuous community engagement and effective grievance redress.
- Timely compensatory plantation and long-term maintenance.
- Section-wise construction to minimize traffic disruption.

Overall Risk Classification:

- **ECR 2023:** *Orange category* (moderate risk).
- **World Bank ESF:** *Moderate risk*.
- No full ESIA required; ESA with site-specific ESMP is sufficient.

The project is expected to deliver significant socio-economic benefits including safer mobility, reduced flooding, improved business environment, and enhanced quality of life for Madhabdi residents