



Government of the people's Republic of Bangladesh
Ministry of Housing and Public Works
Urban Development Directorate
82 Segunbagicha, Dhaka-1000

PREPARATION OF DEVELOPMENT PLAN FOR MEHERPUR ZILLA

REPORT ON ASSIGNMENT-4

Prepared Union Wise Rural Area Plan Map and Generate Statistics

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Summary of Assignment-4

A. Summary of Assignment-4

Mohajanpur Union, located in Mujibnagar Upazila of Meherpur District, is a predominantly agricultural region where about 94.87% of the population depends on farming for their livelihood. The union demonstrates a moderate level of development, as reflected in its Physical Quality of Life Index (63.23), Quality of Life Index (56.58), Cultural Capital Index (66.00), and Integrated Quality of Life Index (61.94). These indicators reveal moderate literacy levels (64.53%) along with persistent health and infrastructural challenges. In 2022, the population of Mohajanpur Union was 20,874, and it is projected to reach 25,422 by 2047 at an annual growth rate of 0.80%. The socio-economic structure is dominated by informal employment (97.44%) and a high dependency on cash crop farming such as tobacco, jute, banana, and vegetables, which reduces food crop production and increases economic vulnerability. Transportation in the area is mostly non-motorized (85.1%), highlighting limited rural mobility and infrastructural development. The settlement pattern shows that most people live in tin-shed (38.69%) and pucca (32.85%) houses, with more than 95% of buildings being single-storied. Settlements are concentrated on higher elevations, while low-lying areas are used for agriculture and water bodies. Rapid, unplanned settlement expansion along major roads has improved accessibility but also led to congestion and land scarcity.

Participatory Rural Appraisal (PRA), socio-economic surveys, and newspaper reports identify key issues such as the need for new and repaired roads, proper drainage systems, electrification in cultivation fields, community clinics, markets, and playgrounds. Irrigation and electricity networks are expanding but often in an unplanned manner, while excessive land use for cash crops threatens food security and environmental sustainability through soil degradation, groundwater depletion, and biodiversity loss. According to resilience analysis, Mohajanpur Union is currently in the growth phase of the adaptive cycle, experiencing agricultural expansion and infrastructural improvements alongside rising community aspirations. However, it faces challenges in maintaining sustainability due to over-reliance on monocropping, weak institutional support, and unplanned development. To address these issues, the action plan proposes constructing pucca drains along new and repaired roads, improving agricultural road connections, repairing damaged roads with durable materials, and establishing a weekly market in Poranpur with basic amenities such as water and sanitation. These interventions, to be implemented by the Department of Agricultural Extension (DAE), Bangladesh Agricultural Development Corporation (BADC), LGED, and the Union Parishad, aim to strengthen resilience, enhance infrastructure, and promote sustainable development in Mohajanpur Union.

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Prepared Union Wise Rural Area Plan Map and Generate Statistics

Mohajanpur Union, located in Mujibnagar Upazila of Meherpur District, is a predominantly agricultural region where farming remains the main livelihood, engaging about **94.87% of the population**. The union has a **moderate level of development**, as reflected in its Physical Quality of Life Index (PQLI 63.23), Quality of Life Index (QLI 56.58), Cultural Capital Index (CCI 66.00), and Integrated Quality of Life Index (IQLI 61.94). These indicators suggest moderate literacy (64.53%), persistent health issues, and infrastructural gaps that hinder sustainable growth.

The population in 2022 was **20,874**, with a projected growth to **25,422 by 2047** at an average annual growth rate of 0.80%. The socio-economic structure shows an overwhelming reliance on informal employment (97.44%), limited access to formal jobs, and a strong dependency on cash crop farming (tobacco, jute, banana, vegetables). Transport remains dominated by non-motorized modes (85.1%), highlighting rural mobility challenges.

Physical features of the union reveal a mixed settlement pattern, with a majority living in tin-shed (38.69%) and pucca houses (32.85%). Most residential structures are one-storied (over 95%), indicating low vertical development. Higher elevation areas are used for settlements, while low-lying areas serve agriculture and water bodies.

Problem identification through PRA, socio-economic data, and newspaper reports highlights critical issues such as the need for roads, drainage, electrification in cultivation fields, community clinics, markets, and playgrounds. Settlements are expanding along roads, irrigation and electricity are developing in an unplanned manner, and excessive land use for cash crops reduces food security. These trends show that while Mohajanpur Union is in a **growth phase**, unplanned development, infrastructural deficiencies, and heavy dependence on monocropping pose risks for long-term resilience and sustainability.

Existing Situation:

Feature	Existing Condition
Population & Projection	2022: 20,874 people (Male: 10168; Female: 10704). Projected 2047: 25,422 (average annual growth rate - 0.80%). <i>(Source: BBS 2022)</i>
Occupational Analysis	Service holder: 2.56%, Business: 2.56%, Farmer: 94.87%. Formal Employment 2.56% and Informal Employment 97.44% <i>(Source: Socio-Economic Survey)</i>
Transportation Analysis	By foot: 46.2%, Van: 7.1%, Motorcycle: 11.6%, Cycle: 26.7%, Rickshaw: 5.1%, Car: 1.6%, Bus: 1.6%. (Non-Motorized 85.1% and Motorized 14.9%). <i>(Source: Socio-Economic Survey)</i>
Building Type	Katcha: 1859 (8.89%), Pucca: 6867 (32.85%), Semi-Pucca: 4093 (19.57%), Tin Shed: 8093 (38.69%). <i>(Source: Physical Feature Survey, Gangni Upazila masterplan by UDD)</i>
Building Floor Distribution	1 floor: 16869; 2 floors: 724; 3 floors: 32; 4 floors: 05; 5 floors: 01. <i>(Source: Physical Feature Survey, Gangni Upazila Masterplan By UDD)</i>
Elevation Profile (DEM)	Higher Elevation (16.1-26m): Residential/Structural; Lower Elevation (4-16m): Agricultural, Waterbody. <i>(Source: Physical Feature Survey, Gangni Upazila Masterplan by UDD)</i>

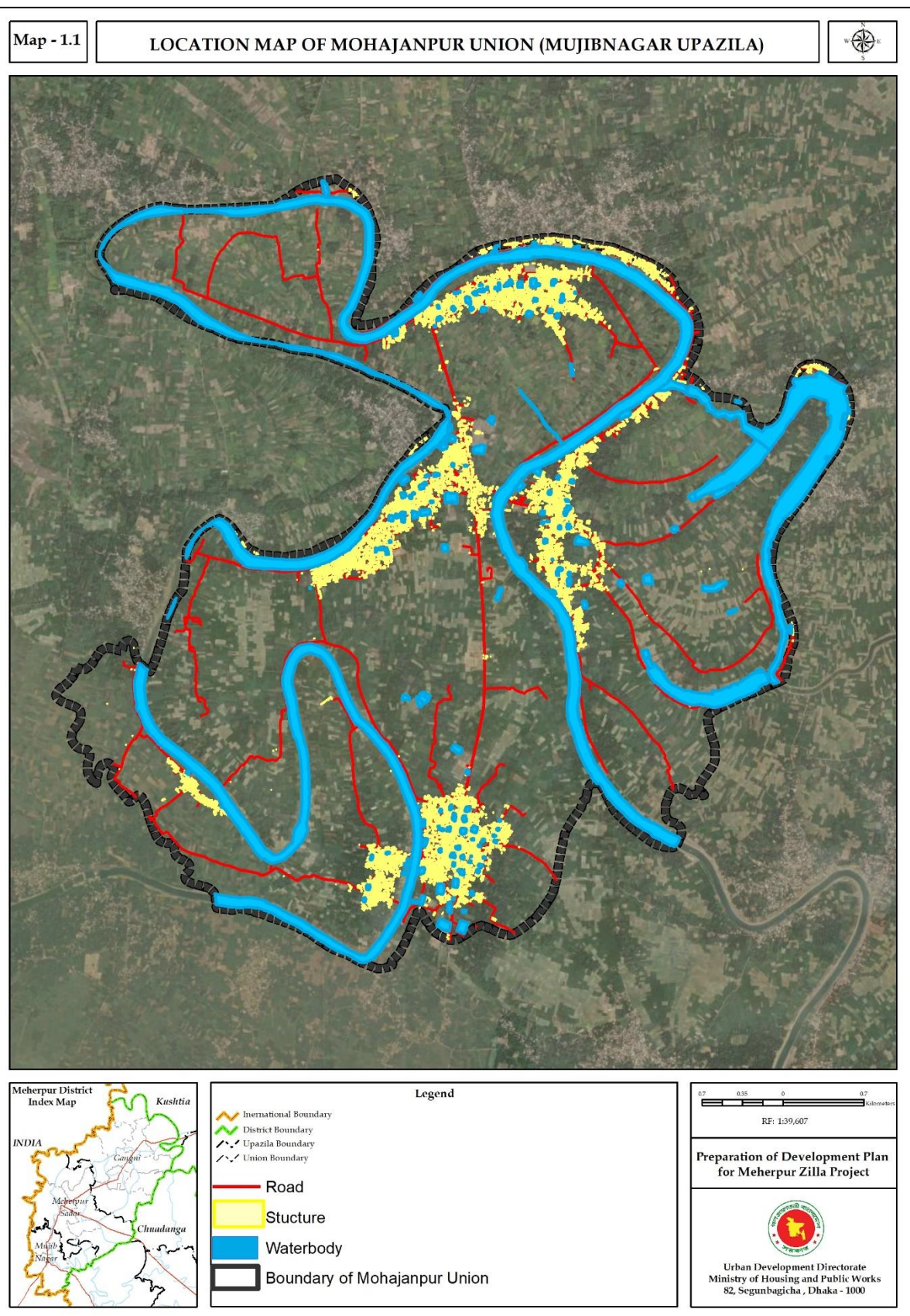
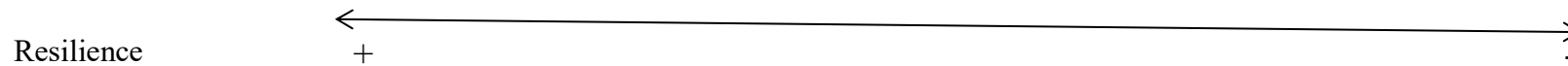


Figure 1: Location Map of Mohajanpur Union

Problem Identification:

Source	Key Issues Identified
PRA	<ul style="list-style-type: none">• Need Drain (Babupur, Gopalpur, Poranpur)• Need Community Clinic (Babupur, Gopalpur, Poranpur)• Playground (Babupur, Poranpur)• New Road (Babupur, Gopalpur, Poranpur)• Need to Repair the Road (Gopalpur, Poranpur)• Need Bazar (Poranpur)
Socio-Economic Data	<ul style="list-style-type: none">• Need Road at Babupur, Gopalpur, Poranpur• Educational, communication, health development at Babupur, Gopalpur, Poranpur• Infrastructure development at Babupur, Gopalpur, Poranpur.• Electric line needed in the cultivation field at Gopalpur.
Newspaper	<ul style="list-style-type: none">• Farmers besiege the municipality in Meherpur demanding road construction https://www.kalerkantho.com/print-edition/campus/2010/06/03/61448• Farmer killed as truck hits in Mujibnagar https://www.meherpurpratidin.com/□□□□□□□□-□□□□□□□□-□□□□□□-2/• Drug dealer arrested with 50 pieces of yaba in Mujibnagar https://www.meherpurpratidin.com/□□□□□□□□-□□□□□□□□-□□□□□□□□/

Adaptive Cycle Phase Analysis:



Variable	Reorganization (α)	Growth (r)	Conservation (K)	Release (Ω)
Resilience	+ —			
Social System	<ul style="list-style-type: none"> Mixed Group of Profession 	<ul style="list-style-type: none"> Farming dominance, credit dependency 	<ul style="list-style-type: none"> Institutional rigidity, elite control in land/water 	<ul style="list-style-type: none"> Outmigration, local conflict, erosion of trust
Economic System	<ul style="list-style-type: none"> Mixed crops Informal jobs, wage labor restart 	<ul style="list-style-type: none"> Cash crop expansion (jute, tobacco, vegetables) 	<ul style="list-style-type: none"> Market lock-in to tobacco/jute Heavy fertilizer/credit dependency Monocropping 	<ul style="list-style-type: none"> Price collapse, debt trap, sudden migration Pest attack, sudden input cost rise
Environmental System	<ul style="list-style-type: none"> Natural soil fertility regeneration (fallow land) 	<ul style="list-style-type: none"> Irrigation expansion, HYV crop adoption 	<ul style="list-style-type: none"> Groundwater overuse Soil degradation Biodiversity decline 	<ul style="list-style-type: none"> Crop failure from drought/pest
Settlement Pattern	<ul style="list-style-type: none"> Based on housing types (Percentage of pucca, semi-pucca, and katcha) 	<ul style="list-style-type: none"> Cluster housing, infrastructure growth 	<ul style="list-style-type: none"> Land scarcity, congestion, shrinking commons 	<ul style="list-style-type: none"> Migration, peri-urban expansion, land disputes
Results	Lack of Housing and Service	Land Use and Settlement	Resource and Inequality	Migration and Environmental Issues

	<ul style="list-style-type: none"> • Houses, roads, and embankments are often damaged. • Basic services (water, sanitation, health) are not appropriately rebuilt. 	<ul style="list-style-type: none"> • Too much land for cash crops, reducing food crop land. • Irrigation and electricity expand, but not always in a planned way. • Settlements grow along roads 	<ul style="list-style-type: none"> • Farmers are locked into one type of crop (monocropping). • Overuse of groundwater and soil leads to land degradation. 	<ul style="list-style-type: none"> • Crop failures force families to leave farmland. • Many move to towns, creating unplanned settlements on city edges. • Conflicts rise over land ownership and water rights.
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Resilience:

Mohajanpur Union is currently in the growth phase (r) of the adaptive cycle, where agricultural expansion, infrastructural improvements, and socio-economic activities are gradually increasing. The dominance of farming, with 94.87% of households engaged in agriculture, highlights a strong reliance on land and crop production, especially cash crops such as tobacco, jute, and vegetables. Irrigation networks and rural electrification are expanding, though not always in a planned way, which reflects ongoing but uncoordinated development. Settlements continue to grow along major roads, improving accessibility and trade opportunities but also creating risks of congestion and land scarcity. The expansion of basic infrastructure, such as roads, drains, and markets, as demanded in PRA surveys, indicates rising community aspirations. These patterns collectively demonstrate that Mohajanpur Union is still experiencing growth in its social, economic, environmental, and settlement systems, yet it faces challenges of sustainability and resilience due to over-dependence on monocropping, unplanned infrastructure, and weak institutional support.

Resilience Analysis

Phase	Problem arises in Mohajanpur Union	Planning Intervention	Implementation Authority
Growth (r)	<p>Land Use and Settlement</p> <p>1. Too much land for cash crops, reducing food crop land:</p> <ul style="list-style-type: none"> Farmers in Mohajanpur Union are highly dependent on cash crops like vegetable, banana, tobacco and jute, which reduces the land available for food crops. (<i>PRA</i>) About 94.87% of people are engaged in farming, showing high dependency on agriculture, mostly cash crops. (<i>Source: Socio-Economic Survey</i>) People demanded for better infrastructure to transport their cash crops, such as demanding road construction in Mujibnagar. (<i>Source: PRA</i>) <p>2. Irrigation and electricity expand, but not always in a planned way.</p> <ul style="list-style-type: none"> Farmers in Gopalpur identified the need for electric lines in cultivation fields, which shows 	<ol style="list-style-type: none"> Plan and construct a network of pucca drains alongside all new and repaired roads to manage stormwater and prevent waterlogging in Babupur, Gopalpur, and Poranpur. Connect key agricultural zones (like Gopalpur) to existing market roads based on farmer demand. Identify and repair damaged roads in Gopalpur and Poranpur, using durable, all-weather materials. Designate a plot in Poranpur for a weekly market, with basic facilities like shaded platforms, water, and sanitation. 	<p>Department of Agricultural Extension (DAE), LGED, NGOs</p> <p>Department of Agricultural Extension (DAE), Bangladesh Agricultural Development Corporation (BADC), Union Parishad UP)</p>

	<p>gaps in planned infrastructure coverage. <i>(Source: PRA)</i></p> <ul style="list-style-type: none"> • Informal employment is 97.44%, showing weak institutional support for proper irrigation and electricity management. <i>(Source: Socio-Economic Survey)</i> • Accidents and disputes over road and infrastructure highlight weak planning in utility services alongside rapid expansion. <i>(Source: Newspaper)</i> <p>3. Settlements grow along roads</p>		
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	<ul style="list-style-type: none"> • Villages like Babupur, Gopalpur, and Poranpur demanded new roads and road repairs, showing how settlement expansion follows road development. <i>(Source: PRA)</i> • A large share of transport is non-motorized (85.1%), meaning roadside settlements are crucial for livelihood, trade, and mobility. <i>(Source: Socio-Economic Survey)</i> • Repeated news on road accidents and demands for new infrastructure reflect the risks of unplanned roadside settlement growth. <i>(Source: Newspaper)</i> 		
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