



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-11

Prepared Ward wise urban area plan map and generate statistics

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MEHERPUR PAURASHAVA WARD NO 04

Existing Situation

Ward No. 04 of Meherpur Paurashava is a moderately developed ward with a strong socio-cultural base but limited physical infrastructure. The ward had a population of **7,988 people in 2022** (BBS, 2022), which is projected to increase to **17,360 by 2047**, highlighting a significant growth trend and increasing pressure on land use, services, and infrastructure. Daily travel purposes in this ward, as identified through the **Socio-Economic Survey 2025**, are primarily linked to **agriculture, education, market/shopping, and general work**. Notably, there are **no recreational or open spaces** available within the ward, limiting opportunities for community well-being and leisure.

Education in Ward No. 04 shows mixed progress. While **73.87% of the 7+ population are attending school** (Male: 75.11%, Female: 72.73%), among the 5–24 age group, a total of **1,363 students (698 males and 665 females) are attending school**. (BBS,2022)

According to the **Physical Feature Survey 2025**, the total road network within the ward covers approximately **17.14 km**, consisting of **7.61 km bituminous (BC) roads, 8.01 km earthen roads, 0.57 km HBB, and 0.90 km RCC roads**. Despite a reasonably established circulation system, the high proportion of earthen roads indicates the need for infrastructure upgrading to support growing mobility demands.

In terms of livability indices, Ward No. 04 scores **PQLI: 54, QLI: 77, CCI: 35, and IQLI: 55**, placing it in the **moderate category**. While the ward demonstrates good cultural and social quality, the comparatively weaker physical infrastructure remains a barrier to achieving higher urban standards. Strengthening basic services, road quality, and open space provision will be crucial for guiding this ward toward a more sustainable and livable urban environment. (Socio-Economic Survey 2025)

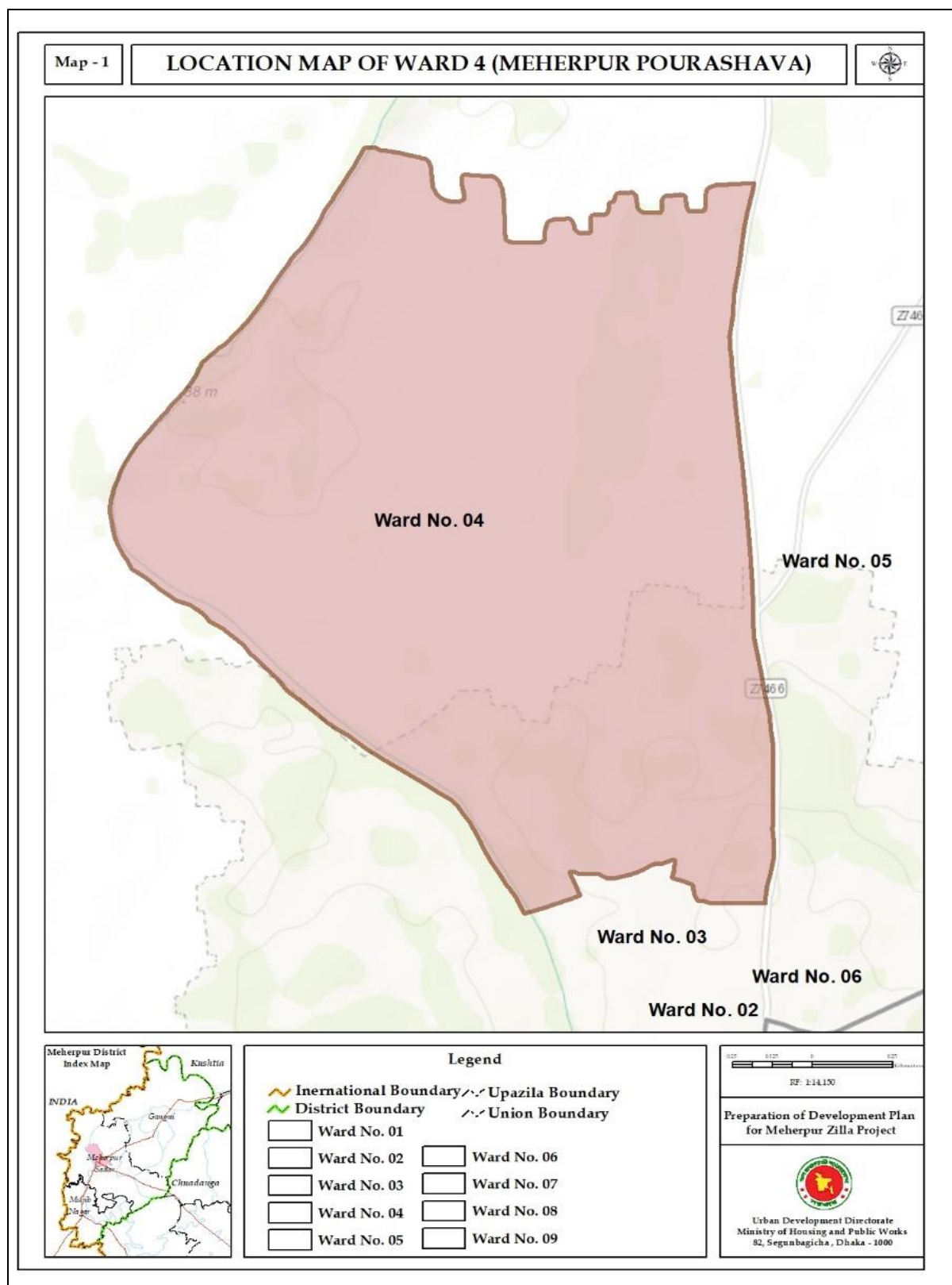


Figure: Map of Ward no 04

Existing Situation:

Feature	Existing Condition
Occupational Analysis	Farmer 40%, Business 30%, Driver 10%, Service Holder 8%, Worker 5%, Education 4%, Medical Service 2%, Religious 1%. (Source: Socio-Economic Survey 2025)
Transportation Analysis	By Foot 8.30%, By Rickshaw 1.12%, By Van 0%, By Cycle 8.00%, By Motorcycle 3.20%, By Car 0%, By Bus 0%, By Microbus 0%, By Others (Easy Bike) 0%. (Source: Socio-Economic Survey 2025)
Drainage System	Covered drains: 2.36 km (53.51%), Uncovered drains: 2.05 km (46.49%). (Source: Physical Feature Survey 2025)
Building Type	Katcha: 264, Pucca: 794, Semi-Pucca: 898 Tin Shade: 1829(Source: Physical Feature Survey 2025)
Building Floor Distribution	1 floor: 3676; 2 floors: 68; 3 floors: 10,4 floors: 3. (Source: Physical Feature Survey 2025)
Elevation Profile (DEM)	12.3–15.7m: Residential/structural areas with drainage.3.01–12.01m. (Source: Physical Feature Survey 2025)
Land Use Status	Agriculture: 671.65 acres, Residential: 65.59acres, Education: 0.79 acres, Administrative: 00 acres, Mixed use: 2.55 acres, Waterbody: 0.77 acres, Open Space & Recreation: 0.00 acres, Circulation: 11.78 acres, Commercial: 0.077 acres, Service activity:0.44acres. (Source: Physical Feature Survey 2025)
Utility Service	Community taps: 00, Formal dustbins: 01, Informal disposal: 00, Public toilets: 0. (Source: Physical Feature Survey 2025)

Emotion Distribution Analysis:

Zone Name	Distance Range (m)	Key Characteristics & Dominant Emotion
Functional Emotion Zone	500–1000	Strong presence of positive emotions such as Happiness and Love , especially around community and residential spaces; however, localized negative emotions like Fear, Anger, and Sadness are linked to ponds (612–615 m).
City Soul Zone	1000–1500	Central emotional core of the ward with Sadness as the dominant emotion (noted at ~1251 m), reflecting possible stress from congestion, lack of space, or social tensions.
Emotional Fade Zone	1500–2000	Transitional zone where emotional intensity reduces; experiences a gradual decline of both positive and negative emotions , leading to weaker community attachment and emotional neutrality.

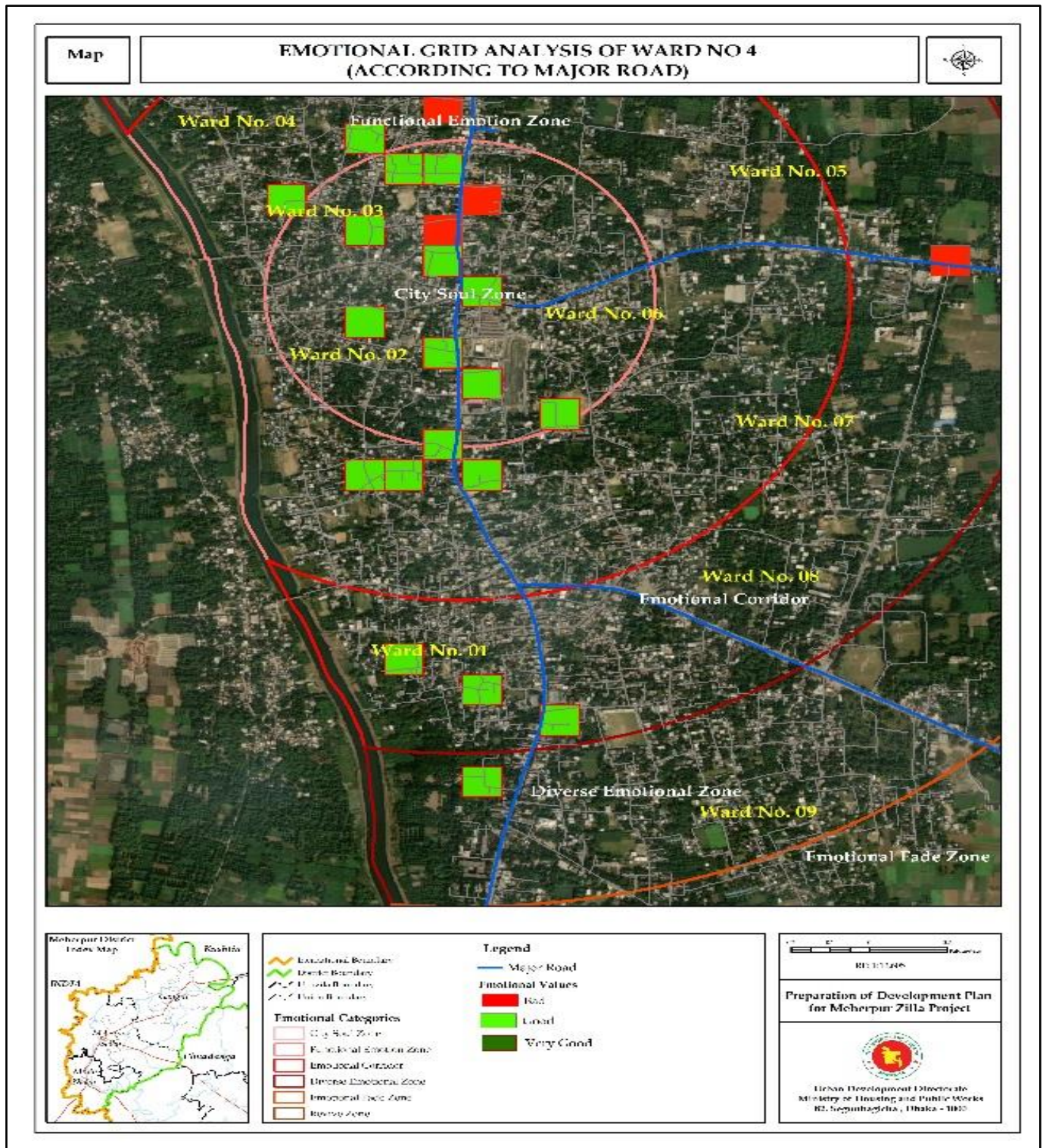
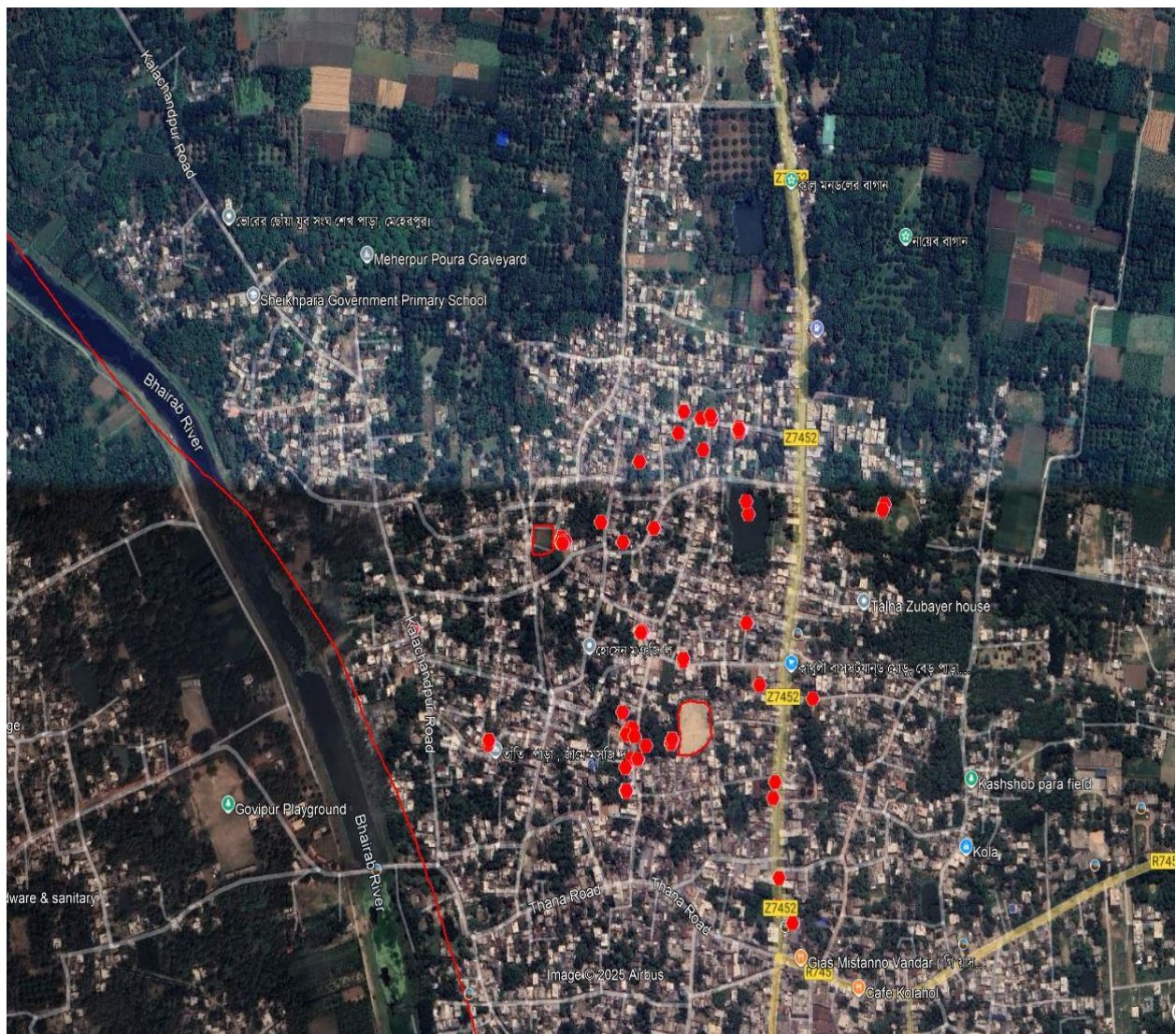


Figure: Emotional Distribution Analysis of Ward 04

Urban Void Identification

In **Ward No. 04 of Meherpur Paurashava**, the emotional void appears mainly in the outer areas where community interaction is low and spaces remain unused or neglected. These include vacant lands, abandoned ponds, narrow lanes without social activity, and roadside stretches dominated by traffic rather than people. Unlike the central zones with strong emotional attachment (homes, schools, bazaars), these void areas lack cultural or social meaning and are mostly used as pass-through spaces. With simple, low-cost interventions such as seating, greenery, play areas, or community corners, these emotional voids could be transformed into active and meaningful places for residents.

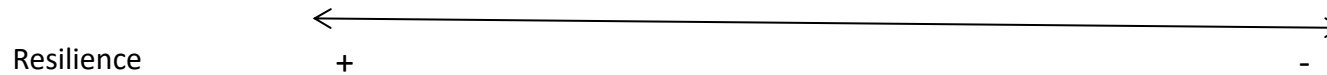


Problem Identification:

Source	Key Issues Identified
PRA	<ul style="list-style-type: none">• Road development• Drain connection• Need Dustbin• Need Playground• Eidgah field renovate.• River excavation
Emotional Analysis	<ul style="list-style-type: none">• Traffic contestation at Borobazar• Unsafe Pond area• Poor Road condition in Fulbagan para• Discomfort for hospital and hospital road.
Socio-Economic Data	<ul style="list-style-type: none">• Infrastructure development• Need Street light• Need maternity clinic• No Drainage
Newspaper	<ul style="list-style-type: none">• Road Accident at Kathuli road

Ward No. 1 clearly reflects the traits of the Reorganization (α) phase, where mixed land use, informal dominance, and scattered growth patterns are visible. The building stock is diverse—katcha (2.9%), semi-pucca (49.4%), tin shade (41.4%), and pucca (43.8%)—signaling a transitional and unstructured urban form. Occupation is led by informal business (71%), while transportation depends overwhelmingly on non-motorized modes (93.36%), both of which indicate an opportunistic yet vulnerable economic base. Land use remains fragmented, with agriculture (32%) and residential (33%) side by side, along with smaller mixed, commercial, and administrative areas, showing an ad-hoc rural-to-urban shift. The population is mostly Muslim (95%) but with Hindu (4.8%) and Christian (0.3%) minorities, reflecting heterogeneity consistent with reorganization. Limited educational land, weak services, and emerging issues such as youth drug abuse further expose the ward's fragility. Altogether, Ward No. 1 is reorganizing itself through scattered growth and informal adaptation, open to opportunities but still struggling with infrastructure and service gaps, which firmly places it in the Reorganization phase of the adaptive cycle.

Adaptive Cycle Phase Analysis:



Adaptive Cycle Phase	Release (Ω)	Reorganization (α)	Growth (r)	Conservation (K)
Social System	One population overwhelms all others, which disappear, or a revolt occurs, breaking the homogeneity of the space.	Heterogeneous populations mixing at the individual level; and absence of barriers. Mainstreaming (residents and explorers) and marginal (drug traders and sex workers) are present.	Selected populations begin to grow; the mainstream populations may begin to overtake marginal populations. Space encourages inclusion.	One population may begin to dominate; Population in the area becomes homogeneous. Segregation occurs are barriers, both physical and implied, rise.
Economic System	Small permutation in customer or market yields collapse	Small, opportunistic, and temporary business emerges.	Entrepreneurs create highly flexible businesses. Imported or local response to local needs.	Large-scale economic entities emerge emphasizing “one size fits all” Efficiency is paramount: customization disappears and the system is inflexible.
Environmental System:	Out of bounds event overwhelms engineered and separated system.	Spontaneous and visible natural processes in the site.	Designed, visible Reinforcing the connection to other systems.	Engineered, hidden Separates the bio-system from others Inflexible.
Results	Unmanaged Sprawl: The primary issue is the unplanned and rapid conversion of land from its current use, such as agriculture, to urban development. This leads to the loss of valuable	Lack of Infrastructure: Areas begin to reorganize, the public infrastructure (roads, water, sewage) may not keep pace with the development. Ad-hoc Growth: Without a clear plan, the reorganization can lead to scattered and	Congestion & Overburdened Infrastructure: As the population and economic activity increase, the existing infrastructure can become overstretched, leading to traffic congestion, strain on the water supply, and inadequate sanitation.	Stagnation: The strong emphasis on stability can lead to stagnation, preventing necessary upgrades to infrastructure and amenities. Rigidity: A rigid system of conservation can prevent the area from adapting to new social or

	<p>farmland and natural spaces.</p> <p>Vulnerability: Areas in this phase are highly vulnerable to uncontrolled change, which can overwhelm existing infrastructure and services.</p>	<p>uncoordinated development, making it difficult to provide efficient public services in the future.</p>	<p>Environmental Degradation: Rapid development can lead to the loss of urban green spaces and a decline in air and water quality.</p>	<p>economic needs, potentially hindering long-term sustainability.</p> <p>Resistance to Change: The population in this phase may resist new development or changes, which can slow down progress and prevent the area from evolving.</p>
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- (Source: Anderson, 2011)
- Source: Marcus, L., & Colding, J. (2023). Placing Urban Renewal in the Context of the Resilience Adaptive Cycle. Land. <https://doi.org/10.3390/land13 010008>.
- Source: Peng, H., Lou, H., Liu, Y., He, Q., Zhang, M., & Yang, Y. (2025). Spatial and Temporal Evolution Assessment of Landscape Ecological Resilience Based on Adaptive Cycling in Changsha Zhuzhou–Xiangtan Urban Agglomeration, China. Land. <https://doi.org/10.3390/land14040 709>.
- Source: Wang, Z., Lin, L., Zhang, B., Xu, H., Xue, J., Fu, Y., Zeng, Y., & Li, F. (2023). Sustainable urban development based on an adaptive cycle model: A coupled social and ecological land use development model. Ecological Indicators. <https://doi.org/10.1016/j.ecolind.2023.110666>.
- Source: Marcus, L., & Colding, J. (2023). Placing Urban Renewal in the Context of the Resilience Adaptive Cycle. Land. <https://doi.org/10.3390/land130 10008>.

Urban Resilience Analysis for ward 04:

Adaptive Cycle Phase	Problem arises in ward 04	Planning Intervention	Implementation Authority
Reorganization (a)	<p>Lack of Infrastructure:</p> <p>1.Roads (development, poor condition, hospital road discomfort, accident at Kathuli road) (PRA, Emotional Analysis, Newspaper)</p> <p>2.Drainage (drain connection, no drainage) (PRA, Socio-Economic Data)</p> <p>3.Waste management (need dustbin) (PRA)</p> <p>4.Playground / open space (need playground, Eidgah field renovation) (PRA)</p> <p>5.River excavation / unsafe pond area (PRA, Emotional Analysis)</p> <p>6.Traffic congestion at Borobazar (Emotional Analysis)</p> <p>7.Street lighting (need street light) (Socio-Economic Data)</p> <p>8.Health facilities (need maternity clinic, hospital access discomfort)</p>	<ol style="list-style-type: none"> Agriculture: 671.65 acres, enough, need to preserve. Residential – Existing: 65.59 acres → Proposed: ~90 acres, need to increased. Source: BRAC, 2022 – Urban Housing Waterbody – Existing: 0.77 acres → Proposed: ~1.5 acres, need to increase/River excavation Source: Frontiers in Environmental Science, 2022 Open Space & Recreation – Existing: 0 acres → Proposed: ~8 acres no open space, need area for that. Source: Green Infrastructure Development Service Activity – Existing: 0.44 acres → Proposed: ~2.5 acres Need to increase area for service activity. Source: ILO – Small Enterprises The circulation network, education, and institutional facilities in Ward No. 04 are adequate to serve the population. Administrative needs are primarily addressed through central administration. However, the area shows limited mixed-use development and is predominantly 	Recreational Place implemented by LGED (Local Government Engineering Department) in collaboration with the Municipality.

	<p>(Socio-Economic Data, Emotional Analysis)</p> <p>9.General infrastructure development (Socio-Economic Data)</p> <p>Ad-hoc Growth:</p> <p>The residential area can be expanded along the road corridors following their cluster nearest neighborhood pattern and focusing on katcha house.</p> <p>1.Waterbodies can be increased through river excavation.</p> <p>2. Open spaces and recreational centers can be developed in the Kala Chandpur playground area, Area 2-3 Acre.</p> <p>3. A proposed Connecting Road from Kalachadpur to Ujalpur Road can enhance the service activities of Ward No. 4.</p>	<p>characterized by agricultural and residential land use.</p>	
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