

Towards a Disaster Resilient city

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The Mayor

Jamalpur City Hall

Jamalpur

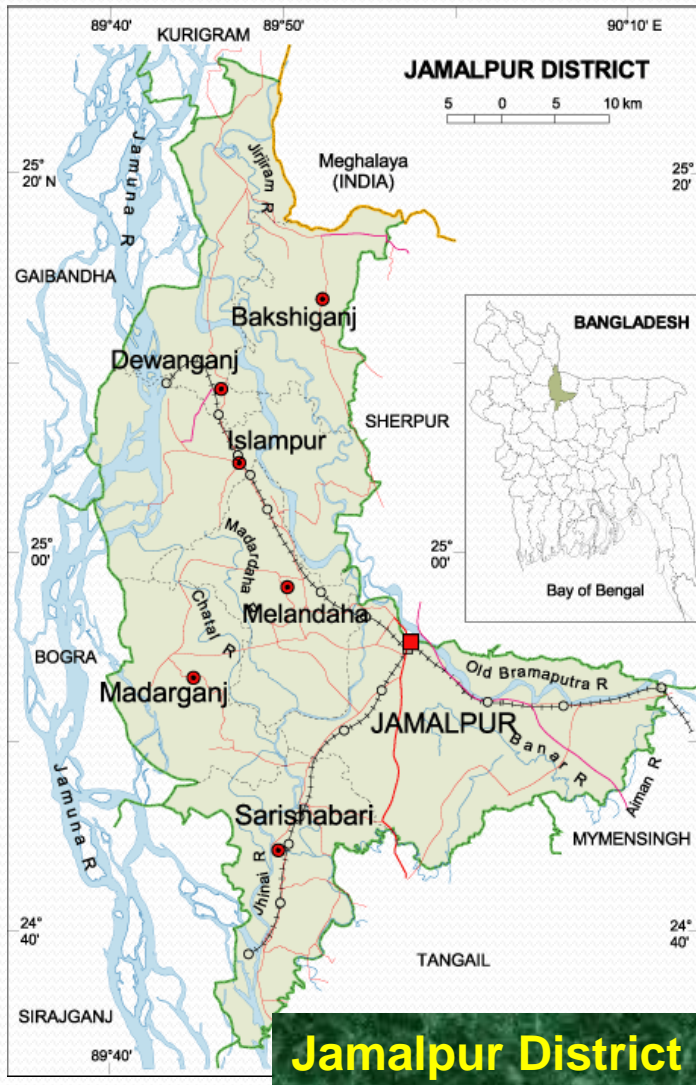
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Jamalpur Initiatives

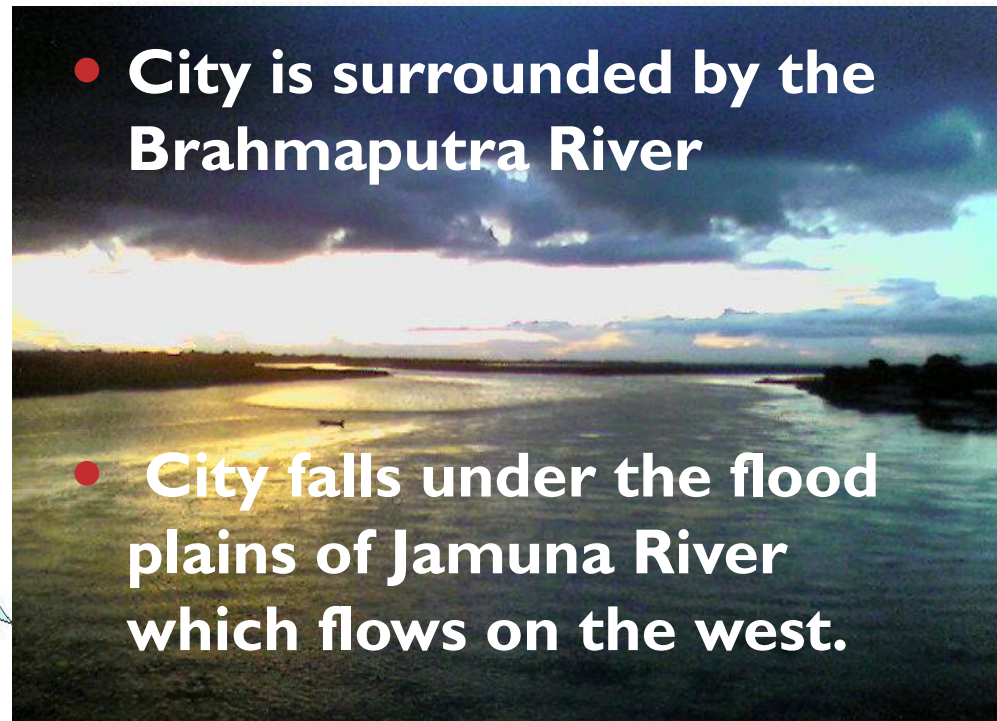
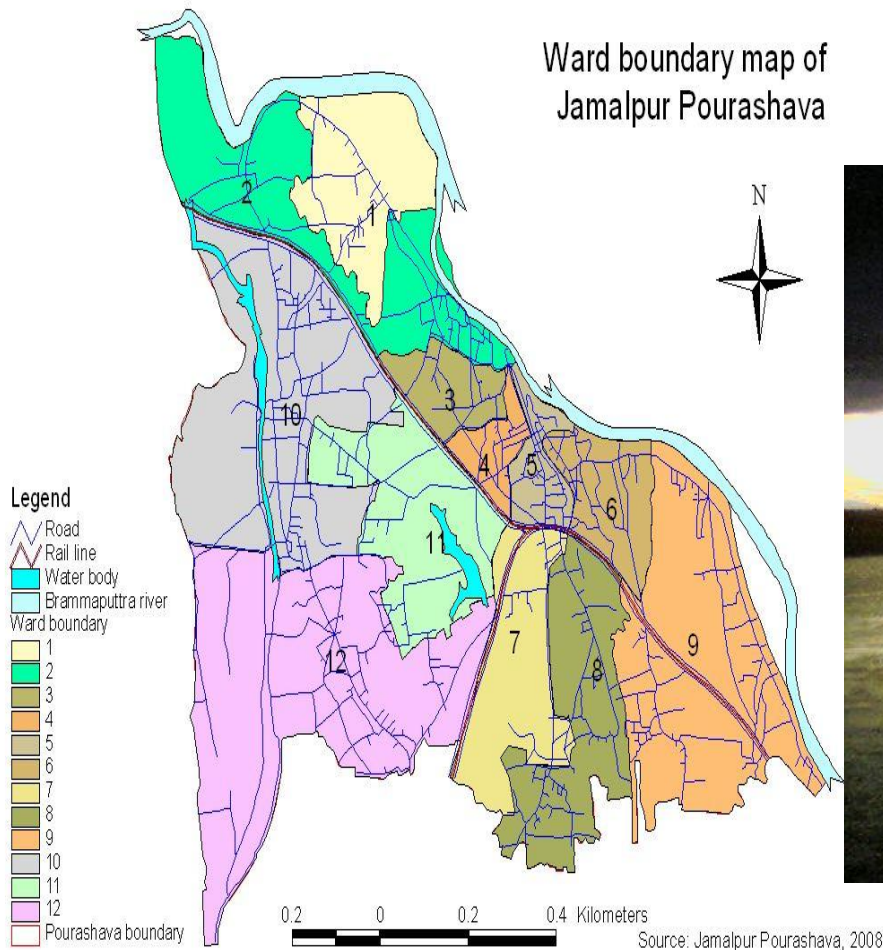
Geographical Location



- Jamalpur city is situated in North Central Bangladesh, in Jamalpur District,
- District is bordered by rivers of Brahmaputra, Padma, Meghna, old Brahmaputra and Lakhya
- Impact of great rivers are widely spread over the district including Jamalpur; water for agriculture and floods for destruction.

Geographical Location

Ward boundary map of
Jamalpur Pourashava



- City is surrounded by the Brahmaputra River
- City falls under the flood plains of Jamuna River which flows on the west.

Jamalpur City

City Profile

Demographic and Geographical Details

- Total Population 132,727
- Male 67,664
- Female 65,063
- Total land area 53.28 km² (13,165.775 acre)
- Total No. of wards 12
- Total No. of slums 30
- Number of Households 18,778
- Government 46

Road Types

- Total Length 165.65 km
- Bituminous concrete 50%
- Kachha road 21.34%
- Brick soling 17.73%
- Others 10.93%



City Profile

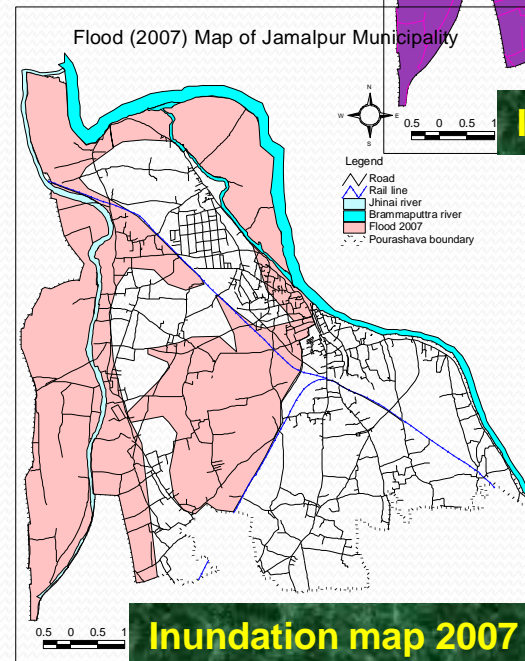
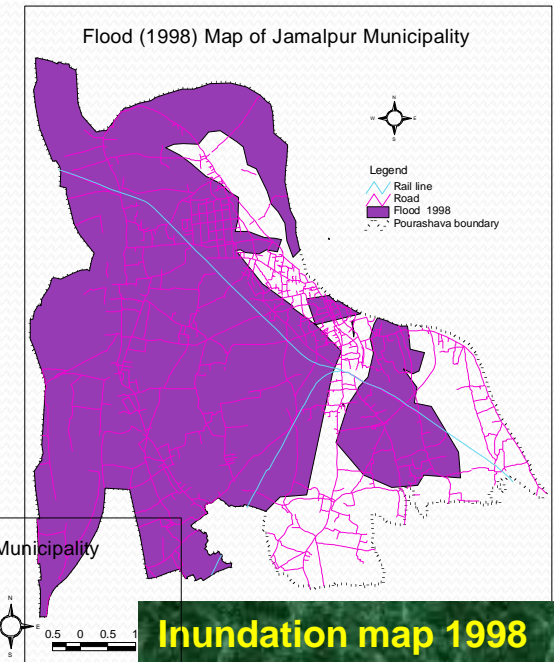
Land Occupancy %

- Housing 27.36
- Agriculture 56.37
- Others 11.06
- Commercial 5.21

Extreme Hazards in Jamalpur

Floods

- Due to surrounding rivers Jamalpur is prone to floods:
Ex: Charland/Shore land flood-
between embankment of major
river- in Nowvanga char,
Compopur char of Jamalpur
- In 1998 and 2007, the city was
severely affected
- Polders and embankments on
upstream, control the floods to
some extent, but fails in heavy
floods



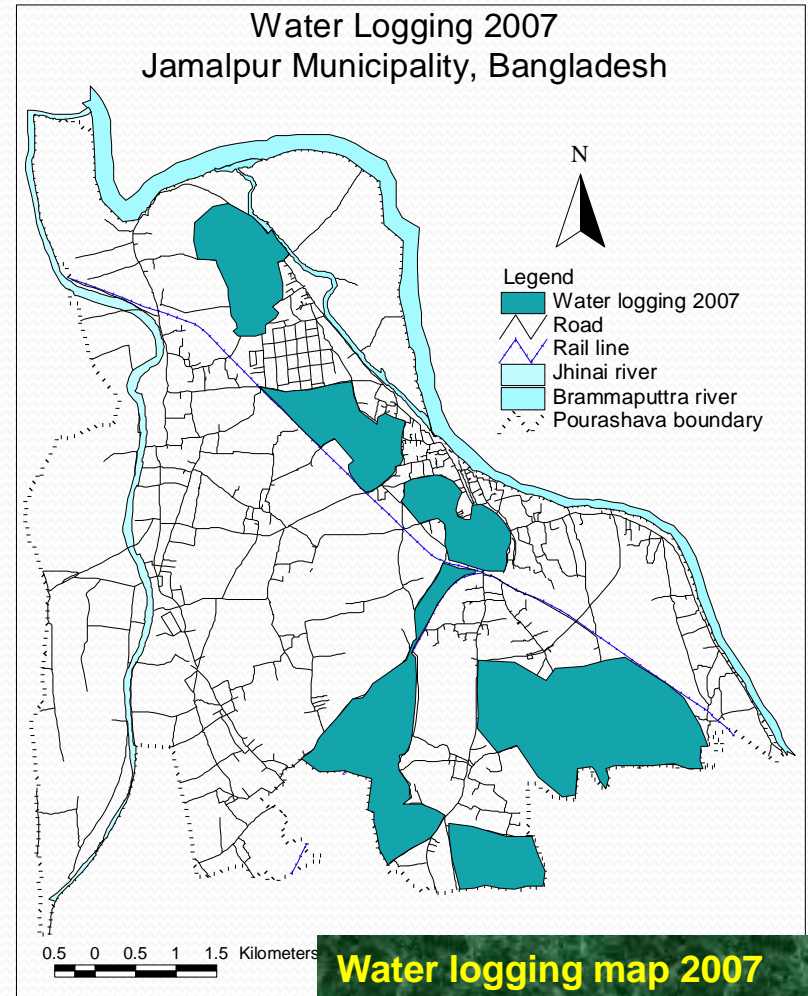
Extreme Hazards in Jamalpur

Water logging

- City's growth makes people to encroach water retention areas
- With flat gradients, elevation of some places are below the water level of rivers
- Poor drainage network with obstruction and dumping of solid waste worsens the free flow
- City is becoming more water logging

Cyclones

- Although not frequent, cyclones cause severe damages



Extreme Hazards in Jamalpur

Soil and river erosion

- Brahmaputra river brings heavy flows with silt and earth from upstream in India
- Over the years, the path is changing with more erosion on embankments
- Erosion led to high sedimentation load of the river obstructing smooth flow to downstream
- As the land is flat, more area goes under flood plain restricting the areas for occupancy



DRR Partners of Jamalpur



- Community
- Pouroshava (City) Disaster Management Committee
- Water Development Board,
- District Disaster Management Committee (DDMC)
- District Relief and Rehabilitation Organisation
- Asian Disaster Preparedness Center. (technical inputs)
- Ahsania Mission
- CARE Bangladesh

Pouroshava Initiatives on DRR

At city level

- Establishment of City level disaster management committee
- Capacity Building activities involving city authorities on DRR, vulnerability assessment, contingency planning and CBDRR
- Vulnerability Assessment of the City
- Development of Risk and Resource mapping at the city level
- Development of DRR action planning and Flood Contingency Plan at the city level
- Inclusion of DRR into Development Plans
- DRR budgeting into the Development Plan
- Establishment of Emergency Operating Center (EOC) at the city level
- Establishment of Community based Early warning system integrating municipality, forecasting agencies and community.

At community level

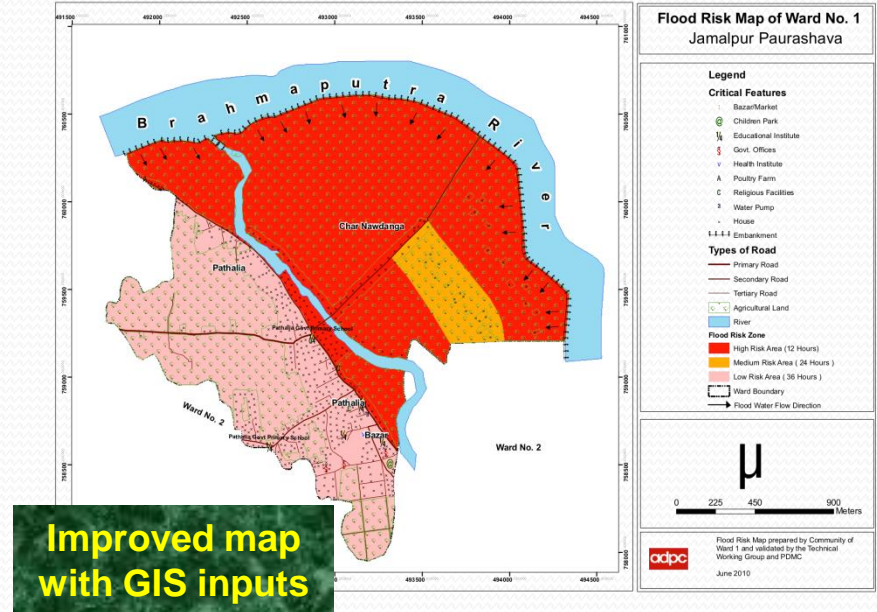
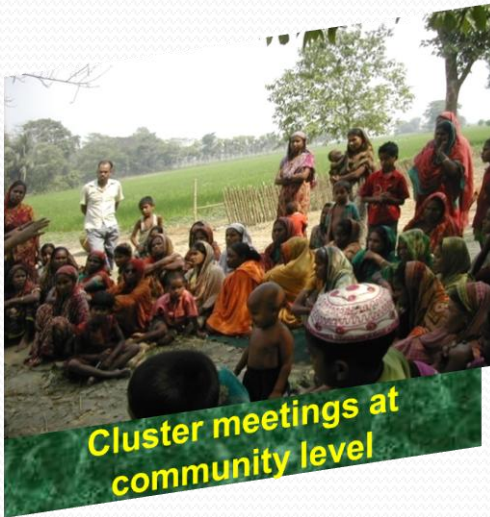
- Establishment of Slum Disaster Volunteer Group
- Capacity building of volunteers and community on CBDRR and CBERC
- Community risk assessment, planning and implementation on issues like water logging and unsafe drinking water facility and community infrastructure
- Community level advocacy through Mapping to the city/district authorities
- Involving schools on Disaster Risk Reduction and safety

Process

- Setting up Technical Working Group (TWG) comprising members of Pourashava (City) Disaster Management Committee (DMC), representatives from relevant governmental and non governmental organizations were formed.
- Formation of community level clusters to facilitate vulnerability analysis with community, volunteers, WDB and city officials for selected wards to conduct community based risk assessment
- Integration of Community Risk Assessment into Land use map and annual development using GIS tools to develop City Level Risk Assessment
- Implementation of priorities of actions indentified by the community and Pouroshava (City), a number of preparedness and mitigation activities are at the implementation stage. Priority is for most vulnerable wards of 1,10,12
- Replication workshop for other remaining wards to prepare respective ward level risk maps and action plans are also planned

Risk Assessment

Actions taken



Improved map with GIS inputs



Community based maps under preparation



Mitigation and Preparedness

Early Warning System (EWS) and Emergency Response

- A city level Emergency Operations Center (EOC) has been set up at the City Hall
- Roles and responsibilities of council members, relevant departments, community leaders and other stakeholders are defined and displayed
- EOC is equipped with tools such as lifesaving jackets, rechargeable torches, ropes, helmets, first aid facilities etc. for 24 hr operation during disasters
- 19 flood gauges are being installed at pre identified locations by the Water Development Board, on the bank of Brahmaputra river
- Selected community volunteers are trained to coding, decoding and dissemination appropriate warning signals and reporting, display boards at community level will be installed
- A mechanism will be set up with WDB, Pourashava and community to obtain warning for smooth coordination on EWS including provision of data monitoring and recording system

Mitigation and Preparedness



EOC Tools

Emergency Response Training for community



EOC - Mayor explains roles of members



Mitigation and Preparedness

Structural mitigation

- Improvements to drainage system and roads through annual budget
- Access roads as evacuation routes (Ex: Rashidpur)
- Community participation with labour, supplying local materials, applying grass on slopes



Mitigation and Preparedness

Water and sanitation

- During floods, potable water is scarce as shallow wells get easily contaminated.
- Available few deep wells are beyond reach for some communities
- Need for deep tube wells and platforms was one of the basic needs identified
- A number of deep tube wells with proper drains are planned to construct to improve sanitation
- Community donated lands for construction & will support by labour



Cluster meetings to identify water & sanitation needs



Drilling deep tube wells

Mainstreaming DRR into Local Governance

In Development planning

- Jamlapur has drafted its City Development Plan
- DRR components are successfully included in areas of :
 - ✓ Land use planning – building approval process, maintaining drains and water retention areas, infrastructure facilities
 - ✓ Health and Sanitation – solid waste disposal, safe drinking water, food and sanitation habits, preventive measures, child and maternity care
 - ✓ Water supply and drainage –waster water disposal, facilities to slum / under developed areas
 - ✓ Emergency response, relief and rehabilitation – EWS & EOC functions, periodic training

In budgeting

- An annual allocation of BDTaka 1,200,000 is available for relief and preparedness for disasters. Out of it, 25,000 BDT is for public awareness including school awareness programmes.

The Future

- Ward 1, 10 and 12 are the most vulnerable wards for which maps and action plans are developed. Ward level DM action plans and maps will be developed for other remaining wards though they are on medium and low vulnerabilities
- Periodical updates will be made for risk maps as the parameters such as land use plans, flow pattern of river and population density are changing and new flood prevention measures may take place.
- Inclusion of Risk and Resource Map of Jamalpur city into the land use map and analysis of the vulnerability based on the development map of the city.
- Development of Digital Elevation Map for the Jamalpur City
- Mobilization of funds for EOC, community based EWS functions, with sustainability through District Disaster Management Committee (DDMC) and other relevant sources such as UGIIP project.
- Development of Regional Strategic Plan on Hydro-meteorological Disaster involving other nearby cities.



Thank you