Validation Workshop on Roads To The Rescue Khajuriya (LGED SubPolder)

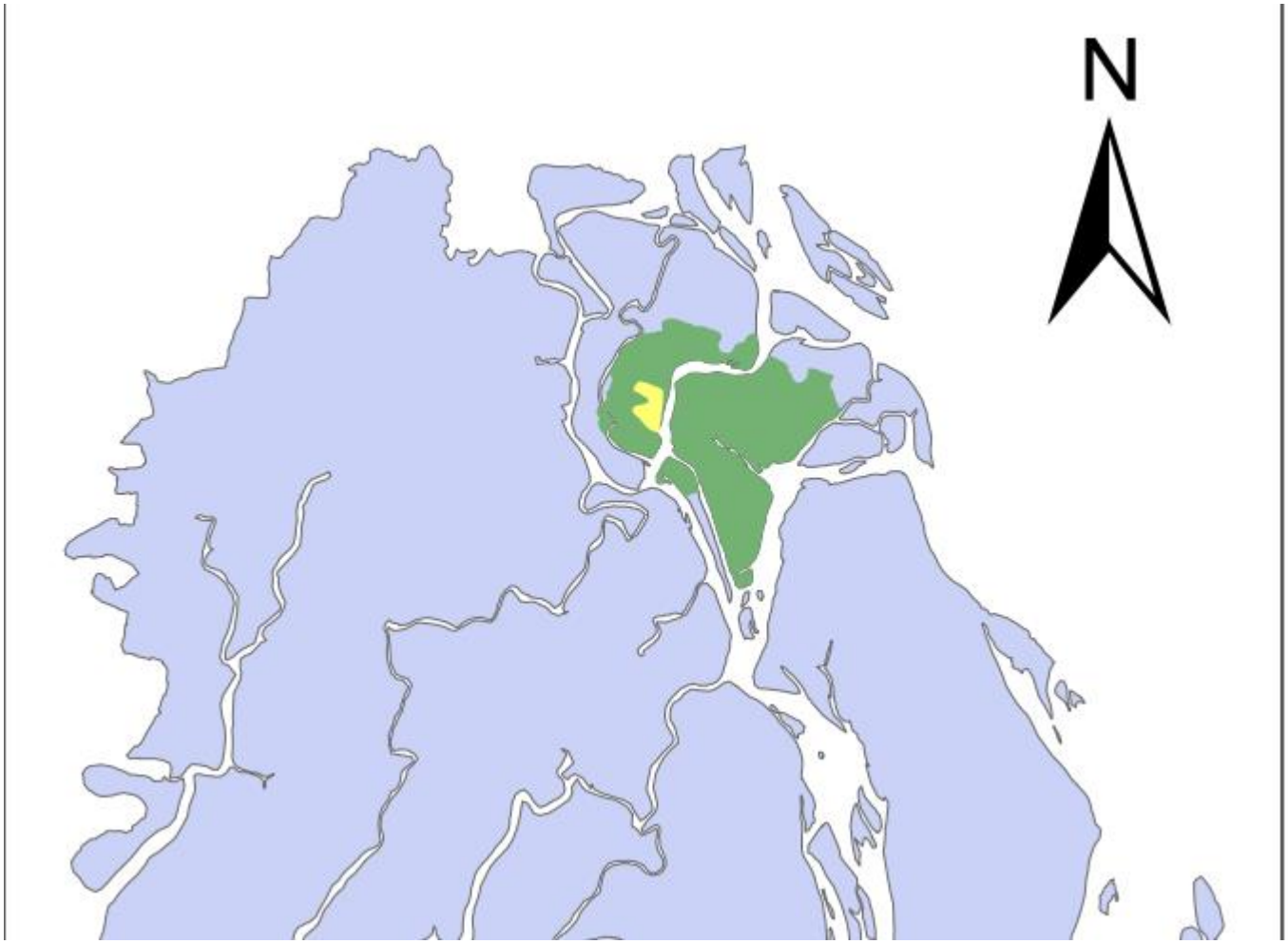
BUET and MetaMeta

15th November 2017

Objectives

- Share the findings of field survey
- Validate/integrate key findings of problems, causes and impacts
- Discuss possible solutions
- Ranking of solutions

Location of LGED Polder



Field work

- Household and physical survey conducted by BUET
- Total area: 719 ha
- Total population
- 3 Unions: Lota, Biddyanandapur and Chonkhola
- 3 rivers: Naya Bhangani to the North, Lata to the East, Chilmari to the West and South-west
- 26-28 October, 2017

Household and Physical survey

- 20 HH along the roads: 17/20 men, average age: 40-60 years old, 12/20 farmers
- 20 HH along embankments: 17/20 men, age 40-60%, 11/20 farmers and 5/20 business
- Physical survey on road structures: 8 internal roads, 9 bridges and 7 culverts
- Physical survey embankment structures: 8 embankments, 3 sluices, 8 culverts and 8 bridges

Part I: Validation of Findings

- Problems
- Causes
- Impacts
- Solution

Key Findings From Household and Physical Surveys

Embankments

- Use of Embankments: Flood protection, flood shelter access, communication, transport of goods and cattle shed

Status of Embankments

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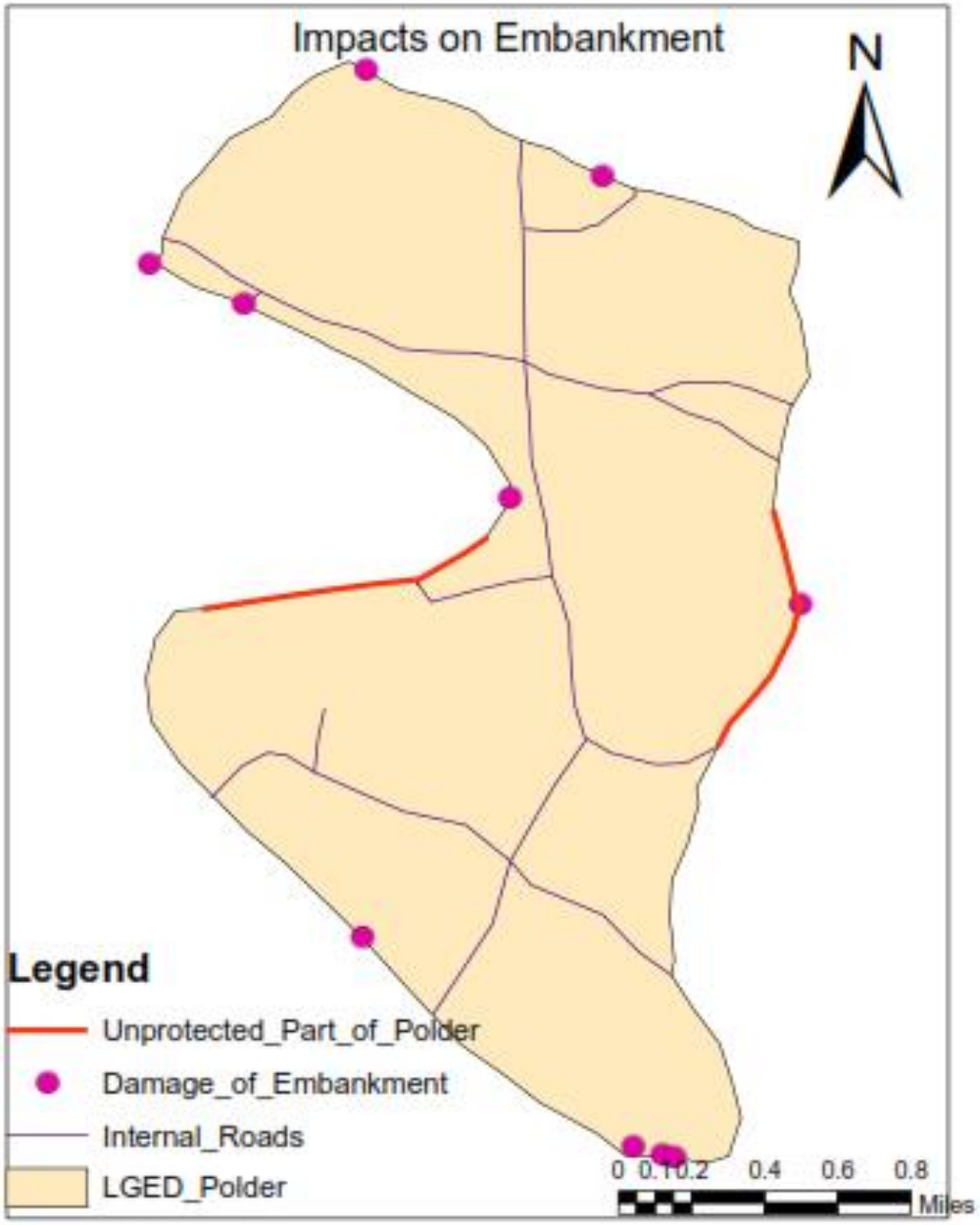


Effects of Damaged/Breached Embankments

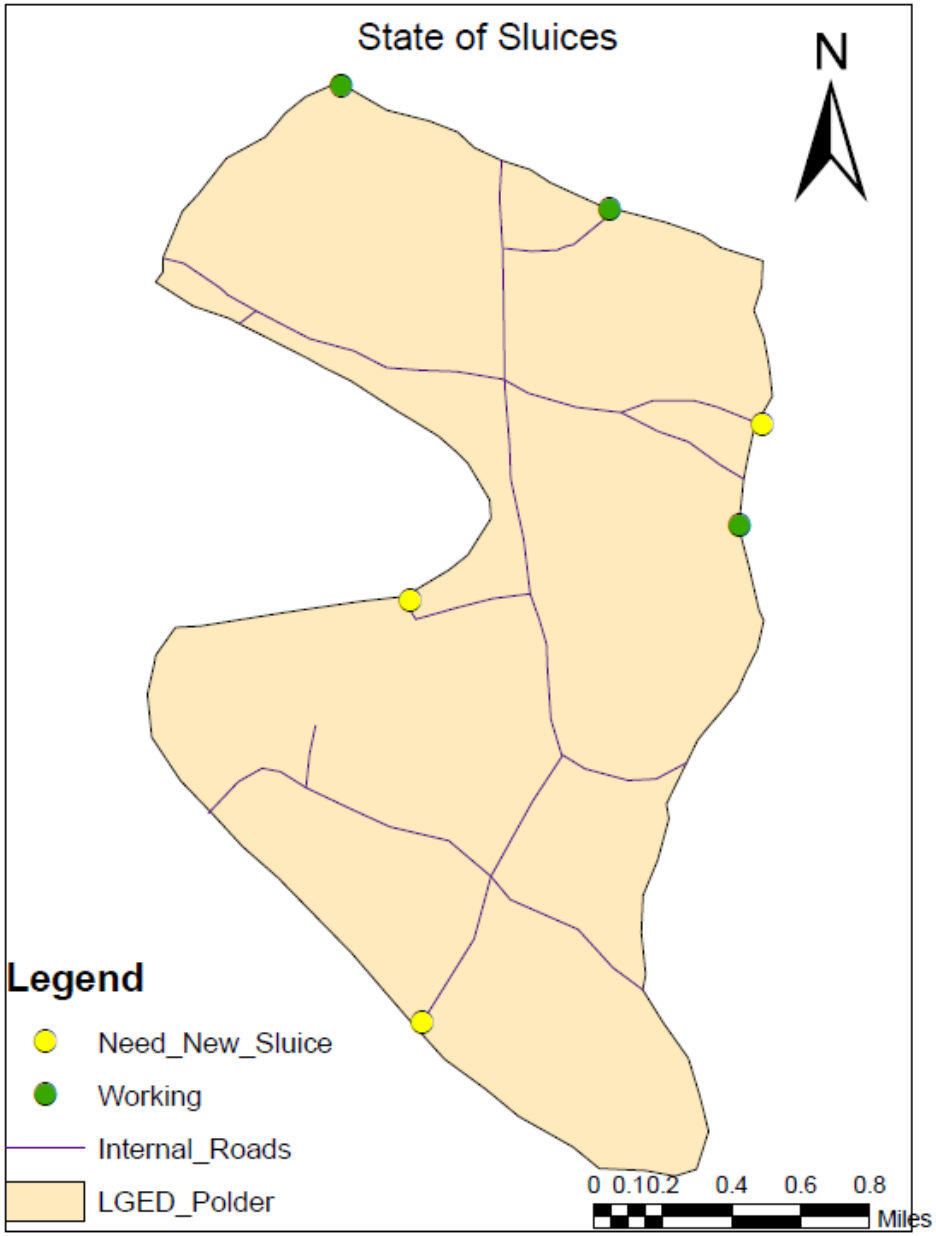
Damage to cultivated areas

Status of embankments structures

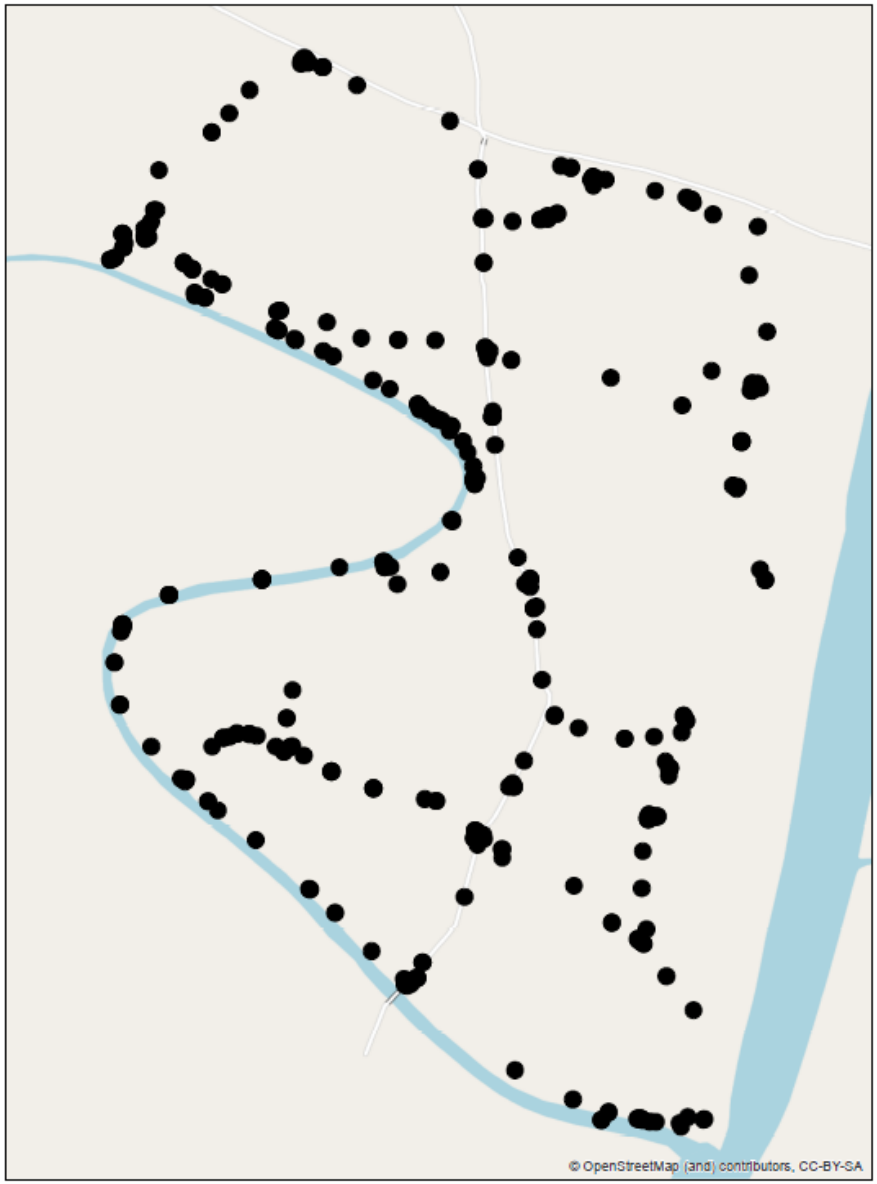
Partially damaged structures

1V sluice gate

Status of Sluices



Road Network Map



Use of Roads

- Transportation
- Communication
- Access to villages
- Cattle shed
- Shops

Road Condition

Road damage

Road Condition

Status of internal roads

Broken sections of the road due to water erosion

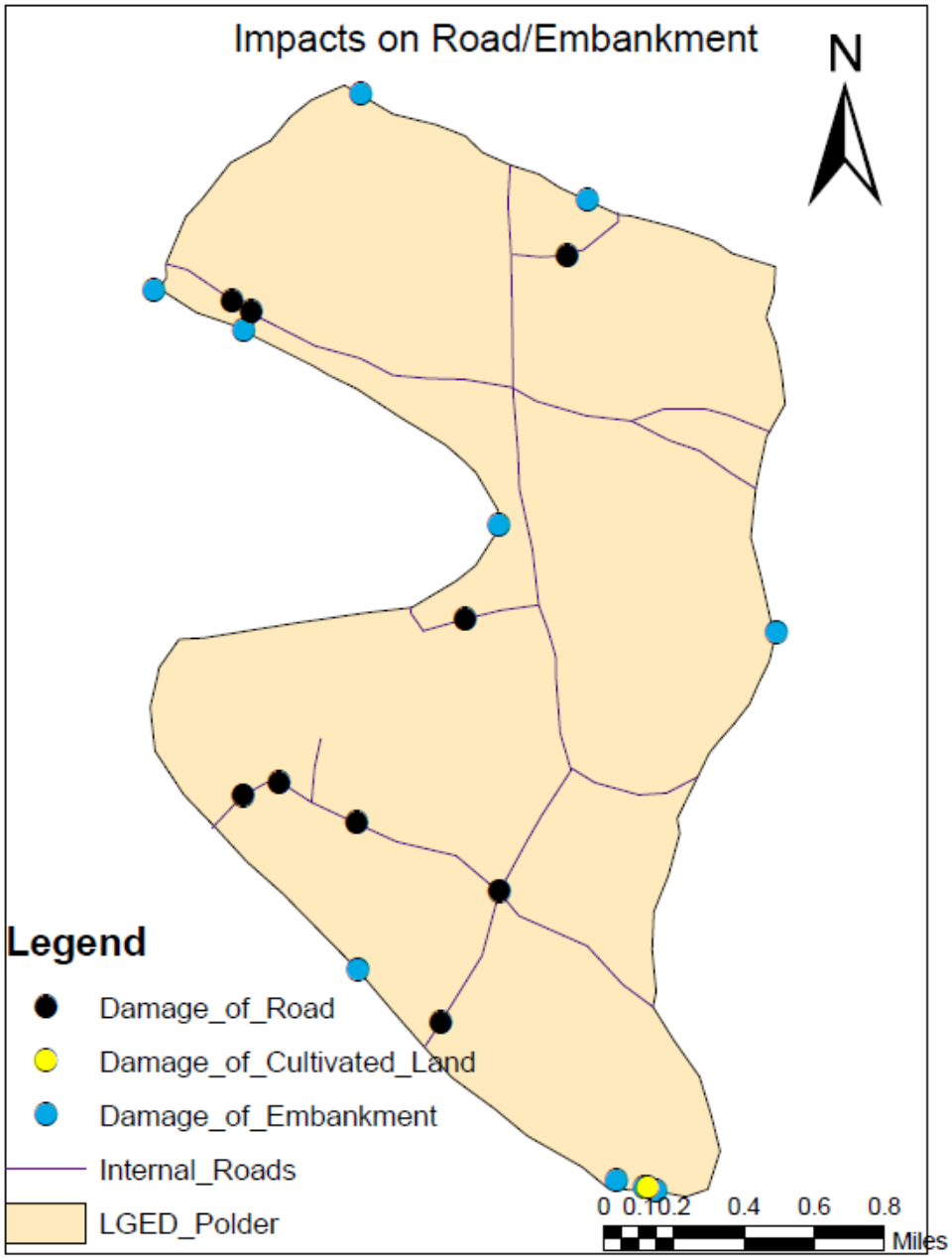
Status of internal roads

Road collapse, NO maintenance since 17 years

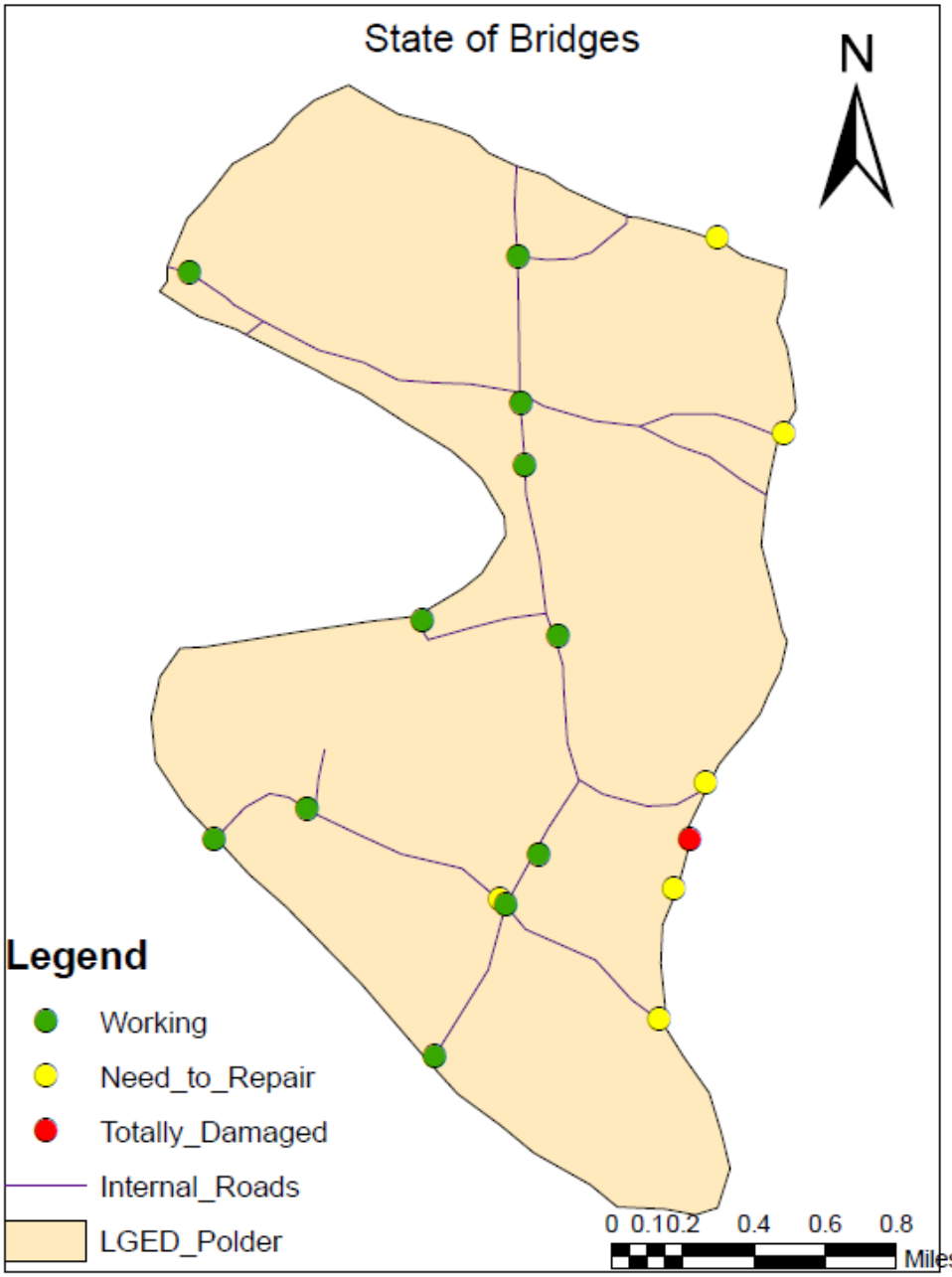
Road collapse, NO access

Narrow and low roads

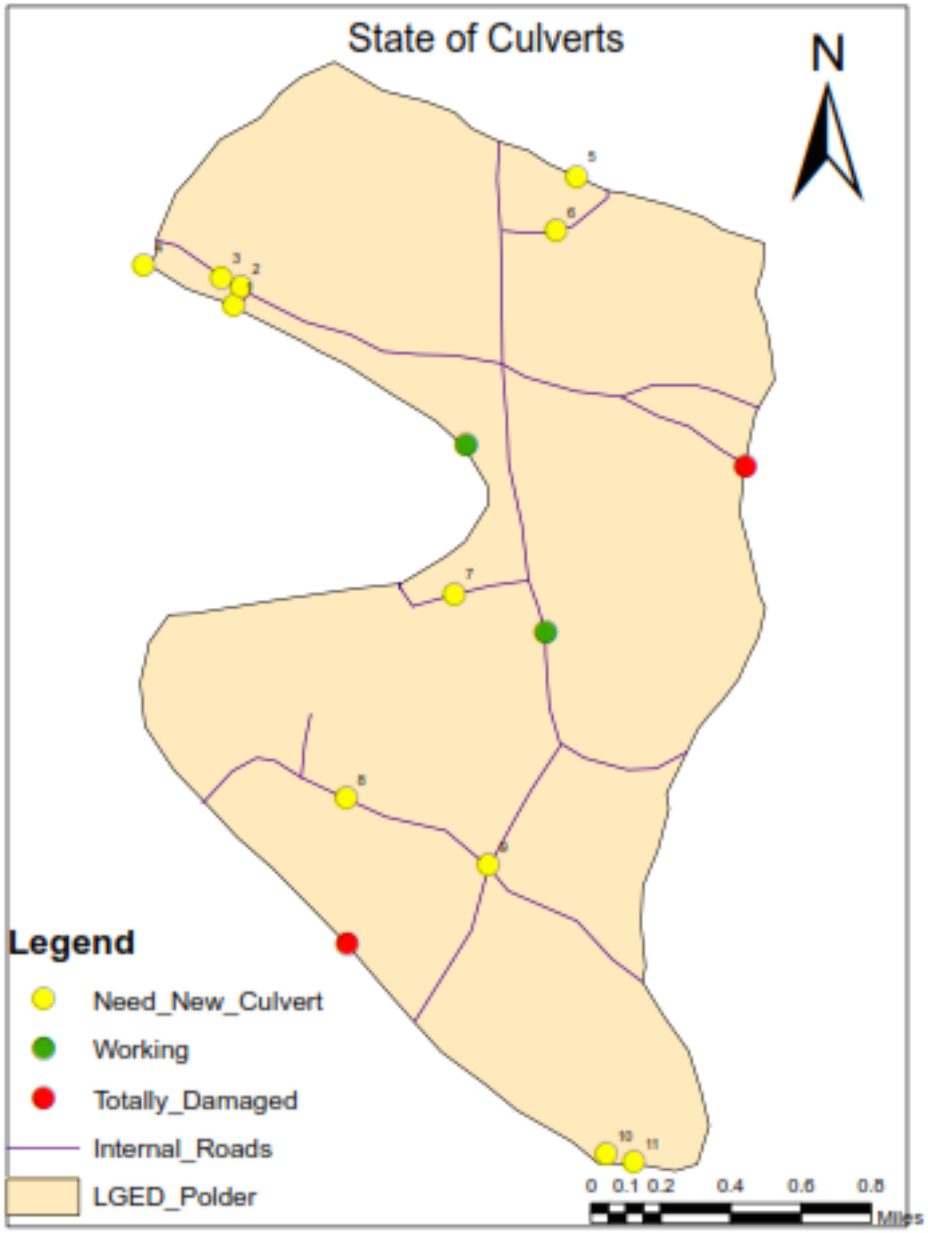
Road Status Map



Bridges Status Map



Map of Culverts

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Status of internal roads structures

Old bridge needs repair/replacement

Key Findings

- Embankment is not designed as roads but is used as roads
- Construction of road and embankment is of poor quality, resulting in damage, collapse, slope failure etc.
- Insufficient water crossing structures (culverts, bridges) and drainage canals
- Water pressure damages embankment and roads

Impacts

- People’s lives and properties are at risk
- Economic losses
- Water scarcity during dry season for irrigation

Part II: Discussion on Solutions

Suggested Measures

- Proper, adequate design of embankment
- Increased number of culverts and bridges to improve drainage
- Repair bridges and culverts
- Repair embankment
- Repair roads
- Provision of Gated culverts to control/store water for irrigation
- Excavation of drainage canals

Ideal situation: Model (Gated) Culvert

Few Questions

- Is there any overtopping of the embankments?
- What is the height of the embankment?
- If so, is it due to tidal effect or due to flood, cyclone, storm?
- Do you grow rice in dry season?
- Do you have water logging?
- Do you have water scarcity for irrigation?

Ranking of Solutions

- Prioritise the solution considering
  - Relevance/Impact
  - Feasibility and
  - Cost

Any other issues/problems?

Thank you All