



**Impact Evaluation Study  
of  
Rural Infrastructure Development Project:  
Greater Mymensingh (Mymensingh, Tangail, Jamalpur,  
Sherpur, Kishoreganj & Netrokona Districts) - 2nd Revised**



*Carried out by*  
**Evaluation Sector**  
Implementation Monitoring and Evaluation Division (IMED)  
Ministry of Planning, Government of the People's Republic of  
Bangladesh

*Conducted by*  
**Research Evaluation Associates for Development Ltd. (READ)**

June 2011

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## FOREWORD

Local Government Engineering Department under the Local Government Division, Ministry of LGRD and Cooperatives implemented the project titled "Rural Infrastructures Development Project: Greater Mymensingh (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj and Netrokona Districts)—2<sup>nd</sup> Revised" from July 2002 to June 2009 with an investment cost of 26,355.66 lakh Taka.

Evaluation Sector of Implementation Monitoring and Evaluation Division (IMED) under the Ministry of Planning contracted out the evaluation of this project to M/S Research Evaluation Associates for Development Ltd (READ) a Consulting Firm through open competition. The major objectives of evaluation were to review implementation status of roads, bridges/culverts, Growth Centers/Rural Markets and Tree Plantations; assess the impact of project activities agricultural productions, trade business, reduction in transport costs and time, increase of productivity of rural poor through skill training and over socio economic betterment of the rural people and to identify the strengths and weaknesses of the project.

In many respects, the project outcome has shown that the LGED interventions are effective in encouraging women, particularly poor women's participation to road and allied socio economic development endeavors. LGED has completed all the types construction works almost as per scheduled targets (at 97% level); Local communities are now enjoying the benefits of improved communication systems and the benefits accrued are certainly comparatively more than those achieved in the control areas and the major benefits are increased marketing of agricultural products, gaining fair price for the same; better communication to schools and health centers etc.

I, sincerely congratulate M/S READ team for conducting the evaluation study and successfully completing the report in time. I also thank Syed Md. Haider Ali, DG (Evaluation Sector) along with his professional colleagues to provide guidance and supervisory supports to the M/S READ team members. I would also like to appreciate local administration for their all cooperation and spontaneous response of project beneficiaries and participation of local influential/civil society members in the local level workshop.

I am very hopeful that the recommendations of the evaluation study will be much helpful in improving implementation of similar projects more cost-effective in future.

(Md. Habib Ullah Majumdar)  
Secretary  
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## PREFACE

The Evaluation Sector, one of the six sectors of Implementation Monitoring Evaluation Division (IMED) under the Ministry of Planning is supposed to conduct impact evaluation for at least 10% of the completed projects of the GOB in each financial year. But due to present shortage of manpower/workforce which at present constitutes one third of the total strength, can not evaluate more than 3% to 4% of the completed projects of the GoB.

Despite the constraint, last financial year 2010-2011, Evaluation Sector, IMED conducted the impact evaluation of 9 completed GoB projects of which 6 projects have been evaluated by outsourcing research firms and 3 evaluation studies have been completed by the in house professional officers of the Evaluation Sector. One of the outsourcing firms- M/S Research Evaluation Associates for Development Ltd (READ has been awarded the contract-money of taka 16.99 lakh by the Evaluation Sector of IMED, Ministry of Planning to carry out the impact evaluation on the Project titled " Rural Infrastructures Development Project: Greater Mymensingh (Mymensingh, Tangail, Jamalpur, Sherpur, Kshoreganj and Netrokona Districts)—2<sup>nd</sup> Revised" which was implemented by Local Government Engineering Department under the ministry of LGRD and Co-operatives " from July 2002 to June 2009 with an investment cost of 26,355.66 lakh Taka.

The major objectives of evaluation are to review implementation status of roads, bridges/culverts, Growth Centers/Rural Markets and Tree Plantations; assess the impact of project activities agricultural productions, trade business, reduction in transport costs and time, increase of productivity of rural poor through skill training and over socio economic betterment of the rural people and to identify the strengths and weaknesses of the project. To carry out the evaluation work- the consulting firm conducted field investigations in 64 villages of 32 unions in 32 Upazilas of 6 districts; interviewed 3200 respondents (intervention =2400; control=800); conducted 310 intensive interviews; 24 FGDs; observed through on the spot physical verifications of the sample infrastructures; and also conducted one local level stakeholders' workshop as well as reviewed PCR, PP and Evaluation Report.

Some of the findings of the evaluation study are found remarkable: Survey evidenced that the intended impacts of the project activities had been positive to a great extent. Some useful recommendations from the findings are: Use proper and good quality of construction materials (steel bar, cement, coarse and fine aggregates); Set up block beside the roads; restrict movement of heavy vehicles; take measures to protect the roadside plantations; improve drainage system in the growth centers/rural markets; ensure regular supervision and timely maintenance and repair of Roads/bridges/culverts; and ensure adequate budget allocations and also emergency allocations of budget for flood damaged structures. The findings of this impact evaluation are also presented in a workshop organized by the Evaluation Sector, IMED. Workshop has been attended by concerned professionals represented by the country's reputed agencies, project personnel both from the Ministry and the directorate levels and invited guests of different organizations.

I take the opportunity to congratulate M/S READ team for conducting the evaluation work and also concerned IMED professionals in making total efforts to complete the report in time. I also express my thanks to officials of LGRD and Co-operatives Ministry for their kind cooperation. Thanks are also due to all members of Technical and Steering Committee members especially to Secretary, IMED for providing us useful advice and guidance. I hope that the lesson learnt and recommendations that are made would contribute to improve the quality and effectiveness of the future project to be implemented by LGRD and Co-operatives.

(Syed Md. Haider Ali)  
Director General  
Evaluation Sector, IMED  
Ministry of Planning

## **Abbreviation**

<b>DHQ</b>	<b>District Head Quarter</b>
<b>FGD</b>	<b>Focus Group Discussions</b>
<b>FRB</b>	<b>Feeder Road Type-B</b>
<b>FSU</b>	<b>First Stage Sampling Unit</b>
<b>IMED</b>	<b>Implementation Monitoring and Evaluation Division</b>
<b>LCS</b>	<b>Labour Contracting Society</b>
<b>LGED</b>	<b>Local Government Engineering Department</b>
<b>NGO</b>	<b>Non-Government Organization</b>
<b>NHQ</b>	<b>National Head Quarter</b>
<b>PCR</b>	<b>Project Completion Report</b>
<b>PP</b>	<b>Project Proforma</b>
<b>RR</b>	<b>Rural Road</b>
<b>SPSS</b>	<b>Statistical Package for the Social Sciences</b>
<b>SSU</b>	<b>Second Stage Sampling Unit</b>
<b>TOR</b>	<b>Terms of Reference</b>

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## Executive Summary

**Background of the Project:** Due to undeveloped rural road transportation marketing facilities of greater Mymensingh region (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona district), the farmers were not eager to produce more agricultural product as they could not get fair price for their product. To address the situation of undeveloped rural road transportation and marketing facilities in the greater Mymensingh region, priorities were fixed to select schemes initiating implementation of constructing Upazila level (FRBs) roads and Rural roads with or without bridges and culverts, establishment of markets (growth centers) and plantation of trees on the roads to augment commercial and economic activities of the rural areas, particularly targeting the poor of the poorest.

### Project Brief

- **Sponsor:** Ministry of LGRD & Co-operatives/Local Government Division
- **Executing Agency:** Local Government Engineering Department (LGED)
- **Location of the Project:** 6 districts of greater Mymensingh (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona Districts)
- **Estimated cost (in Lakh Taka):**

	Gob (FE)	Project Aid (PA)	Total
Original:	21060.00	-----	21060.00
Latest Revised:	26355.66	-----	26355.66
- **Duration of the project:** 01.07. 2002 to 30 June 2009

### Objectives of the Project were to:

- Improve overall rural road transportation network and help agricultural development through construction of Upazila roads (feeder roads) including bridge/culverts as well as Union roads (rural roads) in greater Mymensingh region;
- Speed up the rural economy and increase the trading business through improvement of physical infrastructure Growth Center and important rural Hat/Bazars;
- Increase the productivity of the rural poor involved with the project work and help to reduce poverty through skill development programme;
- Make social forestry through plantation of trees for maintaining balance in environmental condition;
- Rehabilitation of 2004 flood damaged roads including bridges and culverts; and
- Rehabilitation of 2007 flood damaged roads including bridges and culverts and Growth Centre/village Hat-Bazar.

### Objectives of the Assignment

- To review the implementation status of the following major components of the project:
  - Construction status of feeder road type-B of Upazila and Union rural roads;
  - Construction status of bridge/culverts on FRB and Union rural road;
  - Status of Tree plantation on FRB and Union rural road;
  - Status of construction of growth centers/rural markets;
  - Status of 2004 and 2007 flood rehabilitated roads, bridges/culverts and growth centers; and
  - Operation and maintenance by local LGED offices.
- To assess the impact of the project activities on major expected areas as follows:
  - Agricultural productivity, trade/business, reduction in transport cost and time, productivity of rural poor through skill training, direct and indirect employment opportunities of the rural poor especially for the women through Labour Contracting Society (LCS), improvement in environment through social forestry etc.
  - Overall socio-economic betterment of the rural people of the project area.
- To identify the strengths and weaknesses of the project and suggest appropriate recommendation to overcome the weakness in future similar projects.

### Study Methodology: Method followed was through:

- On the spot physical verifications: Trained field investigators under supervision of Civil Engineers conducted the physical verifications and recorded findings in standardized check list (pre-designed and pre-tested); and
- Beneficiary level household sample surveys in the catchments (48 villages) of the infrastructures (FRB/RR with or without bridges/culverts) were conducted. Samples were taken from both the

treatment (project intervention: Unions and villages) areas and also Comparison/Control areas from the adjacent Upazilas/Unions and Villages having comparatively less or no infrastructures.

- In the absence of availability of baseline data; the questionnaires and all other data collection instruments (where applicable), inquired the status at both pre (2002 or prior) and post project (2009 and current) periods.

**Quantitative Household Sampling and sample size:** A stratified multi-stage sampling methodology was applied to select the survey units (i.e. household). From the 6 districts (Mymensing, Tangail, Jamalpur, Sherpur, Kishoreganj, Netrokona), upazilas, unions, and villages (where roads, bridges and culverts, tree plantations, growth center and rural market located), were selected as the first stage sampling unit (fsu), second stage unit (ssu) and third stage sampling unit respectively. Finally, required number of households was selected within each selected village. Sample size was determined scientifically: z statistic is 1.96, which corresponds to the 95% confidence level; d is the level of accuracy that is considered 3%; and design effect is 1.5. The households were selected with systematic random sampling procedure using an appropriate sampling interval. Districts are fixed but the numbers of Upazilas, Unions and Villages are allocated proportionate to the coverage of infrastructures completed. Sample households were the catchments of construction works. Clusters of sample households per village comprised 33 households. From each household, one adult earning male member was selected for interviews; while from every alternate household an adult female in addition to the male respondent, preferably the wife of the male member was interviewed. See table below for distribution samples:

District	Project Intervention sample areas				Comparison/Control sample areas			
	Upazilas	Unions	Villages	HHs	Upazilas	Unions	Villages	HHs
Mymensing	6	6	12	400	2	2	4	135
Tangail	7	7	14	465	2	2	4	135
Jamalpur	5	5	10	330	1	1	2	65
Sherpur	1	1	2	70	1	1	2	65
Kishoreganj	3	3	6	200	1	1	2	65
Netrokona	2	2	4	135	1	1	2	65
<b>Total</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>1600</b>	<b>8</b>	<b>8</b>	<b>16</b>	<b>530</b>

**Data Collection from field:** Data for the study were collected from January to February 2011. The data collection of the study was done through both quantitative and qualitative investigations which are given below.

Methods

Review of documents

Physical Observation

Household level Quantitative Data Collection

Intensive interviews with selected users of infrastructures: brief interviews were completed (additional)

Intensive interviews with the concerned project personnel and allied officials

Focus Group Discussions (FGDs): one per union

Local level Workshop

Catchments (Union) Profile (primarily development aspects)

Data collection

Reviewed PP, PCR and Evaluation reports  
Observation Checklists was completed for available infrastructures in the sample areas  
3200 (100%)

122 Intensive interviews were completed

188 (97%) out of 194 were completed

24 (100%) were completed

Conducted a local level workshop in Kalihati upazila, Tangail on 3 February 2011; and

32 (100%) on Catchments (Union) Profile data were collected

**Assessment Physical Targets Review of PCR and Allied Reports:** Implementation of the project could not be started in 2002, as there was a need for adjusting the backlog allocation, adjust the revised work programme, to complete the incomplete works and to implement the rehabilitation works of 2004 and 2007. At the end of June/2009 the overall physical progress of the project was 97.66% and financial targets achieved was 95%. The project provided better road communication in the rural areas through construction of roads and bridge/culverts on Upazila, Union & Village roads. Construction of roads created marketing facilities of agricultural products through development of rural markets. A few problems were encountered during implementation. Inadequate allocation hampered

project implementation at the beginning of the project. Moreover, devastating flood occurred in 2004 & 2007 and it hampered the implementation activities. As a result period of implementation was extended & the cost of the project was also increased.

**Findings of Physical Observations of Infrastructures:** The study team observed and physically verified construction of different types of infrastructures: Upazila FRB roads, Union Rural roads, Bridges/culverts on Upazila & Union rural roads (newly constructed and Flood damaged/rehabilitated); tree plantation on Upazila & Union roads; and growth centers/rural markets. The observations specifically verified the implementation status, and it also investigated the status of current repairs and maintenance and the level of use and its effectiveness.

### Summary findings of observed infrastructures

Infrastructures	Actual targets Reported: PCR	Sample of the study	Status observed	Types of Problems
Upazila roads	FRB <b>81.91 km: 92% achievement</b>	<b>39.55 km (48%) on 27 Upazila FRB roads</b>	<ul style="list-style-type: none"> <li>• <b>14 roads: 18.21 km (46%): No problem and fully operational.</b></li> <li>• <b>10 roads: 18.47 km (47%) operational but with some minor problems</b></li> <li>• <b>Rest 4 roads: 2.87 km (7%) operational but with major defects</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Minor problems: pot holes found and carpeting damaged in a few places.</b></li> <li>• <b>Major problems: serious damage of carpeting; settling down of pavement; removal of earth from the shoulder; and big pot holes in road surface.</b></li> <li>• <b>Roads are partly constructed: local people mentioned that kutchha part of the rural road become unusable during rainy season due to serious damage.</b></li> <li>• <b>No maintenance work done in most of the roads after construction</b></li> </ul>
Union roads (RR)	<b>400.91 km: 98% achievement</b>	<b>51.69 km (13%) on 37 Union roads</b>	<ul style="list-style-type: none"> <li>• <b>17 roads: 29.07 km. (56%) No problem and fully operational.</b></li> <li>• <b>13 roads: 13.44 km (26%) operational but with some minor problems</b></li> <li>• <b>7 roads: 9.17 km (18%) operational but with major defects</b></li> </ul>	
Flood Rehabilitated Roads (2004 & 2007)	<b>347.35 km: 95% achievement</b>	<b>35.561 km on 12 roads</b>	<ul style="list-style-type: none"> <li>• <b>2 roads: 8.561 km (24%) No problem and fully operational.</b></li> <li>• <b>16 roads: 24.8 km (70%) operational but with some minor problems</b></li> <li>• <b>Rest 1 road: 2.20 km (6%) operational but with major defects</b></li> </ul>	
Bridge/culverts on Upazila Road	FRB <b>1807.31 m: 95% achievement</b>	<b>42 m bridge on 2 FRB roads (5%)</b>	<ul style="list-style-type: none"> <li>• <b>Both bridges found operational and connected with pucca road on both side</b></li> <li>• <b>All the component of the bridge/culvert i.e. pier, abutments, girders, cross beam, top slab, railing, retaining and wing</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Approach road of 30 m bridge on Tangail-Dhalpara road was totally damaged due to erosion of earth and shrinkage down ward which created sharp vertical slope; and</b></li> <li>• <b>Approach road of 12 m bridge on Islampur-Jhagrarchar road found partly damaged.</b></li> </ul>

wall are in good condition

Infrastructures	Actual targets Reported: PCR	Sample of the study	Status observed	Types of Problems
Bridge/culverts on Union Rural Roads	4153.54 m: 98% achievement	62.6 m bridge on 3 Union/Rural roads (5%)	<ul style="list-style-type: none"> <li>Both bridge/culverts found operational</li> <li>All the component of the bridge/culverts i.e. pier, abutments, girders, top slab, railing, retaining and wing wall are in good condition</li> </ul>	<ul style="list-style-type: none"> <li>Condition of approach roads of 1 culvert is good and</li> <li>Another one is not in good condition – both side slopes are not smooth, both side approach road are partly damaged and in few places, pot holes have been formed which creating problems to smooth movement of vehicles</li> </ul>
Flood rehabilitated bridges/ culverts	117.00 m: 100% achievement	88 m bridge (75%) on 2 roads	<ul style="list-style-type: none"> <li>Both of the bridges found operational</li> <li>All the component of the bridge and culvert i.e. pier, abutments, girders, cross beam, top slab, railing, retaining and wing wall are in good condition</li> <li>Approach roads of the both observed bridges are found good</li> </ul>	<ul style="list-style-type: none"> <li>No problem</li> </ul>
Tree plantation on FRB and Union Rural roads	338.53 km: 96% achievement	38.4 km (11%) tree plantation on 9 roads	<ul style="list-style-type: none"> <li>On observed tree plantation on 9 roads, out of a target of 35,745 nos. of trees, 34345 nos. (96%) were planted.</li> </ul>	<ul style="list-style-type: none"> <li>As per observation on an average 36% road side trees were surviving</li> <li>No trees were replanted in place of dead trees.</li> </ul>
Growth Centers/Rural Markets	14 growth centers/rural markets: 100% achievement	12 growth centers/rural markets (86%)	<p>Growth Centers</p> <ul style="list-style-type: none"> <li>1 no. is operating with no problem</li> <li>3 nos. are operating with some problems</li> <li>Use of Growth Centers and its benefits: Additional increase in terms of gross income from the market annually is 231% during post implementation period over the previous period;</li> <li>Frequencies of commencement of market in terms of number of days in a week increased by 5 days or 250%;</li> </ul>	<ul style="list-style-type: none"> <li>Water logging due to heavy rainfall and flood; Lack of cleanliness of the market area; Main road connecting growth center is not developed is not metalled (pucca road); No drainage system; No office room; Tube well stolen; and No latrine or Latrine is out of order.</li> </ul>

- Average number of persons visiting the market increased additionally by 67%; and Saleable items from the market increased.

Infrastructures	Actual targets Reported: PCR	Sample of the study	Status observed	Types of Problems
Growth Centers/Rural Markets			<p>Rural markets:</p> <ul style="list-style-type: none"> <li>• 3 nos. are operating with good condition</li> <li>• 5 nos. are now operating with problems</li> <li>• Use of Rural Markets and its benefits:</li> <li>✓ Additional increase in terms of gross income from the market annually is 246% during post implementation period over the previous period;</li> <li>✓ Market days commenced improved from 104 at pre project period to 360 days during post project period and an additional improvement of 246%;</li> <li>✓ Average number of persons visiting the market increased additionally by 590%; and</li> <li>✓ Sellable items from the market increased.</li> </ul> <p>The obvious impact of such an increase in the volume of trade and commerce due to operational of a rural market would be on increase of wage earnings and employment, particularly for the poor.</p>	<ul style="list-style-type: none"> <li>• Inadequate drainage system;</li> <li>• Problem of drinking water;</li> <li>• Lack of cleanliness of the market area;</li> <li>• Drainage Problem/ No drainage system;</li> <li>• Main road connecting bazaar road is kaccha;</li> <li>• Tubewell is out of order;</li> <li>• Water logging due to heavy rain fall as the drainage work not adequate;</li> <li>• Inside road condition of the market is not good;</li> <li>• Somewhere plaster of floor of sheds are damaged;</li> <li>• Large portion of bazaar area were destroyed for river erosion (Shaikh para BNP bazaar development, Dewanganj, Jamalpur)</li> </ul>

Observations of the infrastructures through physical verifications prove that the assigned tasks of various construction works was carried out at almost hundred percent level, but subsequently, the performances on the repair and maintenance works of the infrastructures are not as good. In the overall analyses, it may be surmised that about a quarter of the infrastructures are now facing problems and during rainy season, communications are becoming certainly more difficult. And lastly, the findings on the survival of the trees on the road side are very poor. The growth centers and the rural markets have certainly accelerated trade and commerce in the rural areas by manifold, but it is

also true that some of the centers are devoid of some essential amenities like tube wells, toilets, connecting roads and cleanliness.

**Findings of Intensive Interviews with Users:** Users opined that Improved road communication exposed rural farm communities to: **Enhanced** Utilization of modern fertilizer/pesticide--10%; **Frequent** use of modern technology of crop production--9%; **Extended participation** to crop diversification--3%; Greater levels of agri products to markets--11%; Higher levels of earning due to fair price of agri products--57%; and Increased productivity of farm laborers due to raise in their wages--10%. Users estimated that on average travel time per destination has been reduced to half (31 minutes on average) now compared to the past (68 minutes on average), while the cost for travel per destination has increased by about 33%. Since travel time has been reduced to half, the estimated cost for carrying goods must have reduced substantially, because the users would currently transport same quantity of goods at half the time compared to the past. Users opined that increased agricultural production and improved marketing of agri products created opportunities and scope for increased income for the farm families; and the users unanimously (100%) affirmed that income of the families has been raised.

**Assessment by Key Informants (Project Engineers) and Local Stakeholders:** Of the available Engineers at Upazila level, 71% claimed that they were involved in the implementation of the project. From among the local government officials, elected or allied GOB officials, only 15% claimed that they were somewhat involved in the project. Engineers most of the times (75%) supervised construction, but rarely checked (only 25% of the times) the quality of work. Problems faced in implementing the project were: land acquisitions, Contractors avoiding to complete work as per specifications and some incidences of external factors (irregular pressures or demands) also cause delays and problems in completing the targets in time. More than three fourths of Engineers (77%) claimed that local women participated in the project work: as a labor: on soil digging, brick crushing, filling sand, cooking, RCC construction--100%; Carpeting--12%; and Tree plantation and nursing--8%. There was no provision for training or orientation of the Engineers. However, it is felt that in future orientation of the Engineers on social mobilization, gender participation and tree plantation can be planned. allied local officials (From Agriculture, Fisheries, Education, UNO Office and Elected Officials of Upazila and Union Parishad and NGOs) mentioned about the problems of water logging (13%); Erosion of road side mud/soil in the absence of adequate tree plantations (28%); and about a quarter of the respondents also mentioned that felling of trees by local influential as a problem (23%).

**Strengths of the Project:** Local stakeholders identified increased income opportunities and improved rural economy as the major gains achieved due to the project, while the engineers identified development of road communication as the major achievement. Enhanced opportunities of Marketing of Agricultural products have been perceived as a benefit almost in comparable proportion by the LG engineers (46%) and the local Stakeholders (33%). More than one third of the Local stake holders (38%) identified improvements in the access to educational and health services, but very meager proportion (7%) LG Engineers identified it.

**Weaknesses of the Project:** Majority of the key informants (55%) mentioned about the following problems:

- **Problems of Road Construction (12%):** **Narrow or** Less wide road and Not capable for running heavy vehicle (Problem of moving heavy vehicles); Road side damaged because of absence of culverts; Roads not constructed properly; Part of the total length of road constructed and part still remains mud constructed;
- **Problems of Repair and Maintenance (32%):** Lack of maintenance; Carpeting of road damaged; and Lack of monitoring/supervision
- **Inadequate Tree Plantation (2%)**
- **Other local Problems (5%):** **Roads are dug and** Water flows through drains created on the road; Absence of Community contact; Speed breakers; Roads filled up local water sources; and local people were not involved in the construction work sufficiently
- **Other Institutional Problems of LG (27%):** Inadequate funds allocated for the project; lack of training and orientation of project personnel; Long term planning was not feature while designing Roads (in terms of length, width and also selecting the sites)

**FGD Findings:** More than two thirds of the participants (71%) could specify 'construction of road' as one of the components of the project infrastructures; only about one sixth (17%) could identify 'construction and operations of the Growth Centers' as another component, while only about a tenth

(12%) could separately identify 'Bridges and Culverts', but 'tree plantations' as a component was identified even by less than one tenth of the participants. Findings suggest that LGED projects uphold the image of predominantly construction of roads, while other components particularly, 'Growth Centers' and 'Tree Plantation' was very meagerly known by the community. Participants although opined that the roads are in operating conditions but these are currently beset with the following problems: Road side slightly broken in few places; In some places road carpeting is damaged and pot holes have been formed, which are creating difficulties to move and not possible to move after rain; Part of the road is kaccha which are creating problems of movements; Road is narrow creating problem to movements of all kinds of vehicles; and Bending trees on the roads sometimes cause accidents. All the bridges are now in operational conditions and are assessed to be good, except in 2 places where approach road are partly damaged and pot holes exist on the approach roads, which need immediate repairs.

**Growth centers/rural markets:** All the participants expressed that growth centers/rural markets are now operating, but have some problems except one area: No drainage system; Lack of tube well for drinking water/ tube well is out of order; Lack of cleanliness; Water logging due to heavy rain fall as the drainage work not adequate; Inner road of the market are kaccha and pot wholes have been created in some places; and Somewhere plaster of floor of sheds are damaged. All participants mentioned that there is no female shopkeeper in growth centers/rural markets, but female customers are available and numbers of female customers are increasing gradually.

**Tree plantation:** In two places FGD participants stated that road side tree plantation was done by the LGED under this project; in one place, trees have been cut down by the Forest department, now no trees are there; and in another place present condition of the trees are good and maintenance of the road side plantations are regularly done by the poor women.

**Findings of Local Level Workshop:** The participants opined that most of the roads are damaged because of frequent movements of heavy vehicles. But no repair work was undertaken since construction. In many instances, only a part of the total length of a road was completed resulting to difficulties of communication and consequently people suffered. In many rural roads, there are often movements of heavy vehicles, while the rural roads are too narrow for such transports.

**Benefits accrued as assessed by the participants are as follows:** Improved communication through construction of roads eased the traveling of school/college going male and female students and indirectly such opportunity enhanced future prospects of increased rates of education of the locality; Good road transportation and improved marketing of agricultural products resulted to earning of fair price and profits for the farm producers; Improved communication network created additional job opportunities for the poor, such as increased involvement of local people as transportation laborers (van drivers) and as factory laborers.

Improved communication system contributed to accelerated production and marketing of fish, horticulture (vegetables and fruits), poultry and diary products (cattle raising); Poor women of the locality achieved opportunities to produce and market vegetables and thereby gained additional income; Improved communication reduced both travel time and cost of marketing of farm products; above all, access to good communication impacted on raising of costs of land in the area and in some instances, land value rose by five times.

Selection of sites or areas of construction of roads was often interfered due to political influences. And in some instances, roads were constructed comparatively in areas of lesser priority. In many cases roads were incomplete in the sense that it did not cover the expected distance. Moreover almost all the roads are unfit for movements of heavy vehicles.

**Findings and Discussions of Quantitative Household Survey of Beneficiaries:** Household level beneficiary survey showed comparability of samples in terms of age, income, education, family size and parity between the Intervention and the Control areas.

**Status of Roads:** Three fourths of the beneficiaries in the Intervention areas (75%) claimed that their areas are covered by LGED constructed Rural Roads at the Union Level, while 29% claimed that they have FRB (Upazila connected) roads in their areas. In the Control areas, only 22% claimed that they use Pucca Road (metal road) in their areas, while the rest are either un-metalled or Kaccha Road. Analyses of findings clearly underscore that the use of motorized vehicles in the Intervention areas compared to those in the Control areas have increased at much higher rates as per perceptions of the

beneficiary samples during the post project period. As for example, in the Control areas only 5% of the beneficiaries mentioned about plying of trucks, while in the Intervention areas it is 59% and again in the control areas only 1% mentioned about plying of buses, while in the Intervention areas, it is 20%.

**Assessment of Agriculture Productions:** Findings from difference-in-differences estimation indicate that significant increase in productions of crops during post project period both in the Intervention and in the Control areas in respect of all the four crops ( $P < 0.001$ ). However, statistical analysis shows that in the Intervention areas, production of all types crops increased more significantly ( $p < 0.01$ ) than in the control areas except fruits production.

In respect of yielding multiple crop production of crops comparatively show that the situation has improved both in the Intervention and in the Control almost equally with slight edge in favor of the Interventions areas. Findings show that in respect of all the six factors which caused acceleration of agricultural productions during post project period were comparatively more favorable in the Intervention areas than in the control areas. Particularly in respect of availability of quality seeds due to improved communications, the intervention areas have an edge over the control areas additionally by 15%; and also in respect of marketing of agricultural products, it is 20%. Fifteen percent more respondents in the Intervention areas over the Control areas claimed to have gained earning fair price for agricultural products.

**Perceptions of Socio Economic Benefits:** In the intervention areas at pre project period, more than a third (39%) of the respondents mentioned that travel to important places was not at all easy or not possible, while during post project period, a tenth (10%) perceived traveling as not easy or difficult. On the contrary, in the Control areas at pre project period, more than half (51%) of the respondents mentioned that travel to important places was not at all easy or not possible, while during the post project period, about a sixth (15%) perceived traveling as not easy or difficult.

**Time and cost of transportation:** As regards reduction of transportation costs, more than one third of the respondents (35%) in the Intervention areas and only about one sixth (15%) in the Control areas perceived that the costs of transportation decreased currently compared to periods prior to commencement of the Project. In the Intervention areas average time has been reduced by 33 minutes and in the Control areas average time reduced by 21 minutes.

**Impact of Monthly Family Income:** To assess the impact of Intervention on average monthly family income statistical significance test (Pair sample test) was conducted. The analysis shows that overall average monthly family income increased by Tk. 4690 and Tk. 3265 in the Intervention and Control areas respectively. Pair sample test (Pre-post) shows that average monthly family income in Intervention areas increased significantly after the implementation of project ( $d = 35.2$ ;  $p < .01$ ). It is also found that in the Control area, the monthly family income also increased significantly ( $d = 23.4$ ;  $p < .01$ ). But the value of d-statistic for the difference in differences estimator indicates that intervention area is more highly significant than control area in terms of increasing average monthly income. The results show that percentage income increased in the intervention area is higher (43%) than control area (35%). The P-value shows that there are significant differences in increasing monthly family income between two areas (control and intervention).

**Impact of Monthly Family Expenditures:** To assess the impact of Intervention on average monthly family expenditure statistical significance test (Pair sample test) was conducted. The analysis shows that overall average monthly family expenditure increased by Tk. 2662 and Tk. 2465 in the Intervention and Control areas respectively. Pair sample test (Pre-post) shows that average monthly family expenditure in the Intervention areas increased significantly after the implementation of project ( $d = 51.18$ ;  $p < .01$ ). It is also found that in the Control area, the average monthly family expenditure increased significantly ( $d = 22.9$ ;  $p < .01$ ). But the value of d-statistic for the difference in differences estimator indicates that Intervention area value is more highly significant than control area in terms of increasing average monthly family expenditure. The P-value shows that there are significant differences in increasing monthly family expenditure between two areas (control and intervention).

**School Enrollment:** Findings show that overall enrollment has significantly improved in the intervention area with greater levels of increased enrollment of the girls in schools during the post project period ( $p < .01$ )—findings reflect positive impact of communication development.

**Benefits Accrued on Improved Communication (Females only):** For the females opportunities to visit markets (bazaars), schools/colleges, health centers increased both in the Intervention and in the Control areas, but it increased much more accelerated way in the former areas (intervention) than in the latter (Control). Scope for increased earning opportunities for the women increased both in the Intervention and in the Control areas almost comparably with slight edge in case of the Intervention areas. Interestingly, more than a quarter of the females in the Intervention areas (29%) compared to only one tenth in the Control areas (10%) claimed that their mobility beyond their locality enhanced.

**Strengths of the Project:** In the control areas more than a quarter of the respondents (28%: males and females combined) perceived that the area did not gain any additional benefits during the period lapsed between 2002 to 2009 when project was implemented in the interventions areas, whereas in the Intervention areas, 100% of the respondents observed that some benefits were gained during the period.

Respondents in the Intervention areas overwhelmingly (91%) acclaimed that they had been benefited with improved road communications, while little less than two thirds (64%) in the Control areas held same views. Specific benefits accrued due to improved Communications comparatively are:

	Intervention %	Control %
• Increased performances of trade/commerce/cottage industries	77	60
• Increased agricultural production/improved crop productions	71	56
• Decreased damages of crops	46	34
• Increased price/value of agri products	36	41
• Increased job opportunities: overall and local labor/transport sector	95	36
• Increase opportunity of education	93	54
• Growth NGO/voluntary associations particularly health care	34	23
• Positive impact on environment: Reduced water logging/flooding/ Benefits accrued due to tree plantations: road embankments are being safe; environmental balance; demands for trees (fruits and fire woods) met	58	0
• Increased Opportunities for Women: mobility, earning scope and visits to schools, health centers, markets and places beyond locality	99	45

**Weaknesses/problems encountered:** due to Project Interventions in the Intervention areas only: in post 2009 over the period falling prior to 2002. About a fifth of the respondents (18%) did not perceive of any problem due to improvements of road communications in their areas. Weaknesses of Project Identified in Intervention areas are:

- Environmental balance affected due to mobility of transports: air/sound pollution -- 83%
- Trade and commerce caused quarrels/violence/crimes in the markets -- 18%
- Created water logging/flooding -- 8%
- Increasing Road accidents -- 8%

### Summary (Overall) Recommendations

#### ➤ Roads/Culverts/Bridges

- Improve Construction Qualities ensuring following specific tasks:
  - ✓ Use proper and good quality of construction materials; make provisions (in the tender document) for sample testing of construction materials (steel bar, cement, coarse and fine aggregates) from recognized laboratory prior to use;
- Set up block beside the roads;
- Restrict movement of heavy vehicle;
- Widen Road to accommodate vehicles of different size and load carrying capacities;
- Raise the height of the roads in selected flood prone areas;
- Ensure approach road on bridge and culvert are filled with earth, which should be properly compacted; during filling of earth compaction should be done 200 mm layer by suitable road roller and before carpeting the sub base should be well compacted (In some cases the height of filling exceed 1.5 to 2 meter in default);

- Ensure regular supervision and timely maintenance and repair of Roads/bridges/culverts and involve local Government (Engage Kabikha Project)
- Community may be mobilized and trained to control traffic, particularly to restrain movements of heavy vehicles in their respective localities;
- Develop quality full roads: avoid completion of part of the roads; involve Local Community/UP to finalize road sites and size take measures to reduce political pressures;
- Ensure timely financial support and ensure adequate budget allocations and also emergency allocations of budget for flood damaged structures; and
- Ensure regular supervision and strong monitoring by the responsible officer and workers and Zero tolerance mentality should be developed of Project Director and other officers for regular field visit and quality control check.

It is an imperative that LGED in future emphasizes on quality of construction of all kinds of infrastructures more than on numbers or quantity. In response to request for drawing an overall master plan for rural infrastructures, the Chief Engineer, LGED assured that such plan is available with them, but the problem arises when political pressures and influences of the powerful cause deviations from their plans. In future for better management of road use by transports by various types and categories of vehicles the local level authorities may be oriented to introduce different road signs for different categories roads—rural or upazila roads.

➤ **Growth centers/rural markets**

- Market should be large: community demands extending of markets; community may be motivated to donate more land;
- Proper maintenance needed;
- Drainage system needed and Drainage system should be developed in growth centers/rural market; and
- Ensure management and maintenance of growth centers by Bazaar committee;
- Tube wells and toilets are essential in the markets.

For efficient marketing of agricultural products, the need is to create extended provisions of storage, packaging and networking between sellers and buyers. In some markets to rationalize further use of farm lands, plans, if suitable, could be designed for vertical rise of infrastructures instead of extending markets (flatly) on useful fertile farm lands.

➤ **Tree plantation**

- Prior to tree plantations, community need to be oriented by LGED about their responsibilities on maintenance and protection;
- Both IMED and LGED need to communicate with Forest Department asking them to take measures against felling down of trees; and
- LGED to mobilize local women, particularly from among the poor to take care of the trees and provide budget allocations to compensate the labour to be given by the community in this regard.

**Conclusion:** Study findings clearly evidence the following that:

- LGED has completed all the types construction works almost as per scheduled targets at 97% level: newly constructed FRBs, RRs, Reconstruction of Flood damaged roads; Construction of bridges and culverts and reconstruction of bridges and culverts; construction of Growth Centers and Rural markets and tree plantations;
- Local communities are now enjoying the benefits of improved communication systems and the benefits accrued are certainly comparatively more than those achieved in the control areas (as estimated in this impact evaluation survey) and the major benefits are increased marketing of agricultural products, gaining fair price for the same; better communication to schools and health centers etc.;
- In many respects, the project outcome has shown that the LGED interventions are effective in encouraging women, particularly poor women's participation to road and allied socio economic development endeavors;
- But the problems are that the infrastructures are showing both major and minor wear and tear in many places without actions resulting to prompt and timely repairs; for which probably both failure of a sound supervisory and monitoring system and also inadequate financial allocations could be held responsible;

- Local communities complained about site selections and interference by the political elites in this regard; this caused partial completion of roads leaving often a vital section as incomplete (as kaccha/mud road);
- The local communities including the local government are not involved in many stages of the project interventions (construction and maintenance works); and lastly
- LGED programs, as evidenced from this survey, missed the opportunities of launching extensive orientations, both of the project personnel (particularly engineers) and the local stakeholders in raising their awareness about the physical, social and economic benefits across gender and socio economic status (poor and non poor) of the impact of good roads, rural markets/growth centers and tree plantations.

Improved Communication system accelerates mobility and trade and commerce, which in turn impacts positively on the socio economic life of the people. In the current study, data underscored the same assumption to be true more in the project intervention area during post project period than in the Control area due to differential improvement in the communication system. In the intervention areas, average monthly family income increased and more significantly, the average monthly expenditures on components like health education and energy consumptions increased at much higher rates than in the control areas evidencing achievements of improved of quality of life in the intervention area.

# Chapter – I

## Background Information

### Background of the Project

Due to undeveloped rural road transportation marketing facilities of greater Mymensingh region (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona district), the farmers were not eager to produce more agricultural product as they could not get fair price for their product. According to population census of 2001 the population of greater Mymensingh region is about 14.08 million with a total household of about 3,603,442. The principal crops of this region are rice, jute, oilseed, wheat, sugarcane and vegetables. Cattle are the main among domestic animals. To address the situation of undeveloped rural road transportation and marketing facilities in the greater Mymensingh region, priorities were fixed to select schemes initiating implementation of constructing Upazila level (FRBs) roads and Rural roads with or without bridges and culverts, establishment of markets (growth centers) and plantation of trees on the roads to augment commercial and economic activities of the rural areas, particularly targeting the poor of the poorest.

In greater Mymensingh region, the Upazila roads (FRB roads) and Union road (R-1) having a length of 81500.00 km of which 1236.00 km were upgraded and the remaining 6914.00 km were not yet been taken up for development. The total length of bridge/culvert on the above Upazila roads (feeder roads) was about 29310 m, of which 11856.00 m were constructed and the remaining 17454 m are yet to be constructed. A total number of growth centers and rural markets are 725 of which only 145 nos were developed and the remaining 580 nos were yet to be developed. With the above background to fulfill the local need for improved road communication, better marketing facilities, increasing agricultural product, generating employment opportunities increasing socio-economic condition of the vast majority of rural poor, this project was taken up for implementation.

### Project Brief

- **Sponsoring Ministry/ Division:** Ministry of LGRD & Co-operatives/Local Government Division
- **Executing Agency:** Local Government Engineering Department (LGED)
- **Location of the Project:** 6 districts of greater Mymensingh (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona Districts)
- **Estimated cost (in Lakh Taka):**

	Gob (FE)	Project Aid (PA)	Total
Original:	21060.00	-----	21060.00
Latest Revised:	26355.66	-----	26355.66
- **Duration of the project:** 01.07. 2002 to 30 June 2009

### Objectives of the Project were to:

- a. Improve overall rural road transportation network and help agricultural development through construction of Upazila roads (feeder roads) including bridge/culverts as well as Union roads (rural roads) in greater Mymensingh region;
- b. Speed up the rural economy and increase the trading business through improvement of physical infrastructure Growth Center and important rural Hat/Bazaars;

- c. Increase the productivity of the rural poor involved with the project work and help to reduce poverty through skill development programme;
- d. Make social forestry through plantation of trees for maintaining balance in environmental condition;
- e. Rehabilitation of 2004 flood damaged roads including bridges and culverts; and
- f. Rehabilitation of 2007 flood damaged roads including bridges and culverts and Growth Centre/village Hat-Bazaar.

**Objectives of the Assignment**

- (i) To review the implementation status of the following major components of the project:
  - Construction status of feeder road type-B of Upazila and Union rural roads;
  - Construction status of bridge/culverts on FRB and Union rural road;
  - Status of Tree plantation on FRB and Union rural road;
  - Status of construction of growth centers/rural markets;
  - Status of 2004 and 2007 flood rehabilitated roads, bridges/culverts and growth centers; and
  - Operation and maintenance by local LGED offices.
- (ii) To assess the impact of the project activities on major expected areas as follows:
  - Agricultural productivity, trade/business, reduction in transport cost and time, productivity of rural poor through skill training, direct and indirect employment opportunities of the rural poor especially for the women through Labour Contracting Society (LCS), improvement in environment through social forestry etc.
  - Overall socio-economic betterment of the rural people of the project area.
- (iii) To identify the strengths and weaknesses of the project and suggest appropriate recommendation to overcome the weakness in future similar projects.

**Scope of services:**

Prepare study design and plan field works considering the following components of the project. Sampling has been made on the basis of coverage of work in 6 districts below:

Coverage of the work	Area Coverage
<ul style="list-style-type: none"> <li>➤ 295.00 km of FRB + 450.00 km of union roads constructed</li> <li>➤ 400.00 m on FRB roads + 600.00 m of union roads where bridge/culverts</li> <li>➤ Tree plantation on 750 km of FRB and Union roads</li> <li>➤ Development of 150 growth center/markets</li> <li>➤ Flood rehabilitation on 297 km of roads and 775 m of bridges/culverts.</li> </ul>	6 districts of greater Mymensingh region (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona Districts)

## Chapter – II

### Study Methodology and Data Collection

Objectives of the current evaluation are to assess the infrastructures and components to augment rural economy and agricultural production. Study design includes sample spots (Unions/Villages) both as Intervention/Treatment and the Control/Comparison areas. The former (Intervention areas) refers to unions and villages included in the project and where Roads with or without bridges/culverts connecting FRBs/RRs constructed/reconstructed; and the latter (Comparison areas) refers to unions and villages with either no roads (FRBs/RRs) or are at a lower proportions/intensity. In addition, in the absence of availability of baseline data; the questionnaires and all other data collection instruments (where applicable), inquired the status at both pre (2002 or prior) and post project (2009 and current) periods by integrating questions for the purpose. Questionnaires were framed retroactively to obtain data from the pre project period. This arrangement ensured measurement of the net effects of the project or changes occurring due to project structures/components implemented.

#### **A. Methods of assessments of Sample of structures (FRB and RR with bridges/culverts): quality and coverage of target numbers**

Method followed was through on the spot physical verifications: Trained field investigators under supervision of Civil Engineers conducted the physical verifications and recorded findings in standardized check list (pre-designed and pre-tested).

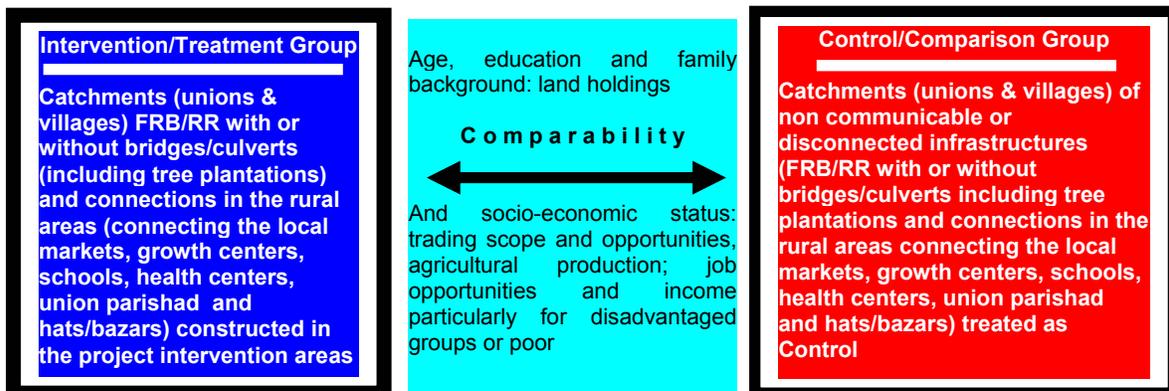
#### **B. Assessment of the impact of the project interventions on acceleration of agricultural production and income generation**

Beneficiary level sample survey in the catchments (48 villages) of the infrastructures (FRB/RR with or without bridges/culverts) selected for physical verifications. The targets were included randomly selected sample households (33 per village) and from each household, both males (preferably head of the household and a married adult female (currently or ever) were interviewed using structured and standardized questionnaire for interpersonal interviews. The samples were taken from both the treatment (project intervention: Unions and villages) areas and also Comparison/Control areas from the adjacent Upazilas/Unions and Villages having comparatively less or no infrastructures.

A conceptual framework of the comparison (Posttest--only Control Group Design) is as follows (Ref-5):

$$\frac{X - O}{O}$$

X = Interventions: Catchments (Unions & Villages) with communicable rural roads with or without bridges and culverts constructed/reconstructed by the project; and O = Control: Catchments (Unions & Villages) without bridges or culverts, i.e., non communicable or disconnected infrastructures (treated as Control):



## Sample Design and Technique including Sample Size & Distribution

Sampling was done for both quantitative household level and also for qualitative in depth investigations. The former is for beneficiary level assessment of benefits accrued due to project interventions and the latter is to assess the status of completion and operations of the physical structures and also elicit opinions and perceptions of influential and those of the project personnel.

### For Quantitative Household Sampling and sample size

Matching the objectives of the study, sample size for the quantitative (beneficiary sample) part of the study was determined delineating precision level and level of significance. The purpose of the study was to evaluate the project impacts on the beneficiaries. The design covered the changes occurred due to implementation of construction works (Infrastructures/Components) of the major interventions and outcome of the project: communication network (Roads: FRBs/RRs and Bridges and Culverts), growth centers/rural markets, tree plantations and overall socio-economic development for improved standard of living of the beneficiaries.

A stratified multi-stage sampling methodology was applied to select the survey units (i.e. household). From the 6 districts (Mymensing, Tangail, Jamalpur, Sherpur, Kishoreganj, Netrokona), Upazilas, unions, and villages (where roads, bridges and culverts, tree plantations, growth center and rural market located), were selected as the first stage sampling unit (fsu), second stage unit (ssu) and third stage sampling unit respectively. Finally, required number of households was selected within each selected village. Sample size was determined scientifically. The households were selected with systematic random sampling procedure using an appropriate sampling interval. Districts are fixed but the numbers of Upazilas, Unions and Villages are allocated proportionate to the coverage of infrastructures completed (See Table-2). Sample households were the catchments of construction works. Clusters of sample households per village comprised 33 households.

### Sample size

Sample size of beneficiaries (farmer household) from each district

$$n = [z^2 p(1-p)/d^2] \times \text{Design effect}$$

Where n= the desired sample size

Z= the standard normal deviate, usually set at 1.96 at 95% confidence level;

The target proportion is p to have a particular characteristic. If there is no reasonable estimate of p, then consider p= 50% (p=0.50)

**The degree accuracy or precision level is d. The higher value of d will yield lower sample size and smaller value of d will yield higher sample size.**

Suppose 50% of the households (beneficiaries) have increased income or wages and improved their socioeconomic status and standard of living;

z statistic is 1.96, which corresponds to the 95% confidence level.

d is the level of accuracy that is considered 3%.

And design effect is 1.5.

The sample size is n= 1601; approximately 1600 households from 6 districts for Intervention area samples; while the Control area samples comprised one-third of the samples for the Intervention areas.

As targeted 33 households per village, a total of  $1600/33 = 48$  villages were selected from the Intervention areas. Two villages were selected per Union so that total number of Unions were  $48/2 = 24$  unions. Moreover one union was selected per Upazila, hence the total number of Upazilas and Unions are equal (24 each).

As for estimating the respondents per sample household, it was proposed that the head of the household being also the earning member would be selected and the person would be obviously mostly males. Hence from each household, one adult earning male member was selected for interviews; while from every alternate household an adult female in addition to the male respondent, preferably the wife of the male member was interviewed. Without interviewing a female member of a household, it would be difficult to assess the socio economic outcome, as females are the better sources of data (more valid and reliable) on household level information, particularly on health and education and also on household expenditures. Besides, the PP specifies project interventions to accelerate income earning status of the poor and the disadvantaged women. The household level beneficiaries comprised both male and female respondents.

Table 1 below shows the distribution of the infrastructures completed by districts and number of Upazilas covered.

**Table 1: Distribution of Upazilas by total number of infrastructures completed by project**

District	Upazilas covered by project	Infrastructures completed by project	
		Number	%
Mymensing	12	187	25
Tangail	11	219	28
Jamalpur	7	139	19
Sherpur	5	25	4
Kishoreganj	10	98	14
Netrokona	10	71	10
<b>Total</b>	<b>55</b>	<b>739</b>	<b>100</b>

Applying the proportions of coverage of the project infrastructures completed per district, the number of Upzilas, Unions and Villages were determined.

**Table 2: Distribution of sample size by districts, Upazilas, unions and villages for both Intervention and Control Areas**

District	Project Intervention sample areas				Comparison/Control sample areas				Total sample areas			
	Upazilas	Unions	Villages	Hhs	Upazilas	Unions	Villages	Hhs	Upazilas	Union	Village	Hhs
Mymensing	6	6	12	400	2	2	4	135	8	8	16	535
Tangail	7	7	14	465	2	2	4	135	9	9	18	600
Jamalpur	5	5	10	330	1	1	2	65	6	6	12	395
Sherpur	1	1	2	70	1	1	2	65	2	2	4	135
Kishoreganj	3	3	6	200	1	1	2	65	4	4	8	265
Netrokona	2	2	4	135	1	1	2	65	3	3	6	200
<b>Total</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>1600</b>	<b>8</b>	<b>8</b>	<b>16</b>	<b>530</b>	<b>32</b>	<b>32</b>	<b>64</b>	<b>2130</b>

Table 3 shows the distribution of the respondents by districts, Upazilas, unions and villages for both Intervention and Control Areas.

**Table 3: Distribution of the Households and Respondents for both Intervention and Control Areas.**

District	Intervention area Respondents			Control areas Respondents			Total Respondents			
	HHs	Respondents		HHs per district	Respondents		HHs	Respondents		
		Male	Female		Male	Female		Male	Female	Total
Mymensingh	400	400	200	135	135	67	535	535	267	802
Tangail	465	465	232	135	135	67	600	600	299	899
Jamalpur	330	330	165	65	65	33	395	395	198	593
Sherpur	70	70	35	65	65	33	135	135	68	203
Kishoreganj	200	200	100	65	65	33	265	265	133	398
Netrokona	135	135	68	65	65	32	200	200	100	300
<b>Total</b>	1600	1600	800	530	530	265	2130	2130	1065	3195

### Selection of Upazila Samples

Fulfilling the conditions of the ToR, area sampling was applied covering Districts and Upazilas. The Upazilas (samples) were selected by the levels of coverage of completed infrastructures. For intervention area, those Upazilas with increased (high) intensity of coverage of completed infrastructures were selected randomly, while for Control area, those Upazilas with low intensity or nil coverage of completed infrastructures were selected randomly. The cutoff points for selection of Upazilas were the mean scores on infrastructures completed, which was estimated below:

- The total number of Upazilas covered is 55 and the total number of Infrastructures completed is 739 (See Table 1); and
- Hence the mean number of infrastructures completed per Upazila is 13 (however in cases of 2 Upazilas, exceptions to mean score was made, as components completed in these 2 Upazilas was less than average score).

Table 4 next page shows the distribution of Upazilas by high and low intensity of infrastructures completed by districts.

**Table 4: Distribution of Upazilas by high and low intensity of infrastructures completed by districts**

Districts	For Universe		For samples	
	High intensity Upazilas: Scores above or equal to 13	Low intensity Upazilas: Scores below 13	High intensity Upazilas: Scores above or equal to 13	Low intensity Upazilas: Scores below 13
Mymensing	Muktagacha (20); Isawrganj (20); Bhaluka (16); Fulbaria (22); Trisal (19); Nandail (32); Sadar (13)	Haluaghat (10); Gafargaon (12); Gouripur (7); Fulpur (10); Dhobaura (6)	Muktagacha (20); Isawrganj (20); Bhaluka (16); Fulbaria (22); Trisal (19); Nandail (32)	Gouripur (7); Dhobaura (6)
Tangail	Kalihati (30); Madhupur (26); Mirzapur (24); Basail (15); Bhuapur (15); Ghatail (39); Sakhipur (20); Gopalpur (18); Nagarpur (13)	Sadar (12); Delduar (7); Dhanbari (0);	Kalihati (30); Madhupur (26); Mirzapur (24); Basail (15); Ghatail (39); Sakhipur (20); Gopalpur (18)	Delduar (7); Dhanbari (0);
Jamalpur	Sharishabari (18); Islampur (26); Bakshiganj (21); Sadar (16); Milandha (25); Dewanganj (24)	Madarganj (9)	Sharishabari (18); Islampur (26); Bakshiganj (21); Milandha (25); Dewanganj (24)	Madarganj (9)
Sherpur	Sreebordi (9: closest to average)	Nakla (3); Nalitabari (4); Jhenaigati (7); Sadar (2)	Sreebardi (9: exceptions: closest to average)	Nakla (3);
Kishoreganj	Pakundia (14); Kotiadi (17); Bajitpur (13); Karimganj (13)	Sadar (12); Hosenpur (10); Kuliarchar (7); Tarail (7); Austagram (1); Bhairab (4); Itna (0); Mithamoin (0); Nikli (0)	Pakundia (14); Kotiadi (17); Bajitpur (13);	Nikli (0)
Netrokona	Sadar (18); Modon (9: closest to average);	Durgapur (7); Kalmakanda (6); Kendua (4); Purbadhala (8); Mohanganj (7); Autpara (5); Barhatta (4); Khaliaghuri (3)	Sadar (18); Modon (9: exception closest to average)	Khaliaghuri (3)
<b>Total</b>	<b>29 High intensity Upazilas including 2 Upazilas with closest scores in the districts of Netrokona and Sherpur</b>	<b>30 Low intensity Upazilas (2 Upazilas with low scores considered in High Intensity category)</b>	<b>24 High intensity Upazilas</b>	<b>8 Low intensity Upazilas</b>

In Netrokona and Sherpur Districts, in the absence of Upazilas with scores equal to or above 13 (High intensity), Upazilas with closest scores were selected under the category High Intensity (performing).

Selection of the Unions and Villages under High and Low Intensity (performances) categories were at the field level consulting the Key Informants including personnel of LGED at those levels.

### Qualitative Investigations

Qualitative investigations were conducted applying following methods:

**Literatures/Documents Search:** Project Document (PP), PCR, Evaluation Report of IMED and Progress Reports were reviewed, primarily to assess the physical progress: comparison of targets versus achievements both physical (construction of structures, their use, equipment) and financial.

**Observations:** Physically verified the structures as detailed in the sample table above. The verifications of the structures, such as the FRBs and RRs with or without bridges and

culverts (newly constructed and Flood damaged/rehabilitated); growth centers and tree plantations were carried out by trained investigators using standard guidelines (pre-tested) under the guidance of the of expert Civil Engineer/Consultant. The observations specifically verified the implementation status, and it also investigated the status of current repairs and maintenance and the level of use and its effectiveness.

### Samples for Observations of Physically Structures

#### Distribution of sample infrastructures and Components of the Project for Observations through physical check-up:

##### a) For total 6 districts and 24 Upazilas from Intervention areas

Name of Sample Infrastructures	Length of observed sample infrastructures	
	Target	Physically Observed
Observe 30 km out of 295 km of FRB construction	30 km	39.55 km
Observe 45 km out of 450 km of union roads construction	45 km	51.69 km
Observe 40 m out of 400 m bridge/ culverts on FRB	40 meter	42 meter
Observe 60 m out of 600 m bridge/ Culverts on Rural roads	60 meter	62.6 meter
Observe 15 out of 150 growth center/ markets	15 nos.	12 nos.*
Observe Tree plantation on 75 km (out of 750 km ) of FRB and Union roads	75 km	38.4**
Observe Flood rehabilitation on 30 km (out of 297 km) of roads	30 km	35.06 km
Observe Flood rehabilitation on 78 m (out of 775 m) of bridges/ culverts	78 meter	88 meter

\*Growth centers/markets are not available in the sample Upazilas

\*\*Actual length of tree plantation is less than targeted observed length

**24 Focus Group Discussions (FGDs) only intervention areas:** FGDs with Community influential/leaders was conducted in the selected Unions only for Interventions/Treatment areas. Each FGD comprised 8 participants: males, females, youth leaders representing teachers, businessmen, religious leaders, field workers, women and poor leaders, farmers. FGDs apart from investigating the quality and use effectiveness of the structures, intensively inquired about the expected outcome effectiveness of the structures/components, such benefits accrued in-terms of communication, agricultural productions, tree plantations; growth centers, enhancing school and health center attendance, development of agricultural products marketing and creating job opportunities (improving standard of living of the catchments population).

**Intensive Interviews:** 194 intensive interviews were conducted with the following: Only from Intervention/Treatment areas

**LGED personnel (50):** Project Director—1 at NHQ; Assistant Engineers—1 NHQ; Accountant— 1 at NHQ; Administrative Officer – 1 at NHQ; Executive Engineer—3 DHQ; Assistant Engineers—4 DHQ; Sub Assistant Engineers – 4 DHQ; Upazila level Concerned Field Officers/Engineers/Sub Assistant Engineers/Accountant -- 35

**Allied Officials Field (144):** Upazila Chairmen/Vice Chairmen—24; UP Chairmen and members—24; Upazila Nirbahi Officers—24 at Upazila level; Upazila Education Officers—24; Upazila Agriculture Officers—24; UHFPOs-24

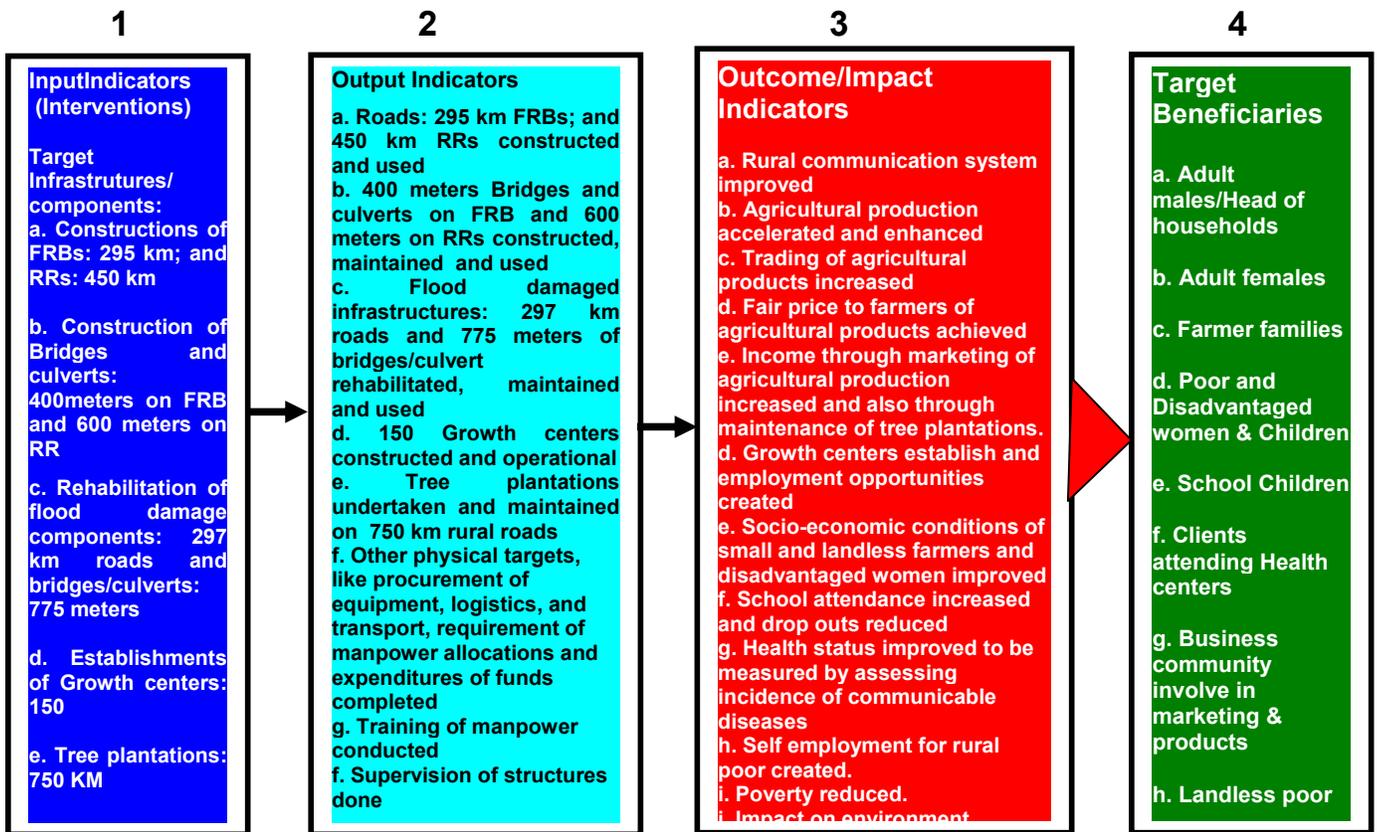
Further at the suggestion of the Specialist Consultant of IMED during Technical Committee Meeting 122 Intensive Interviews were conducted with selected users of the infrastructures. This facilitated in-depth understanding of the users' view points on the impact of the infrastructures improving socio-economic status.

**Unions (32: 24 intervention and 8 Control areas): Catchments' Community Profile:** Data from all the Intervention and Control Unions development status, such as number of Schools, markets, communicable and non communicable Upazila/rural roads, growth centers, tree plantations status. This was collected by using a standard checklist.

**Design of Analyses of Findings: A Conceptual Framework**

The flow chart below delineates assessment of the following input, output and outcome variables of the project impacting on the: a) communication network and to facilitate the marketing of agricultural products; b) situations of agricultural productions and the contributions of the project structures/Components: FRB/RR with or without bridges/culverts, Growth centers and tree plantations and c) Creation of annual and seasonal employment opportunities for the rural poor people consequential to improved income through construction/reconstruction and development activities under the project.

**Flow Chart-1 on Study Indicators  
Project Interventions, Achievements & Impact on Beneficiaries**



The flow chart above delineates the processes of project implementation (inputs) and achievements: (outputs and outcome/impact indicators) and the consequent impact on the target beneficiaries. Column 1 specifies the interventions (inputs); Column 2 explicates the outputs and column 3 underscores the outcome/impact indicators of the project as in Project documents: PP, PCR and Evaluation Report. Column 4 describes the population involved in the project and were influenced and benefited by project inputs and outputs.

## Data Collection

The study was implemented in 6 Districts, 32 Upazilas, 32 unions and 64 villages of Greater Mymensingh covering 3200 respondents in 2130 households. READ implemented the study in the following steps.

**Development of Questionnaires/Guidelines and Checklists:** Twelve types of data collection instruments were developed for the study. To meet the objectives of the study the following data collection instruments were developed and also reviewed during training through field pretest by the investigators and Technical Committee and Steering Committee of IMED and approved by concerned authority of IMED.

1. Household questionnaires: Intervention areas
2. Household questionnaires: Control areas
3. FGD Guidelines in intervention areas: Community leaders/farmers/leaders of women and poor
4. Intensive Interviews with Users of Infrastructures
5. Intensive Interviews Questionnaires: LGED personnel at NHQ & DHQ
6. Intensive Interviews Questionnaires: LGED personnel at Upazila
7. Intensive Interviews Questionnaires: Allied officials at Upazila
8. Observation Checklist: Roads
9. Observation Checklist: Tree Plantation
10. Observation Checklist: Bridges and culverts
11. Observation Checklist: Growth Centers
12. Union Profile: Allied Projects, Schools, Health centers, markets, roads and others

**Training of Survey Teams:** Training of 34 survey manpower was conducted for 5 days, of which, 2 days were for field practices combined with pre-testing of data collection instruments: survey questionnaire and qualitative guidelines. The training was conducted from 3 January 2011 to 8 January 2011 and the field pre-test was conducted at Savar Upazila in between the training (on 5 and 6 January 2011).

**Monitoring, Supervision and Quality Control:** Each Field Team was guided and managed by one Field Supervisor, who regularly maintained contacts with the Co-Team Leader and or Field Coordinator in READ office to report on day to day basis on the progress of data collection at respective Unions. The field supervisor in each team was responsible for ensuring supervision and management of each team at the field level by assigning and taking stock of team's day's work by individual interviewers; arrange and accommodation, coordinate with local influential and maintain regular liaison with READ office at Dhaka. The Field Supervisors in addition to their functions of supervision and field management ensured quality control checks through random interviews.

Quality control of filled in questionnaires ensured by the Consultants, READ Quality Control Officers and the Supervisors through random checks of selected questions of the filled in interviews, which is professionally termed as LQAS. In addition, concerned personnel of IMED also visited the field for enhanced data quality.

**Data Collection from field:** Data for the study were collected from January to February 2011. The data collection of the study was done through multiple methods through both quantitative and qualitative investigations.

- Reviewed PP, PCR and Evaluation reports;
- Observation Checklists was completed for all the available infrastructures in the sample areas
- Hundred percent of the household level quantitative data collection (beneficiaries

interpersonal interviews) was completed: 2400 respondents from the Intervention areas and 800 respondents from the Control areas of 6 districts, 32 Upazilas, 32 unions and 64 villages (48 in intervention and 16 in control areas) of Greater Mymensingh in the following distribution:

<b>Respondents</b>	<b>Intervention Areas: 1600 Households</b>	<b>Control Areas: 530 households</b>	<b>Total Areas: 2130 households</b>
Males respondents	1600	530	2130
Females respondents	800	270	1065
Total respondents	2400	800	3200

- 122 intensive interviews with selected users of infrastructures: brief interviews were completed (additional);
- 188 (97%) Intensive interviews out of 194 with the concerned project personnel and allied officials were completed:
  - ✓ 46 (92%) of LGED officials out of 50;
  - ✓ 142 (99%) of allied official out of 144;
- 24 (100%) Focus Group Discussions (FGDs) were completed (one per Union);
- Conducted a Local level Workshop in Kalihati Upazila, Tangail on 3 February 2011; and
- 32 (100%) data on Catchments (Union) Profile (primarily development aspects) were collected.

**List of Sample Area of Data Collection:** Household data were collected from the following sample areas:

Districts	Intervention areas			Control areas		
	Upazilas	Unions	Villages	Upazilas	Unions	Villages
Mymensing	Muktagacha	Bashati	Bilshingla Prananathbari	Gouripur	Ramgopalpur	Paschimpara Ramgopalpur
	Isawrganj	Atahrabari	Uttar Bangao Sarati	Dhobaura	Ghoshgaon	Jhigatala Ghoshgao
	Bhaluka	Hobirbari	Awalatali Naluabari			
	Fulbaria	Kushmail	Newgi Kushmail Kushmail			
	Trisal	Kanihari	Riarta Kushtia			
	Nandail	Musuli	Kalaihata Marenga			
Tangail	Kalihati	Bangra	Khilda Aultia	Delduar	Delduar	Kandapara Mirkumulli
	Madhupur	Alokdia	Shimbari Dakkhin Laufula	Dhanbari	Jadunathpur	Krishwnapur Islampur
	Mirzapur	Owarshi	Moishamura Nagarbhadgram			
	Basail	Kauljani	Kauljani Badiajani			
	Ghatail	Deulabari	Jhunkail Rasulpur			
	Shakhipur	Gajaria	Jhilimpur Baro Mousha			
	Gopalpur	Hemnagar	Bholarpar Belua			
Jamalpur	Sharishabari	Doail	Chaparkona Royderpara	Madarganj	Balijuri	Nadagari Paschim Sukhnagari
	Islampur	Parthoshee	Dengarchar Laudatta			
	Bakshiganj	Battrajore	Ujanpara Battrajoir			
	Milandha	Fulkocha	Paschim Bakai Bakai			
	Dewanganj	Chikajani	Baolatali Takimari			
Sherpur	Sreebardi	Garjaripa	Ghorjan Garjaripa	Nakla	Chandrakona	Reharchar Char Bassur Ali
Kishoreganj	Pakundia	Sukhia	Charpalash Uttar Sukhia	Nikli	Nikli	Kumarccchara Bhabanipur
	Kotiadi	Masua	Betal Horikeshor			
	Bajitpur	Gazirchar	Gazirchar Alkha			
Netrokona	Sadar	Dakkhin Bishiura	Palashhati Kumarura	Khaliaghuri	Mendipur	Priyo Khara Nurpur
	Modon	Modon	Imadpur Fochika			
<b>6 Districts</b>	<b>24 Upazilas</b>	<b>24 Unions</b>	<b>48 villages</b>	<b>8 Upazilas</b>	<b>8 Unions</b>	<b>16 villages</b>

### Data Consolidation and Analysis

Data collection and data consolidation occurred simultaneously. Completed interview schedules were brought to READ office Dhaka phase by phase for processing. Data consolidation activities, such as editing, coding, translating, classifying and data entry into the computer software for analysis have been carried out separately. Frequency tables (one, two or multi ways) are prepared for interpretations and analysis. Statistical and computer tools (SPSS and d-Base, EPI soft wares, Fox pro) used for data analysis.

## Chapter-III Findings on Infrastructures

### Section 1: Assessment Physical Targets Review of PCR and Allied Reports

Local Government Engineering Department (LGED) under the Ministry of LGRD and Co-operatives of Local Government Division was executed the project "Rural Infrastructure Development Project: Greater Mymensingh (Mymensingh, Tangail, Jamalpur, Sherpur, Kishoreganj & Netrokona District) included construction of Upazila roads (FRBs), union/rural roads (RRs), bridges/culverts on FRBs, bridges/culverts on RRs, road side tree plantation, development of growth centers, 2004 and 2007 flood rehabilitation works of roads and bridges/culverts. The project was taken up to fulfill the local need for improved road communication, better marketing facilities, increasing agricultural product, generating employment opportunities increasing socio-economic condition of the vast majority of rural poor.

**Financing arrangement (Allocation of the project):** The project has been funded by the Government of Bangladesh. The estimated cost and the actual cost of the project are given below.

(In lakh Taka)

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)
	Original	Latest revised		
Total Taka	21060.00	26355.66	25060.80	19.00%
Project Aid (DPP)	-	-	-	-

**Implementation Period:** The implementation period of the project was originally scheduled from July 2002 to June 2007. Subsequently the project period was revised and extended up to June 2009 as shown in the chart below.

Implementation Period as per PP		Actual Implementation period	Time Over-run (% of original implementation period)	Remarks
Original	Latest Revised			
2002-2003 to 2006-2007 (01.07.2002 - 30.06.2007)	2002-2003 to 2008-2009 (01.07.2002- 30.06.2009)	2002-2003 to 2008-2009 (01.07.2002- 30.06.2009)	40%	Project Duration was extended from July 2007 to June 2009

**Project revision with reasons:** The Project was revised with some additional cost but time extension from 1st July 2007 to 30 June 2009 due to the following reasons:

- Implementation of the project could not be started in 2002. Thus to adjust the backlog allocation, adjust the revised work programme, to complete the incomplete works and to implement the rehabilitation works of 2004 and 2007;
- There was no provision of allocation for salary and allowances for extended period of the project. It was therefore, necessary to make provision for salary and allowances' including salary compensation of the project staff for manpower component for the extended period and the project was revised accordingly; and
- In the middle of 2007, heavy flood occurred in the country. Many roads, bridges, culverts & growth centers were damaged in the project area of Rural Infrastructure Development Project: Greater Mymensingh. Transport and communication networks were disrupted seriously. The countrywide flood damage situation was reviewed in a meeting held in the Planning Commission. As per decisions of the review meeting an amount of Tk. 2500.00 lakh was allocated for rehabilitation works of damaged roads, bridges, culverts including

bridge approaches, u-drains, Rip-Rap works, retaining walls, RCC protection works etc, growth centers & rural hat/bazars and the project was revised incorporating the flood damaged works for implementation.

**Component-wise Progress (As per latest approved PP):**

Sl. No.	Name of al component (s) PCP/PP/TAPP	Unit	Target (as per revised DPP)		Actual Progress		% achievement		
			Financial (Taka in Lakh)	Physical Quantity	Financial (Taka in Lakh)	Physical Quantity	Financial	Physical	
1	2	3	4	5	6	7	8	9	
<b>A.</b>	<b>Physical/Civil Works</b>								
01.	(a) Construction of Upazila roads (Feeder road type-B)	km	2532.57	89.10	2325.70	81.91	92%	92%	
02.	(b) Construction of Union and village road	km	9825.33	409.42	9628.72	400.96	98%	98%	
03.	(c) Construction of bridge/culverts on Upazila roads (FRB)	m	2958.57	1900.17	2804.17	1807.31	95%	95%	
04.	(d) Construction of bridge/culverts on Union and village road.	m	5710.15	4254.96	5570.89	4153.54	98%	98%	
05.	(e) Development of Growth Centre/Rural Markets	nos	262.55	14	262.55	14	100%	100%	
06.	Tree plantation on the Upazila roads (FRB) and Union roads (Rural roads)	km	98.42	351.72	98.35	338.53	100%	96%	
07.	Rehabilitation of 2004 flood damaged Roads/bridges								
	i) Development of Upazila roads (Feeder road type - B) (BC)	km	1010.00	101.00	1010.00	101.00	100%	100%	
	ii) Development of Union roads (Rural road) (Earth work + BC)	km	1550.09	226.35	1550.09	226.35	100%	100%	
	iii) Construction of Bridge/Culvert on Upazila roads	m	47.26	75.00	47.26	75.00	100%	100%	
	iv) Construction of Bridge/Culvert on Union roads	m	27.23	42.0	27.23	42.00	100%	100%	
08.	Rehabilitation of 2007 flood damaged Roads/bridges & markets						0	0	
	(a) Development of Upazila/Union roads	km	1370.00	68.50	923.05	47.00	67%	69%	
	(b) Construction of B/C on Upazila/ Union Roads including bridge approaches, U-drains, RCC protection works etc.	km	600.00	400.00	450.00	300.00	75%	75%	
	(c) Development of Growth centre/ village Hat-bazar.	No	20.08	1	20.08	1	100%	100%	
	<b>Sub Total =</b>		<b>26012.25</b>		<b>24718.09</b>				
<b>B.</b>	<b>Manpower</b>	Mm	177.91	1764.00	177.36	1764.00	100%	100%	
<b>C.</b>	<b>Transport: Motorcycle</b>	nos	50.00	50 nos	50.00	50 nos	100%	100%	
<b>D.</b>	<b>Furniture and office equipment</b>								
	Personal Computer & accessories	nos	9.00	9 nos	9.00	9 nos	100%	100%	
	Office furniture	L.S.	4.00	L.S.	4.00	as per need	100%	100%	
	Photo copier	nos	7.00	7 nos	7.00	7 nos	100%	100%	
	Fax	no	.50	1 no	.50	1	100%	100%	
	<b>Subtotal D</b>		<b>7.50</b>		<b>7.50</b>		100%	100%	
<b>F.</b>	<b>Office Contingency</b>	L.S.	95.00	L.S.	94.85	as per need	100%	100%	
	<b>Total</b>		<b>26355.66</b>		<b>25060.80</b>		<b>95%</b>	<b>97.66%</b>	

Activities of the project were implemented according to the Annual Development Programme and at the end of June/2009 the overall physical progress of the project was 97.66% and financial targets achieved was 95%.

## Analysis of the post-Implementation situation and result of the project:

- **Whether the beneficiaries of the project have clear knowledge about the target/objectives of the project:** Beneficiaries of the project do not have clear knowledge about the target/objectives of project as the project is spread over a wide area. They do not have idea about the total target of the project. But they well understood the benefits of reduced transportation cost, better marketing facilities, easy availability of agricultural inputs etc.
- **Programme for use of created facilities of the project:** Created facilities are currently being used by the local people.
- **Impact of the project :**
  - ✓ **Direct:** The project provided better road communication in the rural areas through construction of roads and bridge/culverts on Upazila, Union & Village roads. Construction of roads created marketing facilities of agricultural products through development of rural markets. Thus, the Project provided direct benefit to the rural people.
  - ✓ **Indirect:** Interview with the local residents revealed that improved road communication helped in rapid supply of inputs in agriculture and marketing of the agriculture products. As a result, agricultural production have substantially been increased. Improved road network helped to increase the commercial & economic activities in the project area.
- **Employment generation through the project:** 50 Million man days of employment were created through implementation this project. Some indirect employment in the transport sector and agriculture sector have also been developed.
- **Possibility of self employment:** The project has provided improved road communication along with tree plantation increasing economic and commercial activities of the rural areas which has created possibility of self-employment.
- **Possibility of women-employment opportunity:** The project improved transportation and marketing facilities which have created direct and indirect employment opportunities for the rural poor. There is ample scope for women to be engaged in the business activities. Woman employment opportunity has developed through roads side Tree plantation and care taking activities.
- **Women's participation in development:** Women were directly engaged in the implementation of the project activities like construction of work, tree plantation and care taking programme.
- **Probable Impact on Socio-Economic activity:** Rural communication network development through construction of roads & bridges and culverts has created direct & indirect impact on socio-economic development in the project area. This will have effect on Primary education and health services.
- **Impact on environment:** Bridge and culverts have been constructed and designed in such a manner that they do not create any water logging or obstacle to the natural flow of water. Instead of adverse impact on environment, the project has provided good impact on environment by plantation works done on the road sides.
- **Sustainability of the project:** Periodic and routine maintenance will be done by local Govt. Bodies and LGED.
- **Contribution to poverty alleviation/reduction:** Development of transport communication facilitated increase of agriculture production and commercial activities in the project area. The income of rural people especially poor who are directly and indirectly involved in the business activities will be increased which will contribute towards poverty reduction.
- **Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc.:** The construction of rural roads and bridge/culverts has brought good impact on the rural areas. For this reason, the project schemes were very much demanding to the public representatives, religious leaders and

other local elites and their opinion was taken in the preparation of schemes.

- **Problems encountered during implementation:** Infrastructure built under this project was affected by the flood 2004 and 2007.
- **Time & Cost Over-run:** Inadequate allocation hampered project implementation at the beginning of the project. But when the project got momentum, Planning Commission provided adequate allocation to complete the project. Moreover, devastating flood occurred in 2004 & 2007 hampered the implementation activities. As a result period of implementation was extended & the cost of the project was also increased.

## Section – 2: Findings of Physical Observations of Infrastructures

The study team observed and physically verified construction of different types of infrastructures: Upazila FRB roads, Union Rural roads, Bridges/culverts on Upazila & Union rural roads (newly constructed and Flood damaged/rehabilitated); tree plantation on Upazila & Union roads; and growth centers/rural markets. The observations specifically verified the implementation status, and it also investigated the status of current repairs and maintenance and the level of use and its effectiveness. The steps and mechanism for direct observations were: collecting information in details from the project areas; Collecting information from project officials of LGED and Direct observation by the Field Investigators.

**Summary findings of observed infrastructures:** See detailed findings of each individual infrastructure in Appendix 1.

Infrastructures	Project achievement: Reported PCR	total	Sample observed	Status observed	Types of Problems
Upazila FRB roads	Target was 89.10 km and actual achievement is 81.91 km (92%)	was	Sample observed 39.55 km (48%) on 28 Upazila FRB roads	Out of observed 39.55 km on 28 Upazila FRB roads: <ul style="list-style-type: none"> <li>• 14 roads: 18.21 km (46%) were found fully operational with no problems</li> <li>• 10 roads: 18.47 km (47%) are operational but with some minor problems</li> <li>• Rest 4 roads: 2.87 km (7%) are operational but with major defects</li> </ul>	<ul style="list-style-type: none"> <li>• Minor problems are pot hole found and carpeting damage in few places in the road. The vehicle can move but will create problem in future.</li> <li>• Major problems are the vehicle could not run freely due to serious damage of carpeting, settle down of pavement, removal of earth from the shoulder and big pot hole in road surface.</li> <li>• No maintenance work done in most of the roads after construction.</li> </ul>

Infrastructures		Project total achievement: Reported PCR	Sample observed	Status observed	Types of Problems
Union Roads	Rural	Target was 409.42 km and actual achievement is 400.91 km (98%)	Sample observed 51.69 km (13%) on 37 Union roads	<p>Out of observed 51.69 km on 37 Union rural roads:</p> <ul style="list-style-type: none"> <li>• 17 roads: 29.07 km (56%) were found fully operational with no problems</li> <li>• 13 roads: 13.44 km (26%) are operational but with some minor problems</li> <li>• 7 roads: 9.17 km (18%) are operational but with major defects</li> </ul>	<ul style="list-style-type: none"> <li>• Minor problems are: damage of carpeting in few places, crack and pot hole on road surface. The vehicle can move but in future will create problem due to further deteriorate of the road.</li> <li>• Major problems are: damage of carpeting in many places, settle down of pavement, removal of earth from shoulder, big pot hole on road surface. The vehicle cannot run freely and immediate repair needed.</li> <li>• The local people also mentioned that the kutcha part of the developed rural road become unusable during rainy season due to serious damage.</li> <li>• No maintenance work done in most of the roads after construction.</li> </ul>

Infrastructures	Project total achievement: Reported PCR	Sample observed	Status observed	Types of Problems
Flood Rehabilitated Roads (2004 & 2007)	Target was 395.85 km of flood damaged road on FRB & Union roads and actual achievement is 347.35 km (95%)	Sample observed flood rehabilitated 35.06 km (10%) on 12 roads	<p>Out of observed 35.06 km on 12 flood rehabilitated roads :</p> <ul style="list-style-type: none"> <li>• 4 roads: 10.56 km (30%) were found no problem and fully operational</li> <li>• 7 roads: 22.3 km (64%) are operational but with some minor problems</li> <li>• 1 road (Dhalapara-Chapri road): 2.2 km (6%) found operational but with major problems</li> </ul>	<ul style="list-style-type: none"> <li>• Minor problems are: formation of pot holes, damage of carpeting in few places and cracks on road surface.</li> <li>• Major problems are: Carpeting broken in many places, pot hole developed in most of the surface, road sides broken in some places.</li> <li>• No repair and maintenance work was done after construction</li> </ul>
Bridge/culverts on Upazila FRB Roads	Target was 1900.17 m of bridges/culverts on Upazila FRBs and actual achievement is 1807.31 m (95%)	Sample observed 42 m bridge on 2 FRB roads (5%)	<ul style="list-style-type: none"> <li>• Observed bridges were found operational and connected with pucca road on both side</li> <li>• All the component of the bridges i.e. pier, abutments, girders, cross beam, top slab, railing, retaining and wing wall are in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Approach road for both observed bridges found in bad condition:</li> <li>✓ Approach road of bridge on Tangail-Dhalpara road was totally damaged due to erosion of earth and shrinkage down ward which created sharp vertical slope.</li> <li>✓ Approach road of bridge on Islampur-Jhagrarchar road found partly damaged</li> <li>• No repair and maintenance done after construction</li> </ul>

Infrastructures	Project achievement: Reported PCR	total	Sample observed	Status observed	Types of Problems
Bridge/ culverts on Union Rural Roads	Target was 4254.96 m of bridges/ culverts on Union roads and actual achievement is 4153.54 m: 98% achievement	m of	Sample observed 62.6 m bridge/ culverts on 3 Union/Rural roads (5%)	<ul style="list-style-type: none"> <li>Observed bridge/culverts were found operational</li> <li>All the component of the bridge/culverts i.e. pier, abutments, girders, top slab, railing, retaining and wing wall are in good condition</li> </ul>	<ul style="list-style-type: none"> <li>Condition of approach roads of 1 bridge/culvert is good</li> <li>Approach of the another bridge/culvert is not in good condition – both side slopes are not smooth, both side approach road are partly damaged and in few places, pot holes have been formed which creating problems to smooth movement of vehicles</li> <li>Condition of approach roads of one bridge/ culvert are in almost good – but have small pot hole in one or two place which not creating problem to move vehicles</li> <li>After construction to till date no maintenance work was done</li> </ul>
Flood rehabilitated bridges/ culverts	Target was 117.00 m of bridges/ culverts on Upazila and actual achievement is 100%	m of	Sample observed 88 m flood rehabilitated bridges (75%) on 2 roads	<ul style="list-style-type: none"> <li>Both of the bridges found operational</li> <li>All the component of the bridges i.e. pier, abutments, girders, cross beam, top slab, railing, retaining and wing wall are in good condition</li> <li>Approach roads of the both observed bridges are found good</li> </ul>	<ul style="list-style-type: none"> <li>No problem</li> </ul>

Infrastructures	Project total achievement: Reported PCR	Sample observed	Status observed	Types of Problems
Tree plantation on FRB and Union Rural roads	Target was tree plantation on 351.72 km of FRB and Union roads and actual achievement is 338.53 km (96%)	Sample observed 38.4 km (11%) tree plantation on 9 roads	<ul style="list-style-type: none"> <li>On observed tree plantation on 9 roads, out of a target of 35,745 nos. of trees, 34345 nos. (96%) were planted</li> <li>Various types of trees were planted such as, Mehogoni, Akashmoni, Nim, Garjan, Shegun, Shishu, Karoi, Jackfruit, Mango, Blackberry, Eucalyptus</li> </ul>	<ul style="list-style-type: none"> <li>As per observation on an average 36% road side trees are surviving</li> <li>No tree was replanted in place of dead trees</li> <li>Only in one place (Tree plantation on Baira-Kolghat-Doyel-Kendua road, Sarishabari, Jamalpur), trees are felled down by the persons from the Forest Department, now no trees are there</li> </ul>
Growth Centers/ Rural Markets	Target was 14 growth centers/rural markets development and actual achievement is 100%	Sample observed 12 nos. growth centers/rural markets (86%)	<p>Growth Centers: Out of observed 4 growth centers:</p> <ul style="list-style-type: none"> <li>1 no. is operating with no problem</li> <li>3 nos. are operating with some problems</li> <li>Use of Growth Centers and its benefits: Additional increase in terms of gross income from the market annually is 231% during post implementation period over the previous period;</li> <li>Frequencies of commencement of market in terms of number of days in a week increased by 5 days or 250%;</li> <li>Average number of persons visiting the market increased additionally by 67%; and Saleable items from the market increased</li> </ul>	<ul style="list-style-type: none"> <li>Growth Centers: <ul style="list-style-type: none"> <li>✓ Water logging due to heavy rainfall and flood;</li> <li>✓ Lack of cleanliness of the market area;</li> <li>✓ Main road connecting growth center is not developed is not metalled (pucca road);</li> <li>✓ No drainage system;</li> <li>✓ No office room;</li> <li>✓ Tube well stolen; and</li> <li>✓ No latrine or Latrine is out of order.</li> </ul> </li> </ul>

Infrastructures	Project total achievement: Reported PCR	Sample observed	Status observed	Types of Problems
Growth Centers/ Rural Markets			<p>Rural markets: Out of observed 8 rural markets</p> <ul style="list-style-type: none"> <li>• 3 nos. are operating with good condition</li> <li>• 5 nos. are operating with some problems</li> <li>• Additional increase in terms of gross income from the market annually is 246% during post implementation period over the previous period;</li> <li>• Market days commenced improved from 104 at pre project period to 360 days during post project period; an additional improvement of 246%;</li> <li>• Average number of persons visiting the market increased additionally by 590%; and</li> <li>• Sellable items from the market increased</li> </ul>	<ul style="list-style-type: none"> <li>• Rural Markets: <ul style="list-style-type: none"> <li>✓ Inadequate drainage system (1);</li> <li>✓ Problem of drinking water (1);</li> <li>✓ Lack of cleanliness of the market area (3);</li> <li>✓ Drainage Problem/No drainage system (2);</li> <li>✓ Main road connecting bazaar road is katcha (1);</li> <li>✓ Tubewell is out of order (2);</li> <li>✓ Few local businessmen (Rice and Garments) have grabbed the open pucca platform of the markets and doing their own business (1);</li> <li>✓ Water logging due to heavy rain fall as the drainage work not adequate (1);</li> <li>✓ Inside road condition of the market is not good (1);</li> <li>✓ Somewhere plaster of floor of sheds are damaged (1);</li> <li>✓ Large portion of bazaar area of one bazaar was destroyed for river erosion (Shaikh para BNP bazaar development, Dewanganj, Jamalpur)</li> </ul> </li> </ul>
			<p>The obvious impact of such an increase in the volume of trade and commerce due to operational of a rural market would be on increase of wage earnings and employment, particularly for the poor.</p>	

**Observations by the Community on Roads:** During observation of the infrastructures while discussing with community people who gathered on the spot, identified following impacts accrued from road construction.

- Communication has improved all over the project area connecting schools, colleges growth centers, hat, bazaar, upazila, district town, and health center, hospital different directions have been developed.
- Transportation of agricultural product towards hat/bazaar and other commercial places has improved and farmer get fair price.
- Increased production of different crops, vegetables in the rural areas has been achieved.
- Employment has been generated among rural poor including women and landless.
- Allied developments, such as pisci culture, poultry farm, rice husking mill, tree plantation have also been achieved.

**Observations by the Community on Growth Centers:** During observation of the infrastructures while discussing with community people who gathered on the spot, identified following impacts accrued from establishments and operations of the growth centers and rural markets:

- Increased marketing opportunities of agriculture products
- Farmers and businessman are getting fair price on sale of agriculture products
- Most of the agri and other products are brought to the markets from the different unions.
- Consumers are coming from different unions to purchase and sell different products.
- Increased employments are achieved due to operationlization of growth centers/rural markets: unemployed youths are finding jobs
- Greater numbers of women are now coming to the markets for buying
- Income of the farmers have increased substantially
- Increased marketing opportunities is also an incentives for the farmers to diversify their agricultural products; farmers are finding markets for their fruits and vegetables
- Improved communication facilitate increased number of community people to visit the Growth centers and the rural markets; consequently these centers are functioning as social and economic hub where people also can share and exchange their ideas covering different aspects of their life.

**Recommendation/suggestions for the present and future guideline**

- Repair works for the minor damaged roads are needed to be under taken immediately, so that conditions of those roads do not deteriorate further.
- Budget allocation for maintenance work to be increased.
- Proper turffing should be provided on earthen shoulder of the roads.
- Regular inspection and close supervision by the LGED officials are needed.
- Remaining kutchra part of developed rural roads to be developed.
- Monitoring and maintenance cell may be established to monitor and maintenance work.

Observations of the infrastructures through physical verifications prove that the assigned tasks of various construction works was carried out at almost hundred percent level, but subsequently, the performances on the repair and maintenance works of the infrastructures are not as good. In the overall analyses, it may be surmised that about a quarter of the infrastructures are now facing problems and during rainy season, communications are becoming certainly more difficult. And lastly, the findings on the survival of the trees on the road side are very poor. The growth centers and the rural markets have certainly accelerated trade and commerce in the rural areas by manifold, but it is also true that some of the centers are devoid of some essential amenities like tube wells, toilets, connecting roads and cleanliness.

## Chapter IV

### Findings of Qualitative in-depth investigations

#### Section 1. Findings of Intensive Interviews with Users

At the suggestion of the Specialist Consultant of IMED (during Technical Committee Meeting), 122 Intensive Interviews were conducted with selected users of the infrastructures. This facilitated in-depth understanding of the users' view points on the impact of the infrastructures improving socio-economic status. Among them 117 are engaged directly in farming and 5 in Farm business. Following presentation summarizes salient findings of users' intensive interviews.

Overwhelming majority of the users' sample could identify the period when the infrastructures were constructed in their locality and they mentioned the period between 2002 to 2008. Only a meager portion of the users (about a sixth) could not specify the year of construction of the facilities. Previously roads were un-metalled/mud built and the roads were with pot holes and were near unworthy for travel. Most of the users assessed previous roads as either bad or very bad; only about a tenth identified roads as good or moderately good. Users, 50% of the times claimed that the roads were used by pedestrians/bullock or push cart and rest fifty percent of the times roads were used by rickshaw, vans or bi-cycles; only rarely (1%) motor cycles had been plying on the roads. On the contrary, currently most of the vehicles plying on the roads are engine driven (Motorcycle-11%, Tempo/ tomtom/ votvoti-44%, Bus- 5%, and CNG-15%) and the rest are Rikshaw-12%, Thelagari-1%, and On foot- 2%.

Currently almost all the members of the family use the roads, which was not possible earlier. Users estimated that on average a road is used by 10,000 people per day. Travel time per destination has been reduced to half (31 minutes on average) now compared to the past (68 minutes on average), while the cost for travel per destination has increased by about 33%. Since travel time has been reduced to half, the estimated cost for carrying goods must have reduced substantially, because the users would currently transport same quantity of goods at half the time compared to the past. In a matter of five to ten years, it is unlikely that major shift (change) in occupation in a community would occur, such transformation should take more time. Even then, as mentioned by the users, more than 90% of the persons eligible to be in occupation were engaged in farming (owner farmers, share croppers or agri labourers) and about 7% were engaged in business including farm products, while currently more than 10% are engaged in farm business.

Users opined that increased agricultural production and improved marketing of agri products created opportunities and scope for increased income for the farm families; and the users unanimously (100%) affirmed that income of the families has been raised. Improved road communication exposed rural farm communities to:

- **Enhanced** Utilization of modern fertilizer/pesticide 10%;
- **Frequent** use of modern technology of crop production 9%;
- **Extended participation to** crop diversification 3%;
- Greater levels of agri products to markets 11%;
- Higher levels of earning due to fair price of agri products 57%; and
- Increased productivity of farm laborers due to raise in their wages 10%.

**And all the factors above contributed to increased agricultural production leading to gains in increased income through marketing of farm products.**

## Section 2. Assessment by Key Informants (Project Engineers) and Local Stakeholders

Intensive interviews (188) for conducting in-depth assessment of the status of construction and use of the infrastructures were conducted with:

- 44 Project Engineers: 10 at National and at District levels; 34 at Upazila level;
- 2 Project Accountants: 1 National and 1 at Upazila level
- 90 Allied Officers at Upazila level;
- 50 Elected officials of local Government: 34 at Upazila level and 15 at Union level
- 2 NGO Branch Managers at Upazila level

Of the available Engineers at Upazila level during data collection, 71% claimed that they were involved in the implementation of the project. From among the local government officials, elected or allied GOB officials, only 15% claimed that they were somewhat involved in the project. Those of the local Government officials claiming some involvement, most of them were the elected officials. Engineers most of the times (75%) supervised construction, while only 25% of the times they estimated that they invested to assess the quality of work. The engineers claimed that they invested 25% of their time for activities on bidding and tender finalization. District level Engineers claimed that 100% of the targeted work as per PP was completed, while such claim was at 97% by the Upazila level Engineers. About one tenth of the Upazila Engineers (11%) claimed that they faced some problems in implementing the project and these included the problems of land acquisitions, Contractors avoiding to complete work as per specifications and some incidences of external factors (irregular pressures or demands) also cause delays and problems in completing the targets in time.

**Out of 44 Engineers, majority (84%) opined that the local community participated in the project by:**

- |                              |     |
|------------------------------|-----|
| • Contributing labor locally | 91% |
| • Donating land              | 35% |
| • Resolving local disputes   | 24% |
| • Participating contractor   | 3%  |

More than three fourths of Engineers (77%) claimed that local women participated in the project work by:

- |  |        |
|--|--------|
| • As a labor: on soil digging, brick crushing, filling sand, cooking, RCC construction | - 100% |
| • Carpeting  | - 12%  |
| • Tree plantation and nursing  | - 8%   |

There was no provision for training or orientation of the Engineers. However, it is felt that in future orientation of the Engineers on social mobilization, gender participation and tree plantation can be planned.

Although the Engineers opined that there was no environmental problem faced due to the project. On the contrary, allied local officials (From Agriculture, Fisheries, Education, UNO Office and Elected Officials of Upazila and Union Parishad and NGOs: n = 142) mentioned about the problems of water logging (13%); Erosion of road side mud/soil in the absence of adequate tree plantations (28%); and about a quarter of the respondents also mentioned that felling of trees by local influential as a problem (23%).

### **Section 3. FGD Findings**

FGDs with Community influential/leaders were conducted in the selected Unions only for Interventions/Treatment areas. Of the total FGD participants 86% were males and the rest 14% are females; 48% are farmers, 38% are businessmen, 10% are service holders, 3% teachers; and Day labor (1%). Among the farmers and businessmen, many are UP Chairman and Members, Influential, Community Leaders, Social Workers.

#### **Perception about the infrastructures developed under RIDP project in the sample areas:**

More than two thirds of the participants (71%) could specify 'construction of road' as one of the components of the project infrastructures; only about one sixth (17%) could identify 'construction and operations of the Growth Centers' as another component, while only about a tenth (12%) could separately identify 'Bridges and Culverts', but 'tree plantations' as a component was identified even by less than one tenth of the participants. Findings suggest that LGED projects uphold the image of predominantly construction of roads, while other components particularly, 'Growth Centers' and 'Tree Plantation' was very meagerly known by the community.

**Perceptions about the status of roads and bridge/culverts:** The participants narrated the sequences of construction of roads and bridges/culverts phased over the following years:

- 6 were constructed in 2006
- 4 in 2005
- 3 in 2003
- the rest 4 were in 2004, 2007, 2008 and 2009
- 2 bridges/culverts in 2005 and 1 in 2005-2006

Out of 17 roads covering different places/areas:

- in 11 places, road condition is good and maintenance work not needed;
- in 3 places maintenance work was already done by LGED;
- in 2 places repair and maintenance is needed and
- in 1 place maintenance work is on going by LGED.

Participants although opined that the roads are in operating conditions but these are currently beset with the following problems:

- Road side slightly broken in few places
- In some places road carpeting is damaged and pot holes have been formed, which are creating difficulties to move and not possible to move after rain
- Part of the road is katcha which are creating problems of movements
- Road is narrow creating problem to movements of all kinds of vehicles
- Bending trees on the roads sometimes cause accidents

All the bridges are now in operational conditions and are assessed to be good, except in 2 places where approach road are partly damaged and pot holes exist on the approach roads, which need immediate repairs.

#### **Perceptions about the status of Growth centers/rural markets:**

- Out of 4 growth centers/rural markets, 3 were constructed in 2005 and another 1 in 2006.
- All growth centers/rural markets are currently functioning.
- All the participants expressed that growth centers/rural markets are now operating, but have some problems except one area:
  - ✓ No drainage system
  - ✓ Lack of tube well for drinking water/ tube well is out of order

- ✓ Lack of cleanliness
- ✓ Water logging due to heavy rain fall as the drainage work not adequate
- ✓ Inner road of the market are katcha and pot wholes have been created in some places
- ✓ Somewhere plaster of floor of sheds are damaged

**Perceptions about the status of Tree plantation:**

- In two places FGD participants stated that road side tree plantation was done by the LGED under this project
- In one place, trees have been cut down by the Forest department, now no trees are there
- In one place present condition of the trees are good and maintenance of the road side plantations are regularly done by the poor women
- Participants also mentioned that poor women were engaged in road side plantation work and consequently, they were financially benefited
- For road side tree plantation poor people are earning some money by selling tree leaves and branches/sticks; and they are also using as these as firewood/fuel
- Participants also ascertained that tree plantations ensure environmental balance

**Perception about women participation:** The participants of 5 Upazilas (Kalihati, Gopalpur, Modhupur of Tangail; Ghatail in Mymensingh and Pakundia in Kishoreganj) opined that no female worker was engaged during construction work. But in the rest 19 Upazilas, the participants affirmed local women's participation in the road construction works.

## Section 4. Findings of Local Level Workshop

A local level workshop was conducted to assess the impact on the project of Rural Infrastructure Development Project: Greater Mymensingh (Mymensing, Tangail, Jamalpur, Sherpur, Netrokona and Kishoreganj) Districts on 3 February 2011 at Upazila Auditorium, Kalihati Upazila, Tangail at 11.00 am to 2 pm. The workshop was jointly organized by the IMED and READ with support from the Upazila Engineer's office of LGED, Kalihati, Tangail.

The workshop was presided by Mr. Md Mosharaf Hossain, Assistant Director, IMED. Mr. Hasan Imam Khan, Chairman, Upazila Parishad and Mr. Md. Mamun ul Hasan UNO, Kalihati were present as Guest of Honour. Among others present were Md. Ansar Ali, Mayor, Kalihati Pourashava, Md. Anwar Hossain, Vice Chairman, Kalihati pourashava, Md. Mahbob Hosain, Ex. Engineer, LGED, Assistant Engineer, LGED and Md. Abdul Momin, Upazila Engineer, LGED. The workshop was moderated by Engr. Md. Quddusur Rahman, Consultant, READ along with Susoma Ferdous, Additional Director, READ and Md. Nazrul Islam, Deputy Director, READ. Thirty (30) participants representing cross section of the people of the locality participated in the discussions. Distribution of the participants in the workshop is as follows:

Participants' Identity	Total No.	Male	Female
Beneficiaries: Farmers, School teacher, Imam, Businessmen, Local Influential	15	9	6
Upazila Chairman	1	1	0
Upazila Nirbahi Officer	1	1	0
Upazila Vice Chairman	1	1	0
Pouroshava Mayor, UP Chairman	2	2	0
Upazila Education Officer & Upazila Agriculture Officer	2	2	0
LEGE Executive Engineer & Assistant Engineer, LGED Upazila Engineer	3	3	0
IMED Assistant Director	1	1	0
READ Consultant, Additional Director, Deputy Director and Program Officer	4	3	1
<b>Total</b>	<b>30</b>	<b>23</b>	<b>7</b>

Participants actively interacted in the discussions and made valuable comments on different issues concerning rural infrastructures executed by LGED during the year 2002 to 2009. The salient points raised by the participants in the workshop are specified in the following presentations.

During the year 2002 to 2009 the following infrastructure were developed by LGED in Kalihati Upazila.

- Construction of new Upazila road – 11.03 km
- Rehabilitation of 2004 & 2007 flood damaged road – 9.673 km.
- Tree plantation - 6.50 km covering in 5 different roads.

### Comments of the participants

The participants informed that the construction works were undertaken by the contractors and the materials used were examined prior to construction. The quality of the work was good and satisfactory. Local people joined as laborers during the construction. But the participants opined that most of the roads are damaged because of frequent movements of heavy vehicles. But no repair work was undertaken since construction. In many instances, only a part of the total length of a road was completed resulting to difficulties of communication and consequently people suffered. In many rural roads, there are often movements of heavy vehicles, while the rural roads are too narrow for such transports.

**Benefits accrued as assessed by the participants are as follows:**

- Improved communication through construction of roads eased the traveling of school/college going male and female students and indirectly such opportunity enhanced future prospects of increased rates of education of the locality;
- Good road transportation and improved marketing of agricultural products resulted to earning of fair price and profits for the farm producers;
- Improved communication network created additional job opportunities for the poor, such as increased involvement of local people as transportation laborers (van drivers) and as factory laborers;
- Again improved communication system contributed to accelerated production and marketing of fish, horticulture (vegetables and fruits), poultry and diary products (cattle raising);
- Poor women of the locality achieved opportunities to produce and market vegetables and thereby gained additional income;
- Improved communication reduced both travel time and cost of marketing of farm products;
- Above all, access to good communication impacted on raising of costs of land in the area and in some instances, land value rose by five times;

**Concerns for Repair of Roads:** The Executive Engineer mentioned that currently allocations for repair of rural roads are meager. In most of the cases as rural roads are used by vehicles beyond the capacity of the roads, conditions of the roads deteriorate creating frequent needs for their repairs. His comments were appreciated by all the participants, particularly the beneficiaries participating in the workshop.

As a special remark, the participants underscored the need for the poor women to be used as laborers in the repair work and according to them already, the rural women laborers are involved in the repairing the non metal mud roads.

**Tree Plantation Endeavors:** Both the Executive Engineer and the Upazila Engineer mentioned that in total in five roads covering a length of 6.5 km, tree plantations to the extent of 12000 plants, such as Mehogoni, Akashi, Neem and a few fruit bearing trees were planted. Of these trees, about 70—80% are now surviving. The Upazila Engineer also mentioned that on a part of the roads, coconut trees were planted, but later on people from the vicinity uprooted these and re-planted the same in their own yards. Some of the participants opined that on the road side planting of wood bearing trees is better than fruit bearing trees. On the contrary, the Upazila Agricultural Officer, mentioned that planting of large trees on the road side with wide areas of shadows might damage farm production in the farm lands situated in the close proximity of the roads. He however emphasized that planting of fruit bearing trees on the road side is a better alternative.

The participants also remarked that currently the poor women are in charge of maintenance of the road side plantations and they are engaged as daily laborers for performing such assignments.

**Growth Centers and Rural Markets:** Although under the current project in Kalihati construction of Growth Center was not undertaken. Under a different project in the local Ballabazar market such infrastructures have been constructed and the quality of construction is very good. These Growth Centers are well maintained and are regularly cleaned. Regularly 10 to 12 women sellers are present in the Ballabazar market and of the persons visiting the market, about 50% are women.

# Chapter V

## Findings and Discussions of Quantitative Household Survey of Beneficiaries

### Section 1: Socio-economic and Demographic Characteristics

- Distribution of beneficiary samples (Respondents):
  - 2400 from Interventions areas: 67% were males (head of households, farmers and earning members of the family and the rest 33% were married females; and
  - 800 from Interventions areas: 66% were males (head of households, farmers and earning members of the family and the rest 34% were married females.

**Age of Respondents:** Mean age of the males is 46 years in the intervention areas and 45 years in the control areas, while that of the females is 37 years both in the Intervention and in the Control.

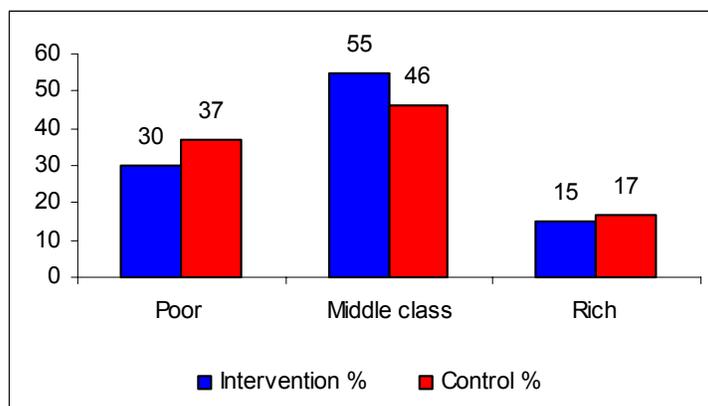
**Education:** Mean education achieved both for Intervention and Control areas 4<sup>th</sup> grade completed; but the men are one grade more qualified (5<sup>th</sup>) than the women (4<sup>th</sup>).

**Occupation:** More than 80% of the males, are engaged in Farming including farm labour in both Intervention (87%) and in Control (87%) areas; rest of the males, 9% in the Intervention areas and 17% in the Control areas are either engaged in Business, Services and Day Labourers.

More than ninety percent of the females in the Intervention areas (98%) and in the control areas (99%) are housewives; very meager percent of the women are engaged in farming, services and Day Labourers.

Mean number of children per family 3 both in the Intervention (3.06) and in the Control areas (3.32). And total members per family are around 5: Intervention (4.9) and Control (5.3). Overwhelming majority of the families are nuclear (single): Intervention (80%) and Control (79%) and the rest are Joint Families.

**Socio Economic Status (SES):** Assessed on composite scale and also on observations (household structures and income), the comparative distributions of the Beneficiaries are as follows:



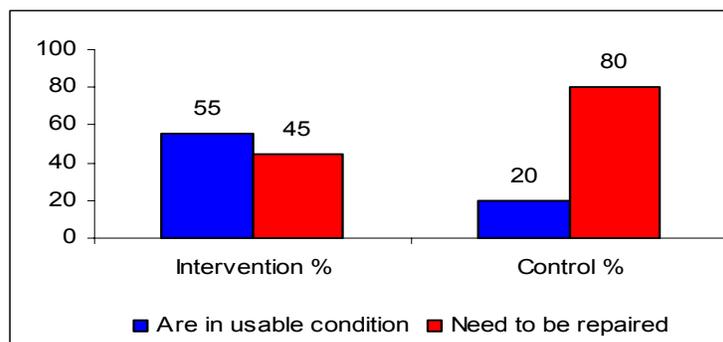
## Section 2: Assessment of use of infrastructures

### Status of Roads:

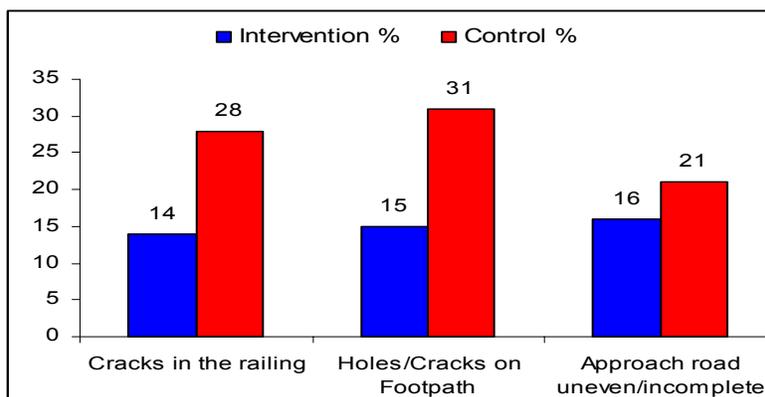
Three fourths of the beneficiaries in the Intervention areas (75%) claimed that their areas are covered by LGED constructed Rural Roads at the Union Level, while 29% claimed that they have FRB (Upazila connected) roads in their areas. Comparably, in the Control areas, only 22% claimed that they use Pucca Road (metal road) in their areas, while the rest are either unmetalled or Katcha Road. Overwhelming majority of the beneficiary samples in the intervention Areas (81%) and just a simple majority in the Control areas (55%) claimed that they regularly use the roads. About third of the respondents in the Control areas (36%) perceived that the roads are not worthy of use by vehicles; on the contrary, in the intervention areas only 3 percent perceived the same. Little less than half of the respondents in the Control areas (43%) observed that the roads are broken and need repairs, while only 15% of the respondents in the Intervention areas held comparable views. In the overall assessment, only 18% of the respondents in the Intervention areas and 96% of the respondents in the Control areas perceived that they are facing problems in using the roads.

Only 8% of the males and 5% of the females in the Intervention areas claimed that they were involved in the Construction phase of the Roads.

**Status of Bridges/culverts:** Usability of Bridges/culverts: Majority of the respondents in the Intervention areas (55%) and only one fifth (20%) in the Control areas claimed that the Bridges/culverts are usable, while the rest in the respective areas need repairs.



**Status of Repairs of Bridges/culverts:** Repairs needed on the Bridges/culverts are for mending the cracks on the railings, pot holes on the foot path and uneven conditions of the approach roads.



**Tree plantation:** Only 4% of the respondents in the Intervention areas claimed that they have observed tree plantations in their localities and of those who observed tree plantations in the respective areas, only 2% claimed that females participated in the plantation tasks. They also mentioned that large number trees planted were felled by local power groups and a large number are damaged in the absence of maintenance.

**Status of growth centers/rural markets:**

A total of 14 Growth Centers/Rural Markets were constructed/ developed under the current project, of which 12 had been observed by the READ investigators. But within the catchments of household samples (24 unions), only four Growth Centers/Rural Markets constructed/developed are located. Only 17% of the respondents could identify the Growth Centers/Rural Markets constructed/developed under the current project. On the contrary, 77% of the respondents claimed that some more Growth Centers/Rural Markets were constructed/ developed under different project.

Fifty five percent of the respondents claimed that the Growth Centers/Rural Markets are used by the local people. Forty five percent of the respondents claimed that the Growth Centers/Rural Markets either need repairs or are damaged.

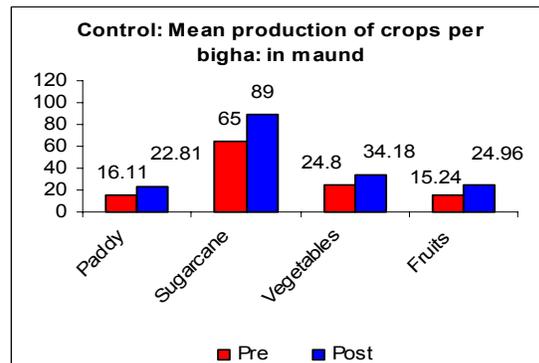
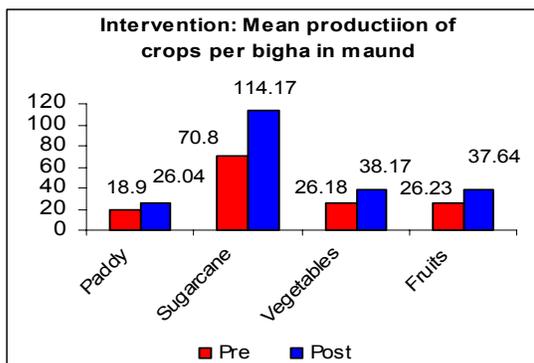
Percent of respondents claiming trading from the Growth Centers/Rural Markets are:

- Cash crops: paddy (21%), Wheat and corn (8%), Jute (10%), sugar cane (3%);
- Other agricultural products: oil seed (7%), pulse (4%), vegetables (42%), seeds (2%), rice (16%);
- Other consumable items: fish/meat (31%), cosmetics (20%), spices (9%) and poultry (10%)

Overwhelming majority of the female respondents (73%) ascertained that the females of the locality use the Growth Centers/Rural Markets.

**Section 3: Assessment of Agriculture Productions**

**Production of crops:** Bar graphs illustrate increase in the production of crops (paddy, Sugarcane, Vegetables, and Fruits) comparatively by areas (Intervention Versus Control) and by time periods (Pre and Post commencement of project period).



**Difference-in-Differences Estimation**

Difference in differences (DID) estimation is a non-experimental technique used in econometrics that measures the effect of a treatment at a given period in time. It is often used to measure the change induced by a particular treatment or event, though may be subject to certain biases (mean reversion bias, etc.). In contrast to a within-subject estimate

of the treatment effect (that measures the difference in an outcome after and before treatment) or a between-subjects estimate of the treatment effect (that measures the difference in an outcome between the treatment and control groups), the DID estimator represents the difference between the pre-post, within-subjects differences of the treatment and control groups. The difference in difference (or "double difference") estimator is defined as the difference in average outcome in the treatment group before and after treatment minus the difference in average outcome in the control group before and after treatment. The basic premise of DID is to examine the effect of some sort of treatment by comparing the treatment group after treatment both to the treatment group before treatment and to some other control group.

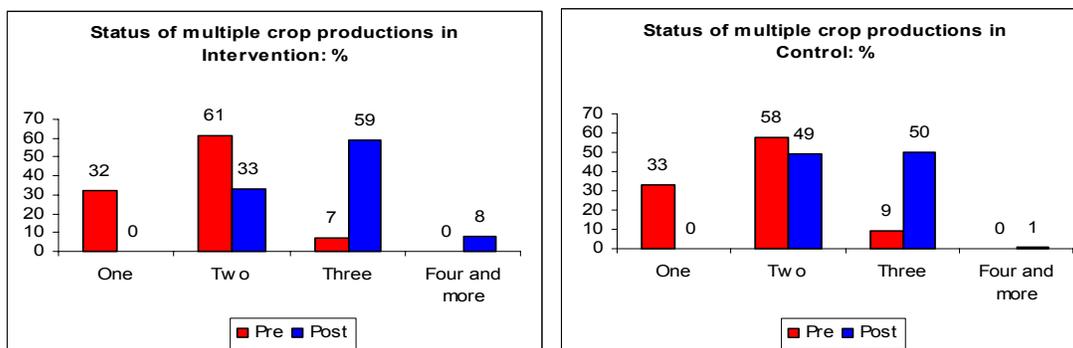
Findings from difference-in-differences estimation indicate that significant increase in productions of crops during post project period both in the Intervention and in the Control areas in respect of all the four crops ( $P < 0.001$ ). However, statistical analysis shows that in the Intervention areas, production of all types crops increased more significantly ( $p < 0.01$ ) than in the control areas except fruits production (see table below).

**Table 5: Mean production of crops per bigha: in maund**

Crops	Intervention					Control					Z-value	**P-value
	Pre	Post	Absolute mean diff.	sd	*p-value	Pre	Post	Absolute mean diff.	sd	*p-value		
Paddy	18.9	26.04	7.14	4.40	0.00	16.11	22.81	6.7	3.21	0.00	2.60	0.009
Sugarcane	70.8	114.17	43.37	42.73	0.00	65	89	24	2.07	0.00	4.1	0.000
Vegetables	26.18	38.17	11.99	11.16	0.00	24.8	34.18	9.38	8.99	0.00	4.84	0.000
Fruits	26.23	37.64	11.41	9.91	0.00	15.24	24.96	9.72	8.87	0.00	1.2	0.228

\*Pair sample d-test; \*\*independent sample (two mean) test

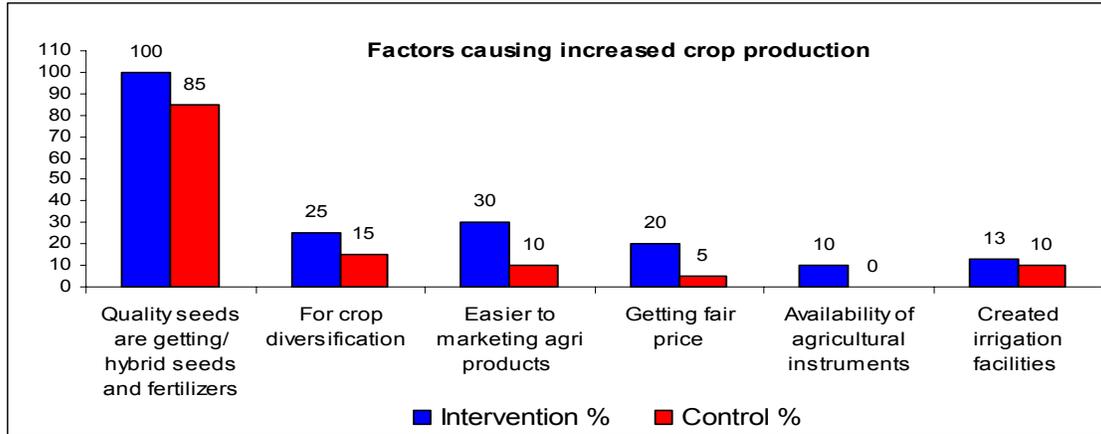
**Status of multiple productions of crops:** Bar graphs illustrate increase in the multiple productions of crops (one crop, 2 crops, 3 crops, and 4 or more crops) comparatively by areas (Intervention Versus Control) and by time periods (Pre and Post commencement of project period).



Status of multiple crop productions	Intervention : %		Control : %	
	Pre	Post	Pre	Post
One	32	0	33	0
Two	61	33	58	49
Three	7	59	9	50
Four and more	0	8	0	1
Total	100	100	100	100

In respect of yielding multiple crop production of crops comparatively show that the situation has improved both in the Intervention and in the Control almost equally with slight edge in favor of the Intervention areas.

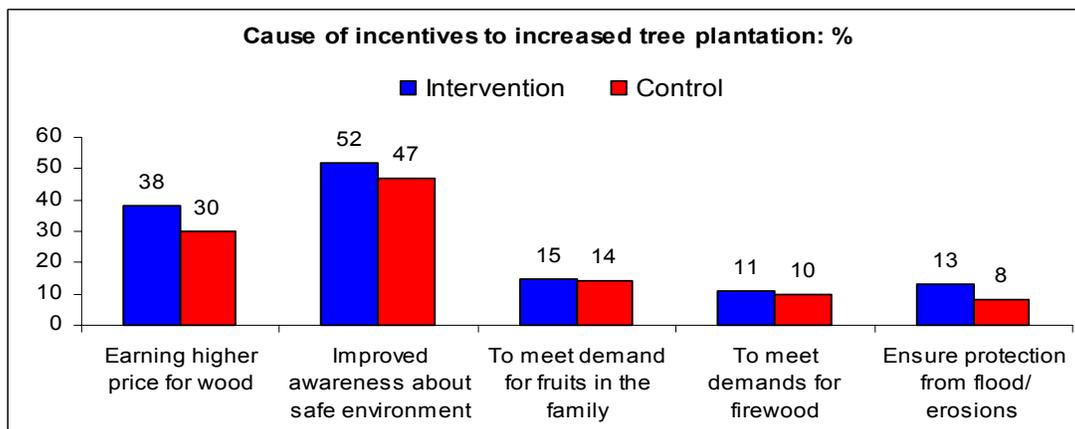
**Factors causing increased crop production:** Bar graphs illustrate the factors accelerating agricultural productions comparatively by areas (Intervention Versus Control) at post project period.



Findings show that in respect of all the six factors which caused acceleration of agricultural productions during post project period were comparatively more favorable in the Intervention areas than in the control areas. Particularly in respect of availability of quality seeds due to improved communications, the intervention areas have an edge over the control areas additionally by 15%; and also in respect of marketing of agricultural products, it is 20%. Fifteen percent more respondents in the Intervention areas over the Control areas claimed to have gained earning fair price for agricultural products.

**Tree plantations:** Three fourths (74%) of the respondents in the Interventions areas compared to just half (51%) in the Control areas claimed that the programs on tree plantation were implemented in their respective areas. Two times more respondents in the Interventions area (17%) than those in the Control areas (8%) also mentioned that the trees were planted on the road side.

Bar graphs illustrate the factors of incentives to increased tree plantations comparatively by areas (Intervention Versus Control) at post project period.



Majority of the respondents in the intervention areas (52%) compared to a little less than half in the Control areas (47%) prioritized 'improved Awareness about safe Environment' as an incentive to encourage road side tree plantations.

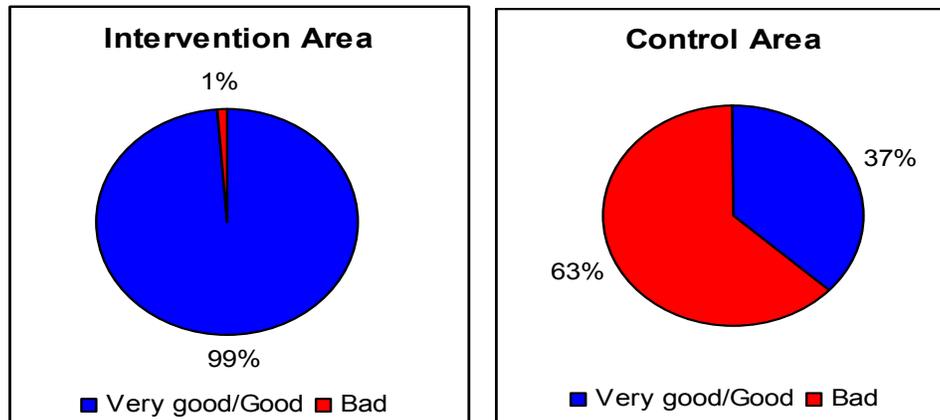
**Perceptions of the beneficiary samples comparatively rated improved agricultural productions in the intervention areas over the Control areas.**

## Section 4: Perceptions of Socio Economic Benefits

### Conditions of Road Communications currently

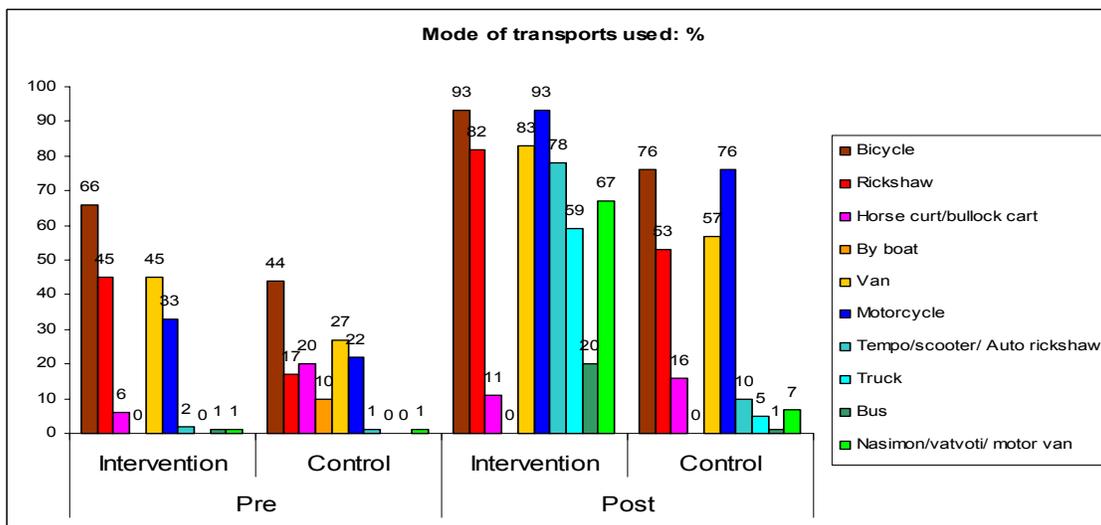
Respondents almost universally acclaimed (perceived) the conditions of Road Communications currently as either Good/Very Good; while only one third of the respondents (37%) from the control held same views. Two third (63%) of the respondents in the control areas assessed the conditions of road communications as bad (see Bar graphs).

#### Status of road communication



### Mode of transports used in Intervention and Control Areas: Pre and Post Project:

Bar graphs below illustrate the types of vehicles used (motorized in Blue or Green Colors and non motorized vehicles in Brown/Red or Pink colors) in the Intervention and Control areas pre and post project periods.



**Table 6: Mode of transports used in Intervention and Control Areas: in %**

Mode of transports used	Pre project period		Post project period	
	Intervention	Control	Intervention	Control
Bicycle	66	44	93	76
Rickshaw	45	17	82	53
Horse cart/bullock cart	6	20	11	16
By boat	0	10	0	0
Van	45	27	83	57
Motorcycle	33	22	93	76
Tempo/scooter/ Auto rickshaw	2	1	78	10
Truck	0	0	59	5
Bus	1	0	20	1
Nasimon/vatvoti/ motor van	1	1	67	7

The use of transports (as in bar graphs above) by types (percent of respondents perceiving) and the change over the period comparatively between Intervention and in the control areas are discussed below:

- Use of rickshaws have increased from 45% at pre project period in the Intervention areas to 82% during post project period, while in the Control areas it has increased from 17% to 53%;
- Use of Van Cart have increased from 45% at pre project period in the Intervention areas to 83% during post project period, while in the Control areas it has increased from 27% to 57%;
- Use of Tempo/scooter/ Auto rickshaw have increased from 2% at pre project period in the Intervention areas to 78% during post project period, while in the Control areas it has increased from 1% to 10%;
- Both in the Intervention and in the Control areas Almost no truck, bus, and no indigenous vehicles was ever plying on the roads during the pre project period; but during post project period use of trucks, bus, and indigenous vehicles increased (as % of respondents perceiving) to 59%, 20% and 67% respectively in the Intervention areas, while in the control areas it remained at low level (1 to 7%).
- Use of Motor Cycle have increased from 33% at pre project period in the Intervention areas to 93% during post project period, while in the Control areas it has increased from 22% to 76%;
- Use of bicycle have increased from 66% at pre project period in the Intervention areas to 93% during post project period, while in the Control areas it has increased from 44% to 76%;
- Use of Horse/Bullock Cart have increased from 6% at pre project period in the Intervention areas to 11% during post project period, while in the Control areas it has decreased from 20% to 16%.

Analyses of findings above, clearly underscore that the use of motorized vehicles in the Intervention areas compared to those in the Control areas have increased at much higher rates as per perceptions of the beneficiary samples during the post project period. As for example, in the Control areas only 5% of the beneficiaries mentioned about plying of trucks, while in the Intervention areas it is 59% and again in the control areas only 1% mentioned about plying of buses, while in the Intervention areas, it is 20%.

### **Perceptions about communication (travel) hardships to Important Places**

**Perceptions of Males:** In the intervention areas at pre project period, little less than one fifth (18%) of the respondents mentioned that travel to important places was not at all easy or not

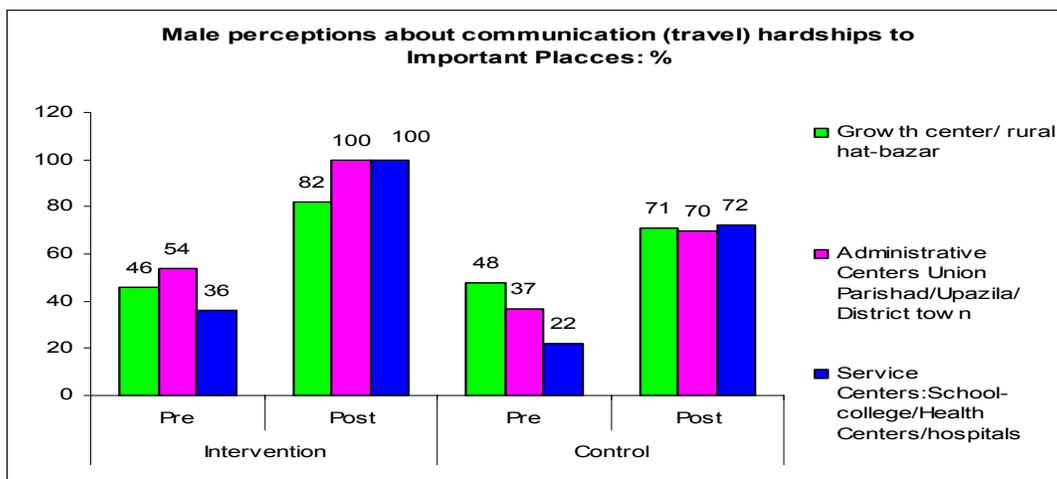
possible, while during post project period none perceived traveling as not easy or difficult. On the contrary, in the Control areas at pre project period, more than a third (39%) of the respondents mentioned that travel to important places was not at all easy or not possible, while during the post project period, only 5% perceived traveling as not easy or difficult.

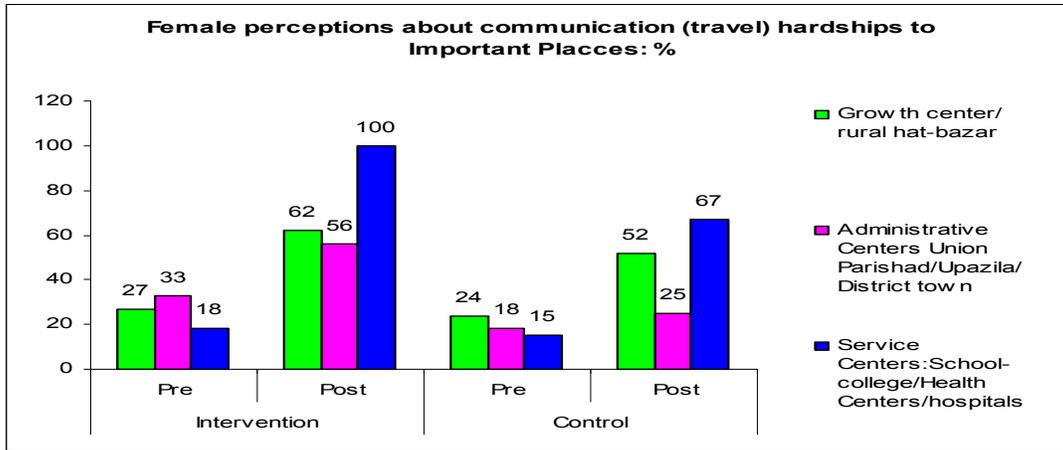
**Perceptions of Females:** In the intervention areas at pre project period, more than a third (39%) of the respondents mentioned that travel to important places was not at all easy or not possible, while during post project period, a tenth (10%) perceived traveling as not easy or difficult. On the contrary, in the Control areas at pre project period, more than half (51%) of the respondents mentioned that travel to important places was not at all easy or not possible, while during the post project period, about a sixth (15%) perceived traveling as not easy or difficult.

Queries about the places to visit were made on three categories: Growth center/ rural hat-bazaar (Green color); Administrative Centers Union Parishad/Upazila/District town (Pink color); and Service Centers: School-college/Health Centers/hospitals (blue color). Bar graphs below illustrate the perceptions of the males and females regarding their visits to these three kinds of places (in terms of ease/hardships in traveling) comparatively by intervention and control areas and by time periods (pre and post project implementation time).

**Males Perceptions:** Findings in the bar graphs below

- As regards visit to Growth Centers/hats/bazaars 82% of the respondents during post project period felt at ease to travel their, while during pre project period only 46% said so; while in the Control areas, the perceptions changed from 48% during pre project time to 71% during post project time;
- As regards visit to Administrative Centers Union Parishad/ Upazila/ District town 100% of the respondents during post project period felt at ease to travel their, while during pre project period only 54% said so; while in the Control areas, the perceptions changed from 37% during pre project time to 70% during post project time; and
- As regards visit to Service Centers: School-college/Health Centers/hospitals 100% of the respondents during post project period felt at ease to travel their, while during pre project period only 36% said so; while in the Control areas, the perceptions changed from 22% during pre project time to 72% during post project time.



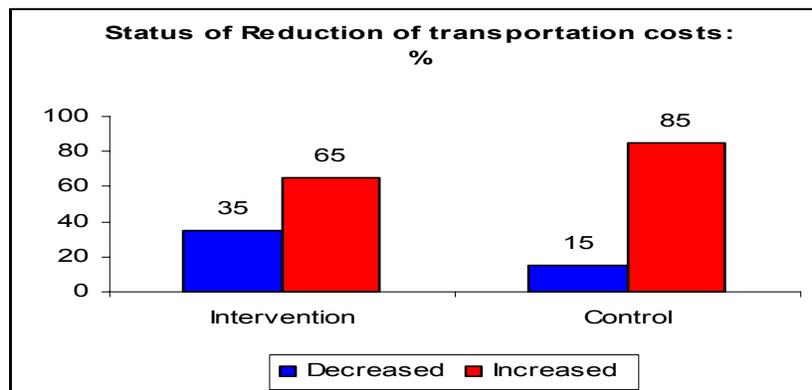


Females Perceptions: Findings in the above bar graphs

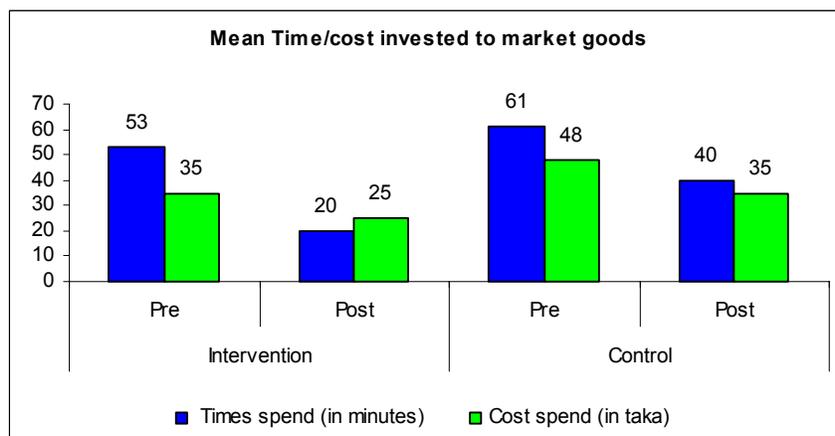
- As regards visit to Growth Centers/hats/bazaars 62% of the respondents during post project period felt at ease to travel their, while during pre project period only 27% said so; while in the Control areas, the perceptions changed from 24% during pre project time to 52% during post project time;
- As regards visit to Administrative Centers Union Parishad/ Upazila/ District town 56% of the respondents during post project period felt at ease to travel their, while during pre project period only 33% said so; while in the Control areas, the perceptions changed from 18% during pre project time to 25% during post project time; and
- As regards visit to Service Centers: School-college/Health Centers/hospitals 100% of the respondents during post project period felt at ease to travel their, while during pre project period only 18% said so; while in the Control areas, the perceptions changed from 15% during pre project time to 67% during post project time;

### Time and cost of transportation

As regards reduction of transportation costs, more than one third of the respondents (35%) in the Intervention areas and only about one sixth (15%) in the Control areas perceived that the costs of transportation decreased currently compared to periods prior to commencement of the Project (see bar graphs below).



Bar graphs below illustrate average (mean) time and costs per shift of transporting goods to markets comparatively time periods and by Intervention and Control areas.



- During post project over pre project period, the average time/costs per shift of transporting goods to markets:
  - ✓ In the Intervention areas average time has been reduced by 33 minutes, while the average costs reduced Tk. 10; and
  - ✓ In the Control areas average time has been reduced by 21 minutes, while the average costs reduced by Tk. 13.

### Impact on Monthly Family Income

Table below specifies the average (combined for poor and non poor) monthly family income by heads (in taka) comparatively by areas (Intervention and Control) and also by time periods (Pre and Post Project Period).

**Table 7: Average Monthly family income by heads: in taka**

Average monthly family income by heads	Intervention			Control			*P-Value
	Pre	Post	% increase	Pre	Post	% increase	
From Crops production: include Vegetables/ fruits	6279	8548	36	4799	6586	37	0.31
From Poultry/Livestock	765	1156	51	767	916	19	0.00
Business	1068	1691	58	918	1067	16	0.00
Fisheries	238	355	49	230	334	45	0.02
Service	692	1149	66	669	1042	56	0.00
<b>Subtotal (Heads relevant to Communication Development)</b>	<b>9042</b>	<b>12899</b>	<b>43</b>	<b>7383</b>	<b>9945</b>	<b>35</b>	<b>0.00</b>
From Remittance	252	698		191	637		0.00
From Land mortgage	33	56		75	117		0.00
From Other sources include loans	662	1026		606	821		0.00
<b>Total include all sources</b>	<b>9989</b>	<b>14679</b>	<b>47</b>	<b>8255</b>	<b>11520</b>	<b>40</b>	<b>0.00</b>

\*P-value is based on Z-test

Heads of income relevant to Communication Development, particularly Poultry/Livestock, Business, and Services have shown accelerated rates (see bar next page below) of income in respect of Intervention areas over the Control areas (comparison of the columns on % additional income) during post over the pre project periods.

We have conducted statistical significance test (Pair sample test) to assess the impact of Intervention on average monthly family income. The analysis shows that overall average monthly family income increased by Tk. 4690 and Tk. 3265 in the Intervention and Control areas respectively. Pair sample test (Pre-post) shows that average monthly family income in Intervention areas increased significantly after the implementation of project ( $d=35.2$ ;  $p<.01$ ). It is also found that in the Control area, the monthly family income also increased significantly ( $d=23.4$ ;  $p<.01$ ). But the value of d-statistic for the difference in differences estimator indicates that intervention area is more highly significant than control area in terms of increasing average monthly income. The results show that percentage income increased in the intervention area is higher (43%) than control area (35%). The P-value shows that there are significant differences in increasing monthly family income between two areas (control and intervention).

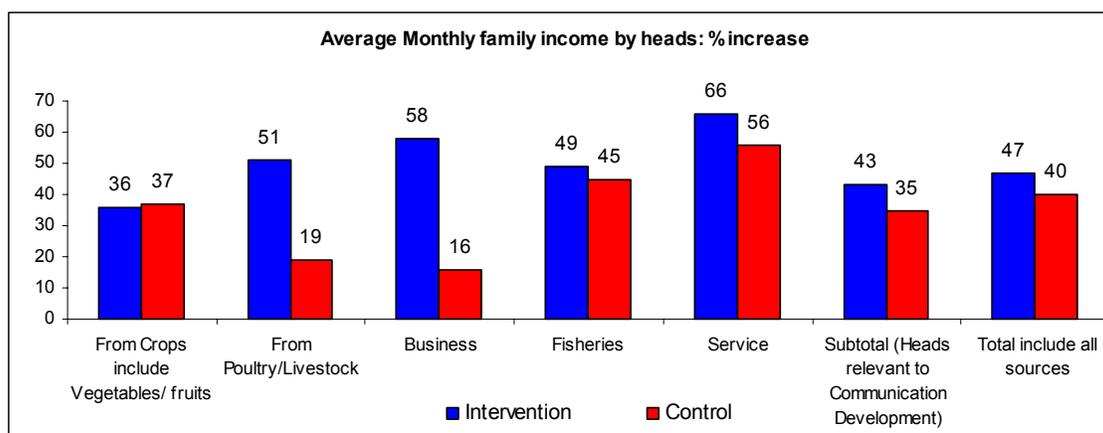


Table below specifies the average (combined for poor and non poor) monthly family expenditures by heads (in taka) comparatively by areas (Intervention and Control) and also by time periods (Pre and Post Project Period).

**Table 8: Monthly family expenditure by different heads: in taka**

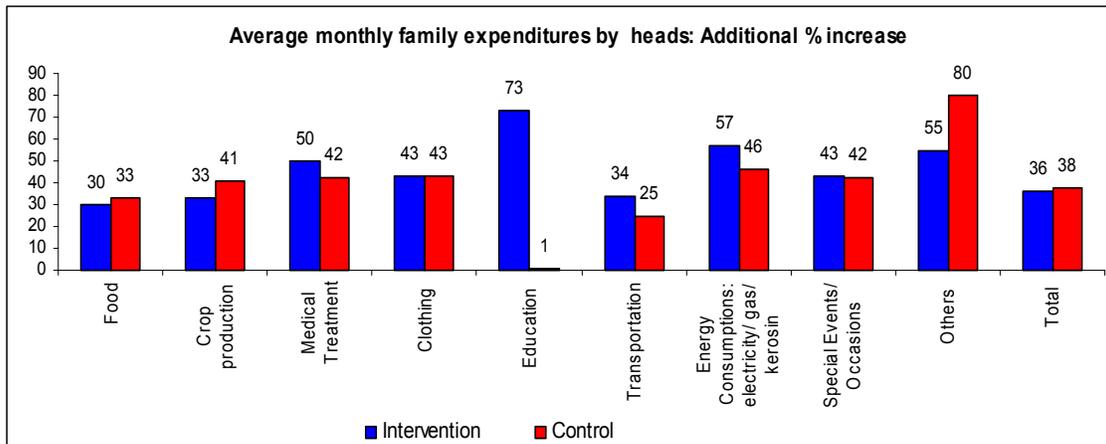
Average monthly family expenditures by heads	Intervention			Control			*P-Value
	Pre	Post	% increase	Pre	Post	% increase	
<b>Food</b>	3653	4763	30	3368	4468	33	0.06
<b>Crop production</b>	2030	2710	33	1327	1875	41	0.00
<b>Medical Treatment</b>	208	313	50	199	283	42	0.00
<b>Clothing</b>	350	500	43	315	449	43	0.50
<b>Education</b>	410	709	73	539	545	1	0.00
<b>Transportation</b>	249	334	34	354	443	25	0.00
<b>Energy Consumptions: electricity/ gas/kerosin</b>	138	217	57	136	199	46	0.00
<b>Special Events/Occasions</b>	421	600	43	405	574	42	0.31
<b>Others</b>	31	48	55	25	45	80	0.00
<b>Total</b>	7426	10088	36	6435	8900	38	0.15

\*P-value is based on Z-test

Heads of expenditures, particularly on Medical Treatment (health care), Educational expenses, costs of energy consumptions, and costs of transportation have shown accelerated rates (see bar graphs below) of expenditures in respect of Intervention areas over the Control areas (comparison of the columns on % additional expenditures) during post over the pre project periods. Increased expenditures in these particular areas also reflect improvements in the quality of life in the Intervention areas.

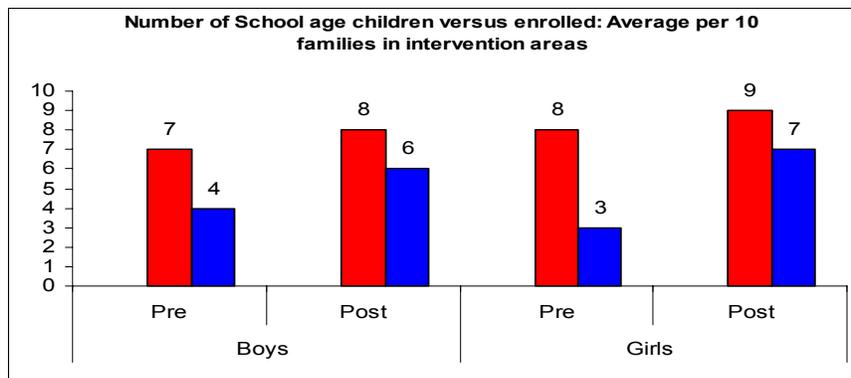
We have conducted statistical significance test (Pair sample test) to assess the impact of Intervention on average monthly family expenditure. The analysis shows that overall average

monthly family expenditure increased by Tk. 2662 and Tk. 2465 in the Intervention and Control areas respectively. Pair sample test (Pre-post) shows that average monthly family expenditure in the Intervention areas increased significantly after the implementation of project ( $d=51.18$ ;  $p<.01$ ). It is also found that in the Control area, the average monthly family expenditure increased significantly ( $d=22.9$ ;  $p<.01$ ). But the value of d-statistic for the difference in differences estimator indicates that Intervention area value is more highly significant than control area in terms of increasing average monthly family expenditure. The P-value shows that there are significant differences in increasing monthly family expenditure between two areas (control and intervention).



### School Enrollment

Bar graphs below illustrate comparatively between availability of school age children versus children enrolled by time periods in the Intervention areas only



Findings show that overall enrollment has significantly improved in the intervention area with greater levels of increased enrollment of the girls in schools during the post project period ( $p<.01$ )—findings reflect positive impact of communication development (see table below).

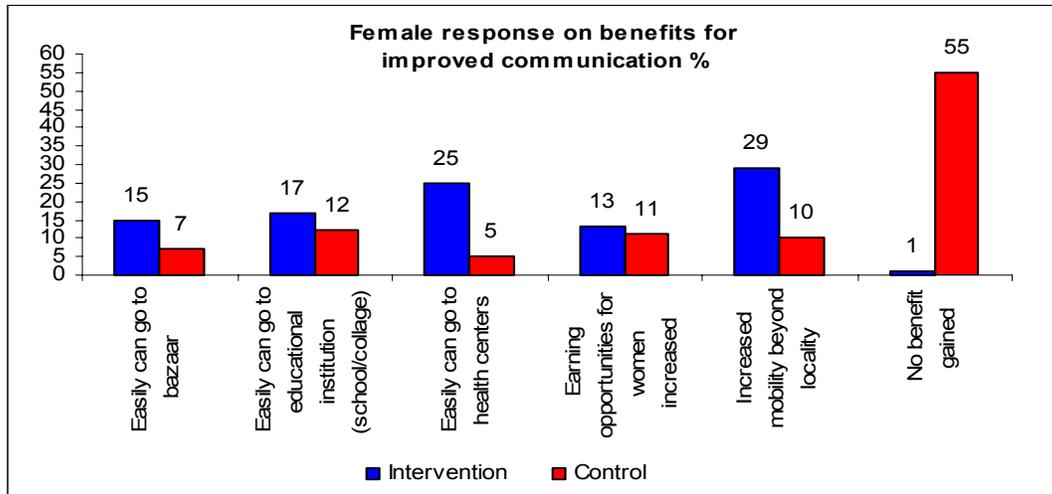
**Table 9: Status of school enrollment: Number of School age children versus enrolled (only in Intervention area)**

Number of School age children versus enrolled: Average per 10 families	Boys			Girls		
	Pre	Post	P-value	Pre	Post	P-value
School age	7	8	0.06	8	9	0.03
Enrolled in school	4	6	0.00	3	7	0.00

\*Z-test (two proportions)

## Benefits Accrued on Improved Communication for Females only:

Only one percent of the females in the Intervention areas denied gaining any benefits due to improvement of communications, while on the contrary, majority of the females in the Control areas (55%) held such negative perceptions.



Female response on benefits for improved communication: %	Intervention	Control
Easily can go to bazaar	15	7
Easily can go to educational institution (school/college)	17	12
Easily can go to health centers	25	5
Earning opportunities for women increased	13	11
Increased mobility beyond locality	29	10
No benefit gained	1	55
Total	100	100

For the females opportunities to visit markets (bazaars), schools/colleges, health centers increased both in the Intervention and in the Control areas, but it increased much more accelerated way in the former areas (intervention) than in the latter (Control). Scope for increased earning opportunities for the women increased both in the Intervention and in the Control areas almost comparably with slight edge in case of the Intervention areas. Interestingly, more than a quarter of the females in the Intervention areas (29%) compared to only one tenth in the Control areas (10%) claimed that their mobility beyond their locality enhanced.

Improved Communication system accelerates mobility and trade and commerce, which in turn impacts positively on the socio economic life of the people. In the current study, data underscored the same assumption to be true more in the project intervention area during post project period than in the Control area due to differential improvement in the communication system. In the intervention areas, average monthly family income increased and more significantly, the average monthly expenditures on components like health education and energy consumptions increased at much higher rates than in the control areas evidencing achievements of improved of quality of life in the intervention area.

## Chapter VI Strengths and Weaknesses: Recommendations and Sustainability

### Key Informants (Project Engineers) and Local Stakeholders

#### Strengths of the Project

Five broad areas of project benefits have been perceived by the LG Engineers (n = 44) and by the allied local officials (49 Elected, 90 GOB Employed and 3 NGO Managers) and these are shown comparatively in the Table below:

**Table 10: Distribution of LG Engineers and Local stakeholders by their perception of benefits accrued from the project**

Benefits Accrued from the Project	Perceptions of LG Engineers: %	Perceptions Local stakeholders: Elected and Employed Officials: %
<b>Development of Road Communication: Availability of increased transports; Savings of Time and costs on transportation and frequencies of travels to hats, bazaars and growth centers</b>	<b>63</b>	<b>20</b>
<b>Accelerated Agricultural Production</b>	<b>14</b>	<b>0</b>
<b>Increased trading/business and marketing of agricultural products leading to fair price of agri products ensured</b>	<b>46</b>	<b>33</b>
<b>Rural Economy improved; Rural income raised; Employment/income opportunities increased</b>	<b>59</b>	<b>71</b>
<b>Improvement of education/literacy and health care services</b>	<b>7</b>	<b>38</b>

Local stakeholders identified increased income opportunities and improved rural economy as the major gains achieved due to the project, while the engineers identified development of road communication as the major achievement. Enhanced opportunities of Marketing of Agricultural products have been perceived as a benefit almost in comparable proportion by the LG engineers (46%) and the local Stakeholders (33%). More than one third of the Local stake holders (38%) identified improvements in the access to educational and health services, but very meager proportion (7%) LG Engineers identified it.

**Weaknesses of the Project:** Majority (55%) of Key informants (44 Engineers; 2 Accountants, 49 Local Government Elected Officials (Upazila and Union levels), 90 Allied Departmental Officials and 3 NGO Managers) mentioned about the following problems:

- **Problems of Road Construction (12%):** Narrow or Less wide road and Not capable for running heavy vehicle (Problem of moving heavy vehicles); Road side damaged because of absence of culverts; Roads not constructed properly; Part of the total length of road constructed and part still remains mud constructed;
- **Problems of Repair and Maintenance (32%):** Lack of maintenance; Carpeting of road damaged; and Lack of monitoring/supervision;
- **Inadequate Tree Plantations (2%);**

- **Other local Problems (5%):** Roads are dug and water flows through drains created on the road; Absence of Community contact; Speed breakers; Roads filled up with from road side water sources; and local people were not involved in the construction work sufficiently.
- **Other Institutional Problems of LG (27%):** Inadequate funds allocated for the project; lack of training and orientation of project personnel; Long term planning was not considered while designing Roads (in terms of length, width and also selecting the sites)

## Recommendations

Table below specifies the recommendations of the Project Engineers and the Allied local Stakeholders for improving Project infrastructures and its use. Topmost priority has been assigned by both groups on timely and proper maintenance and repair work (100% of the Engineers and 75% of the Local Allied Stakeholders). Almost about a half of the Project Engineers (47%) and about a quarter of the Allied Stakeholders (23%) emphasized on timely financial support and adequate budget allocations including emergency allocations of budget for flood damaged structures. Allied local stakeholders (20 to 31%) in much greater proportions than the project Engineers (6 to 9%) recommended the following:

**Table 11: Distribution of Project Engineers (n = 44) and the Allied Stakeholders (n=142) by their Recommendations for improving Project infrastructures and its use**

Recommendation for improving Project infrastructures and its use	Project Engineers in %	Allied Stakeholders in %
Ensure timely and proper maintenance and repair work (Engage Kabikha Project)	100	75
Ensure timely financial support and ensure adequate budget allocations and also emergency allocations of budget for flood damaged structures	47	23
Ensure Regular supervision by the responsible officer and workers and Zero tolerance mentality should be developed of Project Director and other officers for regular field visit and quality control check; ensure strong monitoring	9	31
Community or local level supervision and monitoring by Care takers; raise awareness of community people about the use of infrastructure; Arrange local committee/UP and LCs	6	20
Improve Construction Qualities: Use proper and good quality of materials; Set up block beside the roads; Movement of heavy vehicle should be restricted; Road should be more wide; in selected flood prone areas raise the height of the roads; and Drainage system should be developed in growth centers/rural market	9	25
Ensure Tree plantation both sides of the road and ensure maintenance and protection of plantations	11	13

## FGD Findings:

**Strengths/Benefits accrued from the Infrastructures:** The local people are currently using the roads and bridges/culverts for various purposes, such as

- ✓ carrying goods to districts
- ✓ Transporting and selling agricultural products (such as, seeds, paddy, vegetables, jute, rice, pulse, bean, wheat, mustard, potato, onion, chili, turmeric, ginger, sugarcane, maize, pine apple, banana, cucumber, cauliflower, fertilizer, pesticides etc.) to upazila, district and capital city markets
- ✓ Transporting and selling agri products to the growth centers, rural hat-bazar/markets, wholesalers
- ✓ Visiting schools and colleges
- ✓ Visiting upazila, district and other places

- ✓ Procurement fertilizers, pesticides and agri implements has become convenient
- ✓ Visiting and seeking health center care
- ✓ Buying household necessities from markets
- ✓ Engaging in various types business enterprises
- ✓ Created opportunities for increased vehicular movements, making journeys less time consuming reducing costs travels and at the same time transportation of goods and services

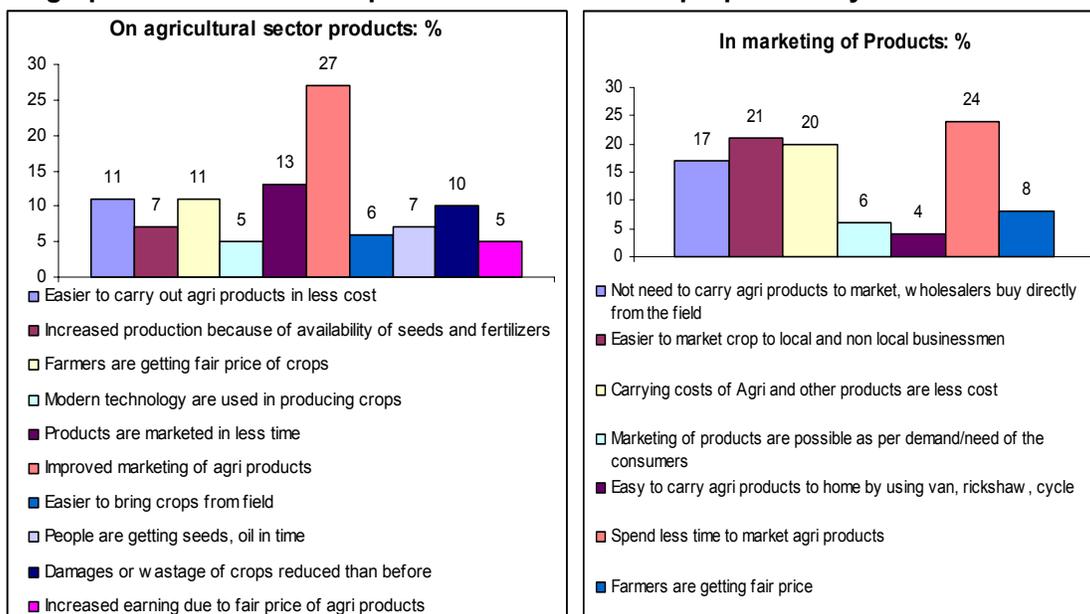
Before the development of the communications (construction of roads), most of the time people moved on foot and also used rickshaws, vans, cycle, bullock cart and they often could not move on the road during rainy season, when they had to depend on boat. But now truck, CNG, pick up, bus, lorry, motorcycle, car can move frequently.

## Growth centers/rural markets

**Strengths/benefits accrued from:** Out of 32 participants in four districts, 27 participants opined that due to development of growth centers/rural markets their income has increased, while 5 participants held negative views in this regard. However those affirming positive results, specified following benefits accrued from the growth centers/rural markets:

- Different types of agri and other products are now being transacted (buying and selling) from different growth centers/rural markets; and the products transacted include vegetables, fish, meat, paddy, jute, rice, pulse, glossaries/stationeries, cloths, shoes, flour, wheat, mustard, duck-chicken, fertilizer, pesticides, potato, onion, chili, pine apple, banana, turmeric, ginger, jewelries etc.
- All participants mentioned that there is no female shopkeeper in the growth centers/rural markets, but female customers are available and numbers of female customers are gradually increasing.
- Participants opined that, as there is only one developed growth center/market under this project in their area; and the sellers are getting fair price for their products, they are eager to produce more agri products, which are paddy, jute, potato, chili, mustard, onion, turmeric, vegetables, mango, etc. by using modern technology. They also thought that the Growth Centers are the indirect incentives for increased production and marketing of agri products.

Bar graphs below illustrate specific relative benefits proportionally:



**Weakness of the project, specially environmental impact:** 39% of the participants specified following environmental problems:

- It is not possible to move during dusty weather and rainy season because the roads are not fully constructed, as part of the road is still incomplete are mud constructed (5%);
- Occurrences of road accidents are frequent, as most of the roads are constructed with too many bends and turns (7%);
- Sound, dust and air pollutions have increased due to movements of vehicles (12%);
- Roads occupy cultivable lands; hence farm lands are decreasing (8%); and
- Construction of new roads resulted in the felling of trees, which in turn affected the environment. (7%).

### **Recommendations for Improved performances of the Project**

- Local Committees may be formed for supervision of the construction works and also for ensuring quality maintenance (61%);
- Tree plantations component need to be given more importance as in most of the places required (targeted) number plantations are completed; either because the trees are felled by local vested interest groups or adequate attention or care was not given on the maintenance of trees. For this, more efforts are needed to mobilize local women force and if necessary, they may be given orientation on maintenance of tree plantations; increased tree plantations would in future ensure strength of roads as trees would protect the roadside soil erosions (21%);
- Roads, bridges and culverts are not properly maintained and repaired; local committees may be formed to oversee maintenance and timely repairs of the infrastructures every year (14%);
- In places where water logging exists, plans may be taken to construct more bridges or culverts (1%);
- Maintenance of roads/bridges/culverts may be entrusted with the local government, which may be given financial support with technical support from LGED (27%);
- Need to widen the roads as heavy and large vehicles often use even the rural roads these days, or else their should be measures to restrict movements of heavy vehicles (13%);
- Growth centers need to be well managed and kept clean with proper drainage system and electricity (2%);

### **Local level Workshop**

**Weaknesses of the Project:** Selection of sites or areas of construction of roads was often interfered due to political influences. And in some instances, roads were constructed comparatively in areas of lesser priority. In many cases roads were incomplete in the sense that it did not cover the expected distance. Moreover almost all the roads are unfit for movements of heavy vehicles.

**Strengths of the Project:** Improved road network contributed to:

- Traveling by the school and college going students has become smooth and less difficult, which might have resulted to enhanced enrolment in the educational institutions in the locality;
- Opportunities for accelerated marketing of the products resulting to enhanced income and profits for the farmers leading possibly to poverty alleviation;
- Improved communication network are encouraging poor women to undertake marketing of their products at a fair price;

- Easier and faster traveling between home and health centers reducing probable rates of child and maternal morbidity and mortality; and
- Participation of NGOs operations of increased numbers of non formal schools in the area.

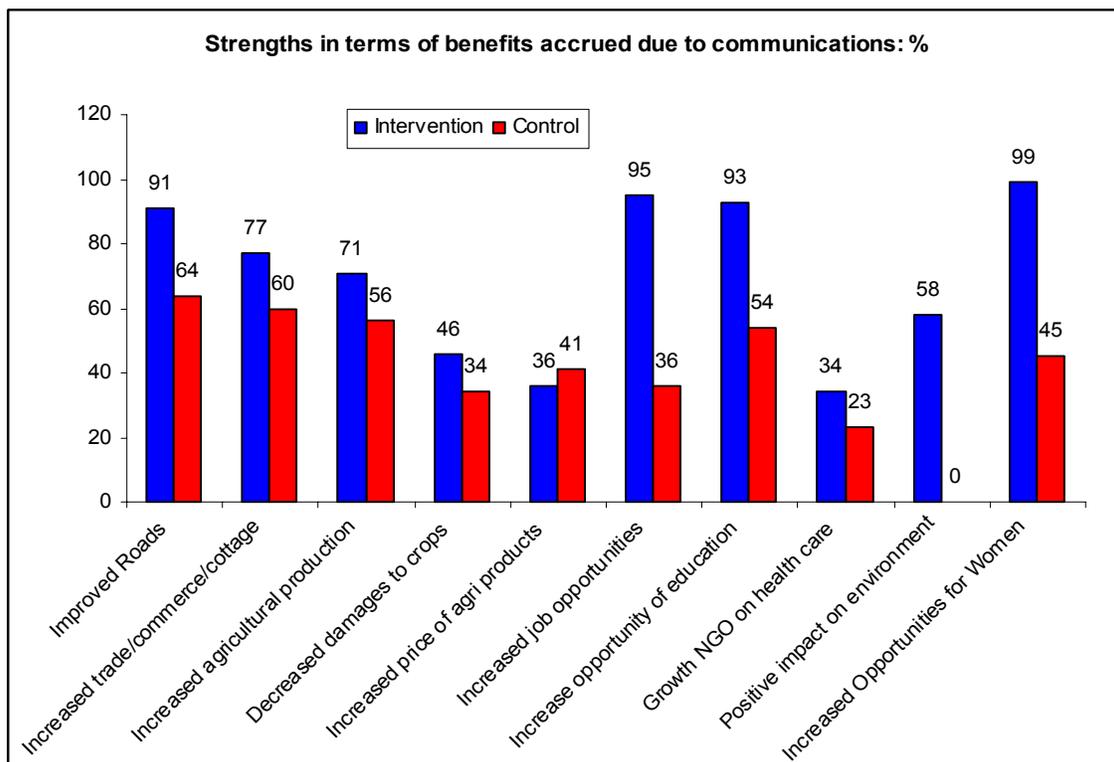
### Recommendations for future Improvements of Project Interventions

- Enhanced allocations of funds for repairs of the Rural and FRB roads;
- Construction of roads fit for movements of heavy vehicles;
- Construction of roads covering the desired length so that people can reach their destinations without facing communication hazards;
- Selection of sites for roads need to prioritize the importance of communication opportunities instead of submitting to political or vested interests;
- In the selection of sites for roads prior participation of the beneficiaries and stakeholders is important; and
- In the construction of roads first priority may be given for completion of FRBs and then connect the FRBs by Rural Roads.

### Household Findings:

**Strengths:** Perceptions of both males and females are considered in assessing the overall strengths and weaknesses of the project interventions. In the interventions areas, every one observed that some benefits were gained due to project implementation. On the contrary, in the control areas more than a quarter of the respondents (28%: males and females combined) perceived that the area did not gain any additional benefits during the period lapsed between 2002 to 2009 (period of project implementation).

**Benefits Gained: in post 2009 over the period falling prior to 2002**

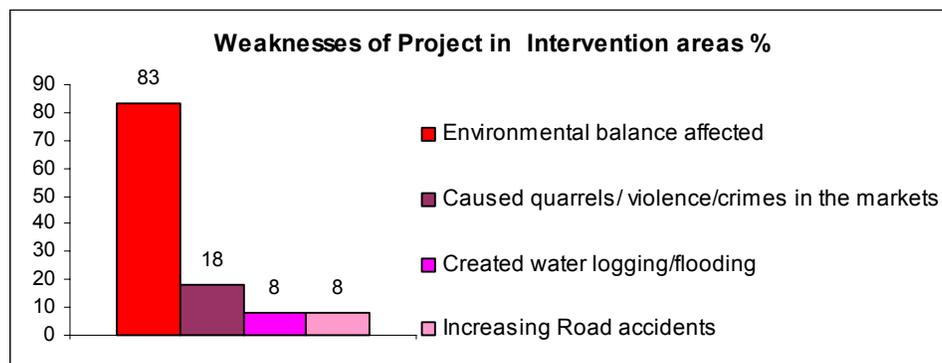


Respondents in the Intervention areas overwhelmingly (91%) acclaimed that they had been benefited with improved road communications, while little less than two thirds (64%) in the Control areas held same views. Specific benefits accrued due to improved Communications comparatively are:

	Intervention %	Control %
• Increased performances of trade/commerce/cottage industries	77	60
• Increased agricultural production/improved crop productions	71	56
• Decreased damages of crops	46	34
• Increased price/value of agri products	36	41
• Increased job opportunities: overall and local labor/ transport sector	95	36
• Increase opportunity of education	93	54
• Growth NGO/voluntary associations particularly health care	34	23
• Positive impact on environment: Reduced water logging/flooding/ Benefits accrued due to tree plantations: road embankments are being safe; environmental balance; demands for trees (fruits and fire woods) met	58	0
• Increased Opportunities for Women: mobility, earning scope and visits to schools, health centers, markets and places beyond locality	99	45

**Weaknesses/problems encountered: due to Project Interventions in the Intervention areas only: in post 2009 over the period falling prior to 2002**

About a fifth of the respondents (18%) did not perceive of any problem due to improvements of road communications in their areas.



**Weaknesses of Project Identified in Intervention areas are:**

- Environmental balance affected due to mobility of transports: air/sound pollution -- 83%
- Trade and commerce caused quarrels/violence/crimes in the markets -- 18%
- Created water logging/flooding -- 8%
- Increasing Road accidents -- 8%

## Recommendations

**Suggested measures for sustainability of the developed infrastructures: Only for intervention area:**

- Road/Bridges
  - **Ensure regular supervision and maintenance of Roads and involve local Govt.** 80%
  - **Roads need to be widened** 29%
  - **Restrict movements of heavy Vehicles: community may be mobilized and trained to control traffic, particularly movements of heavy vehicles in their respective localities** 11%
  - **Develop quality full roads: avoid completion of part of roads** 12%
  - **Ensure Quality of Culverts: widen, fill up with soil, repair railings** 12
- Growth center/rural markets
  - **Market should be large: community demands extending of markets; community may be motivated to donate more land** 20%
  - **Proper maintenance needed** 2%
  - **Drainage system needed** 3%
  - **Ensure management and maintenance of growth centers by Bazar committee** 41%
  - **Tube wells and toilets are essential in the markets** 2%
- Tree plantation
  - **Road side Tree plantation to be expanded with maintenance and protection** 18%
- Don't know 20%

## Intensive Interviews with Users: Case studies with the Users

Users opined that the Project infrastructures accelerated agricultural production and improved marketing of agricultural products creating job opportunities. The users unanimously (100%) affirmed that income of the farm families has been raised. In addition, improved road communications exposed rural farm communities to:

- Enhanced Utilization of modern fertilizer/pesticide--10%;
- Access to the use of modern technology of crop production--9%;
- Extended participation to crop diversification--3%;
- Timely marketing of agricultural products--11%;
- Higher levels of earning due to fair price obtained through sales of agricultural products in the rural markets--57%; and
- Increased wages of the farm laborers, raised their productivity--10%.

## Summary (Overall) Recommendations

- **Roads/Culverts/Bridges**
  - Improve Construction Qualities ensuring following specific tasks:
    - ✓ Use proper and good quality of construction materials; make provisions (in the tender document) for sample testing of construction materials (steel bar, cement, coarse and fine aggregates) from recognized laboratory prior to use;
  - Set up block beside the roads;
  - Restrict movement of heavy vehicle;
  - Widen Road to accommodate vehicles of different size and load carrying capacities;
  - Raise the height of the roads in selected flood prone areas;

- Ensure approach road on bridge and culvert are filled with earth, which should be properly compacted; during filling of earth compaction should be done 200 mm layer by suitable road roller and before carpeting the sub base should be well compacted (In some cases the height of filling exceed 1.5 to 2 meter in default);
- Ensure regular supervision and timely maintenance and repair of Roads/bridges/culverts and involve local Government (Engage Kabikha Project)
- Community may be mobilized and trained to control traffic, particularly to restrain movements of heavy vehicles in their respective localities;
- Develop quality full roads: avoid completion of part of the roads; involve Local Community/UP to finalize road sites and size take measures to reduce political pressures;
- Ensure timely financial support and ensure adequate budget allocations and also emergency allocations of budget for flood damaged structures; and
- Ensure regular supervision and strong monitoring by the responsible officer and workers and Zero tolerance mentality should be developed of Project Director and other officers for regular field visit and quality control check.

It is an imperative that LGED in future emphasizes on quality of construction of all kinds of infrastructures more than on numbers or quantity. In response to request for drawing an overall master plan for rural infrastructures, the Chief Engineer, LGED assured that such plan is available with them, but the problem arises when political pressures and influences of the powerful cause deviations from their plans. In future for better management of road use by transports by various types and categories of vehicles the local level authorities may be oriented to introduce different road signs for different categories roads—rural or upazila roads.

#### ➤ **Growth centers/rural markets**

- Market should be large: community demands extending of markets; community may be motivated to donate more land;
- Proper maintenance needed;
- Drainage system needed and Drainage system should be developed in growth centers/rural market; and
- Ensure management and maintenance of growth centers by Bazaar committee;
- Tube wells and toilets are essential in the markets.

For efficient marketing of agricultural products, the need is to create extended provisions of storage, packaging and networking between sellers and buyers. In some markets to rationalize further use of farm lands, plans, if suitable, could be designed for vertical rise of infrastructures instead of extending markets (flatly) on useful fertile farm lands.

#### ➤ **Tree plantation**

- Prior to tree plantations, community need to be oriented by LGED about their responsibilities on maintenance and protection;
- Both IMED and LGED need to communicate with Forest Department asking them to take measures against felling down of trees; and
- LGED to mobilize local women, particularly from among the poor to take care of the trees and provide budget allocations to compensate the labour to be given by the community in this regard.

## Conclusion

Study findings clearly evidence the following that:

- LGED has completed all the types construction works almost as per scheduled targets at 97% level: newly constructed FRBs, RRs, Reconstruction of Flood damaged roads; Construction of bridges and culverts and reconstruction of bridges and culverts; construction of Growth Centers and Rural markets and tree plantations;
- Local communities are now enjoying the benefits of improved communication systems and the benefits accrued are certainly comparatively more than those achieved in the control areas (as estimated in this impact evaluation survey) and the major benefits are increased marketing of agricultural products, gaining fair price for the same; better communication to schools and health centers etc.;
- In many respects, the project outcome has shown that the LGED interventions are effective in encouraging women, particularly poor women's participation to road and allied socio economic development endeavors;
- But the problems are that the infrastructures are showing both major and minor wear and tear in many places without actions resulting to prompt and timely repairs; for which probably both failure of a sound supervisory and monitoring system and also inadequate financial allocations could be held responsible;
- Local communities complained about site selections and interference by the political elites in this regard; this caused partial completion of roads leaving often a vital section as incomplete (as kaccha/mud road);
- The local communities including the local government are not involved in many stages of the project interventions (construction and maintenance works); and lastly
- LGED programs, as evidenced from this survey, missed the opportunities of launching extensive orientations, both of the project personnel (particularly engineers) and the local stakeholders in raising their awareness about the physical, social and economic benefits across gender and socio economic status (poor and non poor) of the impact of good roads, rural markets/growth centers and tree plantations.

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# Appendix 1

## Detailed Findings of Physical Observation

**Table 1: List of observed infrastructures**

Districts	Upazilas	Name of the schemes	Project achievements	Sample observed	
				Target	Observed
<b>Construction of Upazila roads (Feeder road type-B)</b>					
Mymensingh	Muktagacha	1. Road development from Goaltajpur madrassha to jhanka bazar road by carpeting on shibganj road of muktagacha Upazila (chain 0.000 – 1.000) km; 2. Road development from Satrashia – Begunbari by carpeting of Muktagacha Upazila (chain 0.000 – 1.620) km; and 3. Chechua -Shibgan road development (chain 3.491 – 4.755) km	3.62 km (1+1.62+1)	3 km	3.62 km
	Ishwarganj	4. From Islampur madrassha to gangpara mosque to banglabazar 1.264 km road development by carpeting	1.2 km	1 km	1.2 km
	Bhaluka	5. Bhaluka – Dhalia 1 km road development	1 km	1 km	1 km
	Fulbaria	6. Koiarchala –Soaitpur road development (chain 8.074 – 8.800) km; 7. Madhupur road development (Balughat) (chain 1.000 – 1.609) km; and 8. Achim – Trisal via Purabari road development (chain 3.570 – 4.179) km	1.852km (.588+.609+.655)	2.35 km	1.852 km
	Trishal	9. From Shakua to Kalir bazaar connected road development via Rampur bazaar and Barma bazaar (chain 0.000 – 0.650) km	.65	.65 km	.65 km
Tangail	Kalihati	10. Completed incomplete work of Patal – Joker char of nikail road (chain 1300 meter); 11. Completed incomplete work of Dhunail soya – Hatia (IBA) road (chain 0.750- 2.315) km; 12. Road development of Bhandeswar GC-Borochana (chain 0.347 – 2.367) km; and 13. Construction of pucca road of Alenga – Mogra – Patal (chain 7.913 – 8.639) km	5.046 km (1.3+1+2.02+.726)	5 km	5.046 km
	Madhupur	14. Gangair – Alokdia road development (chain 1.157 – 3.000) km	1.82 km	1 km	1.82 km
	Mirzapur	15. Mirzapur –Patharghata road development (chain 0.500 – 1.922) km; 16. Mirzapur –Nagarpar road development (chain 7.700 -9.348) km; and 17. Dewanhata – Bilgazaria road development (chain 2.800- 3.880) km	4.118 km (1.390+1.648+1.080)	3.6 km	4.118 km
	Basail	18. Basail – Sunna road development (chin 2.42 – 3.811) km	1.4 km	1.4 km	1.4 km
	Ghatail	19. Bhuapur – Jamuria road development by BC (chin 7.622 – 8.396) km; Bhuapur – Jamuria road development by BC (chin 8.390- 8.940) km; and Bhuapur – Jamuria road development by BC (chin 9.000 – 9.920) km	0.774+0.550+0.920	2.15 km	2.244 km
	Gopalpur	20. Completed pucca road from Udampur to Jhaiail bazaar of Hemnagar Jhaiail road (chin 1.212 – 2.063) km	0.85 km	0.85 km	0.85 km
Jamalpur	Sarishabari	21. Barrister (Panchashi –Narpara ) FRB road development (chain 0.00 – 1.00) km; and 22. Barrister Abdus Salam road development (chain 4.000 – 6.000) km	4.25 km (2.1+2.15)	3 km	4.25 km
	Islampur	23. Islampur – Jhagrarchar road development (chain 11.800 – 12.400) km	0.7 km	0.6 km	0.7 km
	Bakshiganj	24. Tinani para – Laochapra road development (chain 4.000- 5.000) km	1 km	1 km	1 km
	Milandha	25. Construction of bridge road and link road from Godarbazar to Sarkar bari of Ghosherpara – Pathanpara road and	1 km	2.15 km	2 km
Jamalpur	Milandha	26. Construction of structure and road development from Purbo mor of Fulkucha bazaar to Rayer bakail (via Kha bari)	1 km		1 km
Kishorganj	Pakundia	27. Thana ghat of Mirzapur – Mathkhola - Tokbazar over agaro sindhur bramyaputra river development of connected road of bridge (chain 140.15 miter)	3 km	.25 km	3 km
Netrokona	Sadar	28. Bairura -North Bishiura GC road development near Netrokona Kendua RHD road (chain 2.626-3.226) km	4.80 km	1 km	4.80 km
<b>Total</b>			<b>39.55km</b>	<b>30 km</b>	<b>39.55 km</b>

Districts	Upazilas	Name of the schemes	Project achievements	Sample observed	
				Target	Observed
<b>Construction of Union and village road</b>					
Mymensingh	Muktagacha	1. Muktagacha–Debgram road development by carpeting (chain 0.960-1.860) km	1 km	1 km	1 km
	Ishwarganj	2. Road development from Utharbari UP to Boyelbari by carpeting	1.5 km	1 km	1.5 km
	Bhaluka	3. Road development from Seed store bazaar to Awlatoli village of Bhaluka Habirbari Union (chain 0. 500- 1.531 ) km	1 km	1 km	1 km
	Fulbaria	4. Road development by carpeting from Fulbaria – Hatkalir bazaar road through Dhamur Falur bazaar Beltoli (chain 0.730- 1.365) km	0.602 km	0.6 km	0.602 km
	Trishal	5. Road development by carpeting from KB Ismail road to Ahmad's house (chain 10.570 – 11.570) km	1 km	1 km	1 km
	Nandail	6. Merenga – Nilganj road development by HB (chain 1.330 – 2.880 ) km	1.55 km	0.4 km	1.55 km
Tangail	Kalihati	7. Kokorhora–Bagutia road development (chain 0.000–1.240) km; & 8. Sahadepru UP (Powktan) solakura kuchuti road development (chain 1.000–2.000) km	3.24 km (1.24+2)	2 km	3.240 km
	Madhupur	9. Raktipara–Gopad Etimkhana via Kalimajhi Road development (chain 0.0-0.817) km	.82 km	3 km	.82 km
	Mirzapur	10. Road development from Kadimdhala bridge to Dewbhogh Baltia government primary school (chain 0.000 – 1.433) km; and 11. Road development by HB from Dhalla bridge to Ujan bari of Dhaka Tangail road (chain 00 - 0.600) km	.79 km (.490+ .300)	2 km	.79 km
	Basail	12. Road development from kalia to kauljani (chain 2+596 – 4+670) km	1.470km	2 km	1.470 km
	Ghatail	13. Gungram–Sandhanpur–Khajarchala road development (part 1) (chain 0.000–0.919) km; 14. Dhalapara – Chapri road development by BC (chain 9.012 – 9.934) km; and 15. Road development of Pakutia (Boys high school) to Amtoli road (chain 0.000– 3.200) km	4.877 km (.755+ .922+ 3.20)	5 km	4.877 km
	Sakhipur	16. Tottarchala - Kuratoli ferry ghat road development (chain 3.161– 4.151) km; 17. Road development from Kaccha bazaar to kalidash growth centre (chain 1.270 – 2.238) km; and 18. Shakhipur– Basail through Shalgram sunna road development (chain 3.180 – 4.496) km	3.284km (5.28+ .968+ 1.316)	3 km	3.284 km
Gopalpur	19. From Belua charpara mor to Belua bazaar through Hemnagar road completed incomplete pucca road of Gopalpur nalin bazaar (chain 2000–2524) km and (chain 2524– 3004) km	1.052 (.524+ .528)	1 km	1.048 km	
Jamalpur	Sarishabari	20. Upazila HQ to Doail UP via Bolardia pucca road construction (chain 8.000–10. 100)	2 km	1 km	2 km
	Islampur	21. From Bulbuli high school to Doctor Manjil Murshed Khan's house road and 2 nos U drain development of Gutail road (chain 0.000 – 0.345) km	.345 km	0.3 km	0.345 km
	Bakshiganj	22. From Naim Mia's bazaar to Ghashipara Mondol bari road development	1 km	1 km	1 km
	Milandha	23. Mamudpur Gabindoganj road development and 24. Beltoli Charashguna bazaar road development	2 (1+1) km	2 km	2 km
	Dewanganj	25. Takimari Dewanganj road development and 26. Lonkkarchar road development	(3.5+ 1.715)	4.7 km	5.215 km
Sherpur	Shreebordi	27. From Kalibari to Fareque Mondol house road development via Shai Baro Duari Mosque of Garjaripar	3 km	2 km	3 km
Kishorganj	Pakundia	28. From Hosendi chowrasta to Moddho para road development of Mirzapur–Dilalpur road; and 29. Aushutia bazaar to Sukhia bazaar road development	5.86km (1+4.86)	2 km	5.86 km
	Kotiadi	30. Moshua UP to Buradia bazaar road development (chain 1.184 – 2.184) km and (chain 2.184 – 2.884) km; and 31. Moshua UP HQ – Kajirchar hat via Bairagirchar bazaar road development (chain 0.000 – 1.200) km	3.7 km (1.7+2)	3 km	3.7 km
	Bajitpur	32. Sharachar – Agarpur – Masimpur road development (chain 0.000 – 0.930) km; and 33. Bajitpur – Kukrai via Koilag road development; and 34. Sharachar – Hamidpur (Halimpur) (beside rail line) road development (chain 0.000 – 0.516) km	2.75 km (1.25+ .500+1)	2.25 km	2.75 km
Netrokona	Sadar	35. Road development upto Gajgoria (Panch Kahnia) Dewpur UP office first and second part (chain 2.942 – 3.741) km (chain 3.741 – 4.666) km and 36. From Bali bazaar to Kailati UP office road development of Netrokona Modon road (chain 0.000 – 0.915) km	2.639 km (1.724+ .915)	2.75 km	2.639
	Modon	37. Modon Khalijuri road via Uchitpur (chain 0.000 – 1.000) km	1 km	1 km	1 km
<b>Total</b>			<b>55.97 km</b>	<b>45 km</b>	<b>51.69 km</b>

Districts	Upazilas	Name of the schemes	Project achievements	Sample observed	
				Target	Observed
<b>Rehabilitation of flood damaged roads</b>					
Mymensingh	Muktagacha	1. Shalora – Bondo bazaar road rehabilitation (chain 0.00 – 14.50) km	14.50 km	3.5 km	3.5 km
		2. Ishwarganj – Shahidpur road rehabilitation (chain 0.00 – 3.50) km	4.9 km	3.5 km	3.5 km
	Trishal	3. RHD sarak Ragmara – Chakrampur GC sarak rehabilitation (chain 2.23 – 8.16) km	6 km	3 km	6 km
	Nandail	4. Nandail – Rasulpur road rehabilitation (chain 0.00 – 6.50) km	6.5 km	3 km	3 km
Tangail	Basail	5. Basail – Natiapara via GC Bilpara road repair and rehabilitation (chain 0.000– 2.061) km	2.06 km	2 km	2.06 km
	Ghatail	6. Dhalapara – Chapri road rehabilitation (chain 0.000 – 2.200) km	2.200 km	4 km	2.200 km
	Gopalpur	7. Gopalpur – Madhupur road rehabilitation	4.80 km	5 km	4.800 km
Jamalpur	Sarishabari	8. Batara UP – Digpaith bazaar road rehabilitation	2 km	2 km	2 km
	Milandha	9. Milandha mohish bathan road rehabilitation	1 km	1 km	1 km
Sherpur	Shreebordi	10. From Bhayadanga to Balijhuri road development	1.5 km	1 km	1.5 km
Netrokona	Sadar	11. Netrokona – Sidli GC (sadar part) road repair	5 km	1.5 km	5 km
	Modon	12. Modon – Mohonganj road repair	0.5 km	0.5 km	0.5 km
<b>Total</b>			<b>50.96 km</b>	<b>30 km</b>	<b>35.06 km</b>
<b>Construction of bridge/culverts on Upazila roads (FRB)</b>					
Tangail	Kalihati	1. Construction of 30 meter RCC bridge on Tangail Dhalapara road	30 m	30 m	30 m
Jamalpur	Islampur	2. 12 meter Girder bridge of Islampur –Jhagrarchar road (6.80 km chain)	12 m	10 m	12 m
<b>Total length of observation of bridges/culverts</b>			<b>42 m</b>	<b>40 m</b>	<b>42 m</b>
<b>Construction of bridge/culverts on Union and village road</b>					
Mymensingh	Ishwarganj	3x4.50x4.50 meter box culvert over Fanur khal on Dewanganj Sutia bazaar road	14.6 m	12 m	14.6 m
Tangail	Modhupur	Construction of box culvert on Bhabaniteki-Dhanbari road on Shama Ghosh khal	12 m	12 m	12 m
Jamalpur	Islampur	Construction of 36 meter bridge near Dharmapura bazaar on Dharmapura GC – Vengura road	36 m	36 m	36 m
<b>Total length of observed bridge/culverts on union rural roads</b>			<b>62.6 m</b>	<b>60 m</b>	<b>62.6 m</b>
<b>Rehabilitation of flood damaged bridge</b>					
Tangail	Mirzapur	Rehabilitation of bridge on Mirzapur Haria (Amrail) road via Kamarpara	50 m	36 m	50 m
Jamalpur	Milandha	Rehabilitation of bridge over Deburchar khal on Manki Deburchar road	38 m	42 m	38 m
<b>Total length of observed flood rehabilitated bridge/culverts</b>			<b>88 m</b>	<b>78 m</b>	<b>88 m</b>
<b>Tree plantation on Upazila FRB roads and Union Rural roads</b>					
Mymensingh	Bhaluka	1. Tree plantation on Dhaka – Mymensingh high way Masterbari – paragaon road and 2. Tree plantation on Dhaka – Mymensingh high way (Sunni Fields Ltd) Mamarrishpur road	4.40 km (2.20+ 2.20)	8 km	4.40 km*
		Nandail	3. Tree plantation on Nandail – Atharabari road	16 km	7 km
Tangail	Kalihati	4. Tree plantation on Nagarbari UP – Kauljani road	3 km	13 km	3 km*
	Mirzapur	5. Tree plantation on Mirzapur –Patharghata road	3 km	13 km	3 km*
Jamalpur	Sarishabari	6. Tree plantation on Baira-Kolghat-Doyel-Kendua road	1 km	1 km	1 km
	Islampur	7. Tree plantation on Durmuth – Nilokkhia road	3 km	10 km	3 km*
Kishorganj	Kotiadi	8. Tree plantation on Bangram UP HQ – Sararchar GP road	2 km	10 km	2 km*
Netrokona	Sadar	9. Tree plantation on Biraour–Dakkshin Bishura sarak of Netrokona Kendua sarak	6 km	13 km	6 km*
<b>Total length of observed tree plantation</b>				<b>75 km</b>	<b>38.4*</b>
<b>Development of Growth Centre/Rural Markets</b>					
Mymensingh	Ishwarganj	1. Shahganj bazaar development	1 no	1 no	1 no
Tangail	Ghatail	2. Dewpara growth centre development	5 nos	5 nos	5 nos.
		3. Sagordighi bazaar development			
		4. Fakirchala bazaar development			
		5. Dewajana growth center development			
		6. Ghatail growth center development			
		7. Shahjada bazaar development	1 no	1 no	1 no
Jamalpur	Islampur	8. Degreerchar bazaar development	2 nos	3 nos	2 nos.
		9. Moholgiri bazar development			
	Dewanganj	10. Shaikh para BNP bazaar development	2 nos	3 nos	2 nos.
		11. Charnushuri bazaar development			
Netrokona	Sadar	12. Baroari growth centre development	1 no	2 no	1 no
<b>Total number of observed growth centers/rural markets</b>			<b>12 nos</b>	<b>15 nos</b>	<b>12 nos.</b>

\*Actual length of tree plantation on the sample area is less than targeted length of observation

**Table 2: Detailed Findings of Observed Upazila FRB roads**

Name of Schemes and location	Size, type, period of construction and cost	Overall comments on the road
<b>Mymensingh</b>		
1. Road development from Goaltajpur madrasha to jhanka bazar road by carpeting on shibganj road of muktagacha Upazila (chain 0.000 – 1.000) km; (RR) Union: 9 no. Kashimpur Upazila: Muktagacha District: Mymensingh	Length–1 km Width–3.1531 m Observed length: 1 km Type: FRB road Year: 2006 – 2007 Cost: Not available	<ul style="list-style-type: none"> <li>1 km road developed by carpeting of Goaltajpur madrasha to Jhanka bazaar road at Kashimpur union of Muktagacha Upazila</li> <li>The road is now operational but have some problems which needed to be repaired: <ul style="list-style-type: none"> <li>✓ Pot hole have been created in 13 places</li> <li>✓ In 4-5 places both side of road have been broken down</li> <li>✓ Also in katcha road, which not yet developed, road side has been broken by soil erosion, which creating problem to move. Need immediate maintenance work.</li> </ul> </li> <li>After construction, no maintenance work was done on this road.</li> <li>Local people are regularly using the road and this is the only road for move. The road is not fully pucca, for that local people demand, the remaining part of the road should be pucca as early as possible, which will be more benefited for them. During observation truck, van, motor cycle CNG, rickshaw and bicycle were found to move.</li> </ul>
2. Road development from Satrashia – Begunbari by carpeting of muktagacha Upazila (chain 0.000 – 1.620) km Union: Kumargata Upazila: Muktagacha District: Mymensingh	Total length– 1.62 Width–3 m Observed length: 1.62 Type: FRB road Year: 12.2006 – 06.2007 Cost: Not available	<ul style="list-style-type: none"> <li>1.62 km road developed by carpeting of Satrashia – Begunbari road of Muktagacha Upazila in 2006-2007. The road is not fully pucca.</li> <li>The developed portion of the road is good. But in kaccha portion, road side soil have been broken down and created hole, which creating problem to move.</li> <li>The road is operational. Local people are regularly using the road. The road is not fully pucca, for that local people demand, the remaining part of the road should be pucca as early as possible, which will be more benefited for them. During observation truck, pick up van, rickshaw and bicycle were found to move. There are many hatcheries in the road construction area and after evening most of the pick up van carry the fish.</li> <li>The local people expected the road will fully pucca one day.</li> </ul>
3. Chechua -Shibganj road development (chain 3.491 – 4.755) km Union: Dolla Upazila: Muktagacha District: Mymensingh	Length–1 km Width–3 m Observed length: 1 km Type: FRB road Year: Cost: Not available	<ul style="list-style-type: none"> <li>LGED was developed 1 km road by carpeting on Chechua -Shibganj road at Dolla union of Muktagacha Upazila. No maintenance work was done after construction.</li> <li>The road is now functional with some problems i.e. many cracks were found; 20-25 pot holes on the road; and in some places carpeting settle down</li> <li>The local people are using the road regularly and this road is very important for them. The overall condition of the road is not good, people are facing problems to movement and vehicle movement is very difficult in this road. Need immediate maintenance work in this road. During observation traffic transaction on this road was as usual. Truck, van, rickshaw, CNG, and different types motorized vehicle are now moving on the road and van, truck and bicycle was the most movable vehicle during observation.</li> </ul>
4. From Islampur madrasha to gangpara mosque to banglabazar 1.264 km road development by carpeting Union: Ishwarganj Upazila: Ishwarganj District: Mymensingh	Length– 1.20 Width–3 m Observed length: 1.2 64km Type: FRB road Year: 17.4.2005 – 09.08.2005 Cost: Allocated – 1648432 Actual - 1648432	<ul style="list-style-type: none"> <li>From Islampur madrasha to gangpara mosque to bangle bazar 1.20 km road was developed by carpeting in 2005 at Ishwarganj Upazila. The road is newly constructed. After construction 2 times maintenance work have done. It is known from LGED officials that after construction 2 times maintenance work has been done.</li> <li>The road condition is not good – road side soil have been displaced and created pot holes; many big pot holes have formed on the top slab of the road – which creating problem to movement.</li> <li>Local people are regularly using the road for different purpose. By using the road people can go to Upazila town, health center, hat-bazaar, school-collage. During observation rickshaw, van was the most movable vehicles.</li> </ul>
5. Bhaluka – Dhalia 1 km road development Union: Bharadoba Upazila: Bhaluka District: Mymensingh	Length– 1 km Width–3.05 m Observed length: 1 km Type: FRB road Year: 15.5.2005 – 5.11.2007 Cost: Allocated – 35,63,831 Actual – 35,61,561	<ul style="list-style-type: none"> <li>The total length of the Bhaluka to Dhalia road is 6.03 km. Under this project LGED was developed 1 km road by carpeting of Bhaluka to Dhalia road in 2005-2007 at Bhaluka Upazila and the rest part of the road is kaccha. No maintenance work was done after construction.</li> <li>The road is now functioning and condition of the developed portion is good, no damage or crack or hole were found in the developed portion.</li> <li>But in the katcha portion, in some places holes have been created, which creating problem to move and during rainy season difficult to move. It is needed to repair.</li> <li>The people are now using the road to go to Union, Upazila and District town, education centers, health centers for their personal and business purpose. For local people the road is very important. Van, truck, CNG, rickshaw, trolley, lorry, cycle, motor cycle are now running in the road and van is the most movable vehicle during observation. The road is directly connected with Bhaluka, Bharadoba and Dhitpur union.</li> </ul>
6. Koiarchala –Soaitpur road development (chain 8.074 – 8.800) km; Union: Bakrita Upazila: Fulbaria District: Mymensingh	Length– .588 km Width–3.66 m Observed length: .588 km Type: FRB road Year: 16.6.2005 – 13.10.2006 Cost: Allocated – 20,00,000 Actual – 19,53,629	<ul style="list-style-type: none"> <li>The total length of the Koiarchala – Soaitpur road is 5.88 km. Under this project LGED was developed .588 km road in 2005-2006 at Fulbaria Upazila. The road is newly constructed. It is known from LGED officials that after construction maintenance work was done once.</li> <li>The road is now regularly using by local people.</li> <li>The road condition is not good and have major problems - carpeting has been damaged, shoulder of road has been broken and pot holes have been formed in many places</li> <li>The people are now using the road to go to Union, Upazila and District town, education centers, health centers, hat-bazars for their personal and business purpose. Van, rickshaw, motor cycle, bicycle are now running in the road and van is the most movable vehicle during observation.</li> </ul>

Name of Schemes and location	Size, type, period of construction and cost	Overall comments on the road
7. Madhupur road development (Balughat) (chain 1.000 – 1.609) km Union: Naogaon Upazila: Fulbaria District: Mymensingh	Length– .609 km Width–3.66 m Observed length: .609 km Type: FRB road Year: 11.01.2005-29.04.2008 Cost: Allocated – 1,974,649 Actual – 2,165,448	<ul style="list-style-type: none"> <li>On Modhupur (Balugaht) road, .609 km road was developed by carpeting in 11.01.2005-29.04.2008 at Fulbaria Upazila. Maintenance work was done once after construction. The road is newly constructed.</li> <li>The road is now functioning.</li> <li>The road condition is not good – carpeting has been damaged, road side has been broken, and in many places pot holes have been formed</li> <li>The people are now regularly using the road to go to hat-bazars, health centers, educational institutions, mosque, Upazila and district town and other personal purpose. For local people the road is very important. Van, rickshaw, tempo, maxi, motor cycles are now moving in the road and maxi was the most movable vehicle during observation. The road is directly connected with Naogaon, Putijana, Fulbaria.</li> </ul>
8. Achim – Trisal via Purabari road development (chain 3.570 – 4.179) km Union: Asim Upazila: Fulbaria District: Mymensingh	Length– .655 km Width–3.05 m Observed length: .655 Type: FRB road Year: 19.08.2006-16.12.2007 Cost: Allocated – 2,009,130 Actual – 2,004,951	<ul style="list-style-type: none"> <li>.655 km road was developed by carpeting on Achim-Trisal via Purabari road at Fulbaria upazial in 19.08.2006-16.12.2007. Maintenance work was done once after construction.</li> <li>The road is now functioning.</li> <li>The road condition is not good and have major problems – carpeting has been damaged, shoulder of road has been damaged and in many places pot holes have been formed</li> <li>The people are now regularly using the road to go to hat-bazars, health centers, educational institutions, mosque, Upazila and district town and other personal purpose. For local people the road is very important. Van, rickshaw, tempo, truck, bus, motor cycles are now moving in the road and tempo was the most movable vehicle during observation. The road is directly connected with Asim, Trishal and Fulbaria union</li> </ul>
9. From Shakua to Kalir bazaar connected road development via Rampur bazaar and Barma bazaar (chain 0.000 – 0.650) km (RR) Union: Rampura Upazila: Trishal District: Mymensingh	Length– .650 km Width–3.05 m Observed length: .650 Type of Road: FRB road Construction year: 05.01.2005-05.04.2007 Cost: Allocated – 26,99,411 Actual – 25,78,511	<ul style="list-style-type: none"> <li>.650 km road was developed by carpeting on Shakua to Kalir bazaar connected road via Rampur bazaar and Barma bazar at Trishal Upazila in 19.08.2006-16.12.2007. No maintenance work was done after construction.</li> <li>The road is now functioning.</li> <li>The road condition is good – carpeting condition is good and no damages or holes were found in the road</li> <li>The people are now regularly using the road to go to hat-bazars, health centers, educational institutions, mosque, Upazila and district town and other personal purpose. For local people the road is very important. Van, rickshaw, tempo, truck, motor cycle, cycle, trolley, lorry, CNGs are now moving in the road and van was the most movable vehicle during observation. The road is directly connected with Kanihar, Trishal, Sakua, Baliapara, and Mymensingh</li> </ul>
10. Completed incomplete work of Patal – Jokar char of nikail road (chain 1300 meter); Union: Durgapur Upazila: Kalihati District: Tangail	Length– 1.3 km Width–3.05 m Observed length: 1.3 km Type: FRB road Year: Cost: Not available	<ul style="list-style-type: none"> <li>Total length of road is 2.5 km (part of the road is in Bhuapur and part is in Kalihat Upazila. LGED was developed 1.3 km road by carpeting and road shoulder filled with soil on this road.</li> <li>No maintenance work was done after construction.</li> <li>The road is now functioning.</li> <li>The overall road condition is good.</li> </ul>
11. Completed incomplete work of Dhunail soya – Hatia (IBA) road (chain 0.750-2.315) km Upazila: Kalihat District: Tangail	Length– 1 km Width–3.05 m Observed length: 1 km Type: FRB road Year: Cost: Not available	<ul style="list-style-type: none"> <li>1 km road was developed by carpeting and road shoulder filled with soil on Dhunail soya – Hatia (IBA) road at Kalihati Upazila. No maintenance work was done after construction.</li> <li>The road is now functioning.</li> <li>The overall road condition is good – but in few places have holes in the road. Need normal maintenance work in this road</li> </ul>
<b>Tangail</b>		
12. Road development of Bhandeswar GC-Borochana (chain 0.347 – 2.367) km and Union: Bir Basinda- Upazila: Kalihati District: Tangail	Length–2.02 km Width–3.66 m Observed length: 2.02 km Type: FRB road Year: 19.10.2005-28.04.2007 Cost: Allocated – 29,00,329 Actual – 29,00,083	<ul style="list-style-type: none"> <li>2.02 km road was developed by carpeting of Bhandeswar GC – Borochana road at Kalihati Upazila in 19.10.2005-28.04.2007. No maintenance work was done after construction.</li> <li>The road is now functioning. The road condition is moderately good – in few places carpeting has been damages and minor damages was found in the road but not creating problem to move</li> <li>The people are now regularly using the road to go to hat-bazars, health centers, educational institutions, mosque, Upazila and district town for personal and business purpose. For local people the road is very important. Bus, micro, truck, van, tempo, CNG, cycle, motor cycle are now moving in the road and van was the most movable vehicle during observation. During observation a truck was found carrying rod. The road is directly connected with Boro Chaona, Sakhipur, Auliabad, Kalihati.</li> </ul>
13. Construction of pucca road of Alenga – Mogra – Patal (chain 7.913 – 8.639) km Union: Elenga Upazila: Kalihati District: Tangail	Length– .726 km Width–3.05 m Observed length: .726 Type: FRB road Year: Cost: Not available	<ul style="list-style-type: none"> <li>Total length of the road is 11.50 km and LGED was developed .726 km road by carpeting and road shoulder filled with soil on Alenga – Mogra – Patal road at Kalihati Upazila. One time maintenance work was done after construction under Gob fund at 2010-2011 financial year.</li> <li>The road is now functioning.</li> <li>The road condition is good.</li> </ul>

Name of Schemes and location	Size, type, period of construction and cost	Overall comments on the road
14. Gangair – Alokdia road development (chain 1.157 – 3.000) km Union: Alokdia Upazila: Modhupur District: Tangail	Length– 1.82 km Width–3.00 m Observed length: 1.82 km Type: FRB road Year: 05.2005-05.2008 Cost: Allocated – 24,62,296 Actual – 13,43,923	<ul style="list-style-type: none"> <li>Total length of the road is 5 km and LGED was developed 1.82 km road by carpeting of Gangai – Alokdia road under this project at Alokdia union of Modhupur Upazila in 05.2005-05.2008. Rest of the road is kaccha. No maintenance work was done after construction.</li> <li>The road is now functioning.</li> <li>The road condition is not good – carpeting has been damaged; many pot holes have been formed around 1.5 km road; and both side roads has been broken in 4-5 places, which not suitable for easy communication.</li> <li>The road is very important for the local people and they are now regularly using the road to go to different places for different purposes. The road is not fully pucca, only 1.82 km area was developed by LGED and rest 3 km is kaccha. Local public demand is too much for construction of the remaining kaccha road and immediate repairing works for damaged portion. Trucks, tempo, motor cycle, cycles are now moving in the road and van was the most movable vehicle during observation. During observation a truck was found carrying soil. The road is directly connected with Gangair and Alokdia.</li> </ul>
15. Mirzapur –Patharghata road development (chain 0.500 – 1. 922) km; Union: Aigana Upazila: Mirzapur District: Tangail	Length– 1.39 km Width–3.70 m Observed length: 1.39 km Type: FRB road Year:12.10.2005-09.03.2006 Cost: Allocated – 59,86,776 Actual – 58,76,363	<ul style="list-style-type: none"> <li>Total length of the Mirzapur – Patharghata road is 18.52 km. LGED was developed 1.39 km road by carpeting on this road at Aigana union of Mirzapur Upazila in 2005. No maintenance or repair works wad done after construction.</li> <li>The road condition is good – no damages or crack were found in this road</li> <li>The road is now functioning without any problem. The kaccha portion of this road is also good. Local people of Tarafpur and Aigana union are using the road mostly and the road is connected with Aigana, Fatepur, Tarafpur and Mirzapur poroshabha union. Tempo, motor cycle, cycles, lorry, van, rickshaw are now moving on the road and motor cycle was the most movable vehicle during observation. During observation a van was found carrying paddy.</li> </ul>
16. Mirzapur –Nagarpur road development (chain 7.700-9.348) km Union: Warshi Upazila: Mirzapur District: Tangail	Length– 1.648 km Width–3.70 m Observed length: 1.648 km Type: FRB road Year:12.10.2005-09.03.2006 Cost: Allocated – 68,86,973 Actual – 68,45,901	<ul style="list-style-type: none"> <li>1.648 km road was developed by LGED under this project on Mirzapur – Nagarpur road Warshi union of Mirzapur Upazila in 2005-2006. No maintenance or repair works wad done after construction</li> <li>The road condition is good – no damages or crack were found in the road</li> <li>The road is now functioning without any problem. Local people of Warshi, Bhadgram, Anaita, Moishamura union are using the road mostly and the road is directly connected with Mirzapur Upazila. Tempo, motor cycle, cycles, lorry, vans are now moving on the road and tempo was the most movable vehicle during observation. During observation a van was found carrying rice.</li> </ul>
17. Dewanhata – Bilgazaria road development (chain 2.800- 3.880) km Union: Bahuria Upazila: Mirzapur District: Tangail	Length– 1.08 km Width–3.70 m Observed length:1.08 km Type: FRB road Year: 12.10.2005-09.03.2006 Cost: Allocated – 39,93,829 Actual – 39,26,564	<ul style="list-style-type: none"> <li>Total length of the Dewanhata Bilgazaria road is 8.95 km. LGED was developed 1.08 km area on this road under this project at Bahuria union of Mirzapur Upazila in 2005-2006. No maintenance or repair works wad done after construction.</li> <li>The road condition is good – no damages or crack were found in the road</li> <li>The road is now functioning without any problem. The road is directly connected to Mirzapur Upazila. The people are now regularly using the road to go to different places for various purposes. Bus, truck, lorry, rickshaw, motor cycle, tempo, vans are now moving on the road and tempo was the most movable vehicle during observation. During observation a van was found carrying rod and cement.</li> </ul>
18. Basail – Sunna road development (chin 2.42 – 3. 811) km Union: Basail Upazila: Basail District: Tangail	Length– 1.4 km Width–3.66 m Observed length: 1.4 km Type: FRB road Year: 14.05.2005-30.08.2005 Cost: Allocated – 39,93,829 Actual – 39,26,564	<ul style="list-style-type: none"> <li>Total length of the Basail – Sunna road is 3.96 km. LGED was developed 1.4 km area on this road under this project at Basail union of Basail Upazila in 2005. No maintenance or repair works wad done after construction.</li> <li>The road condition is good – no damages or crack were found in the road</li> <li>The road is now functioning without any problem. The road is directly connected to Basail to Sunna. The people are now regularly using the road to go to different places for various purposes. Tempo, truck, CNG, van are now moving on the road and tempo was the most movable vehicle during observation. During observation a truck was found carrying agri products (potato, Cauliflower).</li> </ul>
19. Bhuapur – Jamuria road development by BC (chin 7.622 – 8. 396) km ; Bhuapur – Jamuria road development by BC (chin 8. 390- 8.940) km; Bhuapur – Jamuria road development by BC (chin 9.000 – 9.920) km Union: Lokerpara - Jamuria Upazila: Ghatail District: Tangail	Length– .774 km+ .55km + .92km Width–3.70 m Observed length: .774 km+ .55km + .92km Type: FRB road Year: 2005 Cost: Actual – 24,73,773.56 Actual – 24,97,009.53 Actual – 34,98,220.60	<ul style="list-style-type: none"> <li>Total length of the Bhapur – Jamuria road is 10 km and LGED was developed .774 km area by carpeting on this road under this project at Lokerpara union of Ghatail Upazila in 2005. The road is fully pucca. One times maintenance works wad done after construction.</li> <li>The road condition is not good and have major problems – large holes have been formed in 10-12 places and both side roads have been broken in 5-7 places.</li> <li>The road is now functioning with some problems i.e. large holes in the road and road sides have been broken, which creating problems to vehicle movements and sometimes it may occurred accident. It is need to be immediate repair.</li> <li>It was found during observation that the Feeder road is moderately busy for all types of traffic transactions. Truck, motor cycle, van, rickshaw, pick up, bicycle are now moving on the road and motor cycle and van was the most movable vehicle during observation. During observation truck was found carrying brick and sand.</li> </ul>
20. Completed pucca road from Udampur to Jhaial bazaar of Hemnagar Jhaial road (chin 1.212 – 2.063) km Union: Jhaial Upazila: Gopalpur District: Tangail	Length– .85 km Width–3.70 m Observed length: .85 km Type: FRB road Year: 01.2004-10.2005 Cost: Not available	<ul style="list-style-type: none"> <li>LGED was developed .85 km pucca road on this road under this project at Jhaial union of Gopalpur Upazila in 2005. No maintenance work was done after construction.</li> <li>The road condition is not good and have major problems – carpeting has been fully damaged; and many cracks in the road which creating problems to vehicle movements. Need to maintenance work.</li> <li>The road is now functioning with some problems i.e. the full road is damaged. It is need to be immediate repair for better communication.</li> <li>It was found during observation that the Feeder road is moderately busy for all types of traffic transactions. Truck, motorized vehicles, van, bicycle are now moving on the road and truck was the most movable vehicle during observation. During observation truck was found carrying soil.</li> </ul>

Name of Schemes and location	Size, type, period of construction and cost	Overall comments on the road
<b>Jamalpur</b>		
21. Barrister (Panchashi – Narpara ) FRB road development (chain 0.00 – 1.00) km Union: Doail Upazila: Sarishabari District: Jamalpur	Length– 2.1 km Width–3.66 m Observed length: 2.1 km Type of Road: FRB road Construction year: 05.07.2006-24.10.2006 Cost: Allocated – 45,00,000 Actual – 45,00,000	<ul style="list-style-type: none"> <li>• LGED was developed 2.1 km road by carpeting under this project on Panchashi – Narpara road at Doail union of Sarishabari Upazila in 2006. No maintenance or repair works wad done after construction</li> <li>• The road condition is moderately good – no crack or hole was found in the road but carpeting has been slightly damaged in few places of the road and in few places both road side soil has been broken.</li> <li>• The road is now functioning with some problems i.e. carpeting slightly damages in few places and road side soil has been broken but it not created any problem to movement till now. It was found during observation that the Feeder road is moderately busy for all types of traffic transactions. CNG, motor cycle, truck, van, bicycle are now moving on the road and motor cycle was the most movable vehicle during observation.</li> </ul>
22. Barrister Abdus Salam road development (chain 4.000 – 6.000) km Union: Mahadani  Upazila: Sarishabari District: Jamalpur	Length– 2.15 km Width–3.66 m Observed length: 2.15 km Type: FRB road Year: 23.05.2005-23.08.2005 Cost: Allocated – 47,82,000 Actual – 47,82,000	<ul style="list-style-type: none"> <li>• LGED was developed 2.15 km road by carpeting under this project on Panchashi – Narpara road at Doail union of Sarishabari Upazila in 2005. No maintenance or repair works wad done after construction</li> <li>• The road condition is moderately good – in 10-12 places carpeting have been damaged; have some large and small size holes; road side soil has been displaced and slightly broken in few places.</li> <li>• The road is now functioning with some problems i.e. carpeting are damaged and holes are created in some places and road side are broken. Though have some problems in this road, not yet created any problem to movement but needs to immediate repair for better communication. It was found during observation that the Feeder road is very busy for all types of traffic transactions. CNG, motor cycle, van, bicycle, truck, auto rickshaw are now moving on the road and motor cycle was the most movable vehicle during observation.</li> </ul>
23. Islampur – Jhagrarchar road development (chain 11.800 – 12.400) km  Union: Gaibandha  Upazila: Islampur  District: Jamalpur	Length– .700 km Width–3.66 m Observed length: .70 km Type: FRB road Year: 31.03.2009-25.04.2009 Cost: Allocated – 6,79,000 Actual – 6,79,000	<ul style="list-style-type: none"> <li>• LGED was developed .700 km road by carpeting under this project on Islampur – Jhagrarchar road at Gaibandha union of Islampur Upazila in 2009. No maintenance or repair works wad done after construction.</li> <li>• The road condition is moderately good – in some places carpeting have been washed out/damaged but no holes were found in the road; and road side soil have been displaced and broken in some places which need to be filled up with soil.</li> <li>• Local people are regularly using the road. The road is now functioning with some problems i.e. carpeting are damaged and holes are created some places; and road side are broken. Though have some problems in this road, not yet created any problem to movement but needs to immediate repair for better communication. It was found during observation that the Feeder road is very busy for all types of traffic transactions. Van, motor cycle, cycle, motorized votvoti, mini truck, lorry, horse cart are now moving on the road and motor cycle was the most movable vehicle during observation. During observation horse cart was found carrying onion.</li> </ul>
24. Tinani para – Laochapra road development (chain 4.000- 5.000) km Union: Battrajore Upazila: Bakshiganj District: Jamalpur	Length– 1 km Width–10 m Observed length: 1 km Type: FRB road Year: 30.11.2005-3.08.2006 Cost: Allocated – 32,91,297 Actual – 32,90,200	<ul style="list-style-type: none"> <li>• LGED was developed 1 km road by carpeting under this project on Tinani para – Loachapra road at Battrajore union of Bakshiganj Upazila in 2005-2006. No maintenance or repair works wad done after construction</li> <li>• The road condition is good – carpeting condition is good and no damages or holes were found in the road; but in the end of the road, only in one side have a u-drain for water passing from which soil has been washed out and minor portion of the road side has been broken which need to be filled up with soil, though it is not creating any problem now.</li> <li>• Local people are regularly using the road and the road is very important to them. They are not facing problem to move at present. It was found during observation that the Feeder road is busy for all types of traffic transactions. Van, motor cycle, cycle, rickshaw, CNG, motorized votvoti are now moving on the road and van was the most movable vehicle during observation.</li> </ul>
<b>Name of Schemes and location</b>		
<b>Size, type, period of construction and cost</b>		
<b>Overall comments on the road</b>		
25. Construction of bridge road and link road from Godarbazar to Sarkar bari of Ghosherpara – Pathanpara road Union: Ghosherpara Upazila: Melandah District: Jamalpur	Length– 1 km Width–2.45 m Observed length: 1 km Type: FRB road Year: 03.02.2009-08.06.2009 Cost: Allocated – 24,90,939 Actual – 23,10,282	<ul style="list-style-type: none"> <li>• LGED was developed 1 km road by herring bond under this project on Godarbazar to Sarkar bari of Ghosherpara – Pathanpara road at Ghosherpara union of Melandah Upazila in 2009. No maintenance or repair works wad done after construction</li> <li>• The road condition is good – no damages or holes were found on the road and no problems creating to movement. Only in few places road side soil have been displaced and broken which need to be filled up with soil immediately. Local people are regularly using the road for different purposes and the road is very important to them because this is the only way to move. They are not facing problem to move at present. During observation the road is not so busy for all types of traffic transactions. Micro, van, motor cycle, cycle, votvoti, truck are now moving on the road. Van, motor cycle and bicycle was the most movable vehicle during observation.</li> </ul>
26. Construction of structure and road development from Purbo mor of Fulkucha bazaar to Rayer bakail (via Kha bari) Union: Charbani Pakuria Upazila: Melandah District: Jamalpur	Length– 1 km Width–2.45 m Observed length: 1 km Type: FRB road Construction year: 05.04.2006-09.08.2006 Cost: Allocated – 23,16,942 Actual – 20,94,417	<ul style="list-style-type: none"> <li>• LGED was developed 1 km road by carpeting under this project on Purbo mor of Fulkucha bazaar to Rayer bakail (via Kha bari) road at Charbani Pakuria union of Melandah Upazila in 2009. No maintenance or repair works wad done after construction</li> <li>• The road condition is good – no damages or holes were found in the road and carpeting condition is good and no problems creating to movement.</li> <li>• The road is now in use and local people are regularly using the road for different purposes. The road is very important to them because this is the only way to move. They are not facing any problem to move at present. During observation the road was found busy for all types of traffic transactions. Truck, tempo, CNG, baby, auto bike, van, motor cycle, cycle, cow cart are now moving on the road. During observation motor cycle, bicycle, van and auto bike was the most movable vehicle.</li> </ul>

Name of Schemes and location	Size, type, period of construction and cost	Overall comments on the road
<b>Kishorganj</b>		
27. Thana ghat of Mirzapur – Mathkhola - Tokbazar over agaro sindhur bramyauputra river development of connected road of bridge (chain 140.15 miter) Union: Egaro Sindhu Upazila: Pakundia District: Kishorganj	Length– 3 km Width–4.00 m Observed length: 3 km Type: FRB road Year: 05.04.2006-09.08.2006 (2005-2006) Cost: Allocated – Actual – 35,00,000	<ul style="list-style-type: none"> <li>Total length of the road is 7 km and in 7 km, 4 km is under R&amp;H department and LGED developed 3 km connected road of bridge (soiling filling, earth filling, sand filling, WBM, carpeting, CC block set up, side wall of river). One time maintenance work was done after construction under GoB.</li> <li>The road condition is good – no damages were found</li> <li>The road is now functional and local people are regularly using the road for different purposes at different places.</li> <li>Tree plantation was found on this road – local people were planted those.</li> </ul>
<b>Netrokona</b>		
28. Bairura -North Bishiura GC road development near Netrokona Kendua RHD road (chain 2.626-3.226) km Union: Chollisha Dakkhin Bishura Upazila: Netrokona Sadar District: Netrokona	Length– 4.80 km Width–3.66 m Observed length: 4.80 Type: FRB road Year: 2004-2005 Cost: Not available	<ul style="list-style-type: none"> <li>Total length 6.68 km and LGED developed 4.80 km road by carpeting and WBM, paliesiding work, road side soil filling, U-drain, sand filling etc. under this project. The road is fully pucca. No maintenance work was done after construction.</li> <li>The road condition is moderately good – in fess places carpeting has damaged. Need immediate paliesiding work on this road.</li> <li>The road is now functional and local people are regularly using the road for different purposes at different places.</li> </ul>

**Table 3: Detailed Findings of Observed Union Rural Roads**

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
1. Muktagacha – Debgram road development by carpeting (chain 0.960-1.860 ) km Union: 5 no. Bashati Upazila: Muktagacha Districts: Mymensingh	Length– 1 km Width–3.30 m Observed length: 1 km Type: Union road Year: 2005 – 2006 Cost: Allocated: Actual:	<ul style="list-style-type: none"> <li>Total length of the Muktagacha – Debgram road is nearly 10 km and LGED was developed 1 km road by carpeting under this project on this road at Bashati union of Muktagacha Upazila in 2005-2006</li> <li>The road condition is not good – 17 nos. pot holes were found in the roads and in 3 places both side road have been broken, which are creating problems to transportation. Immediate repair works should be needed. After construction, no maintenance work was done.</li> <li>The road is now operational with some problems i.e. many cracks and pot holes in the road which are created problems to transpiration and road side is broken for that local people facing problems to use the road. For better communication immediate repair works is needed.</li> <li>It was found during observation that the rural road is not so much busy for all types of traffic transactions. Truck, motorized vehicles, van, rickshaw, bicycle are now moving on the road. During observation truck, van and bicycle were found to move and van was the most movable vehicle.</li> </ul>
2. Road development from Utharbari UP to Boyelbari by carpeting Union: Atharabari Upazila: Ishwarganj Districts: Mymensingh	Length– 1.5 km Width–3.05 m Observed length: 1.5 km Type: Union road Year: 04.08.2005 –04.05.2006 Cost: Allocated: 44,94,419 Actual: 44,91,679	<ul style="list-style-type: none"> <li>1.5 km road developed from Utharbari UP to Boyelbari by carpeting at Atharabari union of Muktagacha Upazila in 2006-2007 under this project. After construction maintenance work was done once.</li> <li>The road condition is moderately good - carpeting has been damaged and there are many damages in the road and road side soil has been broken in some places (aging, some macadam, carpeting, seal coat, road side soil)</li> <li>The road is fully pucca and the road is now functional but has some problems which need to be immediate repaired.</li> <li>People are regularly using the road for various purposes and this road is very important for them. During observation the rural road was very busy for all types of traffic transactions. Truck, trolley, lorry, tempo, pick up, rickshaw, motor cycles are now moving on the road. During observation trolley was the most movable vehicle.</li> </ul>
3. Road development from Seed store bazaar to Awlatoli village of Bhaluka Habirbari Union (chain 0.500- 1.531 ) km Union: Babirbari Upazila: Bhaluka Districts: Mymensingh	Length– 1 km Width–3.5 m Observed length: 1 km Type: Union road Year: 07.06.2005 – 15.02.2006 Cost: Allocated: 30,17,600 Actual: 30,05,110	<ul style="list-style-type: none"> <li>Total length of the road is 3.50 and LGED was developed 1 km road from Seed store bazaar to Awlatoli village of Bhaluka Habirbari Union by carpeting in 2005-2006. Remaining part of the road is kaccha.</li> <li>After construction no maintenance work was done.</li> <li>Condition of the developed portion condition is good - carpeting condition is good and no damages or cracks were found on the road. But the kaccha portion is not smooth and there are many holes which creating problems to movement and during rainy season it is very difficult to move.</li> <li>Maintenance work need for the katcha portion – holes should fill up with soil.</li> <li>People are now regularly using the road for various purposes and this road is very important for them. During observation the rural road was very busy for all types of traffic transactions. Different types of vehicles e.g. cycle, van, rickshaw, motor cycle, CNG, truck, trolley are now moving on the road and van was the most movable vehicle during observation.</li> </ul>
4. Road development by carpeting from Fulbaria – Hatkalir bazaar road through Dhamur Falur bazaar Beltoli (chain 0.730- 1.365) km Union: 3 no. Kushmail Upazila: Fulbaria Districts: Mymensingh	Length– .602 km Width–3.30 m Observed length: .602 km Type: Union road Year: 08.02.02 – 05.02.03 Cost: Allocated: 10,00,062 Actual: 9,51,972	<ul style="list-style-type: none"> <li>.602 km road was developed by carpeting on Fulbaria – Hatkalir bazaar road through Dhamur Falur bazaar Beltoli under this project. After construction one time maintenance work was done by LGED on this road.</li> <li>The rod is fully pucca and the road condition is not good – carpeting has been damaged; pot holes are created in many places; and road side soil has been broken in some places. Repair and maintenance work is needed in this road.</li> <li>Trees were found both side of road – approximately 2000 trees (Akashi, Mehogani, Babla, Jackfruit, Akashmoni) are there, though these were not planted under this project. The road is now functional and people are regularly using this road for various purposes. During observation the rural road was busy for all types of traffic transactions. At present different types of vehicles e.g. truck, trolley, tempo, auto rickshaw, van, motor cycle are moving on this road and tempo was the most movable vehicles during observation.</li> </ul>

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
5. Road development by carpeting from KB Ismail road to Ahmad's house (chain 10.570 – 11.570) km Union: Kanihari Upazila: Trishal Districts: Mymensingh	Length– 1 km Width–3.05 m Observed length: 1 km Type: Union road Year: 25.10.06 – 18.11.07 Cost: Allocated: 27,74,873 Actual: 25,93,774	<ul style="list-style-type: none"> <li>Under this project LGED was developed 1 km road by carpeting from KB Ismail road to Ahmad's house (chain 10.570 – 11.570 km) in 2006-2007 at Kanihari union of Trishal Upazila. One time maintenance work was done after construction of this road.</li> <li>The road is now functioning but the road condition is not good – carpeting has been damaged; many damages and holes were found in the road. Repair work is needed for this road.</li> <li>The people are now regularly using the road to go to Union, Upazila and District town, education centers, health centers for their personal and business purpose. For local people the road is very important. During observation the rural road was busy for all types of traffic transactions. Van, truck, CNG, rickshaw, trolley, lorry, cycle, motor cycle, maxi are now moving in the road and tempo is the most movable vehicle during observation. The road is directly connected with Kanihar, Rampur, Baliapara, Trishal.</li> </ul>
6. Merenga – Nilganj road development by HB (chain 1.330 – 2.880 ) km Union: Musuli Upazila: Nandail Districts: Mymensingh	Actual Length– 1.55 km Width–3.05 m Observed length: 1.55 km Type: Union road Year: 19.03.08 – 04.05.08 Cost: Allocated: 19,97,306 Actual: 19,76,315	<ul style="list-style-type: none"> <li>Total length of the road is 5 km and LGED was developed 1.55 km road on Merenga – Nilganj road under this project in 2008 at Musuli union of Nandail Upazila. One time maintenance work was done after construction of this road.</li> <li>The road is now operational and the road condition is good – no damages or cracks or holes were found on the road.</li> <li>The people are now regularly using the road to go to Union, Upazila and District town, education centers, health centers for their personal and business purpose. During observation the rural road was moderately busy for all types of traffic transactions. Tomtom, tractor, lorry, van are now moving on this road and lorry was the most movable vehicle during observation which carrying paddy. The road is directly connected with Nilganj, Nabiganj and Nandail Upazila.</li> </ul>
7. Kokorhora – Bagutia road development (chain 0.000 – 1.240) km Union: Bangra Upazila: Kalihati Districts: Tangail	Length– 1.240 km Width–3.05 m Observed length: 1.240 km Type: Union road Year: 19.10.05 – 09.04.06 Cost: Allocated: 28,83,756 Actual: 28,91,862.40	<ul style="list-style-type: none"> <li>The total length of Kokorhora – Bagutia road is 16.89 km. Under this project LGED was developed 1.240 km road in 2005-2006 at Bangra union of Kalihati Upazila. The road is newly constructed. No maintenance work was done after construction of the road.</li> <li>The road condition is moderately good – in some places carpeting has been damaged and created pot holes, which are creating minor problems to movement. Minor repair works need for this road.</li> <li>The people are now regularly using the road to go to different places for various purposes. Tempo, van, cycle, motor cycle, truck, micro are now running in this road and van was the most movable vehicle during observation. Also found during observation van was carrying vegetables (collie flower).</li> </ul>
8. Sahadepu UP (Powktan) solakura kuchuti road development (chain 1+000 – 2+000) km Union: Sahadepu Upazila: Kalihati Districts: Tangail	Length– 2 km Width–3.30 m Observed length: 1 km Type: Union road Year: 2005-2006 Cost: Allocated: Actual:	<ul style="list-style-type: none"> <li>Total length of road is 8.50 km and LGED was developed 2 km road by carpeting on Sahadepu UP (Powktan) solakura kuchuti road at Sahadepu union of Kalihati Upazila under this project in 2005-2006. No maintenance work was done after construction.</li> <li>The road is now functioning and road condition is moderately good – in some places pot holes have been created and road side soil has been displace. Minor maintenance work is needed</li> </ul>
9. Raktipara – Gopad Etimkhana via Kalimajhi Road development (chain 0.0 - 0.817) km Union: Alokdia Upazila: Modhupur Districts: Tangail	Length– .82 km Width–3.00 m Observed length: .82 km Type: Union road Year: 05.2005 – 11.2005 Cost: Allocated: 19,93,221 Actual: 19,46,386.32	<ul style="list-style-type: none"> <li>.82 km road was developed by carpeting on Raktipara – Gopad Etimkhana via Kalimajhi road in 2005 at Alokdia union of Modhupur Upazila under this project. No maintenance work was done after construction.</li> <li>The road is now in use. The road condition is not good – carpeting has been damaged in few places, many cracks and holes are there which are creating problems for smooth movements of vehicles and in 5 places road side soil has been broken. The road is now operational with some problems i.e. carpeting damages and pot holes on the roads which creating problems for easy movement of vehicles and some times for jerking goods are fallen down from vehicles. The road is partly pucca and partly katcha, public demanded for full pucca road. For better movement immediate repair works is needed and also katcha part should be pucca.</li> <li>During observation traffic transactions on this road was as usual. Trucks, van, motor cycle, cycle, CNG are now moving on this road. Motor cycle was the most movable vehicle during observation and also found truck was carrying soil. Many trees are there in road side which are the personal properties not project work.</li> </ul>
10. Road development from Kadimdhala bridge to Dewbhogh Baltia government primary school (chain 0.000 – 1.433) km Union: Moyra Upazila: Mirzapur Districts: Tangail	Length– .490 km Width–3.30 m Observed length: .490 km Type: Union road Year: 2006 – 2007 Cost: Allocated: Actual: Tk.12,66,600	<ul style="list-style-type: none"> <li>Total length of the road is 4 km and LGED was developed .490 km road by HBB on Kadimdhala bridge to Dewbhogh Baltia government primary school road in 2006-2007 at Moyra union of Mirzapur Upazila under this project.</li> <li>No maintenance work was done after construction.</li> <li>The road is now functioning.</li> <li>The road condition is good.</li> <li>During observation traffic transactions on this road was as usual.</li> </ul>
11. Road development by HB from Dhalla bridge to Ujan bari of Dhaka Tangail road (chain 00 - 0.600) km Union: Jamurki Upazila: Mirzapur Districts: Tangail	Length– .300 km Width–3.30 m Observed length: .300 km Type: Union road Year: 2006-2007 Cost: Actual: Tk. 12,44,029	<ul style="list-style-type: none"> <li>Total length of the road is 6 km and LGED was developed .300 km road by HBB (ring bond on brick soling) on Dhalla bridge to Ujan bari of Dhaka Tangail road in 2006-2007 at Jamurki union of Mirzapur Upazila under this project. One time maintenance work was done after construction under GoB fund in 2009.</li> <li>The road is now functioning.</li> <li>The road condition is moderately good – only soil has been settle down</li> <li>Need immediate maintenance work by soil filling on the road for smoothing</li> </ul>

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
12. Road development from Kalia to Kauljani (chain 2+596 – 4+670) km Union: Kauljani Upazila: Basail Districts: Tangail	Length– 1.470 km Width–3.05 m Observed length: 1.470 km Type: Union road Year: 23.05.05 – 23.12.07 Cost: Allocated: 23,47,889 Actual: 23,48,001	<ul style="list-style-type: none"> <li>Total length of the road is 4 km and LGED was developed 1.470 km road on Kalia to Kauljani road at Kauljani union of Basail Upazila in 19.08.2006-16.12.2007. No maintenance work was done after construction. The road is now functioning.</li> <li>The road condition is moderately good – in 2 places carpeting has been slightly damaged which not creating problem to movement vehicles. But at the starting of road where bridge approach road condition is very bad which was not constructed under this project</li> <li>The people are now regularly using the road to go to hat-bazaars, health centers, educational institutions, Upazila and district town and other personal purpose. During observation the rural road was very busy for all types of traffic transactions. Tempo, CNG, van, cycle, bus, truck are now moving on this road. Tempo was the most movable vehicle during observation and also found vans are carrying potato. By using the road people can go to Kauljani, Basail, Tangail, Shokhipur, Kalihati.</li> </ul>
13. Gungram – Sandhanpur – Khajarchala road development (part 1) (chain 0.000 – 0.919) km; Union: Jamuria Upazila: Ghatail Districts: Tangail	Length–.775 km Width–3.00 m Observed length: .775 km Type: Union road Year: 07.2005 – 11.2005 Cost: Actual: 23,74,577	<ul style="list-style-type: none"> <li>LGED was developed .775 km road on Gungram – Sandhanpur – Khajarchala road at Jamuria union of Ghatail Upazila in 2005-2007. No maintenance work was done after construction.</li> <li>The road condition is not good and has major problems – nearly two-thirds of the road is damaged by creating many cracks and holes which creating problems to easy movement of vehicles. The road is now functional and the people are now regularly using the road to go to different places for different purposes. During observation traffic transactions on this road was as usual. Truck, different types motorized vehicles, motor cycle, bicycle are now moving on this road. Truck with brick and soil are the most movable vehicles during observation which is threatening for long term longevity of the road because load bearing capacity of this road is not so high.</li> </ul>
14. Dhalapara – Chapri road development by BC (chain 9.012 – 9.934) km Union: Rasulpur Upazila: Ghatail Districts: Tangail	Length–.922 km Width–3.00 m Observed length: .922 km Type: Union road Year: 02.2004 – 05.2005	<ul style="list-style-type: none"> <li>Total length of the road is 10 km and LGED was developed .922 km road on Dhalapara – Chapri road at Rasulpur union of Ghatail Upazila in 2004-2005 under this project. No maintenance work was done after construction.</li> <li>The road condition is not good and has major problems – most of the carpeting has been damaged; many cracks and holes are in the whole road; and in 10-15 places road side has been broken which may occur accident. Immediate repair works need on this road.</li> <li>Though have many problems, the road is now functional and the people are now regularly using the road to go to different places for different purposes. During observation traffic transactions on this road was as usual. Truck, different types motorized vehicles, motor cycle, bicycle, van are now moving on this road. Truck with brick and soil are the most movable vehicles during observation.</li> </ul>
15. Road development of Pakutia (Boys high school) to Amtoli road (chain 0.000 – 3.200) km Union: Deolabari Upazila: Ghatail Districts: Tangail	Length– 3.200 km Width–3.0 m Observed length: 3.200 km Type: Union road Year: 04.2006 – 05.2007	<ul style="list-style-type: none"> <li>3.200 km road was developed of Pakutia (Boys high school) to Amtoli road at Deolabari union of Ghatail Upazila in 2006-2007 under this project. No maintenance work was done after construction.</li> <li>The road condition is not so good and has major problems – nearly 25-30 pot holes in the road and road side has been broken in 7-8 places which might be occur accident. Immediate repair works need on this road.</li> <li>Though have many problems, the road is now functional and the people are now regularly using the road to go to different places for different purposes. During observation traffic transactions on this road was as usual. Truck, different type motorized vehicles, pick up van, motor cycle, bicycle, van are now moving on this road. Van was the most movable vehicles during observation.</li> </ul>
16. Tottarchala – Kuratoli ferry ghat road development (chain 3+161 – 4+151) km; Union: Hatibandha Upazila: Sakhipur Districts: Tangail	Length– 5.28 km Width–3.0 m Observed length: 5.28 km Type: Union road Year: 2004 –2005	<ul style="list-style-type: none"> <li>Total length of the road is 7.25 km and LGED was developed under this project 5.28 km road was by bituminous carpeting on Tottarchala to Kuratoli ferry ghat road at Hatibandh union of Sakhipur Upazila in 2004-2005. No maintenance work was done after construction.</li> <li>The road is now in use and road condition is good.</li> </ul>
17. Road development from Kaccha bazaar to kalidash growth centre (chain 1+270 – 2+238) km and Union: Gazaria Upazila: Sakhipur Districts: Tangail	Length– .968 km Width–3.00 m Observed length: .968 km Type: Union road Year: 01.06.05 –17.12.05 Cost: Allocated: 29,87,363 Actual: 34,05,352	<ul style="list-style-type: none"> <li>Total length of the road is 4.4 km and LGED was developed .968 km road from Katcha bazaar to kalidash growth centre at Gazaria union of Sakhipur Upazila in 2005 under this project.</li> <li>No maintenance work was done after construction.</li> <li>The road condition is not so good and has major problems – carpeting has been damaged and in many places holes have been created in the road which creating problems to move vehicles. Immediate repair works need on this road.</li> <li>The road is now operational with problems and the people are now regularly using the road to go to different places for different purposes. During observation traffic transactions on this road was as usual. Vans, tempo, motor cycle, cycles are now moving on this road. Van was the most movable vehicles during observation which carrying vegetables and people.</li> </ul>
18. Shakhipur – Basail through Shalgram sunna road development (chain 3+180 – 4+496) km Union: Gazaria Upazila: Sakhipur Districts: Tangail	Length–1.316 km Width–3.66 m Observed length: 1.316 km Type: Union road Year: 25.05.05 –28.06.07 Cost: Allocated: 45,00,000 Actual: 45,82,552	<ul style="list-style-type: none"> <li>Total length of the road is 4.6 km and LGED was developed 1.316 km road on Sakhipur – Basail through Shalgram sunna road at Gazaria union of Sakhipur Upazila in 2005-2007 under this project.</li> <li>No maintenance work was done after construction.</li> <li>The road condition is good – no damages or cracks or holes were found on the road – maintenance work not needed on this road</li> <li>The road is now operational and the people are now regularly using this road for different purposes. During observation the road was very busy for traffic transactions. Vans, tempo, motor cycle, cycle, CNG, auto, rickshaw, truck are now moving on this road. Van was the most movable vehicles during observation and truck was also found to carry bamboo.</li> </ul>

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
19. From Belua charpara mor to Belua bazaar through Hemnagar road completed incomplete pucca road of Gopalpur nalin bazaar (chain 2000 – 2524) km and (chain 2524 – 3004 ) km Union: Hemnagar Upazila: Gopalpur Districts: Tangail	Length– 1.052 (.524+.528 km) Width–3.00 m Observed length: 1.052 km Type: Union road Year: 02.2005 – 10.2007 Cost: Allocated: Tk. 16,00,543 Actual: Tk. 13,33,437	<ul style="list-style-type: none"> <li>Total length of the road is 3.2 km and LGED was developed .528 km road from Belua charpara mor to Belua bazaar through Hemnagar road completed incomplete pucca road of Gopalpur nalin bazaar at Hemnagar union of Gopalpur Upazila in 2005 under this project.</li> <li>After construction one time maintenance work was done on this road.</li> <li>The road condition is not good and has major problems – in many places carpeting has been damaged and created cracks and pot holes; both side road soil has been broken by river erosion; and in few places both side road has been settle down; which are creating difficulties to move. Immediate repair works is needed.</li> <li>The road is now functional with some problems and the people are now regularly using the road to go to different places and different purposes. For local people the road is very important.</li> <li>During observation the rural road was very busy for all types of traffic transactions. Truck, different types of motorized vehicles, bicycle, pick up, van, rickshaw are now moving on the road. Truck and van was the most movable vehicle during observation. Truck was carrying wood, brick and soil.</li> </ul>
20. Upazila HQ to Doail UP via Bolardia pucca road construction (chain 8.000 – 10. 100) Union: Awna Upazila: Sarishabari Districts: Jamalpur	Length– 2 km Width–3.66 m Observed length: 1 km Type: Union road Year: 30.10.04 – 20.05.05 Cost: Allocated: 31,00,000 Actual: 31,00,000	<ul style="list-style-type: none"> <li>2 km pucca road was constructed on Upazila HQ to Doail UP via Bolardia road at Awna union of Sarishabari Upazila in 2005 under this project by LGED.</li> <li>No maintenance work was done after developed of the road.</li> <li>The road condition is good – no cracks or damages or holes were found on this road. No repair works is needed.</li> <li>The road is now functional with no problems and the people are now regularly using the road to go to different places and different purposes. For local people the road is very important. There was market near this road for this the road is very essential to the local people. During observation the rural road was very busy for all types of traffic transactions. Van, CNG, truck, motor cycle, bicycle are now moving on this road. Van, motor cycle and cycle were the most movable vehicle during observation.</li> </ul>
21. From Bulbuli high school to Doctor Manjil Murshed Khan's house road and 2 nos U drain development of Gutail road (chain 0.000 – 0.345) km Union: Parthashi Upazila: Islampur Districts: Jamalpur	Length– .345 km Width–2.450 m Observed length: .345 km Type: Union road Year: 05.05.07 – 10.12.07 Cost: Allocated: 8,54,092 Actual: 8,49,284	<ul style="list-style-type: none"> <li>.345 km road was developed on Bulbuli high school to Doctor Manjil Murshed Khan's house road at Parthashi union of Islampur Upazila in 2007 under this project by LGED.</li> <li>No maintenance work was done after developed of the road.</li> <li>The road condition is good – no cracks or damages or holes were found on this road. No repair works is needed.</li> <li>The road is now functional with no problems and the people are now regularly using the road to go to different places and different purposes. For local people the road is very important.</li> <li>During observation the rural road was busy for all types of traffic transactions. Van, rickshaw, auto rickshaw, lorry, mini truck, jeep, car, motor cycle, are now moving on this road. Motor cycle was the most movable vehicle during observation.</li> </ul>
22. From Naim Mia's bazaar to Ghashipara Mondol bari road development Union: Ghasipara Upazila: Bakshiganj Districts: Jamalpur	Length– 1 km Width– 4 m Observed length: 1 km Type of Road: Union road Construction year: 29.06.05 – 29.12.05 Cost: Allocated: 44,31,534 Actual: 44,25,550	<ul style="list-style-type: none"> <li>1 km road was developed on Naim Mia's bazaar to Ghashipara Mondol bari road at Ghasipara union of Bakshiganj Upazila in 2005. No maintenance work was done after development of the road.</li> <li>The road is now functioning.</li> <li>The road condition is good – no cracks or damages or holes were found on this road.</li> <li>The road is very important for the local people and they are now regularly using the road to go to different places for different purposes. This is the only way (road) for the local people to go to Bakshiganj Upazila. During observation traffic transactions on this road was as usual. Van, truck, motor cycle, cycle, votvoti, trolley, rickshaws are now moving on this road and van was the most movable vehicle during observation.</li> </ul>
23. Mamudpur Gabindoganj road development Union: Mahmudpur Upazila: Melandah Districts: Jamalpur	Length– 1 km Width–2.45 m Observed length: 1 km Type: Union road Year: 22.02.06 – 28.06.07 Cost: Allocated: 19,89,789 Actual: 22,88,253 (15% high price of tender)	<ul style="list-style-type: none"> <li>LGED was developed 1 km road by carpeting on Mamudpur Gabindoganj road at Mahmudpur union of Melandah Upazila in 2006-07. One time maintenance or repair works was done after construction.</li> <li>The road condition is good – no damages or crack were found in the developed portion but both road side soil has been broken by displacing/removing of soil in few places.</li> <li>The road is now functioning without any problem. Local people of Mahmudpur and Noarpara union are using the road most. During observation the rural road was busy for all types of traffic transactions. Motor cycle, van, rickshaw, trolley, bicycle, truck are now moving on the road and van was the most movable vehicle during observation.</li> </ul>
24. Beltoli Charashguna bazaar road development Union: Ghosherpara Upazila: Melandah Districts: Jamalpur	Length– 1 km Width–2.45 m Observed length: 1 km Type: Union road Year: 18.09.06 – 18.12.06 Cost: Allocated: 19,87,325 Actual: 23,07,460 (16.10% high price of tender)	<ul style="list-style-type: none"> <li>LGED was developed 1 km road by carpeting on Mamudpur Gabindoganj road at Ghosherpara union of Melandah Upazila in 2006.</li> <li>No maintenance work was done after development of the road.</li> <li>The road condition is good but have minor problem – in one place carpeting has been damaged. Beside that, at the end of the north side of the road has been damaged due to flood and in few places road side soil has been washed out and road side has been broken – which is creating problem to movement. Need repair work for better communication. The road is now functioning with some problems due to flood. Local people of Ghosherpara, Fulkocho and Adarvita union are using the road most. During observation the rural road was busy for all types of traffic transactions. Van, rickshaw, trolley, fider, microbus, motor cycle, bicycle, truck are now moving on the road and motor cycle was the most movable vehicle during observation.</li> </ul>
25. Takimari Dewanganj road development Union: Chikajani Upazila: Dewanganj Districts: Jamalpur	Length– 3.5 km Width–3.05 m Observed length: 3.5 km Type: Union road Year: 20.06.05 – 20.04.06 Cost: Allocated: 10,109,287 Actual: 10,079,493	<ul style="list-style-type: none"> <li>3.5 km road was developed by LGED under this project on Mirzapur – Nagarpur road at Chakajani union of Dewanganj Upazila in 2005-2006. No maintenance or repair works was done after construction. The road condition is good – no damages or crack were found in the developed portion of the road but road side soil has been broken down for displaced/removed soil in some places which are not creating any problem to movement . The road is now functioning and local people of Chikajani, Chukaibari, Dewangaon pourashabha are using the road mostly. During observation the rural road was very busy for all types of traffic transactions. Motor cycle, bicycle, truck, soil digging truck, CNG, auto bike, van, lorry, rickshaw are now moving on the road and soil digging truck was the most movable vehicle during observation.</li> </ul>

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
26. Lonkkarchar road development Union: Choramkhao Upazila: Dewanganj Districts: Jamalpur	Length- 1.715 km Width-3.05 m Observed length: 1.715 km Type: Union road Year: 20.06.05 – 20.06.06 Cost: Allocated: 52,07,801 Actual: 51,96,377	<ul style="list-style-type: none"> <li>1.715 km road was developed by LGED under this project on Lonkkarchar road at Choramkhao union of Dewanganj Upazila in 2005-2006. No maintenance or repair works wad done after construction</li> <li>The road condition is good – no damages or cracks or holes were found in the developed portion of the road. But road side soil has become displaced which need to be filled up with soil.</li> <li>The road is now functioning without any problem and local people of Choramkhao, Shanandabari, Lankharchar, Katarbil, Kamarerchar union are using the road. During observation the rural road was busy for all types of traffic transactions. Motor cycle, bicycle, truck, auto bike, van, lorry, truck are now moving on the road and motor cycle was the most movable vehicle during observation.</li> </ul>
27. From Kalibari to Fareque Mondol house road development via Shai Baro Duari Mosque of Garjaripar Union: Garjaripar Upazila: Shreebordi Districts: Sherpur	Length- 3 km Width-3.657 m Observed length: 3 km Type: Union road Year: 2004 – 2005 Cost: Allocated: 74,23,201 Actual: 74,22,930	<ul style="list-style-type: none"> <li>Total length of the road is 5 km and LGED was developed 3 km road by carpeting on Kalibari to Fareque Mondol house road under this project at Garjaripar union of Shreebordi Upazila in 2004-2005. The remaining part of the road is katcha. One time maintenance or repair works wad done after construction.</li> <li>The road condition is moderately good – carpeting condition is good, only in two or three places road side pitch has been broken and in some places road side soil has been broken, which are creating problem to passing two vehicles at a time</li> <li>Overall condition of the road is good except some problems i.e. road side pitch are broken and road side soil are broken.</li> <li>The people are now regularly using the road to go to different places for various purposes. Bus, micro, CNG, pick up, auto rickshaw, rickshaw, motor cycle, tempo, vans are now moving on this road. During observation rickshaw, CNG, van and motor cycle were the most movable vehicles.</li> </ul>
28. From Hosendi chowrasta to Moddho para road development of Mirzapur –Dilalpur road and Union: Hosendi Upazila: Pakundia Districts: Kishorganj	Length- 1 km Width-3.30 m Observed length: 1 km Type: Union road Year: 2004 – 2005 Cost: Actual: Tk. 23,00,000	<ul style="list-style-type: none"> <li>Total length of the road is 9 km and LGED was developed 1 km road by carpeting and sand filling, soil filling, earth filling on Hosendi chowrasta to Moddho para road under this project at Hosendi union of Pakundia Upazila in 2004-2005. No maintenance or repair works wad done after construction.</li> <li>The road condition is good.</li> <li>The people are now regularly using the road to go to different places for various purposes.</li> </ul>
29. Aushutia bazaar to Sukhia bazaar road development Union: 10 no. Sukhia Upazila: Pakundia Districts: Kishorganj	Length- 4.86 km Width-2.5 m Observed length: 4.86 km Type: Union road Year: 25.03.08 – 04.12.08 Cost: Allocated: 57,58,964 Actual: 57,40,758	<ul style="list-style-type: none"> <li>LGED was developed 4.86 km road on Aushutia bazaar to Sukhia bazaar road under this project at Sukhia union of Pakundia Upazila in 2008. No maintenance or repair works wad done after construction.</li> <li>The road condition is good – no damages or cracks were found on the developed road</li> <li>The road is now functioning without any problem. The road is directly connected to Basail to Sunna.</li> <li>The people are now regularly using the road to go to different places for various purposes. During observation the rural road was moderately busy for traffic transactions. Tomtom, van, rickshaw, motor cycle, private car are now moving on the road and tempo was the most movable vehicle during observation. During observation tomtom was the most movable vehicle which carrying vegetables, paddy and potato.</li> <li>Approximately 1000 trees (Eucalptas) are there on the road side, though these were not planted under this project – these are the personal asset of the local people.</li> </ul>
30. Moshua UP to Buradia bazaar road development (chain 1.184 – 2.184) km; and 32. Moshua UP to Buradia bazaar road development (chain 2.184 – 2.884) km Union: 07 no. Masua Upazila: Kotiadi Districts: Kishorganj	Length- 1.7 km Width-3.05 m Observed length: 1.7 km Type: Union road Year: 2004 Cost: Allocated: 2,35,200 Actual: 2,34,000	<ul style="list-style-type: none"> <li>LGED was developed 1.7 km area on Moshua UP to Buradia bazaar road under this project at Masua union of Katiadi Upazila in 2004. No maintenance or repair works wad done after construction.</li> <li>The road condition is good – no damages or cracks were found on the developed road</li> <li>The road is now functioning without any problem. It was found during observation that the union road is moderately busy for all types of traffic transactions. Tomtom, rickshaw, van, tractor, van are now moving on the road. Tomtom and van were the most movable vehicles during observation and also tomtom were carrying paddy, rice, potato and tractor carrying soil.</li> <li>Approximately 400 trees (Segun, Jackfruit, Mehogani, Banyan tree and medicinal plants) are there on the road side, though these were not planted under this project – these are the personal asset of the local people.</li> </ul>
31. Moshua UP HQ – Kajirchar hat via Bairagirchar bazaar road development (chain 0.000 – 1.200) km Union: 07 no. Masua Upazila: Kotiadi Districts: Kishorganj	Length- 2 km Width-3.05 m Observed length: 2 km Type: Union road Year: 2004 Cost: Allocated: 3,24,900 Actual: 3,44,660	<ul style="list-style-type: none"> <li>LGED was developed 2 km road on Moshua UP HQ – Kajirchar hat via Bairagirchar bazaar road under this project at Masua union of Katiadi Upazila in 2004. No maintenance or repair works was done after construction.</li> <li>The road condition is good – no damages or cracks were found on the developed road.</li> <li>The road is now functioning without any problem. It was found during observation that the union road is moderately busy for all types of traffic transactions. Tomtom, tractor, mini truck, rickshaw, van, motor cycle, pick up are now moving on the road. Tomtom and tractor were the most movable vehicles during observation.</li> <li>Approximately 200-250 trees (Mehogani, Segun, Mango, Jackfruit and some medicinal plants) are there on the road side, though these were not planted under this project – these are the personal asset of the local people.</li> </ul>

Name of Schemes and location	Size, type of road, period of construction and cost	Overall comments on the road
32. Sharachar – Agarpur – Masimpur road development (chain 0.000 – 0.930) km; Union: 10 Gazirchar Upazila: Bajitpur Districts: Kishorganj	Length– 1.25 km Width–6 m Observed length: 1.25 km Type: Union road Year: 09.02.06 – 10.06.06 Cost: Not available	<ul style="list-style-type: none"> <li>• LGED was developed 1.25 km road on Sharachar – Agarpur – Masimpur road under this project at Gazirchar union of Bajitpur Upazila in 2006. No maintenance or repair works was done after construction.</li> <li>• The road is now functioning with some problems i.e. large holes in the road and road sides have been broken, which creating problems to vehicle movements and sometimes it may occurred accident. It is need to be immediate repair.</li> <li>• During observation the union road was moderately busy for all types of traffic transactions. Pick up, tractor, mini bus, CNG, auto, tomtom, rickshaw, van are now moving on the road. During observation pick up and tomtom were the most movable vehicles and pick ups were carrying people and tomtom were carrying agri products. Approximately 150 trees (Mehogani, Garjan, Jackfruit, Mango and some medicinal plants) was found on the road side, though these were not planted under this project.</li> </ul>
33. Bajitpur – Kukrai via Koilag road development and Union: Koilag Upazila: Bajitpur Districts: Kishorganj	Length– .500 km Width–6 m Observed length: .500 km Type: Union road Year: 2004-2005 Cost: Not available	<ul style="list-style-type: none"> <li>• LGED was developed .500 km road by carpeting and protection wall on Bajitpur – Kukrai via Koilag road under this project at Koilag union of Bajitpur Upazila in 2004-2005. No maintenance or repair works was done after construction.</li> <li>• The road condition is good. – no damages or cracks were found on the developed road</li> </ul>
34. Sharachar – Hamidpur (Halimpur) (beside rail line) road development (chain 0.000 – 0.516) km Union: 10 no. Gazirchar Upazila: Bajitpur Districts: Kishorganj	Length– 1 km Width–5.5 m Observed length: 1 km Type: Union road Year: 05.01.06 – 08.05.06 Cost: Allocated: 21,19,562 Actual: 23,17,670	<ul style="list-style-type: none"> <li>• LGED was developed 1 km road on Sharachar – Hamidpur road under this project at Gazirchar union of Bajitpur Upazila in 2006. No maintenance or repair works was done after construction.</li> <li>• The road condition is moderately good – minor portion of pitch has been damaged in some places which need to be repaired, though it is not creating any problem to movements.</li> <li>• It was found during observation that the union road is moderately busy for traffic transactions. Van, rickshaw, tempo, CNG, tomtom are now moving on the road. Van was the most movable vehicles which was carrying paddy</li> <li>• Approximately 200 trees (Mehogani, Shiri, Shishu, Nim etc.) are there on the road side, though these were not planted under this project.</li> </ul>
35. Road development upto Gajgoria (Panch Kahnia) Dewpur UP office first and second part (chain 2.942 – 3.741) km and (chain 3.741 – 4.666) km Union: Amtala Upazila: Netrokona Sadar Districts: Netrokona	Length– .80+ .920= 1.724 km Width–3.05 m Observed length: 1.724 km Type: Union road Year: 27.10.05 – 20.01.06 26.01.06 – 20.06.7 Cost: Allocated: 21.99+21.99 Actual: 21.53+21.53	<ul style="list-style-type: none"> <li>• 1.724km (.80 km and .920 km) road development upto Gajgoria (Panch Kahnia) Dewpur UP office first and second part by LGED under this project at Amtala union of Netrokona Sadar Upazila in 2005-2007.</li> <li>• No maintenance or repair works was done after construction.</li> <li>• The road condition is moderately good – except in two places minor portion of pitch was damaged, which are not creating problem</li> <li>• The road is now functioning with minor problems i.e. slight pitch is damaged in two places.</li> <li>• It was found during observation that different types of traffic transactions on the union road is as usual. CNG, baby taxi, auto rickshaw, truck, mini bus, microbus, lorry, van, cycle, motor cycle are now moving on the road and rickshaw and auto rickshaw were the most movable vehicle during observation. During observation van and rickshaw were found carrying paddy and rice.</li> </ul>
36. From Bali bazaar to Kailati UP office road development of Netrokona Modon road (chain 0.000 – 0.915) km Union: Kailati Upazila: Netrokona Sadar Districts: Netrokona	Length– 0.915 km Width–3.05 m Observed length: 0.915 km Type: Union road Year: 30.11.05 – 30.03.06 Cost: Allocated: 24.84 Actual: 24.62	<ul style="list-style-type: none"> <li>• .915 km road development from Bali bazaar to Kailati UP office road development of Netrokon Modon road (chain 0.000 – 0.915) km by LGED under this project at Kailati union of Netrokona Sadar Upazila in 2005-2006.</li> <li>• No maintenance or repair works was done after construction.</li> <li>• The road condition is moderately good – in some place minor cracks were found and in some places road side soil has been broken</li> <li>• The road is now functioning with minor problems i.e. minor cracks and road side broken</li> <li>• It was found during observation that different types of traffic transactions on the union road is as usual. CNG, pick up, truck, tempo, auto rickshaw, van, trolley, Rickshaw and rickshaw are now moving on the road. Rickshaw, van and auto rickshaw was the most movable vehicle during observation and trolley was also found carrying goods.</li> </ul>
37. Modon Khalijuri road via Uchitpur (chain 0.000 – 1.000) km Union: Modon Upazila: Modon Districts: Netrokona	Length– 1 km Width–3.05 m Observed length: 1 km Type: Union road Year: 2005 – 2007 Cost: Not available	<ul style="list-style-type: none"> <li>• The road was now under the RHD department, not LGED. LGED was developed 1 km road on Modon Khalijuri road via Uchitpur (chain 0.000 – 1.000) km under this project at Modon union of Modon Upazila in 2005. No maintenance work was done after construction.</li> <li>• The road condition is very bad – carpeting has been damaged fully; many pot holes have been formed which are creating problems to movements; both side road has been broken including 100 meter aging. Because of pot holes, sometimes water logging problem are created due to minor rain. The road is very important for the local people, for that local people are filled up the hole with soil and sand by their own initiative for using the road.</li> <li>• During observation the union road was moderately busy for different types of traffic transactions. Rickshaw, van, nosimon, pick up van, mini truck, Honda, van, auto rickshaw are now moving on the road and nosimon was the most movable vehicle during observation.</li> </ul>

**Table 4: Detailed Findings of Observed Flood Re-habilitated Roads (2004 & 2007)**

Name of Scheme and location	Size, type, period of construction and cost	Overall comments on the road
1. Shalora – Bondo bazaar road rehabilitation (chain 0.00 – 14.50) km; Union: Dolla 1 no. ; Upazila: Muktagacha; District: Mymensingh	Total length– 14.50 Width–3 m Observed length: 3.5 Type: Rural road Year: 2007 Cost: Not available	<ul style="list-style-type: none"> <li>• LGED was rehabilitated 3.5 km road by carpeting and widening &amp; high of road on Shalora – Bondo bazaar road which was damaged during 2004 flood. The road is not fully pucca.</li> <li>• Condition of the completed part (carpeting portion) of solora-bondobazar road is good. But the incomplete part of the road (kutcha portion), the soil in two sides of the road is removing and it may cause the breaking down of the road. Though presently is not creating any problem to move vehicle, it should be repaired and the rest of the incomplete road should be completed, block should be added through piling in two sides.</li> <li>• Local people are not benefited much because the whole road is not completed or carpeted, and solor-bondobazar is the same remote area. According to the local people before constructing the road is was not possible to move for various vehicles. Though the road is not completed, because of the present development of the road it is possible for truck, van, and motor cycles to move. Truck is used for carrying paddy; fish and fish food. People use the road for traveling village-union- Upazila - zilla shohor. It connected Solora and bondobazar. During the observing period 2-5 motor cycles and vans, 2 tracks and 20-25 passers by were seen on the road. At present the road is used for carrying mainly fish and fish food, agricultural products and traveling.</li> </ul>
2. Ishwarganj – Shahidpur road rehabilitation (chain 0.00 – 3.50) km; Union: Sohagi; Upazila: Ishwarganj; District: Mymensingh	Actual length– 4.9 km Width–3.05 m Observed length: 3.5 km Year: 03.01.2006 - 28.06.2006 Cost: Allocated: 36,43,432 Actual: 36,43,432	<ul style="list-style-type: none"> <li>• The iswarganj-shahidpur road is in the Shohagi union. This road was damaged in the flood of 2004. LGED was rehabilitated/repared 3.5 km road by bituminous carpeting on iswarganj-shahidpur road under this project at Sohagi union of Ishwarganj Upazila in 2006. The work was completed according to time. After rehabilitation work one time maintenance work was done.</li> <li>• The road at present is in use. But some repairing is needed- ageing, seal court, macadam, carpeting, side filling is damaged; there are many cracks in the road. Different types of vehicles are now moving on the road, which was not possible before development of road. For the development of communication, job opportunity increased, business expanded and many hats and shops are made. By using this road it is possible to go to Netrokona directly via shahidpur and Kendua. This road connected shahidpur, shohagi, atharbari, iswarganj. The people of Shohagi union and Ishwarganj use it most. According to local users daily 3000 people use the road. During the observation period many people (nearly 500) and many vehicles were seen, such as track, lorry, motor cycle, pick-up etc, but number of pick-ups was highest. At present the road is in use. People are using it in various purposes.</li> </ul>
3. RHD sarak Ragmara – Chakrampur GC sarak rehabilitation (chin 2.23 – 8.16) km ; Union: Sakua; Upazila: Trishal; District: Mymensingh	Total length– 6 km Width–3.05 m Observed length: 6 km Type: FRB Road Year: 26.05.2005 - 28.01.2007 Cost: Allocated: 22,03,163 Actual: 22,70,021	<ul style="list-style-type: none"> <li>• The RHD sarak Ragmara – Chakrampur GC sarak is in Sakua and trishal union. LGED was rehabilitated 6 km road on RHD sarak Ragmara – Chakrampur GC sarak in 26.5.2005-28.1.2007, which was damaged by 2004 flood. During the repairing the pot holes were filled up, uneven parts were made plain and bituminous carpeting was completed.</li> <li>• At present the road is in use. But road condition is not good, some repairing is needed- there are holes, carpeting is damaged, and there are many cracks.</li> <li>• According to the local people, before the construction of the road; rickshaw , van , trolley , by cycle traveled on the road, but now it is possible to carry other goods such as paddy, jute, vegetables etc. its is easier to go to union from Upazila. It takes less time to go somewhere, carry agricultural goods, to go to health centers and educational institutions. For the development of communication, job opportunity increased, business expanded and many hats and shops are made. One can get everything in one place for this construction. During the observation period many people (nearly 2000) and many vehicles were seen, such as track, lorry, motor cycle, pick-up etc, but number of goods carrying track was highest. It is possible to go to Trishal, shakua, rosulpur, barbaria, horirampur, Rampur union by using the road. At present the road is in use. People are using it for going to schools, colleges, bazaars, health centers etc. it is very important because people are benefited by using this road.</li> </ul>
4. Nandail – Rasulpur road rehabilitation (chain 0.00 – 6.50) km; Union: Nandail; Upazila: Nandail Sadar; District: Mymensingh	Total length– 6.50 km Width–6.07 m Observed length: 3 km Type: Rural Road Year: 04.05.2008 – 13.05.2010 Cost: Allocated: 829,983 Actual: 822,810	<ul style="list-style-type: none"> <li>• The road was damaged in the flood of 2004 and was repaired by LGED under this project in 4.5.2008-13.5.2010. This road was made compact by adding sand on the sub-base, adding sand and pieces of brick on the sub-base, bituminous carpeting. The work was completed according to estimated time. After construction one time maintenance work was done on this road.</li> <li>• The road is in use at present and condition of the road is good.</li> <li>• The According to the local people, before the construction of the road; rickshaw, van, trolley, tomtom traveled on the road, but now lorry, rickshaw, tomtom, private car, Honda, small track, pick up travels on the road. It is possible to carry other goods such as paddy, vegetables etc through these vehicles. It is easier to go to union from upazila. It takes less time to go somewhere, carry agricultural goods, to go to health centers and educational institutions. For the development of communication it became easier to carry agricultural goods from the field, business expanded and many hats and shops are made. One can get everything in one place for this construction. They can go to zilla sadar, upazila and Dhaka.</li> <li>• This road connected nandail porashava and other Upazilas to Dhaka-Sylhet. During the observation period many people (nearly 150) and many vehicles were seen, such as track, lorry, motor cycle, pick-up, honda etc, but number of paddy carrying lorry was highest. At present the road is in use. No repairing is needed. People can go to Upazila sadar and zilla sadar and by using this road children can go to educational institutions, male-females from the village can go to local health complexes and zilla hospitals. This road is very important to local people.</li> </ul>
5. Basail – Natiapara via GC Bilpara road repair and rehabilitation (chain 0.000– 2.061) km; Union: Harla; Upazila: Basail; District: Tangail	Total length– 2.061 km Width–3 m Observed length: 2.06 km Type: FRB Year: 10.10.2005 – 31.10.2007 Cost: Allocated: 1,992,543 Actual: 1,294,624	<ul style="list-style-type: none"> <li>• Basail-notipara via Gc bilpara road is in harla union. Total length of the road is 8.66 km. The road was damaged in the flood of 2004 and on this road LGED was 2.06 km road was repaired in 10.10.2005-31.10.2005. Some works done during the repairing of this road are: This road was made broad and high by adding soil on it, it was made compact by adding sand on the sub-base, adding sand and pieces of brick on the sub-base, bituminous carpeting. After rehabilitation no maintenance work was done. The work was completed according to estimated time.</li> <li>• At present the road is in use and no repairing is needed. According to the local people, before the construction of the road van, tempo, cycle, bull-cart traveled on the road, but now track, van, motor cycle etc travels on the road. They carry various agricultural goods such as potatoes, onion, mustard, tomato, carrot etc. because of the development of the road it takes less time to go upazila town, they can sell agricultural goods to remote places, and are getting enough money. By using this road people can go to educational institutions, male-females from the village can go to local health complexes and can carry agricultural goods. This road is very important to local people. By using this road one can go to harla, korotia, basail. According to local users daily 1500 people use the road. During the observation period many people (nearly 100) and many vehicles were seen, such as track, lorry, motor cycle, pick-up etc, but number of vegetable carrying van and tempo was highest.</li> </ul>

Name of Scheme and location	Size, type, period of construction and cost	Overall comments on the road
6. Dhalapara – Chapri road rehabilitation (chain 0.000 – 2.200) km; Union: Dhalapara; Upazila: Ghatail; District: Tangail;	Total length– 2.20 km Width–3 m Observed length: 2.200 km Type: Rural road Year:09.2004–12.2004 Cost: Actual: 1,499,385	<ul style="list-style-type: none"> <li>The dhalapara-chapri road is in rasulpur and dhalapara union. Total length of the road is 10 km and the road is fully pucca. The road was damaged in the flood of 2004 and LGED was repaired 2.200 km road on this road in 09.2004-12.2004. During repairing, road was made compact by adding sand on the sub-base, adding sand and pieces of brick on the sub-base, bituminous carpeting.</li> <li>The work was completed according to estimated time. After rehabilitation one time maintenance work was done.</li> <li>The road is now operating but have some major problems – e.g. carpeting has damaged in most of places; there are many cracks; and in 10-15 places road side brick field has been broken – which creating problem to smooth movement of vehicles and which may occurred road accident. Need immediate repair works in this road for better communication.</li> <li>According to the local people, before the construction of the road van, bi-cycle traveled on the road, but now track, van, motor cycle, rickshaw etc travels on the road. They carry various agricultural goods. because of the development of the road it takes less time to go upazila town, they can sell agricultural goods to remote places, and are getting enough money. During observation the road was found busy for different types of traffic transaction e.g. brick loaded truck, motor cycle, van, bicycle found to move.</li> </ul>
7. Gopalpur – Madhupur road rehabilitation; Union: Dhokkandi; Upazila: Gopalpur; District: Tangail	Total length– 4.80 km Width–3 m Observed length: 4.800 km Type of Road: FRB road Year: 11.2005 – 11.2006 Cost: Allocated: 5,999,502	<ul style="list-style-type: none"> <li>Total length of the road is 12 km and is fully pucca. The road is in Gopalpur and Modhupur Upazila. The road was damaged in the flood of 2004 and LGED was repaired 4.800 km road by carpeting on this road in 2005-2006. During repairing, the road was made compact by adding sand on the sub-base, adding sand and pieces of brick on the sub-base, bituminous carpeting.</li> <li>The work was completed according to estimated time. After rehabilitation one time maintenance work was done.</li> <li>The road is now operating but have some minor problems – e.g. carpeting has moderately good condition but many cracks and pot holes are there – which creating problem to smooth movement of vehicles. Need immediate repair works in this road for better communication. According to the local people, before road development van, bicycle and bullock cart can move on this road, but now truck, baby, tempo, motorized vehicles, motorcycle, pick up also can move. During observation traffic transaction was as usual on this road. Rod loaded truck, motorized vehicles, pick up, cycle, van motor cycle, van were found to move and truck was the most movable vehicle during observation.</li> </ul>
8. Batara UP – Diggapath bazaar road rehabilitation; Union: Awna; Upazila: Sarishabari; District: Jamalpur	Total length– 2 km Width–3.05 m Observed length: 2 km Type: FRB road Year: 27.04.2005 – 16.03.2007 Cost: Allocated: 4,953,000 Actual: 4,953,000	<ul style="list-style-type: none"> <li>The total road is in Awna and Pigna union. The road was damaged in the flood of 2004 and LGED was repaired 2.0 km road by carpeting on this road at Awna union of Sarishabari Upazila in 2005-2007. During repairing, the road was made compact by adding sand on the sub-base, adding sand and pieces of brick on the sub-base, bituminous carpeting.</li> <li>The work was completed according to estimated time. After rehabilitation no maintenance work was done.</li> <li>The road is now operating and the developed portion is in good condition, no cracks were found on the road. But only road side soil has been removed and broken down in 5-6 places which creating minor problem to movement.</li> <li>According to the local people, before road development van, horse cart can move on this road; but now truck, mini truck, CNG, motorcycle, private car also can move. During observation motor cycle, CNG, bicycle, van were found to move and truck was the most movable vehicle during observation.</li> </ul>
9. Milandha mohish bathan road rehabilitation; Union: 2 no. Korichara; Upazila: Melandah; District: Jamalpur	Total length– 1 km Width–3 m Observed length: 1 km Type: FRB road Year: 06.12.2006 – 28.12.2007 Cost: Allocated: 2,007,077 Actual: 2,001,595	<ul style="list-style-type: none"> <li>The road was damaged in the flood of 2004 and LGED was repaired 1.0 km road by carpeting on Milandha mohish bathan road at Korichara union of Melandah Upazila in 2006-2007. The work was completed according to estimated time. One time maintenance work was done after rehabilitation work.</li> <li>The road is now operating and have minor problems on this road – in two places carpeting slightly washed out; in one place have a pot hole on road; and road side have been broken by removing soil in some places. Though not creating any problem to movement, need general maintenance work.</li> <li>According to the local people, before road development rickshaw, van, bullock cart can move on this road; but now truck, motor cycle, bicycle, microbus, auto bike, CNG, horse cart also can move. During observation the road was very much busy for different types of traffic transaction. Van, motor cycle, votvoti, fider, were found to move and votvoti was the most movable vehicle during observation.</li> </ul>
10. From Bhayadanga to Balijhuri road development; Union: Vayadanga; Upazila: Sreebordi; District: Sherpur	Total length– 1.5 km Width–3.65 m Observed length: 1.5 km Type: Rural road Year: 12.2005 – 06.2006	<ul style="list-style-type: none"> <li>Total length of the road is 6.5 km from Vahadanga Chowurasta to Balijuri. In the total road, at the beginning 3 km is pucca, in the middle stage 2 km is kaccha (mud) and rest 1.5 km is pucca (carpeting). The road was damaged (pucca portion) in the flood of 2004 and LGED was rehabilitated/repared 1.5 km road by carpeting on Bhayadanga to Balijhuri road at Vahadanga union of Shreebordi Upazila in 2005-2006. The work was completed according to estimated time. No maintenance work was done after rehabilitation work.</li> <li>The road is in use at present with minor problems – in few places road side pitches/soil have been removed and created holes – for this in these places vehicles move slowly. Need minor repairing works. During observation the road was moderately busy for different types of traffic transaction e.g. fertilizers and grocery loaded horse cart and auto rickshaw, motor cycle were found to move. Horse cart was the most movable vehicle during observation.</li> </ul>
11. Netrokona – Sidli GC (sadar part) road repair; Union: Medoni; Upazila: Netrokona Sadar; District: Netrokona	Total length– 5 km Width–5.5 m Observed length: 5 km Type: FRB road Year: 2007-2008	<ul style="list-style-type: none"> <li>Total length of the road is 13.13 km. The road was damaged in the flood of 2007 and LGED was rehabilitated/repared 5 km road by carpeting, road side improvement, sand compact on sub-base, compact by sand and brick on sub base on Netrokona – Sidli GC (sadar part) road at Medoni union of Netrokona Sadar Upazila in 2007-2008. The work was completed according to estimated time. One time maintenance work was done after rehabilitation work.</li> <li>The road is in use at present with minor problems – in few places carpeting has washed out; in few places cracks and pot holes were found; and in few places road side soil has broken by removing soil. Need minor repairing works.</li> <li>According to the local people, before road development only horse and bullock cart can move on this road; but now truck, trolley, van, rickshaw, auto rickshaw, tempo also can move. During observation truck, trolley, van, rickshaw, auto rickshaw, tempos were found to move and rickshaw &amp; auto rickshaw were the most movable vehicle during observation.</li> <li>Road side tree plantation was found in this road (Mehogoni, Shishu). During the observation big trees were found on both side of the road. LGED official was mentioned that there was a plan to plant trees on both sides of road in the project and they planted 100 trees (Mehogoni and Shishu). Now there are 50% trees survived and they are in a good condition. It was also informed that 50% was dead and destroyed and village people took away some trees.</li> </ul>

Name of Scheme and location	Size, type, period of construction and cost	Overall comments on the road
12. Modon – Mohonganj road repair; Union: Madon; Upazila: Madon; District: Netrokona	Total length– 0.5 km Width–3.66 m Observed length: 0.5 km Type: FRB road	<ul style="list-style-type: none"> <li>The road was damaged in the flood of 2004 and LGED was rehabilitated/repared .500 km road by carpeting, sand compact on sub-base, compact by sand and brick on sub base on Modon – Mohonganj road at Madon union of Madon Upazila. The work was completed according to estimated time. No maintenance work was done after rehabilitation work.</li> <li>The road is in use at present with minor problems – carpeting is in good condition, no cracks and damages are there on road but in 50 meter area, road side has broken with aging for flooding which need to be repaired.</li> <li>According to the local people, before road development people was move on foot and by boat; but now nosimon, Honda, van, rickshaw, pick up can move on road. During observation Honda, van, rickshaw, nosimon, pick up van were found to move and paddy loaded pick up van and Honda, nosimon were the most movable vehicle during observation.</li> <li>Tree plantation is needed in this road.</li> </ul>

**Table 5: Detailed Findings of Observed Bridges/Culverts on FRB Roads**

Name of Scheme	Location of the bridge	Size, type of road, period of construction and cost	Condition of the bridge and overall comments
1. Construction of 30 meter RCC bridge on Tangail Dhalapara road	Union: Pahikara Upazila: Kalihati District: Tangail	Length– 30m Width–3.66 m Height–6.4m No. of span –3 Year of construction: 2005 Cost: 3,900,000 Lakh	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition - soil of both side abutments are filled in, abutments' walls plastering is smooth, concrete work for wall done properly; 6 nos. girders are in good condition; 9 nos. cross beams are in good condition; 2 nos. piers are in good condition; Bridge slab is in good condition – surface is smooth, RCC casting is good and smooth; Both side railing are in good condition; Both side of approach road are partly damaged and in few places spot whole have been formed and both side slops are not smooth and in one side approach road collapsed down ward; Wing wall and retaining wall are in good condition; and Clear opening is sufficient</li> <li>The bridge is newly constructed. The road where the bridge was constructed is fully paca road and in total there is 28 bridges/culverts in the road including the project bridge. The road with bridge/culvert is now operational. Overall condition of the bridge is good except both side approach road – partly damaged, spot whole formed, slops are not smooth and also the road have some problems e.g. spot whole found here and there and in few places road carpeting is damaged. The most benefited unions are Pahikara (bridge site), Kokkahora, Bir Basinda. Approximately 5000 people are using the road and bridge daily. The road with bridge are using for carrying agricultural products to union market, Upazila and district town and other purpose. Before the road development most of the time people moved on foot and rickshaws, vans, cycle could move to the road but now truck, CNG, lorry, cycle, Motorcycle can move.</li> <li>During observation it was found that van is the most frequent vehicle and also the van was carrying the paddy seedlings. Users opined that for road development the movement is easier than before, take less time to go any where than before, easily can take agri product to market and different places for sale. If there is some problem in the road, for better communication development approach road and whole road needed repairing and carpeting as early as possible.</li> </ul>
2. 12 meter Girder bridge of Islampur – Jhagrarchar road (6.80 km chain)	Union: Jhagrarchar Upazila: Islampur District: Jamalpur	Length– 12m Width–3.66 m Height–1.5m No. of span – 1	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition - soil of both side abutments are filled in, abutments' walls plastering is smooth, no rod and stone chips were found open in the wall surface; 2 nos. girders are in good condition; 3 nos. cross beams are in good condition; Bridge slab is in good condition – surface is smooth, RCC casting is in good and smooth; Both side railing are in good condition; Both side approach road are in almost good condition but some minor spot whole have been formed in few places; Wing wall and retaining walls are in good condition; Clear opening is sufficient; Wearing coat is in good condition;</li> <li>The bridge is newly constructed. The road where the bridge was constructed, it is katcha road. The road with bridge/culvert is now operational. Overall condition of the bridge is good except approach road – minor spot whole formed in few places and also the road have some problems e.g. spot whole found here and there.</li> <li>Approximately 3000 people are using the road and bridge daily. The road with bridge are using for carrying agricultural products to union market, Upazila and district town and other purpose. Before the road development most of the time people moved on foot and vans, bullock curt, horse curt could move to the road but now truck, Motorcycle, pick-up can move. Users opined that for road development the movement is easier than before, take less time to go any where than before, easily can carry agro products (paddy, jute, potato, onion etc.) to market and different places for sale by using van, lorry, motorized vehicles and easier to go any where – school, college, market, health center, union Parishad. During observation it was found that motor cycle is the most frequent vehicle and also the mini truck and horse curt were carrying the agricultural products (onion).</li> </ul>

**Table 6: Detail Findings of Observed Bridges/Culverts on Union Rural Roads**

Name of Scheme and location	Size, type of road, period of construction and cost	Condition of the bridge and overall comments
<p>1. 3 x 4.50 x 4.50 meter box culvert over Fanur khal on Dewanganj Sutia bazar road</p> <p>Union: Jatia</p> <p>Upazila: Ishwarganj</p> <p>District: Mymensingh</p>	<p>Length- 14.6 m</p> <p>Width-3.7 m</p> <p>Height-4.5m</p> <p>No. of span -3</p> <p>Year of construction: 2005-2006 (10.02.2005-18.09.2006)</p> <p>Cost: Tk. 1,400,056 Lakh (allocated Tk. 1,500,000)</p>	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition - soil of both side abutments are filled in, abutments' walls plastering is smooth, concrete work are smooth; 2 nos. piers are in good condition; Culvert slab is in good condition - surface is smooth, RCC casting is in good condition and smooth; Both side railing are in good condition; Both side approach road are not in good condition - both side slops are not smooth, both side approach road are partly damaged and in few places pot hole have been formed for that transport could not be moved easily/creating problems to move vehicles/transport; Clear opening is sufficient.</li> <li>The culvert is newly constructed. The road where the bridge was constructed is fully katcha road. The road with culvert is now operational. Overall condition of the culvert is good except both side approach road - partly damaged, big pot hole formed, slope are not proper and also the road have some problems e.g. pot hole found here and there and in few places road side is partly damaged which creating problem to move vehicle smoothly.</li> <li>Users claimed that for road development, movement to different places have been easier, less time spent to reach Upazila town and other important places, easier to carry out agriculture product (cucumber, tomato, brinjal, potato, bean, mula etc.) to market in short time by using modern vehicles, farmers can sale their agri product as when they need, increased various types of business. Before road development only rickshaw, van, cycle, bullock cart could move, but now truck, lorry, tempo, trolley, motorcycle can move easily. During observation lorry, trolley, rickshaw, cycle, tempo, motorcycle were found to move. Of those, trolley was the most frequent vehicle.</li> <li>Public demanded that for much better movement, the approach road and the whole katcha road should be constructed as paca road as soon as possible.</li> </ul>
<p>2. Construction of box culvert on Bhabaniteki-Dhanbari road on Shama Ghosh khal</p> <p>Union: Mirzabari</p> <p>Upazila: Madhupur</p> <p>District: Tangail</p>	<p>Length- 12 m</p> <p>Width-3 m</p> <p>Height-4m</p> <p>Type of Road: Rural Road</p> <p>Year of construction: 2006-2007 (.03.2006-02.2007)</p> <p>Cost: Tk. 711,302 Lakh (allocated Tk. 716,332.37)</p>	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition; 2 nos. piers are in good condition; Culvert slab is in good condition - surface is smooth, RCC casting is good and smooth.; Both side railing are in good condition; Both side approach road are in good condition - but the approach is katcha; Clear opening is sufficient.</li> <li>The culvert is newly constructed. The road where the bridge was constructed, is fully katcha road. The road with culvert is now operational. Overall condition of the culvert is good. But the road where culvert was constructed, have some problems e.g. pot hole found here and there and in few places road side is partly damaged which creating problem to move smoothly. During rainy season it is very difficult for people to use the road.</li> <li>The road with culvert directly connected to Bhabaniteki, Dhanbari, Modhupur High Way road. Users claimed that for road development, movement to different places have been easier, less time spent to reach Upazila town and other important places; easily and in short time people can carry out agriculture product (e.g. banana, paddy, vegetables etc.) to market by using modern vehicles; farmers can sale their agro product as when they need, increased various types of business. Before road development no vehicles could move, but now truck, bullock cart, van, cycle, motorcycle can move easily. During observation van, cycle, bullock cart, motorcycles were found to move.</li> <li>Public demanded that for much better movement, the approach road and the whole katcha road should be paca as soon as possible.</li> </ul>
<p>3. Construction of 36 meter bridge near Dharmapura bazaar on Dharmapura GC - Vengura road</p> <p>Union: Pourosabha</p> <p>Upazila: Islampur</p> <p>District: Jamalpur</p>	<p>Length- 36 m</p> <p>Width-3.7 m</p> <p>Height-3 m</p> <p>No. of span - 3</p> <p>Type of Road: Rural Road</p> <p>Year of construction:</p> <p>Cost: Tk.</p>	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition; 2 nos. girder are in good condition; 2 nos. piers are in good condition; Culvert slab is in good condition - surface is smooth, RCC casting is good and smooth; Both side railing are in good condition; Both side approach road are in almost good condition - but have small spot hole in one or two place which not creating problem to move vehicles; Both side river training works are in good condition - CC blocks are placed in right place; Wing wall and return walls are in good condition; Clear opening is sufficient; Wearing coat is in good condition.</li> <li>Overall condition of the bridge is good and now operational The culvert is newly constructed. The road where the bridge was constructed, it is fully pucca road. The road with bridge/culvert is now operational. Overall condition of the bridge and the road also is good.</li> <li>Users claimed that for road development, movement to different places have been easier, less time spent to reach Upazila town, district town and other important places; easily and in short time people can carry out agriculture product (e.g. potato, chili, paddy, jute, vegetables etc.) to market by using lorry, vans; farmers can sale their agri product as when they need, increased various types of business. Before road development only van and rickshaws could move, but now truck, bus, rickshaw, van, mini truck, motorcycle can move easily.</li> <li>During observation truck, motorcycle, mini motorized truck, lorry were found to move. Of those motor cycle was the most frequent vehicle and also found the lorry to carry out agri products (paddy).</li> </ul>

**Table 7: Detailed Findings of Observed Flood Rehabilitated Bridges/Culverts**

Name of Scheme and location	Size, type of road, period of construction and cost	Condition of the bridge and overall comments
<p>1. Rehabilitation of bridge on Mirzapur Haria (Amrail ) road via Kamarpara ID-393663001</p> <p>Union: Bahuria</p> <p>Upazila: Mirzapur</p> <p>District: Tangail</p>	<p>Length- 50m Width-3.66 m Height-3.5m No. of span -5 Type of Road: Rural Road Year of construction: 2005 (29.05.2005-30.08.2005) Cost: Allocated - Tk. 3,362,241 Actual - 3,246,252</p>	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition; 6 nos. girders are in good condition – surface is smooth, no rod were found; 6 nos. cross beams are in good condition; 5 nos. piers are in good condition; Bridge slab is in good condition – surface is smooth, RCC casting is in good condition and no stone chips and rod were found open; Both side railing are in good condition; Both side of approach road are in good condition – no problem was found; Wing wall and return walls are in good condition; Clear opening is sufficient; Wearing coat is in good condition – smooth and no stone chips were found open</li> <li>This is the 2004 flood damaged box culvert is re-constructed in 2005. The road where the bridge was constructed, it is semi pucca road. The road with culvert is now operational. Overall condition of the bridge and also the road is good. The most benefited unions are Bahuria (culvert site), Mirzapur Pourasabha, Haria. Approximately 700 people are using the road with bridge/culvert daily. The road with bridge are using for carrying agricultural products to union market, Upazila and district town and other purpose. Before the road development most of the time rickshaws, vans, cycle were the most frequent moving vehicles, but now truck, tempo, motor car, private car, rickshaw, van are the most frequent moving vehicles.</li> <li>During observation van, tempo and motor cycle were found as a most frequent vehicle and also the van was found carrying the vegetables (cauliflower) to the market. Users opined that for road development the movement is easier than before, take less time to go any where than before, easily can take agri product (paddy, jute, mustard, potato, cauliflower vegetables etc.) to market and different places for sale; farmers are getting actual price of selling product and getting seeds, fertilizers, insecticides in due time and also increased the opportunity of various trade business.</li> <li>Public demanded that if the road is semi pucca, for better communication development the whole road should be developed by carpeting as early as possible.</li> </ul>
<p>2. Rehabilitation of bridge over Deburchar khal on Manki Deburchar road</p> <p>Union: 10 no. Jhaugara to 8 no. Fulkocho</p> <p>Upazila: Islampur</p> <p>District: Jamalpur</p>	<p>Length- 38 m Width-3.7 m Height-2 m No. of span – 2 Type of Road: Rural Road Year of construction: 06.08.2005 to 28.09.2005 Cost: Allocated Tk. 19,20,000 Actual Tk. 22,96,000 (for high price of tender)</p>	<ul style="list-style-type: none"> <li>2 nos. abutments are in good condition; 2 nos. girder are in good condition; 5 nos. cross beams are in good condition; 1 no. pier is in good condition; Bridge slab is in good condition – surface is smooth, RCC casting is in good condition and no stone chips and rod were found open; Both side railing are in good condition; Both side approach road are in good condition – no problems were found and vehicles are moving easily; Both side river training works are in good condition – both sides are pucca; Wing wall and return walls are in good condition; Clear opening is sufficient; Wearing coat is in good condition.</li> <li>The road condition where the bridge was constructed is good. During bridge construction it was kucha, but now it is fully pucca (peach carpeting) and almost in good condition but in some places road side soil is oved/washed out/broken.</li> <li>The bridge was re-constructed which damaged during 2004 flood. (The 2004 flood damaged bridge was re-constructed.) The road with bridge is now operational. Overall condition of the road with bridge is also good.</li> <li>The bridge is situated in between Jhaugara and fulkocho union. The road is directly connected with Shamganj Kalibari (west side of bridge) and Jamalpur (east side of bridge). Besides that the people also use the road to go the different unions (Beltoli, Sabilapur, Charshokuna, Manki, Bhabki, Jamlipur), different places (school, hat-bazars, relatives house, health centers, Upazila).</li> <li>Users claimed that for road development, movement to different places have been easier, less time spent to reach Upazila town, district town and other important places; easily and in short time farmers (as when they need) are carrying out agriculture product (e.g. jute, paddy, mustard, vegetables etc.) to market by using van, lorry, rickshaw, cycle. Before road development only van, rickshaws and bullock cart could move, but now truck, tempo, van, rickshaw, motorcycle, bicycle, CNG can move easily. During observation van, fiver, motorcycle, bicycle and rickshaw were found to move. Of those, van was the most frequent vehicle.</li> </ul>

**Table 8: Detailed Findings of Observed Tree Plantation on FRB and Union Rural Roads**

Name of Scheme and location	Present status of the trees plantation
<p>1. Tree plantation on Dhaka – Mymensingh high way Masterbari – paragaon road</p> <p>Union: Habirbari</p> <p>Upazila: Bhaluka</p> <p>District: Mymensingh</p>	<ul style="list-style-type: none"> <li>• Tree plantation on Dhaka to Mymensing highway Masterbari to Paragaon 0.0-2.20 km road was done under this project in 2004 (08.08.2004-10.12.2004).</li> <li>• Allocated budget was Tk. 77,943 and the actual expenditure is Tk. 77,493 taka.</li> <li>• 1352 trees were planted according to plan and those were Mehogoni and Akashmoni trees.</li> <li>• At present 20% trees are surviving and those are in good condition. No trees were replanted by LGED in place of dead trees.</li> <li>• It is known from local people and the LGED authority that for the establishment of industry in Masterbari area some trees have been destroyed due to widening of road. On the other hand some trees have broken down for the movement of mud carrying truck and other heavy vehicle in the road and some trees have destroyed for the lack of proper maintenance.</li> <li>• Maintenance of trees was done by the poor women of local area on the basis of monthly salary. Women were also engaged during tree plantation as day labour.</li> <li>• During observation community people mentioned that the beauty of the area increased and ecological environment created for the road side tree plantation. Some people said that the rates of road accidents decreased for tree plantation.</li> </ul>
<p>2. Tree plantation on Dhaka – Mymensingh high way (Sunni Fields Ltd) Mamarishpur road</p> <p>Union: Mollikbari</p> <p>Upazila: Bhaluka</p> <p>District: Mymensingh</p>	<ul style="list-style-type: none"> <li>• Tree plantation on Dhaka to Mymensing highway Sunny Fields to Mamarishpur 0.0-2.20 km road was done under this project in 2004 (08.08.2004-16.12.2004).</li> <li>• Allocated budget was Tk. 76,138 and the actual expenditure is Tk. 76138.</li> <li>• 1266 trees were planted according to plan and those were Mehogoni, Akashmoni and Nim trees.</li> <li>• It was observed that at present 20% trees are surviving and those trees are in good condition and growth is well. No trees were replanted by LGED in place of dead trees. Women were engaged during tree plantation as day labour.</li> <li>• No trees were found in the entrance of the road and some industry have established there. It has known from the LGED authority (Engineer) that the owner of these industries destroyed the trees during construction of industry. After passing some distance from industrial area LGED planted trees were found. From the LGED authority it is known that some trees destroyed by owners of industries during construction work; some trees destroyed for the transportation of trucks of the industry; some trees have died for lack of proper nursing and the owners of the land beside the road destroyed some trees because they thought that shadows from the trees are harmful for their crops. No other trees were planted in the placement of dead trees. Beside the LGED planted trees, private owner also planted trees both sides of the road which also found better conditions.</li> <li>• During observation local people opined that for road side tree plantation beautification of this area are increased; ecological environment created; and the rate of road accident reduced</li> </ul>
<p>3. Tree plantation on Nandail – Atharabari road</p> <p>Upazila: Nandail</p> <p>District: Mymensingh</p>	<ul style="list-style-type: none"> <li>• On Nandail-Jahangirpur-Deonganj road 16.06 km tree plantation was done under this project in 2007 (28.05.2007-30.07.2007).</li> <li>• Allocated budget was Tk.127,173 and the actual expenditure is Tk.127,173</li> <li>• 6,667 nos. trees were planted according to plan and those were Mehogoni, Garjan, Shegun, Jackfruit, Mango and some forest and medicinal trees.</li> <li>• At present 40% trees found surviving. Among rest of the trees, maximum were dead for lack of proper maintenance (nursing) and some were destroyed for natural problem. No trees were replanted by LGED in place of dead trees.</li> <li>• Maintenance of trees was done by the poor women of local area on the basis of daily salary. Women were also engaged during tree plantation as day labour.</li> <li>• During observation community people opined that for road side tree plantation they get some advantages – many poor families are using branches and leaves of trees as firewood and by selling dead branches and leaves bear their expenditure of livelihood; in the leisure time people take rest under the shadow of trees; and trees also give us pure/fresh air from the trees. (For road side tree plantation poor people are earning some money by selling tree leaves and branches/sticks; and they are also using as these as firewood/fuel). Beneficiaries also recommend that from the beginning of tree plantation, if the responsibilities of maintenance (nursing) of trees were given to the local people, the number of survival trees would increase and the growth of trees would be better.</li> </ul>
<p>4. Tree plantation on Nagarbari UP – Kauljani road</p> <p>Union: Nagbari</p> <p>Upazila: Kalihati</p> <p>District: Tangail</p>	<ul style="list-style-type: none"> <li>• Tree plantation on Nagarbari UP to Kouljani Up through Ratanganj 3 km area had done under this project in 2004 (28.09.2004-30.10.2004). The name of contractor Md. Mofil Uddin.</li> <li>• Allocated budget was Tk. 200,000 and the actual expenditure is Tk. 200,000 (183,746)</li> <li>• 5,570 trees were planted according to plan and those were Mehogani, Akash Mony, Nim, Blackberry, Jackfruit, Mango trees. Lack of proper maintenance (nursing) maximum trees was died.</li> <li>• At present 50% trees were found surviving. No other trees were planted by LGED in place of dead one.</li> <li>• After the plantation maintenance (nursing) of trees was done by the poor women of local area on the basis of monthly salary. Women were also engaged during tree plantation as day labour.</li> <li>• During observation, on the view of local people, for the tree plantation the ecological environment created; accidents rate reduced; trees gives shadow for pedestrian; and trees give us pure air. On the other hand trees have vital role of supplying firewood and fulfill the requirement of wood. So trees plantation on both beside of roads are playing an important role for the fulfillment of shortage of forest.</li> </ul>
<p>5. Tree plantation on Mirzapur –Patharghata road</p> <p>Union: Fatepur</p> <p>Upazila: Mirzapur</p> <p>District: Tangail</p>	<ul style="list-style-type: none"> <li>• Tree plantation on Mirzapur to Pathanghata Toktarchala 3 km road (beginning from Bardam village to Tarafpur village) had done under this project in 2004 (29.08.2004-15.09.2004).</li> <li>• Allocated budget was Tk. 200,000 and the actual expenditure is Tk. 200,000 (182,637)</li> <li>• 5,570 trees had planted according to plan. Mehogani, Nim, Jackfruit, Mango, Eucalyptus trees had planted.</li> <li>• At present 80% trees found surviving and most of trees conditions are well. No other trees planted by LGED in place of dead one. After the plantation, maintenance (nursing) of trees was done by the poor women of local area on the basis of monthly salary. Women were also engaged during tree plantation as day labour.</li> <li>• During observation local people opined that for road side tree plantation - erosion of road prevented; ecological environment created; farmers and passerby are taking rest under the shadow of trees; and trees are giving fresh air. They also mentioned that after maturation of trees, by selling those trees our country economically developed and trees have an important role on supplying fuel (firewood) and meet the requirement of wood ware.</li> </ul>

Name of Scheme and location	Present status of the trees plantation
6. Tree plantation on Baira-Kolghat-Doyel-Kendua road Union: Pogondiga Upazila: Sarishabari District: Jamalpur	<ul style="list-style-type: none"> <li>Tree plantation on Baira-Kolgate-Doail 1 km road was done under this project in 2004 (30.10.2004-10.12.2004).</li> <li>Allocated budget was Tk. 100,000 and the actual expenditure is Tk. 100,000.</li> <li>4,760 trees were planted according to plan and those were Mehogoni, Shishu, Jackfruit and Mango trees. Women were engaged during tree plantation as day labour.</li> <li>At present there was no trees found on the road side.</li> <li>LGED authority mentioned that all trees have been cut down by the people of forest department</li> </ul>
7. Tree plantation on Durmuth – Nilokkhia road Union: Gaibandha Upazila: Islampur District: Jamalpur	<ul style="list-style-type: none"> <li>Tree plantation on Durmuth- Nilokkhia 3 km road was done under this project in 2003 (20.07.2003-20.08.2003).</li> <li>Allocated budget was Tk.187, 990 and the actual expenditure is Tk. 41,115.</li> <li>According to plan 5,560 trees were planted and those were Mehogani, Jackfruit and Shishu trees.</li> <li>At present 30% trees were found surviving and most of the trees condition and growth is good. No other trees were planted by LGED in place of dead one.</li> <li>After the plantation nursing of trees was done by the poor women of local area on the basis of monthly salary. Women were also engaged during tree plantation as day labour.</li> <li>During observation local people opined that for the road side tree plantation - erosion of road are prevented; local poor women are getting financial benefit by maintenance work trees; farmers and passerby can take rest under the shadow of trees.</li> </ul>
8. Tree plantation on Bangram UP HQ – Sararchar GP road  Union: Bangram  Upazila: Kotiadi  District: Kishorganj	<ul style="list-style-type: none"> <li>Tree plantation on Bangram up headquarter to Sararchar 2 km road was done under this project in 2003-2004 (07.08.2003-04.05.2004).</li> <li>Allocated budget was Tk. 175,200 and the actual expenditure is Tk. 157,200.</li> <li>According to plan 3000 trees scheduled to be plant but 2,100 trees were planted. Mehogoni, Jackfruit, Blackberry and Mango trees were planted.</li> <li>At present 35% trees are surviving and those are in good condition and growth is well. After tree plantation for lacking of proper nursing half of the planted trees were died. Among the living trees most of trees conditions are well. There were no other trees planted by LGED in place of dead one.</li> <li>During observation local people ascertained that for the road side tree plantation – village people can take rest under the shadow of trees; poor people are using tree leaves and branches/sticks as firewood/fuel. They also ascertained that erosion of roads is prevented; local poor women are getting financial benefit by maintenance work; and farmers &amp; passerby are taking rest under the shadow of trees.</li> <li>Local people also recommended that if the responsibilities of maintaining these plants were given to local person with fixed than the probability of dead could be reduced. Poor families could get financial benefit if more trees planted on road side.</li> </ul>
9. Tree plantation on Biraur– Dakshin Bishura sarak of Netrokona Kendua sarak Union: Dakkhin Bishuora Upazila: Netrokona Sadar District: Netrokona	<ul style="list-style-type: none"> <li>Tree plantation on Netrokona Kendua road from Biraur to Dakkhin Bishura 6 km road had done under this project in 2004 (05.05.2004-05.06.2004).</li> <li>According to plan, 2000 trees scheduled to be plant but 1500 trees were planted. Mehogoni, Jackfruit, Eucalyptus, Shishu, Akashmoni, Karoi trees were planted.</li> <li>At present 10% trees are surviving and those trees have grown very well and condition is good. Reset of the trees, some were died and some were cut down by the thief. No other trees were planted by LGED in place of dead one.</li> <li>During observation local people mentioned that for the road side tree plantation - trees are fulfilling the requirement of wood; and dead branches &amp; leaves are using as fuel/firewood. On the other hand trees are playing a vital role to prevent environmental pollution.</li> </ul>

**Table 9: Detailed Findings of Observed Growth Centers/Rural Markets**

Name and location of growth centers/ rural markets	Present status of operation, use effectiveness and benefits																
1. Shahganj bazar development, Isawrganj, Mymensingh	<ul style="list-style-type: none"> <li><b>Implementation period:</b> 2.11.2005 – 1.12.2007. The work completed in scheduled time; <b>Size:</b> 2 acre; <b>Amount allocated:</b> 23,59,146; <b>Actual expenditure:</b> 23,33,647; <b>Work undertaken by LGED:</b> 7 sheds, 76 meter drainage, 250 meter bazaar connected road, 1 tubewell, 1 bazaar samity office, 1 slaughter house, 1 latrine and 1 acre land purchase; <b>Responsible authority for repair and maintenance:</b> Bazaar committee;</li> <li><b>Status of Bazaar Management Committee:</b> Have formed a Bazaar Management Committee comprise with 9 members and an office room for committee. Responsibilities of the committee: setting arrangement for sellers; giving support for maintenance; resolve disputes of sellers-buyers</li> <li><b>Present status of operation:</b> Operating but have some problems: Inadequate drainage system; and Problem of drinking water</li> </ul> <table border="1"> <thead> <tr> <th>Before</th> <th>At present</th> </tr> </thead> <tbody> <tr> <td>✓ Average annual income Tk. 15,000</td> <td>✓ Average annual income Tk. 100,000</td> </tr> <tr> <td>✓ Market took place 2 days in a week</td> <td>✓ Market took place 7 days in a week</td> </tr> <tr> <td>✓ On an average 2000 people gathered in the market</td> <td>✓ On an average 10,000 people gathered in the market</td> </tr> <tr> <td>✓ The important selling items are vegetables, fish, meat, paddy, jute etc.</td> <td>✓ The important selling items are vegetables, fish, meat, paddy, jute, rice, pulse, groceries/ stationeries, cloths, shoes, etc.</td> </tr> <tr> <td>✓ Before selling items came from Uchamila, Modhupur, Ishwarganj</td> <td>✓ Presently selling items are coming from Uchamila, Modhupur, Ishwarganj, Nandail, Mymensing</td> </tr> <tr> <td></td> <td>✓ There are 7 sheds and near about 42 shops of different product in the market. The shed are in good condition. The overall situations of the growth center are good but have some problems – drainage problems and drinking water problems.</td> </tr> <tr> <td></td> <td>✓ After development of the market increased opportunities of marketing of agriculture products, farmers and businessman of agriculture products are getting proper price of products.</td> </tr> </tbody> </table>	Before	At present	✓ Average annual income Tk. 15,000	✓ Average annual income Tk. 100,000	✓ Market took place 2 days in a week	✓ Market took place 7 days in a week	✓ On an average 2000 people gathered in the market	✓ On an average 10,000 people gathered in the market	✓ The important selling items are vegetables, fish, meat, paddy, jute etc.	✓ The important selling items are vegetables, fish, meat, paddy, jute, rice, pulse, groceries/ stationeries, cloths, shoes, etc.	✓ Before selling items came from Uchamila, Modhupur, Ishwarganj	✓ Presently selling items are coming from Uchamila, Modhupur, Ishwarganj, Nandail, Mymensing		✓ There are 7 sheds and near about 42 shops of different product in the market. The shed are in good condition. The overall situations of the growth center are good but have some problems – drainage problems and drinking water problems.		✓ After development of the market increased opportunities of marketing of agriculture products, farmers and businessman of agriculture products are getting proper price of products.
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2. Dewpara growth centre development, Ghatail, Tangail	<ul style="list-style-type: none"> <li><b>Implementation period:</b> 2004-2005 The work completed in scheduled time and as per required plan; <b>Size:</b> 1 acre; <b>Amount allocated:</b> Tk. 22,000; <b>Actual expenditure:</b> Tk. 21,737; <b>Work undertaken by LGED:</b> 6 nos. shed, 1 tubewell, 1 bazaar samity office, 2 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li><b>Status of Bazaar Management Committee:</b> Have formed a Bazaar Management Committee comprise with 9 members and an office room for committee. Responsibilities of the committee: ensuring security of bazaar; setting arrangement for sellers; resolve disputes of sellers-buyers and help to collect tola of market</li> <li><b>Present status of operation:</b> Operating but have some problems -- Water logging due to heavy rain and flood; Lack of cleanliness of the market area; Main pucca road to bazaar connected road is katcha; and No drainage system.</li> </ul> <table border="1"> <thead> <tr> <th>Before</th> <th>At Present</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 50,000</li> <li>The important selling items were only rice and vegetables</li> <li>Market took place 2 days in a week</li> <li>On an average 1000 people gathered in the market</li> <li>No female shopkeeper / seller</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 140,000</li> <li>At present all kinds of products such as-paddy, jute, rice, groceries/ stationeries, fish, meat, vegetables (potato, brinjal, onion, cabbage, cauliflower), pulse, oil, cloths etc are selling here.</li> <li>Market took place 7 days in a week. On observing time the market was operating.</li> <li>On an average 2000 people gathered in the market daily. In observing time it was seen that on average 50 people came here in one hour for purchase. Among them some came for selling vegetables, fish and delicious food and some came for buying daily needed product. No female shopkeeper and seller were seen here.</li> <li>There are 8 sheds- 6 shades are permanent and 2 sheds are non permanent. The sheds are in good condition. But there have lack of cleanliness of the market area. The infrastructures which are made by LGED the condition these are good at present. Water logging due to heavy rain and flood for absence of drainage system.</li> <li>At present the importance of market is increase than the past for developing growth centre by LGED. Most of the agri and other products are coming from the different union (Dewpara, Kalikapara, Shorashak, Badh-Amdani, Amjana, Burga etc.). 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3. Sagordighi bazar development, Dhalapara, Ghatail, Tangail	<ul style="list-style-type: none"> <li><b>Implementation period:</b> October 2005-May 2006. The work completed in scheduled time and as per required plan. <b>Size:</b> 2 acre; <b>Amount allocated:</b> 21.689/ 21,34,559; <b>Actual expenditure:</b> 20.888/ 21,34,559; <b>Work undertaken by LGED:</b> 8 nos. shed, 2 tubewell, 1 bazaar samity office, 1 slaughter house, 3 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li><b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 11 members and an office room for committee. Responsibilities of the committee: ensuring security of bazaar; setting arrangement for sellers; resolve disputes of sellers-buyers and help to collect tola of market</li> <li><b>Present status of operation:</b> Operating but have some problems-- Water logging due to heavy rain and flood; Lack of cleanliness of the market area; and No drainage system</li> </ul> <table border="1"> <thead> <tr> <th>Before</th> <th>At present</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 30,000</li> <li>The important selling items were paddy jute and vegetables</li> <li>Market took place 7 days in a week</li> <li>On an average 1000 people gathered in the market</li> <li>No female shopkeeper / seller</li> <li>Man came from only Hatimara and Solakura for selling goods</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 100,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, groceries/ stationeries, cloths, shoes, pineapple, banana, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 7 days in a week. On observing time the market was operating.</li> <li>On an average 10,000 people gathered in the market on any special day. During observation approximately in one hour, 2000 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc. Among them 50 were female.</li> <li>No female shopkeeper and seller were seen here during observation.</li> <li>There are 11 sheds and near about 200 shops. The sheds are in good condition. But lack of cleanliness is seen in the market area. At present growth center are operating. Men are coming from the different union (Dholapara, Hathimara, Shonakura, Kaila, Pagarria, Echarchala, Taltola etc.) for puchaging different product. For community people this market is very important. Marketing of product, purchasing tendency, volume of trade and commerce and scope of employment are increased due to operationlization of markets. But some development are needed- build new sheds, build a koshaikhana, floor plaster and drainage system are essential.</li> </ul> </td> </tr> </tbody> </table>		Before	At present	<ul style="list-style-type: none"> <li>Average annual income Tk. 30,000</li> <li>The important selling items were paddy jute and vegetables</li> <li>Market took place 7 days in a week</li> <li>On an average 1000 people gathered in the market</li> <li>No female shopkeeper / seller</li> <li>Man came from only Hatimara and Solakura for selling goods</li> </ul>	<ul style="list-style-type: none"> <li>Average annual income Tk. 100,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, groceries/ stationeries, cloths, shoes, pineapple, banana, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 7 days in a week. On observing time the market was operating.</li> <li>On an average 10,000 people gathered in the market on any special day. During observation approximately in one hour, 2000 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc. Among them 50 were female.</li> <li>No female shopkeeper and seller were seen here during observation.</li> <li>There are 11 sheds and near about 200 shops. The sheds are in good condition. But lack of cleanliness is seen in the market area. At present growth center are operating. Men are coming from the different union (Dholapara, Hathimara, Shonakura, Kaila, Pagarria, Echarchala, Taltola etc.) for puchaging different product. For community people this market is very important. Marketing of product, purchasing tendency, volume of trade and commerce and scope of employment are increased due to operationlization of markets. But some development are needed- build new sheds, build a koshaikhana, floor plaster and drainage system are essential.</li> </ul>
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<ul style="list-style-type: none"> <li>Average annual income Tk. 30,000</li> <li>The important selling items were paddy jute and vegetables</li> <li>Market took place 7 days in a week</li> <li>On an average 1000 people gathered in the market</li> <li>No female shopkeeper / seller</li> <li>Man came from only Hatimara and Solakura for selling goods</li> </ul>	<ul style="list-style-type: none"> <li>Average annual income Tk. 100,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, groceries/ stationeries, cloths, shoes, pineapple, banana, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 7 days in a week. On observing time the market was operating.</li> <li>On an average 10,000 people gathered in the market on any special day. During observation approximately in one hour, 2000 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc. Among them 50 were female.</li> <li>No female shopkeeper and seller were seen here during observation.</li> <li>There are 11 sheds and near about 200 shops. The sheds are in good condition. But lack of cleanliness is seen in the market area. At present growth center are operating. Men are coming from the different union (Dholapara, Hathimara, Shonakura, Kaila, Pagarria, Echarchala, Taltola etc.) for puchaging different product. For community people this market is very important. Marketing of product, purchasing tendency, volume of trade and commerce and scope of employment are increased due to operationlization of markets. But some development are needed- build new sheds, build a koshaikhana, floor plaster and drainage system are essential.</li> </ul>					
4. Fakirchala bazar development, Sandhanpur, Ghatail, Tangail	<ul style="list-style-type: none"> <li><b>Implementation period:</b> October 2005-May 2006. The work completed in scheduled time. <b>Size:</b> .32 acre; <b>Amount allocated:</b> 23.589/ 23,45,706; <b>Actual expenditure:</b> 23.223/ 23,45,706; <b>Work undertaken by LGED:</b> 6 sheds, 2 meter bazaar connecting road, 1 tubewell, 1 bazaar samity office, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li><b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 11 members and an office room for committee. Responsibilities of the committee: ensuring security of bazaar; setting arrangement for sellers; giving support for maintenance; resolve disputes of sellers-buyers and help to collect tola of market</li> <li><b>Present status of operation:</b> Operating without any problem.</li> </ul> <table border="1"> <thead> <tr> <th>Before</th> <th>At present</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 20,000</li> <li>The important selling items were paddy, rice, jute and vegetables</li> <li>Market took place 1 day in a week</li> <li>On an average 100 people gathered in the market</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Average annual income Tk. 55,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, cloths, pineapple, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 1 day in a week. During observation the market was not operating.</li> <li>On an average 2000 people gathered in the market on any special day.</li> <li>There are 6 sheds and the sheds are in good condition. The market areas were cleaned. Presently selling items are coming from Boroachala, Vewlachala, Dengrachala, Dewajana, Chammulia and Fokirchala.</li> </ul> </td> </tr> </tbody> </table>		Before	At present	<ul style="list-style-type: none"> <li>Average annual income Tk. 20,000</li> <li>The important selling items were paddy, rice, jute and vegetables</li> <li>Market took place 1 day in a week</li> <li>On an average 100 people gathered in the market</li> </ul>	<ul style="list-style-type: none"> <li>Average annual income Tk. 55,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, cloths, pineapple, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 1 day in a week. During observation the market was not operating.</li> <li>On an average 2000 people gathered in the market on any special day.</li> <li>There are 6 sheds and the sheds are in good condition. The market areas were cleaned. Presently selling items are coming from Boroachala, Vewlachala, Dengrachala, Dewajana, Chammulia and Fokirchala.</li> </ul>
Before	At present					
<ul style="list-style-type: none"> <li>Average annual income Tk. 20,000</li> <li>The important selling items were paddy, rice, jute and vegetables</li> <li>Market took place 1 day in a week</li> <li>On an average 100 people gathered in the market</li> </ul>	<ul style="list-style-type: none"> <li>Average annual income Tk. 55,000.</li> <li>The important selling items are- vegetables, fish, meat, paddy, jute, rice, pulse, cloths, pineapple, tamarind, ginger, betel leaf and nut, oil, etc.</li> <li>Market took place 1 day in a week. During observation the market was not operating.</li> <li>On an average 2000 people gathered in the market on any special day.</li> <li>There are 6 sheds and the sheds are in good condition. The market areas were cleaned. Presently selling items are coming from Boroachala, Vewlachala, Dengrachala, Dewajana, Chammulia and Fokirchala.</li> </ul>					

Name and location	Present status of operation, use effectiveness and benefits	
4. Fakirchala bazar development, Sandhanpur, Ghatail, Tangail	<b>Before</b> <ul style="list-style-type: none"> <li>Man came from only Dewajana and Fakirchala for selling goods</li> </ul>	<b>At present</b> <ul style="list-style-type: none"> <li>The importance of this market is not so high because another growth center is situated in Dewajana which is only one km. away from this market. Most of businessmen are going to Dewajana center because many people are gathered there. Fakirchala market is called as private market for that no tax is coming from this market.</li> </ul>
5. Dewajana Growth Center, Sandhanpur, Ghatail, Tangail	<ul style="list-style-type: none"> <li><b>Implementation period:</b> October 2005-May 2006. The work completed in scheduled time and as per required plan. <b>Size:</b> .56 acre; <b>Amount allocated:</b> Tk. 21,68,215; <b>Actual expenditure:</b> 21,68,215; <b>Work undertaken by LGED:</b> 6 sheds, 2 meter bazaar connecting road, 1 tubewell, 3 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee;</li> <li><b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 11 members. Responsibilities of the committee: ensuring security of bazaar; setting arrangement for sellers; giving support for maintenance; resolve disputes of sellers-buyers and help to collect tola of market. No office room was found.</li> <li><b>Present status of operation:</b> Operating but have some problems-- No office room; Tubewell was stolen; Latrine is out of order</li> </ul>	
	<b>Before</b> <ul style="list-style-type: none"> <li>Average annual income Tk. 30,000</li> <li>The important selling items were paddy, jute and vegetables</li> <li>Market took place 2 days in a week</li> <li>On an average 150 people gathered in the market</li> <li>No female shopkeeper / seller</li> <li>Man came from only Deojana and Fakirchala for selling goods</li> </ul>	<b>At present</b> <ul style="list-style-type: none"> <li>Average annual income Tk. 120,000</li> <li>At present all kinds of products such as-paddy, jute, rice, fish, meat, milk, vegetables, pineapple, ginger, cloths, cosmetics etc are selling here.</li> <li>Market took place 7 days in a week. On observing time the market was operating. No female shopkeeper and seller were found here during observation.</li> <li>On an average 2000 people gathered in the market on any special day. During observation approximately in one hour 100 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc. Among them 10 were female.</li> <li>There are 6 sheds and the sheds are in good condition. The market areas were cleaned. But there were no office room, tubewell was stolen and latrine was out of order.</li> <li>At present growth center are operating. Men are coming from the different union- Koralia, Bealutibi, Nalma, Shottoorbari, Mulbari, Kharkhata etc. for purchasing different product. For community people this market is very important. Marketing of product is become easier and scopes of employment are increased due to operationlization of growth center. Female are coming there for buying. For conducting market there have some problem for that building an office room is essential. Floor plaster, bazaar connecting road plaster, digging tubewell, repairing latrine are also essential.</li> </ul>
6. Ghatail Growth Center, Poursabha, Ghatail, Tangail	<ul style="list-style-type: none"> <li><b>Implementation period:</b> June 2006-December 2006. The work completed in scheduled time and as per required plan. <b>Size:</b> 1 acre; <b>Amount allocated:</b> Tk. 22,50,000; <b>Actual expenditure:</b> Tk. 22,50,000; <b>Work undertaken by LGED:</b> 5 sheds, 8 meter bazaar connecting road, 1 bazaar samity office, 1 tubewell, 1 slaughter house, 4 open platform; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li><b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 27 members and have an office room. Responsibilities of the committee: setting arrangement for sellers; resolve disputes of sellers-buyers</li> <li><b>Present status of operation:</b> Operating but have some problems: Water logging due to heavy rain fall as the drainage work not adequate; Lack of cleanliness of the market area; and No latrine</li> </ul>	
	<b>Before</b> <ul style="list-style-type: none"> <li>Average annual income Tk. 35,000</li> <li>The important selling items were paddy, rice and vegetables</li> <li>Market took place 7 days in a week</li> <li>On an average 20,000 people gathered in the market</li> <li>No female shopkeeper / seller</li> <li>Man came from only Deojana and Fakirchala for selling goods</li> </ul>	<b>At present</b> <ul style="list-style-type: none"> <li>Average annual income Tk. 130,000.</li> <li>The important selling items are- paddy, rice, potato, onion, garlic, pulse, oil, vegetables, fish, meat, betel leaf, cloths, tamarind, brinjal, pumpkin, cauliflower, groud, tomato, carrots etc.</li> <li>Market took place 7 days in a week. On observing time the market was operating. No female shopkeeper and seller were found here during observation.</li> <li>On an average 30,000 people gathered in the market on any special day. During observation approximately in one hour 5000 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc. Among them 100 were female.</li> <li>Maintenance, ensuring security, repairing etc. work are done by the municipality.</li> <li>There are 9 sheds and the sheds are in good condition. The market areas were not cleaned.</li> <li>At present growth center are operating. Men are coming from the different union- Jamuria, Chalta, Dhariyal, Gatail, Poshhimpara, Rotonpur, Korimpur, Shadur Gikkanda, Shimla, Gatail Dhokkinpara etc. for puchaging different product. For community people this market is very important. Marketing of product is become easier and scopes of employment are increased due to operationlization of growth center. Female are coming there for buying. Building some new sheds, digging tubewell, repairing latrine, plastering the bazaar connecting road, building an office room are very essential.</li> </ul>
7. Shahjada bazaar development, Location- adjacent to soakore bridge, Kamrabad Union, Sarishabari Upazila, Jamalpur: Newly developed bazaar – before there was no bazaar	<ul style="list-style-type: none"> <li><b>Implementation period:</b> 10.03.2007 – 12.06.2007. The work was completed in scheduled time and as per required plan. <b>Size:</b> 1 acre; <b>Amount allocated:</b> 1,200,000; <b>Actual expenditure:</b> 1,200,000; <b>Work undertaken by LGED:</b> 4 nos. shed, 150 meter bazaar connected road, 1 tubewel, 1 garbage pit, 1 slaughter house, 2 open platform, 1 latrine, purchased 1 acre land, ½ k.m. HBB road developed inside bazaar ; <b>Responsible authority for repair and maintenance:</b> Bazaar committee/ Union Parishad</li> <li><b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 20 members (UP members, business man), whom were responsible for ensuring security of bazaar, Resolve disputes of sellers-buyers of market. No office room was found.</li> <li><b>Present status of operation:</b> Operating with some problems: Lack of cleanliness of the market area; Main pucca road to bazaar connected road is katcha; and Drainage problem/No drainage system, and Tubewell is out of order</li> </ul>	

Name and location	Present status of operation, use effectiveness and benefits	
<p>7. Shahjada bazaar development, Location- adjacent to soakore bridge, Kamrabad Union, Sarishabari Upazila, Jamalpur: Newly developed bazaar – before there was no bazaar</p>	<p><b>Before</b></p> <ul style="list-style-type: none"> <li>✓ There was no market before</li> </ul>	<p><b>At present</b></p> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 40,000</li> <li>✓ Market took place 2 days in a week</li> <li>✓ On an average 3000 people gathered in the market</li> <li>✓ The important items e.g. Potato, Vegetables, Brinjal, Chili, Onion, Garlic, Meat, Fish, Betel leaves, Betel-nut, Rice, Oil etc. are selling and buying in the market</li> <li>✓ Various products are come from Satpoa, Sarishabari, Soapur, Charoha</li> <li>✓ There are 4 sheds and 40 shopkeepers (there has different shops- 4 for meat, 7 for fish, 10 for rice and others for vegetables, oil, potato, chili etc.) sitting here daily. The sheds are in good condition. The market areas were not cleaned.</li> <li>✓ Volume of trade and commerce are increasing, farmer can sell their product on proper value. Community people can buy their product smoothly. It creates so many opportunities for community people. They can sell product easily. Purchasing tendency of agricultural product are increased. There are no female shopkeepers. Market are not clean properly. Tubewell is out of order and no drainage system is here.</li> <li>✓ At present growth center are operating. The infrastructures which are made by LGED the condition of these are good but tubewell is out of order, need to be repaired.</li> <li>✓ People come here for selling- buying their daily product here. For community people this market is very important. Farmer can market their product easily and sell their product on proper value. The socio-economic conditions of farmer are developed. Sometime they face some problem because of political influence. Overall condition is developed for establishing growth center here.</li> </ul>
<p>8. Degreerchar bazaar development, Islampur, Jamalpur</p>	<ul style="list-style-type: none"> <li>• <b>Implementation period:</b> 01.07.2005 – 20.10.2007. The work was completed in scheduled time and as per required plan. <b>Size:</b> 1.4 acre; <b>Amount allocated:</b> 17,21,378; <b>Actual expenditure:</b> 16,03,353; <b>Work undertaken by LGED:</b> 3 sheds, 70 meter drainage, 60 meter bazaar connected road, 1 tubewell, 1 room for bazaar samity, 1 garbage pit, 1 slaughter house, 2 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li>• <b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 20 members and have of office room. Responsibilities of the committee: resolving disputes of sellers-buyers of market and help to collect tola of market.</li> <li>• <b>Present status of operation:</b> Operating with some problems: Lack of cleanliness of the market area; and Some rice and garments businessman doing business on open pacca platform.</li> </ul>	
	<p><b>Before</b></p> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 20,000</li> <li>✓ Market took place 7 days in a week</li> <li>✓ On an average 500 people gathered in the market</li> <li>✓ The important selling items are potato brinjal, chili etc.</li> <li>✓ Selling items came from Jhagrarchar, Sreebordi</li> </ul>	<p><b>At present</b></p> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 50,000</li> <li>✓ Market took place 7 days in a week.</li> <li>✓ On an average 1,500 people gathered in the market. During observation the market was open and approximately in one hour, 200 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc.</li> <li>✓ The important selling items are potato, brinjal, chili, onion, mustard, rice, vegetables etc. Besides those items wood furniture (Alna, chair, and tables) were also sold in the market.</li> <li>✓ Presently selling items are coming from Jhagrarchar, Sreebordi, Kamarer Char</li> <li>✓ There are 5 sheds and near about 25 shops of different product in the market. The sheds are in good condition. But the market areas were unclean.</li> <li>✓ At present market are operating. The infrastructures which are made by LGED the condition of these are good at present. Community people come here for selling-buying different agri products. For community people this market is very important. Scopes of business are increased. Community people get some advantages- they can buy product easily and cheaply. No female shopkeepers are found at past and present.</li> </ul>
<p>9. Moholgiri bazar development, Islampur, Jamalpur</p>	<ul style="list-style-type: none"> <li>• <b>Implementation period:</b> 10.07.2006 – 09.06.2007. The work was completed in scheduled time. <b>Area:</b> 2 acre; <b>Amount allocated:</b> 17,63,287; <b>Actual expenditure:</b> 17,57,753; <b>Work undertaken by LGED:</b> 5 sheds, 215 meter bazaar connected road, 1 tubewell, 1 room for bazaar samity, 4 garbage pit, 1 slaughter house, 2 open platform, 1 latrine, 1 acre land purchased; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li>• <b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 16 members and have an office room. Responsibilities of the committee: ensuring security of the market; resolving disputes of sellers-buyers of market</li> <li>• <b>Present status of operation:</b> Operating but have some problems: Water logging due to heavy rain fall as the drainage work not adequate, Tubewell is out of order; Road condition of the market is not good; and Somewhere plaster of floor of sheds are damaged</li> </ul>	
	<p><b>Before</b></p> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 40,000</li> <li>✓ Market took place 7 days in a week</li> <li>✓ On an average 700 people gathered in the market daily</li> <li>✓ The important selling items are potato brinjal, chili, fish, vegetables etc.</li> <li>✓ Selling items came from Fakiroaram Bhulki para</li> <li>✓ No female shopkeeper / seller</li> </ul>	<p><b>At present</b></p> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 100,000</li> <li>✓ Market took place 7 days in a week.</li> <li>✓ On an average 1,500 people gathered in the market daily. During observation the market was open and approximately in one hour, 1000 people were found in the market for marketing. The marketing items were potato, chili, brinjal, onion, fish, meat, vegetables, etc.</li> <li>✓ The important selling items are potato, brinjal, chili, onion, rice, sugra, molasses (gur), sweet, betel leaves, betel nut, vegetables, milk etc.</li> <li>✓ Presently selling items are coming from Bhulakipara, Kasimarchar, Fakirpara</li> <li>✓ There are 5 sheds and near about 45 shops of different product in the market. No female shopkeeper or sellers were found there. Some sheds' floor plaster are slightly damaged here &amp; there. Tubewell is out of order.</li> <li>✓ Though there have some problems the market are operating at present. For community people this market is very important. By developing this market many unemployed young people are enclosed with business. Farmer get opportunity to sell their product timely and also get proper value of product. For that they give emphasis on their agricultural work. Community people use this market properly. No female are come here at present and past.</li> </ul>

Name and location	Present status of operation, use effectiveness and benefits	
10. Shaikh para BNP bazaar development, Dewanganj, Jamalpur	<ul style="list-style-type: none"> <li>• <b>Implementation period:</b> 25.06.2005 – 25.02.2006 The work was completed in scheduled time and as per required plan. <b>Size:</b> 1 acre; <b>Amount allocated:</b> 18,64,810; <b>Actual expenditure:</b> 18,64,810; <b>Work undertaken by LGED:</b> 4 sheds, 1 tubewell, 1 room for bazaar samity, 1 slaughter house, 2 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li>• <b>Present status and operation:</b> <ul style="list-style-type: none"> <li>✓ It is known from upazilas engineer and people from bazaar area that the Shaikpara BNP bazaar was enclosed to old Brammaputra for that some of bazaar area and 4 sheds was dissolved under the river. 8 pillars and some goods are preserved.</li> <li>✓ Many places with bazaar area were destroyed for river erosion. People of this area are facing fear all time. There have some shops here by these the people of this area meet their need. River erosion occurs here in every year. For that a large number of area are dissolved every year.</li> </ul> </li> </ul>	
11. Charmushuri bazaar development, Dewanganj, Jamalpur	<ul style="list-style-type: none"> <li>• <b>Implementation period:</b> 25.06.2005 – 25.12.2006. The work was completed in scheduled time and as per required plan. <b>Size:</b> 2 acre; <b>Amount allocated:</b> 22,51,884; <b>Actual expenditure:</b> 20,24,039 (all money not spent for incomplete work of HBB road for river erosion; <b>Work undertaken by LGED:</b> 4 sheds, 1 tubewell, 1 garbage pit, 1 slaughter house, 2 open platform, 1 latrine; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li>• <b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 16 members and have an office room. Responsibilities of the committee: ensuring security of the market; resolving disputes of sellers-buyers of market</li> <li>• <b>Present status of operation:</b> Operating without any problem</li> </ul>	
	<b>Before</b> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 25,000</li> <li>✓ Market took place 2 days in a week</li> <li>✓ On an average 1500 people gathered in the market daily</li> <li>✓ The important selling items are paddy, jute, fish etc.</li> <li>✓ Selling items came from Horichandi, Bahadurabad</li> <li>✓ No female shopkeeper/ seller</li> </ul>	<b>At present</b> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 75,000</li> <li>✓ Market took place 7 days in a week.</li> <li>✓ On an average 4,000 people gathered in the market daily. During observation the market was open and approximately in one hour, 800 people were found in the market for marketing. The marketing items were potato, chilli, brinjal, onion, vegetables, milk etc.</li> <li>✓ The important selling items are paddy, jute, potato, brinjal, vegetables, rice, betel leaves, betel nut etc.</li> <li>✓ Presently selling items are coming from Bhulakipara, Kasimerchar, Fakirpara</li> <li>✓ There are 6 sheds and near about 30 shops of different agricultural products and other necessary things in the market. No female shopkeeper or sellers were found there. But female are visiting the market for buying necessary things.</li> <li>✓ The market is now operating with no problem.</li> <li>✓ At present market are operating. The works which are made by LGED the condition of these are good at present no reconstruction work is needed. Community people use this market for their daily purpose. Farmer is selling their agri product in this market. Community people give emphasis on farming vegetables because they can market these agri products easily in this market. They have no need to go away. For community people this market is very important. Many unemployed young people are doing their business here. Capable working people from the community are becoming business minded.</li> </ul>
12. Baroari growth centre development, Sadar, Netrokona Sadar, Netrokona	<ul style="list-style-type: none"> <li>• <b>Implementation period:</b> 20.06.2005 – 19.10.2005 The work was completed in scheduled time and as per required plan. <b>Size:</b> 1 acre; <b>Amount allocated:</b> 22,15,000; <b>Actual expenditure:</b> 21,24,000; <b>Work undertaken by LGED:</b> 3 sheds, 80 meter drainage, 100 meter bazaar connected road, 1 tubewell, 1 garbage pit, 1 slaughter house, 1 open pucca platform, 1 latrine, 1 acre land purchase, .25 km; <b>Responsible authority for repair and maintenance:</b> Bazaar committee</li> <li>• <b>Status of Bazaar Management Committee:</b> There is a bazaar management committee comprise with 50 members and have an office room. Responsibilities of the committee: ensuring security of the market; resolving disputes of sellers-buyers of market</li> <li>• <b>Present status of operation:</b> Operating without any problem</li> </ul>	
	<b>Before</b> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 27,000</li> <li>✓ Market took place 7 days in a week</li> <li>✓ On an average 150 people gathered in the market daily</li> <li>✓ The important selling items were only vegetables and fish</li> <li>✓ Selling items came only from the local people</li> <li>✓ No female shopkeeper/ seller</li> </ul>	<b>At present</b> <ul style="list-style-type: none"> <li>✓ Average annual income Tk. 80,000</li> <li>✓ Market took place 7 days in a week.</li> <li>✓ On an average 1,500 people gathered in the market daily. During observation the market was open and approximately in one hour, 300 people were found in the market for marketing (50 female). The marketing items were potato, onion, chilli, tomato, bean, rice, green leafy vegetables, milk, fish, egg, oil, salt, flour, turmeric, spice and other necessary things.</li> <li>✓ The important selling items are now rice, flour, vegetables, paddy, potato, bean, cauliflower, carriage flower, chilli, onion, tomato, fish, meat, duck, chicken, fertilizer, diesel, medicines, insecticide, etc.</li> <li>✓ Presently most of the agri product are coming from the nearest area of market and also from Hatkundoli, Bus-hati, Patalikhar Bangla, Saidpur</li> <li>✓ There are 3 sheds and 2 open platforms. No female shopkeeper or sellers were found there. But female are visiting the market for buying necessary things. No female seller/shopkeeper is there.</li> <li>✓ The market is now operating and is in good condition. People come here from hither and thither and from far-off place. This growth center is playing an important role for community people because when the growth center was not here they had to go far away market. On that it was killing enough time and they did not selling their product on their desire. Now they can bring their product here and sell these on proper value. Trucks come from the town and bring the products. The rate of rotting/damages of products is decreased for establishing growth center here. People come here for purchasing daily product here. Volume of trade and commerce and scope of employment are increased. Therefore the qualities of life of people are developed.</li> </ul>

## Appendix-2: Detailed Tables of Household Survey

Table 1: Category of respondents by gender

Gender	Intervention		Control	
	n	%	n	%
Male	1600	67	530	66
Female	800	33	270	34
Total	2400	100	800	100

Table 2: Occupation of the respondents: in %

Occupation	Intervention		Control	
	Male (n=1600)	Female (n=800)	Male (n=530)	Female (n=270)
Farming including farm labour	87	0	87	0
Business	9	1	6	0
Service	3	1	5	1
Day labour	1	0	2	0
Housewife	0	98	0	99
Total	100	100	100	100

Table 3: Mean parity and mean family size: in number

Parity & Family size	Intervention (n=2400)	Control (n=800)
Mean parity	3.06	3.32
Mean family size	4.91	5.31

Table 4: Type of the family type: in %

Responses	Intervention (n=2400)	Control (n=800)
Singly family	80	79
Joint family	20	21
Total	100	100

Table 5: Socio-economic status of the respondents: in %

Responses	Intervention (n=2400)	Control (n=800)
Poor	30	37
Middle class	55	46
Rich	15	17
Total	100	100

Table 6: Factors causing increased crop production: in %

Factors causing increased crop production	Intervention	Control	*p-value
Quality seeds are getting/hybrid seeds and fertilizers	100	85	0.00
For crop diversification	25	15	0.00
Easier to marketing agri products	30	10	0.00
Getting fair price	20	5	0.00
Availability of agricultural instruments	10	0	0.00
Created irrigation facilities	13	10	0.01

\*Z-test (two proportions)

**Table 7: Distribution of respondents by status of increased tree plantation, place of increased plantation and cause**

of incentives to increased tree plantations: in %

Status of increased tree plantation:	Intervention (n=2400)	Control (n=800)
Yes	74	51
No	26	49
Total	100	100
<b>Place of plantation increased:</b>	<b>n=1764</b>	<b>n=404</b>
Besides the road	17	8
Surrounding of the homestead land	65	72
In fallow land	18	20
Total	100	100
<b>Cause of incentives to increased tree plantation:</b>		
Earning higher price for wood	38	30
Improved awareness about safe environment	52	47
To meet demand for fruits in the family	15	14
To meet demands for firewood	11	10
Ensure protection from flood/erosions	13	8

**Table 8: Distribution of respondents by status of road communication currently: in %**

Status of road communication	Intervention	Control
Very good/Good	99	37
Bad	1	63
Total	100	100

**Table 9: Places of easier movement before and after improved communication: in %**

Male responses	Intervention		Control	
	Pre	Post	Pre	Post
Growth center/ rural hat-bazar	46	82	48	71
Administrative Centers Union Parishad/Upazila/ District town	54	100	37	70
Service Centers:School-college/Health Centers/ hospitals	36	100	22	72
Not easy to go any where	18	0	39	5
<b>Females responses</b>				
Growth center/ rural hat-bazar	27	62	24	52
Administrative Centers Union Parishad/Upazila/District town	33	56	18	25
Service Centers:School-college/Health Centers/hospitals	18	100	15	67
Not easy to go any where	39	10	51	15

**Table 10: Status of Reduction of transportation costs: in %**

Status of Reduction of transportation costs	Intervention	Control
Decreased	35	15
Increased	65	85
Total	100	100

**Table 11: Mean time/cost invested to market goods**

Mean Time/cost invested to market goods	Intervention		Control	
	Pre	Post	Pre	Post
Times spend (in minutes)	53	20	61	40
Cost spend (in taka)	35	25	48	35

**Table 12: Types of opportunities increased for women after communication development: in %**

Female response on benefits improved communication %	Intervention	Control
Easily can go to bazaar	15	7
Easily can go to educational institution (school/collage)	17	12
Easily can go to health centers	25	5
Earning opportunities for women increased	13	11
Increased mobility beyond locality	29	10
No benefit gained	1	55
Total	100	100

**Appendix 3:**  
**Data Collection Instruments**  
(QUESTIONNAIRE BANGLA)



N. DEİ vZv^ vXi RmeZ mSib msL^v KZ? t0tj : ..... tqtq: ..... tglu: .....

O. caierfi i tglu m^m msL^rt .....Rb (0-14 e0i chS-ki; 14 e0tii Dtx^eq^ m^m)

eq^ cj^t.....Rb eq^ gnj vt.....Rb t0tj k^t .....Rb tqtq k^t.....Rb

P. DEİ vZv^ vXi gmmK Avq: .....UvKv

Q. caierfi i aib: 1. GKK caierfi 2. thS\_ caierfi

tmKkb-2: AeKvWtgv ms^vS-Z\_ (iv^v, eR/Kvj fivU^tM\_ tmUvi /grtK0/nU-erRvi)

2. cj^v-AeKvWtgv Dbqb cktfi i Avl Zvq (2002-2009 mtj i gta^) abafi Z DctRj vBDqbq-G Gj RBW KZR cktfi i k k KvR ntqtQ Zv Dvj E-Ki^b? (ckf Avdm t\_k tRtb btZ nte k k ntqtQ, Kte ntqtQ)

k k ntqtQ

tKvbtmj ntqtQ

- |   |
|---|
| <ol style="list-style-type: none"> <li>1. DctRj v moK (vWv tiW) vbg/cpefb</li> <li>2. BDqbq moK/ MgvY moK (i^v tiW) vbg/cpefb</li> <li>3. DctRj v motK eR/Kvj fivU^vbg/cpefb</li> <li>4. BDqbq motK eR/Kvj fivU^vbg/cpefb</li> <li>5. tM_ tmUvi/MgvY nU-erRvi Dbqb</li> <li>6. iv^v ctk e^i tivcb</li> <li>7. Ab^v (Dvj E-Ki^b).....</li> </ol> |
|---|

iv^v moK m^mKZ Z\_:

(ckf Avdm t\_k ctgB tRtb btZ nte abafi Z DctRj vq iv^v vbg/cpefb i KvR ntqtQ kKv Ges Kte vbg/cpefb KvR ntqtQ Ges tmB iv^v vbg i vbg^Yi mvj Dvj E-Ki^b cktk^iZ nte)

3. (iv^v big i mvj Dvj E-Ki^b vRtAm Ki^b) Gj RBW KZR iv^v vbg^Yi mgq/cpefb i mgq, Avcb er Avcbri caierfi i tKd iv^v vbg^Yi KvRi mt\_ RvZ v0tj b k?

1. niiv 2. bv

4. (Gj RBW KZR vbgZ/cpefbKZ iv^v big Dvj E-Ki^b vRtAm Ki^b) eZg^v Avcb er Avcbri iv^v e^eni KtQb k?

1. niiv 2. bv

K. vRfbk^i c^Y caierfi (btq hvl qv i btq Avmvi) Rb^ Avcbri v GB iv^v e^eni Kt^b k?

1. niiv 2. bv

5. thMthM e^e^v er iv^v Dbq^bi dtj c^eP tPtq eZg^v Gj vKvi RbM^Yi tek Kti P^i ver^ Kivi AvMh tetotQ k?

1. niiv 2. bv

6. (Gj RBW KZR vbgZ/cpefbKZ iv^v big Dvj E-Ki^b vRtAm Ki^b) iv^v e^enfi tKv i Kg mgm^i m^g^ub ntqtQb er nt^Qb k?

1. niiv 2. bv

7. iv^v h\_vh\_fite i qYvte^Y i ms^vi Kiv nq k?

1. niiv 2. bv 3. Rmbv

K. iv^v ms^vfi i KvR Gj vKvi RbMY AskMhb Kti k?

1. niiv 2. bv

8. iv^v eZg^v Ae^v tKgb?

1. Gj vKvi t^vKv vbgZ GB iv^v e^eni Kti
2. iv^v e^enfi i DchP AvtQ
3. iv^v t^v vZ Kiv c^qRb
4. iv^v Pj vPtj i Dcthm^v bv
5. iv^v t^v i Kg Pj vPtj Kiv hvq

6. iv^v t^v i Mtq MtZP m^o ntqtQ
7. iv^v D^v P^ntq hvbeimb Pj vPtj i Abcthm^v ntq AvtQ
8. AvZ e^o/eb^vq iv^v e^a t^v i Mtq
9. iv^v t^v i qYvte^Y Kiv nq bv
10. Ab^v (Dvj E-Ki^b) .....

DctRj vBDibqib motK ubgZ eR/Kvj fU<sup>9</sup>m=ukZ Z :

(c<sup>9</sup>tgB cKf Aucm t<sub>1</sub>K tRtb btZ nte uba<sup>9</sup>i Z DctRj vBDibqib eR/Kvj fU<sup>9</sup>e<sup>9</sup> t<sup>9</sup>ivctbi KvR ntqtQ ukbv, Kte er tkvb m<sup>9</sup>tj ntqtQ Ges tkvb iv<sup>9</sup>q ntqtQ Ges tmB iv<sup>9</sup>h big I ubg<sup>9</sup>Yi mj Dj L=Kti ckaKiZ nte)

9. (Gj <sup>9</sup>RbW KZ<sup>9</sup> th iv<sup>9</sup>q eR/Kvj fU<sup>9</sup> ubgZ/cpe<sup>9</sup>mbKZ ntqtQ Zvi big I mj Dj L=Kti m<sup>9</sup>RtAm Ki<sup>9</sup>b) eZ<sup>9</sup>tb iv<sup>9</sup>mn iv<sup>9</sup>h Dci eR/Kvj fU<sup>9</sup> Avcab er Avcbriv e<sup>9</sup>envi KiZ cri<sup>9</sup>tb uk? 1. ni<sup>9</sup> 2. bv
10. eR/Kvj fU<sup>9</sup> h<sup>9</sup>vh<sup>9</sup> fite I q<sup>9</sup>Yte<sup>9</sup>Y I tgi<sup>9</sup>vZ Kiv nq uk? 1. ni<sup>9</sup> 2. bv 3. Rmbv
11. eR/Kvj fU<sup>9</sup> eZ<sup>9</sup>tb Ae<sup>9</sup>v tKgb?
  1. Gj vKvi tj vKRb ubgZ iv<sup>9</sup>mn eR/Kvj fU<sup>9</sup> e<sup>9</sup>envi Kti
  2. eR/Kvj fU<sup>9</sup> e<sup>9</sup>en<sup>9</sup>ti I Dch<sup>9</sup> Av<sup>9</sup>Q
  3. eR/Kvj fU<sup>9</sup> tgi<sup>9</sup>vZ Kiv c<sup>9</sup>qvRb
  4. t<sup>9</sup>ij s Gi eZ<sup>9</sup>tb Ae<sup>9</sup>v f<sup>9</sup>tj v bq
  5. d<sup>9</sup>UcvZ Gi eZ<sup>9</sup>tb Ae<sup>9</sup>v f<sup>9</sup>tj v bq
  6. G<sup>9</sup>v<sup>9</sup>c<sup>9</sup>P t<sup>9</sup>iv<sup>9</sup>Wi eZ<sup>9</sup>tb Ae<sup>9</sup>v f<sup>9</sup>tj v bq
  7. Ab<sup>9</sup>v<sup>9</sup> (Dj L=Kti<sup>9</sup>b) .....

iv<sup>9</sup>h c<sup>9</sup>rk e<sup>9</sup>ti<sup>9</sup>ivcb m=ukZ Z :

(cKf Aucm t<sub>1</sub>K tRtb btZ nte uba<sup>9</sup>i Z DctRj vBDibqib e<sup>9</sup>ti<sup>9</sup>ivctbi KvR ntqtQ ukbv, Kte er tkvb m<sup>9</sup>tj ntqtQ Ges tkvb iv<sup>9</sup>q ntqtQ Ges tmB iv<sup>9</sup>h big I ubg<sup>9</sup>Yi mj Dj L=Kti ckaKiZ nte)

12. (iv<sup>9</sup>h big I mj Dj L=Kti m<sup>9</sup>RtAm Ki<sup>9</sup>b) Gj <sup>9</sup>RbW KZ<sup>9</sup> iv<sup>9</sup>h c<sup>9</sup>rk e<sup>9</sup>ti<sup>9</sup>ivcb ni qv Avcbriv eZ<sup>9</sup>tb uk<sup>9</sup>fite j v<sup>9</sup>ferb n<sup>9</sup>Qb er uk m<sup>9</sup>peav ntqtQ?  
.....
13. e<sup>9</sup>ti<sup>9</sup>ivctbi KvR Gj vKvi g<sup>9</sup>nj viv AskM<sup>9</sup>hY Kti tQ uk? 1. ni<sup>9</sup> 2. bv 3. Rmbv
14. iv<sup>9</sup>h GB M<sup>9</sup>Q<sub>2</sub> t<sup>9</sup>ij vi ubgZ t<sup>9</sup> L<sup>9</sup>tk<sup>9</sup>br Kiv er hZ<sup>9</sup>tbqv KvR Gj vKvi <sup>9</sup>ni<sup>9</sup> g<sup>9</sup>nj viv AskM<sup>9</sup>hY Kti uk? 1. ni<sup>9</sup> 2. bv 3. Rmbv
15. iv<sup>9</sup>h c<sup>9</sup>rk t<sup>9</sup>ivcbKZ e<sup>9</sup>ti<sup>9</sup> t<sup>9</sup>ij vi eZ<sup>9</sup>tb Ae<sup>9</sup>v tKgb?
  1. t<sup>9</sup>ivcbKZ e<sup>9</sup>ti<sup>9</sup> t<sup>9</sup>ij v f<sup>9</sup>tj v Av<sup>9</sup>Q
  2. t<sup>9</sup>ivcbKZ e<sup>9</sup>ti<sup>9</sup> t<sup>9</sup>ij v b<sup>9</sup>o ntq t<sup>9</sup>mtQ
  3. e<sup>9</sup>ti<sup>9</sup>ivctbi t<sup>9</sup>q<sup>9</sup>t<sup>9</sup> h<sup>9</sup>vh<sup>9</sup> c<sup>9</sup>ui Ph<sup>9</sup> Afite A<sup>9</sup>ak<sup>9</sup>sk M<sup>9</sup>Q g<sup>9</sup>ti t<sup>9</sup>mtQ (kZKiv ..... f<sup>9</sup>m)
  4. e<sup>9</sup>ti<sup>9</sup>ivctbi t<sup>9</sup>q<sup>9</sup>t<sup>9</sup> eo M<sup>9</sup>Q<sub>2</sub> t<sup>9</sup>ij v P<sup>9</sup>il Kti t<sup>9</sup>ktU ubtq t<sup>9</sup>mtQ
  5. Ab<sup>9</sup>v<sup>9</sup> (Dj L=Kti<sup>9</sup>b) .....

16. Avcbriv Gj vKvq iv<sup>9</sup>weR/Kvj fU<sup>9</sup>Dbqib er ubg<sup>9</sup>Y Ges iv<sup>9</sup>h c<sup>9</sup>rk e<sup>9</sup>ti<sup>9</sup>ivctbi dtj uk uk m<sup>9</sup>peav ntqtQ?

- |  |  |
|--|--|
| 1. th <sup>9</sup> m <sup>9</sup> h <sup>9</sup> m e <sup>9</sup> v <sup>9</sup> i Db <sup>9</sup> z   | 11. Gj vKvq <sup>9</sup> ne <sup>9</sup> f <sup>9</sup> b <sup>9</sup> uc <sup>9</sup> l <sup>9</sup> Z <sup>9</sup> ovb/msN/Gb <sup>9</sup> RI / <sup>9</sup> t <sup>9</sup> t <sup>9</sup> K <sup>9</sup> K <sup>9</sup> iv KiZ i <sup>9</sup> i <sup>9</sup> Kti tQ |
| 2. e <sup>9</sup> em <sup>9</sup> -em <sup>9</sup> t <sup>9</sup> R <sup>9</sup> i c <sup>9</sup> ni <sup>9</sup>  | 12. iv <sup>9</sup> ubg <sup>9</sup> Yi dtj Rj ve <sup>9</sup> Zv KigtQ  |
| 3. K <sup>9</sup> il k <sup>9</sup> t <sup>9</sup> i Drc <sup>9</sup> v b ep <sup>9</sup>  | 13. iv <sup>9</sup> h Db <sup>9</sup> qib ni qv m <sup>9</sup> gv <sup>9</sup> ep <sup>9</sup> tZ eb <sup>9</sup> vi m <sup>9</sup> o nq bv  |
| 4. K <sup>9</sup> il c <sup>9</sup> Y <sup>9</sup> i g <sup>9</sup> j <sup>9</sup> ep <sup>9</sup>   | 15. iv <sup>9</sup> h a <sup>9</sup> ti e <sup>9</sup> ti <sup>9</sup> ivcb ni qv <sup>9</sup> ct <sup>9</sup> ki em <sup>9</sup> i <sup>9</sup> q <sup>9</sup> v <sup>9</sup> ct <sup>9</sup> Q   |
| 5. K <sup>9</sup> il uk <sup>9</sup> t <sup>9</sup> i Db <sup>9</sup> qib  | 16. iv <sup>9</sup> h a <sup>9</sup> ti e <sup>9</sup> ti <sup>9</sup> ivcb ni qv c <sup>9</sup> ui t <sup>9</sup> et <sup>9</sup> ki f <sup>9</sup> iv <sup>9</sup> m <sup>9</sup> g <sup>9</sup> i <sup>9</sup> q <sup>9</sup> v <sup>9</sup> ct <sup>9</sup> Q      |
| 6. K <sup>9</sup> g <sup>9</sup> ms <sup>9</sup> v <sup>9</sup> b ep <sup>9</sup>  | 17. e <sup>9</sup> ti <sup>9</sup> ivctbi dtj dj R I ebR Kv <sup>9</sup> Vi Drc <sup>9</sup> v b ep <sup>9</sup>   |
| 7. c <sup>9</sup> P <sup>9</sup> kvj <sup>9</sup> te <sup>9</sup> i q <sup>9</sup> hZi c <sup>9</sup> ui g <sup>9</sup> Y KigtQ  | 18. Gj vKvi <sup>9</sup> ni <sup>9</sup> g <sup>9</sup> nj viv M <sup>9</sup> Q-c <sup>9</sup> vj v hZ <sup>9</sup> tbqv KvR AskM <sup>9</sup> hY Ki tQ  |
| 8. iv <sup>9</sup> q h <sup>9</sup> ms <sup>9</sup> K h <sup>9</sup> ve <sup>9</sup> mb Pj v <sup>9</sup> tj i dtj <sup>9</sup> v <sup>9</sup> bxq k <sup>9</sup> ig <sup>9</sup> K <sup>9</sup> i K <sup>9</sup> g <sup>9</sup> ms <sup>9</sup> v <sup>9</sup> b t <sup>9</sup> et <sup>9</sup> Q | 19. iv <sup>9</sup> h c <sup>9</sup> rk d <sup>9</sup> mj Drc <sup>9</sup> v b ep <sup>9</sup>   |
| 9. uk <sup>9</sup> q <sup>9</sup> iv m <sup>9</sup> h <sup>9</sup> m t <sup>9</sup> et <sup>9</sup> Q  | 20. tZ <sup>9</sup> gb tkvb Db <sup>9</sup> z nq <sup>9</sup> v/ t <sup>9</sup> g <sup>9</sup> UI Db <sup>9</sup> z nq <sup>9</sup> v  |
| 10. Gj vKvq <sup>9</sup> ne <sup>9</sup> f <sup>9</sup> b <sup>9</sup> uc <sup>9</sup> l <sup>9</sup> c <sup>9</sup> l <sup>9</sup> Z <sup>9</sup> ovb M <sup>9</sup> to D <sup>9</sup> v <sup>9</sup> Q   | 21. Ab <sup>9</sup> v <sup>9</sup> (ub <sup>9</sup> o <sup>9</sup> Ki <sup>9</sup> b): .....   |

t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /M<sup>9</sup>g<sup>9</sup>Y nU-er<sup>9</sup>Rvi Db<sup>9</sup>qib m=ukZ Z :

(cKf Aucm t<sub>1</sub>K c<sup>9</sup>l<sup>9</sup>tgB tRtb btZ nte uba<sup>9</sup>i Z DctRj vBDibqib t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /er<sup>9</sup>Rvi Db<sup>9</sup>qib KvR ntqtQ ukbv Ges Kte ntqtQ Ges tmB t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /g<sup>9</sup>vt<sup>9</sup>K<sup>9</sup>U/er<sup>9</sup>Rvi i big I ubg<sup>9</sup>Yi mj Dj L=Kti ckaKiZ nte)

17. Avcbriv Gj vKvq t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /M<sup>9</sup>g<sup>9</sup>Y nU-er<sup>9</sup>Rvi Av<sup>9</sup>Q uk? (DEi ni<sup>9</sup> ntj, t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri er g<sup>9</sup>vt<sup>9</sup>K<sup>9</sup>U i big a<sup>9</sup>ti m<sup>9</sup>RtAm Kti t<sup>9</sup>m<sup>9</sup>U Gj <sup>9</sup>RbW bv Ab<sup>9</sup> Kv<sup>9</sup>iv Kiv ub<sup>9</sup>o<sup>9</sup>Z ntq 1 A<sub>er</sub> 2 m<sup>9</sup>t<sup>9</sup>K<sup>9</sup> Ki<sup>9</sup>b)
  1. ni<sup>9</sup>: cK<sup>9</sup>t<sup>9</sup>i Av<sup>9</sup>l Zv<sup>9</sup>xb
  2. ni<sup>9</sup>: cK<sup>9</sup>t<sup>9</sup>i erB<sup>9</sup>ti
  3. bv (17L bs c<sup>9</sup>l<sup>9</sup>kv<sup>9</sup>h)

K. (DEi ni<sup>9</sup> ntj) Kte t<sub>1</sub>K Avcab/Avcbriv D<sup>9</sup> t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /M<sup>9</sup>g<sup>9</sup>Y nU-er<sup>9</sup>Rvi e<sup>9</sup>envi KiZ i<sup>9</sup>i<sup>9</sup> Kti tQb?  
.....(mj Dj L=Kti<sup>9</sup>b)  
L. bv ntj, Avcbriv Gj vKvq t<sup>9</sup>m<sup>9</sup> t<sup>9</sup>m<sup>9</sup>Uri /M<sup>9</sup>g<sup>9</sup>Y nU-er<sup>9</sup>Rvi bv vKvi dtj uk uk m<sup>9</sup>gm<sup>9</sup>v ni<sup>9</sup>Q? (25 bs c<sup>9</sup>l<sup>9</sup>kv<sup>9</sup>h)  
.....



27. «R~Pvl thM» Ragi cni gnb: cʔeʔ eZʔtb

Ragi aib	cʔf er~emqZ ni qri cʔeʔ(kZrsk)	eZʔtb (kZrsk)
«R~Pvl thM» Ragi	1. ArtQ: .....kZrsk	2. bʔB
	1. ArtQ: .....kZrsk	2. bʔB

28. Avcvri cni exʔi i tgrU Artqi Drm I cni gV: cʔeʔ eZʔtb

Artqi Drm	cʔf er~emqZ ni qri cʔeʔ Mo gnmK Avq (UrKvq)	eZʔtb Mo gnmK Avq (UrKvq)
1. Kul LvZ t_ʔK		
2. ci cʔj b t_ʔK (nim/ gj Mv/Mi /QmJ cʔj b)		
3. e~emv-embR t_ʔK		
4. kvK&meRi eMvb/dtj i eMvb t_ʔK		
5. grm Pvl t_ʔK		
6. Pvkix (Dtj e~Ki b) .....		
7. Ab~ vb t_ʔK tclli Z (tugtUY)		
8. eUkx m~u t_ʔK		
9. FY t I qv t_ʔK		
10. Ab~vb (tclli e~Ki b) .....		
tgrU gnmK Avq		

29. Dʔi ~vZi gnmK Avq hr cʔeʔ Zj brq tek nq, Zte nRtAm Ki b, Zvi Avq ep~i gj Kvi Y, tj vnk nk?

30. Avcvri cni exʔi i tgrU gnmK e~q: cʔf er~emqZ nevi cʔeʔ I eZʔtbi

e~tqi LvZ	cʔf er~emqZ ni qri cʔeʔMo gnmK e~q (UrKvq)	eZʔtb Mo gnmK e~q (UrKvq)
1. Lv~		
2. dmj Pvl ver~		
3. nPkrmv		
4. tcllvK		
5. ~j /Ktj R/gr~mv		
6. cni enb		
7. nej (e~ jr/M~m/tKti vmb)		
8. Drme		
9. Ab~vb (tclli e~Ki b) .....		
tgrU gnmK e~q		

31. Avcvri cni exʔi (cʔf er~emqZ nevi) cʔeʔKZRb ~tj thZ Ges eZʔtb KZRb ~tj hvq?

cʔeʔ		eZʔtb	
nkʔlv cʔZvrb hvl qvi DcithMx	KZRb ~tj thZ?	nkʔlv cʔZvrb hvl qvi DcithMx	KZRb ~tj hvq
m~tm~i mSL~v KZRb uQj?		m~tm~i mSL~v KZRb?	
tQj	tgtq	tQj	tgtq
.....Rb	.....Rb	.....Rb	.....Rb

tmKkb 4: Kul nel qK Z~

32. cʔf er~emqZ cʔeʔ Zj brq eZʔtb km~ Dr cr~ b teʔotQ nk? 1. n~ 2. b~

K. ni~ ntj, Avcvri gtZ, km~ Dr cr~ b eovi Kvi Y, tj vnk nk? .....

33. cʔf er~emqZ dtj Kul tʔt~i ktm~i eUgtLKi b (GKB RagiZ GKvK dmj Dr cr~ b) nʔ~Q nk? 1. n~ 2. b~

K. ni~ ntj, KqU dmj Dr cr~ Z nq: cʔeʔ eZʔtb?

cʔeʔ				eZʔtb			
1. GKU	2. ~bU	3. nZbU	4. PvlU I Zvi tekx	1. GKU	2. ~bU	3. nZbU	4. PvlU I Zvi tekx





49.  $\text{thwMthwM e}^{\text{e}}\text{-vi Dbaqbi dtj gnj vt}^{\text{i}}\text{ i AvtMi Zj brq Avtqi mthwM tetoiQ uk?}$  1. niw 2. bw

K. niw ntj, kZKiv KZfiv tetoiQ? .....%

50. Avcbvi GjvKvq gnj vt<sup>i</sup> i  $\text{wafbnaibti KtR AskMhbti}$  al b tkGb: cKf er<sup>-</sup>erqbtbi cte<sup>o</sup> I eZ<sup>o</sup>qbtbi?

- |  |  |
|--|--|
| K. cte <sup>o</sup> K al tbi KtR gnj viv tek AskMhb KIZ?         | L. eZ <sup>o</sup> qbt uk al tbi KtR gnj viv tek AskMhb Kti?     |
| 1. Kai   | 1. Kai   |
| 2. nim/ gj Mx/Mi'/OmJ cyj b                                      | 2. nim/ gj Mx/Mi'/OmJ cyj b                                      |
| 3. Kaii ukf  | 3. Kaii ukf  |
| 4. gwU Lbb   | 4. gwU Lbb   |
| 5. iv <sup>-</sup> v-NvU/ tmZubgfb                               | 5. iv <sup>-</sup> v-NvU/ tmZubgfb                               |
| 6. e <sup>o</sup> qbt vcb  | 6. e <sup>o</sup> qbt vcb  |
| 7. grm   | 7. grm   |
| 8. kvKmeRi evMvb   | 8. kvKmeRi evMvb   |
| 9. qjz <sup>o</sup> e <sup>o</sup> emv (ubr <sup>o</sup> Kib)    | 9. qjz <sup>o</sup> e <sup>o</sup> emv (ubr <sup>o</sup> Kib)    |
| 10. PrKix  | 10. PrKix  |
| 11. Ab <sup>o</sup> vb <sup>o</sup> (ubr <sup>o</sup> Kib) ..... | 11. Ab <sup>o</sup> vb <sup>o</sup> (ubr <sup>o</sup> Kib) ..... |

51. Avcbvi GjvKvq cKf er<sup>-</sup>erqbtbi dtj (iv<sup>-</sup>v/etR/Kvj fivU<sup>o</sup>tM<sup>o</sup> tmUvi er nuU-evRvi ni qvq) eZ<sup>o</sup>qbt gnj viv cy<sup>o</sup> evRvi RvZ Kti vtK uk? 1. niw 2. bw

52. Avcab ubtR KLbi tM<sup>o</sup> tmUvi/evRt<sup>i</sup> mtqtQb uk? 1. niw 2. bw

K. niw ntj, ukimi Rb<sup>o</sup> er uk cy<sup>o</sup> tePr-tKbvi Rb<sup>o</sup> Avcab tM<sup>o</sup> tmUvi/evRt<sup>i</sup> mtqtQb? .....

53. cKf ,tjv er<sup>-</sup>erqbtbi dtj GjvKvi RbMtYi wPrKrmvi t<sup>o</sup>q<sup>o</sup>t uk uk mpeav ntqtQ?

1. tmerK<sup>o</sup>,tj vtZ tmer tbqvi Rb<sup>o</sup> mn<sup>o</sup>RB t<sup>o</sup>tZ cwi
2. bZb bZb tmer tK<sup>o</sup> ntqtQ
3. mgqgZ wPrKrmv ubtZ cwi
4. tmer tK<sup>o</sup>,tj vtZ hvevi hvZvqvZ LIP KtgtQ
5. bZb JI tai t<sup>o</sup>vKvb nevi dtj mn<sup>o</sup>RB JIa tctZ cwi
6. Ab<sup>o</sup>vb<sup>o</sup> (ubr<sup>o</sup> Kib) .....

54. cKf er<sup>-</sup>erqbtbi cte<sup>o</sup>KZfivM tj vK <sup>-</sup>v<sup>o</sup> tKb<sup>o</sup> t<sup>o</sup>hZ Ges eZ<sup>o</sup>qbt KZfivM tj vK <sup>-</sup>v<sup>o</sup> tKb<sup>o</sup> hvq?

cte<sup>o</sup> .....fivM eZ<sup>o</sup>qbt: .....fivM

55. cKf er<sup>-</sup>erqbtbi dtj (iv<sup>-</sup>v, etR/Kvj fivU<sup>o</sup>tM<sup>o</sup> tmUvi, iv<sup>-</sup>vi avti e<sup>o</sup>qbt vcb ni qvi dtj) uk uk Ampeavi m<sup>o</sup> ntqtQ - thgb netki Kti caitetki Dci?

1. iv<sup>-</sup>v-bg<sup>o</sup>YI dtj Rj ve<sup>o</sup>Zv m<sup>o</sup> ntqtQ
2. mgv<sup>o</sup> ep<sup>o</sup>tZ eb<sup>o</sup>vi m<sup>o</sup> nq
3. iv<sup>-</sup>vi avti e<sup>o</sup>qbt vcb bv Kivq caitetki fivi mg<sup>o</sup> bo nt<sup>o</sup>Q
4. tM<sup>o</sup> tmUvi/gvtK<sup>o</sup>,tj vtZ Rbm<sup>o</sup>Wg teto hvl qvq SMOV-veev<sup>o</sup> teto tM<sup>o</sup>Q
5. hms<sup>o</sup>K hibe<sup>o</sup>mb Pj v<sup>o</sup>tj i dtj erq/k<sup>o</sup> b nt<sup>o</sup>Q
6. Ab<sup>o</sup>vb<sup>o</sup> (ubr<sup>o</sup> Kib) .....

56. er<sup>-</sup>emqZ cKf ,tjv hvZ me mgqtqi Rb<sup>o</sup> e<sup>o</sup>envi Dcthw<sup>o</sup> I fvtjv vtK (Kiv<sup>o</sup>Ri vtK) tmRb<sup>o</sup> uk Kiv DpZ etj Avcab gtb Ktib? (cZvU at<sup>i</sup> at<sup>i</sup> wRtAm Kib)

AeKiv<sup>o</sup>Wtgv m<sup>o</sup>cmi k

iv<sup>-</sup>v-NvU

etR-Kvj fiv<sup>o</sup>

tM<sup>o</sup> tmUvi

tivcbKZ e<sup>o</sup>q

ab<sup>o</sup>ev<sup>o</sup> w<sup>o</sup> tq mv<sup>o</sup>q<sup>o</sup>vrKvi MhY tkl Kib





iv-wi cirk eñitvcb m=úKZ Z:

13. Avcbvi Gj vKvq iv-wi cirk eñitvcbvi KvR ntqtQ wK? 1. niw 2. bv (17 bs-G hrb) 3. Rmbbv (17 bs-G hrb)

K. niw ntj , eñitvcbvi KvR Gj vKvi gñj v AskMñY Kti tQ wK? 1. niw 2. bv 3. Rmbbv

L. iv-wi GB MwQ,tj vi wqngZ t Lvtkvv Kiv ev hZatbqvi KvR Gj vKvi w-wi gñj vi v AskMñb Kti wK? 1. niw 2. bv 3. Rmbbv

14. iv-wi cirk eñitvcb ni qvq Avcbvi v eZgvtb wKfite j vferb ntQb? .....

15. iv-wi cirk tvcbKZ eñi,tj vi eZgvtb Ae-v tKgb?

1. tvcbKZ eñi,tj v fvtj v AvtQ
2. tvcbKZ eñi,tj v bó ntq tMtQ
3. eñi tvcbvi tñtñ h\_vh\_cui Phñ Afite AwKisk MwQ gti tMtQ (kZKiv .....fvM)
4. eñi tvcbvi tñtñ eo MwQ,tj v Pñi Kti tKtU wbtq tMtQ
5. Ab'vb" (Dtj t-Ki'b) .....

16. Avcbvi Gj vKvq iv-wetR/Kvj fivDbaq ev wqñy Ges iv-wi cirk eñi tvcbvi dtj wK wK mjeav ntqtQ?

- |   |  |
|---|--|
| 1. thwñthwM e'e-vi DbwZ   | 11. Gj vKvq wñfbwñZóvb/msN/GbñRI /-f- tK-^KvR Ki tZ Yi" Kti tQ |
| 2. e'emv-embtR'i cñwi   | 12. iv-w wqñyvi dtj Rj v exZv KgtQ                             |
| 3. Kul kti"i Drcv b epx   | 13. iv-wi Dbwq ni qvq mqv" epótZ eb'vi mjo nq bv               |
| 4. Kul cñY'i gj" epx  | 15. iv-wi avti eñitvcb ni qvq wñtñki eva i qñv cñt"Q           |
| 5. Kulñi wñtñi Dbwq   | 16. iv-wi avti eñitvcb ni qvq cñi tñtñki fvi mvg" i qñv cñt"Q  |
| 6. Kgñs-vb epx  | 17. eñitvcbvi dtj dj R i ebR Kvñvi Drcv b epx                  |
| 7. cPbkñj tñe"i qñZi cñi gñy KgtQ                                 | 18. Gj vKvi w-wi gñj vi v MwQ-cñj v hZatbqvi KvR AskMñb Ki tQ  |
| 8. iv-wq hñsK hñbemb Pj v Pñj i dtj v vñq kñgKñi i Kgñs-vb tetotQ | 19. iv-wi cirk dmj Drcv b epx                                  |
| 9. wñqñvi mñthwM tetotQ   | 20. tZgb tKv DbwZ nqñb/ tñtñUI DbwZ nqñb                       |
| 10. Gj vKvq wñfbwñKñj cñZóvb Mto DtvtQ                            | 21. Ab'vb" (wñtñ Kti'b): .....                                 |

tMö tñUvi /MñgY nU-evRvi m=úKZ Z:

17. Avcbvi Gj vKvq tMö tñUvi /MñgY nU-evRvi AvtQ wK? 1. niw 2. bv (17-L bs cñkñvb)

K. niw ntj , tKvñv AvtQ? 1. tMö tñUvi 2. gñtKñ 3. nU-evRvi 4. Ab'vb" (wñtñ Kti'b): .....

L. bv ntj , Avcbvi Gj vKvq tMö tñUvi /nU-evRvi /gñtKñ bv vKvi Rb" Avcbñtñ i wK wK mgnv nt"Q? (25 bs cñkñvb) .....

18. eZgvtb tMö tñUvi /MñgY nU-evRvi w Avcab ev Avcbvi v e'envi Ki tZ cñi tQb wK? 1. niw 2. bv

K. niw ntj , wK wK Dtñ tñk" (wK tKbñtñv Kivi Rb") Avcab ev Avcbvi v tMö tñUvi /MñgY nU-evRvi wñtñtQb? .....

19. Avcbvi Gj vKvq tMö tñUvi /MñgY nU-evRvi nevi dtj Kul cñY" tñv-tKbvi cñYZv tetotQ wK? 1. niw 2. bv

20. Gj vKvi RbMY wK wK cñY" wñtñtñi Rb" tMö tñUvi /gñtKñ nU-evRñi wbtq hvq? .....

21. Avcbvi Gj vKvq tMö tñUvi /MñgY nU-evRvi nevi dtj Gj vKvi RbMñYi Avq cñeP Zj vñq tetotQ wK? 1. niw 2. bv

22.  $\text{tM}_0$   $\text{tm}_0$ Uvi /M $\text{t}$ gY niU-erRvi  $\text{U}$ i eZ $\text{g}$ vb Ae $\bar{v}$  tKgb?

1. Gj vKvi tj vKRb  $\text{nbqgZ}$  GB  $\text{tM}_0$   $\text{tm}_0$ Uvi /M $\text{t}$ gY niU-erRvi  $\text{U}$ e $\bar{v}$ ni Kti
2. e $\bar{v}$ nti i Dch $\text{p}$  Av $\text{t}$ Q
3. tgi $\text{v}$ gZ Kiv c $\text{t}$ qvRb
4.  $\text{tM}_0$   $\text{tm}_0$ Uvi /gr $\text{t}$ K $\text{t}$ U  $\text{nbqgZ}$  AeKv $\text{t}$ gv $\text{t}$  v - f $\text{v}$ z $\text{t}$ Pvi v/b $\text{o}$  ntq M $\text{t}$ Q
5. cvKv KvR $\text{t}$  v t $\text{f}$  $\text{t}$  $\text{z}$  b $\text{o}$  ntq  $\text{tM}_0$ Q
6.  $\text{tM}_0$   $\text{tm}_0$ Uvi /gr $\text{t}$ K $\text{t}$ U m $\text{v}$ Kf $\text{v}$ te e $\bar{v}$ ni Kiv nq bv
7. AvZ $\text{e}$ p $\text{o}$  er eb $\bar{v}$ i mgq erRvi Gj vKvq c $\text{v}$ b R $\text{t}$ g  $\text{v}$ tK
8. c $\text{v}$ k $\text{p}$ Z $\text{r}$ g $\text{v}$  vKvq Ab $\bar{v}$  erRvi Pj ynl qvq AT erR $\text{t}$ i i  $\text{t}$  i $\text{z}$  K $\text{t}$ g  $\text{tM}_0$ Q
9.  $\text{tM}_0$   $\text{tm}_0$ Uvi /gr $\text{t}$ K $\text{t}$ U Gi c $\text{t}$ qvRbgZ i  $\text{t}$ Y $\text{v}$ te $\text{t}$ Y Kiv nq bv
10. Ab $\bar{v}$ b $\bar{v}$  (D $\text{t}$ j  $\text{L}$ -Ki $\text{t}$ b) .....

23. Avcbvi Gj vKvq  $\text{tM}_0$   $\text{tm}_0$ Uvi /gr $\text{t}$ K $\text{t}$ U Dbq $\text{b}$ /b $\text{g}$  $\text{t}$ Yi d $\text{t}$ j  $\text{v}$ K  $\text{v}$ K m $\text{p}$ av ntq $\text{t}$ Q?

- |  |   |
|--|---|
| 1. $\text{v}$ erfb $\text{v}$ ai $\text{t}$ bi c $\text{Y}$ m $\text{v}$ gM $\text{t}$ i gR $\text{y}$ tet $\text{o}$ tQ                         | 8. K $\text{v}$ U $\text{v}$ K $\text{t}$ i i Dbq $\text{b}$  |
| 2. $\text{v}$ erfb $\text{v}$ ai $\text{t}$ bi c $\text{Y}$ m $\text{v}$ gM $\text{t}$ i tK $\text{v}$ teP $\text{v}$ tet $\text{o}$ tQ          | 9. K $\text{g}$ $\text{t}$ s $\bar{v}$ b e $\text{p}$ x   |
| 3. g $\text{v}$ n $\text{j}$ $\text{t}$ $\text{v}$ Z $\text{v}$ - $\text{v}$ et $\text{v}$ Z $\text{v}$ m $\text{S}$ $\bar{v}$ tet $\text{o}$ tQ | 10. $\bar{v}$ te $\bar{v}$ i $\text{t}$ U $\text{Z}$ i c $\text{v}$ l g $\text{v}$ Y K $\text{t}$ g $\text{t}$ Q                              |
| 4. $\text{v}$ erfb $\text{v}$ ae $\bar{v}$ emv-emb $\text{t}$ R $\bar{v}$ i c $\text{t}$ v $\text{i}$ N $\text{t}$ U $\text{t}$ Q                | 11. R $\text{j}$ v $\text{e}$ x $\text{Z}$ v $\bar{v}$ t ntq $\text{t}$ Q   |
| 5. erR $\text{t}$ i i em $\text{l}$ $\text{K}$ Av $\text{q}$ tet $\text{o}$ tQ   | 12. $\text{t}$ Z $\text{g}$ tK $\text{v}$ b Db $\text{z}$ nq $\text{v}$ b/t $\text{g}$ v $\text{t}$ U $\text{D}$ b $\text{z}$ nq $\text{v}$ b |
| 6. erR $\text{t}$ i i Av $\text{q}$ Z $\text{b}$ tet $\text{o}$ tQ   | 13. Ab $\bar{v}$ b $\bar{v}$ (b $\text{v}$ $\bar{v}$ $\text{t}$ Ki $\text{t}$ b): .....   |
| 7. m $\text{B}$ v $\text{t}$ n c $\text{t}$ Z $\text{v}$ b $\text{B}$ erR $\text{v}$ i e $\text{t}$ m  |   |

24. Avcbvi Gj vKvq  $\text{tM}_0$   $\text{tm}_0$ Uvi /gr $\text{t}$ K $\text{t}$ U Dbq $\text{b}$  er b $\text{g}$  $\text{t}$ Yi d $\text{t}$ j g $\text{v}$ n $\text{j}$  v  $\text{t}$  $\text{v}$ Z $\text{v}$ - $\text{v}$ et $\text{v}$ Z $\text{v}$  tet $\text{o}$ tQ  $\text{v}$ K? 1. ni $\text{v}$  2. bv

K. ni $\text{v}$  nt $\text{j}$ , Av $\text{t}$ Mi Z $\text{j}$  b $\text{v}$ q kZKiv KZ $\text{f}$ vM tet $\text{o}$ tQ e $\text{t}$ j Avc $\text{v}$ b g $\text{t}$ b K $\text{t}$ i b? .....

$\text{t}$ mKkb 3: Av $\text{t}$   $\text{v}$ mg $\text{v}$ RK Ae $\bar{v}$

25. Avcbvi c $\text{v}$ l er $\text{t}$ i i DcvR $\text{t}$ K $\text{v}$ i x m $\bar{v}$  m $\bar{v}$  m $\text{S}$  $\bar{v}$  KZRb?

- |   |    |   |    |
|---|----|---|----|
| K. c $\text{t}$ e $\text{p}$ KZRb $\text{U}$ Q: t $\text{g}$ v $\text{U}$ : ..... | Rb | L. eZ $\text{g}$ vb KZRb: t $\text{g}$ v $\text{U}$ : ..... | Rb |
| c $\text{j}$ $\text{t}$ : .....   | Rb | c $\text{j}$ $\text{t}$ : .....                             | Rb |
| g $\text{v}$ n $\text{j}$ v: .....  | Rb | g $\text{v}$ n $\text{j}$ v: .....                          | Rb |

26. Avcbvi t $\text{c}$ kr  $\text{v}$ K? (c $\text{t}$ e $\text{p}$  i eZ $\text{g}$ vb)

c $\text{t}$ e $\text{p}$	Ab $\bar{v}$ b $\bar{v}$ t $\text{c}$ kr (G $\text{K}$ ma $\text{K}$ n $\text{t}$ Z c $\text{t}$ i)	eZ $\text{g}$ vb	Ab $\bar{v}$ b $\bar{v}$ t $\text{c}$ kr (G $\text{K}$ ma $\text{K}$ n $\text{t}$ Z c $\text{t}$ i)
1. K $\text{v}$ l K $\text{v}$ R	1. K $\text{v}$ l K $\text{v}$ R	1. K $\text{v}$ l K $\text{v}$ R	1. K $\text{v}$ l K $\text{v}$ R
2. K $\text{v}$ l gR $\text{j}$	2. K $\text{v}$ l gR $\text{j}$	2. K $\text{v}$ l gR $\text{j}$	2. K $\text{v}$ l gR $\text{j}$
3. K $\text{j}$ -K $\text{v}$ i Lv $\text{b}$ vi k $\text{t}$ g $\text{K}$	3. K $\text{j}$ -K $\text{v}$ i Lv $\text{b}$ vi k $\text{t}$ g $\text{K}$	3. K $\text{j}$ -K $\text{v}$ i Lv $\text{b}$ vi k $\text{t}$ g $\text{K}$	3. K $\text{j}$ -K $\text{v}$ i Lv $\text{b}$ vi k $\text{t}$ g $\text{K}$
4. $\text{t}$ z $\bar{v}$ e $\bar{v}$ emv/d $\text{v}$ oq $\text{v}$	4. $\text{t}$ z $\bar{v}$ e $\bar{v}$ emv/d $\text{v}$ oq $\text{v}$	4. $\text{t}$ z $\bar{v}$ e $\bar{v}$ emv/d $\text{v}$ oq $\text{v}$	4. $\text{t}$ z $\bar{v}$ e $\bar{v}$ emv/d $\text{v}$ oq $\text{v}$
5. g $\text{v}$ S $\text{v}$ i x e $\bar{v}$ emv	5. g $\text{v}$ S $\text{v}$ i x e $\bar{v}$ emv	5. g $\text{v}$ S $\text{v}$ i x e $\bar{v}$ emv	5. g $\text{v}$ S $\text{v}$ i x e $\bar{v}$ emv
6. eo e $\bar{v}$ emv	6. eo e $\bar{v}$ emv	6. eo e $\bar{v}$ emv	6. eo e $\bar{v}$ emv
7. P $\text{v}$ Ki x	7. P $\text{v}$ Ki x	7. P $\text{v}$ Ki x	7. P $\text{v}$ Ki x
8. $\text{t}$ eK $\text{v}$ i	8. $\text{t}$ eK $\text{v}$ i	8. $\text{t}$ eK $\text{v}$ i	8. $\text{t}$ eK $\text{v}$ i
9. $\text{v}$ $\bar{v}$ b gR $\text{j}$	9. $\text{v}$ $\bar{v}$ b gR $\text{j}$	9. $\text{v}$ $\bar{v}$ b gR $\text{j}$	9. $\text{v}$ $\bar{v}$ b gR $\text{j}$
10. M $\text{v}$ nY $\text{x}$	10. M $\text{v}$ nY $\text{x}$	10. M $\text{v}$ nY $\text{x}$	10. M $\text{v}$ nY $\text{x}$
11. Ab $\bar{v}$ b $\bar{v}$ (b $\text{v}$ $\bar{v}$ $\text{t}$ Ki $\text{t}$ b) ...	11. Ab $\bar{v}$ b $\bar{v}$ (b $\text{v}$ $\bar{v}$ $\text{t}$ Ki $\text{t}$ b) ...	11. Ab $\bar{v}$ b $\bar{v}$ (b $\text{v}$ $\bar{v}$ $\text{t}$ Ki $\text{t}$ b) ...	11. Ab $\bar{v}$ b $\bar{v}$ (b $\text{v}$ $\bar{v}$ $\text{t}$ Ki $\text{t}$ b) ...



ჰმკკბ 4: კული მელიკა Z\_

32. ავბვი გვიკვი არამი ჯი ბვი კმი დრც`ბ თეთიო უკ? 1. ნიუ 2. ბი

კ. ნიუ ნტი, ავბვი გიჯ, კმი დრც`ბ ეოვი კვი Y\_ტი ვ უკ უკ?  
 .....

33. ეჯიტი ავბვი ი გვიკვი კული ტიტი კტი ეიტი კი ბ (გკბ რიჯი გკმაკ დმი დრც`ბ) ნიუ? 1. ნიუ  
 2. ბი

კ. ნიუ ნტი, კვი დმი დრც`ბ ნი: ცეი ეჯიტი?

ცეი				ეჯიტი			
1. გკუ	2. ბი	3. უბი	4. პიუ ი ჯი	1. გკუ	2. ბი	3. უბი	4. პიუ ი ჯი
ტეკ				ტეკ			

34. ავბვი გვიკვი უკ დმი დრც`ბ ნი (ცეი ეჯიტი დმი დრცატი აი ბ ი ცი გი)?

დტი ი ბვი

ცი ეი ენი ცი დრც`ბი ცი გი (გი-გი)  
 ცეი ეჯიტი

1. აი
2. მი
3. ტი
4. ცი
5. აი/ბი
6. ჯი რიჯი კი (მი ი ვი/ჯი/ვი/ეი/ვი/.....)
7. მი რიჯი (გი/მი/კი)
8. კი-მი (ბი ტი კი:.....)
9. აი-ბი (ბი ი კი).....

35. ავბვი გვიკვი არამი ჯი ბვი ეჯიტი:

კ. ეტიცი თეთიო უკ? 1. ნიუ 2. ბი  
 ლ. ნი-გი მი ცი ბ თეთიო უკ? 1. ნიუ 2. ბი  
 მ. ცი ცი ბ თეთიო უკ? 1. ნიუ 2. ბი

- |  |  |   |
|--|--|---|
| <p>კ.1. ნიუ ნტი, ტივი ეტიცი ტეკ ნიუ?</p> <ol style="list-style-type: none"> <li>1. ივი არი</li> <li>2. ენი ეოვი არი ტი</li> <li>3. ციჯი რიჯი</li> <li>4. აი-ბი (ბი ი კი).....</li> </ol> <p>კ.2. ტი თეთიო?</p> | <p>ლ.1. ნიუ ნტი, ტივი ჩიტი თეთიო?</p> <ol style="list-style-type: none"> <li>1. ეი ჩიტი</li> <li>2. ენი რიჯი ტი</li> <li>3. ტი ტიტი</li> </ol> <p>ლ.2. ტი თეთიო?</p> | <p>მ.1. ნიუ ნტი, ტივი ტივი ტიტი ცი ცი ბ თეთიო?</p> <ol style="list-style-type: none"> <li>1. მი ცი ბ</li> <li>2. მი ცი ბ</li> <li>3. მი ტივი რიჯი</li> <li>4. აი-ბი (ბი ი კი).....</li> </ol> <p>მ.2. ტი თეთიო?</p> |
|--|--|---|

ჰმკკბ 5: თიმი ეი, ერვი რიჯი კი, ენი-ნი რიჯი ი კი-ბი მსუ-

36. არამი ჯი ბვი ეჯიტი ავბვი ერ ავბვი ი ჯიჯი მი ენი ტი გი? 1. ლე ტივი 2. ტივი  
 3. ლივი



44. th tKvb cY (Kul Riv I Ab'vb" th tKvb cY") evRi RivZKi tY KZ mgq j vM I KZ LIP nq

c#e°	eZ#vrb
K. c#e°c#Zeti Mto KZ mgq j vMZ:	L. eZ#vrb c#Zeti Mto KZ mgq j vM:
.....(qubtU)	.....(qubtU)
L. c#e°th tKvb cY" evRi RivZKi tY c#Zeti Mto	L. eZ#vrb th tKvb cY" evRi RivZKi tY c#Zeti
KZ	Mto
LIP nZ: .....UvKv	KZ LIP nq: .....UvKv

45. Avcbv er Avcbvi c#i et#i i m`m`iv mBrt#n KZeri nvU-erR#ti hvb?

K. c#e°KZeri th#Zb: mBrt#n (7#`tb)	L. eZ#vrb KZeri hvb: mBrt#n (7#`tb)
cY" evRi RivZ Ki t#bi c#i emi K er e`#MZ	cY" evRi RivZ Ki t#bi c#i emi K er e`#MZ
Rb" Ab'vb" Kv#Ri Rb"	Rb" Ab'vb" Kv#Ri Rb"
.....eri	.....eri

46. eZ#vrb Kul cY" teP#tKbrq g#nj v#` i AskM#t#Yi m#th#M Av#Q #K? 1. n`u 2. bv

K. th#M#th#M e`e`vi Db#t#bi (etR/Kvj fvU#bg#P) g#nj v#` i #K ai t#bi m#eav nt#t#Q ?

.....

47. Avcbvi Gj vKvq hvZvqvZ e`e`vi Db#Zi (iv`v, etR/Kvj fvU#nI qvq) dtj Avcbvi er Gj vKvi t#tj t#t#qiv #K #K ai t#bi m#eav c#t#Q #K?

c#e°#K ai t#bi Am#eav #Qj ?	eZ#vrb eZ#vrb #K ai t#bi m#eav nt#t#Q?
1. `g /K#j R/gv`#mvq th#Z K# nZ	1. mnt#RB `g /K#j R/gv`#mvq th#Z c#t#i
2. GKv GKv th tKvb RvqMvq th#Z cvi Z bv	2. GKv GKv th tKvb RvqMvq th#Z c#t#i
3. mgq te#k j vMZ	3. mgq Kg j vM
4. t#t#U `#j th#Z nZ	4. hv#S#K ev#t#bi Kv#t#Y `#Z `#j hv# qv hv# Ges n#U#Z nq bv
5. evRi /t#M#_ t#m#U#t#i th#Z cvi Z bv	5. mnt#RB evRi /t#M#_ t#m#U#t#i th#Z c#t#i
6. `#`#` tK#`#`th#Z cvi Z bv	6. `#`#` tK#`#`th#Z cvi Z bv
7. Ab'vb" (t#b#`#` Ki`b) .....	7. Ab'vb" (t#b#`#` Ki`b) .....

48. Avcbvi Gj vKvq c#e° Zj brq eZ#vrb Avcbv#` i Kg#s`v#t#bi m#th#M tet#t#Q #K? 1. n#v 2. bv

K. n`u ntj , tKvb#tKvb#L#v#Z/#`#t#t# Kg#s`v#t#bi m#th#M tet#t#Q?

1. Kul KvR	9. e#t#t#i vcY (ebvqb) Ges Gi c#i Ph# KvR
2. Kul cY" evRi RivZKi t#Yi t#t#t#t#	10. kvK-me#Ri evM#b
3. hvbe#b Pj v#t#j i t#t#t#t#	11. #t#j `e`emv
4. Mi`/Q#Mj /n#m/gj M# c#j b	12. gr#` P#l
5. K# Kv# L#b#i KvR	13. #e#f#b#e`emv-embR" (t#b#`#` Ki`b) .....
6. Kul#i #k#t#i KvR	14. m#v#i Y m#v#m#R#K Db#q#b#j K Kv#Ri t#t#t#t#
7. g#v#U L#b# KvR	15. Ab'vb" (t#b#`#` Ki`b) .....
8. AeK#v#t#v# #bg#P# I m#s`#t#i i KvR (iv`v#v#U, t#m#Z# #bg#P# I m#s`#t#i i KvR I Ab'vb")	

49. eZ#vrb Avcbv#` i Gj vKvq g#nj v#` i Av#t#q#i m#th#M Av#Q #K? 1. n#v 2. bv

K. n#v ntj , th#M#th#M e`e`vi Db#q#b ntj g#nj v#` i eZ#vrb#i Zj brq Av#t#q#i m#th#M Av#t#i v#v#t#e #K? 1. n#v 2. bv

L. n#v ntj , kZKi v#v#Z#v#M v#v#t#e? .....



cj ~~h~~AeKwWtgv Dbqb cKf : enEi gqgbmsn (gqgbmsn, UvsMvBj , Rvgvj cj , tki cj , ~~h~~KtkviMÄ I tbTtKvbn tRj v) - 2q mstkwaz xli R cKf i cFve gj "vqb

iv-v-I etR/Kvj fvU<sup>9</sup> tM<sub>0</sub> tmUvi/MögyY nvU-erRvi e"envi Kvi t` i mvt\_ msrjß mvjvrKvi

DÉi`vZvi aiY: .....

1. Z\_ msMni Rb" bafni Z bgpv iv`v etR-Kvj fvU<sup>9</sup>tM<sub>0</sub> tmUvti i bvg  
.....
2. bvg: ..... tclvb b<sup>at</sup> (h<sup>ir</sup> \_vtK)t .....
3. (vKvbn)t Mlg ..... BDubqb..... DctRj v: ..... tRj vt .....
4. cäv tckv t ..... cäv tckvi cvkvcnk Ab" tKvb tckv (h<sup>ir</sup> \_vtK) .....
5. tKvb Gj vKvi thvMthvM e"e-v fivj ntj A\_9 iv`v-NvU Dbqb ntj Gj vKvi ~~h~~K ~~h~~K Dbqb ntZ cvti I Gj vKvi Rbmtyi ~~h~~K ~~h~~K DcKvi ev mpeav ntZ cvti etj Avcab gtb Kti b?  
.....
6. tKvb Gj vKvj tM<sub>0</sub> tmUvi/grtK9/nvU-erRvi Dbqb ntj Gj vKvi ~~h~~K Dbqb nZ I Gj vKvi Rbmtyi ~~h~~K ~~h~~K DcKvi ev mpeav ntZ cvti etj Avcab gtb Kti b?  
.....  
.
7. (iv`vi bvg Dvj E-Kti ~~h~~RtAm Ki"b) GB iv`vU Dbqbtbi AvtM GLvbKvi hvZvqZ e"e-v tKgb vQj ?  
1. fivj                      2. tgvUvgU/Pj vPj thvM"                      3. Lvi v                      4. GtKerfi B Pj vPtj i AthvM"  
5. Ab"vb" (bv" 9 Ki"b) .....
8. (iv`vi bvg Dvj E-Kti ~~h~~RtAm Ki"b) Kte t\_tK c\_lg Avcab ev Avcbv iv GB iv`v-ir tq Pj vPj /hvZvqZ i i" Kti tQb?  
.....
9. hLb c\_lg GB iv`v-ir tq Pj vPj i i" Kti b ZLb iv`vU tKgb vQj (KuPv iv`v-vQj bv cvKv iv`v) eY9v ir b?  
.....
10. Kte GB iv`vU Dbqb Kiv ntqtQ ej tZ cvti b ~~h~~K?  
.....
11. iv`v-Dbqbtbi AvtM tKv\_vl hvevi Rb" tekki fivM mgq ~~h~~Ktm Kti thtZb :  
.....  
K. eZ9vb tKv\_vl hvevi Rb" tekki fivM mgq ~~h~~Ktm Kti hvb :  
.....
12. iv`v-Dbqbtbi AvtM GB iv`vq ~~h~~K ~~h~~K hvbevb tek Pj vPj Ki Z:  
.....  
K. eZ9vb GB iv`vq ~~h~~K ~~h~~K hvbevb tek Pj vPj Kti :  
.....
13. Avcab tKv\_vq hvt"Qb/tKv\_vq tKv\_vq hvb (GB iv`v-e"envi Kti)?  
.....  
K. ~~h~~K KvtR hvt"Qb/ ~~h~~K ~~h~~K KvtR hvb? (D<sup>3</sup>i`vZv ~~h~~K KvtR hvt"Q ev hvq, ~~h~~K ~~h~~Rabm mvt\_ vbtq hvt"Q ev hvq e"vi Z vj Lp)

L. Avcb GLb thLrb hv"Ob/ thLrb thLrb hvb tmLrb thZt eZrb Mto KZ mgq j vM: .....  
iv-vDbqbi AvM KZ mgq j vMZ: .....

M. Avcb GLb thLrb hv"Ob/ thLrb thLrb hvb tmLrb t  
eZrb Ktm Kti tekki fM mgq ev mPivPi hvbt

iv-vDbqbi AvM tekki fM mgq ev mPivPi Ktm Kti  
thZb:.....  
N. Avcb GLb thLrb hv"Ob/thLrb thLrb hvb tmLrb thZt eZrb Mto KZ LiP j vMt .....  
iv-vDbqbi AvM Mto KZ LiP j vMZ: .....

14. iv-vDbqbi AvM Avcb tKrbtckrq RvZ vQj b (cavb tckv K vQj)?

K. hv cpe cavb tckv I eZrb cavb tckv GK bv nq Zvntj vRtAm Ki"b, tKb cpe tckv cavb eZrb Kti eZrb  
tckrq  
GtmOb?.....

15. Avcbvi gvM Avq AvMi Zj vq tetotQ vK? 1. niv 2. bv  
K. niv ntj, tKb

tetotQ?.....  
16. Avcbvi cavb i m"m"ivl GB iv-vU e"envi Kti vK? 1. niv 2. bv  
K. niv ntj, cavb i m"m"iv tKv\_vq tKv\_vq hvvi Rb" Ges vK KvRi Rb" GB iv-vU e"envi Kti?

17. iv-vUz gvj cavb Kvix Mvov/UvK/j v/ f"vb Pj vPj Kti vK? 1. niv 2. bv  
K. GB iv-v e"envi Kti eZrb vK vK Kul cY" I mvM cavb Kv nq?

18. iv-v Dbqb I iv-v Dci etR/Kvj fvU vbgZ nl qvq Kul cY" Avb-tbi qvi tvti Gj vKvi tj vKRtbi vK ai tbi mjev  
ntotQ?

19. iv-v Dci etR/Kvj fvU vbgZ nl qvq Gj vKvi tj vKRb vK vK mthM mjev fM Ki otQ?

20. AvbgvK KZRb tj vK vK GB iv-v vq Pj vPj Kti? .....Rb

21. AvMi tPtq eZrb (thMthM e"v ev iv-vDbqb nl qvq) KvI Drcv b tetotQ vK? 1. niv 2. bv

22. Kul velqK Z"v t

K. Avcbvi vK cavb gvY Pvl thM" Rvq AvQ: eZrb: .....kZvsk cpe .....kZvsk  
L. cpe tPtq eZrb Avcbvi Drcv b tek nt"Q vKbv? 1. niv (AvMi tPtq KZ fM tetotQ?.....fM (%) 2. bv  
Drcv b vxi KvY vK?

M. Avcb clZ eQi vK vK dmj Pvl v" Kti b:

eZrb ev MZ eQi vK	clZeQi ev MZ eQi	iv-vDbqbi cpe/Gj vKvq tM tmUv/nvU-	clZeQi	vNv	clZ
vK dmj Drcv b	vNv clZ Drcv tbi	evRvi nev AvM vK vK dmj Drcv b Ki tZb	Drcv tbi	cavb gvY	KZ
Kti otQb	cavb gvY (gY-G)		vQj (gY-G)		

N. GKB RngtZ Kq dmj dmj Pvlver` Ktib: eZgvtb Kq dmj Ktib: ..... cteKq dmj KitZb: .....

O. Avcbvi GB Drcw` Z dmj t eZgvtb tkv\_vq wapu Ktib: .....  
cteKq\_vq wapu KitZb: .....

P. Drcw` Z dmj wapuqi Rb` Avbr-tbl qvi tqtit Avcbvi KZ LIP nq?  
eZgvtb clZeti Mto KZ LIP nqt .....UvKv  
cte(iv`v-Dbqtbi AvtM) clZeti Mto Mto KZ LIP nZ: .....UvKv

Q. Avcbvi Drcw` Z dmj wapuqi Rb` Avbr-tbl qvi tqtit KZ mgq j vM?  
eZgvtb Mto clZeti KZ mgq j vM: ..... cte(iv`v-Dbqtbi AvtM) KZ mgq j vMZ: .....

23. Avcbvi GjvKvq (BDwbqtb) tM\_ tmUvi/nvU-erRvi/grtKt AvtQ wK? 1. niv: Kte t\_tK e`envi Kitob ..... 2. bv  
K. GB tM\_ tmUvi/nvU-erRvi/grtKt Avcbv er Avcbv v wK wK KrtR hrb er e`envi Ktib?

.....  
L. bv ntj , tM\_ tmUvi/nvU-erRvi/grtKt bv\_vKvi Rb` wK wK mgm`v nt`Q?.....  
.....

24. eZgvtb Km cY` erRvi RvZKi tbi tqtit Avcbv` i GjvKvq wK wK ai tbi mpeav mto ntqtQ?  
.....  
.....

K. erRvi RvZKi tbi Rb` GB mpeav mto nI qvi dtj Avcbvi er Avcbv` i wK wK jvf er DcKvi ntqtQ?  
.....  
.....

cj ~~Æ~~ÆKvWtgv Dbq b cKí : epÉi gqgbmsn (gqgbmsn, UvsMvBj , Rvgvj cj , tki cj , ~~Æ~~ÆKtvi MÄ I tbTtKvrv tRj v) - 2q mstkwaz xli R cKtí i cÍve gj "vqb

ÿ j xq Avtj vPbvi ~~Æ~~ÆKv: cKí Gj vKvq BDubqb chÍq  
(FGD Guideline at Union Level)

AskMhYKvi x: KvgDvbu vj Wvi , K.I.K: Fvgnb/Íjz Pvl x; abx Pvl x I ga'æÉ Pvl x, ÿ mi ÿ I gvnj v tbZv, hÿe tbZv, e'emvqx, ~~Æ~~ÆÍK, agÍq tbZv, gvKgp. ÿÍ"/GbuRI

[cÍZ FGD-ÍZ AskMhYKvi x KgctÍ 8 Rb ]

tRj v : .....	tKvW bs : .....
DctRj v : .....	tKvW bs : .....
BDubqb : .....	tKvW bs : .....

GchRvW mgSÍqKvi xi bvgt ..... mnvqZvKvi xi bvgt .....

ÿ j xq Avtj vPbvi ÿvbt ..... Zvi L: .....

ÿ j xq Avtj vPbvq AskMhYKvi xÍ i Z\_Ít

µvgK bs	bvg	vj ½ (cj "I/gvnj v)	eqm	<del>Æ</del> ÆÍv	tckv	c`ex (m`m")
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

~~Æ~~ÆRvrt ~~Æ~~Æbñi Z bgbv Gj vKvq (BDubqb-G) cKtí i Avl Zvq th KtæúrtbÍUi KvR ev`emqZ ntqtQ i agvÍ tmB tmB KtæúrtbÍUi I ci AskMhYKvi xÍ i gZvqZ MhY KiÍZ nte|

K. ÆKvWtgv ~~Æ~~ÆbgÍ, e`envi I i ÍÍYtÍÍÍY

1. tKvb Gj vKvi thMÍthvM e`ev fvj ntj A\_Í iv`v-NvU Dbq b ntj Gj vKvi ev Gj vKvi RbMÍYI ~~Æ~~Æ DcKvi ntZ cÍtÍ etj Avcbv v gtb KtÍ b?
2. tKvb Gj vKvq tMÍ\_ tMÍUv/gvÍKÍ/nvU-evRvi Dbq b ntj Gj vKvi ev Gj vKvi RbMÍYI ~~Æ~~Æ DcKvi ntZ cÍtÍ etj Avcbv v gtb KtÍ b?
3. cj ~~Æ~~ÆKvWtgv Dbq b cKí : epÉi gqgbmsn cKtí i Avl Zvq Gj vRBvW KZÍ ~~Æ~~Æbñi Z bgbv Gj vKvq ~~Æ~~Æ KvR ev`emqZ ntqtQ?
4. cKtí i Avl Zvq Gj vRBvW KZÍ bZb ~~Æ~~ÆvgZ ev eb`vq ÍÍZMÍ-cÍeÍmbKZ iv`v-NvU I etR/Kvj fíUÍmsµvÍŠ:
  - (iv`v bvg DÍj Í-KtÍ Z\_Í mshÍ Ki`b) Gj vRBvW KZÍ iv`vU ev etR/Kvj fíUÍ bZb ~~Æ~~ÆÍv Kiv ntqtQ bñK eb`v ÍÍZMÍ-iv`v ev etR/Kvj fíUÍ-cÍeÍmb Kiv ntqtQ? AvbgvbK KÍe iv`vU/ etR/Kvj fíUÍ ~~Æ~~ÆÍv ev cÍeÍmb Kiv ntqtQ? eZÍÍtÍb iv`v-NvU I etR/Kvj fíUÍ e`eüZ nt`Q ~~Æ~~ÆÍv? iv`v-NvU I etR/Kvj fíUÍ ~~Æ~~Æ KvR e`eüZ nt`Q? ~~Æ~~ÆÍv bñK cY` cñ enÍbÍ ev Avbr-ÍbÍ qvÍ Rb` GB iv`v-NvU e`envi nt`Q ~~Æ~~ÆÍv I ~~Æ~~ÆÍv aÍÍbÍ Kñ cY` Avbr-ÍbÍ qvÍ Kiv nq?
  - Gj vKvi iv`v-NvU ~~Æ~~ÆÍv/cÍeÍmb KvRÍ mgq Gj vKvi ÿ mi ÿ I gvnj vÍ i Íj evi ev kÍgK nÍtÍte ~~Æ~~ÆÍvÍv Í`qv ntqtQÍ ~~Æ~~ÆÍv?





5. j ʃiˈgriːv Abhwɔː D³ ckiːf i mKj KvR evˈemqZ ntiːqɔj ʌK? 1. niːv 2. bv  
K. bv ntiːj , tKb evˈemqZ nqib? .....
6. ckiːf i KvR eivˈi KZ Aː ʃm=ubentɔːqɔj ʌK? 1. niːv 2. bv  
K. bv ntiːj , tKb tkiː nqib? .....
7. ckiːf ˈij tj ubaʃiː Z mKj moK i Abˈvbˈ th me KvR thLɔːb thLɔːb nevi K\_ː ɔj tm\_ːtj v GB ckiːf i Avl Zvq evˈemqZ ntiːqɔ ʌK? 1. niːv 2. bv  
K. bv ntiːj , tKb? .....
8. ckiːf ˈij tj Dtiː ʌZ KɔːRi evBtiː tKib moK ev Abˈvbˈ tKib AeKvWtɔːr GB ckiːf i Avl Zvq evˈemqZ ntiːqɔ ʌK? 1. niːv 2. bv  
K. niːv ntiːj , tKb? .....
9. ckiːf evˈevqɔKvj ɔb mgtɔ tKib mgmˈv ʃˈ Lv ʃˈ tɔːqɔj ʌK? 1. niːv 2. bv  
K. niːv ntiːj , ʌK ʌK mgmˈv ʃˈ Lv ʃˈ tɔːqɔj ? .....
10. ckiːf evˈevqɔKɔːtj ˈvbɔq RbMʃiː mɔːq AskMhY ɔj ʌK? 1. niːv 2. bv  
K. niːv ntiːj , ʌK aiːtbi AskMhY ɔj ? .....
11. ckiːf evˈevqɔKɔːtj evˈevqɔKɔːR gW chʃɔq gɔːj ʃˈ i AskMhY ɔj ʌK? 1. niːv 2. bv  
K. niːv ntiːj , ʌK ʌK KɔːR AskMhY Ktiː ɔj ? .....
12. ckiːf i Avl Zvq tKib ckiːʃb ʃˈ qv ntiːqɔj ʌK?? 1. niːv 2. bv  
K. niːv ntiːj , Kvˈi i ckiːʃb ʃˈ qv ntiːqɔj ? .....
13. ckiːf ˌtj v evˈevqɔtbi dtiːj cɔi ʃekMZ tKib mgmˈv mɔː ntiːqɔ ʌK? 1. niːv 2. bv  
K. niːv ntiːj , ʌK ʌK mgmˈv ntiːqɔ? .....
14. ckiːf i AeKvWtɔːr ˌtj v mɔːKfɔːt KvR Kiːtɔ ʌK? 1. niːv 2. bv  
K. bv ntiːj , tKb mɔːKfɔːt KvR Kiːtɔ bv? .....
15. GKɔl ckiːf evˈevqɔtbi ci tmB ckiːf i AeKvWtɔːr ˌtj v (ivˈv; eɔR/Kvj fɔːʃ KZɔːr b ci i ʃvɔːteʃv ev msˈvi Kivi K\_ː? .....eQi
16. evˈemqZ ckiː ˌtj v mɔːKfɔːt i ʃvɔːteʃv Kiv nq ʌK? 1. niːv 2. bv  
K. niːv ntiːj , ʌKfɔːt i ʃvɔːteʃv Kiv nq? .....
17. Arcbri Kgʃj vKvi ɔɔfɔːRvɔːmɔː GB ckiːf i Avl Zvq hZ\_ːtj v ivˈwi i eɔR/Kvj fɔːʃ KvR ntiːqɔ Zvi gtaː KZɔl ivˈwi G hier i ʃvɔːteʃv ev msˈvi i KvR Kiv ntiːqɔ? .....ɔl
18. ckiːf i mdj Zv\_ːtj v ev kvˈɔːkvj x ʃˈ K\_ːtj v ʌK ʌK? .....
19. ckiːf i ˈʃʃ ʃˈ K\_ːtj v ʌK ʌK? .....
20. fɔːel ʃZ GKB aiːtbi ckiːf evˈevqɔtbi ʃʃʃ hɔːZ Dciːv³ ˈʃʃ Zv\_ːtj v bv ˌʃK tmRbˈ ʌK Kiv DɔːZ etj Arcub gtb Ktiːb? .....
21. ckiːf i Avl Zvq evˈemqZ AeKvWtɔːr ˌtj v hɔːZ me mgtɔi Rbˈ eˈenvi DciːhMɔː i fɔːtj v ˌʃK (KvRi ˌʃK) tmRbˈ ʌK Kiv DɔːZ etj Arcub gtb Ktiːb? .....

(abˈevˈ ʃˈ tɔːq mɔːʃvRkvi MhY tkiː Kiːˈb)

cyj AeKwrtgv Dbqb cKf : enEi gqgbmsn (gqgbmsn, UrvMvj , Rvgvj cy , tkicj , Ktkvi MÄ I tbTtkvrv tRjv) - 2q mstkmaZ kxl R cKf i cfrve gj "vqb

**nbreo Avtj vPbvi cKgvj v**  
(DctRjv chfqi Gj vRBWv KgRZÄ i Rb)

fvgKv: Avmrvj vgy Avj vBKg| Avgiv iW (MtelYv cZöv) Ges AvBGgBw (cni Kf br gSvj q) Gi cñ t\_K gv chf q gj "vqb Rmici Df tk" GtmQ| vbxq miKvi cKSkj Am`Bi (Local Government Engineering Department) KZR 2002-2009Bs mtj c j AeKwrtgv Dbqb: enEi gqgbmsn (gqgbmsn, UrvMvj , Rvgvj cy , tkicj , Ktkvi MÄ I tbTtkvrv tRjv) kxl R cKf i Kvr er`emqZ ntqtQ| GB cKf i Avl Zvq enEi gqgbmsni 6w tRjvq iv`v, etR/Kvj fW q tM\_ tmUvi vbgP Ges iv`vi ctk eñ tivcb Kiv ntqtQ| eZvb Rmici Df tk" nt`Q, cKf vU vbgP Kvr gj "vqb Ges Gi dtj thvMthv e`e`v, Kul Drc`b, evRi RvZKIY, e`emvntR`i m`cñvi Y Ges mpeavt fV M` i Avq I Kgms`vbi tñtñ K K cni eZB ntqtQ tm vel tq Z` msh Kiv| Avgiv G m`utK`Avcbvi gj "evb gZvgZ mshni Rb" GtmQ|

Avcb gj "evb Z`" ñ tq G MtelYvi KtR mthvMZv Kitz cñi b| Avcbvi gZvgZ i agv MtelYvi KtRB e`eüZ nte| Avcbvi t`qv Z` m`uY`Mvcb ivLv nte| Avcbvi AbgvZ tctj Avg m`ñjvKvi i i` Kitz cñi |

tKm bst

wefM : .....	tKwbs : .....
tRjv : .....	tKwbs : .....
DctRjv : .....	tKw bs : .....

m`ñjvKvi MhYKvixi vbg : ..... m`ñjvKvi MhYi Zwi L: .....

m`vci fivBRvii vbg : ..... Zwi L: .....

m`ñjvKvi MhY: i i`i mgq : ..... tkl mgq: .....

1. Upazila Engineer      2. Assistant Engineer      3. Sub-assistant Engineer
4. Others (Specify) .....

1. vbg : .....
2. c`ex: .....
3. c j AeKwrtgv Dbqb cKf : enEi gqgbmsn (gqgbmsn, UrvMvj , Rvgvj cy , tkicj , Ktkvi MÄ I tbTtkvrv tRjv) kxl R cKf i KtR Avcb RvZ vQ t j b K?      1. niv    2. bv
- K. niv ntj , D<sup>3</sup> cKf Avcbvi fvgKv/Ae`vb K vQj ? .....
4. cKf i Kvr Pj vKj v mgv cKf i Kvr mt i Rvgtb cñ`kB/Z`vi K Kiv nZ K? 1. niv    2. bv  
K. niv ntj , Kfvte Kiv nZ? .....
5. j ñ`gyv Abhvq D<sup>3</sup> cKf i Kvr mivKfvte er`emqZ ntqtQj K?      1. niv    2. bv  
K. bv ntj , tKb er`emqZ nqvb? .....
6. cKf i Kvr ei v KZ At`m`ubentqQj K?      1. niv    2. bv  
K. bv ntj , tKb tkl nqvb? .....

7. cKf `nj tj mbañi Z mKj moK I Ab`vb` th me KVR thLxb thLxb nevi K\_v nj tm,tj v GB cKf i Avl Zvq ev`emqZ ntqtQ nK? 1. niw 2. bv  
K. bv ntj , tKb? .....
8. cKf `nj tj Daj mEZ KvRI evBti tKvb moK ev Ab`vb` AeKvWtgv GB cKf i Avl Zvq ev`emqZ ev mvgZ ntqtQ nK? 1. niw 2. bv  
K. niw ntj , tKb? .....
9. cKf ev`erqbKvj xb mgjq tKvb mgm`v f` Lv n` tquj nK? 1. niw 2. bv  
K. niw ntj , nK nK mgm`v f` Lv n` tquj ? .....
10. cKf ev`erqbKvj `vbxq RbMfYI mmlq AskMhY nDj nK? 1. niw 2. bv  
K. niw ntj , nKai tbi AskMhY nDj ? .....
11. cKf ev`erqbKvj `vbxq RbMfYI Zi d t`\_tK tKvb cZeUKZv GtmDj nK? 1. niw 2. bv
12. cKf ev`erqbKvj gmj v` i AskMhY nDj nK? 1. niw 2. bv  
K. niw ntj , nKfite? .....
13. cKf i Avl Zvq tKvb cKf`b f` qv ntqtQ nK? 1. niw 2. bv  
K. niw ntj , Kv` i cKf`b f` qv ntqtQ ? .....  
L. nK nK mel tqi Dci cKf`b f` qv ntqtQ ? .....
14. cKf ,tj v ev`erqbtbi dtj cni tekMZ tKvb mgm`v mpo ntqtQ nK? 1. niw 2. bv  
K. niw ntj , nK nK mpo mgm`v ntqtQ?.....
15. cKf i AeKvWtgv ,tj v mW/fite KvR KI tQ nK? 1. niw 2. bv  
K. bv ntj , tKb mW/fite KvR KI tQ bv? .....
16. cKf i AeKvWtgv ,tj v i qYte`fYi Rb` `vbxq chiq tKvb KugU AvtQ nK? 1. niw 2. bv  
K. GB KugU nK nK KvR Kti `vtK? .....
17. KZ n` b ci ci cKf i AeKvWtgv ,tj v i qYte`fYi I tgi vZ Kivi K\_v? .....
18. ev`emqZ cKf ,tj v mW/fite i qYte`fYi Kiv nq nK? 1. niw 2. bv  
K. niw ntj , nKfite i qYte`fYi Kiv nq? .....  
L. Kiv i qYte`fYi KvRI `mqZ; i tqtQb? .....  
M. bv ntj , tKb i qYte`fYi Kiv nq bv? .....  
N. nKfite i qYte`fYi Kiv hq? .....
19. Avcbri KgEj vKvi mrfbaRiqMq GB cKf i Avl Zvq hZ ,tj v iv`w I etR/Kvj fivUP KvR ntqtQ Zvi gta` KZw Iv`w G hieR i qYte`fYi ev ms`v`i i KvR Kiv ntqtQ? .....
20. cKf i mdj Zv ,tj v ev k`v kvj x n` K ,tj v nK nK? .....
21. cKf i `p` n` K ,tj v nK nK?.....
22. fmel`tZ GKB aitbi cKf ev`erqbtbi t`fif hrtZ Dctiv` `p`Zv ,tj v bv `vtK tmRb` nK Kiv DpZ etj Avcab gtb Ktib?.....
23. ev`emqZ cKf i AeKvWtgv ,tj v hvZ fmel`tZ e`envi Dcthm`v`vtK (Avl i KvR`i ivLvi Rb`) tmRb` Avcbri gZvgZ ev mpcwi k nK? .....

(ab`ev` n` tq mv`fYvrKvi MhY tki Ki`b)







cyj AeKWvrgv Dbq b cKf : enEi gqgbwmsn (gqgbwmsn, UvMvBj , Rvgvj cji , tki cji , wKtkvi MÄ I tbTtkvrv trjv) - 2q mstkwaz xli R cKf i cfi ve gj "vqb

AeRvi tfkb tPKvj ÷ t ivv

trjv:..... tKw bs:..... DctRjv:..... tKw bs:.....
BDvqb:..... tKw bs:..... Mlg: .....
tj vKkvb: .....

chfeYKvixi bvg: ..... Zvi L: .....

Z\_clvbKvixi bvg, c`ex l wKvrv: .....

cKf msk6-eiv3 tK rAvmv Kti, Gj vKvi tj vKt` i KvO t\_tK trtb Ges mti Rvgtb cui`k0 Kti btpi Z\_`\_tjv mSMh Kti vj wceX Ki tZ nte|

(1 t\_tK 17 chS-Gj wRBwv-i cKf msk6-eiv3 i KvO t\_tK Z\_`\_ msMh Ki tZ nte)

- 1. tctgi ev ev`emqZ cKf i (iv`vi) bvg :
2. iv`vU bZb vbgZ bvk eb`vq YwZMv`-eR/Kvj fVU`cpevmb/ms`vi Kiv nqtqO :
3. ms`vi Kiv nqtqO (2007 mvtj eb`v YwZMv`)
4. ms`vi Kiv nqtqO (2004 mvtj eb`v YwZMv`)
5. ms`vi Kiv nqtqO (2007 mvtj eb`v YwZMv`)
6. ms`vi Kiv nqtqO (2004 mvtj eb`v YwZMv`)
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80. ms`vi Kiv nqtqO (2004 mvtj eb`v YwZMv`)
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97. ms`vi Kiv nqtqO (2007 mvtj eb`v YwZMv`)
98. ms`vi Kiv nqtqO (2004 mvtj eb`v YwZMv`)
99. ms`vi Kiv nqtqO (2007 mvtj eb`v YwZMv`)
100. ms`vi Kiv nqtqO (2004 mvtj eb`v YwZMv`)



29. chʰeŋŋYKij xɔ mgtq AvbgɯɔbK KZRb tj vKtK Pj vPj Ki tZ t̄ Lv tM̄tQ? .....Rb
30. iv̄-wi cɯtk eŋŋ ti vcb Kiv n̄tq̄tQ ɯKbv? (chʰeŋŋYKij xɔ mgtq iv̄-wi cɯtk MvQ j vM̄t̄bv Av̄tQ ɯKbv t̄ t̄L Z\_ ɯj ɯcex Ki\*b)  
 1. n̄w 2. bv  
 K. AvbgɯɔbK ɯK cɯi gvY MvQ Av̄tQ, ɯK ɯK MvQ Av̄tQ Ges eŋŋ t̄j vi eZɯɯv Aē-v̄ tKgb ɯē-wi Z ɯj Lp
31. iv̄-wɯi eZɯɯv Aē-v̄ m̄ɔt̄KʰchʰeŋŋYKixi gʂe (ɯē-wi Z ɯj Lp): eZɯɯv iv̄-wɯi e'eüZ n̄t̄Q ɯKbv A\_ŋ Pj j Av̄tQ ɯKbv, ɯbqɯZ tj vKRb iv̄-wɯi e'envi Ki t̄Q ɯKbv, t̄Kiv&t̄Kiv&cɯqvR̄t̄b gɯbɯ GB iv̄-wɯi e'envi Ki t̄Q, eZɯɯv iv̄-wɯi Aē-v̄ tKgb (thgb -Kiv̄c̄ɯs ɯK Av̄tQ ɯKbv, iv̄-vq t̄Kiv̄ fiv̄w̄Piv̄ Av̄tQ ɯKbv, Kv̄v̄ iv̄-vq gvɯ m̄t̄i ɯM̄t̄q MZ'ɯt̄q̄tQ ɯKbv, Pj vP̄t̄j i Am̄jear n̄t̄Q ɯKbv, ɯK ai t̄bi Am̄jear, ms̄-t̄t̄i i c̄t̄qvR̄b Av̄tQ ɯKbv, t̄Kiv̄&t̄Kiv̄ɯvi ɯK ɯK ms̄-t̄t̄i i c̄t̄qvR̄b Av̄tQ BZ'w̄ ɯē-wi Z Z\_ ɯj ɯcex Ki\*b), Gj vKvi RbM̄t̄Yi Kiv̄t̄Q GB iv̄-wɯi ɯi'Z̄j KZŪKz̄et̄j chʰeŋŋYKixi Kiv̄t̄Q ḡt̄b n̄t̄q̄tQ, ɯK ɯK h̄v̄beɯb Pj vPi Ki t̄Q t̄m m̄ɔt̄ŋ chʰeŋŋYKixi gʂe (BZ'w̄)
- .....  
 .....  
 .....  
 .....

cyj AeKwvtgv Dbqb cKf : enEi gqgbmsn (gqgbmsn, UvMvBj , Rvgvj cj , tki cj , mKtkvi MÄ I tbTtKvrv tRj v) - 2q mstkwaz xli R cKf i cve gj vqb

AerVi t fkb tPKuj ÷ : etR/Kyj fvU©

Form with fields: tRj v:..... tKw bs:..... DctRj v:..... tKw bs:..... BDqb:..... tKw bs:..... Mlg: ..... tKw bs:..... tjtKkb: .....

chfYKvixi bvg: ..... Zvi L: .....

cKf msK6-eiK rAvmv Kti, e'envi Kvit i mvt\_ K\_v etj Ges mti Rvgtb cui`kß Kti bxtPi Z\_ ,tj v msMh Kti vj uceX Ki tZ nte|

(1 t\_tK 17 chS-Gj rBw-i cKf msK6-eiK Kiv t\_tK Z\_ msMh Ki tZ nte)

Z\_ cÜvb Kvixi bvg, c`ex I tdiv b=tt .....

1. tgi bvg I AvBw bs (th iv-wi Dci etR/Kyj fvUbgZ ntqtQ):

2. etR/Kyj fvU bZb ubgZ bmk eb'vq vZMf-etR/Kyj fvUms-vi Kiv ntqtQ :

- 1. bZb ubgZ 2. ms-vi Kiv ntqtQ (2004 mvtj eb'v vZMf) 3. ms-vi Kiv ntqtQ (2007 mvtj eb'v vZMf)

K. th iv-wi Dci etR/Kyj fvUbgZ ntqtQ tmB iv-wli ^N^KZ vglvi? .....

L. iv-wli DctRj v moK bv BDqb moK/MlgY moK: 1. DctRj v moK 2. BDqb/MlgY moK

M. iv-wi th RvMvq etR/Kyj fvUbgZ ntqtQ tmU tKv&BDqbti gta' ctoiq?

N. etR/Kyj fvUmn iv-wli tKv&Kv&BDqbti Dci v tq mtoiq (tKv&Kv&BDqbti tj vKRb iv-wli tek e'envi Kti vK)?.....

3. etR/Kyj fvUGi cui gvc:

iv-wi cui gvc mbaZ j v'gvT (mRvBb AvRZ j v'gvT (ev`e chfYtYi dj vdj (mti Rvgtb chfYtYi mvg vj uceX Ki`b)

K. üvb msL'v .....L. etR/Kyj fvUGi %N° .....vglvi %N° .....vglvi %N° .....vglvi cui gvc cft: .....vglvi cft: .....vglvi cft: .....vglvi D°PZv: .....vglvi D°PZv: .....vglvi D°PZv: .....vglvi

4. etR/Kyj fvU ubgYi/cpefmbi mvg (ev'emqZ cKf) mK mK Kiv Kiv ntqtQ? (mst'itc cÜvb Kiv ,tj v Dvj L-Ki`b)

5. cKf mli Avl Ziq GB iv-wi etR/Kyj fvUbgYi/cpefmbi Rb':

tgvU eivl KZ A\_ (UvKv) tgvU cKZ e'q KZ ntqQj? (UvKv)

6. etR/Kyj fvUbgY/cpefmb KivR : 'i' ntqQj : ..... (gym I eQi) tkl ntqQj : .....(gym I eQi)

7. etR/Kyj fvUbgY/cpefmb KivRi mvg KZ Rb' em klgK btqM Kiv ntqQj? cj'I .....Rb gmj v .....Rb

8. j v'gvT Avbvx Kiv m'uv`tbi mbaZ mgtqi gta' KivU tkl ntqQj mK? 1. niw 2. bv

- K. br ntj , tKb?
- |   |   |
|---|---|
| 1. msik6-wKv`vi t i Kvr Aetnj v                   | 6. msik6-KZetji AmnthwMzv                             |
| 2. msik6-Kvri Rb` clqvRbxq gvj vgrtj i `p`clc`Zv  | 7. `vbxqfvte Pv`vevR, `pKZKvix i UvDUt`i clZeUKZv mpo |
| 3. clqvRbxq gvj vgrtj i A`ffveK gj` ep`           | 8. clKvZK mechtq mgm`vi mpo ni qv                     |
| 4. msik6- Kvr e`euz miAvgrw` i hscwZ chfB br _vKv | 9. Ab`vb` (wv` 0 Ki`b) .....                          |
| 5. clqvRbxq At`p ms`vb br _vKv                    |   |

9. KvrUJ crI KI br gmdK m`uYp`c (hv hv Kivi K\_v uQj tm Abfvq) mgvB ntqUJ wK? 1. niw 2. br  
K. br ntj , tKb nqob?

.....

10. clkt i Avl Zvq D<sup>3</sup> iv`vq KquJ etR/Kvj fvU`bgZ/cpefmb ntqtO: K. etR:.....u L. Kvj fvU`.....u

11. iv`wUtZ tgvU KZ`tj v etR/Kvj fvU`AvtO (clkt i Avl Zvq wbgZ i Ab`vb` mn tgrU): .....u

12. hLb clkt uJ ev`emqZ nq ZLb iv`wi aiY wK i Kg uQj ?

- |  |                       |                               |
|--|-----------------------|-------------------------------|
| 1. ctivUvB cvKv iv`v (civ Xij vB-KvrcfB Kiv) | 2. KvPr ev gnuJi iv`v | 3. Avav-cvKv i Avav KvPr iv`v |
| 4. Ab`vb` (wv` 0 Ki`b)                       |                       |                               |

.....

13. etR/Kvj fvU` qYvteqY i ms`vfi i Kvrri Rb` `vbxq tKvb KquJ (tj evi KbUkUUs tmvmbUJ) AvtO wKbv? 1. niw 2. br  
K. niw ntj , KquJi bvg wK? .....  
L. Kvir GB KquJi m`m`?

- M. GB KquJtZ kZKiv KZfvM gmvj v i KZfvM cv`i?  
N. GB KquJ wK wK Kvr Kti `vK? .....  
O. Kv` i gva`tg (tKvb KZetji gva`tg) GB KquJ Kvr Kti `vK? .....  
P. At`p thwvB Kvir w`tq `vK (tKvb clZorb ev Awa`Bi)? .....

14. etR/Kvj fvU` wbgfYi/cpefmbi ci ntZ G hwer KZeri ms`vi (i qYvteqY i tgivgZ) Kiv ntqtO? .....evi

15. etR/Kvj fvU` wbgfYi/cpefmbi ci GKeri i qYvteqY i tgivgZi Kvr Kiv br ntj , wK Kvi tY nqob?

16. etR/Kvj fvU` wbgfYi/cpefmbi ci Gj wRBwv` i tKvb crI` kbKvix wKsev KgKZPgvS gvtS crI` kb Kti etR/Kvj fvU` KquJtK (i qYvteqY KquJtK) tKvb civgk`b wK? 1. niw 2. br

17. wbaWi Z iv`wi etR/Kvj fvU` KZUb tj wv teqvi Kivi K\_v? (AvbgmbK) .....

(18 t`tK 27 chS-iv`v mn etR/Kvj fvU`e`envi Kvir` i wtkl Kti Kul Kvr i e`envi mvt` RwoZ e`v`t` i mvt` K\_v etj Z` msMh Ki tZ nte)

Z` clvb Kvirix bvg, tcv i tcv b`f (GKwZ ntZ cvti)t .....

18. tKvb GjvKvi thwvthwv e`v`v fiv ntj A`v` iv`v-wU Dbqb ntj GjvKvi wK wK Dbqb ntZ cvti i GjvKvi RbmfiYi wK wK DcKvi ev mjev ntZ cvti etj Avcab ev Avcbv v gtb Kti b?
19. tKvb GjvKvq tM` tmUvi/gvtKb/nU-evRvi Dbqb ntj GjvKvi wK wK Dbqb ntZ cvti i GjvKvi RbmfiYi wK wK DcKvi ev mjev ntZ cvti etj Avcab ev Avcbv v gtb Kti b?
20. iv`wi Dbqb ev iv`wi Dci etR/Kvj fvU`wbgfYi AvtM hvZvqZ e`v`v tKgb uQj ?
- |        |                        |          |                              |                              |
|--------|------------------------|----------|------------------------------|------------------------------|
| 1. fiv | 2. tgvUvU/Pj vPj thwv` | 3. Lvivc | 4. GtKerfi B Pj vPj i Athwv` | 5. Ab`vb` (wv` 0 Ki`b) ..... |
|--------|------------------------|----------|------------------------------|------------------------------|



• ƒe Gi tƒ tej (tRbrtƒj Gƒj tƒkb) mƒKƒƒte AvtQ ƒKbv ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |  
R. etR/Kƒj ƒvUƒGi ƒ ƒcƒƒki tƒ ƒj s Gi eZƒvb Ae ƒ tKgb?

ƒK chƒe ƒƒY Kƒteb: ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ: etR/Kƒj ƒvUƒGi ƒ ƒcƒƒki tƒ ƒj s Gi Avƒ ƒm ƒm Xƒj vB ƒWKgZ  
AvtQ ƒKbv A\_ƒ etR/Kƒj ƒvUƒGi ƒ ƒcƒƒki tƒ ƒj s Gi mƒi tƒdm gmƒ ev ƒ ƒ AvtQ ƒKbv, tƒKv\_vq iW I t ƒvB Pƒcm tƒei  
ntq AvtQ ƒKbv; ƒ ƒcƒƒki tƒ ƒj s tƒm RmƒjR (Lvov Lmvo/j ƒtƒ ƒ) Ae ƒvq AvtQ ƒKbv ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |  
S. etR/Kƒj ƒvUƒGi Dƒq cƒƒkƒ G ƒvƒcƒP tƒvW (mstƒhM iv ƒi) Gi eZƒvb Ae ƒ tKgb?

• ƒK chƒe ƒƒY Kƒteb: ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ: etR/Kƒj ƒvUƒGi Dƒq cƒƒki G ƒvƒcƒP tƒvW mƒiKƒƒte  
ƒbgƒƒ ntqƒtQ A\_ƒ G ƒvƒcƒP tƒvW Gi mƒt ƒ etR/Kƒj ƒvUƒGi ƒ ƒcƒƒki iv ƒi mstƒhM Gi Xƒj / ƒe gmƒ ev  
smooth AvtQ ƒKbv; G ƒvƒcƒP tƒvW Gi tƒKv\_vq ƒvƒv AvtQ ƒKbv, MZ AvtQ ƒKbv; hvbevb Pj vƒtƒj i DcƒthMƒ  
ƒKbv ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |

T. etR/Kƒj ƒvUƒGi DRvb I ƒvUƒtZ cƒZi ƒvƒgƒj K (ƒi ƒvi tUƒbs I qvKƒ) KvR Gi eZƒvb Ae ƒ tKgb?

• ƒK chƒe ƒƒY Kƒteb: ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ: etR/Kƒj ƒvUƒGi DRvb I ƒvUƒtZ GevUƒgƒU Gi PZ ƒK  
ƒi ƒvi tUƒbs I qvKƒ/ cƒZi ƒvƒgƒj K KvR Kiv AvtQ ƒKbv A\_ƒ ƒm ƒm eƒ (tLvq I mƒtƒbUI mƒtƒY ƒZix eƒ) ƒ tƒq  
cƒZi ƒvƒgƒj K KvR Kiv AvtQ ƒKbv- Kiv\_vKƒj ƒm ƒm eƒ, tƒj v mƒiKƒƒte ƒvcb Kiv AvtQ ƒKbv A\_ƒ eƒ, tƒj v  
mƒ i ƒƒte tƒmU Kiv AvtQ bƒmK Pwi ƒ tK Oovƒbr-ƒUvƒbrƒƒte AvtQ - ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |

U. etR/Kƒj ƒvUƒGi DBs I qƒj I ƒi Uvbƒ qƒj mƒtƒni eZƒvb Ae ƒ tKgb?

ƒK chƒe ƒƒY Kƒteb: ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ: etR/Kƒj ƒvUƒGi DBs I qƒj I ƒi Uvbƒ qƒj ƒ tUvB AvtQ ƒKbv,

• etR/Kƒj ƒvUƒGi DBs I qƒj I ƒi Uvbƒ qƒj Gi Pvi cƒƒki gmU mƒiKƒƒte ƒi vU Kiv AvtQ ƒKbv bv, gmW tƒKv\_vl  
mƒi tƒtƒQ ƒKbv; DBs I qƒj I ƒi Uvbƒ qƒj Gi KbvƒU Xƒj vB KvR (Avi ƒm ƒm Xƒj vB) tKgb Ae ƒvq AvtQ A\_ƒ  
I qƒj mƒi tƒdm gmƒ ev ƒ ƒ AvtQ ƒKbv, iW tƒi ntq AvtQ ƒKbv, t ƒvB Pƒcm tƒi ntq AvtQ ƒKbv ƒe ƒwi Z eYƒv  
ƒbr ƒ Kƒi ƒj Lƒ |

V. etR/Kƒj ƒvUƒGi bƒƒPi ƒKqvi I tƒcbs eZƒvb emj / cƒj gmU ƒ tƒq ƒi vU ntq AvtQ ƒK?

• ƒK chƒe ƒƒY Kƒteb: ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ: ƒ ƒcƒƒki GevUƒgƒU i t ƒK GevUƒgƒU chƒ-MWƒi i bƒP  
t ƒK Zj t k chƒ-ƒ tƒcbs ƒKqvi AvtQ ƒKbv; tƒKv\_vl cƒj gmU I emj ƒ tƒq ƒi vU ntqƒtQ ƒKbv chƒe ƒƒY Kƒi ƒe ƒ  
wi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |

W. etR/Kƒj ƒvUƒGi I q ƒi s tƒvUƒGi eZƒvb Ae ƒ tKgb?

• ƒK chƒe ƒƒY Kƒteb: etR/Kƒj ƒvUƒGi Uc ƒ ƒei Avi ƒm ƒm Kw ƒ s Gi ci ciB GK Bv ƒ ƒKtƒtm (NbZ) tƒvU  
AvKƒi i t ƒvB Pƒcm tƒi mƒtƒgU mƒ. Pvi ƒ tƒq mƒt ƒ ƒei Dcƒi ƒtƒM Xƒj vB Kiv nq - GUƒtKB etj I q ƒi s tƒvUƒ  
GB I q ƒi s tƒvUƒGi eZƒvb Ae ƒ tKgb A\_ƒ tƒKv\_vl MZ ƒKsev I q ƒi s tƒvUƒbó ntqƒtQ ƒKbv, gmƒ ev ƒ ƒ  
AvtQ ƒKbv, t ƒvB Pƒcm tƒi ntq AvtQ ƒKbv chƒe ƒƒY Kƒi ƒe ƒwi Z eYƒv ƒbr ƒ Kƒi ƒj Lƒ |

X. th iv ƒvq etR/Kƒj ƒvUƒbƒgZ ntqƒtQ tƒ iv ƒvU cƒKv iv ƒvB Kƒv iv ƒv?

• ƒK chƒe ƒƒY Kƒteb: cƒ tƒg Gƒ ƒRBW KZƒƒƒi KƒtQ tRtƒ ƒj ƒceƒ Ki ƒb iv ƒvq etR/Kƒj ƒvUƒbƒgƒYi mƒq iv ƒ  
vU ƒK ai tƒi ƒQj A\_ƒ cƒKv iv ƒvB Kƒv iv ƒvB Avav-cƒKv iv ƒvUj | mivmƒi chƒe ƒƒYi mƒq iv ƒi ai Y  
tKgb t ƒtQb tƒmUv ƒe ƒwi Z ƒj ƒceƒ Ki ƒb |

Y. th iv ƒvq etR/Kƒj ƒvUƒbƒgZ ntqƒtQ tƒ iv ƒvU eZƒvb Ae ƒ tKgb?

• ƒK chƒe ƒƒY Kƒteb: mivmƒi chƒe ƒƒY Kƒi iv ƒi eZƒvb Ae ƒ ƒe ƒwi Z ƒƒte ƒj ƒceƒ Ki ƒb | (thgb -Kƒtƒb  
ƒWK AvtQ ƒKbv, iv ƒvq tƒKv ƒvƒvPiv AvtQ ƒKbv, Kƒv iv ƒvq gmU mƒi mƒtq MZ ƒntqƒtQ ƒKbv, Pj vƒtƒj i Amƒear  
nt ƒQ ƒKbv BZ ƒv ƒe ƒwi Z Z\_ ƒbr ƒ Kƒi ƒj ƒceƒ Ki ƒb) |

29. evZƒvb iv ƒvUƒtZ ƒK ƒK hvbevb Pj vƒPj Kƒi? (chƒe ƒƒYKƒvix ƒbƒR chƒe ƒƒYi mƒq th th hvbevb Pj vƒPj Kƒi Z  
ƒ tƒeb)

K. chƒe ƒƒYKZ hvbevb tƒi gta ƒ tƒKv ƒ hvbevb iU tƒk Pj vƒPj Kƒi Z ƒ Lv tƒtƒQ? .....

30. chƒe ƒƒYKƒj ƒb mƒtƒq tƒKv tƒgƒj / cY ƒ tƒSvBKZ hvbevb Pj vƒPj Kƒi Z ƒ Lv tƒtƒQ ƒKbv? 1. n ƒ 2. bv

K. niƒ ntj , ƒK hvbevb I ƒK gƒj vƒgƒj cƒi enb Kƒi ƒQj ? .....

31. eZƒvb etR/Kƒj ƒvUƒi tƒKv Ask tƒt ƒ bó ntq AvtQ ƒKbv ev tƒi vƒgZ thW ƒKbv? 1. n ƒ 2. bv

K. ƒvƒv Ask\_ƒj v ev tƒi vƒgZ thW Ask\_ƒj v ƒK ƒK Zvi bƒg Dƒj ƒK ƒb:

.....

32. th iv`vq eR/Kvj fVU`bgZ ntqtQ tmB iv`vU eZg`tb Pj vPtj i Dc`thMx`Kbv? 1. n`u 2. bv

K. ch`e`q`bKZ eR/Kvj fVU`eZg`tb Pj vPtj i Dc`thMx`Kbv? 1. n`u 2. bv

33. iv`v I eR/Kvj fVU`i eZg`b Ae`v m`u`K`ch`e`q`YKvixi g`se` (e`w`iZ wj Lp: eZg`tb eR/Kvj fVU`mn iv`vU e`eüZ nt`Q`Kbv A`P PjyAvtQ`Kbv, Gj`RBW KZ`R th th Kiv Kiv ntqtQ`tm,tjvi c`Z`U`i eZg`b Ae`v tKgb - tm,tjv PjyAvtQ`Kbv, ms`v`i c`q`Rb AvtQ`Kbv, tKv&tKv`v`i`K`K ms`v`i c`q`Rb AvtQ, tKv&tKv&c`q`R`b g`v`j GB eR/Kvj fVU` e`envi K`i`Q, Gj`v`i RbM`Y`i K`i`Q GB eR/Kvj fVU`n iv`vU`i`i`Z`i KZUK`z etj ch`e`q`YKvixi K`i`Q g`tb ntqtQ, tmU`m`V`K`v`e Pj`i`Q`Kbv tm m`u`Ü ch`e`q`YKvixi g`se` BZ`w`)

.....  
.....  
.....  
.....

cyj AeKWrtgv Dbaq cKf: enEi gqgbmsn (gqgbmsn, UvMvBj , Rvgvj cyj , tki cyj , mKtkvi MA I tbTtkvbr tRj v) - 2q mstkmaZ xli R cKf i cEve gj "vqb

AeRvi tKfb tPKvj ÷ t iv`wi cvfk e, t tvcb

Form box containing fields for: tRj v:..... tKW bs:..... DctRj v:..... tKW bs:..... BDbaq:..... tKW bs:..... Mlg: ..... tj vtKkvb: .....

chEYKvixi bvg: ..... Zmi L: .....

Z`cUvbKvixi bvg, c`ex l mKvbr: .....

cKf msk6-e`v3 tK mRAvmv Kti, Gj vKvi tj vKf` i KvQ t` tK tRtb Ges mti Rvgtb cwi` kE Kti bxtPi Z` , tj v msMh Kti wj wceX Ki tZ nte|

(1 t` tK 14 chS-Gj mRBW-i cKf msk6-e`v3 i KvQ t` tK Z` msMh Ki tZ nte)

- 1. t` tgi ev ev` emqZ cKf i (th iv`wi e, t tvcb ntqt0) bvg : .....
2. th iv`vq e, t tvcb ntqt0 tm iv`wi aiY: 1. DctRj v tiw (cdWvi tiw) 2. BDbaq tiw (i`ivj tiw)
3. (th iv`vq e, t tvcb Kiv ntqt0) GB iv`vU tKvb cIZv`bi ev mWcU\$UI mbgPY Kti t0: 1. Gj mRBW bv 2. Ab` Krtiv: (big D`j E-Ki`b) .....
4. GB iv`vU KZ mKtj vgvUvi iv`vq e, t tvcb Kiv ntqt0: .....
5. tgvU e`q (UvKv): mbaMi Z eiv` KZ e`q : .....UvKv cKZ e`q : .....UvKv
6. GB iv`vq e, t tvcb i KvR: `i` ntqt0j : .....(gym l e0i) tkl ntqt0j : .....(gym l e0i)
7. e, t tvcb i KrtR KZ Rbr`em klgK mbtqM Kiv ntqt0j? cy`l .....Rb gmv v .....Rb
8. GB iv`wi avti MQ j vMtbvi KrtR tmB Gj vKvi `wi`\*l gmv v` i mbtqM t` qv ntqt0j mKbv? 1. niiv 2. bv
9. GB iv`vq tgvU KZ m e, t tvcb: Kivi K`v`Qj? .....m cmi Kf br tgvZv`eK KZ m e, t tvcb Kiv ntqt0j? .....m
10. iv`wi `pvtK mK mK ai tbi MQ j vMtbv ntqt0j?.....
11. eZv`tb tvcbKZ MQ , tj vi kZKiv KZ fvm MQ tetP Avt0? .....%
12. gti hvl qv MQ , tj vi RvqMvq cpi vq MQ j vMtbv ntqt0 mK? 1. niiv 2. bv
13. MQ i YvteY I cmi Phf Rb` `vbxq tKvb KvgU (tj evi KbUkUls tmvmbU) Avt0 mKbv? 1. niiv 2. bv

K. niiv ntj , Kuglji bvg nk?

L. Kvi v GB Kuglji m`m`?

M. GB KugljiZ kZKiv KZfVM gij v I KZfVM cj`I? gij v: .....% cj`I: .....%

N. GB Kuglji nk nk Kiv Kti \_vtK?

O. Kv` i gra`tg (tKvb KZet`ji gra`tg) GB Kuglji Kiv Kti \_vtK?

P. At`p thMvb Kiv v` tg \_vtK (tKvb cIZorb ev Aua`Bi)?

14. e`ji tvc`bi c`ti mVKfite MvQ,tj vi i`Yite`Y Kiv ntq`Q nk? 1. niiv 2. bv

K. niiv ntj , mKfite I Kv` i v` tg GB MvQ t` Lvtkvbi Kiv Kiv`bv nq?

1. `vbK teZb v`fite`Z gij v klgK vbtqVM Kti
2. gvmK teZb v`fite`Z gij v klgK vbtqVM Kti
3. `vbxq RbM`bi `^Dit``vM
4. Ab`vb` (vbi` Ki`b) .....

(15 t` tK 17 chS-iv`v/moK e`envi Kiv` i mvt` K v etj Z` msMh Ki`Z nte)

Z` c`vb Kiv`i bvg, tckv I tdrv b`f (GKvaZ ntZ c`ti)t .....

15. tKvb Gj vKvi thM`thM e`e`v fiv ntj A`f iv`v-NvU Dbqb ntj Gj vKvi nk nk Dbqb ntZ c`ti I Gj vKvi RbM`Yi nk nk DcKvi ev mjeav ntZ c`ti etj Avcab ev Avcbri v g`b Kti b?

16. tKvb Gj vKiv tM` tmsUvi/gvtK8/nvU-evRvi Dbqb ntj Gj vKvi nk nk Dbqb ntZ c`ti I Gj vKvi RbM`Yi nk nk DcKvi ev mjeav ntZ c`ti etj Avcab ev Avcbri v g`b Kti b?

17. iv`vi `b c`tk MvQ j vM`bvi dtj Gj vKvi nk mjeav nt`Q I Avcbri v mKfite j v`f`vb nt`Qb ev Avcbv` i nk nk DcKvi nt`Q?

18. e`ji tvc`bi Kv`R Gj vKvi `ni`gij vi v AskMhY Kti`tQ nk? 1. niiv 2. bv 3. Rvbbv

19. iv`vi GB MvQ,tj vi v`bqgZ t` Lvtkvbi Kiv ev hZet`bqri Kv`R Gj vKvi `ni`gij vi v AskMhY Kti`tQ nk?

1. niiv 2. bv 3. Rvbbv

20. iv`vi c`tk tvc`bKZ e`ji,tj vi eZ`vb Ae`v tKgb?

1. tvc`bKZ e`ji,tj v fvtj v Av`Q
2. tvc`bKZ e`ji,tj v b` ntq tM`Q
3. e`ji tvc`bi t`f`f` h\_vh\_cui Phf A`fite AuaKisk MvQ gti tM`Q (kZKiv .....fVM)
4. e`ji tvc`bi t`f`f` eo MvQ,tj v Pui Kti tKtU vbtq tM`Q
5. Ab`vb` (Dij l-Ki`b) .....

(21 t` tK 26 chS-ch`e`YKvix v`R iv`vU/moKvji `b c`tki MvQ,tj v mti Rvgtb Nti t` L`eb I Z` wj`cex Ki`eb)

21. iv̄-wi cirk eñl tivcb Kiv ntqtQ mKbv? (cheñlYKvj xb mgdq iv̄-wi cirk MvQ j vMtvb AvtQ mKbv f̄ tL Z\_ñ nj mce× Ki'b)  
 1. nñ 2. bv
22. iv̄-vq AvbgmbK mK cñi gvY/KZ,tj v MvQ j vMtvb AvtQ? .....(msL'v Dñj L-Ki'b)
23. iv̄-wi `pctk mK mK ai tbi MvQ j vMtvb ntqtQ? .....
24. Gj mRBmW KZK hZ,tj v MvQ j vMtvb ntqtQj Zvi gta" kZKiv KZfvM MvQ tetP AvtQ? .....fvM (%)
25. iv̄-wi cirk tivcbKZ eñl,tj vi eZgñb Aeñ v tKgb? (cheñlYKvj xb mgdq th MvQ,tj v f̄ Lv ntqtQ - tmB MvQ,tj v tKgb AvtQ, th MvQ,tj v eZgñb AvtQ Gt̄ i gta" KZ,tj v fvñj v AvtQ Ges KZ,tj v b6 ntq tMñQ, tetP AvtQ  
 .....
26. iv̄-wi cirk eñl tivcb mñúK© cheñlYKvi xi mmeK gše't  
 .....  
 .....

cyj AeKwrtgv Dbq b cKf : enEi gqgbwmsn (gqgbwmsn, UvMvBj , Rvgvj cji , tki cji , mKtkvi MÄ I tbTtkvrv tRj v) - 2q mstkwaz xli R cKf i cfi ve gj "vqb

AeRvi t fkb tPKuj ÷ : tMÜ t mUvi / MÜxY nvU-erRvi

tRj v:..... tKW bs:..... DctRj v:..... tKW bs:.....
BDtq b:..... tKW bs:..... tj vtKkb: .....
chf eYKvi xi big: ..... Zni L : .....

(cKf msak6-ei r3 tK rAvmv Kti , erRvi Kugli tj vKf i mrf\_ K\_v etj Ges mti Rugtb cni `k0 Kti bxtPi Z\_ , tj v mSMh Kti ij mce x Ki tZ nte)

(1 t tK 10 chS-Gj rRBW-Gi cKf msak6-ei r3 i KvQ t tK Z\_ mSMh Ki tZ nte)

Z\_ cÜvb Kvi xi big, c`ex l tdlv b=ft .....

- 1. er`emqZ cKf i er`atgi big :
2. GB tMÜ t mUvi /erRvi u GKert i B bZbfvte ubgP Kiv ntqtQ bmk AvtM t tKB tQvU-LvU erRvi intmte mPrYZ uQj Zv eo AvKrti Dbq b Kiv ntqtQ?
3. Ab'vb" (ubv`0 Ki "b): .....
4. GB tMÜ t mUvi /erRvi Dbq tbi mgq (er`emqZ cKf) mK mK KvR Kiv ntqtQ? (mst`ttc cÜvb KvR , tj v Dtj E-Ki "b)
5. tgiU e`q (UvKv): uba m i Z eiv i KZ e`q: .....UvKv cKZ e`q: .....UvKv
6. GB tMÜ t mUvi /erRvi Dbq tbi KvR (gvm l eQi Dtj E-Ki "b): 'i i' ntqtQj : ..... tkl ntqtQj :
7. GB tMÜ t mUvi /erRvi Dbq tbi mgq KZ Rb`em klgK m btqvM Kiv ntqtQj ? cji 'l .....Rb gmvj v .....Rb
8. KvR u mK ubv`0 mgq tkl ntqtQj ? 1. niw 2. bv
9. KvR u cni Kf bv gmdK m=üYp`c (hv hv Kivi K\_v uQj tm Abhvqv) mgvb ntqtQj mK? 1. niw 2. bv
10. tMÜ t mUvi /erRvi u t`Lvtkvbv, i Yvte`Y I m`vfi i `vqZi Kv`i ? .....

(11 t tK 26 chS-erRvi Kugli m`m: mfvcaZ/mvavi Y m=ü`vK/tmt`Uvni -Gi KvQ t tK Z\_ mSMh Ki tZ nte)

Z\_ cÜvb Kvi xi big, c`ex l tdlv b=ft (GKvaz ntZ cfi) t .....





cyj AeKWtgv Dbq b cKf : enEi gqgbmsn (gqgbmsn, UsvMvBj , Rvgvj cyj , tki cyj , mKtkvi MÄ I tbTtkvrv tRj v) - 2q mstkwaz xrl R cKf i cEve gj "vqb

BDnbqb Dbq b tPKvj ÷
(GB Z\_ , t j v d i m p r i f i B R v i m s M h K i t e)

BDnbqb : ..... DctRj v:.....

tRj v : ..... Z\_ "msMhKvixi bvg:.....

Zmi L:.....

Z\_ "cÜvbKvixi bvg, c`ex I mKvrv: .....

- 1. tgv AvqZb: ..... eMqKtj vglvi
2. tgv t j vKmsL`vt ..... Rb
3. cvKv iv`v: ..... mKtj vglvi
4. AvavcvKv iv`v: ..... mKtj vglvi
5. KvPv iv`v: ..... mKtj vglvi
6. iv`vi avti eRjtivcb Kiv AvtQ mK 1. n`u 2. bv
7. Kvj fvUqGi mSL`v ..... K. KvRix KqU:
8. etR Gi mSL`v ..... K. KvRix KqU:
9. Gj vKvi mK ai tbi hvbemb Pj vPj Kti:
mKtj v cÜZovtbi mSL`v: (cÜBgvix `g , nvB`g , gv`tmv , Ktj R memn) 1. mi Kvix: .....U
10. evRvi /grtKqUi mSL`v: .....U
K. evRvi /grtKqUi ai Y I mSL`v 1. cvBKvix evRvi .....U
2. %mbK evRvi .....U
3. mvBvnrK evRvi (etm): .....U
11. evm ÷ "vÜ/tU=úy ÷ "vÜ/UHK ÷ "vÜ AvtQ mKbv? 1. n`u 2. bv
12. tMÜ tmUvi AvtQ mK? 1. n`v : .....U 2. bv
13. KZU GbRI KvR Kti? .....U
14. GbRI , t j v i bvg
15. GbRI , t j v i cÜvb KvR mK mK Ges Kt` i m t q KvR Kti t
16. "f" tK` f n m c v z y j / m K u b K .....U
17. Gj vKvi RbMtYi cÜvb tckv mK
18. Gj vKvi RbMtYi mZxq tckv mK
19. Gj vKvi RbMtYi cÜvb e`emv mK
20. Gj vKvi /BDnbqtb i cÜvb cÜvb Drcw` Z dmj mK mK
21. BDnbqb t`K DctRj v hvevi mivmi msthM iv`v AvtQ mKbv 1. n`u 2. bv
22. GB cKf Qrov D3 BDnbqtb Av i mK mK Dbqbgj K cKf ev`emqZ ntqtQ Ges tKvb cÜZovb ev gS`y j q Kti tQ? (2002-2010 mtj i gta)
cKf i bvg I KvRi ai Y (mK mK ev`erqbkvix cÜZovb/gS`y j tqi bvg Kte ev`emqZ ntqtQ (tKvb eQt i ev eZgvb mgq t`K KZ eQi AvtM)

## Appendix 4: Pictures of Infrastructures, Local Level Workshop & Dissemination Workshop



Baroari Growth Center, Netrokona Sadar, Netrokona



Seed store bazar to Awalatoli road, Hobirbari, Bhaluka, Mymensingh



Kalia to Kauljani road development, Kauljani, Basail, Tangail



Bulbuli high school-Doctor Manjil Murshed Khan's house road development, Parthashi, Islampur, Jamalpur



Tree Plantation on Biraura-dokhin bishura sarak of Kendua Netrokona Sarak, Kendua, Netrokona



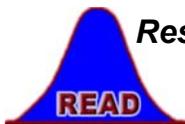
Tree Plantation on Dhaka-Mymensingh highway (Sunni Fields Ltd) Mamarishpur road, Bhaluka, Mymensingh



Local Level Workshop, Kalihati, Tangail



Dissemination Workshop, Evaluation Sector, IMED, Ministry of Planning



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