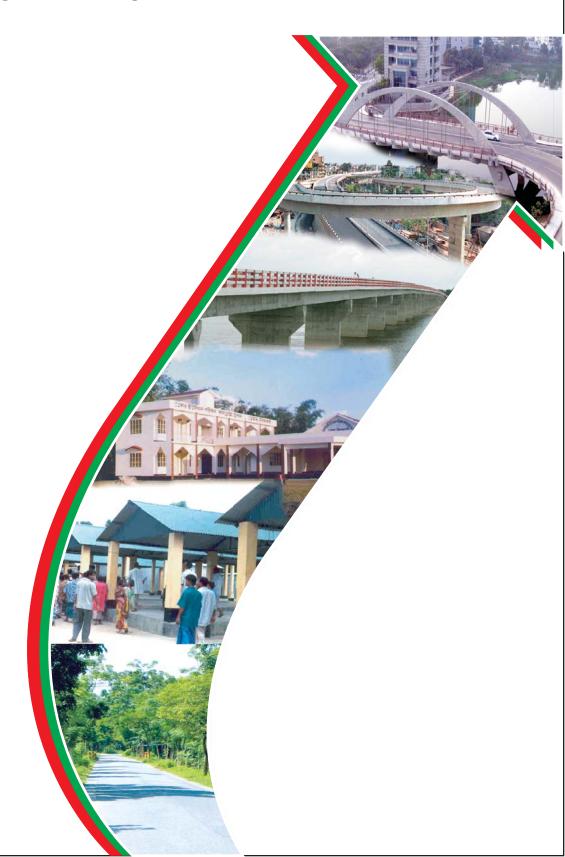


# LOCAL GOVERNMENT ENGINEERING DEPARTMENT





# Message from The Chief Engineer Local Government Engineering Department



It is a pleasure for me to announce the publication of LGED's Brochure in its seventh edition. The present edition has become due as the last one was published long back in 2002. In the meantime lot of events and happenings of public interests have taken place and many of the information of the sixth edition have fallen outdated. It needed as such updating and some additions too.

LGED is a public department with exception. It is more focussed on decentralization, informal decision making, professionalism, leadership and nonetheless team work. Grass-roots' participation at all stages of development programmes is the fundamentals of LGED's mission, vision and strategy. It is indeed a prime need that LGED opens up itself to all for a better communication and understanding among its different stakeholder groups so as to develop and deliver appropriate message to the people in general through a most accessible channel of communication. The present LGED Brochure is one of such mechanisms. It is thus believed that this Brochure will provide some updated first hand information to the various Development Partners, other Ministries and agencies and to any newcomer interested in LGED.

However, I strongly feel for a Bangla version of this Brochure to go in to circulation. It will obviously become more useful for the people at grass-roots, who are the primary recipient of LGED services. I must reiterate that LGED is always keen to maintain its high standard as a government department with greater transparency and accountability to the Government and the people in all spheres of its jurisdiction. It continues its strive for innovations and excellence for better performance as service provider towards poverty reduction.

This book-let has been enriched with boxes, tables, figures, diagrams and photographs. Some examples have also been cited for the convenience of general readers. This Brochure has also been hosted in LGED website www.lged.gov.bd, which has facilitated LGED's global exposure.

I express my sincere gratitude to my colleagues and other associates and congratulate them for their sincere efforts to make this Brochure optimally informative and for making this publication possible.

Md. Wahidur Rahman

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#### **Abbreviation**

ADB : Asian Development Bank

AE : Assistant Engineer

BARD : Bangladesh Academy for Rural Development
BARI : Bangladesh Agricultural Research Institute
BIDS : Bangladesh Institute of Development Studies

BKB : Bangladesh Krishi Bank

BLRI : Bangladesh Livestock Research Institute
BME : Benefit Monitoring and Evaluation
BRRI : Bangladesh Rice Research Institute

BUG : Beel Users Group

BWDB : Bangladesh Water Development Board

CBRMP : Community Based Resource Management Project

CE : Chief Engineer

CIRDAP : Centre on Integrated Rural Development for Asia and the Pacific

CO : Community Organization
COD : Chemical Oxygen Demand

DAE : Department of Agriculture Extension

DFID : UK's Department for International Development

DLS : Department of Livestock Services

DO : Dissolved Oxygen

DPP : Development Project Proposal

ECNEC : Executive Committee of the National Economic Council

ECP : Environmental Codes of Practice
EIA : Environmental Impact Assessment
EME : Effect Monitoring and Evaluation

FCDI : Flood Control and Drainage Improvement

FDR : Flood Damage Rehabilitation

FTP : File Transfer Protocol
GAP : Gender Action Plan

GIS : Geographical Information SystemGMC : Ghat Management CommitteeGOB : Government of Bangladesh

HQ : Headquarters

ICT : Information & Communication Technology

IEE : Initial Environmental Examination

IFAD : International Fund for Agricultural DevelopmentIFPRI : International Food Policy Research Institute

IGA : Income Generation Activities
ILO : International Labour Office

IME : Impact Monitoring and Evaluation

ISP : Institution Support Project

IWRM : Integrated Water Resources ManagementJBIC : Japan Bank of International Co-operationJICA : Japan International Cooperation Agency

LAN : Local Area Network

LCS : Labour Contracting Society
LGD : Local Government Division

LGEB : Local Government Engineering Bureau
LGED : Local Government Engineering Department

LGI : Local Government Institution
M&E : Monitoring and Evaluation

MIDPCR : Market Infrastructure Development Project in Char-land Region

#### **Abbreviation**

MIS : Management Information System

MLGRD&C : Ministry of Local Government, Rural Development & Co-operatives

MMC : Market Management Committee
 MMT : Mobile Maintenance Team
 MoU : Memorandum of Understanding
 MSP : Municipal Services Project

MSP : Municipal Services Project
MSU : Municipal Support Unit

NEMAP : National Environmental Management Action Plan

NGO : Non Government Organization
NLTP : National Land Transport Policy

NWP : National Water Policy PC : Personal Computer

PDP : Pourashava Development Plan
PIC : Project Implementation Committee

PLCEHD : Post Literacy Continuing Education for Human Development

PME : Progress Monitoring & Evaluation

PMT : Proxy-Means Testing

PRA : Participatory Rural Appraisal

PV : Photo Voltaic
RD : Rural Development

RDEC : Rural Development Engineering Centre

RDP : Rural Development Project

REIN : Renewable Energy Information Network

RET : Renewable Energy Technology

RIIP-2 : Second Rural Infrastructure Improvement Project

RMA : Road Maintenance Association
ROSC : Reaching Out-of School Children

RS : Remote Sensing

RUC : Road User's Committee
RWP : Rural Works Programme
SAE : Sub-Assistant Engineer
SE : Superintending Engineer

SEM&E : Socio-Economic Monitoring and Evaluation

SEQAEP : Secondary Education Quality and Access Enhancement Project

SIC : Slum Improvement Committee

SIDA : Swedish International Development Cooperation Agency

SRC : Staff Review Committee
SRE : Sustainable Rural Energy
TIP : Thana Irrigation Plan

TTDC : Thana Technical Development Committee

TU : Training Unit

UGIAP : Urban Governance Improvement Action Program

UGIIP : Urban Governance and Infrastructure Improvement (Sector) Project

UNDP : United Nations Development Programme

UPC : Union Parishad Complex

UPPRP : Urban Partnerships for Poverty Reduction ProjectWMCA : Water Management Cooperative AssociationWMCA : Water Management Co-operative Association

WP : Works Programme
WPW : Works Programme Wing
XEN : Executive Engineer

#### **Evolution of LGED**

Local Government Engineering Department, popularly known as LGED, is an outcome of its evolution from a rural works component of the integrated rural development programme of the early 1960s to its formalization and rapid growth as a public sector department over the next 35 years. Looking back on early sixties, it is revealed that Works Programme (WP), with components on Rural Works Programme (RWP), Thana Irrigation Plan (TIP) and Thana Technical Development Committee (TTDC), was started. Subsequent to its establishment as an Engineering Cell of the Ministry of Local Government, Rural Development and Co-operatives (MLGRD&C) in the 1970s, it grew in to a Works Programme Wing (WPW) in 1982 borne on the

development budget in two operating units covering nation-wide rural works and urban works. Following the decentralization policy of 1982, the organization was transformed in to the Local Government Engineering Bureau (LGEB) in 1984 under the government revenue budget with a substantial increase in staff deployed at Upazila level.

LGEB was ultimately upgraded as the Local Government Engineering Department (LGED) in 1992 with the formal status of a department under the Local Government Division of the Ministry of the Local Government Rural Development and Cooperatives. LGED has eventually turned in to its own as a dynamic public organization of the country.

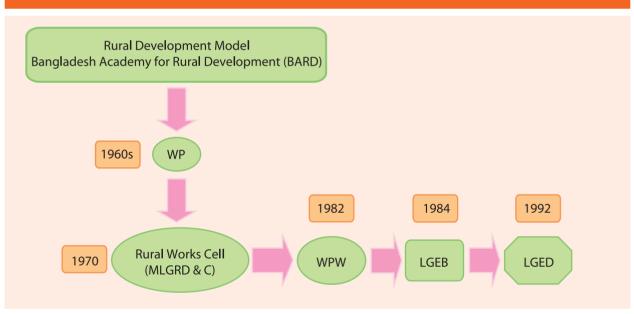


Figure 1: Organizational evolution of LGED

## Mission, Vision and Strategic Plan of LGED

#### **Mission Statement of LGED**

Stimulation of a well-developed sense of purpose and culture of enterprise amongst staff in all of LGED have been formalized into an organizational mission focused on the promotion of socio-economic development and poverty reduction for rural and urban citizens. LGED'S Mission Statement thus discreetly describes the purpose of the

organization as development and management of local infrastructure towards increasing farm / non-farm production, generating employment, improving socio-economic conditions, promoting local governance, reducing poverty and acting as an agent of change at the local level.

#### **Vision Statement of LGED**

The Vision Statement of LGED is very clearly articulated, which states that:

The clarity about the future direction of LGED as an organization has been made in its vision statement through a set of goals representing future

developments and improvements in the organization. LGED would continue to remain professionally competent, efficient and an effective public sector agency to performing the inter-related and complementary functions of:

- Developing, maintaining and managing transport, trading and small scale water resources infrastructure at the local level by ensuring LGI and community participation and taking care of environmental and social issues.
- Providing technical and institutional support to strengthen the local government institutions and serving local communities and other stakeholders.

#### **Strategic Plan for LGED**

LGED has set forth its Strategic Plan in order to translate its Mission and Vision into reality. This Strategic Plan of LGED is a two-fold manifestation comprising plans for core functions and plans for supporting functions.

#### **Box 1: Strategic Plans under core functions of LGED**

- Plan for rural infrastructure development and management
- Plan for small scale water resources development and management
- Plan for urban infrastructure development
- Plan for generating employment at the local level
- Plan for strengthening local government institutions and promoting local governance

#### Box 2: Strategic Plans under supporting functions of LGED

- Plan for development of ICT framework for LGED functions
- Plan for improvement of financial management, accounts and audit
- Plan for Human Resource Development of LGED, LGIs and other stakeholders
- Plan for community participation and empowerment
- Plan for facilitating gender equity
- Plan for environmental and social issues
- Plan for effective monitoring and evaluation system

## **LGED follows Government Policies and Strategies**

LGED formulates its planning for all of its development activities keeping in full consonance with the national policies and strategies. The relevant government policies and strategies have been excerpted herein:

**Step Towards Change: National Strategy for Accelerated Poverty Reduction II (FY 2009-11)** 

Key issues as identified in the National Strategy for Accelerated Proverty Reduction-II, 2008 and relevant to LGED are:

#### **Road Transport and Rural Road Connectivity**

Road development is critical to socio-economic development and poverty reduction. An improved road communication system reduces road user costs and costs of production and thus facilitates socioeconomic development of the country. It contributes to the reduction of poverty by creating employment opportunities for all, including women, increasing the mobility of working people and facilitating the distribution of capital and consumption of goods. Moreover, it contributes to the expansion of markets, augmentation of regional balance and creation of investment opportunities, all of which are conducive to economic growth and poverty reduction. Furthermore, it supports human resource development through improved access to health and education services.

The main goal of rural infrastructure improvement and rural road connectivity is development of road communication to link growth centres, Union Parishad headquarters, Upazila Parishad headquarters, social service institutions like schools and hospitals with the national road network on a priority basis.

# Challenge of Demand and Supply of Water for Agriculture in the Dry Season

The over-dominance of ground water use in agriculture is pre-empting the possibility for environmental replenishment and balance. It causes droughts and hasten desertification. The strategy for the Water Sector, therefore, discourages strongly the use of ground water and encourages to increase surface water use until a threshold of ground water storage is achieved for all hydrological regions.

# Goals of Urbanization and Need for Planned Development

The overall goal of urbanization is to ensure planned urbanization for growth and equity. The specific goals are to: promote urban development for balanced growth across the country and promote sustainable urbanization for poverty reduction and development. These point to the need for

comprehensive urban development and adoption of an integrated approach to urbanization, embracing cluster development of adjacent towns or a provision for satellite towns. One way to address these problems is to prepare and implement a Master Plan/Land Use Plan of each urban centre and strategic plans of regional and local authorities.

# National Land Transport Policy (NLTP), 2004

The key features of the Policy are:

- Provide paved connection between all economic growth centres and country's road network
- Extend bridge/culvert construction on rural road network
- Foster higher level of mobility and access to basic support services
- Improve local markets
- Improve human skill

#### **National Rural Development Policy 2001**

The following issues have been emphasized in the National Rural Development Policy (NRDP) 2001:

- Integration of all activities in rural development with a view to alleviate poverty
- Improving quality of life of women and poor
- Economic empowerment of landless and marginal farmers
- Expansion of education, health, nutrition and family-welfare activities
- Creation of opportunities for rural people to become self-reliant economically
- Ensuring proper utilization of all existing resources

#### **National Water Policy 1999**

The National Water Policy formulated by the Government in 1999 aims at providing direction to all agencies working with the Water Sector. The Policy stipulates that the Bangladesh Water Development Board (BWDB) will implement all major surface water development projects and other FCDI projects with command area above 1000 hectares. The Local Government Engineering Department (LGED) and the Local Government Institutions (LGIs) will implement FCDI projects having command area of 1000 hectares or less.

# **Urban Management Policy Statement** 1999

The rapid urbanization in Bangladesh, both in the major urban centres as well as in smaller towns, warrants a higher level of investment and improvement in urban public service delivery. The Government is committed to improve quality of life in cities and urban centres, particularly for the poor, to ensure that service delivery is commensurated with population density, and that over time, these urban centres become vibrant sources of opportunity, trade and economic growth. The Government of Bangladesh (Local Government Division) has an Urban Management Policy Statement issued in 1999. The key policies of the statement include the following:

#### **Municipal Services:**

The services that shall be provided and maintained by the Pourashavas and City Corporations to their constituents are (i) water supply, (ii) storm water drainage, (iii) solid waste disposal, (iv) public sanitation, (v) roads and traffic control system, (vi) public markets, (vii) public transport terminals, (viii) recreational parks and reserves, (ix) community centres, (x) street lighting etc.

#### **Land Use:**

Land Use Plans shall be prepared by Pourashavas and City Corporations in consultation with local communities and shall be periodically updated. Such plans shall form the basis for all properties and land development and the assessment of taxes.

#### Focus on Slum and Poor Communities:

Pourashavas and City Corporations shall provide services in slums, including provisions of water, drainage, footpath, sanitation, solid-waste disposal and street lighting.

#### **Own-Source Revenues:**

Pourashavas and City Corporations shall generate sufficient revenues from their own sources to meet, at a minimum, all of their operating expenses.

# Community Participation and Public Consultation:

Pourashavas and City Corporations shall conduct periodic public meetings to advise their constituents regarding their activities as well as to engage the public in consultations on investment choices, decisions and priorities.

#### **Role of Women:**

Maximizing the participation of women shall be accorded high priority.

### **Organization of LGED**

LGED is the primary agency in Bangladesh for planing, implementing, maintaining and monitoring rural roads and rural infrastructure including small scale water resources structures. It also implements programmes for urban infrastructure development. LGED is headed by a Chief Engineer (CE) and he is assisted by 4 Additional Chief Engineers (ACE), 7 Superintending Engineers (SE), 16 Executive Engineers (XEN), 15 Assistant Engineers (AE) and other professional staff at the headquarters. There are 10 Superintending Engineers at the regional level, 64 Executive Engineers at the district level and 482 Upazila Engineers at Upazila level. LGED has a total of 10,771 officers and staff of which 144 are working at the headquarters level (1.33% of the total man-power), 854 at the district level (7.93% of the total man-power), 204 in the Hill Tracts / Zila Parishad on deputation (1.89% of the total man-power), 24 in the six regions (0.22% of the total man-power) and 9,545 at the Upazila level (88.61% of the total manpower). The organization chart of LGED, given below, reveals a highly decentralized nature of LGED's organizational structure:

Figure 2 : Organization Chart of LGED													
Chief Engineer													
Asst. Chief Engineer													
Addl. Chief Engineer Addl. Chief E				neer		Addl	l. Chief	f Engi	ineer		Addl. C	Addl. Chief Engineer	
Superintending Engineer	Superintending Engineer		itending ineer	Superi Eng	nter gine	_		J   '			rintending ngineer	Superintending Engineer	
5 XEN Mechanical (1)/Training (4) 1 Architect 2 St. 1 Urban Planner 1 Transport Economist 1 System Analyst 2 Es 2 Dr 1 Senior Sociologist 1 Computer Programmer 1 Im			Agro Statis Stat	A E Mechanical/Electrical Agronomist/Aquaculturist Statistician/Accounts Officer Estimator (SAE) Draftsman (SAE) Mechanical Foreman mam Head Assistant/Accountant					4 11 15 7 17 1 1 1 25	1 Stenographer 5 Steno Typist    Accountant Assistant (1) /    Office Assistant Cum Typist (6) 7 Moazzen (1)/Driver (16)    Duplicating Machine Operator    Ammonia Machine Operator			
		c.	Sub perinter	-Total =				-:: \					
Revenue Head  6 Superintending Engineer  6 Assistant Engineer  6 Sub-Assistant Engineer  6 Stenographer/Computer Operator				Sub-total 70 4 10 (0.22%) 4 4 4 10				4 10 4 4	Assistant Engineer Sub-Assistant Engineer Stenographer/Computer Operator Driver				
			Executi	ve Engir	neer	x 64	(Distri	ct)					
<ol> <li>Senior Assistant Engineer</li> <li>Assistant Engineer</li> <li>Assistant Engineer (Mechanical)         (in 22 Greater Districts)</li> <li>District Sociologist</li> <li>Sub-Assistant Engineer</li> <li>Laboratory Technician</li> <li>Upper Division Assistant (UDA)</li> </ol>				Sub-total = 854 (7.93%)				<ol> <li>Accountant</li> <li>Steno Typist</li> <li>Jeep Driver</li> <li>Truck Driver</li> <li>Road Roller Driver</li> <li>MLSS</li> </ol>					
Assistant Engineer x 482 (Upazila)													
<ul> <li>476 Upazila Engineer</li> <li>951 Sub-Assistant Engineer</li> <li>482 Draftsman /Sub-Assistant Engineer</li> <li>482 Community Organizer</li> <li>482 Accountant</li> <li>482 Surveyor</li> </ul>			er	Sub-total = 9545 (88.61%)				<ul> <li>1896 Work Assistant</li> <li>482 Electrician</li> <li>482 Accounts Assistant</li> <li>482 Office Assistant</li> <li>482 Office Assistant Cum Typist</li> <li>942 Chowkidar</li> <li>942 MLSS</li> </ul>					
Post for Deputation Reserve													
12 Sub-Assistant Engineer (Hill Tracts Parishad)					.89 9	%)	771	<ul> <li>61 Assistant Engineer (Zila Parishad)</li> <li>61 Sub-Assistant Engineer (Zila Parishad)</li> <li>61 Surveyor / Work Assistant (Zila Parishad)</li> </ul>					
Total Man-power = 10,771													

#### **Different Units at LGED HQ**

LGED adopts a systematic approach to fulfill its Mission. To facilitate that, it has established in the

following 14 Units in LGED headquarters:

#### **Box 3: Units in LGED HQ**

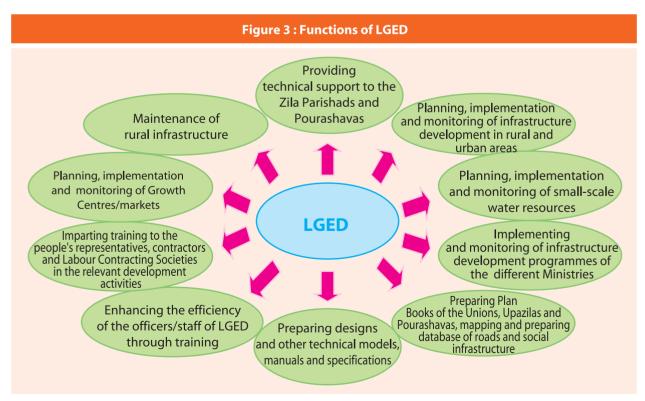
- Administration
- Planning
- Design
- Integrated Water Resource Management
- Environmental Management
- Monitoring and Evaluation
- Management Information System (MIS)

- Geographic Information System (GIS)
- Urban Management Support
- Quality Control
- Training
- Maintenance Management
- Road Safety
- Procurement

#### **LGED's Mandate**

LGED's mandate was derived from three of the four original functions under the Comilla Rural Development Model, which manifested the provision of rural physical infrastructure, irrigation, training and urban development activities. Its mandate was also inferred from the Strategy for Rural Development (RD) Projects (A Sectoral Policy Paper of the Planning Commission), January, 1984. The Strategy articulated three priority areas, which were (i) development of

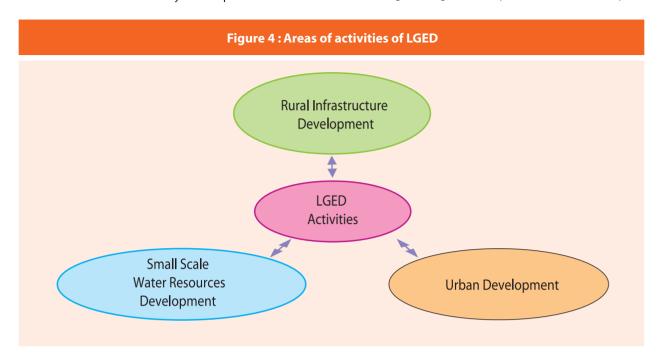
physical infrastructure including roads, storage and markets (ii) irrigated agriculture, minor drainage and flood control works and (iii) production and employment programme for the rural poor. The outcome of a subsequent study titled Rural Infrastructure Strategy Study,1996 did not suggest any major changes to the above priority areas. LGED's organizational functions would be further clear from the diagram shown below:



#### **Core Activities of LGED**

LGED's core activities mainly encompass three areas.

Following is a diagrammatic presentation in this respect.



### **Activities Under LGED Projects**

#### **Rural Infrastructure Development**

The box given below contains the list of activities, which are normally carried out under the

development projects by LGED to develop rural infrastructure:

#### **Box 4: Activities under Rural Infrastructure Development**

- Construction / Improvement of Upazila Road, Union Road, Village Road and their appurtenant structures
- Construction of submersible road in Haor area
- Development of ferry ghat / landing stage
- Maintenance of Upazila Road, Union Road, Village Road and their appurtenant structures
- Maintenance of rural road, bridge / culvert and growth centre / rural market by destitute women
- Tree planting and tending
- Re-excavation of derelict pond for pisciculture
- Construction of Union Parishad Complex and Upazila Parishad Complex

- Development of growth centre, rural market and women market section
- Construction of storage godown and mulltipurpose centre
- Construction of cyclone shelter and Killa
- Construction of flood shelter
- Construction of school building, additional class room, office building and residential quarters
- Supply of school utilities and furniture
- Complementary poverty reduction measure
- Road safety measure
- Capacity building of LGED

#### **Urban Development**

The following box contains the activities of the LGED's projects on Urban Governance and

Infrastructure Development, as a whole or part:

#### **Box 5 : Activities of LGED under Urban Development**

- Construction of integrated town centre, (bus / truck terminal, market)
- Development of road, bridge and culvert and their appurtenant structures
- Development of storm water drainage system
- Improvement of sanitation system
- Solid-waste management
- Environment improvement including slum upgrading

- Institutional strengthening/capacity building of Pourashavas
- Modernization of management system and improvement of local governance
- Community need based infrastructure, education, community health care and support for basic service promotion
- Master Plan / Land Use Plan

# Small Scale Water Resources Development

LGED's activities under Small Scale Water Resources

Development have been outlined in the box given hereunder:

#### Box 6: Activities carried out by LGED under Small Scale Water Resources Development

#### **Community based infrastructure development**

- Flood management
- Drainage
- Water retention
- Command-area development

- Fishery infrastructure
- Tree planting and tending

#### **Participationery Water Resources Development**

 Beneficiary participation mobilization through NGO services



Photo 1: Paved road with planted trees

Figure 5: LGED Organizational Results Chain

