



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

LOCAL GOVERNMENT ENGINEERING DEPARTMENT





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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events and happenings of public interests have taken place and many of the information of the sixth edition have fallen outdated.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 System
GMC	:	Ghat Management Committee
GOB	:	Government of Bangladesh
HQ	:	Headquarters
ICT	:	Information & Communication Technology
IEE	:	Initial Environmental Examination
IFAD	:	International Fund for Agricultural Development
IFPRI	:	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 Management
JBIC	:	Japan Bank of International Co-operation
JICA	:	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
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 Project
WMCA	:	Water Management Cooperative Association
WMCA	:	Water Management Co-operative Association
WP	:	Works Programme
WPW	:	Works Programme Wing
XEN	:	Executive Engineer

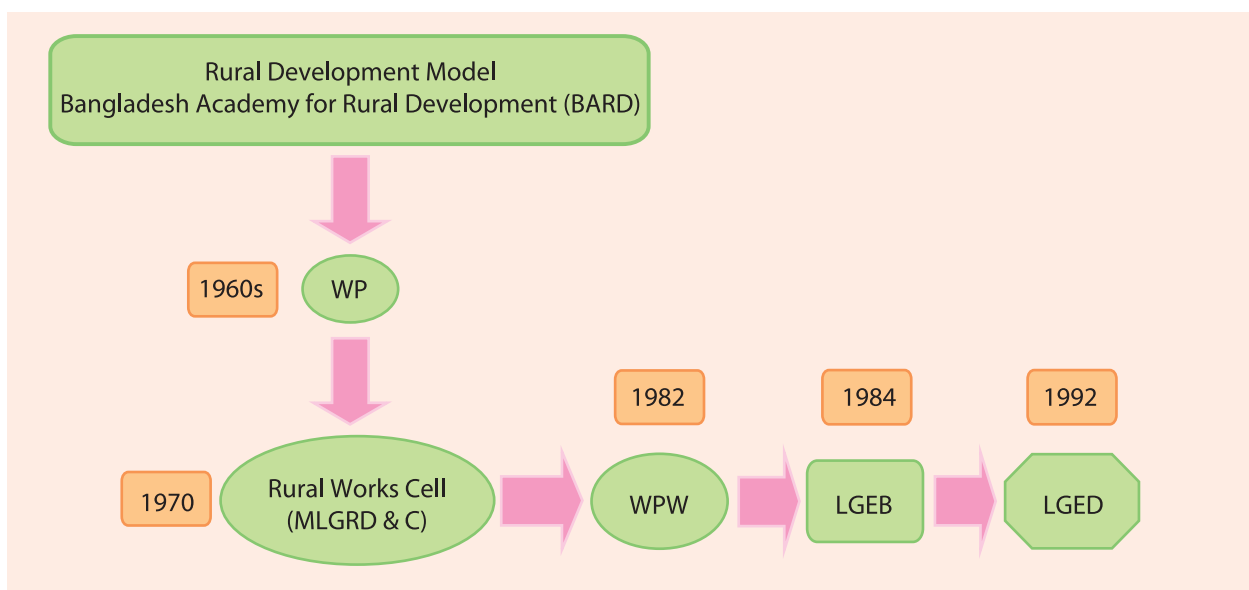
Evolution of LGED

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 Co-operatives. LGED has eventually turned in to its own as a dynamic public organization of the country.

Figure1: 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 Poverty 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 socio-economic 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.

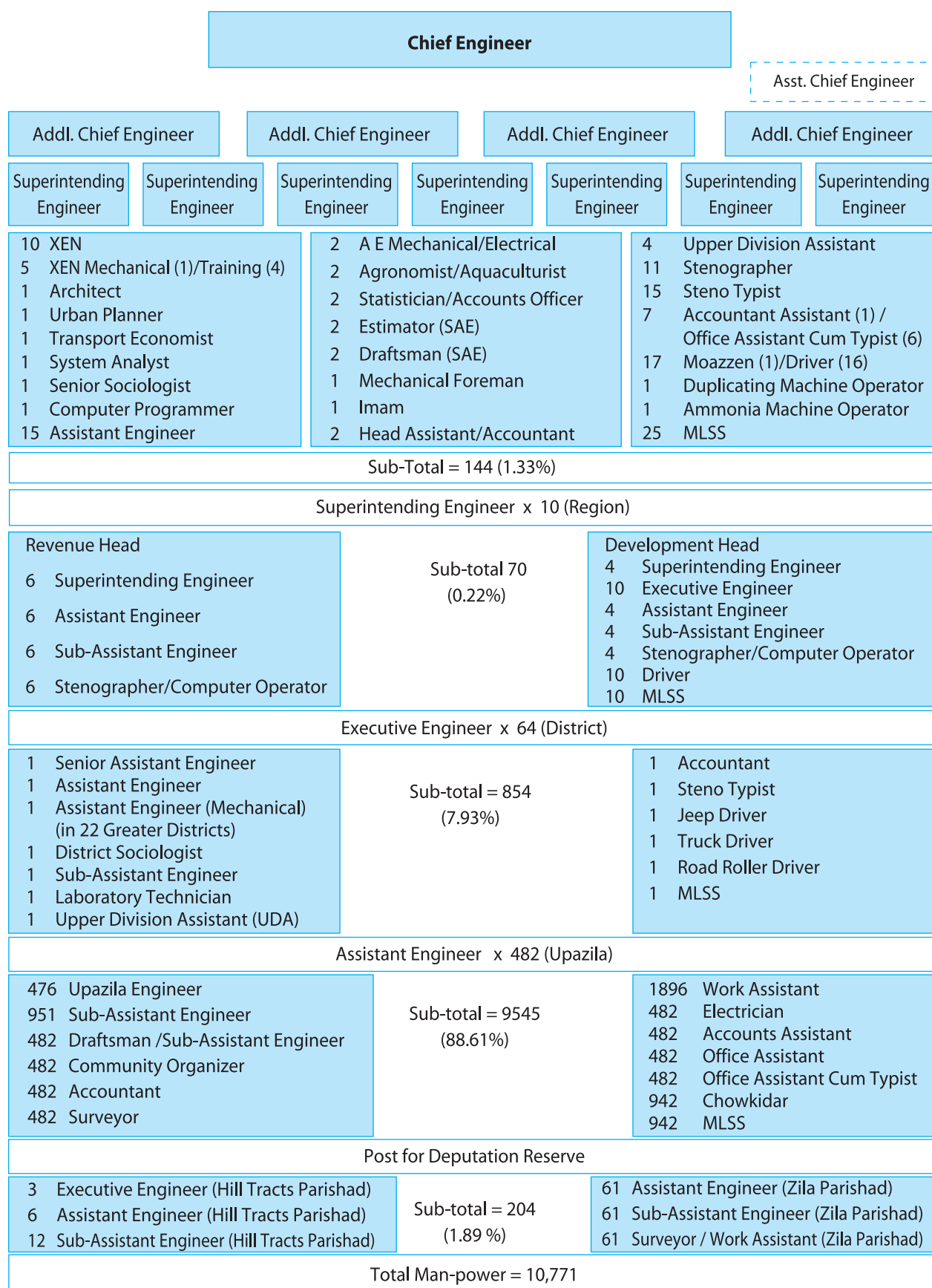
Role of Women:

Maximizing the participation of women shall be accorded high priority.

Organization of LGED

LGED is the primary agency in Bangladesh for planning, 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 man-power). The organization chart of LGED, given below, reveals a highly decentralized nature of LGED's organizational structure :

Figure 2 : Organization Chart of LGED



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 | • Geographic Information System (GIS) |
| • Planning | • Urban Management Support |
| • Design | • Quality Control |
| • Integrated Water Resource Management | • Training |
| • Environmental Management | • Maintenance Management |
| • Monitoring and Evaluation | • Road Safety |
| • Management Information System (MIS) | • 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:

Figure 3 : Functions of LGED

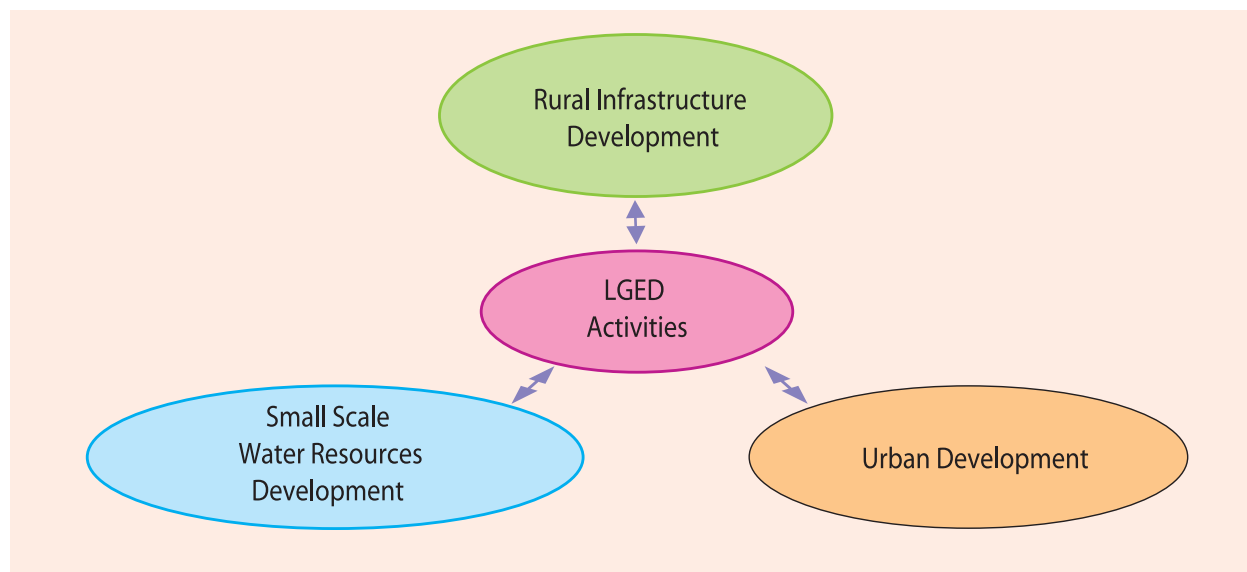


Core Activities of LGED

LGED's core activities mainly encompass three areas.

Following is a diagrammatic presentation in this respect.

Figure 4 : Areas of activities of LGED



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

- | | |
|---|---|
| <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Development of growth centre, rural market and women market section • Construction of storage godown and multi-purpose 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

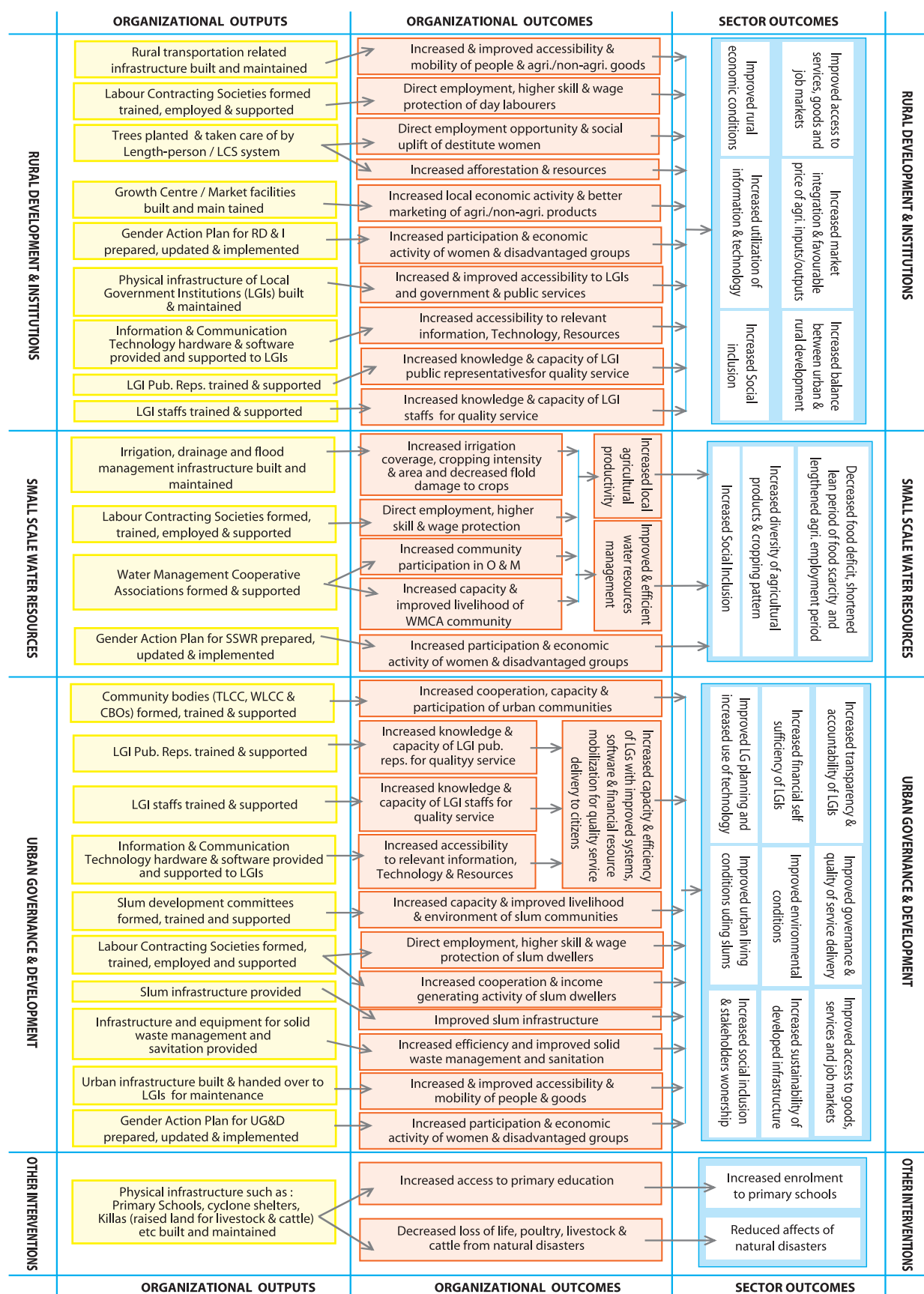
Participationary Water Resources Development

- Beneficiary participation mobilization through NGO services



Photo 1 : Paved road with planted trees

Figure 5 : LGED Organizational Results Chain

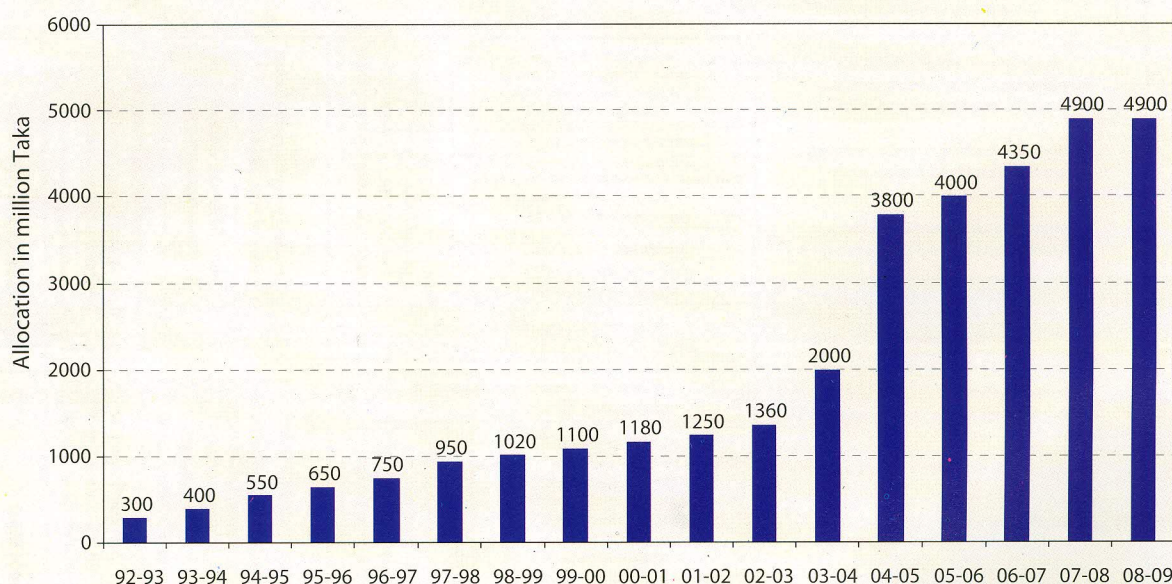


Maintenance Programmes

Maintenance is a universally considered event to ensuring a prolonged life and optimizing the utility of different physical infrastructures. Routine and periodic are the customary maintenance activities that are carried out as a post-construction follow-up of any infrastructure. However, emergency maintenance programmes become a dire need to restore and rehabilitate the damaged infrastructures, as and when get affected by natural disasters. Maintenance programmes are implemented with the resources available from the Government's own resources under its revenue head, funding by the development

partners under a project arrangement and in a few cases partly shared by the Local Government Institutions and the stakeholders as well. Maintenance activities are generally carried out with project funds during implementation of a project. The Government has been allocating funds under its Revenue Budget for infrastructure maintenance since 1992-93 and this allocation has grown exponentially over the years considering the importance of maintenance. The bar-chart given below demonstrates the government allocations on maintenance activities as made to LGED since 1992-1993.

Figure 6 : Revenue Fund Allocation for Maintenance



LGED's Programme Implementation Modes

"Contractor" is the common mode of construction and maintenance of infrastructure for LGED. Contractors are engaged by following the Public Procurement Rules passed by the Government. Special provisions of various Development Partners are also given due attention in case of foreign-assisted projects. Since inception, LGED is practicing and evolving various Labour Intensive Methods for roads/infrastructure development works. The methods of programme implementation followed by LGED have been briefly described below:

Contractor

LGED gets most of its programmes implemented by the contractors. The contractors are normally selected through post-qualification procedures as required under the Public Procurement Rules 2008. Contracts are awarded to the winning contractors selected through Open Tendering Method for which adequate and wide publicity is made in the widely circulated national Dailies.

Project Implementation Committee

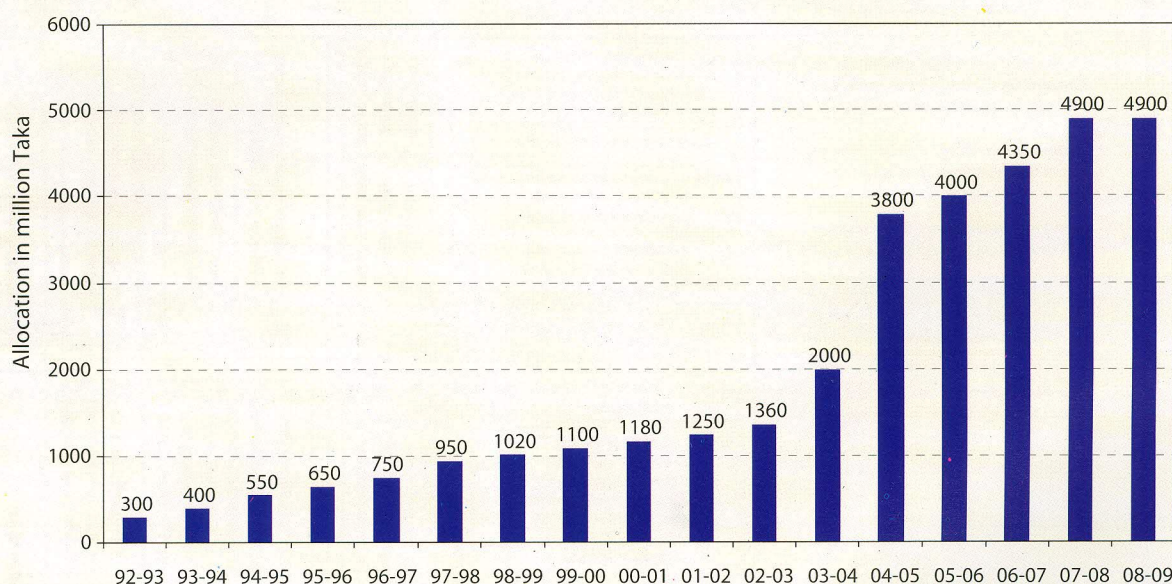
Separate procedures have been developed for formation and working of a Project Implementation

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Project Implementation Committee

Separate procedures have been developed for formation and working of a Project Implementation

Committee (PIC) and its functions. Normally Project Implementation Committees implement earthwork and other small works. Generally one PIC is comprised of 5-7 members. The PIC consists of Union Parishad Chairman, Union Parishad Members and local elites such as social workers, school teachers, Ansars, VDP members and farmers. The PIC Chairperson will either be the Union Parishad Chairman or Union Parishad Member. Inclusion of at least one woman member is mandatory. PIC will designate one of its member as the Project Secretary. PIC is formed as per the set methodology and works are performed as per set criteria and standard. After one PIC is formed, its members are provided with requisite training on work methodology, quality control, management and other related subjects. A poorly performed PIC can be suspended or cancelled. Persons who have been sentenced on charge of misappropriation and persons against whom cases are pending in a court or charge-sheeted or defaulted in submitting accounts of a previous year's scheme do not qualify for a Chairperson/Member of PIC. Individual PIC scheme is limited upto Tk. 75,000.

Labour Contracting Society (LCS)

Since early Eighties, Labour Contracting Society (LCS) concept has been adopted as a new and innovative mode of construction and maintenance of physical infrastructure. LCS is a group of landless (having less than 0.5 acre of land) male and female labourers or destitute women organized by the formal group of Bangladesh Rural Development Board (BRDB), Non Government Organizations (NGO) and other informal groups to implement small construction and maintenance scheme on contract.

Introduction of LCS method is considered as a landmark in targeting poverty reduction directly through infrastructure development. The LCS procedure is now commonly used in the different rural infrastructure development projects of LGED. The main objectives of the use of LCS are to:

- directly involve the landless groups in infrastructure construction and maintenance
- provide employment and income opportunities for the landless groups/destitute women
- eliminate intermediaries for projects' construction and maintenance activities
- ensure a minimum wage to the labourers
- achieve required quality/standard of construction and maintenance work



Photo 2 : Women are carrying out routine maintenance works

Length Person Method

This method is used for off-pavement maintenance. Basically women crews are recruited from the beneficiaries to maintain earthen shoulder and slope and care-taking of trees as well. Normally one woman is recruited for one kilometer of a road. But in case of new plantation or plant replacement of more than 80%, two women per kilometer are engaged. There is a provision of a Supervisor for a group of 15-20 workers.

Mobile Maintenance Team (MMT)

LGED has also introduced labour intensive Mobile Maintenance Team for on-pavement maintenance activities such as, routine maintenance of pavement. A group of 3-4 unskilled workers with one skilled person as the gang leader, form a Mobile Maintenance Team in a district. The team is provided

with necessary materials, tools and equipment to carry out the maintenance works. Transport is also provided for hauling materials and equipment. The team moves around the roads of the district regularly and carry out on-pavement maintenance works to mend the damaged spots identified by the District Executive Engineer's designated staff.

Water Management Co-operative Association (WMCA)

WMCA is the focal point of sub-project planning, implementation and all activities undertaken during operation and maintenance of sub-projects only under Small Scale Water Resource Development Project. Through WMCA, the beneficiaries can invest their savings in profitable business and can avoid complexities / compliances of micro-credit. WMCA has significant role in making all sub-projects sustainable and environment friendly.

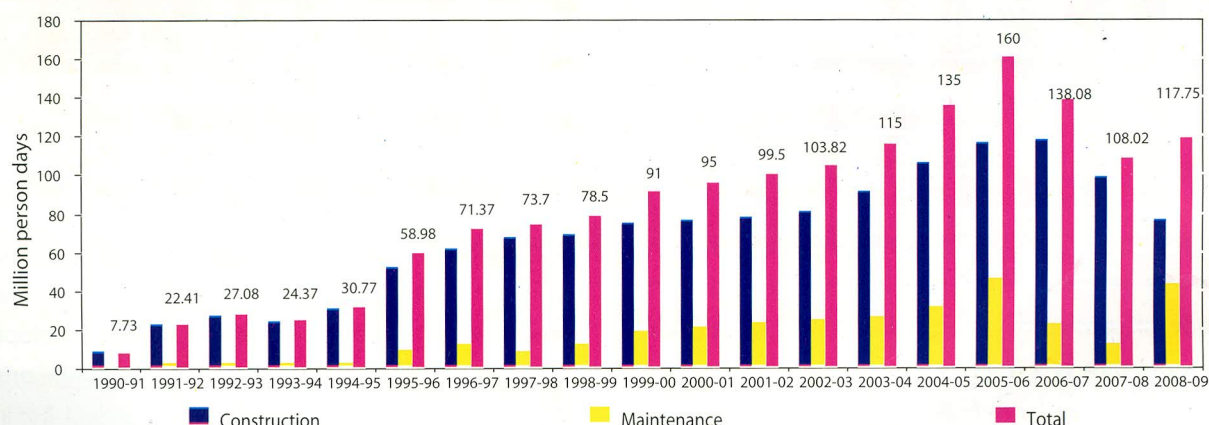
Employment Generation through Infrastructure Development Activities

Infrastructure development projects/activities contribute positively towards creating both direct and indirect employment opportunities to the rural poor in the following ways :

- Short term (seasonal) employment through both construction employment and maintenance activities
- Regular employment through maintenance activities
- Employment in trading in the growth centres / markets
- Employment in the farm sector
- Employment in the non-farm sector

A total of 1,558 million employment person days have been generated through rural infrastructure development activities of LGED from July 1990 to June 2009 showing year-wise information in the following chart:

Figure 7 : Employment Generated



Support Functions in LGED

As already stated, LGED has a number of core functions as well as sectoral responsibilities. As also said, there are different Units in the LGED wherefrom support functions are made available. These functions are mostly of the following nature :

Planning

LGED's Planning Unit carries out this task. Generally, the planning process of a project has the following stages:

- Country Portfolio Program / Three years Rolling Plan
- Project Preparatory Technical Assistance (PPTA)
- Feasibility Study
- Fact Finding Mission's review
- Pre-Appraisal Mission's primary appraisal
- Appraisal Mission's comprehensive appraisal

- Staff Review Committee (SRC) meeting
- Loan negotiation
- Development Project Proposal (DPP) approved by ECNEC
- Board circulation
- Board consideration and approval
- Loan Agreement signing
- Opening of Imprest Account and Project Operating Account
- Co-financing arrangement finalization/ Agreement signing
- Loan effectiveness declaration

Design

The design support functions include the following:

- Prepare architectural and structural designs of the infrastructures like bridge, culvert, building, Michioniki, market, cyclone centre, school building, bus terminal, health complex, auditorium, Union Parishad Complex, Model Thana, Paura Bhaban, Residential quarters for the officials etc.
- Review the structural and architectural designs of the infrastructures prepared by consultants of the different projects.
- Store the structural and architectural soft copies of the various infrastructural plans and designs.
- Provide necessary advice in resolving field level design related issues.
- Provide training to the field level engineers on design related Softwares like AutoCAD, STAAD Pro etc.

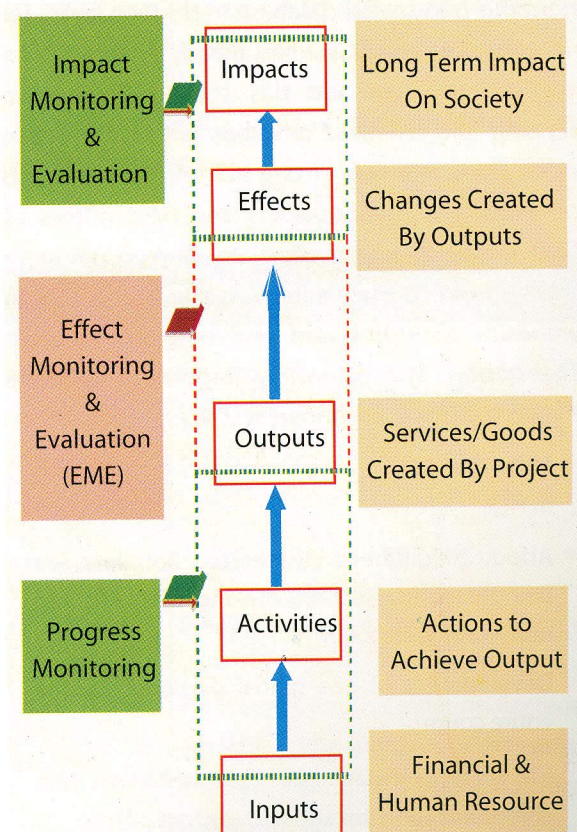
Monitoring and Evaluation (M&E)

The M&E activities of the following types are carried out in LGED :

- Progress Monitoring and Evaluation (PME)
- Benefit Monitoring and Evaluation (BME) :
- Effect Monitoring and Evaluation (EME)
- Socio-Economic Monitoring and Evaluation (SEME)
- Impact Monitoring and Evaluation (IME)

LGED has formulated a Framework for comprehensive Socio-Economic Monitoring and Evaluation (SEM&E) for assessment of Output-Effect of the development projects / activities, which includes SEM&E Strategy & Objectives, scope of data collection and monitoring, key stages in SEM&E implementation in LGED and quality assurance in LGED's SEM&E process. It has also prepared operational methodology for implementation of Framework for Comprehensive SEM&E, which has illustrated the concept of SEM&E, objectives of the operational methodology, broad activities related to data collection, data preparation and data analysis and report writing.

Figure 8 : Levels of Monitoring in LGED



GIS, MIS and ICT

LGED is a pioneer agency in adopting Geographical Information System (GIS) with the very objective to develop geo-spatial database to sustain infrastructure planning and monitoring activities throughout the country. GIS and Remote Sensing (RS) technology, which LGED made operational in early nineties is a unique example of embodied modern ICT tool for planning and management in any public sector organization. The Upazila maps and district maps developed by LGED are so far the tools widely used by the government, non-government and local government institutions for planning of local level infrastructure development programmes and other development activities. There has been a simultaneous development of MIS to harmonize the need of automation for different activities by customized Software for quick and efficient delivery of services. A number of Software, developed in-house, are now in use to support ever expanding activities in the areas of rural, urban and water resources infrastructure development activities. LGED has earned many remarkable achievements in the area of GIS, MIS and ICT. Besides developing an enormous geo-spatial database in thirteen layers for the whole country, LGED has already finalized Rural Road Master Plan and has started Pourashava mapping and database development in the Urban Sector. There is a very strong ICT infrastructure and connectivity at headquarters and field offices of LGED. It is also making efforts for human resources development to mainstreaming the use of ICT to synthesize a result-based and objective-oriented organization. The following important activities relating to ICT are performed in LGED :

- More than 500 PCs are connected through LAN in HQs
- About 20 different customized Software are being used for decision making, planning and monitoring purpose
- Development of geo-spatial database for the entire country
- FTP server is installed in HQs to establish data communication linkage with district offices

LGED is also trying to catch up with the rapid advancement of ICT technology world-wide. Video conference system has recently been introduced in LGED. This is another milestone in modernizing LGED as a public sector organization in respect of Information Technology. The newly introduced Video Conference System facilitates delivering lectures/speeches, monitoring and reviewing the progress on face to face conversation between LGED headquarters and the district offices.

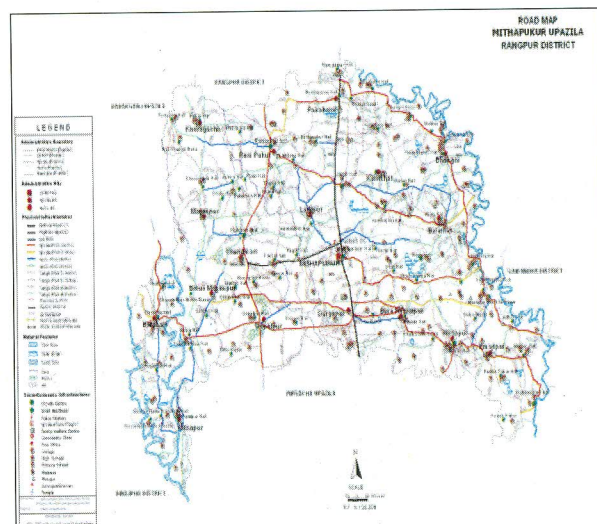


Photo 3 : Digitized map prepared by using GIS

LGED has been entrusted with the responsibilities to provide such technology supports to other government organizations to build up their capacity within a frame work of interagency collaboration. Such collaborative activities include School Mapping for the use of the Department of Primary Education, database development and management for Reaching Out-of School Children (ROSC), administrating Proxy-Means Testing (PMT) and database development & management for Secondary Education Quality and Access Enhancement Project (SEQAEP) of the Directorate of Secondary and Higher Education, database development & management for Post Literacy Continuing Education for Human Development (PLCEHD-2) of the Bureau of Non-Formal Education.

Material Testing and Quality Control

LGED has its own quality control system to maintain works' standard in the construction and maintenance of infrastructures. In this process LGED has established the following types of quality control laboratories :

• Central Quality Control Unit	1 No.
• Regional Quality Control Unit	10 Nos.
• District Quality Control Unit	54 Nos.
• Environment Laboratory	5 Nos.



Photo 4 : Field CBR Test

LGED also pays special attention to maintain a congenial ecosystem in each project. To this effect, LGED has introduced 21 mobile environmental

Different testing facilities on cement, aggregate, brick, concrete, bitumen, soil including sub-soil investigations are available in the LGED's district / regional laboratories. The quality standard of works of various types related to infrastructures including strength of the different road layers and construction materials are tested in accordance with the test frequencies as specified. Other available test facilities in the LGED's Central Quality Control Laboratory are:

- Marshall Mixed Design
- Stability Determination of Bituminous Sample
- Extraction of Bitumen
- Unconfined Compression Test of Soil
- Consolidation Test of Soil
- Direct Shear Test of Soil
- Calibration of Load Devices
- Collection of sample using core driller
- Test of reinforcement bar
- Pile Integrity Test

laboratories on the basis of greater districts and 5 regional laboratories.

Table 1 : Facilities Available in LGED's Environmental Laboratories

Mobile Environment Laboratory (21 Nos.)	Dinajpur, Rangpur, Bogra, Rajshahi, Pabna, Kushtia, Faridpur, Jessore, Khulna, Barisal, Patuakhali, Sylhet, Mymensingh, Jamalpur, Tangail, Dhaka, Gazipur, Comilla, Noakhali, Chittagong and Cox's Bazar	PH, Arsenic, Dissolved Oxygen (DO), Hardness, Acidity, Alkalinity, Nitrate, Phosphate, Potassium
Regional Environment Laboratory (5 Nos.)	Khulna, Barisal, Rangpur, Mymensingh and Comilla	Electric conductivity, Arsenic, Chemical Oxygen Demand (COD), Biological Culture, Cauliform Bacteria, Nitrate Phosphate, Potassium, Sodium, Iron, Zinc, Copper, Calcium, Salinity

Training

LGED recognises training as an essential means to acquire knowledge and skill and also for awareness raising and motivation. Since LGED's manpower did not increase in due proportion with its work load, it has given strong emphasis on Human Resource Development. LGED's Training Unit is totally committed towards capacity development by making its staff professionally skilled and resourceful. In this mission, LGED follows a long term training strategy and plan and has established a strong Training Unit at headquarters. LGED has further decentralized its training activities by establishing training cells at regional level. LGED is presently implementing and coordinating all training programmes through its HQ Training Unit and 10 Regional Training Centres. LGED's training approaches are:

- Training is based on needs
- Training system is decentralized

- Curriculum is uniform throughout the country
- Target groups include staff, LGI representatives, contractors and beneficiaries
- Training method is participatory
- Training is evaluated at different stages

LGED also conducts training programmes at district, Upazila and Union level depending upon its clientel types and their needs. Training courses are prepared on technical / engineering, management, financial management, procurement, quality control, LCS, socio-economic issues, participation, gender and development, environmental issues etc. Figure 9 shows the training cycle of LGED and Figure 10 is the bar presentation on the LGED's achievement in implementing training programmes.

Figure 9 : Training Cycle Followed in LGED



Training evaluation is made on conducting each training course. Normally evaluation is done internally. But effectiveness of training needs is assessed at certain interval by external consultants.

So far, training effectiveness has been assessed in three cases - one for national courses conducted by TU HQ under ISP, one for RDP-11 courses and one for RDP-22 courses.

Figure 10 : Training Achievement in LGED

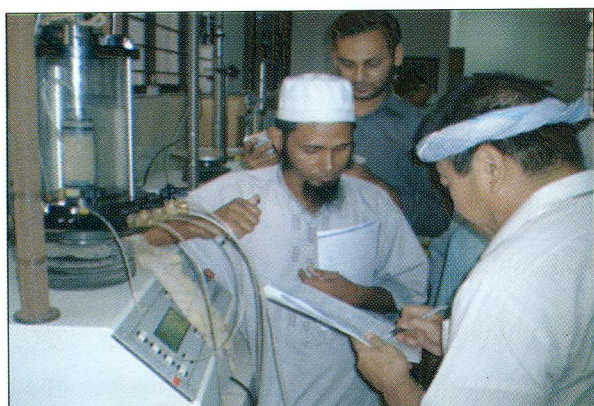
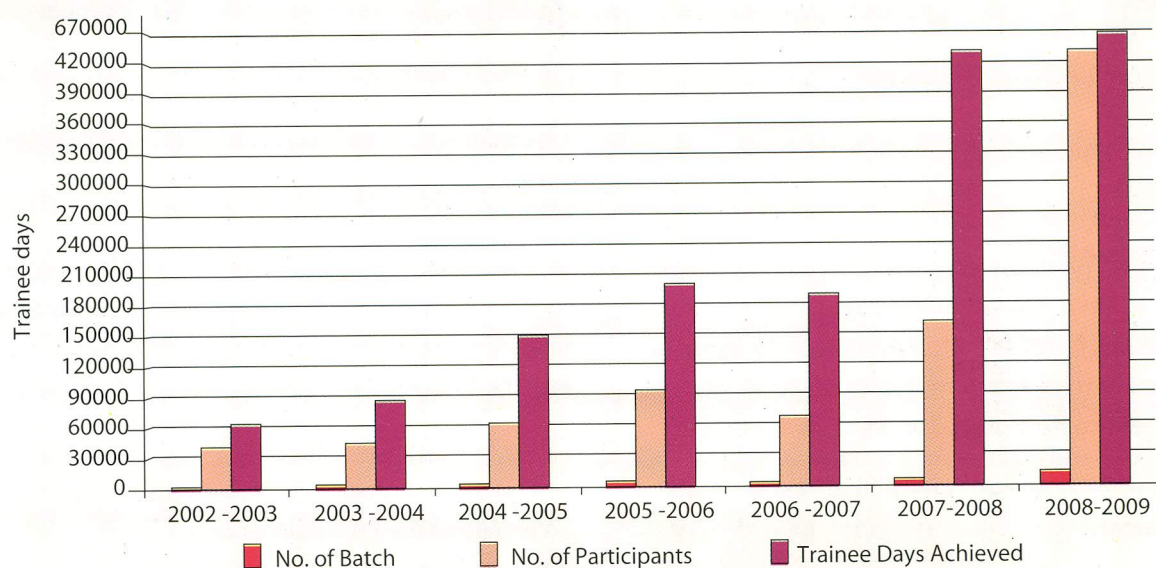


Photo 5 : Triaxial Test is being conducted



Photo 6 : Workshop on MICHINOEKI

Guidelines and Manual

In complementing the training materials, LGED has also developed a number of guidelines, handbooks,

manuals etcetera on different subjects. A few of them have been listed below :

- Upazila Plan Book
- Union Plan Book
- Manual on Pre-Stressed Concrete Bridges, Part-A-Standard Designs 1996

- Road Structures Manual, Part-B-Standard Design: Volume-1, Volume-2 and Volume-3
- Guidelines on Tree Plantation
- Guidelines on Financial Management of Union Parishad

- Guidelines on Market & Ghat Management
- Road Pavement Design Manual 1999
- Road Design Standard for Rural Roads 2005
- Manual on Design, Standard & Specification of Roads
- Manual for Growth Centre Planning
- Local Contracting Societies (LCS) Training Manual

- Training Manual on Financial Management of Foreign-aided Projects
- Handbook on Agricultural Production for the farmer-members of the Sub-project Water Management Cooperative Association
- Training handbook for Community Organizer
- Quality Control Manual
- Construction Technology and Quality Control of Hydraulic Structure

Road Safety

LGED has been experiencing traffic hazards on rural roads either. It has felt strongly as such to adopting appropriate road safety measures on rural roads in the present context of road accident occurrences.

For effectively handling the road safety issues, a Road Safety Unit has been formed at the LGED central level with the follow responsibilities:

- Avoid any design faults that cause road accidents;
- Install necessary traffic signals
- Make aware the road users with road related behaviour and give them basic education
- Enforce the correct ways of movement on roads

- Prepare and update guidelines on road safety and other road related manuals
- Assist the LGED engineers and the stakeholders to acquire and transfer knowledge on road safety
- Strengthen the road safety management within the local government institutions and the communities

New Classification of Country's Road Network

Government of Bangladesh has further made its straightforward decisions on the definition, ownership and institutional responsibilities of the country's entire road system.

In this end the Government reclassified the entire road network of the country, which came in to force under a Gazette Notification in May 2003. The new classifications stand as follows:

Table 2 : Road Classification 2003

Type	Definition	Ownership/Responsibility
National Highway	Highways connecting National capital with Divisional HQ(s) or sea port(s) or land port(s) or Asian Highway	RHD
Regional Highway	Highways connecting District HQ(s) or main river or land port(s) or with each other not connected by national Highways.	RHD
Zila Road	Roads connecting District HQ(s) with Upazila HQ(s) or connecting one Upazila HQ to another Upazila HQ by a single main connection with National / Regional Highway, through shortest distance/ route.	RHD

Table 2 : Road Classification 2003

Type	Definition	Ownership/ Responsibility
Upazila Road	Roads connecting Upazila HQ(s) with Growth Centre(s) or one Growth Center with another Growth Centre by a single main connection or connecting Growth Centre(s) to Higher Road System through shortest distance / route. (Former Feeder Road Type-B)	LGED / LGI
Union Road	Roads connecting Union HQ(s) with Upazila HQ(s), Growth Centre(s) or local market(s) or with each other. {Former Rural Road Class-1 (R1)}	LGED / LGI
Village Road - A	Roads connecting Village(s) with Union HQ(s), local market(s), farm(s) and ghat(s) or with each other. [Former Rural Road Class-2 (R2)]	LGED / LGI
Village Road - B	Roads within a Village. [Former Rural Road Class-3 (R3)]	

Road Network under LGED and LGI

LGED has already prepared its road inventory in accordance with the new classifications and definitions made by the Government. Table 3 and

Table 4 display the inventory of roads and their appurtenant structures belonging to LGED and LGI's.

Table 3 : Road Network under LGED and LGI's

Road Type	Total Number	Total Length (Km)	Developed (Km)		Earthen (km)
Upazila Road	4,488	37,858	26,745	71%	11,113
Union Road	7,938	44,903	17,664	39%	27,238
Village Road - A	32,907	100,347	16,179	16%	84,167
Village Road - B	43,761	85,331	4,987	6%	80,344
Total	89,094	268,438	65,576	24%	202,862

Table 4 : Bridge / Culvert under LGED /LGI

Road Type	Total Need		Already Developed		Need to be Developed	
	Total Number	Total Length (m)	Total Number	Total Length (m)	Total Number	Total Length (m)
Upazila Road	58,284	432,087	53,011	315,417	5,273	116,670
Union Road	60,633	375,869	51,129	254,993	9,504	120,877
Village Road - A	84,015	481,642	57,434	262,542	26,581	219,100
Village Road - B	53,339	270,027	28,113	110,886	25,226	159,141
Total	256,271	1,559,625	189,687	943,838	66,584	615,787

Rural Road Master Plan

Following the revised classification and ownership of roads, LGED prepared Rural Road Master Plan in 2005 covering Upazila road, Union road and Village road. It also included other infrastructure like growth centre,

rural market and Union Parishad complex. The Master Plan covers a total period of 20 years from 2005-06 to 2024-25 having 4 phases, each comprising 5 years. The Master Plan, which has already received Government approval, has been summarized below:

Table 5 : Rural Road Master Plan

Component	Improvement		Rehabilitation		Maintenance		Total	
	Physical	Financial (Million Tk.)	Physical	Financial (Million Tk.)	Physical	Financial (Million Tk.)	Physical	Financial (Million Tk.)
Upazila Road (km)	18277	104482	32242	313955	36166	357149	50519	775586
Bridge/Culvert on Upazila Road (m)	112233	49411	11762	5155	382293	23145	123995	77711
Union Road (Km)	33816	200174	26938	202828	42329	279067	60754	499523
Bridge/Culvert on Union Road (m)	125267	45302	7500	2301	330409	15265	132767	62868
Bridge/Culvert on Village Road-A (m)	216957	120678	10418	3196	-	-	230374	123874
Growth Centre (No.)	1041	4146	-	-	-	-	1041	4146
Rural Market (No.)	14308	69312	-	-	-	-	14308	69312
Union Parishad (No.)	2979	12358	-	-	-	-	2979	12358
Total :							1807927	

Growth Centres

There are about 15,500 rural markets all over the country under four types namely Primary Market, Secondary Market, Assembly Market and Terminal Market. Bangladesh Planning Commission, on conducting extensive survey and by using a wide range of parameters, identified 2100 rural markets as Growth Centres. These Growth Centres are considered to be the nerve centres of rural economy. Improvement of accessibility to these Growth Centres is as such a foremost consideration for any Rural Development Projects.



Photo 7 : Developed Barobari Growth Centre in Lalmonirhat

Innovative and Special Activities of LGED

Community Participation in Infrastructure Development

Infrastructure development activities of LGED are planned and implemented through community participation process. Implementation of project activities is done with the involvement of the private sector. Small and medium contractors take part in construction activities of LGED. In addition, the Local Government Institutions (LGIs) at various levels, are also involved in the implementation of LGED projects. NGOs also get involved to assist LGED in social mobilization aspects for planning and implementation of schemes. As a part of participatory development, beneficiary groups and user committees, such as, Labour Contracting Society (LCS), Market Management Committee (MMC), Ghat Management Committee (GMC), Road User's Committee (RUC), Water Management Co-operative Association (WMCA) etc. have been formed under various projects of LGED. Involvement of the private sector, Local Government Institutions, NGOs and beneficiary groups have significantly contributed to smooth planning, implementation and operation/maintenance of infrastructure development schemes of LGED at the local level.

The community participation takes place at the following stages of scheme cycle:

- Identification, selection and planning of infrastructure scheme
- Design of infrastructure
- Implementation/construction of scheme
- Operation and maintenance of infrastructure
- Financing of infrastructure improvement and maintenance
- Monitoring of infrastructure works

Gender Equity Strategy and Action Plans

In line with the provisions of the Constitution of the People's Republic of Bangladesh quote "women shall have equal rights with men in all spheres of the state and of public life" unquote, LGED developed its Gender Equity Strategy and Action Plans for the period 2002-2007, which has subsequently been updated for a further period of 2008-2015. The goal of the strategy is that LGED will strive for ensuring gender equity in all its operations including project activities through the participation of an empowered workforce and communities in a sustainable way. The objective of LGED's Gender Equity Strategy is to provide clear, practical and achievable vision and guidance for LGED's infrastructure development programs. It should prioritize the benefit of poor and contribute to government's poverty reduction and gender mainstreaming goals.

The activities for addressing Gender Equity Strategy include strategic data collection within LGED, human resources development, coordination of all relevant activities in LGED and coordination among rural, urban and water sectors for achieving strategic objectives. The guiding principles of the Strategy are accountability, transparency, partnership, participation, empowerment, sustainability, ownership, integration and coordination and capacity building.

The core areas of the Strategy are Data/Information, HRD & Training, Participation, Contracting, Policy, Support Facilities, Communication, Funding and Resources, Monitoring and Evaluation. The core phases to be addressed are Planning, Implementation, Operation and Maintenance, Monitoring and Evaluation. Activity-wise indicators have been identified and responsibilities have been assigned. The Strategy has been formulated to cover LGED's Overall Strategy, Rural Sector Strategy, Water Sector Strategy and Urban Sector Strategy. Actions have been identified in all sectors of interventions at central, sectoral and field level.

Women Market Section

LGED has already joined the National Policy on Women Development. As a part of it, LGED has developed its own Gender Action Plan for Rural, Urban and Water Sector development activities to mainstreaming gender in LGED's development programmes. Growth Centre improvement is one of the must components of LGED's any Rural Development Projects (RDP). LGED has developed many Growth Centres / markets under its RDPs by this time. To involve women in trading, LGED has now made it a compulsory item to construct Women Market Section under any of its Rural Development Projects. This is an effort towards ensuring and enhancing women's access in the Growth Centre. Normally there are 8-12 shops in a Women Market Section with toilet and other facilities. Guidelines on Shop Allotment and Women Traders Selection; Lease Agreement and Maintenance Guidelines for the Women Market Sections was previously issued by the Local Government Division in August 2001.

LGED provides training to the women traders on Shop Management and Skill Development. LGED, at the same time, extends micro-credit facilities to them. One Impact Assessment Study on Women Market Sections built under different Rural Development Projects has found positive impact of this activity on poverty reduction of rural women. This women empowerment programme of LGED also received significant coverage in the local and international media and journals. ADB Review of November-December 2002 as well as Making ADB's profile on "Making Infrastructure Work for Women in Bangladesh" also highlighted impact of Women Market Section in Bangladesh.



Photo 8 : Women's Corner in a Developed Growth Centre

LGED's Rubber Dam Project - A Reality For Agricultural Production

Irrigation is of vital importance for agricultural produces. The farmers in Bangladesh have to bear the brunt of dry season crisis and to face irrigation hazards during winter. The availability of surface water in dry season awfully comes down at 2.50 lakh cusec. Moreover, calamities like overflow of rivers in monsoon and flash floods, bringing miseries to the farmers, have become almost regular.



Photo 9 : A Rubber Dam

LGED's innovative Rubber Dam Project, has effected a tremendous positive change in this respect, causing an increased agricultural produce and maintaining ecological balance. In 1995, a cost-effective technology for retention and conservation of surface water in rivers, channels, rubber dams - one across Bakkhali river and the other across Eidgaon canal under Cox's Bazar district - were constructed by LGED under two pilot projects with Chinese technical assistance. The successful impact of the pilot projects inspired LGED to take up another Rubber Dam scheme across Bhogai river under Sherpur district with financial assistance from the Ministry of Agriculture. It was also a success and thereupon the programme continued under the banner of exclusive projects. LGED has so far constructed 22 rubber dams all over the country. It has facilitated to bring an additional land of 11,340 hectares under cultivation to produce 79,337 tonnes of crops and to create employment opportunities for 168,500 person-days. Rubber dams in Bangladesh have been proved to be a reality as an alternate irrigation support in dry season, giving a great relief to the farmers. Rubber Dam Project has caused a noticeable positive economic change in the project areas.

Sustainable Rural Energy Activities

LGED has played a flag-ship role to introduce renewable energy technologies in Bangladesh. Bio-gas plants have been installed by LGED from many years under various development projects. LGED is the implementing agency for Sustainable Rural Energy (SRE) component under the Sustainable Environment Management Programme of the Ministry of Environment & Forest and supported by UNDP. The target of SRE component was to develop community based models of renewable energy as a substitute source of rural energy in the off-grid areas of Bangladesh. Its main objectives were demonstration of renewable energy technologies, capacity building for technology transfer and wide dissemination of those technologies in the off-grid areas. The pilot demonstrations of renewable energy technologies was kept limited within four options only, which were Solar, Wind, Biomass and Micro-Hydro interventions. More specifically, the technology wise demonstrations encompassed mainly 40.5 kWp solar photo voltaic installations, 10kW wind-solar hybrid system, 15.5 kW power generation from biomass resources and 10 kW from micro hydro intervention. As a part of technology transfer, training were provided with the technical hands and beneficiaries. Moreover, SRE has published 11 brochures on different RET installations. The book titled "Green Energy Development Model in the St. Martin's Island" is one of such publications. Besides, SRE has successfully hosted a web portal named Renewable Energy Information Network (REIN), [www.lged-rein.org].



Photo 10 : Solar PV Pumping in Barind areas

The Renewable Energy Policy of Bangladesh that has already been formulated and published in the official Gazette on 4 January 2009, has recognized LGED as a co-partner for country-wide implementation of the renewable energy development programmes.

Khilgaon Flyover

The 1.9 kilometer long and 14 meter wide Khilgaon Flyover, so far the longest one in the country, was constructed by LGED entirely with domestic resources. This flyover has been providing easy access for the extensive south-eastern parts of Dhaka City to Dhaka's mainstream communication zone and to the western outskirts. It is a major intervention towards minimizing the growing traffic congestion in the capital. It was inaugurated by the Honorable Prime Minister on 2 June 2001. This flyover is some sort of a relief to a section of nation's capital dwellers in the face of Dhaka's seriously growing traffic congestion.

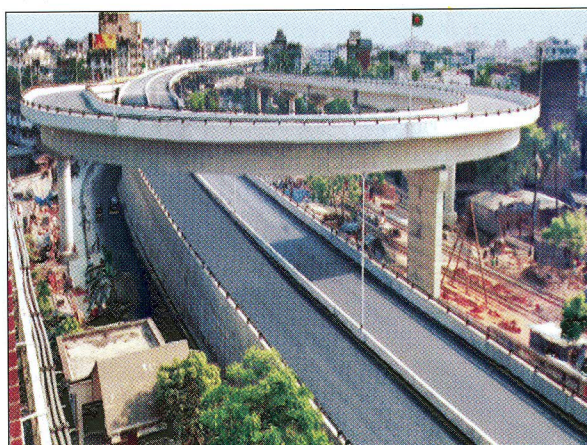


Photo 11 : Khilgaon Flyover

Banani-Gulshan Link Bridge

It is a 306-meter long bridge, which begins from the furthest end of Road No.11 of Banani. It provides an alternate route to the Gulshan area. The bridge, costing Tk. 22 crore and entirely funded by the Government of Bangladesh, connects Road No.11 of Banani with Road Nos. 41, 43, 35 and 34 in Gulshan area. The Banani-Gulshan Connecting Bridge is thus significantly contributing to ease the severe traffic jams at the more important road sections of Banani, Gulshan, Baridhara and Badda areas in the city.



Photo 12 : Banani-Gulshan Link Bridge

Multipurpose Cyclone Shelters

Construction of Cyclone Shelters and Killas to protect human lives, properties and livestock exposed to the risk of cyclone and storm surge in the coastal areas and offshore islands of Bangladesh is one of the major challenges to development activities of Bangladesh . LGED has developed its own models that serve best and can be optimally used while any natural disaster strikes and at the normal time as well. It has, by this time, constructed a number of cyclone shelters for multipurpose use during' the non-cyclone period, such as, school, madrasahs, mosque, family welfare centre, union parishad office-cum-community centre, storage godown etc .



Photo 13 : A multipurpose Cyclone Shelter

Union Parishad Complex

It is the Government policies and plan to set up Union Parishad Complex (UPC) in each Union to coordinate all development activities at the Union

level, a step towards strengthening local government institutions. The Government earlier approved two designs for UPC, prepared by LGED for main land and coastal areas and UPCs are being constructed on such approved designs. Besides using this complex as the office of the Union Parishad, provisions have been kept to provide office accommodation Union level offices of Health and Family Welfare, Agriculture, Education, Livestock, Ansar and VDP, BRDB and LGED. This is as such an one-stop arrangement that caters the multiple needs under a single-roof and get the prompt services of different offices of the Government. At the same time, it would facilitate the elected representatives to coordinate and monitor the various offices at the Union level more effectively. This is obviously an important step to establish good governance at the local level.



Photo 14 : Domar Union Parishad

Rural Development Engineering Centre (RDEC)

The Institutional Support Project (ISP) for LGED, which was implemented during Nineties with the assistance from the Swedish International Development Cooperation Agency (SIDA) came to an end in the year 2000. Nonetheless, the initiative in completing the tasks of LGED's institutional reform needed to be continued further. Establishment of RDEC within LGED with technical support from the Japan International Cooperation Agency (JICA) and financial support from the then Japan Bank of International Co-operation (JBIC) was indeed a remarkable support at that point of time.

The immediate objective of RDEC was to take over the relevant engineering functions developed at the HQ with the support of GOB, ISP and others in various fields like planning, design, quality control and research & development. The Centre had to be linked closely with the LGED field offices and projects. The medium-term objective of RDEC was to continue to strengthen the engineering capacity of LGED field offices and Local Government Institutions (LGI) not restricting to civil works only, but in social, economic and environmental issues too through a number of timely and effective technical interventions. The long-term objective of RDEC was to deal with the ever-expanding development activities in a way that maximizes the positive impact of infrastructure development on rural economy and poverty reduction.



Photo 15 : LGED-RDEC Bhaban

A six storied building was originally constructed as an annex to the main LGED HQ building, which was later on raised to fifteen storeys with separate funds. The building has accommodated LGED's central Planning Unit, Design Unit, Training Unit, IWRM Unit, Urban Management Unit, Quality Control Laboratory, the Central Equipment Maintenance Workshop, 3 class rooms and 4 group discussion rooms. In addition, there is a seminar room and one library, dormitory, common and dining facilities and office spaces for expatriate advisers and LGED officials. LGED is now running RDEC by itself after taking over from JICA

experts. RDEC has reduced LGED's total reliance upon consultants and has enabled LGED to manage its increasing work loads in a better and efficient manner. RDEC has become the nucleus of all capacity building activities in the fields of Planning, Design, Quality Control and Training to support LGED staff, LGI representatives, beneficiaries and contractors.

Tree Plantation Programme

Tree plantation, as a part of national programme, is an important component of various development projects of LGED. Tree plantation programme is implemented as an integrated element of the routine road maintenance activities. For successful implementation of these programmes, 34 officers of LGED of various ranks have been designated to monitor district-wise tree plantation activities.

LGED has its own Guidelines on Tree Plantation and Care Taking, which is a comprehensive one. It has detailed out all modalities and procedures on the following:

- Tree plantation and caretaking in office premises of LGED and other fallow lands
- Road side tree plantation and tending
- Tree plantation and tending on embankment slope and banks.

Environmental Management

LGED gives due attention to the environmental management issues. To carry out Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA), LGED has developed Guidelines on the Environmental Issues Related to Physical Planning. The guidelines include, inter-alia, the environmental parameters and potential impacts of road, irrigation, drainage and embankment schemes, Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA).

The National Environmental Management Action Plan (NEMAP) prepared by GOB provides policy framework to link all the development activities with environment for improving quality of life. LGED, in conformity with NEMAP, also prepared and circulated the Manual on Environmental Supervision and Monitoring & Guidelines for Environmental Screening and Categorization of Sub-project in 2004. The Manual contains, among others, the following:

- Environmental supervision covering general approach of supervision, supervision at Upazila level (Level-1), supervision at district and regional level (Level-2), supervision at LGED HQ level (Level-3) and the supervision procedures
- Environmental monitoring covering purpose of environmental monitoring, environmental monitoring responsibility, monitoring parameters and the monitoring procedures
- Environmental Codes of Practice (ECP) covering objectives of ECP, framework of ECP and summary of ECP
- Reporting compliance covering records of environmental monitoring data and reporting non-compliance

Road Asset Management System

LGED has created the road network database for proper management of its country-wide huge rural road network. The general purpose of this database is to use it in planning and management of rural roads by providing detailed information on roads and their structures (bridges/culverts). This complements in drawing up of comprehensive annual maintenance programmes and making rational allocation of funds based on road category, surface type, traffic and physical condition of the road network.

The database has been designed to accommodate all relevant information of the road network sequentially and the system is being improved and/or modified from time to time to cater the

growing varieties of needs. Data are stored in customized computer software called "Road and Structure Database Management System" (RSDMS), which is being widely used by the Upazila and District offices. At the LGED HQ, the central database has been established to compile road network data of the whole country.

Capacity Building of Local Stakeholders and Good Governance at Local Level

LGED conducts orientation and training courses for the LGI representatives and local community people for capacity building and promotion of local governance both in the rural and urban areas. The orientation/training materials, designed for different categories of trainees, are mainly related to planning and implementation of infrastructure on construction, rehabilitation and maintenance.

The course materials also include other issues, like roles and responsibilities of LGI representatives and community people, uses of planning/mapping tools and participatory planning, implementation, operation, maintenance & management, monitoring & evaluation, group management, leadership, rule of law, transparency, equity, accountability etc.

Introduction of a computerized tax collection and billing system in municipalities is an example of instilling good governance at local level.



Photo 16 : A view of an awareness campaign

Local Level Participation In Infrastructure Development

Infrastructure development activities of LGED are planned and implemented with the participation of elected representatives of the Local Government Institutions (LGIs) and the local community people. In some cases, Non-Government Organizations are involved to assist LGED, LGIs and the communities on the social aspects of planning and implementation of infrastructure development schemes. To be more specific, the participation entities in LGED's activities at local level are :

- Representatives of Local Government Institutions (LGI)
- Beneficiary groups such as LCS, WMCA, CO
- Rural poor, destitute women
- Non-Government Organizations
- Project Implementation Committees (PIC)

The communities participate at the following stages of the infrastructure development scheme cycle :

- Identification, selection and planning of scheme
- Design of scheme
- Implementation/construction of scheme
- Operation and maintenance of infrastructure
- Financing of programmes on improvement and maintenance of infrastructure
- Monitoring of construction works

LGED has prepared and circulated Guidelines on LGI / Community Participation stating the methods to be followed and activities to be performed at each stage of the scheme cycle. Involvement of the Local Government Institutions, NGOs and beneficiary groups is found not only helpful for smooth planning, implementation and operation / maintenance of infrastructure development activities of LGED, but also its contribution has become evident in building sustainable infrastructure.

LGED Projects of New Dimensions

LGED is getting increasingly involved in the activities relating to gender equality and poverty reduction. LGED is also taking up projects to redress the sufferings of the most disadvantaged groups living both in rural and urban habitats. Providing improved livelihood for the distressed people of the Char and Haor areas has currently become another new dimension of LGED activities.

Some of the projects of LGED, formulated on the above principles, are briefly described below:

Market Infrastructure Development Project in Char-land Regions (MIDPCR)

The project is being implemented by LGED with the financial assistance from IFAD and the Government of Netherlands. The project has been designed to improve the marketing facilities for improvement of socio-economic condition of the Char-land regions and creating employment opportunities for a huge number of skilled and unskilled persons living there amidst utter miseries. The project is eventually to contribute towards the national poverty alleviation goal of the Government. The objectives of this project are (i) poverty reduction and ensuring well-being of Char-based primary producers, traders, landless and single women and their households, set to be realized through improvement in the facilities of the market and to its access (ii) an increase in the wage for women (iii) an increase in the production and sale of products in the market and (iv) movement of primary producers up the value chain. More specifically, the target groups comprise small traders of the formal markets and outside who operate their own with a few employees; primary producers who grow crops and raise livestock; fish farmers and fisherman; households with non-farm enterprise; and the extremely poor women who are poorest of poor.

The project is expected to generate employment opportunities for 17,500 destitute, disadvantaged and marginalized women living in Char-land regions.

The project is to encourage movement up the value chain through processing and trade for both primary producers and local traders, improving linkage between project groups and agribusiness and markets both within the region and outside. Simultaneously, to provide financial support to the Char-based landless producer groups, the project also undertakes micro-financing programmes by engaging two national level NGOs. The project will directly reach some 85,500 households belonging to small producers and LCS workers.

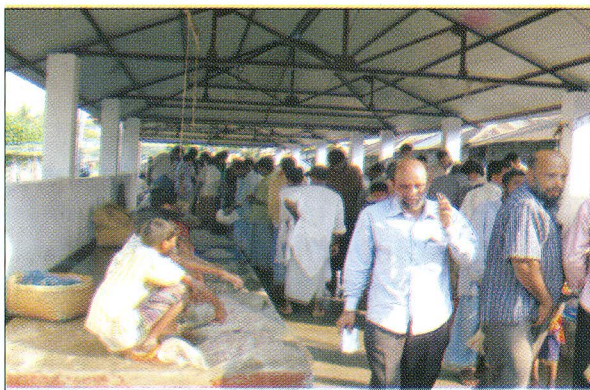


Photo 17 : Sagoria Bazar, Hatia, Noakhali

Community Based Resource Management Project (CBRMP)

The project is being implemented by LGED in Sunamganj district with funding from IFAD for a period of about 12 years that started in January 2003. The total project period is divided into three phases: 2003- 2007, 2007-2011 and 2011-2014. The project is vowed to poverty reduction of 135,000 poor households, each holding land below 2.5 acres. It follows a participatory community-based approach and dedicated to build capacity of the community to become self-reliant. Along with other supports, the project has been providing them training and orientation to build capital by group savings and making them skilled to invest in alternative livelihoods by taking loan from their group savings and project credit line. The project is implementing its activities through five components, which are: (1) labour-intensive infrastructure development programme; (2) fisheries development programme;

(3) agriculture and livestock production development programme; (4) micro-financing; and (5) institutional support programme. CBRMP has, by this time, completed its 1st phase successfully and its 2nd phase is also very near to its end. The project is being implemented in 9 Upazilas of Sunamganj district covering 57 Unions and 559 villages.

The project adopts length person system and employs poor women in the implementation of its road maintenance programmes. Under the fisheries development component, the Beel Users Groups (BUG) are formed and the Beels are being transferred to them through MoU made with the Ministry of Land and the Ministry of Youth and Sports. Women constitute a big section of BUG members. The Beels are re-exevated by engaging LCS and are being used as fish sanctuaries to promote fish biodiversity and brought under promoting swap forestry in Haor areas. BUG members have so far been trained up in groups and community fisheries management by the project.

Under the Agriculture and Livestock Production component, demonstrations are being made for production of improved varieties of crops. Livestock and poultry birds are vaccinated and cattle are brought under de-worming programme. Setting up of nurseries is also an activity under this component. Farmers are also being trained up on latest technologies and management by this component. The research and promotional activities are being assisted by Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Bangladesh Livestock Research Institute (BLRI), Department of Agriculture Extension (DAE) and Department of Livestock Services (DLS). Under Micro-finance component, Community Organizations (CO) are being formed consisting of both male and female members and they are being trained on different subjects so that they are turned in to a self-managed group.

The project under its Institutional Support component has conducted exposures trainings and workshops for knowledge dissemination, policy promotion and skill development of the project

staffs, partner's institutions and community people with the assistance from Bangladesh Academy for Rural Development (BARD Comilla), Centre of Integrated Rural Development for Asia and the Pacific (CIRDAP), World Fish Centre, BARI, BRRI, DAE, DOF, DLS, BKB, Youth Department, local administration and other development agencies. IMED has recommended the project as a model for other Haor districts.



Photo 18 :Submersible road built by CBRMP

Small Scale Water Resources Development Sector Project

The process for involving local stakeholders of both sexes in the identification, planning, designing and implementation of sub-projects under this project is considered critical in making investment decisions, taking the full back-up of each local community, identifying and resolving any resource-use conflicts in its embryo stage. The project provides extensive training for mobilizing beneficiaries to participate in sub-project selection, planning, implementation and operation & maintenance. Participatory Rural Appraisals (PRA) is conducted to assess stakeholders' needs and their perception of proposed sub-projects. NGOs are contracted to facilitate development of Water Management Cooperative Associations (WMCA) in the sub-project areas. The Small Scale Water Resources Development Sector Project is a role model for water resources development and conservation with people's participation under the National Water Policy (NWP), an ideal example on transferring maintenance responsibilities to the people on completion of

project through mass participation. Besides, water resources have been turned into a community organization in the shape of a cooperative. This organization has brought together the men, women, landless, marginal owners of lands of all sizes small, medium or large, farmers, sharecroppers, even the women, men and youths engaged in off-farm professions. Under this organization new strategies have been evolved to increase agricultural production towards poverty reduction and to raise awareness about women rights and to create social and financial capital towards gender mainstreaming.



Photo 19 :Command Area Development

The Small Scale Water Resource Development Project normally comprises the following activities:

- Construct embankment
- Reduce effect of flood in cultivable land (up to 1000 hectare)
- Improve irrigation system
- Construct water control structure
- Excavate / re-excavate Khal
- Construct Rubber Dam
- Conserve water for irrigation



Photo 20 :A Flood Management & Drainage structure (Sluice)



Photo 21 : A Flood Management & Drainage canal

Second Rural Infrastructure Improvement Project (RIIP-2)

The objective of the project is to reduce rural poverty through sustainable economic growth, rural development and improved infrastructure in 23 districts of north-western and eastern part of Bangladesh. The project is to promote economic opportunities for the rural poor through participatory improvement of sustainable rural infrastructure, social and gender development and improved local governance through strengthening of Local Government Institutions in the project area. The specific objectives are improvement of the rural transportation network, economic and social development of rural poor, strengthening of Local Government Institutions, and empowerment of rural poor women to enhance their participation in economic and social life.



Photo 22 : Reconstruction of Nekmasood College-Shibgonj Haat Road, Ranishankail, Thakurgaon

The project has given a special emphasis upon the integration of women and the physically handicapped in rural development and to improve

local government in the project area through strengthening the Union Parishads. In order to focus the gender issue in the project, it aims at increasing the women's participation in all project activities, creating direct employment for poor women through rural road construction and maintenance, providing training in income generating activities (IGAs), smoothening the access of women to trading in the local markets and promoting active participation of female UP members and other women in local governance. The programmes for integration of the physically handicaps comprise special activities that include appropriate designing of the transport and market facilities, keeping market spaces reserved for small business and providing training on IGAs. To finance the project, funds come from ADB, DFID, gtz and kfw as development partners in juxtaposition with GOB.

Municipal Services Project (MSP)

Since long, LGED has also concentrated to strengthen physical and social infrastructures in the urban areas. Programmes of LGED's urban related activities broadly cover promotion of institutional skill of municipalities including the infrastructure privileges for the urban dwellers of the city corporations and municipalities through a number of projects. LGED's Municipal Services Project (MSP) is one such effort. Implementation of the project started in October 1999 with the support of World Bank, which will end in June 2011.



Photo 23 : Patuakhali Bus Terminal, Patuakhali

To encounter the increasing environmental depletion of the cities and towns and to improve the weakly managed financial capacity of the municipalities, MSP set forth three main objectives: (i) to improve environmental, physical infrastructure and municipal service delivery; (ii) to strengthen the institutional capacity to plan, finance, implement and operate urban infrastructure services in an efficient and sustainable manner; and (iii) eventually to reduce urban poverty and improve environmental conditions of urban communities. The major programmes of the project cover 2 City Corporations and 17 Municipalities while the Flood Damage Rehabilitation (FDR) component includes 150 municipalities. So far 3,637 km of urban roads, 93km of drains, 44 public toilets and 27 Municipal markets have either been constructed or improved or rehabilitated under the physical activities of the project. In addition, development / rehabilitation programmes of other infrastructures like footpath, water pipe-lines, deep tube-wells, sanitary latrines, landing stages have also been taken up. Apart from the physical activities, this is for the first time, a countrywide institutional development and capacity building programmes for the Municipalities are being implemented under MSP through Municipal Support Unit (MSU). The MSU programmes include support to computerization of municipal tax billing, utility billing, accounting system and preparation of infrastructure inventory. The programmes also undertake massive training agenda for Municipal staff and the elected representatives.

Urban Partnerships for Poverty Reduction Project (UPPRP)

UNDP in partnership with the LGED and UN-Habitat is implementing the Urban Partnerships for Poverty Reduction Project (UPPRP) in Bangladesh. UK's Department for International Development (DFID) and UNDP are, in collaboration, providing financial assistance for the project. The project will be implemented over a seven year period starting from FY 2007-08 covering a project area of 6 City Corporations and 24 Pourashavas. The goal of the

project is to reduce urban poverty in the context of rapid urbanization in Bangladesh.

The project targets at improving the livelihoods and living conditions of three million urban poor and extremely poor people, especially women and girls, living in 30 towns and cities in Bangladesh. It is expecting to achieve this target through providing support for participatory community upgrading through community contracting, supporting viable and sustainable livelihoods and social and economic development activities, addressing issues of security of tenure and the needs of the extreme poor, and working with others to create a more pro-poor urban policy environment. The project will complement the development of town-wise poverty reduction and economic development strategies in partnership with urban poor communities, civil societies and local government.



Photo 24 : Urban Partnerships for Poverty Reduction Project Community Action Planning

The expected outputs on completion of the project, are: urban poor communities are mobilised and supported to form representative, inclusive and well-managed groups; poor urban communities are supported to create healthy and secured living environments; urban poor and extremely poor people are supported to acquire the resources, knowledge and skills needed to increase their incomes and assets; development and implementation of pro-poor policies and practices are supported in partnership with others; and effective project management systems are established and become operational.

Second Urban Governance and Infrastructure Improvement (Sector) Project (UGIIP-II)

The National Strategy for Accelerated Poverty Reduction has considered urban poverty and growing disparities within urban areas as an important policy agenda. Improvement of basic infrastructure and services has also been viewed to be the entry point to address urban poverty. Furthermore, good governance is recognized as a critical factor to more effective growth and poverty reduction. The strategic thrust of this project has thus been given upon poverty reduction through shared growth, social development, and good governance. The most important lessons learned from the about-to-complete first Urban Governance and Infrastructure Improvement (Sector) Project (UGIIP), are that improvement of urban infrastructure of service delivery can be achieved more effectively by linking it with governance reform and creating proper incentive mechanism. This project, in fact, follows UGIIP and adopts performance-based allocation of investment funds with defined performance criteria on governance improvement. It has kept the National Strategy for Accelerated Poverty Reduction in view while formulating its objectives to promote sustainable human development, economic growth and poverty reduction by enhancing municipal management and strengthening capacity to deliver municipal services and improving physical infrastructure and urban services (especially to the poor) in 35 secondary towns of Bangladesh. The project will be implemented over a period of 6 years starting from January 2009. ADB, gtz and kfw are the three Development Partners to augment the funding of the project by GOB, project Pourashavas and the beneficiaries. Investment funds will be allocated among the project Pourashavas based on their performance in respect of governance improvement as defined in the Urban Governance Improvement Action Program (UGIAP).

The project has three broad components and they are: i. urban infrastructure delivery that will provide infrastructures related to municipal transport, drainage, solid-waste management, water supply and

sanitation, municipal facilities and basic services in urban slums; ii. urban governance improvement and capacity building through awareness raising and participation of urban citizens in Pourashava governance to enhance the accountability of Pourashavas urban planning through formulation of a Pourashava Development Plan (PDP) in a participatory manner, women's participation through a Gender Action Plan (GAP) and to integrate the urban poor living in the slum areas and outside the slums; and iii. project management and implementation support.

One of the unique features of this project is that Slum Improvement Committee will be formed in every slum and a representative of poor will head it.



Photo 25 : Orientation Programme for Pourashava Ward Councillors

Rural Employment and Road Maintenance Programme : An Effort Towards Poverty Reduction

This is a project, classically designed to generate employment exclusively for the rural poor women and to build their confidence and capacity to undertake income generation works at the end of the project to become self-reliant. On the other hand, maintenance of the economically important rural earthen roads is carried out throughout the year to develop a year round serviceable rural road network, which will have significant positive impact upon agriculture productivity and the movement of agriculture produces and personal transportation. Apart from economic benefit, tree plantation component of the project will maintain the eco-

system. The programme as a whole is directed towards poverty reduction. The project areas cover around 4,490 Unions under all the 480 Upazilas of 64 Districts, and has a target to year round maintaining of 98,000 km of economically important rural earthen roads on the basis of 20km per Union, providing training on IGA to 49,060 destitute women and planting 2,245,000 trees at the rate 10 plants in every kilometer on an average. The road maintenance operation procedures will engage worker groups, each consisting of 10 destitute women per Union residing in the proximity of the selected roads, giving



Photo 26 : Road Maintenance Crews are working

preference to widows with children, widows and divorcees. However, 20 women crews per Union will be employed in the Monga-affected districts namely Rangpur, Gaibandha, Nilphamari, Lalmonirhat and Kurigram. Same road maintenance work crew recruitment modalities are followed for 12 Sidr-affected districts, which are Khulna, Satkhira, Bagerhat, Barisal, Perojpur, Jhalokhati, Patuakhali, Barguna, Bhola, Gopalganj, Madaripur and Shariatpur. There is provision for forced savings from the daily wages of the crews and at the end of the project each women crew will save about Tk. 70,000.00, which would form a liquid asset for her to invest in income diversification activities on the basis training she received for maintaining life through self-employment. This will prevent them to go back to destitution again after completion of the project. The women crews will receive training under this project to acquire Basic Business Management skill of proper and profitable self-employment works such as rearing of livestock, fish culture, sericulture or poultry

or as desired by the crews. The training will also extend knowledge on savings and credit management. This project is expected to enhance social status of the rural destitute women through economic guarantee, social mobility and access to resource. This project is a such a major endeavour towards the Government's policy to empowering women, the rural poor in particular.

Planning and Implementation of Infrastructure Development: Steps Towards Digital Bangladesh

LGED uses different normal and customized Software for planning and implementation purposes. Upazila Base Map and other sectoral maps are all digitized. For efficient and accurate maintenance programmes, road inventory is updated and maintained in digitized form. Almost all core functions are carried out using Software. LGED is supplying computers to Union Parishads and providing training to the Union Parishad Secretaries on Basic Computer. Digitization has also been extended to the Pourashavas and as a part of it, their tax collection and water billing systems have been computerized along with providing training to the Pourashava staff. LGED also works for different Ministries and other departments on Database preparation. Information on Reaching Children Out of School and Polling Centres for National election have been digitized for Secondary Education Department and Election Commission respectively. All these measures have made it a frontal organization towards implementing the Government's pledge for "Digital Bangladesh" and this is a step forward in this regard.

LGED's Involvement in Development Activities of Other Ministries

LGED has the reputation for its quality and timely output and thereby it has earned confidence of the other Ministries beyond LGED's own administrative Ministry, the Local Government Division of the Ministry of LGRD & Cooperatives. Other Ministries have also become interested to associate LGED for implementation of their projects. Besides, a number of them seek LGED's cooperation in the

organizational capacity building within the framework of interagency collaboration. A few of such collaborative arrangements have previously been described under the Section on GIS and ICT. LGED has so far worked in collaboration with the following Ministries :

- Ministry of Agriculture,
- Ministry of Forest and Fisheries,
- Ministry of Water Resources, and
- Ministry of Hill Tracts

Impact of Development Activities of LGED

Several external studies, conducted on the developmental impacts of rural infrastructure, acknowledged positive relationship between infrastructure development and socio-economic upliftment. Findings of a few such studies are excerpted below:

Research Report of IFPRI-BIDS on Developmental Impact of Rural Infrastructure in Bangladesh, 1990

The main findings of this Report were as follows:

- Development of rural infrastructure has far-reaching implications for the alleviation of poverty by indirectly generating income.
- Infrastructure development increases the speed of diffusion of agricultural technology, reduces the cost of marketing and improves the operation of both input and product markets, through improved linkages with other sectors.
- Fertilizer prices are 14 percent lower and labour costs 12 percent higher in the developed villages than in the underdeveloped.
- The combined effects of wider and more efficient use of new technology as a result of infrastructure development is estimated to have increased agricultural production in developed areas as much as 32 percent.

- Infrastructural endowment causes household income to rise by 33 percent, income from agriculture increases about 24 percent, that from livestock and fisheries is about 78 percent.
- Infrastructure development encourages savings and investment indirectly through its positive effect on income.

Report of the Independent South Asian Commission on Poverty Alleviation, 2003

Findings of Case Study 36 : Decentralized Rural Infrastructure - the LGED Story

Most villages are now linked to a network of all-weather rural roads called Feeder Roads. This has had a major impact on poverty allowing greater mobility to the poor, easier access of rural goods to urban markets and stronger capacity of the government to deal with emergencies and natural disasters. This highly successful decentralized rural infrastructure strategy has been spearheaded by the Local Government Engineering Department (LGED), a public sector agency marked by the critical institutional attributes of decentralization, professionalism, monitoring system, informal decision-making, leadership, team work and sense of mission. As a central agency, LGED has been distinguished by its emphasis on human resource development and use of ICT. Infrastructure development activities of LGED are planned and implemented through community participation process involving beneficiaries and project-affected persons, local government institutions and NGOs. The community participation includes all the stages of scheme cycle, such as, identification, selection, planning, design, implementation / construction, operation & maintenance, cost sharing and monitoring/evaluation. As a part of participatory development, management and operation, beneficiary groups and user committees, such as, Labour Contracting Society (LCS) formed by groups of landless men and women labourers, Road Maintenance Association (RMA), Market Management Committee (MMC), Ghat Management

Committee (GMC), Road User's Committee (RUC), Water Management Cooperative Association (WMCA), Slum Improvement Committee (SIC), have been formed under various projects of LGED.

Women's Corner in Market Centres

A key constraint to greater participation of women in trading and marketing activities is the physical environment of market-centres, which tend to be highly unfriendly for women. Lack of toilet facilities, inability to compete for physical space and generally inhospitable environment deter women from playing a larger role in the market-centres. With these constraints in mind, Local Government Engineering Department (LGED), a government agency, has launched the Women's Corner Project within its larger rural development strategy of building growth centres in the rural areas. Within each selected growth centre, a separate structure containing several outlets and common facilities are being built to accommodate poor women entrepreneurs. The women sign lease contracts with the municipal authorities on prescribed formats prepared by LGED. The premises can only be used for trading and marketing activities.

International Labour Office, ILO, Geneva, Issue 2005

It contained the following observation about LGED :

- LGED and RDP-21 made partnership with institutions like Local Government Institutions, NGO's, Community organizations, Donor agencies
- Created employment opportunities at local level
- Promoted equal opportunities for both men and women

GOB - GOJ Programme Level Evaluation 2006

The findings are :

- Unique feature of LGED is its Institutional Arrangement where 90% of staff is posted in field.

- Leadership, team-work, sense of responsibility and other managerial aspects are outstanding.
- LCS contributed to Increase in Income, assets and confidence of landless women and men.

Appreciation for LGED

The World Bank Report on Government That Works - Reforming the Public Sector in Bangladesh, 1996:

LGED is rated by both service users and donors as one of the most efficient and effective government organizations. It is evidenced that with sound organizational practices, a public sector organization can also perform efficiently and cost effectively. The institutional aspects contributing to the LGED's successful operation are:

Decentralization - the bulk (90 percent) of LGED staff are at the thana level. In fact, this organization has the highest proportion of staff in the field level of any government field organization.

Professionalism - the LGED is well-known for its highly qualified professionals and its emphasis on continuous upgrading of skills. It has a well-developed training programme for the staff at thana, district and head-office levels. The LGED management has imbibed the private sector practice of recognizing its staff for outstanding achievement in its corporate magazine, in its citations, in identifying staff for overseas training and in semi-annual functions. All of these have contributed to building staff morale.

Monitoring System - The LGED top management attaches the highest priority to MIS and, since 1993, efforts have been underway to set up a uniform system for monitoring and evaluating all LGED projects.

Informal Decision Making - LGED management has by-passed the time-consuming bureaucratic practice of processing decisions through various layers. Rather than using written communication based on the movement of files, it takes many actions on the basis of telephone and fax contact.

Leadership - LGED's Chief Executive has been with the organization for almost a decade. GoB/donor officials, knowledgeable about LGED, credit him as the single most important source of continuity and motivation for the incoming staff.

Team Work - The organization is a shining example of good team-work, with clearly defined work objectives and a keen sense of achievement. The senior managers have inculcated a strong work ethic through their personal example of putting in long working hours and maintaining high quality output. These factors have, more or less, offset the usual disincentives associated with low government salaries, lack of accountability and inadequately defined work objectives.

Sense of Mission - The LGED has vigorously pursued its overarching mission, namely 'serving the people at the grassroots'. This emphasis on people's participation has led to a high success rate for LGED projects. Engineers for the first time are being recognized, by the local communities, as important agents of change.

LGED's Winning of Awards

LGED's works have been appreciated at local and international level. World Bank, in 1997, ranked LGED as high performing public agency. LGED's Sustainable Rural Energy Project won the 1st Prize in the "Austria -based Energy Globe World Award 2007". LGED was awarded by the ADB on the following projects for outstanding performances:

Third Rural Infrastructure Development Project (RDP-21) - 2001, 2002, 2003; South West Flood Damaged Rehabilitation Project - 2003; Emergency Flood Damaged Rehabilitation Project 2004 (Part - A: Rural Infrastructure) - 2005; Rural Infrastructure Improvement Project (RDP-25) - 2005, 2007; Second Small Scale Water Resources Development Sector Project - 2006; Urban Governance and Infrastructure Improvement Project (UGIIP) - 2006; Urban Governance and Infrastructure Improvement Project (UGIIP) - 2007; North West Crop Diversification Project - 2007.

LGED also received the following awards for outstanding performances in Tree Plantation and Environmental activities:

LGED was awarded 1st Prize in the "National Environment Fair-2007" organized by the Ministry of Environment and Forest; LGED was awarded 1st Prize in the "Environment Fair-2007"; Singra Upazila Office under Natore district received 1st prize in Prime Minister's National Award in Tree Plantation in 2003; Tangail XEN office received 1st prize in 2004 in Tree fair organized by the District Administration and Forest Office; Executive Engineer's offices of the Noakhali and Kushtia district received certificates in 2004 in Tree Fair organized by the District Administration and Forest Office; Executive Engineer's office of LGED of the Tangail district received 1st prize in 2006 in Tree Fair organized by the District Administration and Forest Office; LGED

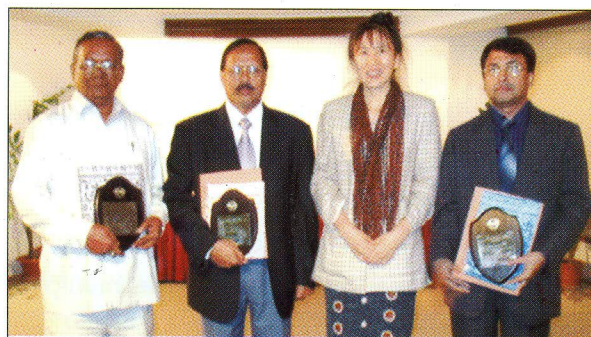


Photo 27 : ADB Best Performance Award-2005

received 1st prize in the Environment Fair in 2006 organized by the Ministry of Environment and Forest; LGED was awarded 2nd & 3rd Prize of the 'Chief Adviser's National Award 2006' on Tree Plantation; Executive Engineer's office of the Tangail district received 1st prize in the 'Tree Fair-2008' organized by the District Administration and Forest Office; LGED, Chapai Nababganj received 1st prize in the 'Information Fair 2008 Against Corruption' in 2008.



Photo 28 : 1st Prize in the "Austria -based Energy Globe World Award 2007"

