

**JICA Special Assistance for Project Formation  
(SAPROF)  
For South-Western Bangladesh Rural  
Development Project (SWBRDP)**

**Final Report Summary**

**March 2009**

JICA LIBRARY



1192572 [4]

**JAPAN INTERNATIONAL COOPERATION AGENCY**

**IC Net. LTD.**

JICA  
101  
81  
SAD  
LIBRARY

SAD

CR(10)

09-004



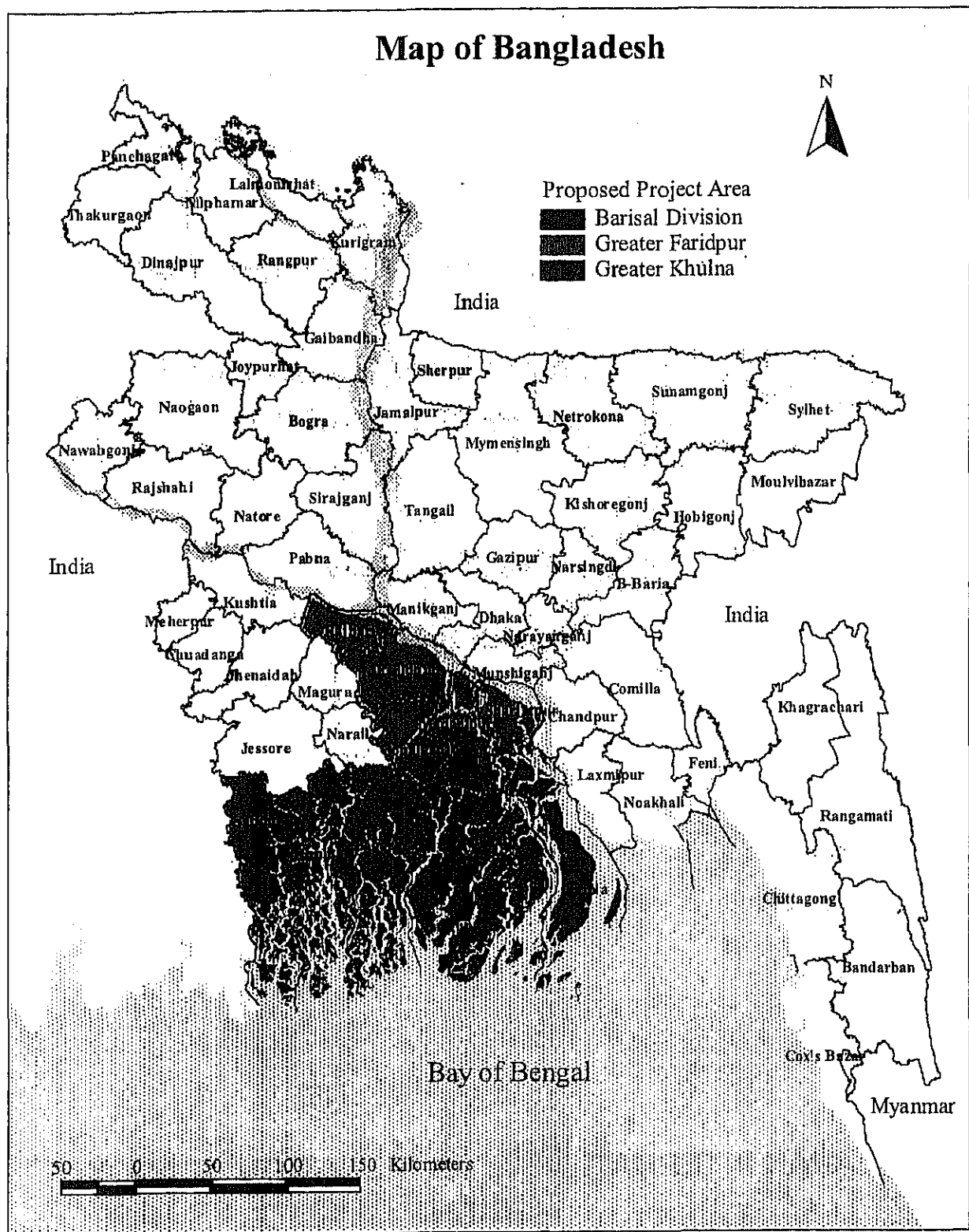
**Local Government  
Engineering Department (LGED)  
The People's Republic of Bangladesh**

**JICA Special Assistance for Project Formation  
(SAPROF)  
For South-Western Bangladesh Rural  
Development Project (SWBRDP)**

**Final Report Summary**

**March 2009**

**JAPAN INTERNATIONAL COOPERATION AGENCY  
IC Net. LTD.**



Location map of the proposed Project Area

## Abstract

The proposed project objectives are to increase economic opportunities for the rural poor, improve their access to social services, and promote recovery from damage by natural disasters. The Project will improve Upazila and Union roads and growth center and rural market facilities. To secure the benefits derived from infrastructure development, it will also provide employment opportunities for the poor and capacity development services to stakeholders, such as officials of the Local Government Engineering Department (LGED), local government officials, contractors, members of Market Management Committees (MMCs) and Labor Contracting Societies (LCS's), shopkeepers, and leaseholders.

The 14 Districts selected as the Project area are characterized by high poverty levels, slow progress of rural road development, absence of major rural infrastructure development projects supported by development partners, and susceptibility to cyclones and floods. The policy framework, legal and administrative instruments, and financial means are well-established as bases for project implementation. LGED will be the main implementation agency and is a well-functioning organization. However, timeliness of implementation, adequacy of quality control, and supervision of subprojects still need improvement. The capacity development of LGED officials, contractors, and construction workers will be conducted to address this situation. To enhance the effects of upgrading works, capacity development of local institutions and stakeholders, namely users committees and beneficiary groups, will also be implemented. Cyclone-resistant multipurpose market sheds, and retaining walls, vegetation cover, and concrete revetments on slopes of Upazila and Union roads will be introduced as mitigation measures against cyclones and floods.

Upazila roads, Union roads, growth centers, and rural markets were ranked according to a set of criteria. As a result, 88 Upazila roads, 19 Union roads, 58 growth centers, and 18 rural markets in the Project area were proposed for upgrading. In addition, 18 Upazila roads are selected for upgrading by the government budget. The total cost of the Project is estimated at tk. 9,100 million, which is equivalent to 14,041 million Japanese yen. Upgrading of Upazila roads, Union roads, growth centers and rural markets account for 53 %, 3 %, and 4 % of the total budget, respectively. Poverty reduction interventions promote the direct transfer of money (4 % of the budget) to the rural poor through the employment of LCS's for 759 km of roadside tree-planting and 1,400 km of village road maintenance. Approximately 1 % of the total budget and 91,000 trainee-days are to be allocated to the capacity development component. The rest of the budget will be allocated to consultancy services and various recurrent expenditures.

The Project is recommended to commence in July 2009 and will last for five years. The proposed contract packaging schedule distributes the annual requirement of funds for the first, second, third, fourth, and fifth years at 4 %, 34 %, 37 %, 18%, and 7 % of the total project cost, respectively. The development impacts of rural infrastructure are expected to be significant, and the overall economic internal rate of return (EIRR) of the project is estimated at 25 %, which is significantly higher than the assumed opportunity cost of capital (12 %) in Bangladesh.

The progress of the project should be monitored according to the rules of the Government of Bangladesh (GOB) and the requirements of JICA. Effect monitoring and evaluation should follow the LGED guidelines, JICA procedures, and the methodology employed by a similar project. A baseline survey, mid-term assessment, and terminal assessment will be conducted to evaluate the effects of the infrastructure developed. The Initial Environmental Examination (IEE) concludes that if appropriate mitigation measures are taken, the project will have no significant adverse environmental and social impacts during the period of project implementation.



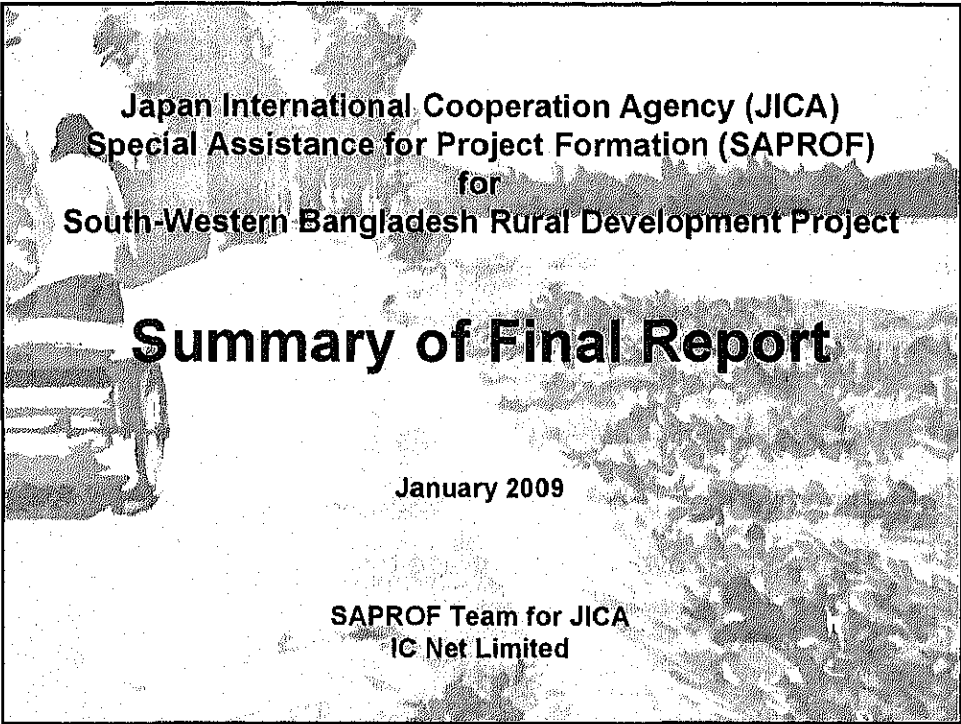
SPECIAL ASSISTANCE FOR PROJECT FORMATION  
(SAPROF)  
FOR  
SOUTH-WESTERN BANGLADESH RURAL DEVELOPMENT PROJECT  
PEOPLE'S REPUBLIC OF BANGLADESH

# **FINAL REPORT**

## **Summary**







Japan International Cooperation Agency (JICA)  
Special Assistance for Project Formation (SAPROF)  
for  
South-Western Bangladesh Rural Development Project

# Summary of Final Report

January 2009

SAPROF Team for JICA  
IC Net Limited

## Table of contents

1. Project plan and costs
  - 1.1 Objectives and scope
  - 1.2 Rationale
  - 1.3 Summary of project costs
  - 1.4 Project component and costs
  - 1.5 Institutional arrangement
  - 1.6 Implementation schedule
  - 1.7 Financial plan and procurement method
2. Evaluation of project plan
3. Monitoring and evaluation
4. Environmental and social considerations

## **1. Project plan and costs**

### **1.1 Objectives and scope**

#### **(1) Objectives**

Through the construction and rehabilitation of rural infrastructure, the project will:

- Increase economic opportunities for the rural poor
- Improve their accessibility to social services
- Promote recovery from damage by natural disasters

**3**

## **1. Project plan and costs**

### **1.1 Objectives and scope (cont.)**

#### **(2) Scope of the Project**

##### **Component 1: Upgrading of Upazila roads**

88 roads; 723 km of paved roads; 2,730 m of bridges and culverts;  
road safety measures (bus bays, guard posts, and sign boards)

##### **Component 2: Upgrading of Union roads**

19 roads; 69 km of paved roads; 2 m of bridges and culverts

##### **Component 3: Upgrading of GCs and RMs**

58 growth centers; 18 rural markets

##### **Component 4: Procurement of vehicles & equipment**

##### **Component 5: Poverty reduction interventions**

Mobilization of LCS's; tree-planting and caretaking on 759 km  
of roads; maintenance of 1,400 km of village roads

##### **Component 6: Capacity development**

Training of LGED officials and stakeholders

##### **Component 7: Upgrading of Upazila roads to be financed by GOB**

18 roads; 158 km of paved roads; 705 m of bridges and culverts;  
road safety measures (bus bays, guard posts, and sign boards)

#### **4 Consultancy services**

# 1. Project plan and costs

## 1.2 Rationale

### (1) Rationale by component

#### Component 1, 2 and 7: Upgrading of Upazila and Union roads

- The Master Plan targets for Upazila and Union road development are yet to be achieved
- Impacts of Upazila and Union road development are significant
- Impacts of Upazila road development are more significant than those of Union roads

#### Component 3: Upgrading of GCs and RMs

- The Master Plan target for GC development is yet to be achieved
- Impacts of GC and RM development are significant
- GC and RM development has the potential to change the statuses of women and the socially disadvantaged

#### Component 5: Poverty reduction interventions

- Creation of employment opportunities for the poorest of the poor
- Earthen road maintenance is important

#### Component 6: Capacity development

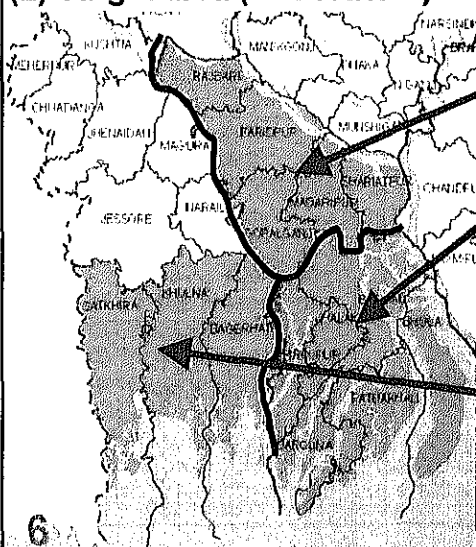
- Efficiency and effectiveness of rural infrastructure development and maintenance can be improved through capacity development of LGE officials, members of MMC and LCS, and other stakeholders

5

# 1. Project plan and costs

## 1.2 Rationale (cont.)

### (2) Target area (14 Districts)



LGED coordinates with other projects with respect to decision-making for public investment

#### Greater Faridpur

- Low GDP/capita
- Flood and cyclone-affected area
- High economic return

#### Barisal Division

- Low GDP/capita
- Slow decline in poverty
- Flood and cyclone-affected area
- High growth potential of fisheries
- Slow progress of rural infrastructure development

#### Greater Khulna

- Slow decline in poverty
- Cyclone-affected area
- High growth potential of fisheries
- Slow progress of rural infrastructure development

6

# 1. Project plan and costs

## 1.2 Rationale (cont.)

### (3) Target groups

- Rural population of the Project area (all components)
- Destitute women (Component 5: Poverty reduction intervention)
- Women (Component 3: Upgrading GC and RM)
- LGED officials and stakeholders (Component 6: Capacity development)

### (4) Approaches

- Management: Coordination with other projects and among the project components to enhance efficiency of public investment
- Civil work: Employment of local contractors and labor-intensive technologies to maximize benefits to local residents, including the poor
- Capacity development: Enhancement of LGED's and stakeholders' capacities to develop and maintain rural infrastructure

7

# 1. Project plan and costs

## 1.3 Summary of project costs

Item	(million tk.)			% to total
	FC	LC	Total	
<b>TOTAL PROJECT COST (A+B)</b>	<b>325</b>	<b>8,775</b>	<b>9,100</b>	<b>100%</b>
<b>A. PORTION ELIGIBLE FOR JICA LOAN</b>	<b>325</b>	<b>6,977</b>	<b>7,302</b>	<b>80%</b>
Component 1: Upgrading of Upazila roads		4,837	4,837	53%
Component 2: Upgrading of Union roads		293	293	3%
Component 3: Upgrading of GC and RM		328	328	4%
Component 4: Procurement of vehicles and equip.	114	110	224	2%
Component 5: Poverty reduction interventions		397	397	4%
Component 6: Capacity development	32	55	87	1%
Consultancy services	169	271	441	5%
Price escalation and contingency	10	686	686	8%
<b>B. PORTION NON-ELIGIBLE FOR JICA LOAN</b>		<b>1,798</b>	<b>1,798</b>	<b>20%</b>
Component 6: Capacity development		19	19	0%
Component 7: Upgrading of Upazila roads		1,054	1,054	12%
Land acquisition		31	31	0%
Project operation and recurrent costs		484	484	5%
Taxes and duties		90	90	1%
Price escalation and contingency		120	120	1%

8

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 1 and 7: Upgrading of Upazila roads

##### (1) Selection of Upazila roads: Ranking criteria

###### A. National and basic selection policy

A1 Upazila road

A2 Selection of at least one Upazila road per Upazila

###### B. Evaluation criteria for ranking

	weight
Total	100%
B1 Level of development	35%
B2 Economic potential	45%
B3 Social impact	5%
B4 Cost of construction	15%

##### (2) Selection of Upazila roads: Ranking results

Division/Greater District	Proposed roads (no.)	Selected roads (no.)		Total
		Component 1 for JICA loan	Component 7 for GOB budget	
Total	137	88	18	106
Barisal Division	66	39	10	49
Greater Faridpur	34	26	5	31
Greater Khulna	37	23	3	26

9

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 1 and 7: Upgrading of Upazila roads (cont.)

- (3) Road design type Component 1: Type 4 (2 roads) and Type 6 (86 roads)  
Component 7: Type 4 (0 roads) and Type 6 (18 roads)

##### (4) Quantity and cost (million tk.) of selected Upazila roads

Item	Component 1		Component 7		Total	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Upazila road component total		4,837		1,054		5,892
Pavement (with retention walls)	723 km	3,880	158 km	811	881 km	4,691
Pavement of earthen roads	481 km	2,715	98 km	524	579 km	3,240
Pavement of HBB/BFS	242 km	1,165	60 km	286	302 km	1,451
Bridge/culvert/ghats	2,730 m	906	705 m	232	3,435 m	1,138
Construction of bridges	2,424 m	808	596 m	199	3,020 m	1,007
Construction of culverts	306 m	93	109 m	33	415 m	126
Construction of ghats	2 nos	5	0 nos		2 nos	5
Safety measures		51		11		63
Establishment of bus bays	723 nos	32	158 nos	7	881 nos	39
Installation of guard posts	11,649 nos	13	2,611 nos	3	14,260 nos	16
Installation of sign boards	1,123 nos	6	239 nos	1	1,362 nos	7

10

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 2: Upgrading of Union roads

##### 1) Selection of Union roads: Ranking criteria

###### A. National and basic selection policy

A1 Union

A2 Selection of at least one Union road per Upazila

A3 Connection with a developed UP Complex

###### B. Evaluation criteria for ranking

	weight
Total	100%
B1 Level of development	35%
B2 Economic potential	45%
B3 Social impact	5%
B4 Cost of construction	15%

##### 2) Selection of Union roads: Ranking results

Division/Greater District	Proposed roads (no.)	Selected roads (no.)
Total	120	19
Barisal Division	60	8
Greater Faridpur	30	9
Greater Khulna	30	2

11

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 2: Upgrading of Union roads (cont.)

##### (3) Road design type: Type 8 for all selected Union roads

##### (4) Quantity and cost of selected Union roads

Item	Quantity	Cost (million tk.)
Total		293
Pavement with retention walls	69 km	292
Earthen road	50 km	221
HBB/BFS	18 km	71
Bridges/culverts/ghats	2 m	1
Bridges	0 m	0
Culverts	2 m	1

12

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 3: Upgrading of GC and RM

##### (1) Selection of GC and RM: Ranking criteria

###### A. National Policy

A1 Growth center or rural market

###### B. Evaluation criteria for ranking

	weight
Total	100%
B1 Level of development	40%
B2 Economic potentials	40%
B3 Sustainability of operation and maintenance	20%

##### (2) Selection of GCs and RMs: Ranking results

Division/Greater District	Growth centers		Rural markets	
	Proposed (no.)	Selected (no.)	Proposed (no.)	Selected (no.)
Total	58	58	62	18
Barisal Division	25	25	21	8
Greater Faridpur	17	17	21	9
Greater Khulna	16	16	20	1

13

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 3: Upgrading of GC and RM (cont.)

##### (3) Quantity and cost of selected GCs and RMs

Item	Quantity	Cost (mill. tk.)
Total		327.5
Growth center (GC)		266.3
GC upgrading	51 nos	153.0
Construction of women's sections	22 nos	13.2
Construction of ghats	41 nos	81.2
Construction of cyclone-resistant market sheds	9 nos	18.9
Rural market (RM)		61.2
RM upgrading	18 nos	36.0
Construction of ghats	13 nos	25.2

14

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 4: Procurement of vehicles and equipment

Items	Quantity	Total without CD and VAT (tk. million)
<b>Total</b>		<b>223.5</b>
<b>A. Vehicle</b>		<b>40.0</b>
1) 4-wheel drives	4 nos	6.6
2) 4-wheel double cabin pick-up trucks	14 nos	11.9
3) Motor cycles	123 nos	21.5
<b>B. Construction equipment</b>		<b>171.1</b>
1) 10-12 ton vibrator rollers (double drum)	14 nos	53.2
2) 7-9 ton vibrator rollers (double drum)	14 nos	42.0
3) Total stations (level machine)	90 nos	67.5
4) Laboratory equipment (accessories)	14 nos	8.4
<b>C. Office Equipment</b>		<b>12.4</b>
1) Computers and UPS's	104 nos	6.2
2) Printers	104 nos	3.1
3) Photocopiers	17 nos	2.7
4) Laptop computers	2 nos	0.3

15

## 1. Project plan and costs

### 1.4 Project component and costs

#### Component 5: Poverty reduction interventions

##### (1) Unit cost of poverty reduction interventions (per 1 km)

Item	Cost per km (tk. thousand)
<b>(a) Tree-planting and caretaking by LCS</b>	
Total	208
Tree-planting	67
Tree-caretaking	131
Tools and equipment for caretakers	5
Miscellaneous	4
<b>(b) Maintenance of village roads by LCS</b>	
Total	171
Maintenance of village roads	164
Tools and equipment for caretakers	4
Miscellaneous	3

##### (2) Quantity and cost of poverty reduction interventions

Item	Quantity	Cost (tk. million)
<b>Total</b>		<b>398</b>
(a) Tree-planting and caretaking by LCS	759km	158
(b) Maintenance of village roads by LCS	1,400km	240

16



**1. Project plan and costs**

**1.4 Project component and costs**

**Component 6: Capacity development**

Item	Quantity (trainee-days)	Cost (tk. million)
<b>Total</b>	<b>91,135</b>	<b>106.3</b>
a. Capacity development of LGED officials	22,736	56.7
b. Capacity development of contractors and construction workers	1,500	1.6
c. Capacity development of Upazila Chairpersons, UNO, and UP Chairpersons	1,050	1.1
d. Capacity development of growth center / rural market stakeholders	7,804	7.3
e. Capacity development of women shopkeepers of WMS's and physically- challenged shopkeepers	1,320	1.3
f. Capacity development of LCS members	56,665	22.3
g. Capacity development of local NGO trainers / facilitators	60	0.1
NGO contract		15.9

**17**

**1. Project plan and costs**

**1.4 Project components and costs**

**IV. Land acquisition**

**(1) Cost of land acquisition**

Division	Cost per hectare (tk. million)	Area to be acquired (ha)	Inflation Rate (%)	Estimated cost (tk. million)
<b>Total</b>		<b>17.14</b>		<b>30.79</b>
Barisal Division	1.54	7.10	137.5	15.03
Greater Faridpur	0.73	5.14	143.6	5.39
Greater Khulna	1.54	4.90	137.5	10.37

**18**

## 1. Project plan and costs

### 1.4 Project component and costs

#### V. Project operation and recurrent costs

##### (1) PIO staff deployment and costs

Location of post	Persons	Person-months	Total cost (tk. million)
<b>Total</b>	<b>240</b>	<b>14,400</b>	<b>187.5</b>
A. Project Implementation Office, LGED Headquarters, Dhaka	38	2,280	22.5
B. Design and Monitoring Office, LGED Circle Office, Faridpur	16	960	9.1
C. Quality Assurance Offices in 14 LGED District Offices	98	5,880	49.5
D. 88 LGED Upazila Offices	88	5,280	51.1
Allowances and benefits			55.3

##### (2) Office operation costs

Items	Cost (tk. million)
<b>Total</b>	<b>184.2</b>
A. Fuel costs for vehicles	56.7
B. Office operation cost (communication, supplies, utilities, etc.)	127.5
PIO at LGED HQs	15.0
Faridpur Office	7.5
District offices in Barisal Division	45.0
District offices in Greater Faridpur	37.5
District offices in Greater Khulna	22.5

19

## 1. Project plan and costs

### 1.4 Project component and costs

#### V. Project operation and recurrent costs (cont.)

##### (3) Costs for survey and investigation and equipment maintenance costs

Items	Cost (mill. tk.)
<b>Total</b>	<b>12.3</b>
Survey and investigation	3.3
Maintenance of vehicles and equipment	9.0
A. Construction Equipment	2.0
B. Vehicles	6.2
C. Office Equipment	0.8

##### (4) Development of offices

Division/Greater District	Cost (mill. tk.)
<b>Total</b>	<b>99.6</b>
Barisal Division	42.0
Greater Faridpur	43.6
Greater Khulna	14.0

20



# 1. Project plan and costs

## 1.7. Financial plan and procurement method

Item	09/10	10/11	11/12	12/13	13/14	Total
<b>TOTAL PROJECT COST (A+B)</b>	<b>398</b>	<b>3,065</b>	<b>3,343</b>	<b>1,632</b>	<b>661</b>	<b>9,100</b>
	4%	34%	37%	18%	7%	100%
<b>A. PORTION ELIGIBLE FOR JICA LOAN</b>	<b>337</b>	<b>2,480</b>	<b>2,715</b>	<b>1,292</b>	<b>477</b>	<b>7,302</b>
<b>I. Procurement and construction</b>	<b>232</b>	<b>2,233</b>	<b>2,462</b>	<b>1,055</b>	<b>306</b>	<b>6,286</b>
Component 1: Upgrading of Upazila roads		1,935	1,935	726	242	4,837
Component 2: Upgrading of Union roads			146	146		293
Component 3: Upgrading of GCs and RMs		131	131	49	16	328
Component 4: Proc. of vehicles and equip.	224					224
Price escalation and contingency	8	167	249	134	46	605
<b>II. Procurement of services</b>	<b>105</b>	<b>247</b>	<b>253</b>	<b>237</b>	<b>173</b>	<b>1,016</b>
Component 5: Pov. reduction interventions	20	119	119	99	40	397
Component 6: Capacity development	10	19	19	19	19	87
Consultancy services	70	93	93	93	93	441
Price escalation and contingency	4	17	23	26	21	91
<b>B. PORTION NON-ELIGIBLE FOR JICA LOAN</b>	<b>61</b>	<b>585</b>	<b>628</b>	<b>340</b>	<b>184</b>	<b>1,798</b>
<b>III. Project component</b>	<b>2</b>	<b>426</b>	<b>426</b>	<b>162</b>	<b>67</b>	<b>1,073</b>
Component 6: Capacity development	2	4	4	4	4	19
Component 7: Upgrading of Upazila roads		422	422	158	53	1,054
<b>IV. Land acquisition</b>	<b>2</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>2</b>	<b>31</b>
<b>V. Project operation and recurrent costs</b>	<b>48</b>	<b>97</b>	<b>121</b>	<b>121</b>	<b>97</b>	<b>484</b>
<b>VI. Taxes and duties</b>	<b>9</b>	<b>18</b>	<b>23</b>	<b>23</b>	<b>18</b>	<b>90</b>
<b>VII. Price escalation and contingency</b>	<b>0</b>	<b>35</b>	<b>49</b>	<b>25</b>	<b>10</b>	<b>120</b>

23

# 1. Project plan and costs

## 1.7. Financial plan and procurement method

Item	Procurement method	Packaging
<b>A. PORTION ELIGIBLE FOR JICA LOAN</b>		
<b>I. Procurement and construction</b>		
Component 1 and 7: Upgrading of Upazila roads		
1.1 Pavement (including culverts and ghats)	Local bidding	3 km/Road Package
1.2 Bridges	Local bidding	1 bridge/Bridge Package
1.3 Road safety measures	Local bidding	1 road/Road Package
Component 2: Upgrading of Union roads		
2.1 Pavement (including culverts)	Local bidding	3 km/Road Package
2.2 Bridges	Local bidding	1 bridge/Bridge Package
Component 3: Upgrading of GC and RM		
3.1 Growth centers	Local bidding	1 GC/Market Package
3.2 Rural markets	Local bidding	1 RM/Market Package
Component 4: Procurement of vehicles and equip.		
4.1 Vehicles	International bidding	1 package
4.2 Construction equipment	International and local bidding	1-several packages
4.3 Office equipment and furniture	Local bidding	1 package
<b>II. Procurement of services</b>		
Component 5: Poverty reduction interventions		
5.1-1 Tree-planting by LCS	Direct procurement	5 km/package
5.1-2 Tree-caretaking by LCS	Direct procurement	2 km/package
5.2 Maintenance of village roads by LCS	Direct procurement	5 to 10 km/package
Component 6: Capacity development		
6.1 Special foundation training by BARD	Direct procurement	1 package
6.2 Overseas training	Direct procurement	1 training/package
6.3 Training by NGOs	Local bidding	1 training/package
Consultancy services		
7.1 Consultancy services and support staff	International bidding	1 package

24

## 2. Evaluation of project plan

### 2.1 Expected benefits

Sector / Issue	Main direct beneficiaries	Description of expected benefits
Rural transport	•Transport operators •Passengers / commuters	•Reduction of travel and transport costs •Reduction in time required for travel and transport •Improved access to markets, schools, hospitals, UPCs, and other facilities •Improved access to employment opportunities
Local Industry	•Farmers •Fishers	•Improved access to inputs and markets •Improved access to information on production technologies and markets •Reduction of post-harvest losses and spoilage •Expansion / introduction of new / existing industries
Real estate	•Land owners	•Increase in price of land
Trade	•Producers •Traders •Consumers •Government	•Reduction in spoilage of perishable goods •Increase in sellers and buyers •Increase in the number of shops and goods and services available •Expansion of catchment area •Increase in trading volume •Increase in market lease revenue
Employment	•Local residents •Destitute people	•Increase in employment in construction work •Increase in work specifically targeting the poor •Increase in opportunities to earn cash
Gender	•Female shopkeepers / traders •Rural women in general	•Increase in opportunities to trade •Increase in trade and income at markets •Safer and easier access to markets, schools, hospitals, and other facilities •Increase in opportunities to engage in activities outside of their homes •Increase in employment opportunities

25

## 2. Evaluation of project plan

### 2.2 Economic evaluation

(1) EIRR of Upazila and Union roads, and growth centers

Infrastructure	Range of EIRR	Average EIRR
Upazila road	16 % - 47 %	32%
Union road	40 % - 44 %	41%
Growth center	26 % - 77 %	57%

(2) Economic evaluation of the project

Scenario	EIRR
1) Base Case	25%
2) Costs plus 20%	22%
3) Benefits minus 20%	22%
4) Combination of both cases	19%

26

### **3. Monitoring and evaluation**

#### **(1) Progress monitoring**

- Annual Development Program Review Format to be submitted to LGED on a monthly basis
- Project Monitoring Form to be submitted to the Evaluation Division of the Ministry of Planning on a quarterly basis
- Quarterly Report to be submitted to JICA on a quarterly basis
- Project Completion Report to be submitted to JICA at project termination

#### **(2) Effect monitoring and evaluation**

- The LGED guidelines (LGED, 1999) and the methodology employed in RDP-25 will be used to conduct effect monitoring and evaluation
- The effect monitoring and evaluation methods will be determined in the first year
- A baseline survey with controls will be conducted in the first year
- A mid-term assessment and a terminal assessment will be conducted

**27**

### **4. Environmental and social considerations**

- The Project will adhere to Environmental Conservation Rules 1997
- The Project will not have significant adverse impacts
- The potential adverse impacts which will require mitigation measures include:
  - a) Soil erosion caused by construction works
  - b) Disturbance of regional hydrology
  - c) Permanent acquisition of private land
  - d) Loss of income sources of ferry-related workers
- The proposed mitigation measures and monitoring mechanism should be incorporated into the application for Environmental Clearance Certificate.
- EIA should be completed without delay for construction of bridges over 100 meters, which falls into the Red category

**28**

**Thank you for your attention**

