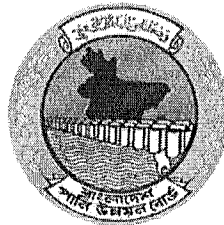


PROJECT COMPLETION REPORT (PCR)

IMED 04/2003 (Revised)

**Name of the Project : “Planning for Flood Management in Bangladesh
(Ganges and Brahmaputra Basin)”**



Directorate of Planning-2

BANGLADESH WATER DEVELOPMENT BOARD

MINISTRY OF WATER RESOURCES

**GOVERNMENT OF THE PEOPLE'S REPUBLIC OF
BANGLADESH**

Government of the People's Republic of Bangladesh
Ministry of Planning
Implementation Monitoring and Evaluation Division

PROJECT COMPLETION REPORT: IMED 04/2003 (Revised)

A. PROJECT DESCRIPTION :

- | | | |
|------------|---|---|
| 01. | Name of the Project | : Planning for Flood Management in Bangladesh
(Ganges and Brahmaputra Basin) |
| 02. | Administrative
Ministry/Division | : Ministry of Water Resources |
| 03. | Executing Agency | : Bangladesh Water Development Board
(BWDB) |
| 04. | Location of the Project | : |

Division

Dhaka, Mymensingh, Khulna, Rajshahi, Rangpur

District

Dhaka, Mymensingh,
Munshiganj, Jamalpur,
Tangail, Sherpur, Nilphamari,
Rajshahi, Natore, Pabna,
Faridpur, Kustia, Rajbari,
Kurigram, Lalmonirhat,
Rangpur, Gaibandha, Bogra,
Madaripur, Sirajganj,
Manikganj.

05. Objective of the Project :

The overall long term objective of this project is to develop an integrated plan and system for flood management and risk reduction in Bangladesh, based on the current needs and flood management situation. The flood management plan shall consist of engineering measures and non-engineering measures. The engineering measures will be integrated combination of embankment, reservoirs, retention basins, or river training programmes etc., which aims to provide discharge capacity and sufficient storage for flood. The non-engineering measures will focus on the development of a flood forecasting and early warning system, which aims to provide technical support for decision making during flooding season.

In summary, the ultimate goal of the planning work is to provide a guidance for Bangladesh on flood management measures to improve the safety level of the Ganges Basin and the Brahmaputra Basin in Bangladesh on dealing with flood.



06. Estimated Cost
(In lakh Taka)

:

	Original	Latest Revised
(a) Total	2747.54	-
(b) Taka	179.30	-
(c) Foreign Currency	2568.24	-
(d) Project Aid	2568.24	-
(e) RPA	-	-

07. Date of Approval

:

PCP

TPP

(a) Original

:

-

23 February 2017

(b) Latest Revised

:

-

-

08. Implementation Period

:

	Date of Commencement	Date of Completion
(a) Original	January 2017	June 2019
(b) Latest Revised	-	-
(c) Actual	June 2017	June 2019

09. Financing Arrangement (Source-wise):

9.1 Status of Loan/Grant

a) Foreign Financing :

Source (s)	Currency as per Agreement	Amount in CNY (million)	Nature (Loan/Grant/supplier's/credit)	Date of Agreement	Date of Effectiveness	Date of Closing	
						Original	Revised
1	2	3	4	5	6	7	8
Government of China (GoC)	CNY	21.60	Grant	27.09.2016	27.09.2016	June 2019	-



b) GOB :

(In lakh Taka)			
Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
179.30	-	179.30	-

9.2 Utilization of Project Aid: (Source wise)

Source (s)	Total Amount		Actual Expenditure		Unutilized Amount	
	In CNY (in million)	In Local Currency (BDT in lakh Taka)	In CNY (in million)	In Local Currency (BDT in lakh Taka)	In CNY (in million)	In Local Currency (BDT in lakh)
1	2	3	4	5	6	7
Gouvernement of China (GoC)	21.60	2568.24	21.60	2568.24	-	-

* Exchange rate with date: 1 CNY= BDT 11.89 (Bangladesh Bank Exchange Rate on 26 January 2016)

9.3 Re-imbursible Project Aid (RPA) :

RPA Amount		Amount Spent	Amount Claimed	Amount Re-imbursed	Remarks
As per PP	As per Agreement				
1	2	3	4	5	6
Not Applicable for this project.					

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B. IMPLEMENTATION POSITION

01. Implementation Period :

Implementation Period as per TPP		Actual Implementation period	Time Over-run (% of original implementation period)	Remarks
Original	Latest Revised			
1	2	3	4	5
January 2017 to June 2019	-	June 2017 to June 2019	-	

02. Cost of the Project:

(In lakh Taka)

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)	Remarks
	Original	Latest revised			
1	2	3	4	5	6
TOTAL	2747.54	-	2594.64	-	
TAKA	179.30	-	26.40	-	
PA	2568.24	-	2568.24	-	

03. Project Personnel: The project have been implemented by existing manpower of Directorate of Palnning-2, BWDB, Dhaka.

Sanctioned strength as per PP	Manpower employed during execution	Status of the existing manpower			Manpower Employed	
		Manpower requirement for O&M as per PP	Existing manpower for O & M	Others		
1	2	3	4	5	Male	Female
Officer (s) : 06	05	-	-	-	03	02
Staff(s) : -	-	-	-	-	-	-
Total : 06	05	-		-	03	02



04. Training of Project Personnel (Foreign/Local) :

a. Foreign:

Field of Training / Study tour/ workshop/ Seminar etc.	Provision as per PP		Actual		Remarks
	Number of person	Duration	Number of person	Duration	
1	2	3	4	5	6
Study Tour	08	10 days	06	10 days	Place: China
Consultation Tour-1	08	10 days	08	10 days	Place: China
Consultation Tour-2	08	10 days	09	07 days	Place: China

b. Local:

Field of Training / Study tour/ workshop/ Seminar etc.	Provision as per PP		Actual		Remarks
	Number of person	Duration	Number of person	Duration	
1	2	3	4	5	6
Local Training -1 on Planning Preparation of Flood Management in Bangladesh	15	05 days	15	05 days	
Local Training -2 on Planning Preparation of Flood Management in Bangladesh	15	05 days	15	05 days	



05. Component-wise Progress (As per latest approved TPP):

(In lakh Taka)

Items of Work (as per TPP)	Unit	Target (as per TPP)		Actual Progress		Reasons for deviation (±)
		Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7
(a) Revenue Component						
Supplies and Services:						
Travel Expenses	L.S	5.00	100.00%	0.45	8.98%	
Rent-Office	24 months	48.00	100.00%	-	-	
Misc. Taxes (Income Tax, VAT for Consultation, House Rent, Vehicle Tax, Token, Fitness, Insurance etc.) and duties	L.S	60.00	100.00%	-	-	
Postage	L.S	1.00	100.00%	0.13	12.71%	
Petrol & Lubricant	L.S	3.00	100.00%	0.45	14.98%	
Printing & Binding	L.S	1.00	100.00%	0.44	43.73%	
Stationary, Seals and Stamps	L.S	1.00	100.00%	0.99	99.14%	
Training Expenses (Local)	L.S	12.00	100.00%	11.32	94.37%	
Honararium/ Fees/ Remuneration	L.S	3.00	100.00%	1.59	53%	
Hiring Charge (Microbus-2nos.)	24 months	37.80	100.00%	3.56	9.43%	
Repair, Maintenance and Rehabilitation:						
Motor Vehicles	L.S	1.00	100.00%	0.996	99.62%	
Computers and Office Equipment	L.S	1.00	100.00%	0.998	99.83%	
Machineries and Equipment	L.S	0.50	100.00%	0.496	99.19%	
(b)Capital Component						
Acquisition of Assets						
Machinery and Other Equipments	L.S	3.00	100.00%	2.999	100.00%	
Computers and Accessories	L.S	2.00	100.00%	1.98	100.00%	
Consultancy	man-month	2568.24	100.00%	2568.24	100.00%	
Total (a+b)		2747.54		2594.64		

06. Information regarding Project Director (s):

Name & Designation with pay Scale.	Full time	Part time	Responsible for more than one project	Date of		Remarks
				Joining	Transfer	
1	2	3	4	5	6	7
AKM Tahmidul Islam Director/ Superintending Engineer Planning-II, BWDB, Dhaka & Project Director. Pay Scale: 50000-71200	Yes	-	Yes	14.06.2017	-	

Signature

07. Procurement of Transport (in Nos.): No transport was purchased under this project. One microbus was hired as per Consultant's demand.

Type of transport	Number as per P.P.	Procured with date	Transferred to Transport Pool with date	Transferred to O & M with date	Condemned/damaged with date	Remarks
1	2	3	4	5	6	7
Not Applicable						

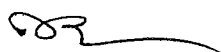
08. Procurement of Goods, Works and Consultancy Services: Not applicable.

08.1 Goods & Works of the Project costing above Tk. 200.00 lakh. and Consultancy above Tk. 100.00 lakh : Not applicable because cost of goods procured under this project is less than Tk. 200.00 lakh and the Consultants of this project were engaged as per the Letter of Exchanges between GoB & GoC and letter from Embassy of China vide reference no:2015-EC-ZHG-084, dated 31 December 2015.

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Proposal Cost (in crore Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
Not Applicable. Consultants of this project were engaged as per the Letter of Exchanges between GoB & GoC and letter from Embassy of China vide reference no:2015-EC-ZHG-084, dated 31 December 2015.						

8.2 Use of Project Consultant (s) (Foreign/Local):

Name of the Field	Approved man month		Actual man month utilised	Remarks
	As per PP	As per contract		
1	2	3	4	5
(a) Foreign	132	-	97	
(b) Local	96	-	38.5	



09. Construction/Erection/Installation Tools & Equipment: Not applicable.

Description of items	Quantity (as per PP)	Quantity procured with date	Transferr ed to O & M with date	Disposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7
Not applicable						



C. FINANCIAL AND PHYSICAL PROGRAMME :

01. (a) Original and revised schedule as per TPP :

(In lakh Taka)

Financial Year	Financial provision & physical target as per original TPP				Financial provision & physical target as per latest revised TPP			
	Total	Taka	P.A.	Physical %	Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9
2016-17	318.30	61.48	256.82	11.5%	No revision of the TPP was required.			
2017-18	1104.00	76.70	1027.30	40.18%				
2018-19	1325.24	41.12	1284.12	48.23%				
Total	2747.54	179.30	2568.24	100%				

01. (b) Revised ADP allocation and progress :

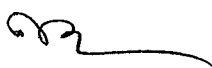
(In lakh Taka)

Financial Year	Revised Allocation & target				Taka release	Expenditure & physical progress			
	Total	Taka a	P.A.	Physical %		Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9	10
2016-17	-	-	-	-	-	-	-	-	-
2017-18	1320	36	1284	48%	31.70	1297.92	13.80	1284.12	47%
2018-19	1315	31	1284	52.76%	16.10	1296.72	12.60	1284.12	51%



D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objectives as per TPP	Actual achievement	Reasons for shortfall, if any
To provide a guidance for Bangladesh on flood management measures to improve the safety level of the Ganges Basin and the Brahmaputra- Jamuna Basin in Bangladesh through planning for flood management. The project would provide the following output: • Planning and Design of Structural Measures and Development of Non- Structural measures, • ESIA; • Cost Estimate.	The project has provided the following output: • Flood Management Plan of the mainstreams of Jamuna River, Ganges River and Padma River (reaches upstream of Padma Bridge), as well as the tributaries such as the Dudhkumar River, the Dharla River and the Teesta River. • Design of Structural Measures and guidance for Development of Non-Structural measures, • ESIA; • Cost Estimate.	Due to limited time and resources, all tributaries/ distributeris of the main rivers within the project area could not be covered within the planning scope. As per deicion of review meeting on Draft Inception Report three main branches (Dharla, Teesta and Dudh kumar River) of Brahmaputra river is considered in the project.



E. BENEFIT ANALYSIS

01. Annual Out-put: Not applicable for study project.

Items of out-put	Unit	Estimated quantity expected at full capacity	Actual quantity of out-put during the 1st year of operation at full capacity (or during, real production for newly completed project).
(a)			
(b)			
(c)			
(d)			

02. Cost / Benefit : Not applicable for study project.

Item	Estimated	Actual
(1) Benefit cost ratio of the project		
(i) Financial		
(ii) Economic		
(2) Internal Rate of Return		
(i) Financial		
(ii) Economic		

03. Please give reasons for shortfall, if any, between the estimated and actual benefit:

Not Applicable.



F. MONITORING AND AUDITING

0.1 Monitoring:

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4

(a) Ministry / Agency: Not yet conducted.

(b) IMED : Not yet conducted.

(c) Others: Not yet conducted

0.2. Auditing during and after Implementation:

2.1. Internal Audit: Not yet conducted.

Period of Audit	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
1	2	3	4

2.2. External Audit: Not yet conducted.

Audit period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
1	2	3	4



G. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on :

1.1 Background

Bangladesh generally experiences four types of floods. Flash floods occur during mid-April before the on-set of the south-western monsoon. Rain-fed floods generally happen in the deltas in the south-western part of the country and are increasing in low-lying urban areas. River floods are the most common; the areas are inundated during monsoon season along the river and in cases far beyond the riverbanks. Storm surge floods occur along the coastal areas of Bangladesh, which has a coastline of about 800 km along Bay of Bengal. In case of catastrophic cyclones, the entire coastal belt is flooded, sometimes causing great loss of lives. Coastal areas are also subjected to tidal flooding from June to September.

During the last half-century, at least eight extreme flood events occurred affecting 50% of land area. These extreme events are generated by excessive rainfall in the catchments. When water levels in the three major river systems rises simultaneously and cross the danger marks (usually starting from mid-July and continuing until mid-September), an extreme flood situation usually occurs all over the country. Duration of these extreme events normally extends from 15 days to 45 days. This was observed during those which occurred in 1987, 1988 and 1998, the latter having been the severest one in terms of magnitude and duration. Recurrent flooding also causes a repeated threat of loss of people's lives and assets.

The main rivers, such as the Brahmaputra, the Jamuna, the Padma, and the Ganges, are major contributors of these issues, which have been restricting the development in large areas behind the rivers as the national poverty map indicates. Substantial flood management system has been developed along the main rivers; destructive flood water of recurrent flooding has been threatening the steep economic growth of the country. For this reason more sustainable and stable flood management planning have been increasingly demanded. Accordingly, the proposal is prepared particularly to deal with the flood management issues with planning on flood management system and risk reduction in Bangladesh. Major work contents include the planning of flood management system and the improvement of the current non-engineering measures i.e. the improvement of the current flood forecasting early warning system.

In continuation of above circumstances, a high level Technical Mission from Yellow River Engineering Consulting Co. Ltd. (YREC), China visited Bangladesh. The Missions aimed to initiate the proposed Project The Mission discussed with the BWDB high officials and delivered their view in planning the project in a wrap-up meeting in the Ministry of Water Resources, Government of the People's Republic of Bangladesh. Finally the project was prepared by Bangladesh Water Development Board fulfilling the requirements of GoB.



1.2 Justification/Adequacy

During the last half-century, at least eight extreme flood events occurred affecting 50% of land area. These extreme events are generated by excessive rainfall in the catchments. When water levels in the three major river systems rises simultaneously and cross the danger marks (usually starting from mid-July and continuing until mid-September), an extreme flood situation usually occurs all over the country. Duration of these extreme events normally extends from 15 days to 45 days. This was observed during those which occurred in 1987, 1988 and 1998, the latter having been the severest one in terms of magnitude and duration. Recurrent flooding also causes a repeated threat of loss of people's lives and assets.

The main rivers, such as the Brahmaputra, the Jamuna, the Padma, and the Ganges, are major contributors of these issues, which have been restricting the development in large areas behind the rivers as the national poverty map indicates. Substantial flood management system has been developed along the main rivers; destructive flood water of recurrent flooding has been threatening the steep economic growth of the country. For this reason more sustainable and stable flood management planning have been increasingly demanded. Accordingly, the proposal is prepared particularly to deal with the flood management issues with planning on flood management system and risk reduction in Bangladesh. Major work contents include the planning of flood management system and the improvement of the current non-engineering measures i.e. the improvement of the current flood forecasting early warning system.

1.3 Objectives

Overall objectives:

Basically establish a flood control engineering system for the mainstreams and tributaries within the planning scope and a sound hydrological monitoring, warning and forecasting system in line with the principle of combining benefit promotion and damage reduction, taking flood control security as the principal thing and giving consideration to increasing the available amount of floodplain, to further improve the ability to fight against flood and control flood-related risks and substantially protect the key flood control and protection areas in major rivers covered within the planning scope; to protect people's lives and properties and increase the available amount of floodplain in case of floods within the standards in major rivers covered within the planning scope; and to take various measures and minimize the losses caused by flood disasters in case of flood exceeding the design level.

Short-term objectives:

By 2025, according to the planned flood control standard, build preliminary embankment works of the mainstreams of the Jamuna River, the Ganges River and the Padma River (reaches upstream of Padma Bridge), as well as the tributaries such as the Dudhkumar River, the Dharla River and the Teesta River; complete floodplain protection & river training works of key river reaches of the project to preliminarily control river bank erosion of the key river reaches and increase the available amount of floodplain; and further improve the hydrological monitoring, warning and forecasting system to improve the ability to fight against flood and control flood-related risks in planned river reaches.



Long-term objectives:

By 2035, according to the planned flood control standard, build preliminary embankment works of main streams and tributaries within the planning scope; preliminarily control river bank erosion of the mainstreams of the Jamuna River, the Ganges River, the Padma River (reaches upstream of Padma Bridge), as well as major tributaries such as the Teesta River, the Dharla River and the Dudhkumar River and relatively stabilize the main channels; further increase the available amount of floodplain; establish a sound hydrological monitoring, warning and forecasting system; protect people's lives and properties in case of floods within the standards in major rivers covered within the planning scope; and take various measures and minimize the losses caused by flood disasters in case of flood exceeding the design level; and further increase the available amount of floodplain.

1.4. Project revision with reasons: Not applicable.

2. Rationale of the project in respect of Concept, Design, Location and Timing.

This project has direct linkage with Goal no: 1,2,6,11 and 13 of SDGs and Goal no: 1, 2 and 3 of Bangladesh Delta Plan. The Seventh Five Year Plan mentioned about Basin-Wise Water Resources Development Initiative. Through this project, an attempt was taken to prepare a basin wise flood management plan for Ganges basin area and Brahmaputra Basin area within Bangladesh. Although the objectives could not be fully achieved due to shortage of resources and time, the project has given a flood management plan for Brahmaputra-Jamuna, Ganges, Padma (from Aricha confluence of Ganges and Brahmaputra to Padma Bridge), Dudhkumar, Dharla and Teesta river which will help for future basin wise flood management planning in Bangladesh.

3. Brief description on planning and financing of the project and its applicability:

◆ Project Identification

The project was first conceived during the official visit of the Honorable Prime Minister of Bangladesh Sheikh Hasina to China, Letter of Exchanges were signed between two Governments on 9 June 2014 regarding "Feasibility Study of Flood Management in Bangladesh". A team of experts from Yellow River Engineering Consulting Co. Ltd. (YREC) under the Yellow River Conservancy Commission of the Ministry of Water Resources of China subsequently visited Bangladesh from 13 to 27 July 2014. The Chinese Team carried out preliminary site investigation & data collection and had a wrap up meeting with the Ministry of Water Resources of Bangladesh. The Minutes of the Meeting describes the responsibilities of both parties on the prospective project.

Afterwards, Letter of Exchanges for the project "Planning for Flood Management in Bangladesh" were signed by the Government of China (GoC) and Government of Bangladesh (GoB) on 13 January 2015 (revised on 12 May 2015) & 07 June 2015 respectively on the basis of the aforementioned Letter of Exchanges and minutes of the wrap up meeting.

The Contract of the Project was signed between BWDB and YREC on 27 September 2016. YREC has been assigned as the Consultants of the project as per the Grant Approval Letter from the GoC. The TPP of the project was approved on 23 February 2017. The Consultants of YREC arrived in Bangladesh for starting the project works on 10 June 2017.



◆ Project Preparation

In view of the above, BWDB prepared a TPP to execute the study project.

◆ Appraisal

Appraisal meeting and SPEC meeting on the project was held in Planning Commission on 02.11.2016 and 12.12.2016 respectively

◆ Credit Negotiation

◆ Credit Agreement

◆ Credit Effectiveness

◆ Loan Disbursement

◆ Loan Conditionalities

Not Applicable for this project as the fund was a grant from the Government of China (GoC).

◆ Project Approval

The TPP of the project was approved on 23 February 2017. The Consultants of YREC arrived in Bangladesh for starting the project works on 10 June 2017.

◆ Others (if any).

4. Analysis of the Post-Implementation situation and result of the project : Not applicable.

4.1 Whether the beneficiaries of the project have clear knowledge about the Target/ Objectives of the project.

4.2 Programme for use of created-facilities of the project

4.3 O & M programme of the project.

4.4 Impact of the project -

4.4.1 Direct

4.4.2 Indirect

4.5 Transfer of Technology and Institutional Building through the project

4.6 Employment generation through the project.

4.7 Possibility of Self employment

4.8 Possibility of women-employment opportunity

4.9 Women's participation in development

4.10 Probable Impact on Socio-Economic activity.

4.11 Impact on environment

4.12 Sustainability of the project

4.13 Contribution to poverty alleviation/reduction

4.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc.

4.15 Contribution of Micro-credit programmes and Comments on overlapping with any NGO activities.



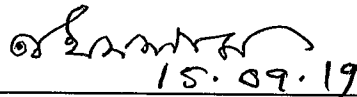
5. **Problems encountered during Implementation (with duration & steps taken to remove those):**
Not applicable for study project.

5.1	Project Management	5.11	Design formulation/approval
5.2	Project Director	5.12	Project aid disbursement and re-imbursment
5.3	Land Acquisition	5.13	Mission of the development partners.
5.4	Procurement	5.14	Time & Cost Over-run
5.5	Consultancy	5.15	Project Supervision/Inspection
5.6	Contractor	5.16	Delay in Decision
5.7	Manpower	5.17	Transport
5.8	law & Order	5.18	Training
5.9	Natural calamity	5.19	Approval
5.10	Project financing, allocation and release	5.20	Others.

6. **Remarks & Recommendations of the Project Director:**

The project has been successfully completed in June 2019. The project was aimed to prepare a basin level flood management plan for Ganges and Brahmaputra basin within Bangladesh. But basin wise planning is very difficult for Bangladesh because the major portions of the basins lie within the territory of India. With the limited time and resources allocated for the project, it was not possible to consider the whole basin area of Ganges and Brahmaputra rivers. A flood management plan covering 21 districts of the project area has been developed through this project which has been accepted by Bangladesh Water Development Board. It is anticipated that outcome of the project will help in the future basin wise flood management plan of Bangladesh.

Date :

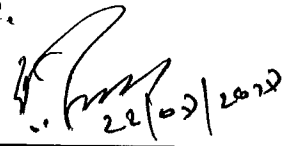

15.09.19
Signature and seal of the Project Director/Manager

A.K.M. Tahmidul Islam
Project Director
Planning for Flood Management
in Bangladesh Project
BWDB, Dhaka.

7. **Remarks/Comments of Agency Head**

This study project was taken to provide guidance on flood management measures to improve safety level of the Ganges Basin and Brahmaputra-Jamuna Basin. Upon the completion of the project, it provided a flood management plan of the mainstream of Jamuna, Ganges and Padma River. The study project also provided design of structural measures and guidance for non structural measures. Due to limited time and resources some of the tributaries of the main river are considered in the project boundary. Therefore, the project is a successful one.

Date :


22/02/2022
Signature and Seal
(Md. Mahfuzur Rahman)
Director General
BWDB, Dhaka.

8. Remarks/Comments of the officer in- charge of the Ministry/Division

Date :

Signature and Seal
