

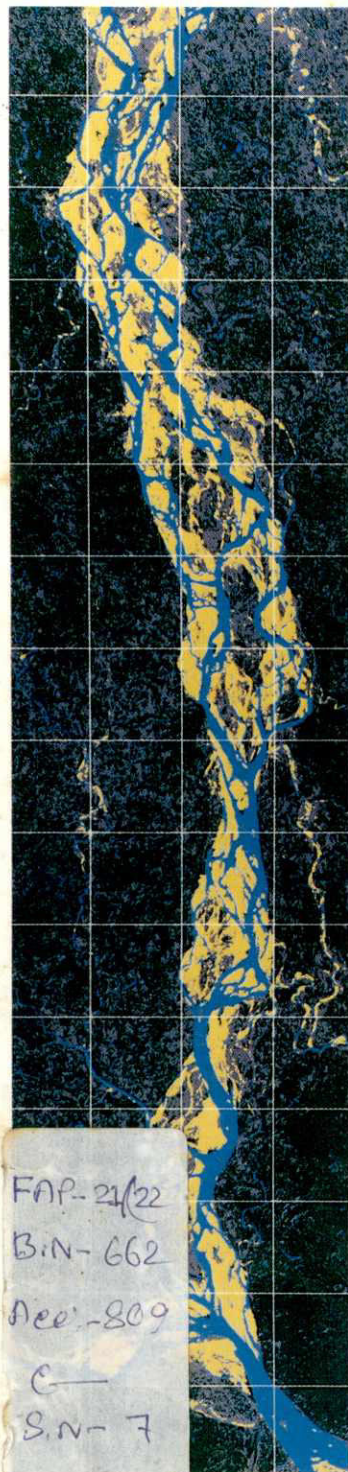
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Call - FAP 21/22

GOVERNMENT OF PEOPLES REPUBLIC OF BANGLADESH  
MINISTRY OF IRRIGATION, WATER DEVELOPMENT AND FLOOD CONTROL  
FLOOD PLAN COORDINATION ORGANIZATION

KREDITANSTALT FÜR  
WIEDERAUFBAU (KfW)

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CAISSE FRANCAISE DE  
DEVELOPPEMENT (CFD)



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BANK PROTECTION AND  
RIVER TRAINING (AFPM)  
PILOT PROJECT  
FAP 21/22

BN-662  
N-809



TEST  
AND  
IMPLEMENTATION  
PHASE

ADMINISTRATION AND  
FINANCIAL REPORT  
REFERRING TO  
PROGRESS REPORT NO.3

JUNE '93 TO MARCH '94



CONSULTING CONSORTIUM FAP 21/22

RHEIN-RUHR ING.-GES.MBH, DORTMUND/GERMANY

COMPAGNIE NATIONALE DU RHONE, LYON/FRANCE  
PROF.DR. LACKNER&PARTNERS, BREMEN/GERMANY  
DELFT HYDRAULICS, DELFT/NETHERLANDS

In association with:

BANGLADESH ENGINEERING &  
TECHNOLOGICAL SERVICES LTD.(BETS)  
DESH UPODESH LIMITED (DUL)

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**BANK PROTECTION AND RIVER TRAINING  
(AFPM) PILOT PROJECT  
FAP 21/22**

**TEST AND IMPLEMENTATION PHASE**



**ADMINISTRATION AND FINANCIAL REPORT  
REFERRING TO PROGRESS REPORT  
NO. 3**

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JUNE '93 TO MARCH '94

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BANK PROTECTION AND RIVER TRAINING (AFPM)  
PILOT PROJECT FAP 21/22

**TEST AND IMPLEMENTATION PHASE  
ADMINISTRATIVE AND FINANCIAL REPORT  
REFERRING TO PROGRESS REPORT NO.3**

01 June, 1993 to 31 March, 1994

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## A INTRODUCTION

### 1 BACKGROUND

The Project was awarded by the Flood Plan Coordination Organization (FPCO) represented by the Kreditanstalt für Wiederaufbau (KfW) to the Joint Venture Rhein-Ruhr Ingenieur-Gesellschaft mbH as lead partner, Compagnie Nationale du Rhône, Prof.Dr. Lackner & Partners and Delft Hydraulics in association with Bangladesh Engineering and Technological Services Ltd. (BETS) and Desh Upodesh Ltd. (DUL).

The Consultancy Agreement was signed on October 14, 1991. The date of commencement was fixed on December 1, 1991.

On the occasion of a project appraisal mission from 26.01.1993 to 07.02.1993 by KfW and CFD the results and recommendations of the Planning Study were discussed in tripartite meetings of FPCO, KfW/CFD and the Consultant. The study's overall concept was agreed to by FPCO and KfW/CFD.

As to the sequence of the activities, however, there was a preference to have the general discussion on river training prior to any further investigations and to formally finalize the FAP 22 Planning Study with that meeting. It was therefore agreed to obtain an Experts Opinion on Jamuna River Training/AFPM strategies by holding a discussion with a team of reputed experts in the field of river training and river basis management, and the Consultant was requested to make respective arrangements.

The other result of the discussions was the installation of the Final Stage of Phase I, after finalizing the main services of the Planning Study (Phase I) on 31.10.93 and before starting the Test and Implementation Phase (Phase II) on 01.06.1993. The Final Stage of Phase I served to prepare modified work and staffing schedule for Phase II, to receive and discuss the comments to the Draft Final Report, to prepare the respective answers and to issue the Final Report and to include the relevant comments in the Final Report. The costs of the Final stage of Phase I are covered by the balance of the funds for Phase I.

The Letter to Proceed into the Test and Implementation Phase (Phase II) was issued on May 15, 1993 and the Test and Implementation Phase started on June 01, 1993.

The so called EXPERT DISCUSSION on river training of FAP 22 was held in Dhaka on 2nd, 3rd and 4th of November 1993.

The present Report of the Test and Implementation Phase (Phase II) covers the period from June 01, 1993 to March 31, 1994.

### 2 IMPORTANT DATES AND EVENTS

15.05.1993	Issue of Letter to Proceed into Test and Implementation Phase (Phase II)
01.06.1993	Date of Commencement for the services for Phase II
02.11 to 04.11.1993	Expert Discussion on River Training (FAP 22)
23.02.1994	Issue of Tender Documents for Test Site No. 1 (Kamarjani)



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## B ADMINISTRATIVE SUBJECTS

### 1 STAFFING

#### 1.1 Professional Staff Fielded

As per the consulting Agreement the fees for the professional staff will be paid in accordance to the time actually spent on the project. The cost for local support staff is included in the office running costs.

The assignment periods of the expatriate and the local professional staff for the reporting period are given in Part 1, Table 1 and Table 2 and Part 2, Table 1 respectively:

#### 1.2 Staff Schedule

B. Part 1, Table 3 and B. Part 2, Table 2 of the present report shows the staffing schedule as per Letter to Proceed.

There are only minor changes in the course of executing the Project, details are given below.

Modification of staff arrangement:

#### Expatriate Staff

No.	Function	Person	Modified MM	Remarks
1.1	Project Director	Dr D Neuhaus	--	
1.3.1	Project Manager	C Netzeband	- 0.87	Medical Treatment
1.4	Chief Hydraulic Design Engineer	Dr H Kramer	+ 0.46	General adjustment, work for project purpose in Europe
2.1.1	Hydraulic Design Engineer	M Schwarz	+ 0.81	General adjustment, work for project purpose in Europe
2.2	Structural Engineer	K Schnakenberg	+ 0.13	General adjustment
2.3	Mechanical Engineer	Dos Santos	--	
2.4	Procurement Expert	Dos Santos	--	
2.5	Subsoil Engineer	H Wessling	--	
3.1	Chief Supervision Engineer	--	--	
3.2.1	Supervision Engineer	--	--	
3.3	-----	--		
3.4.1	Surveyor	J Heise	- 0.67	
3.5	Administrator	--	-	
4.1.1	Morphologist	Dr E Mosselmann	+ 0.20	
4.2.1	Modelling Expert	M vd Wal	+ 0.70	
4.3.1	Environmental Expert	--	--	
4.4	Socio-Economist	--	--	
4.5.1	Economist	--	--	
4.6.1	Unallocated	--	--	

**Local Staff**

No.	Function	Person	Modified MM	Remarks
1.3.2	Deputy Project Manager	S M Mansur	--	
2.1.2	Hydraulic Design Engineer - 2	A Q M Ali	- 0.40	
2.3.2	Mechanical Engineer - 2	Masih-ur-Rahman	- 0.53	
2.4.2	Procurement - 2	Masih-ur-Rahman	- 2.30	
2.5.2	Subsoil Expert - 2	Muzharul Haque	+ 0.03	
3.2.2	Supervising Engineer	nn	--	
3.3	Quantity Surveyor - 2	nn	--	
3.4.2	Surveyor - 2	A H M Kamal	+ 0.26	
4.1.2 4.2.2	Morphologist - 2 Modelling Expert - 2	M Salahuddin Q Saifuddin / S R Khan	- 0.83	
4.3.2	Environmental Expert - 2	nn		
4.4	Socio-Economist - 2	nn		
4.5.2	Economist - 2	nn		
4.6.2	Unallocated	nn		

**2 SUBCONTRACTS****2.1 General**

The Consulting Agreement (Letter to Proceed) provides for four subcontracts to be executed under the Project, namely

1. Topographic, cadastral and bankline surveys (item 5.1)
2. Construction and test running of a Filter Test Rig (item 5.2)
3. Physical modelling of sites (item 5.3)
4. Subsoil investigations (item 5.4)

In addition special physical modelling of falling apron has been provided (item 4.1).

These model tests on falling apron have been partly executed through the Laboratory division of our joint venture partner CNR in a small bypass channel of the river Rhone in France.

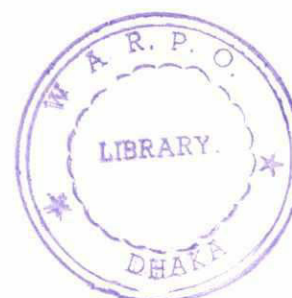
**2.2 Subcontracts Concluded**

To date the subcontracts 3 and 4 have been concluded. Subcontract 1 is scheduled over several periods, two survey campaign has been concluded so far. Subcontract 2 the construction of the Filter Test Rig has been concluded, the test runs will start on May 1994.



The main data are as follows:

Item	Subject	Subcontractor	Amount paid up to 31.03.94		Remarks
			Tk	equivalent to DM	
5.1	Survey's:				
5.1.1	1st campaign Kamarjani	Hydroland	336,500	14,374.20	Finalized
5.1.2	2nd campaign Kamarjani	Hydroland	114,000	4,978.56	Finalized other campaigns to come
5.2	Filter Test Rig				
5.2.1	Installation and test run	AIR	1184,468	50,071.91	Finalized
5.2.2	Guarding	AIR	18,000	731.71	to be continued
5.2.3	Filler material		20,482	853.38	to be continued
5.3	Physical Modelling				
5.3.1	Model bed rent Jan. 93 to Jun. 93	RRI-Faridpur	144,000	6,207.30	Finalized
5.3.2	Model Tests	RRI-Faridpur	1452,000	62,833.70	Finalized
5.4	Subsoil Investigations	Soiltech	280,000	12,027.70	Finalized



# CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES

## - Test and Implementation Phase -

### EXPATRIATE PROFESSIONAL STAFF

#### Fielded up to March 31, 1994

Version: 25.04.94

No.	Function	Name	Time Spent	Assignment Breakdown				Total Man - Months **							
				Full Months	Working Days	Travel Days	Leave Days	Fees ***		Allowance ***		Hotel			
								Fees	Total	Total	Allow.	Total	Item 2.5	Total	House Item 2.4
1.1	Project Director	Dr D Neuhaus	01.06.93 - 31.12.93 *	1.2	14	4	-	1.20	1.80		0.60			0.47	
1.2	Home Office Support	RRI, CNR, L&P, DELFT	25.10.93 - 07.11.93	-	-	-	-	0.60							
1.3.1	Project Manager	C Netzeband	01.06.93 - 31.12.93	8	15	4	41		1.00		-				
1.4	Chief Hydraulic Design Engineer	Dr H Kramer	01.06.93 - 31.12.93	1	26	4	-	2.00			8.63				10.00
			07.08.93 - 02.10.93	1	8	-	-	0.26					1.87		-
			01.12.93 - 31.12.93 #	-	2	4	-	1.20	3.46	1.20	3.20	1.07	2.94		-
			09.02.94 - 10.03.94	1	20	4	-	3.80							
2.1.1	Hydraulic Design Engineer	M Schwarz	03.09.93 - 22.12.93	3	9	2	-	1.37							
			07.01.94 - 14.02.94	0	18	2	-	0.67							
			23.02.94 - 10.03.94	-	14	-	-	0.47	6.31		5.84			5.57	
			15.03.94 - 28.03.94 #	2	26	4	-	2.13			2.13			2.00	
2.2	Structural Engineer	K Schnakenberg	09.09.93 - 08.11.93	-	4	-	-	1.00			1.00			0.87	
2.3	Mechanical Engineer	Dos Santos	03.10.93 - 29.10.93	2	-	-	-	2.00							
2.4	Procurement Expert	Dos Santos	01.11.93 - 31.12.93 #	1	-	-	-	1.00	3.00		-			-	-
			01.01.94 - 31.01.94 #	1	2	4	-	1.20	1.20	1.20		1.07			-
2.5	Subsoil Engineer	H Wessling	15.11.93 - 16.12.93	1	-	-	-	0.8	2.00		1.20		1.07		-
			01.02.94 - 24.02.94 *												
3.1	Chief Supervision Engineer	-													
3.2.1	Supervision Engineer														
3.3	-----														
3.4.1	Surveyor	J Heise	15.10.93 - 21.10.93	-	7	2	-	0.30		0.30		0.23			
			17.11.93 - 23.11.93	-	7	-	-	0.23		0.23		0.23			
			17.03.94 - 25.03.94 #	-	9	2	-	0.30	0.83	0.30	0.83	0.27	0.73		
3.5	Administrator			-											
4.1.1	Morphologist	Dr E Mosselmann	09.09.93 - 08.11.93	2	2	4			2.20		2.20		2.07		
4.2.1	Modelling Expert	M vd Wal	06.06.93 - 13.11.93	3	29	4	29	4.40		4.40		-			5.00
			21.11.93 - 23.11.93	-	3	-	-	0.10		0.10		0.10			
			09.12.93 - 12.12.93	-	3	-	-	0.13		0.13		0.13			
			06.03.94 - 07.03.94	-	2	-	-	0.07	4.70	0.07	4.70	0.07	0.30		
4.3.1	Environmental Expert	-													
4.4	Socio - Economist	-													
4.5.1	Economist	-													
4.6.1	Unallocated	-													
* Home Office Work				** Decimal fractions of months are band on 30 days/month				37.06		30.33		16.02		15.00	

\* Home Office Work \*\* Decimal fractions of months are band on 30 days/month

\*\*\* Including travel days # Work for project purpose in Europe

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## B. Part 1, Table 2

**CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES**  
**- Test and Implementation Phase -**  
**LOCAL PROFESSIONAL STAFF**  
**Fielded up to March 31, 1993**

Version : 25.04.94

No.	Function	Person	Assignment			Month	Total
			From	To	Fees		
1.2	Home Office Support	Dr S K Chowdhury	01.06.93	31.12.93	-	1.00	
1.3.2	Deputy Project Manager	S M Mansur	01.06.93	31.03.93		10.00	
2.1.2	Hydraulic Design Engineer - 2	A Q M Ali	08.09.93	31.03.94		6.60	
2.3.2	Mechanical Engineer - 2	Masih-ur-Rahman	04.10.93	03.11.93	1.00		
			29.01.94	10.02.94	0.44		
			24.02.94	24.02.94	0.03		1.47
2.4.2	Procurement - 2	Masih-ur-Rahman	04.11.93	10.11.93	0.23		
			01.12.93	15.12.93	0.47		0.70
2.5.2	Subsoil Expert - 2	Muzharul Haque	12.09.93	16.09.93	0.17		
			15.11.93	10.02.94	2.86		3.03
3.2.2	Supervising Engineer - 2	nn	-	-			
3.3	Quantity Surveyor - 2	nn	-	-			
3.4.2	Surveyor - 2	A H M Kamal	27.09.93	21.02.94	4.86		
			20.03.94	31.03.94	0.40		5.26
4.1.2	Morphologist - 2	M Salahuddin	20.06.93	09.11.93			4.67
4.2.2	Modelling Expert - 2	Q Salfuddin / S R Khan	20.06.93	15.12.93	5.87		
			21.07.93	09.09.93	1.63		7.50
4.3.2	Environmental Expert - 2	nn	-	-			
4.4	Socio-Economist - 2	nn	-	-			
4.5.2	Economist - 2	nn	-	-			
4.6.2	Unallocated - 2	nn	-	-			
						Total	40.23

Observation : Decimal fractions of months are based on 30 days/month





## CONSULTANCY SERVICES FOR FAP 21 - TEST STRUCTURES

- Test and Implementation Phase -  
STAFFING SCHEDULE

FUNCTION		25.04.1994												MAN-MONTHS			FLIGHTS											
														EXPERIENCES														
														BD	EU	LOCAL												
1.1	PROJECT DIRECTOR	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	3	8	8
1.2	HOME OFFICE SUPPORT																											
1.3/1/2	PROJECT MANAGER / DEPUTY PROJECT MANAGER																										10	7
1.4	CHIEF HYDRAULIC DESIGN ENGINEER																											



25.04.1994

VERSION NO. 2		ACTIVITY		1993			1994			1995			1996			1997			1998																			
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
		ORDER TO PROCEED																																				
	1.1	TOPOGRAPHIC SURVEYS / SUBSOIL INVESTIGATIONS																																				
	1.2	MORPHOLOGICAL INVESTIGATIONS																																				
	1.3	MODEL TESTS																																				
	1.4	ENVIRONMENTAL INVESTIGATIONS																																				
	1.5	SOCIO-ECONOMIC MITIGATION MEASURES																																				
	1.6	DETAILED DESIGN, SPECIFICATIONS, TENDER																																				
	1.7	WORKING DRAWINGS																																				
	1.8	PRESELECTION OF CONTRACTORS																																				
	1.9	PREPARATION / EVALUATION OF PROPOSALS																																				
	1.10	ORDER TO COMMENCE / MOBILIZATION																																				
	1.11	CONSTRUCTION OF TEST WORKS																																				
	1.12	MONITORING, ADAPTATION																																				
	2.1	TOPOGRAPHIC SURVEYS / SUBSOIL INVESTIGATIONS																																				
	2.2	MORPHOLOGICAL INVESTIGATIONS																																				
	2.3	MODEL TESTS																																				
	2.4	ENVIRONMENTAL INVESTIGATIONS																																				
	2.5	SOCIO-ECONOMIC MITIGATION MEASURES																																				
	2.6	DETAILED DESIGN, SPECIFICATIONS, TENDER																																				
	2.7	WORKING DRAWINGS																																				
	2.8	PRESLECTION OF CONTRACTORS																																				
	2.9	PREPARATION / EVALUATION OF PROPOSALS																																				
	2.10	ORDER TO COMMENCE / MOBILIZATION																																				
	2.11	CONSTRUCTION OF TEST WORKS																																				
	2.12	MONITORING, ADAPTATION																																				
		QUARTERLY REPORTS																																				
		YEARLY REPORTS ON MONITORING / ADAPTATION																																				
		EVALUATION REPORT																																				
		MANUALS + GUIDELINES																																				

**CONSULTANCY SERVICES FOR FAP 22 PHASE II - EXPERTS DISCUSSION**  
**- Expatriate and Local Professional Staff -**  
**Fielded up to March 31, 1994**

Version: 25.04.94

Sl.No	Function	Person	Time	Home Office	Bangladesh		Fees *		Allowance *		Hotel
					Day	Travel	Fees	Total	Allow.	Total	
	INVITED EXPERTS :	Prof. J. F. Agema	July - Sept. 93	2.50	-	-	-	2.50	-	-	-
		Dr. Vic Galay	27.10.93 - 06.11.93		7	4		0.37		0.37	0.23
		Mr. Max S. Lamb	28.10.93 - 06.11.93		6	4		0.33		0.33	0.20
		Prof. J. J. Peters	28.10.93 - 06.11.93		6	4		0.33		0.33	0.20
		Prof. C. R. Thorne	28.10.93 - 02.11.93 **		4	2		-		-	-
		Prof. Wan Zhaohui	28.10.93 - 06.11.93		6	4		0.33		0.33	0.20
	Sub-Total			2.50				4.19		1.69	1.03
	Technical Home Office Support		June - Dec. 93	1.00				1.00			
	Project Director	Dr. H. Kramer for Dr. Neuhaus	June - Dec. 93	1.50	-	-	1.50				
			27.10.93 - 09.11.93	-	10.00	4.00	0.47	1.97		0.47	0.33
	Sr. River Training Engineer	F. Koch	June - Dec. 93	1.50	-	-	1.50				
		F. van der Knaap	27.10.93 - 06.11.93	-	7.00	4.00	0.37		0.37		
			27.10.93 - 07.11.93	-	8.00	4.00	0.40	2.27	0.40	0.77	0.50
	Senior Morphologist	G. Klaassen	June - Dec. 93	1.00	-	-	1.00				
			25.10.93 - 07.11.93	-	10.00	4.00	0.47	1.47		0.47	0.33
	River Training Engineer - 2	K. Oberhagemann	June - Dec. 93	3.40	-	-	3.40				
			23.10.93 - 09.11.93	-	14.00	4.00	0.60	4.00		0.60	0.47
	River Training Engineer - 3	S. R. Khan	10.09.93 - 09.11.93	-	60.00	-	-	2.00		-	-
	TOTAL							16.90		4.00	2.66

\* Including Travel days \*\* Covered by EC

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## **C FINANCIAL ASPECTS**

### **1 GENERAL**

- The Consulting Agreement provides for payment of the costs incurred by 4 quarterly installments for each consultancy budget year.

For each budget year an interim balance for the services rendered during the year shall be submitted. At the end of the project a final balance based on the interim balances shall be submitted.

To enable the Client and Funding Agencies a financial follow up and control of the Project during its execution the Administrative and Financial Report shall provide both an informative review of approximate costs accrued so far and a forecast on possible substantial changes of final costs, so far as anticipated at the date of reporting.

For easy reference the status of expenditures will be given in accordance to the tables of Attachment 3 of the Letter to Proceed and exactly along the same items, showing the quantities and amounts of the Agreement and additionally the quantities and amounts accrued until the respective date(s). These tables are given in Section C. Part 1 and C. Part 2.

### **2 STAFFING COSTS**

In Chapter B the staffing schedule is shown on Part 1, Table 1 and Table 2, and Part 2, Table 1.



# **CONSULTANCY SERVICE FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Version : 12.05.94

Item	Summary	Per Agreement			Up to 31.03.94	
		DM	DM	%	DM	%
1	MANPOWER COSTS *	7,807,650	1,196,222	15.32		
2	LUMPSUMS PER UNIT #	3,090,915	432,240	13.98		
3	REIMBURSABLES #	866,400	73,071	8.43		
4	LUMPSUMS #	480,000	210,768	43.91		
5	SUBCONTRACTS #	416,000	152,079	36.56		
6	CLIENT'S TRAINING, INFORMATION TOURS, CONFERENCES #	81,500	-	-		
	SUBTOTAL	<u>12,742,465</u>	<u>2,064,380</u>	<u>16.20</u>		
	PHYSICAL CONTINGENCIES	1,200,000				
	FINANCIAL CONTINGENCIES	2,057,535				
	OBSERVATION :					
	Price basis of the unit rates as Consulting Agreement of October 14, 1991					
	# Price basis of the unit as per Letter to Proceed of May 15, 1993					
	<b>Total</b>	<b>16,000,000</b>				

**Note:** The fees and allowances refer to the basic unit rates as per Consulting Agreement of October 14, 1991

C. - Part 1, Table 1.2

**CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES  
TEST AND IMPLEMENTATION PHASE  
LOCAL PROFESSIONAL STAFF**

VERSION : 25.04.94

Sl. No.	Function	Person	PER AGREEMENT			UP TO 31.03.94	
			Fees (DM)			Fees (DM)	
			MM	incl. Allowances	Amount	MM	Amount
1.2	Home Office Support	Dr. S K Chowdhury	7.00	4,650	32,550	1.00	4,650
1.3.2	Deputy Project Manager	S M Mansur	67.00	4,800	321,600	10.00	48,000
2.1.2	Hydraulic Design Engineer - 2	A Q M Ali	35.00	3,800	133,000	6.60	25,080
2.3.2	Mechanical Engineer - 2	Masih-ur-Rahmah	3.00	4,000	12,000	1.47	5,880
2.4.2	Procurement - 2	Masih-ur-Rahmah	1.00	4,100	4,100	0.70	2,870
2.5.2	Subsoil Expert - 2	Muzharul Haque	6.00	4,150	24,900	3.03	12,575
3.2.2	Supervising Engineer - 2	nn	53.00	2,700	143,100	-	-
3.3	Quantity Surveyor - 2	nn	90.00	2,650	238,500	-	-
3.4.2	Surveyor - 2	A H M Kamal	62.00	3,700	229,400	5.26	19,462
4.1.2	Morphologist - 2	M Salahuddin	9.00	4,300	38,700	4.67	20,081
4.2.2	Modelling Expert - 2	Q Saifuddin / S. R. Khan	16.00	4,800	76,800	7.50	36,000
4.3.2	Environmental Expert - 2	nn	7.00	4,000	28,000	-	-
4.4	Socio-Economist - 2	nn	25.00	4,100	102,500	-	-
4.5.2	Economist - 2	nn	4.00	3,800	15,200	-	-
4.6.2	Unallocated - 2	nn	10.00	4,500	45,000	-	-
		Sub-Total Item 1.2	395.00		1,445,350	40.23	174,598

Note: The fees and allowances refer to the basic unit rates as per Consulting Agreement of October 14, 1991



# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Version : 14.02.94

Item	Description	Per Agreement	Up to 31.03.94	
		DM	Total DM	%
1	MANPOWER COSTS *			
	(Payment for actual assignment in the project)			
1.1	Expatriate Staff (see Table 1.1)			
1.1.1	Fees	5,651,800	915,469	16.20
1.1.2	Living Allowances	710,500	106,155	14.94
1.2	Local Staff (see Table 1.2)	1,445,350	174,598	12.08
* OBSERVATION : - Vacation and sickness leave is included in the overhead costs of the man month rates - In item 1.1, 2 x 2 days are allowed for travel time for each roundtrip EUR - DHAKA				
<b>TOTAL ITEM 1</b>		<b>7,807,650</b>	<b>1,196,222</b>	<b>15.32</b>

## CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES

### - Test and Implementation Phase -

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>2</b>	<b>LUMP SUMS PER UNIT</b> (Payment per unit performed)								
2.1	Main office running costs incl. rental, electricity, water, communications, stationary and full support staff	month	67	15,545	1,041,515	10	155,450	14.93	
2.2	Main office long term stand-by costs incl. reduced electricity, water, communication no stationary, no support staff	month	0	4,500	0	-	0	0.00	
2.3	Site office running costs incl. electricity, water guards	month	96	1,100	105,600	-		0.00	
2.4	House running costs for long term exp. staff	month	105	3,000	315,000	15	45,000	14.29	
2.5	Hotel / guesthouse for short term exp. staff	month	125	3,500	437,500	16.02	56,070	12.82	
2.6	Jeep running costs incl. microbus	veh. - month	320	2,200	704,000	50	110,000	15.63	
2.7	Sedan running costs	veh. - month	115	1,650	189,750	20	33,000	17.39	
2.8	Car rental costs	veh. - month	15	3,300	49,500	-		0.00	
2.9	Reporting (In case of additional orders the unit rates for items 2.9.2 and 2.9.3 will be reduced to 90 % of the original rate for the first ten additional copies and to 80 % for the eleventh and following copies)								
2.9.1	Quarterly report (18) (18 x 15)	piece	275	100	27,500	30	3,000	10.91	
2.9.2	Reports on monitoring (3) (3 x 15)	piece	45	200	9,000	-	-	0.00	
2.9.3	Evaluation reports (2) (2 x 15)	piece	30	500	15,000	-	-	0.00	
<b>TO BE CARRIED FORWARD</b>					<b>DM</b>		<b>402,520</b>		

Note: The rates refer to the basic unit rates as per Consulting Agreement of October 14, 1991

# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
	<b>CARRIED FORWARD</b>				2,894,365		402,520		
2.9.4	Manuals and guidelines	piece	30	1,000	30,000	-	0	0	
2.9.5	Tender documents (2 sites)	piece	40	300	12,000	20	6,000	50	
2.9.6	Video, 1 hr., commented	piece	1	10,000	10,000	-	0	0	
2.10	Ground Transport and miscellaneous costs for staff trips EUR - Dhaka	trip	85	330	28,050	14	4,620	16	
2.11	Excess baggage for some staff EUR - DHAKA	trip	50	750	37,500	14	10,500	28	
2.12	Transport to sites (air and train)	site	2	15,000	30,000	0.25	3,750	13	
2.13	Consultant's home office staff activities on the occasion of Client's staff trips to Europe at the Consultant's headquarters	man - week	5	6,000	30,000	-	-	0	
2.14	Allowance for Consultant's staff travelling for Project purposes	day	60	150	9,000	9	1,350	15	
2.15	Travel expenses (ground travel, Europe) for Consultant's staff travelling for Project purpose	trip	20	500	10,000	7	3,500	35	
<b>TOTAL ITEM 2</b>					<b>DM</b>		<b>432,240</b>	<b>14</b>	

Version : 25.04.94

Note: The rates refer to the basic unit rates as per Consulting Agreement of October 14 1991



# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>3</b>	<b>REIMBURSABLES</b>								
3.1	Site offices, construction and installation of semi-permanent buildings, inclusive local phone	piece	2	32,200	64,400	-	-	0.00	
3.2	Construction of semi-permanent lining units on site	piece	2	45,000	90,000	-	-	0.00	
3.3	Office equipment for sites (fax, copier etc.)	site	2	7,500	15,000	-	-	0.00	
3.4.1	Jeep (Toyota Land Cruiser or equivalent) 2nd hand long wheel base	piece	1	25,000	25,000	-	-	0.00	
3.4.2	Jeep (Toyota Land Cruiser or equivalent) 2nd hand short wheel base	piece	1	20,000	20,000	-	-	0.00	
3.5	Consultant's air travel								
3.5.1	Staff, C-class, EUR - DHAKA	trip	50	6,000	300,000	10	41,520	13.84	
3.5.2	Staff and dependants, exc. fare, EUR - DHAKA	trip	65	3,000	195,000	9	29,326	15.04	
3.5.3	Staff, Regional air travel, Asia	trip	10	3,000	30,000	-	-	0.00	
3.5.3	Staff, Regional air travel, Europe	trip	10	2,000	20,000	1	1,225	6.13	
<b>TO BE CARRIED FORWARD</b>					<b>DM</b>		<b>759,400</b>	<b>72,071</b>	

Version : 25.04.94

# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
	<b>CARRIED FORWARD</b>				<b>759,400</b>		<b>72,071</b>		
3.6	Hotel accommodation acc. to item 2.14	night	50	200	10,000	5	1,000	10	
3.7	Air freight for equipment	kg	1,000	12	12,000	-	0	0	
3.8	Sea freight	cmb		10,000	-	-	0	0	
3.9	* Cost for performance bond (To be valid until approval of the final invoice for each respective test work package)	constr. year	3	15,000	45,000	-	0	0	
3.10	* * Miscellaneous costs for unforeseeable items (inspection flights, etc.)	to be detailed		40,000	40,000	-	0	0	
<p align="center"><b>OBSERVATION :</b></p> <p>* The costs are estimated for bonds concluded with European insurance companies in Europe i.e no Bangladeshi bond is contemplated</p> <p>** Subject to prior approval by the Client / KfW</p>									
<b>TOTAL ITEM 3</b>				<b>DM</b>	<b>866,400</b>		<b>73,071</b>	<b>8.43</b>	

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C. - Part 1, Table 4

# CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES - Test and Implementation Phase -

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>4</b>	<b>LUMPSUMS FOR SPECIAL ITEMS AND TASKS</b>								
4.1	Physical modelling of falling aprons (CNR). (details see Table 4.1)	to be detailed	1	-	300,000	-	184,000	61.33	
4.2	Remote sensing evaluations (details see Table 4.2)	to be detailed	6	30,000	180,000	-	26,768	14.87	
<b>TOTAL ITEM 4</b>			<b>DM</b>				<b>210,768</b>	<b>43.91</b>	

Version : 12.05.94



# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>4.1</b>	<b>PHYSICAL MODELLING OF FALLING APRONS (CNR - LABORATORY)</b> for scope for works for the investigations references is made to subsection 11.2.4.2 of the Final Report, Vol. IA								
4.1.1	Lumpsums - Staff - Model construction / Instrumentation - Running cost - Reporting cost (up to 15 copies, further copies DM 500 each)	LS LS LS LS			150,000 50,000 25,000 15,000	0.75 0.90 6.75 -	75,000 37,500 12,500 -	50.00 75.00 50.00 0.00	
4.1.2	Lumpsums Cost for Bangladeshi graduate engineer with model testing experience - accommodation + allowance - fees for CNR	month month	6 6	6,500 3,000	39,000 18,000	5.87 5.87	38,155 17,610	97.83 97.83	
4.1.3	Reimbursables Air travel, excursion fee for Bangladeshi engineer	trip	1	3,000	3,000	1	3,235	107.83	
<b>TOTAL ITEM 4.1</b>					<b>DM 300,000</b>		<b>184,000</b>	<b>61.33</b>	

Version : 25.04.94

# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Version: 25.04.94

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>4.2</b>	<b>REMOTE SENSING EVALUATIONS</b>								
4.2.1	Lumpsums Processing of status and multitemporal pictures (details see item 4.2.2)	l.s. / year	6	11,280	67,680	1	11,280	16.67	
4.2.2	Reimbursables Purchase of Landsat TM Computer Compatible Tapes 1 x Jamuna North 1 x Jamuna South per year	year	6	18,720	112,320	1	15,488	13.79	
<b>TOTAL ITEM 4.2</b>				<b>DM</b>	<b>180,000</b>		<b>26,768</b>	<b>14.87</b>	

# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>5</b>	<b>SUBCONTRACTS</b>								
5.1	Surveys, (details see Table 5.1)	to be detailed	2		186,000	-	19,353	10.40	
5.2	Filter test rig. (details see Table 5.2)		1	(100,000)	100,000	-	51,657	51.66	
5.3	Physical modelling of sites (RRI)	to be detailed	1	(100,000)	100,000	-	69,041	69.04	
5.4	Subsoil investigations	to be detailed	1	(30,000)	30,000	-	12,028	40.09	
<b>TOTAL ITEM 5</b>					<b>DM</b>		<b>416,000</b>	<b>36.56</b>	

Version : 25.04.94





# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
<b>5.1</b>	<b>SURVEYS</b>								
5.1.1	Topographic Surveys for detailed design	site	2	30,000	60,000	-	0	0.00	
5.1.2	Cadastral Surveys for compensation	site	2	15,000	30,000	-	0	0.00	
5.1.3	Bankline Surveys on each site after each monsoon	site year	8	12,000	96,000	2	19,353	20.16	
<b>TOTAL ITEM 5.1</b>				<b>DM</b>	<b>186,000</b>		<b>19,353</b>	<b>10.40</b>	

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# **CONSULTANCY SERVICES FOR FAP 21 PHASE II - TEST STRUCTURES** **- Test and Implementation Phase -**

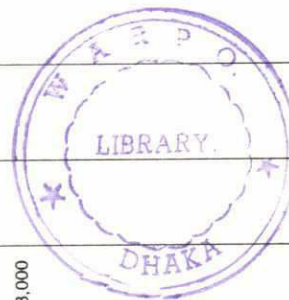
Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Total DM	%	
5.2	<b>FILTER TEST RIG</b>								
5.2.1	Construction and Supervision and Installation	piece	-	(55,000)	55,000	1	51,657	94	
5.2.2	Testing as per Scope of Works, Chapter 0-4	LS	-	-	35,000	-	0	0	
5.2.3	Material etc.	LS	-	-	10,000	-	0	0	
<b>TOTAL ITEM 5.2</b>				<b>DM</b>	<b>100,000</b>		<b>51,657</b>	<b>51.66</b>	

Version : 25.03.94

## CONSULTANCY SERVICES FOR FAP 22 PHASE II - EXPERTS DISCUSSION

VERSION - 25.04.94

Sl. No.	Function	Person	Per Agreement						Up to 31-03-94					
			Fees (DM)			Allowances (DM)			Fees (DM)			Allowances (DM)		
			MM	MM-Rate	Amount	Allow.	MM-Rate	Amount	MM	MM-Rate	Amount	Allow.	MM-Rate	Amount
1	MANPOWER COST													
1.1	EXPATRIATE PROFESSIONAL STAFF													
0	Invited Experts	J. F. Agema Vic. Galay Max S. Lamb J. J. Peters C. R. Thorne Zhaochui Wan	4.50	30,000	135,000	2.00	3,500	7,000	4.19	30,000	125,700	1.69	3,500	5,915
1.1	Project Director	Dr D Neuhaus / Dr H Kramer	2.00	29,500	59,000	0.50	3,500	1,750	1.97	29,500	58,115	0.47	3,500	1,645
1.2	Technical Home Office Support		1.00	26,500	26,500	-	-	-	1.00	26,500	26,500	-	-	-
4.1.1	Senior Morphologist	G. Klaassen	1.50	28,900	43,350	0.5	3,500	1,750	1.47	28,900	42,483	0.47	3,500	1,645
4.7.1	Sr. River Training Engineer	F. Koch F. v d Kraap K Oberhagemann	2.25	26,500	59,625	0.75	3,500	2,625	2.27	26,500	60,155	0.77	3,500	2,695
4.7.2	River Engineer - 2		4.00	20,200	80,800	1.00	3,500	3,500	4.00	20,200	80,800	0.60	3,500	2,100
	<b>SUB-TOTAL</b>		<b>15.25</b>		<b>404,275</b>	<b>4.75</b>		<b>16,625</b>			<b>393,753</b>	<b>4.00</b>	<b>14,000</b>	<b>407,753</b>
1.2	LOCAL PROFESSIONAL STAFF													
4.7.3	River Engineer - 3	S. R. Khan	2.00	8,000	8,000				2.00	4,000	8,000			8,000
	<b>TOTAL</b>		<b>17.25</b>		<b>412,275</b>	<b>4.75</b>		<b>16,625</b>	<b>16.90</b>		<b>401,753</b>	<b>4.00</b>	<b>14,000</b>	<b>415,753</b>





## CONSULTANCY SERVICES FOR FAP 22 PHASE II - EXPERTS DISCUSSION

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Unit Rate DM	Total DM	
2	<b>LUMPSUMS PER UNIT</b> (Payment per unit performed)								
2.1 (a)	Main office, additional costs	month	1	1,500	1,500				
2.5	Hotel / guesthouse for short term exp. staff	month	5	3,500	17,500	2.66	3,500	9,310	
2.8	Car rental costs	month	5	3,300	16,500	4.00	3,300	13,200	In addition to facilities by FAP 21
2.9	Reporting	copy	40	350	14,000	20.00	350	7,000	
2.10	Ground transport and miscellaneous costs	Trip	10	330	3,300	10.00	330	3,300	
2.11	Excess luggage	Trip	2	750	1,500	2.00	750	1,500	
2.15	Travel expenses (ground travel Europe) for Consultant's staff travelling for Project purpose	L.S.	6	500	3,000	6.00	500	3,000	
2.16	Additional communication costs	L.S.	1	5,000	5,000	1.00	5,000	5,000	Fax / Phone during preparation of the discussion
<b>TOTAL ITEM 2</b>				<b>DM</b>	<b>62,300</b>			<b>43,810</b>	

Version: 25.04.94

## CONSULTANCY SERVICES FOR FAP 22 PHASE II - EXPERTS DISCUSSION

Version : 25.04.94

Item	Description	Unit	Per Agreement			Up To 31.03.94			Remarks
			Quantity	Unit Rate DM	Total DM	Quantity	Unit Rate DM	Total DM	
<b>3</b>	<b>REIMBURSABLES</b>								
3.5	Consultant's air travel	trip	10	6,000	60,000				
3.5.1	Staff, C-class, EUR - DHAKA	trip	2	2,000	4,000	10.00		48,837	
3.5.4	Staff, Regional air travel, Europe								
3.10	Miscellaneous cost for organizing the experts' discussion, rental of venue, courier services etc.								
3.10.1	Courier Services			20,000	20,000			4,000	
3.10.2	Rental of Venue							9,000	
<b>TOTAL ITEM 2</b>				<b>DM</b>	<b>84,000</b>			<b>61,837</b>	

