

REQUIRED DATA AND QUESTIONNAIRE
FOR
FEASIBILITY STUDY
OF
PADMA BRIDGE
IN
THE PEOPLE S REPUBLIC OF BANGLADESH

November, 2001

Japan International Cooperation Agency (JICA)

A. The Preparatory Study Team considers that the relevant documents, reports and statistics listed in the attached table are important to this study. Therefore, please provide us those documents and information during our stay in Bangladesh.

B. The Preparatory Study Team would like to raise the following questions. Please answer in detail, as much as possible, in writing.

1. Confirmation of the request from the Government of Bangladesh

1-1 Background of the project

- (1) The relationship between the Padma Bridge project and other road and bridge projects ongoing and under planning, both nationally and internationally.
- (2) Other current and future national and local development plans affecting the study area
- (3) Past transportation infrastructure study conducted in the study area, regardless whether they were conducted under JICA or not.

1-2 Outline of the project

- (1) Title
- (2) Target area
- (3) Target population
- (4) Target time frame
- (5) Overall goal
- (6) Objectives

Bangladesh side

- (a) To carry out detailed engineering services for feasibility study for the construction of a bridge over the Padma near Mawa on Dhaka-Mawa-Bhanga road.
- (b) To study the following :
 - *Where should the bridge be located?
 - *What modes of traffic will move over it, including transfers of electric power and gas between the two regions?
 - *What characteristics and configuration does the bridge require in order to handle the projected traffic?
 - *What are the incremental costs associated with alternative solutions?

Japanese side

- (a) To conduct a feasibility study on the new bridge over the Padma River at Mawa.
- (b) To pursue technology transfer in the course of implementation of the Study.

1-3 Counterpart organisation or agency of the project

- (1) Is the following formation correct?

Lead Agency:

Jamuna Multi-purpose Bridge Authority, Ministry of Communications

Assisting Agency:

Roads and Highways Department (RHD), Ministry of Communications
Roads and Railways Division, Ministry of Communications
Jamuna Bridge Division, Ministry of Communications
The Department of Environment (DOE)
Inland Water Transport Authority (IWTA)

Please provide the organisation chart of the above counterpart organisations.
Also, please clarify the responsibility of each counterpart for the project.

2. Information to be collected for the plenary study

2-1 Security issues

- (1) Whether the JICA study team can purchase, use and take the data and information such as listed in this questionnaire and the table attached out of Bangladesh to Japan for the purpose of the study.
- (2) If any permit or clearance is required for the above-mentioned actions, please indicate the detailed procedures and required time to obtain such clearance or permit.
- (3) Please indicate which government department or office the Study Team should approach to obtain the data and information listed in this questionnaire and the table attached.

2-2 Natural conditions

- (1) Topographic map ; scale 1/500,000, 1/200,000, 1/100,000, 1/50,000 and 1/25,000
- (2) Geological map; scale 1/500,000, 1/200,000, 1/100,000, 1/50,000 and 1/25,000
- (3) Other geological data of the study area
- (4) Navigation chart for river traffic
- (5) Other river-bed elevation data of the study area
- (6) Data of soil investigation, geophysical prospecting and logging in the study area
- (7) River discharge, velocity and water level data of Jamuna, Ganges and Padma rivers
- (7) Soil classification map of the study area
- (8) Aerial photograph of the study area 1/500,000, 1/200,000, 1/100,000, 1/50,000 and 1/25,000
- (9) Satellite image of the study area 1/500,000, 1/100,000, 1/50,000
- (10) Land utility map and vegetation map
- (11) Meteorological data in the study area, such as precipitation, temperature, wind, evaporation, sunlight hours
- (12) Aerial photos, satellite photos or maps showing the day-by-day or week-by-week changes in the extent of the flood area after major floods.
- (13) Seismic data such as epicentre map with magnitudes.

Further, please check to see if maps listed above are in paper format or digital format.

2-3 Information on traffic

- (1) Statistics on transit cargo and passenger traffic for India, Nepal and Bhutan through Benapole, Banglabanda and Sylhet, with data on custom clearance (item, value, etc.)
- (2) Traffic data on Padma River crossing ferries, such as Mawa ferry and Aricha ferry.
- (3) Data on the current conditions of vessels (type, model and year built), terminal building and facilities (type, year built or installed).
- (4) River traffic data along Padma River, especially in the area near Mawa (size, type, capacity, etc.)

2.4 Information on bridge construction

- (1) Construction outline of Jamuna, Meghna, Meghna-Gumti, Paksey, Bhairab and Rupsha bridges.
- (2) Detailed record of planning, design and construction of Jamna Bridge.
- (3) Design specification of the bridges.
- (4) Navigation clearance for the bridges
- (5) Energy interconnectors plan on the Padma Bridge
- (6) Construction materials supply

2-5 Information on river works

- (1) Existing river monitoring stations for Jamuna, Ganges and Padma rivers. Monitoring items.
- (2) Existing river data, such as river water level, river discharge and velocity.
- (3) Existing riverbank protection works for the river. Method and performance.
- (4) Existing scouring protection works for the pier and riverbank protection work. Method and performance.
- (5) Data showing the river water level in relation to the tide level for Padma River, especially at the study area.
- (6) Flood record and cyclone record.
- (7) Meteorological monitoring stations along Jamuna, Ganges and Padma rivers.
- (8) Meteorological monitoring data at the study area.

2-6 Information related to environmental issues

- (1) Legislation related to environmental policies and standards
 - (a) Responsible ministry or agency and its organisation chart
 - (b) Laws and guidelines
 - (c) Environmental quality standards including emission / effluent standards
 - Limit values and penalties
 - Monitoring system and its responsible agency

Air pollution

Water pollution
Soil pollution
Noise
Vibration
Offensive odour

- (2) Laws / guidelines related to environmental impact assessment (EIA)
 - (a) Type / size of activities for EIA
 - (b) Procedure
- (3) International convention on environmental conservation
 - (a) Affiliation to bilateral or multilateral conventions
 - (b) Names and conventions and the date of affiliation, if any
- (4) Present situation of the study area regarding for environmental issues
 - (a) Socio-economic environment
 - Plan of resettlement, if any (number of people to be resettled and compensation)
 - Experience of resettlement, if any (number of people to be resettled and compensation)
 - Distribution of schools, hospitals, etc. (public facilities)
 - Cultural or archaeological property
 - History of epidemic disease including water-borne diseases (for the last five years)
 - Solid waste collection / disposal system and waste water treatment system
 - (b) Natural environment
 - Location of particular area officially protected such as national and natural parks
 - Location of environmentally vulnerable area
 - Species of precious animals and plants
 - Distribution of important historical spots, landscape and scenery
 - (c) Quality life
 - Present conditions of air quality, water quality, soil contamination, noise and vibration
 - Number of population grievances
 - Environmental education
- (5) Environmental and resettlement problems experienced in Jamna bridge project
 - (a) Number of households and people resettled.
 - (b) NGO s role for the smooth resettlement, a review comments as of today.
 - (c) Environmental impact of the bridge construction, a review comments as of today.
- (6) General conditions and quality of the existing infrastructure.
 - (a) Bridge, roads, supporting facilities (type, year built or installed, conditions, maintenance conducted, etc.)

2.7 Information on district / village life

- (1) District / village name in the study area
- (2) Population distribution (community distribution)
- (3) Land use
- (4) Industry
- (5) Administrative organisation
- (6) Community organisation / union
- (7) Income level of villager
- (8) Villager s life cycle
- (9) Natives in the study area and their culture and custom
- (10) Actual road condition

2.8 Others (including general information of the study area)

- (1) Economic statistical data of the study area
- (2) Such as population (for the last 20 years), domestic trade balance, fiscal situation, price index (for the last five years), economic growth rate,
- (3) Local administrative organization in the study area with boundary maps
- (4) Development plan of the study area (for the span of 5 years and 10 years)
- (5) Financial situation of local government
- (6) Problems of the poor and needy in the study area and the relief measures taken or to be taken.

3. Information on Local Firms

Please provide names, addresses and contacting persons of private firms, NGO and or public agencies who can undertake the services listed below. Also, please indicate an average bidding rate of consultant for each type of service.

- (1) Land Survey
- (2) Geological and Geotechnical Survey
- (3) Hydrological Survey and Monitoring
- (4) Meteorological Monitoring
- (5) Environmental Survey and Studies
- (6) Land use planning
- (7) Traffic Survey

2. 収集資料

2. 1 所有資料の更新

1	Statistical Yearbook of Bangladesh (1996年版所有。2000版の存在は確認している。)	Bangladesh Bureau of Statistics
2	Bangladesh Integrated Transport System Study (1997年版所有。1998版(Final)の存在は確認している。)	Planning Commission
3	Annual Development Programme (2000～2001の存在は確認している。)	Planning Commission
4	RHD Road Network Database Annual Report (Report 1997 は所有)	

2. 2 新規収集資料 (National Statistic, Policy and Regulations)

5	Bangladesh Population Census (Zila in South West Region and Dhaka)	Bangladesh Bureau of Statistics
6	Bridge Design Handbook	Roads and Highways Department
7	Hand Book on Roads and Highways Department	Roads and Highways Department
8	List of Projects Prepared for Linning up of Foreign Aid	Roads and Highways Department
9	Bangladesh National Building Code	

2. 3 新規収集資料 (Map)

10	Geological Map : 1/25,000～1/1,000,000	Geological Survey
11	River Distribution Map : 1/500,000	Geological Survey
12	Topographic Map : 1/50,000～1/1,000,000	National Mapping
13	Navigation Chart of Padma River	Transport Authority

2. 4 バングラデシュ側が準備している資料 (於. 要請書)

14	Petrobanga: Tecno Economic Study for Supply to Western Zone: 1983	Rendel Palmer and Tritton and Pencil Consultant
15	Intermodal Transport Study ' Interim Report ' for ADB	Pacific Consultant. Etc.
16	Bangladesh Transport Study, 1974	Economic Intelligence Unit
17	Brahmaputra (Jamuna) River Crossing Feasibility Study : 1999	Freeman Fox and Partners, et al
18	Brahmaputra Multipurpose Barrage Report : 1984	Sir Wilium Halcrow
19	Design and Construction of East-West Electrical Intercoector : 1982	Bangladesh Power Development Board
20	Bangladesh Energy Pranning Project, Interim Report for ADB : 1984	Sir Wilium Halcrow
21	Jamuna Bridge Feasibility Study Phase 1 & 2 for WB.	RIT-NEDECO JV.
22	Design and Construction of Jamuna Multipurpose Bridge Authority of Gov. of Bangladesh (now under implementation)	
23	Power System Master Plan, Draft Report for ADB : 1984	Acres International

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Socio-economic conditions of the last 10 years 1) GNP (or GDP) by sector, district and division 2) Population by district and division 3) Agricultural, industrial and mining products by main sort and by district and division 4) Foreign trade (quantity and value) by main sort 5) Foreign trade balance 6) Income distribution by district and division 2. National Development plans and Regional Development Plans by district and division 1) Economic development plan 2) Transportation development plans 3) Agricultural and fishing development plan 4) Industrial development plan including ① recent tendency of foreign investment ② free trade zone 5) Progress of above mentioned plan in % 6) Forecast of socio-economic indicators 3. Development of Plan of Dhaka Division (Dhaka, Munshiganj, Madaripur and Shariatpur) 1) Existing and Land Use Plan of Dhaka Area 2) Network maps and capacity of transportation systems in Dhaka Division 3) Agricultural, industrial, mining and other products by district for the last five year 4) Population by Division in 2001 and the projection under the development plan 5) Relevant development by district under the development plan				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
4. The Jamuna Bridge 1) Role and Function of Jumna Bridge Authority (Organization chart) 2) Development plan and F/S reports including Railway Construction 3) Schedule of Railway Construction 4) Operational / managing costs of road and railway 5) Existing traffic volume through ferryboats and forecasted traffic volume 6) Operational / managing costs of the ferryboats 7) Navigation clearance for the Bridges 8) Toll 5. Annual budget with breakdown for the next 10 years 6. Public investigation of the last 5 years by component 7. Amount of foreign assistance				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Transportation systems 1) Network maps and capacity of transportation systems, (ports, roads, railways, inland waterway and ferry) 2) Present condition of each mode ① Degree of the development ② Traffic volume by each mode ③ Amount of investment of each mode ④ Transportation cost, fares and tariff of each mode 2. Transport administration 1) Administrative organization chart with jurisdictional responsibilities and brief explanation ① Ministry of Communication and related agencies ② Other indispensable organizations for this projects 3. Existing and on-going road development plans and projects 1) Design, implementation schedule and current project status 2) National plan 3) Annual plan				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<p>1. Agencies in charge and / or concerned with the followings:</p> <ul style="list-style-type: none"> 1) Permission to aerial photo taking 2) Custody of topographic maps and aerial photos 3) Area conservation 4) Geological data / information <p>Please state:</p> <ul style="list-style-type: none"> - Name of Agencies and Departments - Name and position of the responsible persons in charge of the Japanese Study Team. <p>2. Organization to supervise and steer the management of the Study</p> <p>3. Roads and Railway related budget</p> <ul style="list-style-type: none"> 1) Road and Railway construction budget 2) Road and Railway maintenance budget <p>4. Roads and Bridge related cost</p> <ul style="list-style-type: none"> 1) Construction cost by type of road, bridge and location 2) Maintenance cost by type of road, bridge and location 3) Construction material cost 4) Unit costs for major work 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<p>1. Legislation</p> <p>1) Responsible ministry or agency related to environmental policies and standards</p> <p>2) Laws / guidelines related to environmental policies and standards</p> <p>3) Environmental quality standards on air pollution, water pollution, soil pollution, noise, vibration and offensive odor including emission / effluent standards</p> <ul style="list-style-type: none"> - Standards values and penalties - Monitoring system and its responsible agency <p>4) Law / guidelines related environmental impact assessment (EIA)</p> <ul style="list-style-type: none"> - Role and Function of Ministry of Forest in Environmental Assessment and Organization Chart - Type / size of activities for EIA - <u>Procedure of IEE and EIA</u> <p>2. International convention on environmental conservation</p> <ul style="list-style-type: none"> - Ramsar Convention : affiliated on 19__. - Convention for the protection of the World Culture and Natural Heritage : affiliated on 19__. - Washington Convention : affiliated on 19__. - United Nations convention on the law of the sea : affiliated on 19__. - Basel Convention : affiliated on 19__. 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<p>3. Present situation of the proposed project sites</p> <p>1) Socio-economic environment</p> <ul style="list-style-type: none"> - Plan for resettlement, if any (number of people to be resettled) - (compensation) - Main industry or source of income of residents - Distribution of schools, hospitals, etc (public facilities) - Cultural property or archaeological sites - Use of water area (river, sea water) (existence of common water-area) - Solid waste collection / disposal system and waste water treatment system <p>2) Natural environment</p> <ul style="list-style-type: none"> - Location of particular areas officially protected such as national parks and natural parks - Location of environmentally vulnerable area such as mangrove forest, coral reef, wetland and tideland - Species of precious animals and plants in the area - Distribution of important historical spots, landscape and scenery <p>3) Quality of life</p> <ul style="list-style-type: none"> - Present air quality 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<ul style="list-style-type: none"> - Regulation of emission gas - Present water quality - Regulation of effluent - Present condition of soil contamination - Regulation for prevention of soil contamination - Present condition of noise and vibration - Regulation for prevention of noise and vibration <p>4. Present organization executing environment study and environmental impact assessment (EIA)</p> <ul style="list-style-type: none"> 1) Organization executing environment study <ul style="list-style-type: none"> - governmental organization / university - private sector 2) Organization executing EIA <ul style="list-style-type: none"> - governmental organization / university - private sector 3) Experience of execution of environmental study and EIA <p>5. Environmental impact assessment (EIA) of the proposed project</p> <ul style="list-style-type: none"> 1) Environmental factors / items to be expected affecting environments by the proposed project 2) Necessity of EIA in the proposed project 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Topographic data 1) Topographic maps - of larger scale on site, if any 2) Availability of aerial photos - Aerial photos (1/25,000)				
2. Geological data 1) Geological maps covering the study area 2) Existing report about data / information such as: - Location of soft ground - Results of geological / soil investigation				
3. Geodetic data 1) Triangulation point network 2) Bench mark network 3) Points description (Control points, Bench mark) 4) Triangulation point data list				
4. Hydrographic data 1) Hydrogeological maps or data 2) Amount of ground water pumped 3) Number of wells and boreholes to be used 4) Change of water level including ground water in recent years				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
5. Meteorological data 1) Monthly rainfall data (daily rainfall data, if possible) 2) Temperature 3) Wind (observation data at the nearest point of the site) 4) Others 6. Natural disaster 1) History of natural disaster - Earthquake - Cyclone - Flood, high, tide, land slide, etc. 7. Data of existing bridge more than 100 meters in length - Type length, width, span, clearance, load limitation - Construction cost, year built, etc 8. Specification and Standard 1) Geometric standard 2) Bridge standard 3) Pavement standard 4) Environmental standard 5) Maintenance manual 6) Legal enforcement, etc.				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<p>1. List of registered consulting firm in and actual results and terms of;</p> <ul style="list-style-type: none"> - Environmental survey - Topographic survey - Soil / Geotechnical survey - Traffic survey - Socio-economic survey <p>2. Cost of investigation and survey</p> <ul style="list-style-type: none"> - Environmental survey (water quality, noise, etc) - Topographic survey, sounding survey - Boring, laboratory soil test, seabed material survey - Origin-destination survey - Socio-economic survey - Salary for consultants <p>3. Bidding rate for ;</p> <ul style="list-style-type: none"> - Environmental specialist - Surveyor - Geotechnical engineer - Traffic engineer - Economist, etc. 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1.Future budgetary plan for the implementation of the project 2. Any specific restrictions related to the Study 3. Availability of the Government's equipment / instruments / apparatus for the Study 1) List up Equipment / instruments / apparatus which are available for the Study by the following category with the following information : a) Category <ul style="list-style-type: none"> - Instruments for geodetic survey - Apparatus for geological / soil investigation - Apparatus for traffic survey - Computer - Services vehicle - Others b) Information <ul style="list-style-type: none"> - Name - Type (or model / maker) - Characteristics (or capacity) - Number of units - Condition 				

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
4. Availability of construction materials (soil / sand / aggregate, timber, cement / concrete, steel / materials products, etc.)	MAY BE AVAILABLE FROM CONCERNED PARTIES			
5. Opinions of alternative routes				

Data / Item	Description	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Policy on WID (Women in development), poverty, alleviation, community participation and resettlement	(1) Central government policy (Law, Guidelines, etc) (2) Others			
2. Organizations	(1) Government agencies responsible for WID, poverty alleviation, community participation and resettlement, and their responsibilities. (Institutional capacity of the agencies) * Please explain Jamuna Bridge resettlement system. (2) Others			
3. Present situation of target population in the project areas	(1) Target population - Number of people to be benefited - Number of people to be resettled - Geographical distribution of target population - Social structure of target population (ethnicity, caste, kinship, system, gender, income differential, power relation of community etc.) - Main forms of livelihood (farming trade, services, etc.) - Pattern of resource distribution amongst the target population (land, water, livestock, farm equipment, etc.) -Target population's access to resources (private ownership, clan or village membership; gender, disparity in terms of access to and ownership of resources, etc.)			

Data / Item	Description	Availability		Name of Report & Files
		Availability	Place of Data Available	
	<ul style="list-style-type: none"> - Common property resources and assets, and its management - Pattern of settlement (housing proximity by kinship or caste, etc.: social ties, residential patterns, etc.) <p>(1) Who are the stakeholders?</p> <p>(2) Are the objectives of the project consistent with their needs, interest, and capacities?</p> <p>(3) What social and cultural factors affect the ability of stakeholders to participate or benefit from the operations proposed?</p> <p>(4) What is the impact of the project or program on the various stakeholders, particularly on women and vulnerable group?</p> <p>(5) What are the social risks (Lack of commitment or capacity and incompatibility with existing concession) that affect the success of the project or program?</p> <p>(6) What institutional arrangement are needed for participation and project delivery?</p> <p>(7) Are there adequate plans for building the capacity required for each?</p>			

Data / Item	Description	Availability		Name of Report & Files
		Availa-bility	Place of Data Available	
4. Rehabilitation and compensation program	<p>(2) Public services</p> <ul style="list-style-type: none"> - Existing public services (electricity, health care, school, water supply, etc.) - Staff of public service (do they come from inside or outside the area?) <p>(3) Others</p> <p>(1) Rehabilitation and compensation program</p> <ul style="list-style-type: none"> - Does the resettlement agency provide employment opportunity for the displaced people, especially for the very poor? - Does the resettlement agency provide an initial resettlement package (subsidies on basic foods, etc.) for the displaced people, especially for the vulnerable group? - Does the resettlement agency respond to the particular needs of women, ethnic minorities and other vulnerable people? - Does the resettlement agency provide target population, if it is necessary, with necessary technical assistance? - Others 			

* Please explain JAMUNA Bridge resettlement system.

1. Affected population 100,000 persons
2. Affected house-hold: 16,000 hh (Bhua Pur 9,300hh+ Siragiganji 7,400hh)
3. Most of the target population (affected people) were resettled in this project area (both sides of the bridge).

They were compensated for their land homesteads, disruption of employment and disturbance. They are now trying to gain their economic condition.

Questionnaire on Planning, Designing, Construction and Maintenance
of Jamuna Bridge (As a break-down of questionnaire 2.4 and 2.5)

(1) Planning

- (a) How the location of the bridge was determined. On what kind of data the decision was based?
- (b) How the hydrographical model testing was utilized for the design of the guide bank of the bridge?
- (c) The methodology of the survey on the river water traffic.
- (d) At what stage the decision to include the railway was made?
- (e) At what stage the foundation system was changed to steel pipe piles?

(2) Design

- (a) What was the design code adopted for the bridge?
- (b) How the buffer was designed?
- (c) How the design high water level was determined?
- (d) Why the power transmission line was hung on the poles? Any reasons for not using the utility duct for the transmission line?

(3) Construction

- (a) How the riverbank slope was determined? Any standard section adopted for the riverbank? If the slope was changed during construction, why and how the changes were made?
- (b) What are the main reasons for applying the large diameter steel pipe piles for the foundation?

(4) Maintenance

- (a) Please explain the existing system and organization of the bridge maintenance.
- (b) What kind of maintenance work is carried out currently?
- (c) Please provide actual data for scouring and river course mitigation after construction.

(5) Others in general

- (a) Please show the back data for the estimation of the construction cost given in the pre-feasibility study.
- (b) Please provide a map showing the flooded area at the annual maximum water level.
- (c) Please provide the water levels at all the nearby river water gauge stations during major floods. Also, please provide maps, aerial photos, or satellite images showing the changes in the flooded area with time after the major floods.

- (d) Toll for the bridges near Dhaka, such as Jamuna, Megna etc.
- (e) Railway fare for passenger and freight.
- (f) River training projects for Padma River. (Location, size and period)
- (g) Procedure for land acquisition.

Questionnaire regarding Padma Bridge:

1.1 Background of the Project :

2. Current & future national and local development plan affecting the study area :

- Economic
- Social
- Agriculture
- Infrastructure

Ref. PADMA BRIDGE PREFEASIBILITY
REPORT (VOLUME I), CH. 2.

3. Past transportation infrastructure study conducted in the study area, regardless whether they were conducted under JICA or not :

Not

1.2. Outline of the Project:

1. Title : Padma Bridge Construction
2. Target Area : The land area of south-west covers 43,000 Sq km
3. Target Population : The population of south-west covers 28.80 million
4. Target Time Frame : Up to 2008
5. Overall Goal/Objective : The objective is to connect the Padma Bridge to the National Highway Network.

1-3 Counterpart organization or agency of project

(1) Is the following information correct?

Ans-Corrected as follows

Lead Agency:

Jamuna Multi-purpose Bridge Authority, Jamuna Bridge Division,
Ministry of Communication

Assisting Agency:

Roads and Highways Department (RHD), Ministry of Communication

Roads and Railways Division, Ministry of Communication

Bangladesh Water Development Board, Ministry of water Resources

The Department of Environment (DOE)

Inland Water Transport Authority (IWTA)

Please provide the organization chart of the above counterpart organizations. - *Provided*

Also, please clarify the responsibility of each counterpart for the project. - *stated*

Responsibility:

1-3.

- Roads and Highway Department (RHD) will provide all necessary records, data, Map regarding the communication all over the Bangladesh
- Roads and Railway Division will provide all necessary records, data, Map regarding the Railway communication all over the Bangladesh.
- * Bangladesh Water Development Board, Ministry of Water Resources
- The Department of Environment will provide all necessary records, data, Map regarding the Environment sector. at
- Inland water Transport Authority will provide all necessary records, data, Map, regarding the water way, navigation etc.
- * Bangladesh Water Dev. Board (BWDB) assists the Feasible study by supplying hydrological data and river morphological data (x-section) at the study area. BWDB also assists the project implementation by deputing her experienced senior and junior engineers while constructing river training structures of the Bridge such as guide bunds, gro, embankments etc.

Questionnaire on Planning, Designing, Construction and Maintenance of Jamuna Bridge :

1. Planning :

(a). How the location of the bridge was determined. On what kind of data the decision was made?

Ans. The location of the bridge crossing was determined by considering the (i) Stability of the river reach; ii)phenomenum with; regular cross section (ii) optimum distance between the targeted region; (iii) geo-technical/geological conditions, etc.

The decision was made on the basis of aerial photographs, satellite imageries, cross section, field survey, site visit, etc.

(b). How the hydrographic model testing was utilized for the design of the guide band of the bridge?

Ans. Based on the historical record, a frequency distribution of the discharge had been computed assuming a Gumble distribution for the annual maximum discharge at Bahadurabad. From this frequency distribution the expected discharge had been determined for various frequencies. The water level and its frequencies were determined following the same procedure. Alternatively water level was computed at various frequencies from the discharge using rating curve.

In these way hydrographic model testing was utilized in determining the design discharge and water level to use in designing guide bund (Appendix A-1 Discharge and water levels: Jamuna Bridge Project, Phase II Study Feasibility Report, Volume II, 1989).

d) At what stage the decision to include the railway was made?

Ans : During the design phase, to the interest of nation it was decided to include the rail line (Mix gauge) on the Jamuna Bridge.

e) At what stage the foundation system was changed to steel pipe piles ?

Ans : From very beginning it was steel pipe piles

2. Design :

a) What was the design code adopted for the bridge?

Ans : AASHTO and BS 54000 Code followed.

C) How the design high water level was determined ?

Ans. The design high water level was determined by frequency analysis using Gumble distribution method and also on a probability basis using rating curve. And 100 years flood level at the bridge site had been adopted to 15.08 m. PWD (Appendix A-1 Discharge and water levels: Jamuna Bridge Project, Phase II Study Feasibility Report, Volume II, 1989)

d) Why the Power Transmission Line was hung on the poles.

Ans : Following the conventional procedure and due to high power transmission inter-connector i.e. 11,000 KV, the power transmission line was hung on the poles. There was no other reasons to hung the power transmission line on poles.

3. Construction :

a) How the riverbank slope was determined? Any standard section adopted for the riverbank? If the slope was changed during construction, why and how the changes were made?

Ans. The river bank slope was determined on the basis of the geo-technical boundary conditions (in-situ soil density, grain size distribution), current velocity, wave action, etc.

During construction the slope of the guide Bund was changed due presence of mica more than that was encountered during investigation. The changes were made by providing more gentle slope than original design. In the original design the slope was 1:5 and changed to 1:6.

b) What are the main reasons for applying the large diameter steel pipe piles for the foundation ?

Ans: The capability to install steel cylinder piling large enough to withstand the environmental threats of deep scour, sand waves, strong river current, wind earthquake & boat impact.

4. Maintenance :

a) Please explain the existing system and organization of the bridge maintenance

Ans: As per maintenance manual submitted by the construction contractor, JMBA has been carrying out the maintenance work engaging an international contractor called JOMAC which is comprised with
1) Sir Own Williams (UK)
2) Intertoll (S. Africa)
3) Abdul Monaim Construction Co. Ltd (Bangladesh)

b) What kind of maintenance work is carried out currently ?

Ans: The maintenance work is carried out currently such as Toll Operation System, Main Bridge, Guide Bund, Approach Roads, Bridge End Facilities Area, Housing Area and different facilities developed during this period etc.

c). Please provide actual data for scouring and river course migration.

Ans. Actual data for scouring is provided as appendix 4(c1).
The river course migration after construction is shown in figure 4(c2).

5. Others in General :

b) Please provide a map showing the flooded area at the annual maximum water level

Ans. The map showing the flooded area at the annual maximum water level is annex 5(b).

d) Toll for the Bridge near Dhaka, such as Jamuna

Ans: Motor Cycle (MC) : 30.00 Tk
Light vehicle (LV) : 400.00 Tk (Car, Jeep, Pickup & Microbus)
Small Bus (SB) : 550.00 Tk (Less than 29 Seats)
Large Bus (LB) : 800.00 Tk (More than 29 Seats)
Small Truck (ST) : 750.00 Tk (Less than 5 ton)
Medium Truck (MT) : 1000.00 Tk (5 ton to 8 ton)
Large Truck : 1250.00 Tk (More than 8 ton)

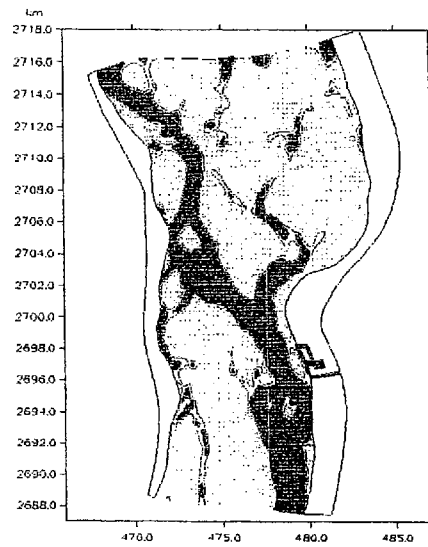
e) Railway fare for passenger

Ans: Tk. 45.00 from West Banghabandhu.Setu and Tk. 70.00 form East Banghabandhu.Setu to Rajshahi (general class)

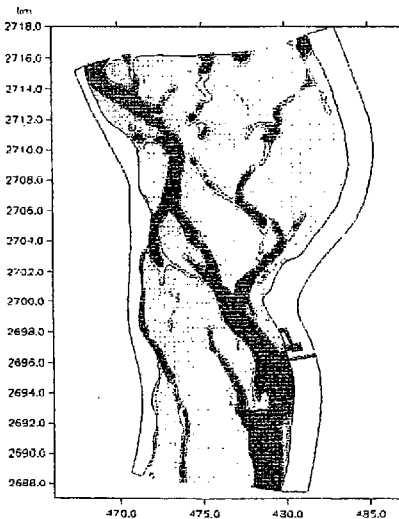
g) Procedure for land acquisition

Ans: As per requirement the implementation agency submitted a requisition to competent authority i.e. District Commissioner (DC) of project area. Surveyor of DC Office firstly surveyed the acquired land and fix up the market value of the land. After resurvey by JMBA the land has acquired. The compensation money delivered to the affecting person directly by JMBA Resettlement unit through DC office.

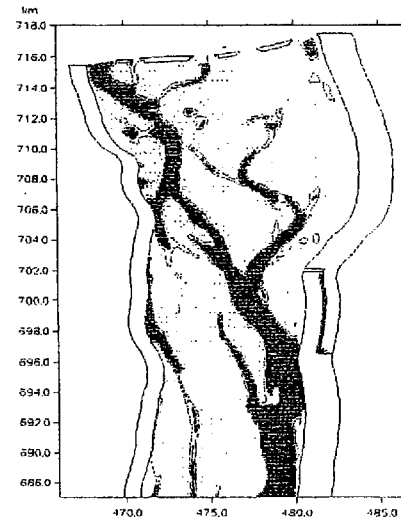
Channel below 6 mPW (development at Sirajganj JP and at bridge section)



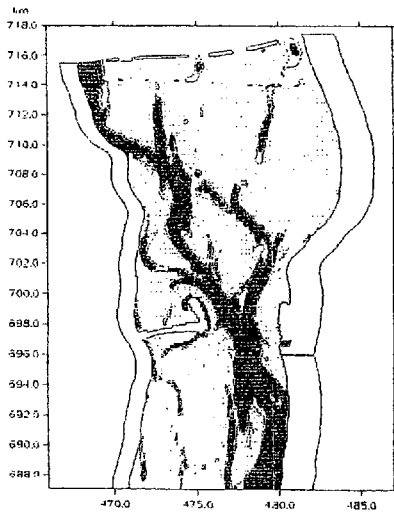
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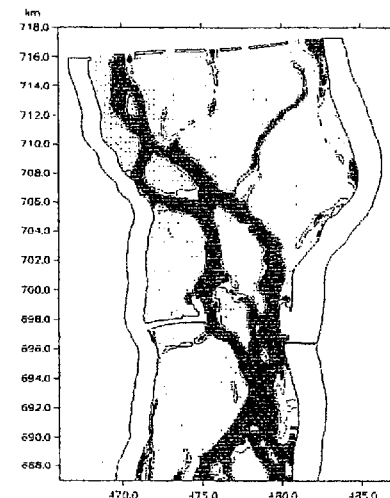
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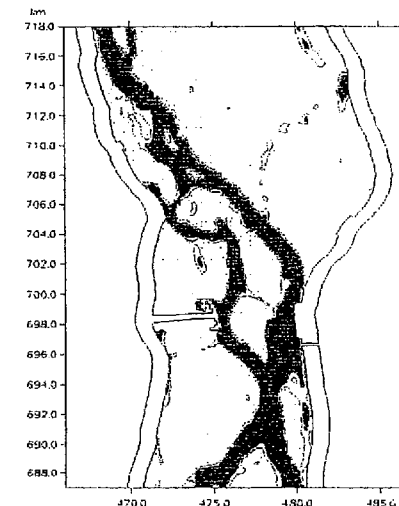
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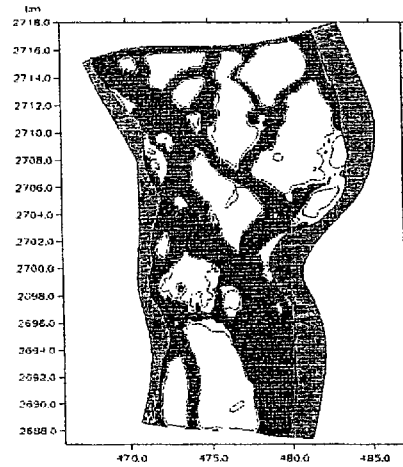
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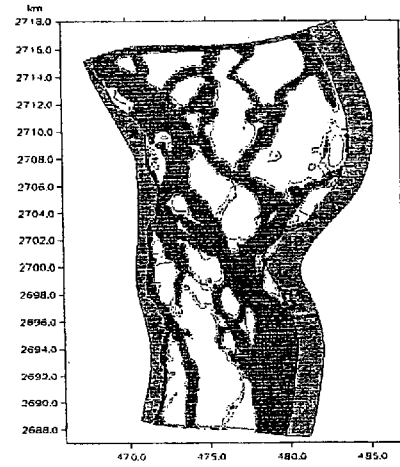
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Channel below 9 mPWL (development u/s of Bhuaipur HP)

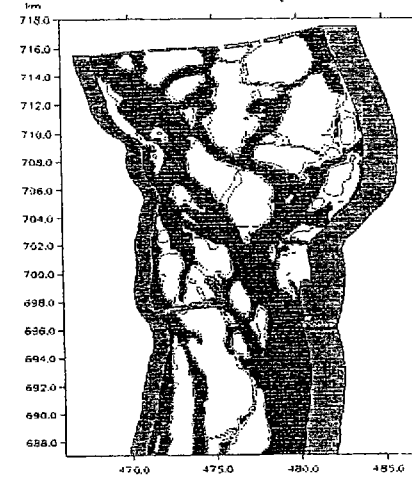
Appendix 4C1



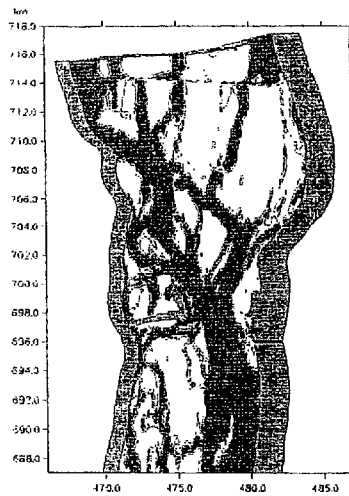
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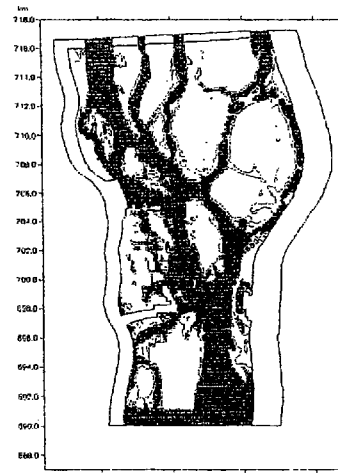
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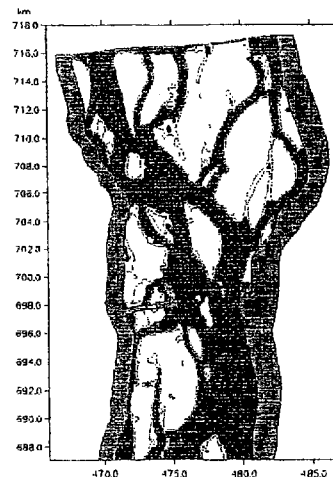
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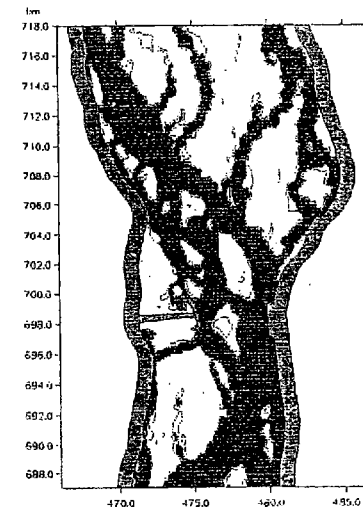
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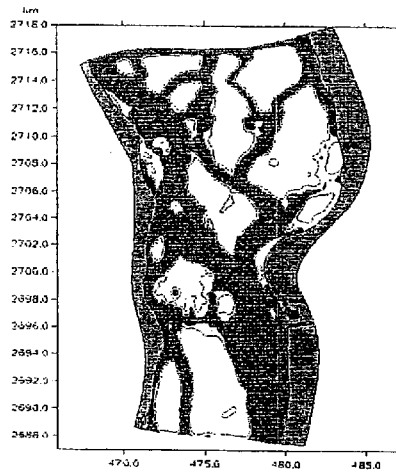


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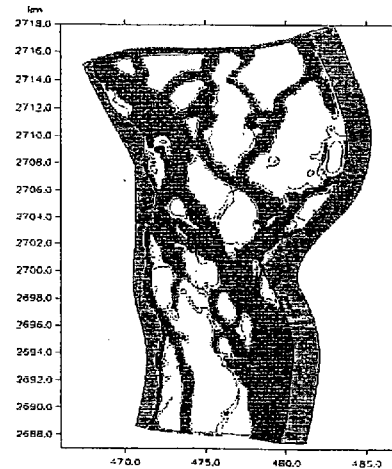
SWMC/DHI

JMBA

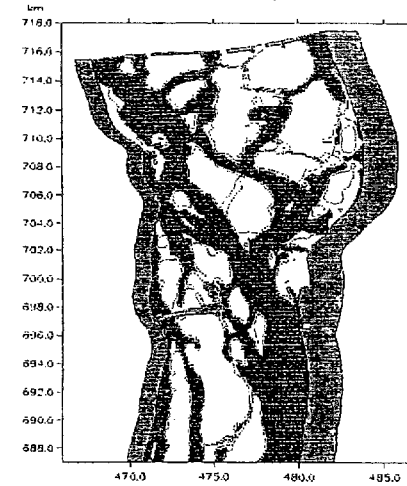
Channel below 9 mPW (development u/s of Bhuaipur HP)



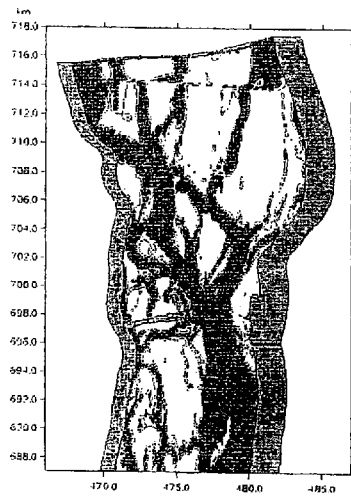
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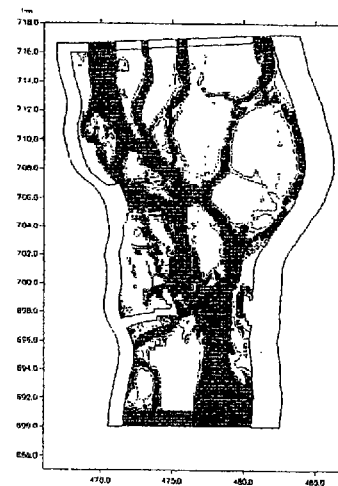
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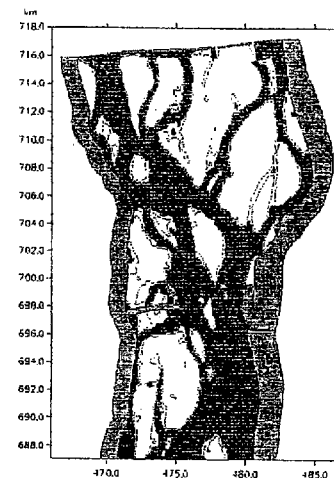
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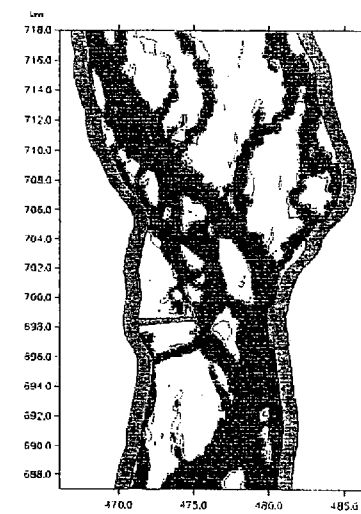
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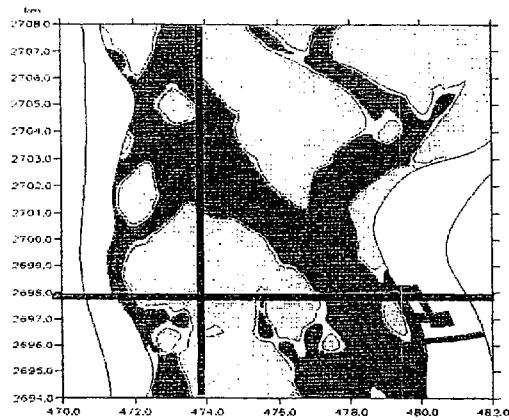


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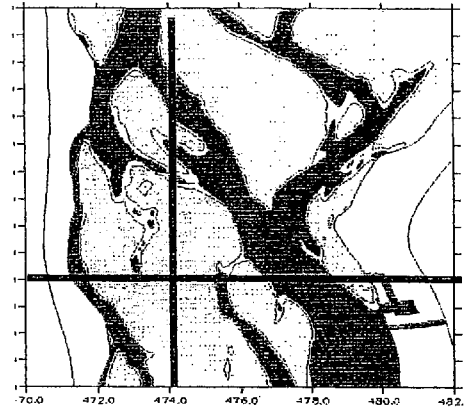
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JMBA

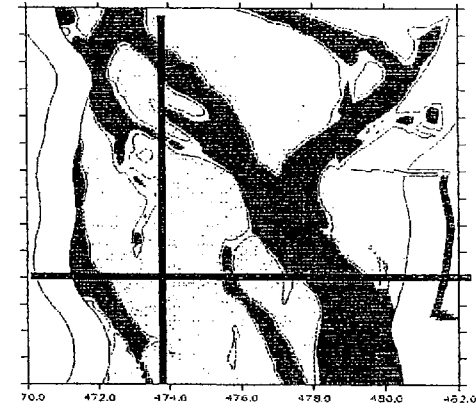
Charland degradation and migration at bridge section



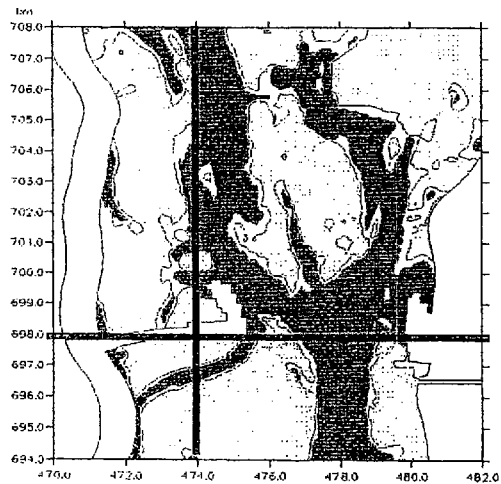
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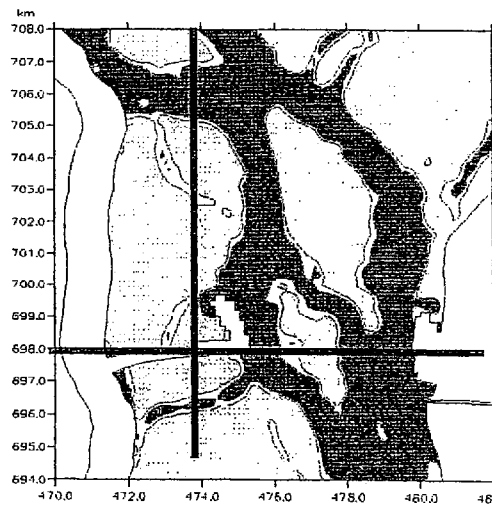
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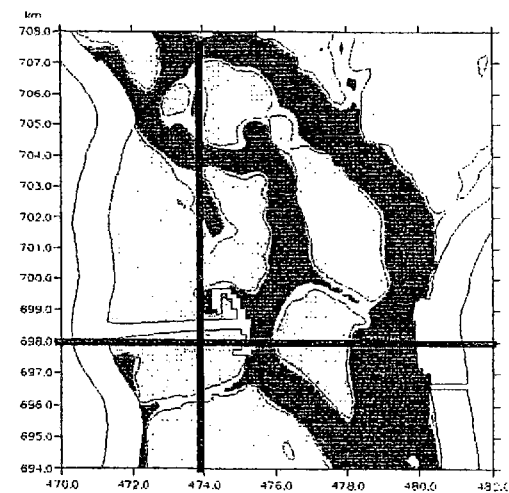
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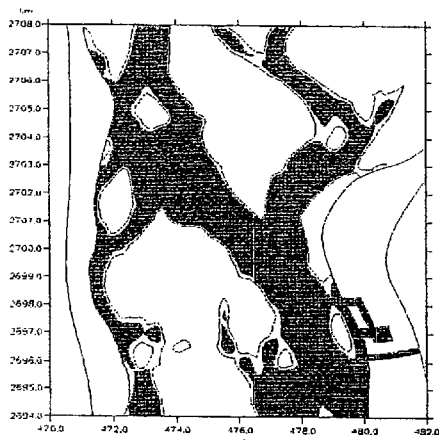


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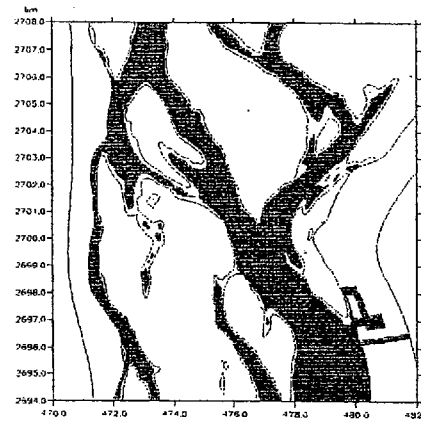


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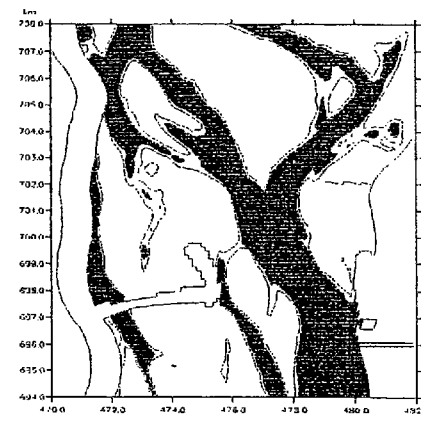
Charland degradation and migration at bridge section



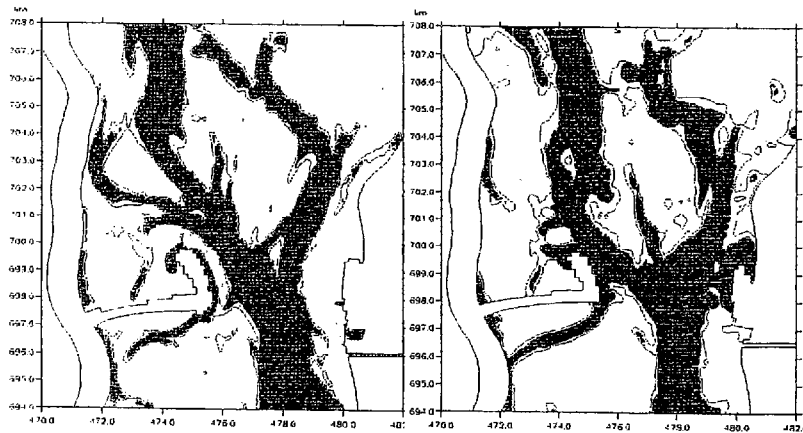
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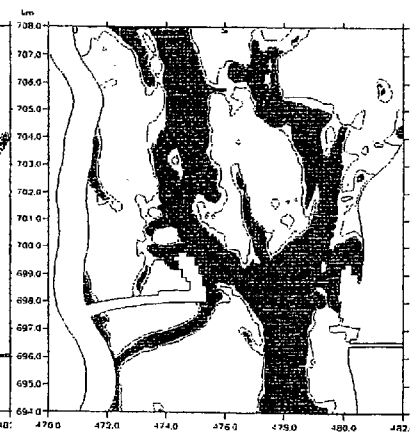
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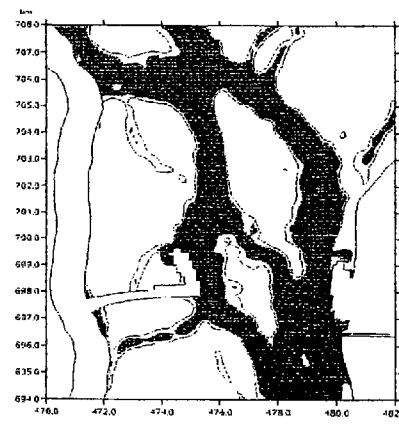
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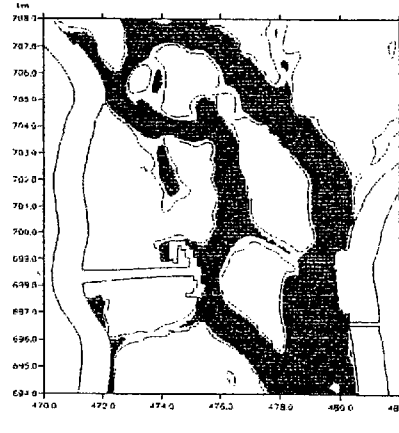
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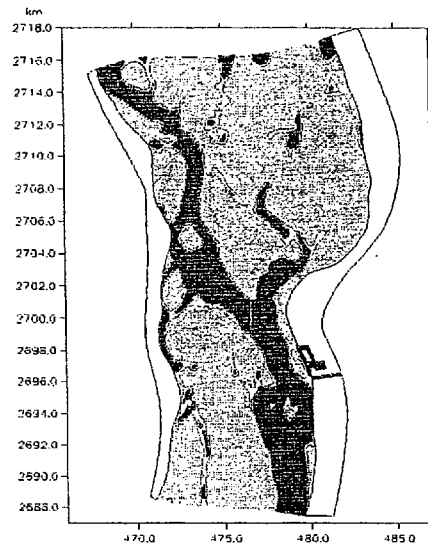


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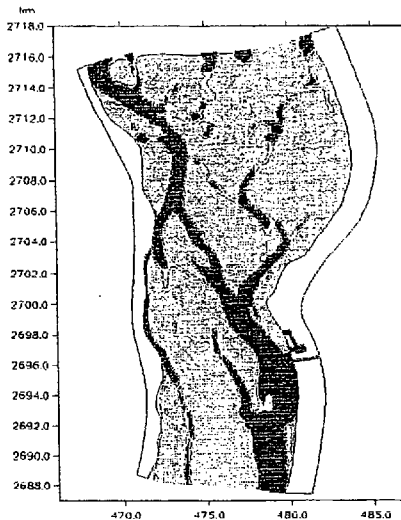
SWMC/DHI

JMBA

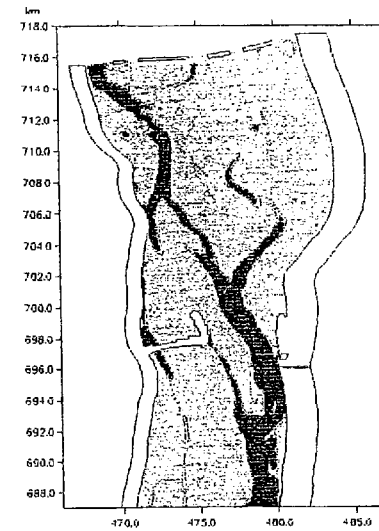
Channel development at Sirajganj HP and at bridge section



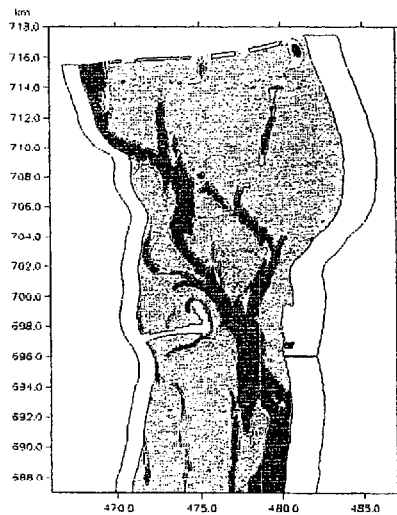
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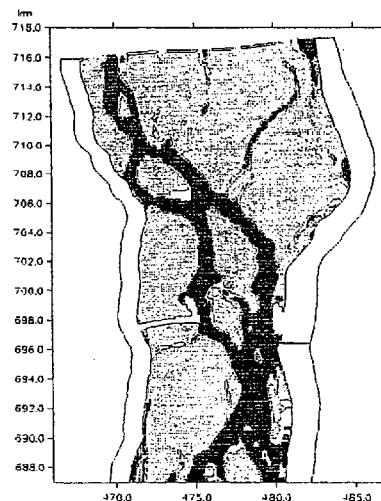
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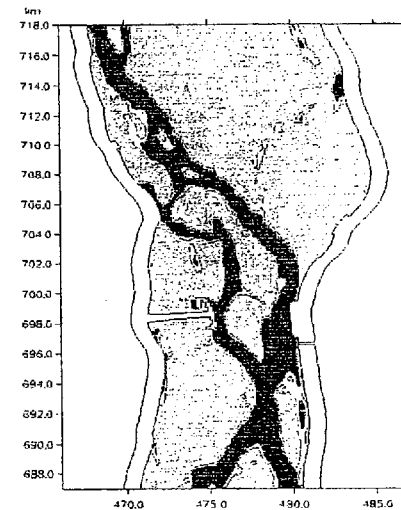
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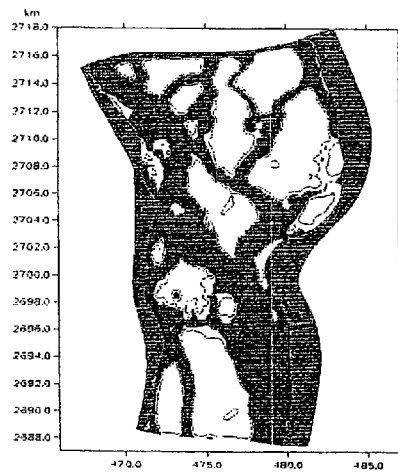


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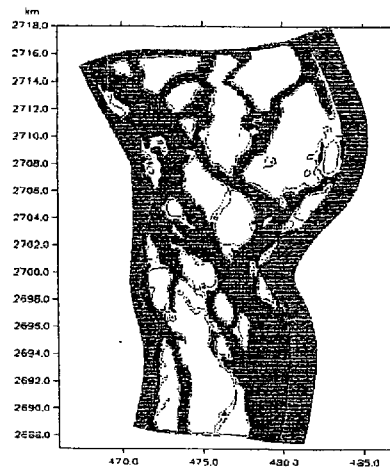


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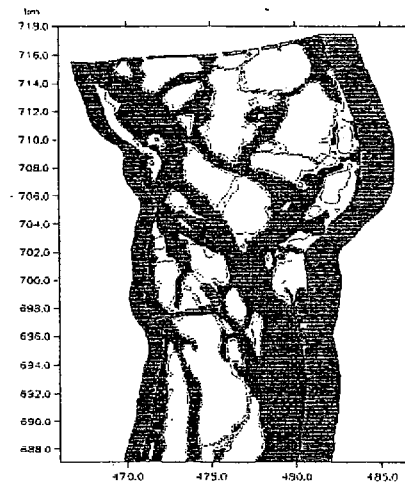
Channel development maps of Bhuapur HP



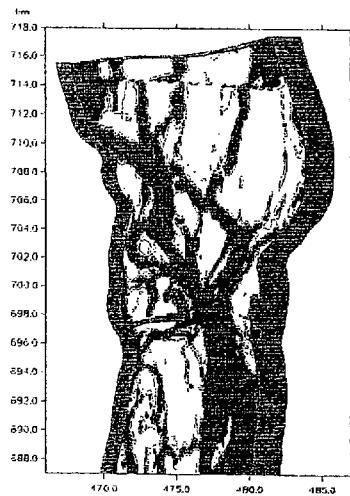
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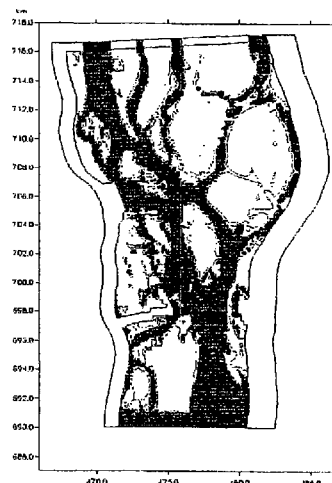
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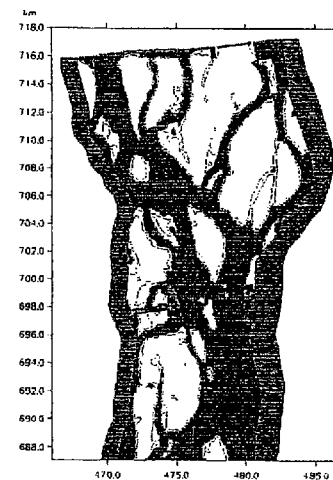
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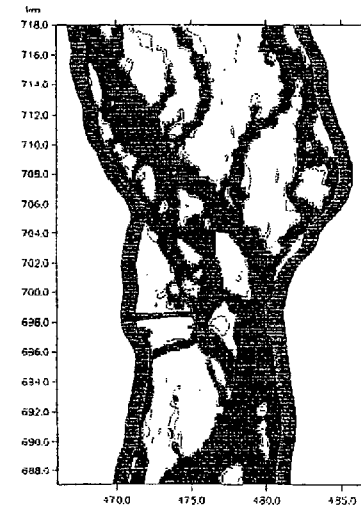
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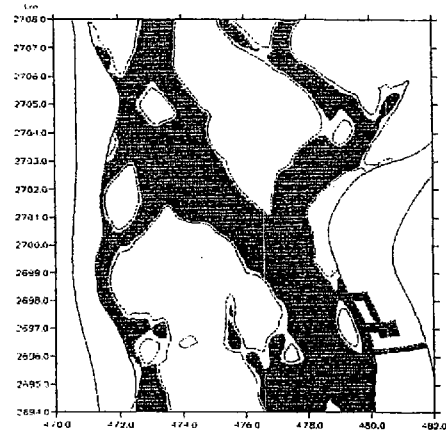


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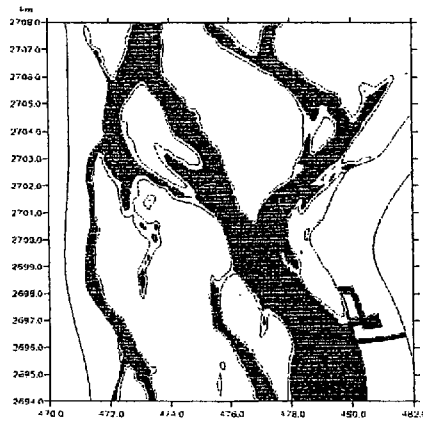
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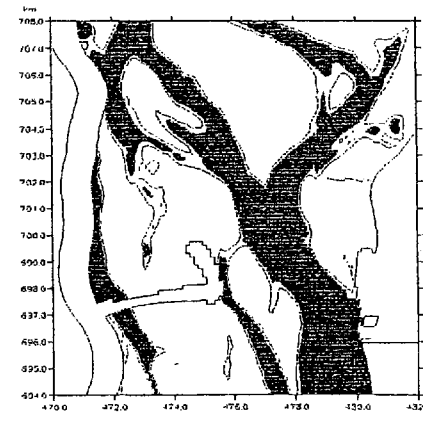
Charland degradation and migration at bridge section



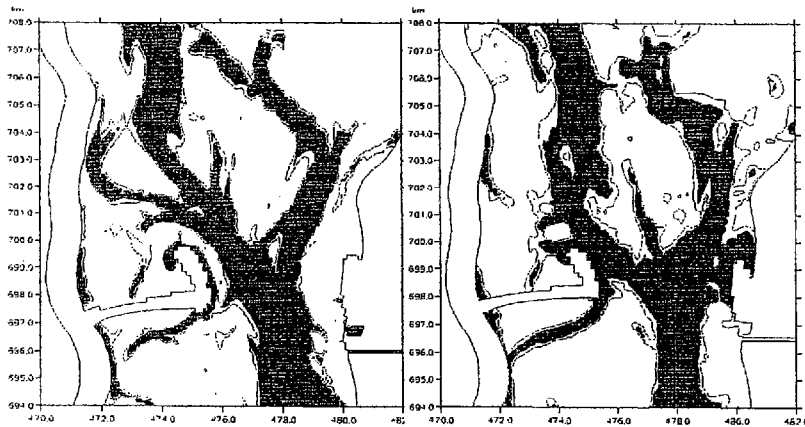
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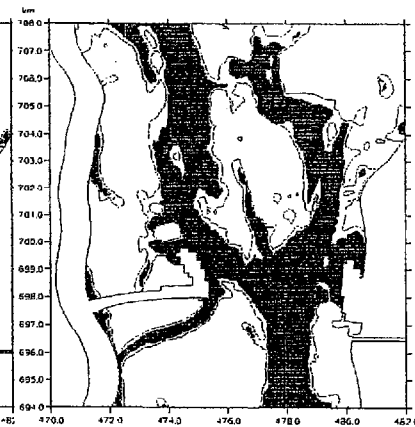
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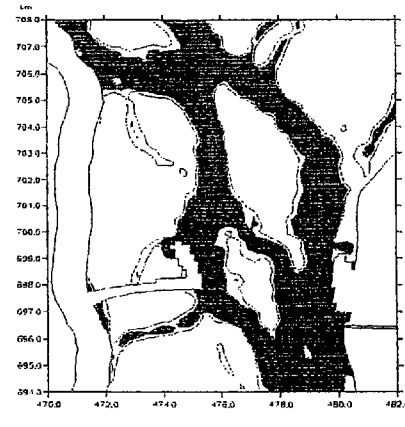
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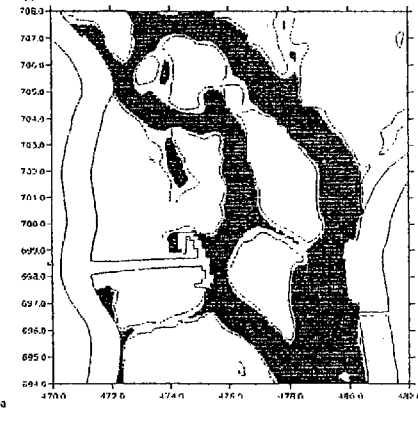
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Bikash Choudhury
Additional Director (Environment)
JMBA, Banani, Dhaka
BANGLADESH

Phone 011-811562 (Mobil)
9340048 (Res)

Fax

Information related to Environmental Issues

Received on
6/Dec/01
from Mr. Bikash.

Information related to Environmental Issues

Legislation related to Environmental Policies and Standards

(a) Responsible Ministry or Agency and its Organization

- Ministry of Environment and Forest
- Directorate of Environment

(b) Laws and Guidelines

1. Bangladesh Regulation 1977

This Regulation only covers the creation of a Pollution Control Board.

2. Environmental Protection Act 1995

This Act was passed in Parliament on 16 February 1995. It concerns a Bill for Environment Conservation, Development of Environmental Standards and Environmental Pollution Control and Abatement.

The bill is of an institutional nature in the sense that it provides the institutional framework for environmental protection.

3. Environmental Quality Standards (EQS)

Available with Directorate of Environment

(c) Environmental Quality Standards on Air Pollution, Water Pollution, Soil Pollution, Noise, Vibration and Offensive Odor including Emission/Effluent Standards

All major construction contracts contain normal provisions for satisfactory environmental operation through the Specification and the Conditions of Contract. But, whatever the requirements of the Contract, the law of Bangladesh must be obeyed.

The specific environmental concerns are listed below which may related to the Padma Bridge construction sites. These are:

- ⊕ Emissions to air (dust, smoke etc.,)
- ⊕ Emissions to water (dredge spoil, surface & foul water drainage etc.,)
- ⊕ Emissions to land (solid and liquid domestic & industrial waste etc.,)
- ⊕ Noise and visual pollution

1. Air Pollution

The spread of wind blown soil particles, derived from unpaved haulage and access roads, reclaimed areas and stockpiles of soil, and dust from handling may cause a problem during the dry season if strong winds prevail. Such dust may cause health risks for the labourers and for the population living nearby.

Exhaust emissions caused by the use of vehicles, machinery and other engine driven equipment used by the contractors should not exceed the **exhaust emission standards** which are based on the Bangladesh EQS for emission standards for gaseous exhausts.

2. Water Pollution

In Bangladesh, rain water drainage surface water drainage is not considered to be environmental hazard. But dredge spoil and return water may cause environmental hazard. Disposal of dredged material requires approval of working methods regarding disposal of dredge spoil, discharge of return water, silt and other fines.

3. Soil Pollution

The waste disposal problem (solid and liquid) is limited in size. It may concerns some 500 to 1000 people.

4. Noise and visual pollution

The noise caused by pile driving, crushing plants and earth and rock moving equipment is unavoidable.

Resettlement unit
JMBA
Data and Questionnaire for feasibility study of Padma Bridge

2.6 (4) Present situation of the study area regarding environmental issues :

(a) Socioeconomic environment :

* Plan for resettlement , if any (number of people to be resettled and compensated)

Involuntary resettlement should be avoided as much as possible. There should be an action plan for resettlement of people affected by land acquisition. The directives of World Bank on involuntary resettlement, resettlement policy of ADB, environmental guidelines of former OECF and experience of JMBA should be taken into consideration while formulating resettlement action plan.

Total area of land to be acquired is not known hence the number of people to be resettled cannot be determined. From experience of Jamuna Bridge it may be assumed that about 1900 ha of land would be acquired where approximately 75000 people will be directly or indirectly affected.

* Experience of resettlement, if any (number of people to be resettled and compensated)

We have experience of resettlement of people affected by acquisition of land for Jamuna Bridge where about 2300 ha of land was acquired and about 104000 people were directly or indirectly affected. A revised Resettlement Action Plan (RRAP) and Guidelines for Compensating Erosion and Flood Affected Persons (GCEFAP) were formulated for rehabilitation of people affected by land acquisition and erosion at up and down stream of Jamuna Bridge.

* Distribution of schools, hospitals etc. (public facilities) :

The exact number of schools, hospitals and public facilities of the affected area may be known from the concerned departmental offices located at the Upazila hqs. For social , economic and cultural integration between relocated and host people these facilities must be extended.

*Cultural or archaeological property :

The exact scenario can be observed by spot verification after land acquisition.

* History of epidemic diseases including water borne diseases (for the last five years) :

The information may be collected from the concerned Upazila Health Complex.

*Solid waste collection/disposal system and waste water treatment system :

The information may be collected on spot verification after acquisition of land.

(5)Environmental and resettlement problems experienced in Jamuna Bridge Project :

(a) Number of households and people resettled :

1164 households were resettled at two selected resettlement sites with about 5800 people and 2868 households were resettled at host villages surrounding the acquired land with about 15000 people. Detail information regarding implementation of RRAP is available.

(b) NGOs role for the smooth resettlement, a review comments as of today :

(i) An NGO was engaged for implementation of RRAP. No such program was implemented earlier, the NGO had to work on learning by doing method as a result there are ample success with some failures also.

(ii) Another NGO implemented GCEFAP. This program is also a new one in Bangladesh. This program was also implemented on learning by doing method with better success.

(iii) The other NGO was engaged for training of project affected persons on human resource development and occupational skill development and disbursement of micro credit. Here performance is quite satisfactory.

(iv) Some other NGOs were also engaged for implementation of education, afforestation and health services etc.

(c) Environmental impact of the bridge construction, a review comments as of today :

To mitigate the adverse impact Environmental Management Action Plan (EMAP) was formulated and implemented. As such there is no considerable adverse impact as of today. Details of this program is available in the environmental Unit of JMBA.

(6) General conditions and quality of the existing infrastructure :

Roads and Railways Division, Ministry of Communication may be consulted for these information.

2.7 Information on district/village life :

(1) to (10) - Departmental Offices at Upazila level of the land to be acquired may be consulted.

2.8 Others (including general information of the study area :

(1) to (6) - Bureau of Statistics and local Upazila Offices of the study area may be consulted.

3. Information on local firms :

(1) Land survey may be carried out by NGO - BRAC

(5) Environmental survey and studies may be conducted by Environmental Engineering Division, Department of Civil Engineering, BUET.

(6) Land use planning by NGO- BRAC.

Information regarding other survey and studies may be collected from Department of Geological Survey of Bangladesh, Meteorological Department, SPARSO, Roads and Railways Division, Ministry of Communication. concerned department of BUET and the pre feasibility report on Padma Bridge .

Benu Gopal Dey
Project Director(Ru), JMBA.

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
4. The Jamuna Bridge 1) Role and Function of Jumna Bridge Authority (Organization chart) 2) Development plan and F/S reports including Railway Construction 3) Schedule of Railway Construction 4) Operational / managing costs of road and railway 5) Existing traffic volume through ferryboats and forecasted traffic volume 6) Operational / managing costs of the ferryboats 7) Navigation clearance for the Bridges 8) Toll 5. Annual budget with breakdown for the next 10 years 6. Public investigation of the last 5 years by component 7. Amount of foreign assistance	JAMUNA MULTI-PUR- POSE BRIDGE AUTHORITY (JMBA)	YES	DHAKA	

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Transportation systems	* BIWTA	YES	DHAKA	
1) Network maps and capacity of transportation systems, (ports, roads, railways, inland waterway and ferry)	RHD & BR			
2) Present condition of each mode				
① Degree of the development	DO	DO	DO	
② Traffic volume by each mode				
③ Amount of investment of each mode				
④ Transportation cost, fares and tariff of each mode				
2. Transport administration				
1) Administrative organization chart with jurisdictional responsibilities and brief explanation				
① Ministry of Communication and related agencies	SECRETARIATE OF BANGLADESH	DO	DO	
② Other indispensable organizations for this projects				
3. Existing and on-going road development plans and projects				
1) Design, implementation schedule and current project status	RHD	DO	DO	
2) National plan				
3) Annual plan				

* BIWTA — BANGLADESH INLAND WATER TRANSPORT AUTHORITY
 RHD — ROADS AND HIGHWAY
 BR — BANGLADESH RAILWAY

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Agencies in charge and / or concerned with the followings: 1) Permission to aerial photo taking 2) Custody of topographic maps and aerial photos 3) Area conservation 4) Geological data / information Please state: - Name of Agencies and Departments - Name and position of the responsible persons in charge of the Japanese Study Team.				
2. Organization to supervise and steer the management of the Study				
3. Roads and Railway related budget 1) Road and Railway construction budget 2) Road and Railway maintenance budget	RHD & BR	RHD YES	DHAKA	
4. Roads and Bridge related cost 1) Construction cost by type of road, bridge and location 2) Maintenance cost by type of road, bridge and location 3) Construction material cost 4) Unit costs for major work	RHD	YES	DHAKA	

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. Topographic data 1) Topographic maps - of larger scale on site, if any 2) Availability of aerial photos - Aerial photos (1/25,000)	SURVEY OF BANGLADESH (SOB)	YES	DHAKA	REQUEST MAY BE MAKE MENTIONING AREA, PERIOD OF TYPE OF DATA ETC. AND CONCERNED DEPARTMENT WILL FINDOUT THEIR REFERENCE.
2. Geological data 1) Geological maps covering the study area 2) Existing report about data / information such as: - Location of soft ground - Results of geological / soil investigation	GEOLOGICAL SOCIETY OF BANGLADESH (GSB)	YES	DHAKA	DO
3. Geodetic data 1) Triangulation point network 2) Bench mark network 3) Points description (Control points, Bench mark) 4) Triangulation point data list	DO	DO	DO	DO
4. Hydrographic data 1) Hydrogeological maps or data 2) Amount of ground water pumped 3) Number of wells and boreholes to be used 4) Change of water level including ground water in recent years	* BWDB	DO	DO	DO

* BWDB — BANGLADESE WATER DEVELOPMENT BOARD

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
5. Meteorological data 1) Monthly rainfall data (daily rainfall data, if possible) 2) Temperature 3) Wind (observation data at the nearest point of the site) 4) Others	BANGLADESH METEOROLOGICAL DEPARTMENT	YES	DHAKA	DO
6. Natural disaster 1) History of natural disaster - Earthquake - Cyclone - Flood, high, tide, land slide, etc.	DO	DO	DO	DO
7. Data of existing bridge more than 100 meters in length - Type length, width, span, clearance, load limitation - Construction cost, year built, etc	RHD	DO	DO	DO
8. Specification and Standard 1) Geometric standard 2) Bridge standard 3) Pavement standard 4) Environmental standard 5) Maintenance manual 6) Legal enforcement, etc.	DO	DO	DO	DO

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
1. List of registered consulting firm in and actual results and terms of; <ul style="list-style-type: none"> - Environmental survey - Topographic survey - Soil / Geotechnical survey - Traffic survey - Socio-economic survey 	EGIS SOB GSB RHD *DU			
2. Cost of investigation and survey <ul style="list-style-type: none"> - Environmental survey (water quality, noise, etc) - Topographic survey, sounding survey - Boring, laboratory soil test, seabed material survey - Origin-destination survey - Socio-economic survey - Salary for consultants 	MAY BE AVAILBLE FROM THE CONCERNED PARTIES.			
3. Bidding rate for ; <ul style="list-style-type: none"> - Environmental specialist - Surveyor - Geotechnical engineer - Traffic engineer - Economist, etc. 	DO			

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* DU — DHAKA UNIVERSITY

VI. OTHER INFORMATION 1

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
<p>1.Future budgetary plan for the implementation of the project</p> <p>2. Any specific restrictions related to the Study</p> <p>3. Availability of the Government's equipment / instruments / apparatus for the Study</p> <p>1) List up Equipment / instruments / apparatus which are available for the Study by the following category with the following information :</p> <p>a) Category</p> <ul style="list-style-type: none"> - Instruments for geodetic survey - Apparatus for geological / soil investigation - Apparatus for traffic survey - Computer - Services vehicle - Others <p>b) Information</p> <ul style="list-style-type: none"> - Name - Type (or model / maker) - Characteristics (or capacity) - Number of units - Condition 	<p>MAY BE AVAILABLE FROM THE CONCERNED PARTIES</p> <p>DD</p>			

Data / Item	Request of Availability	Availability		Name of Report & Files
		Availability	Place of Data Available	
4. Availability of construction materials (soil / sand / aggregate, timber, cement / concrete, steel / materials products, etc.)				
5. Opinions of alternative routes				

付属資料 事前調査一収集資料リスト
 収集資料リスト(1)

番号	カテゴリー	資料の名称	発行年	地域	言語	形態	版型	ページ数	オリジナル・コピーの別	部数	収集先名称又は発行機関	寄贈・購入の別	備考
1	地質図	Geological Map 1/1,000,000	1990	全土	英語	Sheet	—	1	オリジナル	1	Geological Survey	購入	
2	地形図	Topographic Map 1/50,000 Dhaka Faridpur, Manikganj, Madaripur and Munshiganj Districts No. 79 I/2 (3rd ed.)	1990	—	英語	Sheet	—	1	オリジナル	2	Survey General of Bangladesh	寄贈	
3	地形図	Topographic Map 1/50,000 Faridpur, Gopalganj, Madaripur, Munshiganj & Sariatpur Districts No. 79 I/3 (3rd ed.)	1990	—	英語	Sheet	—	1	オリジナル	1	Survey General of Bangladesh	寄贈	3rd Edition
4	地形図	Topographic Map 1/50,000 Dacca & Faridpur Districts No. 79 I/3 (2nd ed.)	1973	—	英語	Sheet	—	1	オリジナル	1	Survey General of Bangladesh	寄贈	2nd Edition
5	地形図	Topographic Map 1/50,000 Dacca District No. 79 I/6 (2nd ed.)	1972	—	英語	Sheet	—	1	オリジナル	2	Survey General of Bangladesh	寄贈	
6	地形図	Topographic Map 1/50,000 Madaripur, Munshiganj, and Sariatpur Districts No. 79 I/7 (4th ed.)	1994	—	英語	Sheet	—	1	オリジナル	1	Survey General of Bangladesh	寄贈	4th Edition
7	地形図	Topographic Map 1/50,000 Madaripur, Munshiganj, and Sariatpur Districts No. 79 I/7 (2nd ed.)	1977	—	英語	Sheet	—	1	オリジナル	1	Survey General of Bangladesh	寄贈	2nd Edition
8	地形図	Topographic Map 1/50,000 Manikganj Pabna and Rajbari Districts No. 79 E/9 (4th ed.)	2000	—	英語	Sheet	—	1	オリジナル	1	Survey General of Bangladesh	寄贈	4th Edition
9	地形図	Topographic Map 1/50,000 Manikganj Pabna and Rajbari Districts No. 79 E/9 (2nd ed.)	1972	—	英語	Sheet	—	1	コピー	1	Survey General of Bangladesh	寄贈	2nd Edition
10	地形図	Topographic Map 1/50,000 Dhaka Faridpur Magura and Rajbari Districts No. 79 E/10 (4th ed.)	1998	—	英語	Sheet	—	1	オリジナル	2	Survey General of Bangladesh	寄贈	
11	地形図	Topographic Map 1/50,000 Chandpur Comilla Munshiganj and Shariatpur Districts No. 79 I/11 (3rd ed.)	1991	—	英語	Sheet	—	1	コピー	1	Survey General of Bangladesh	寄贈	
12	地形図	Topographic Map 1/50,000 Barisal, Chandpur, Lakshmipur and Shariatpur Districts No. 79 I/12 (4th ed.)	1993	—	英語	Sheet	—	1	オリジナル	2	Survey General of Bangladesh	寄贈	
13	地形図	Topographic Map 1/50,000 Manikganj, Rajbari and Tangail Districts No. 79 E/13 (3rd ed.)	1990	—	英語	Sheet	—	1	コピー	1	Survey General of Bangladesh	寄贈	

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14	地形図	Topographic Map 1/50,000 Faridpur, Manikganj and Rajbari Districts No. 79 E/14 (3rd ed.)	1986	—	英語	Sheet	—	1	オリジナル	2	Survey General of Bangladesh	寄贈	
15	衛星画像	Image Map prepared by digital mosaicing of multispectral SPOT image, Sheet 79 I/2, 1/50,000	1990	—	英語	Sheet	—	1	コピー	1	ignESPACE	寄贈	
16	衛星画像	Image Map prepared by digital mosaicing of multispectral SPOT image, Sheet 79 I/3, 1/50,000	1990	—	英語	Sheet	—	1	コピー	1	ignESPACE	寄贈	
17	衛星画像	Image Map prepared by digital mosaicing of multispectral SPOT image, Sheet 79 I/7, 1/50,000	1990	—	英語	Sheet	—	1	コピー	1	ignESPACE	寄贈	
18	水運陸運区	Bangladesh Showing Communications 1/1,000,000	2001	Bangladesh 全土	英語	Sheet	—	1	オリジナル	1	Brigadier General AHM Shahidullah	寄贈	
19	道路網図	RHD Road Network in Faridpur Circle 2000 1/250,000	2000	Faridpur	英語	Sheet	—	1	オリジナル	2	Roads and Highway Department	寄贈	
20	道路網図	RHD Road Network in Dhaka Circle 2000 1/250,000	2000	Dhaka	英語	Sheet	—	1	オリジナル	1	Roads and Highway Department	寄贈	
21	道路網図	RHD Road Network in Bangladesh 1/750,000	2000	全土	英語	Sheet	—	1	オリジナル	1	Roads and Highway Department	寄贈	
22	水深図	Padma & Jamuna River Confluence, Daulatdia to Teota/Natibpur 1/25,000, Sheet ARC 04/2001 A	2001	—	英語	Sheet	—	1	コピー	2	Bangladesh Inland Water Transport Authority	寄贈	
23	水深図	Padma River, Dighali to Muqsudpur 1/25,000, Sheet CD 264/2001 B1	2001	—	英語	Sheet	—	1	コピー	2	Bangladesh Inland Water Transport Authority	寄贈	
24	水深図	Padma River, Muqsudpur to Char Salehpur 1/25,000, Sheet ND 1078/2001 A	2001	—	英語	Sheet	—	1	コピー	2	Bangladesh Inland Water Transport Authority	寄贈	
25	水深図	Padma River, Char Salehpur to Sharipur Char/Natakholra 1/25,000, Sheet ND 1078/2001 B	2001	—	英語	Sheet	—	1	コピー	2	Bangladesh Inland Water Transport Authority	寄贈	
26	水深図	Padma River, Sharipur Char/Natakholra to Daulatdia 1/25,000, Sheet ND 1078/2001 C	2001	—	英語	Sheet	—	1	コピー	2	Bangladesh Inland Water Transport Authority	寄贈	

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27	自然災害地図	Hazards affecting Bangladesh, Areas Affected by Cyclone, Areas Affected by Floods and Riverbank Erosion, Areas Affected by Droughts and Earthquake zones	Data 1979 - 1991	Bangladesh 全土	英語	Sheet	—	1	オリジナル	1	Disaster Management Bureau, Ministry of Relief	寄贈	
28	水文観測網地図	Hydrological Network (SW) Bangladesh 1/750,000	?	Bangladesh 全土	英語	Sheet	—	1	オリジナル	3	Bangladesh Water Development Board	購入	
29	レポート (交通)	"Bangladesh Integrated Transport System Study, 1998" by Physical Infrastructure Division	1998	全土	英語	簡易製本	A4	292	コピー	1	Planning Commission	寄贈	
30	レポート (環境)	Revised Resettlement Action Plan	Oct. 1993 / Feb. 1994	Jamuna Bridge Area	英語	リング製本	A4	122	コピー	1	Jamuna Multipurpose Bridge Authority Resettlement Unit	寄贈	
31	レポート (環境)	The Study on Construction of the Bridge over the River Rupsa in Khulna (Phase-2) Environmental Impact Assessment Final Report Volume 2 Annexures Part D: Resettlement Action Plan	Feb. 2000	Khulna	英語	リング製本	A4	41	コピー	1	Sheltech Consultants (Pvt.) Ltd	寄贈	
32	レポート (環境)	Environmental Management Action Plan, Jamuna Multipurpose Bridge Project	1995	Jamuna	英語	製本	A4	155	オリジナル	1	Jamuna Multipurpose Bridge Authority Environmental Unit	寄贈	
33	河川水位記録	Flood 1998, River water level and Rainfall Data (1) and (2)	1998	Bangladesh 全土	英語	リング製本	?	120 + 120	コピー	1+1	Flood Information Centre, BWDB	寄贈	
34	レポート (水文)	Japan-Bangladesh Joint Study Project-Phase II, Topic 2: Morphological Behaviours of the River Meghna with Particular Emphasis on the Meghna and Bhairab Bridges	Jul. 2001	Meghna	英語	リング製本	A4	140	コピー	1	Bangladesh University of Engineering and Technology	寄贈	
35	レポート (水文)	Impact of 1998 Floods on Groundwater Recharge in Dhaka	Jan. 1999	Dhaka	英語	リング製本	A4	51	コピー	1	Institute of Flood Control and Drainage Research, BUET	寄贈	

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36	レポート (水文)	Performance Evaluation of FCD/FCDI Projects During 1998 Flood	Dec. 1998	Dhaka	英語	リング製本	A4	55	コピー	1	Institute of Flood Control and Drainage Research, BUET	寄贈	
37	レポート (水文)	Impact of 1998 Floods on Dhaka City and Performance of Flood Control Works	Nov. 1998	Dhaka	英語	リング製本	A4	76	コピー	1	Institute of Flood Control and Drainage Research, BUET	コピー代負担	
38	レポート (水文)	Erosion and Local Scouring around Bridges due to 1998 Floods	Jan. 1999	Central to Northern Bangladesh	英語	リング製本	A4	90	コピー	1	Institute of Flood Control and Drainage Research, BUET	コピー代負担	
39	レポート (水文)	Late Monsoon Flood in the Southwest Region of Bangladesh 2000	2000	Southwest of Bangladesh	英語	リング製本	A4	75	コピー	1	Bangladesh Water Development Board	コピー代負担	
40	水文資料	Supporting the Feasibility Study of the Padma Bridge by Japan International Cooperation Agency (JICA)	2001	-	英語	リング製本	A4	70	コピー	1	Surface Water Modelling Centre (SWMC)	寄贈	With CD
41	論文集 (水文)	Proceedings of the International Workshop on "Morphological Behaviour of the Major River in Bangladesh"	1993	Bangladesh 全土	英語	リング製本	A4	489	コピー	1	Organising Committee	コピー代負担	
42	レポート (経済)	Techno Economic Study for Gas Supply to Western Zone, Final Report	1983	西部	英語	製本	A4	3 cm厚	コピー	1	PETROBANGLA	寄贈	Main Text + Appendices
43	レポート (プロジェクト)	Engineering Appraisal of the Brahmaputra Multipurpose Development Project	1987	-	英語	リング製本	A4	165	コピー	1	Expert Study Group Bangladesh	寄贈	
44	レポート (プロジェクト)	Jamuna Bridge Appraisal Study, Phase I: Characteristics and Configuration, Final Report, Executive Summary and Main Text	1987	Jamuna	英語	リング製本	A4	1.5cm厚	コピー	1	Gov. Of Bangladesh, World Bank, UNDP	コピー代負担	

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45	レポート (プロジェクト)	JAMUNA BRIDGE PROJECT, Phase II Study, Draft Feasibility Study, 全11巻	1989 - 1990	Jamuna	英語	リング製本	A4	全部で15cm厚	コピー	各1、計11	Gov. Of Bangladesh, World Bank, UNDP	コピー代負担	
46	レポート (プロジェクト)	Paksey Bridge Construction Project Detailed Engineering Services (Design Criteria)	1996	-	英語	リング製本	A4	93	コピー	1	Roads and Highways Dept.	寄贈	
47	レポート (プロジェクト)	Construction of Bhairab Bridge (Contract Documents Vol. 2A)	1999	-	英語	リング製本	A4	130	コピー	1	Roads and Highways Dept.	寄贈	
48	設計基準	Bangladesh National Building Code	1993	全土	英語	製本	A4	5cm厚	オリジナル	1	Housing and Building Research Institute	寄贈	
49	設計資料	RHD Bridge Designers' Handbook	1999	-	英語	製本	A4	259	オリジナル	1	Roads & Highway Dept.	寄贈	
50	設計資料	RHD Bridge Designers' Handbook (Supplement A)	1999	-	英語	製本	A4	147	オリジナル	1	Roads & Highway Dept.	寄贈	
51	環境資料	Handbook, Environmental Procedures and Guidelines	1999	全土	英語	ホチキス	A4	116	コピー	1	Environment and Development Alliance	寄贈	
52	経済資料	Bangladesh Energy Planning Project (Final Report) Executive Summary	1987	-	英語	リング製本	A4	150	コピー	1	Planning Commission	寄贈	
53	資料	List of Projects Prepared for Lining up of Foreign Aid	2000	-	英語	リング製本	A4	56	コピー	1	Roads & Highway Dept.	寄贈	
54	新聞切り抜き	洪水関係新聞記事切り抜き	2000	全域	英語	リング製本	A4	160	コピー	1	Bangladesh University of Engineering and Technology	寄贈	
55	新聞切り抜き	Chandpur 鉄道駅が河岸侵食により壊れた時の新聞記事	2001	Chandpur	英語	バラ	A4	2	コピー	1	Bangladesh Water Development Board	寄贈	

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56	パンフレット	Laying of the Foundation Stone of the Padma Bridge at Mawa	2001	Mawa	英語	バラ	A4	8	オリジナル	1	Ministry of Communication	寄贈	
57	パンフレット	Second Buriganga Bridge	2001	—	英語	バラ	A4	8	オリジナル	1	Ministry of Communication	寄贈	
58	パンフレット	Rupsa Bridge Construction Project	2001	Khulna	英語	バラ	A4	4	オリジナル	1	Shimizu-ITD JV	寄贈	
59	パンフレット	Hydrological and Morphological Study of the River Meghna in the People's Republic of Bangladesh	2001	Meghna	英語	ホチキス	A4	12	コピー	1	JICA + BUET	寄贈	
60	政策、統計	Statistical Pocketbook Bangladesh 99	2000	全土	英語	製本	A6	466	オリジナル	1	Bangladesh Bureau of Statistics	購入	
61	政策、統計	Annual Development Programme 2001 - 2002	2001	全土	英語	製本	A4	462	オリジナル	1	Planning Commission	寄贈	
62	政策、統計	1999 Statistical Yearbook of Bangladesh	1999	—	英語	製本	A4	652	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
63	政策、統計	RHD Road Network Database Annual Report	2000	全土	英語	バインド	A4	91	オリジナル	1	Roads & Highway	寄贈	JICA has 1997 version
64	政策、統計	Bangladesh Population Census 1991	1996	Manikganj	英語	製本	A4	242	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
65	政策、統計	Bangladesh Population Census 1991	1994	Faridpur	英語	製本	A4	232	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
66	政策、統計	Bangladesh Population Census 1991	1996	Shariatpur	英語	製本	A4	158	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
67	政策、統計	Bangladesh Population Census 1991	1993	Dhaka	英語	製本	A4	628	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
68	政策、統計	Bangladesh Population Census 1991	1996	Nadarpur	英語	製本	A4	138	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	

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69	政策、統計	Bangladesh Population Census 1991	1996	Munshiganj	英語	製本	A4	164	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
70	政策、統計	Bangladesh Population Census 1991	1996	Rajbari	英語	製本	A4	162	オリジナル	1	Bangladesh Bureau of Statistics	寄贈	
71	水文データ	河川水位、流量データ	2001	—	英語	CD	—	—	コピー	1	JMBA、BWDB	寄贈	
72	道路統計	Statistical Pocketbook Bangladesh 99 + 道路地図	2001	全土	英語	CD	—	—	コピー	1	Roads and Highways Dept.	寄贈	上村専門家より受領
73	衛星画像	ランドサット画像	2001	—	英語	CD	—	—	コピー	1	BUET	寄贈	帯金専門家より受領
74													
75													
76													