

## **TERMS OF REFERENCE (TOR)**

*for*

### **Socio-Economic and Other Surveys**

Under

“চট্টগ্রাম জেলার মীরসরাই উপজেলার উন্নয়ন পরিকল্পনা প্রণয়ন ঃ সার্বিক দুর্যোগ ব্যবস্থাপনাকে  
ভূমি ব্যবহারের মাধ্যমে সম্পূর্ণকরণ”

**(Preparation of Development Plan for Mirsharai Upazila, Chittagong District:  
Risk Sensitive Landuse Plan)**

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Ministry of Housing and Public Works  
Government of the People’s Republic of Bangladesh  
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## APPENDIX 01 BCKGROUND INFORMATION OF THE PROJECT

### 1.1. Project Background

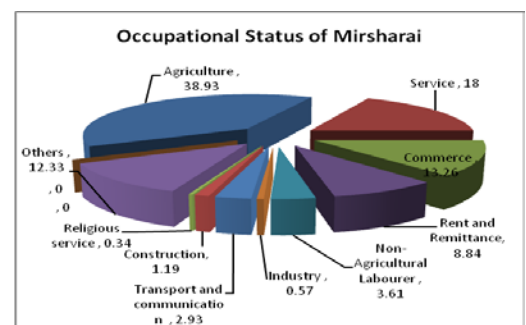
Mirsharai Upazila (CHITTAGONG DISTRICT) area 482.88 sqkm(BBS)/509.80sqkm(GIS Data), located in between 22°39' and 22°59' north latitudes and in between 91°27' and 91°39' east longitudes. It is bounded by TRIPURA state of India, CHHAGALNAIYA and FENI SADAR upazilas on the north, SITAKUNDA upazila and BAY OF BENGAL on the south, FATIKCHHARI upazila on the east, SONAGAZI and COMPANIGANJ (NOAKHALI) upazilas on the west. Mirsharai Thana was formed in 1901 and it was turned into an upazila in 1983. Mirsharai Upazila consists of 2 Municipality, 16 Union and 113 Mouza.

Mirsharai, the combination of lake and hilly area contains attractive scenic beauty on the southernmost part of Bangladesh. The most important attraction of the upazila is that one can travel Mohamaya Chara Lake by speed boat and explore hilly area and can enjoy Khoiyachora, Baghbiani, Napitachora, Sonaichora, Mithachora and Boyalia waterfalls. This area is located 192.2 km far from DHAKA and 4.5 hour bus journey. Anyone can travel by rail and it is 197 km of rail journey and it takes 4.5 hour from Dhaka to Mirsharai Upazila. 56 km from the CHITTAGONG Divisional headquarters and takes 1.5 hour travel by bus. The Bangladesh Road Transport Corporation introduced a direct bus service from Dhaka to *Mirsharai* via comilla.(Source: Banglapedia,2012)

At Mirsharai Upazila main river is Feni; Sandwip Channel is notable; canal 30, most noted of which are Feni Nadi, Isakhali, Mahamaya, Domkhali, Hinguli, Moliash, Koila Govania and Mayani Khal. The hills range on the northern and eastern side of this upazila along the bank of the Feni River extended up to Chittagong and the Chittagong hill tracts

**Historical Events:** Sultan Fakhruddin Mobarak Shah conquered Chittagong in 1340 AD and established the Muslim rule in this region. During the reign of Gaur Sultans Hussain Shah and Nusrat Shah, Paragal Khan and Chhuti Khan were the rulers of this area. Subsequently Nizam Shah, brother of emperor Sher Shah, was the ruler of this area. Nizampur Pargana is named after Nizam Shah and the whole area of Mirsharai came under the control of Nizampur pargana. From the beginning of the 16th century this region was very rich in Bangla literature. Most of the time between 1580 and 1666 this region was under the control of the Arakanese. The place at which (of the present Mirsharai thana) Bujurg Umed Khan, son of Subadar Sayesta Khan, landed after crossing the Feni River was named as Bujurg Umedpur. With the conquest of Chittagong by Bujurg Umed Khan in 1666, this region came permanently under the Mughal rule. Towards the end of British rule in India, Durgapur and Karerhat areas of Mirsharai upazila were the centres of revolutionary activities of Chittagong. A fierce battle was fought between the freedom fighters (under Capt. Wali Ahmed) and the Pak army at a place adjacent to the Fenafuni Bridge on the south of Mirsharai sadar in which about 100 Pak soldiers were killed. Besides, direct encounters were held between the freedom fighters and the Pak army at many' places including Shuvapur Bridge, Hinguli Bridge, Aochi Mia Bridge and Mostan Nagar.

**Main occupations:** Agriculture 38.93%, non-agricultural labourer 3.61%, industry 0.57%, commerce 13.26%, transport and communication 2.93%, service 18%, construction 1.19%, religious service 0.34%, rent and remittance 8.84% and others 12.33%. Total cultivable land 22,896.40 hectares, fallow land 147713 hectares; single crop 38.91%, double crop 42.46% and treble crop land 18.63%. At present Cultivable land under irrigation is 6,917.85 hectare. Ownership of agricultural



land Landowner 51.30%, landless 48.70%; agricultural landowner: urban 38.82% and rural 52.09%.

**Value of land :** The market value of the first grade arable land is Tk 30000 per 0.01 hectare. Main crops Paddy, potato, aborigine, bean, tomato, pumpkin and radish. Extinct or nearly extinct crops Sugarcane, jute, arahar, mustard, sesame, linseed, ground nut. Main fruits Mango, blackberry, jackfruit, banana, papaya, litchi, pineapple, water-melon.

**Communication facilities Roads:** Pucca road 230 km, semi-pucca road 119 km, mud road 1435 km; railway 16 km; waterway 11 nautical miles, Rail junction 4. Extinct or nearly extinct traditional transport Palanquin, bullock cart. Noted manufactories Carpet industry, pipe mill, ice factory, rice mill, bakery, brick-field, steel furniture, fish- poultry' feed' factory, bidi factory. There are also Cottage industries, Goldsmith, blacksmith, potteries, weaving, tailoring, bamboo and wood work. Hats, bazars and fairs Hats and bazars are 52, fairs 5, most noted of which are Abu Torab Bazar, Kamar Ali Bazar, Bara Daroga Hat, Mahajan Hat, Karer Hat, Baraia Hat, Shantir Hat, Zorwarganj Baishakhi Mela, Baruni Snan Mela and Shadhinata Mela. Main exports product is Bamboo, fish, paddy, potato, banana, vegetables.

**NGO Activities:** Operationally important NGOs are BRAC, Proshika, ASA, Sheba, CARE, and Hunger Project. Upazila health complex 1, family planning centre 16, satellite clinic 11.

**Opportunity:** Bangladesh can earn money in local and also in foreign exchange by opening a tourist resort at *Mirsharai*. The spot, if properly developed will become an excellent holiday resort and tourist centre. Rowing facility can be arranged easily; fishing and hunting facilities are already there. The success of developing *Mirsharai* as a tourist centre and Special Economic Zone depends much on good communication facilities and availability of modern amenities. Moreover, the proposed *Special Economic Zone* would generate many industry related new activities including huge vehicular traffic such as air, rail, road and water. This phenomenon would have both positive and negative impact on the socio-economic condition and existing land use pattern of the region. The proposed planning package would guide such probable changes in the socio-economic condition and land use pattern of the region, and would also address the adverse impact of such changes.

**The proposed project would be prepared on a regional development perspective considering the region as a part of whole of Mirsharai Upazila and its 16 unions. In this development planning package since its location is strategically important from the regional context because this upazila is situated on the way to Dhaka Chittagong highway as the highway runs through this upazila.**

**Description of the Project Area:** A detailed description of the Project Area is given below:

**Table: Area, Population and Density of the Project Area:**

Municipality	Union	Mouza	Village	Population		Density (per sq km)	Literacy Rate (%)
				Urban and Other Urban	Rural		
2	16	103	208	31206	36751 0	826	55.1

Source: BBS, 2011

**Mirsharai sea beach, hilly area, Mohamaya Chara Lake, Khaiya Chara region has the greater potential for tourism development as there are abundant resources to attract tourists. Mirsharai is developing in an unplanned and haphazard manner very rapidly due to the ample opportunity for tourism development, which is acting as pull factor for private sector developers. Hence, this project has been under taken to protect the region from depletion of its natural resources and character and tourism development as well.**

**Moreover, honorable MoHPW Minister expressed his heartiest interest to develop char of this Upazila as an exclusive economic zone; as well as to establish a tourist zone and economic zone covering Mirsharai upazila.**

### **1.2 Objectives of the Project**

The objective of the project is to optimize **coastal resources** and activities for sustenance of marginal people. The **coastal activities** and resources are very important to the economy and life of the people of Bangladesh whose living conditions are inextricably linked to the productivity and sustainability of **coastal zone**. There is no long term Holistic Development Plan for the **coastal zone**. Coastal zone needs to be integrated with the mainstream of development process of the country. So, an interdisciplinary development planning approach is urgent to optimize livelihood of **coastal zone**. The Physical development planning problems, needing attention, are as follows:

- (i) To integrate coastal zone with the mainstream of development process of the country.
- (ii) To frame policies for the best use of land and its control for the **Mirsharai Upazila**.
- (iii) To optimize coastal environment for sustenance of marginal people.
- (iv) Formulation of Policies and plans for mitigation of different types of hazards, minimizing the adverse impacts of climate change and recommend possible adaptation strategies for the region.
- (v) Formulation of Policies and plans for gradual nucleation of settlements with policies and plans for development of growth centers of the area.
- (vi) Formulation of a planning **package** for development of tourism in **Mirsharai Upazila**, and also to accommodate future changes in existing land use pattern, socio-economic condition of the area and quality of life of the people due to establishment of the third sea port in the region in an integrated and comprehensive manner.

## APPENDIX 02

### 2. Scope of Work

UDD project team members' shall prepare the plan for the Preparation of Development Plan for Mirsharai Upazila, Chittagong District: Risk Sensitive Landuse Plan. The survey firm shall conduct all necessary socio-economic and other surveys and studies for the project, and prepare working paper on the relevant fields under study, and also assist the UDD team members in preparation of final plan and all relevant reports till completion of the project.

The survey firm would extend all necessary assistance particularly in gathering and procuring all relevant socio-economic and cultural attribute data of each feature within the project area; SPSS & GIS database operation and management, analysis and preparation of all maps and reports till completion of the project.

The survey firm would also conduct different type of other surveys and studies covering hydrological and coastal surveys and studies, environmental studies, traffic and transportation surveys, socio-economic surveys and demographic studies, agricultural surveys and studies, baseline survey of flora and fauna etc. The survey firm shall also arrange workshops/seminar on collected data and information, findings, interpretation and working paper and conduct other ancillary activities relating to the project activities as directed by the PD wherever necessary. UDD project team would conduct all PRA session and the survey firm would extend necessary assistance in communication with the Mayor, ward councilors of the paurashava, Union Parishad Chairman and other stakeholders as directed by PD for arranging the PRA sessions.

The survey firm shall collect all relevant data and information through digital survey and upload the collected data to website instantly through online communication device; at the end of each month submit a report containing all information have been uploaded to website and ensure that all data and information are accessible to viewer.

The survey firm shall be responsible for quality of data and information collected, data processing, cleaning and editing, and presentation into tabular form including preparation of working paper as required by PD. The survey firm shall deliver all raw and processed data along with working papers containing guidelines for preparing the planning **package**.

Traditional practice of Development Plan is to expand urban facilities, ignoring or suppressing the priority of agriculture, fisheries, forestry or ecology. The current project would emphasize over the coastal activities focusing on tourism. It would emphasize over the tourism development in and around **Mirsharai Upazilas** and also livelihood of the local people, who are very much depended on coastal resources. The current project would also emphasize over the change in land category, land use and livelihood pattern. Spatial development planning is an evolving process. Socio-economic Survey firm will be conducted **1000 Socio economic Questionnaire preparation and printing, field survey, cross checking Data entry, Data quality checking, analysis, report writing and printing etc.**

The objectives of the work comprise the following:

- a) Identify the socio-economic condition of the people of different strata and minority group including tribes and also identify people's aspiration, attitude, opinion towards development of the area especially **tourism** industry; and their need, demand for their development and the project area as a whole.
- b) Identify the scenario of interrelated complex system that are co-existent the project area covering various sectors including hydrology and coastal characteristics, environment and disaster, traffic and transportation, socio-economic and demographic characteristics, agriculture, forest and, flora and fauna etc.
- c) Prepare people oriented demand driven planning **especially for tourism development of the region.**

- d) Develop a development scenario which is compatible to all biotic and non-biotic interrelated, co-existent systems functioning in the project area to prepare tourism development plan for **Mirsharai Upazilas**.

## **2.1 Typology for Different Types of Surveys, Studies and Activities**

The Survey firms' shall have to follow the following step-wise integrated activities for the stated scope of work on the intended different survey works. He/she would have to interlink the intended survey activity with different steps of other related activities conducted by other different survey firms'. A detailed methodology of the specific survey work including procedure for relating its output with that of other different surveys and activities (both attribute and spatial data transportation, hydrological, coastal, socio-economic and other required hard and soft data), which would be imparted by other different survey firms' has to be mentioned clearly in the proposed technical proposal. The survey firm has to combine the socio-economic and other database with that of database (GIS database) of physical feature, topographic and land use database prepared by other survey firm(s). A presentation of the proposed methodology shall have to make before the Proposal Evaluation Committee (PEC) as part of technical proposal evaluation. The bidder has to make the presentation by using his/her own hardware and software along with valid license. The Client may the premise of the firm without providing prior notice (if necessary).

The survey firm has to perform the following tasks including surveys and studies:

### **A. Socio-Economic Survey, Study of Formal and Informal Sector (Both Urban and Rural) Economy, and Social Infrastructure:**

**a-1. Socio-Economic Survey:** The objective of socio-economic survey for **Mirsharai Upazilas** is to identify the existing socio-economic condition of the region including their development potential with special reference to **tourism development in the region**. The survey would also reveal their opinion, needs, demands and perception relating to their socio-economic development emphasizing tourism. The survey firm shall prepare of socio-economic questionnaire in online communication device (tablet) compatible format (apps), and also responsible for editing, piloting and finalization of questionnaire. Then shall conduct digital survey at household level (both in urban and rural area) through the structured questionnaire, acquire geo-coordinate of the household and also picture of the respondent and household; and upload the data and information including geo-coordinate and picture of both respondent and household to website instantly through online communication device (tablet) in consultation with PD.

The survey firm shall also check and ensure the quality of the field level surveyed data and upload the surveyed data to computer at the same day. The socio-economic database shall be linked with that of other related spatial and attribute database collected from different other surveys and studies conducted by other survey firm. He/She would also ensure the quality of database (data editing, data cleaning) and would perform data analysis, tabulation, present it in graphs and figures, and preparation of report.

The survey firm shall have to identify the household and/or locations surveyed on physical feature map and also inter-link the collected socio-economic data with different steps of other related activities conducted by other different survey firms'.

### **a-2. Study of Formal and Informal Sector (Both in Urban and Rural) Economy:**

Preparation of questionnaire for studying formal and informal sector economy both in urban and rural areas in online communication device (tablet) compatible format (apps) covering trade, commerce, shopping and other related activities, editing, piloting, finalization and printing of questionnaire by the survey firm. Then, a digital questionnaire survey shall be conducted both in urban and rural areas in consultation with PD, also take photograph and geo-coordinate of the enterprise surveyed' and shall check the quality of the field level surveyed data and upload the surveyed data to website instantly and also upload to computer at the same day. The attribute data of surveyed commercial and industrial enterprises shall be linked with spatial data collected from physical feature and land use survey. He/She would also ensure the quality of database (data editing, data cleaning) and would perform data analysis, tabulation, present it in graphs and figures, and preparation of report.

Trade encompassing banking and other financial institutions, shopping centres and shop, and commercial establishments differentiated into wholesale and retail shopping should be recorded. Growth or decline in economy during the last 10 years should be collected and presented in a report with explanatory notes on the causes for growth or decline covering a possible quality of existing and future trade, commerce and shopping facilities for the project area with tentative pedestrian linkage (missing link) considering manmade and natural disasters for the Project area. All the collected attribute and spatial economic data shall be linked with other spatial database by the survey firm.

**a-3. Study of Social Infrastructure (Education, Religious, Sports, Recreation, Community and Socio-Cultural Services/Facilities etc.):** Preparation of questionnaire for studying social in online communication device (tablet) compatible format (apps), editing, piloting, finalization and printing of questionnaire by the survey firm. Then, a digital questionnaire survey shall be conducted both in urban and rural areas in consultation with PD, and shall check the quality of the field level surveyed data and upload the surveyed data to computer at the same day. The attribute data of surveyed social infrastructure shall be linked with spatial data collected from physical feature survey. He/She would also ensure the quality of database (data editing, data cleaning) and would perform data analysis, tabulation, present it in graphs and figures, and preparation of report.

**B. Traffic Survey:** Regarding Traffic problem three types of surveys will have to be conducted;

- (a) Statistical analysis of the past trends in growth on the basis of types and numbers of different Vehicles.
- (b) The Traffic flow and O-D survey in major roads, river *ghats*, and railway stations both day and night time for peak and off-peak period should be surveyed and presented with sufficient maps and charts showing origin and destination.
- (c) Critical traffic Junctions should be separately studied and conditions illustrated graphically.
- (d) Trip generation survey at different locations in consultation with PD.

The survey firm shall take photograph and geo-coordinate of the survey locations and upload them in the Web site instantly through online communication device; and also upload the surveyed data to website and computer at the same day.

The survey firm shall prepare report on the basis of output of the surveyed data showing a prediction model of 20-year period for Project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

**C. Hydrological and Coastal Study:** Identification of water bodies including pond, ditch, beels, etc. (both perennial and seasonal), depth, width and direction of flow of the river, khal/canals and drains, precipitation analysis, delineation of catchments area, encroachments and blockage in the river, khal/canals, identification of water control structures including their width and depth, operational condition and reason for non-operational condition (in case of non-operational water control structures). The survey firm shall take photograph and geo-coordinate of the outlets of the catchments and upload them in the Web site instantly through online communication device (tablet) and also upload the data and information to website at the same day and the data and information along with photograph and geo-coordinate to computer at the same day.

The survey firms would also identify the tidal characteristics of the project area, inundation during spring and neap tide, areas of coastal erosion, and other coastal hydrology related issues as directed by PD.

The survey firm shall prepare report on the basis of output of the obtained data showing a prediction model of long, medium and short term (100, 50, 20 and 5-year period) for Project area. All the collected attribute and spatial hydrological data shall be linked with other spatial database by the survey firm.

**D. Formal and Informal Industrial Survey:** Preparation of questionnaire for studying formal and informal industries in online communication device (tablet) compatible format (apps), editing, piloting, finalization and printing of questionnaire by the survey firm. Then, a digital questionnaire survey shall be conducted both in urban and rural areas in consultation with PD, take the photograph of the industry



including the respondent (if possible), and also geo-coordinate of the premise and upload instantly to website through online communication device; shall check the quality of the field level surveyed data and enter them into computer at the same day. The attribute data of surveyed commercial and industrial enterprises shall be linked with spatial data collected from physical feature and land use survey. He/She would also ensure the quality of database (data editing, data cleaning) and would perform data analysis, tabulation, present it in graphs and figures, and preparation of report. The questionnaire shall contain the following:

- (a) Details of location, size and capacity of the existing
- (b) Details of labour statistics with the housing conditions and their quality of life
- (c) Other relevant data and information as directed by PD

The survey firm shall prepare report on the basis of output of the surveyed data showing industrial prosperity and recommendation for Project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

**(E). Recreational Spaces (Both Open and Closed):** Parks, playgrounds, river bank, historical space, and other open spaces should be surveyed to find out its details like location, size and attached facilities. This should be presented in proper maps with proper explanatory notes like population, open space, relationships, etc.

The consulting shall also survey various closed recreational spaces like cinema hall, auditorium, theatre, gymnasium, club, and so on to find out their location and capacity, number and type of population using them. This should also be presented in proper maps with proper explanatory notes.

The survey firm shall take photograph and geo-coordinate of the survey locations and upload them in the Web site instantly through online communication device; and also upload the surveyed data to website and to computer at the same day.

The survey firm shall prepare report on the basis of output of the obtained surveyed data showing a possible quality of existing and future recreational facilities with tentative pedestrian linkage (missing linkage) for Project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

**F. Health Facilities including Community Health Facilities:** Dispensaries, health centres and Hospitals showing their location and capacity should be collected and presented with a report covering explanatory notes by showing a possible quality of existing and future health facilities including community health for the project area with tentative emergency linkage (missing link) considering manmade and natural disasters for Project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

The survey firm shall take photograph and geo-coordinate of the survey locations and upload them in the Web site instantly through online communication device; and also upload the surveyed data to website and to computer at the same day.

**G. Educational Facilities:** Information on different categories of schools, colleges, university and other education related institutions with the location, sizes and capacity shall be collected and presented with appropriate explanatory notes graphs and charts. Information on dropouts at primary and secondary levels may be collected.

The survey firm shall take photograph and geo-coordinate of the survey locations and upload them in the Web site instantly through online communication device; and also upload the surveyed data to website and to computer at the same day.

The survey firm shall prepare report on the basis of output of the surveyed data showing a proposal of 20-year period for Project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

**H. Agricultural Land Demarcation Survey:** The agricultural land demarcation survey would be based on height of land, cropping pattern, cropping type, land utilization and flood level. Growth or decline of agricultural land during the last 10 years should be collected and presented in a report with explanatory notes on the causes for growth or decline covering a possible quality of existing and future agricultural land for the project area. All the collected attribute and spatial transportation data shall be linked with other spatial database by the survey firm.

**I. Archaeological Study:** Location of archaeological site, detailed design and history of the archaeological feature should be collected from the site. The survey firm shall prepare a questionnaire for collecting data and information relating to archaeological site in online communication device (tablet compatible format (apps), and also responsible for editing, piloting and finalization of questionnaire. Then shall conduct digital survey at the archaeological sites (both in urban and rural area) through the structured questionnaire, acquire geo-coordinate of the site and also picture of the respondent and the site; and upload the data and information including geo-coordinate and picture of both respondent and household to website instantly through online communication device (tablet) in consultation with PD and also upload the surveyed data to website and to computer at the same day.

A report with explanatory notes on the history and causes for rise and decline of the site covering existing quality of the site and possible measures for future archaeological preservation and conservation and economic value of cultural tourism for the project area. All the collected attribute and spatial archaeological data shall be linked with other spatial database by the survey firm and also upload the surveyed data to website and to computer at the same day.

**J. Pollution, Impact of Climate Change and Disaster Study:** Study of noise, waste (including solid, household, clinical and industrial waste; and night soil) pollution, ambient air quality during peak hour, quality assessment of drinking and surface water, quality assessment of top soils. In case of surface water sample shall be taken at water upstream, downstream and various points (if necessary). This shall be determined in consultation with PD.

The survey firm would also conduct disaster studies including cyclone, tidal surge, tsunami, saline water intrusion, coastal erosion, sea level rise and impact of climate change and other disasters that occur in the **Mirsharai Upazilas** and conduct risk assessment of the disasters.

**K. Population Studies:** The population statistic shall have to be collected from all possible sources, such as:

(a) Census. (b) Municipal Record,

Analysis of existing population should bring out the following characteristics—

(i) Male/Female ratio, (ii) Age-sex pyramid, (iii) Reasons for population growth/decline (Birth rates, Death rates, Immigration, emigration)/extension of Municipal boundary, etc and

(iv) General economic conditions of the people.

**L. Road Surveys:** In this survey detail of existing roads like type and condition of pavement, existing width and possibility for future extension should be studied and presented with appropriate explanatory notes. Road survey would include hierarchy, network and circulation pattern. open space, relationships, etc.

**M. Hotel/Motel/Boarding House Accommodation Survey:**

Accommodation in existing hotels/motels/boarding houses shall be surveyed to obtain first hand data and information relating to visitors/tourists coming to **Mirsharai Upazilas**. This survey includes no. of visitors, length of stay, reasons for visit, origin seasonal variation of tourists and related other information.

## **2.2 Step wise Activities to Accomplish the Task**

The survey firms shall have to follow the following step-wise integrated activities for the stated scope of work on the intended different survey works. He/she would have to interlink the intended survey activity with different steps of other related activities conducted by other different survey firms. A detailed methodology of the specific survey work including procedure for relating its output with that of other different surveys and activities (both attribute and spatial data of physical feature, topographic, land use and other required hard and soft data), has to be mentioned clearly in the proposed technical proposal. The survey firm has to combine the rural database with that of database (GIS database) of municipality area. A presentation of the proposed methodology shall have to make before the Proposal Evaluation Committee (PEC) as part of technical proposal evaluation. The bidder has to make the presentation by using his/her own hardware and software along with valid license. The Client may visit the premise of the firm without providing prior notice (if necessary).

### **STEP 1 MOBILIZATION, RECONNAISSANCE SURVEY, PROJECT DESIGN AND SUBMISSION OF MOBILIZATION REPORT**

Deployment of Key Personnel and supporting staff for the intended project, tentative project management plan and tentative work schedule. The survey firm shall conduct reconnaissance survey including Focus Group Discussion, Tea Stall Meeting etc.; steps taken immediate after signing the contract including initial meeting with the local public representatives including Mayor of the municipalities, UP chairman, counselor etc.

**Submission of Mobilization Report** containing findings from reconnaissance survey with illustration with photographs, maps, figures, data etc.

### **STEP 2 COLLECTIONS OF MAPS, BASIC STATISTICS AND INFORMATION AND SUBMISSION OF INCEPTION REPORT**

To start the survey process the existing situation of the planning area has to be represented in a set of maps and in a collection of basic statistics and information.

#### **Step 2-I Collection of Geo-physical maps and reports Includes**

- Geology (sedimentation, stratification, fault lines, lineaments etc.)
- Hydrology (contour lines, water bodies/courses, embankments, pump house, related structure, tidal data etc.)
- Soils major type.
- As a first 'overlay' to the, base map the geo-physical situation of the planning area has to be given.

#### **STEPS 2-II Collection of Basic statistics: present activities**

- Number of inhabitants/households, differentiated according to income level/type/density and quality of housing
- Production and employment (formal/informal, number and size of establishments, type of production/activity, income/education level)
- Public services (education, health, security etc.) and utilities (drinking water, sewerage/sanitation, garbage disposal, gas, electricity, telecommunication); administrative institutions
- Commercial activities (shops, markets both formal and informal)
- Transportation facilities (roads, public transportation, parking facilities, waterways, railway, foot path)

#### **Step 2- III Submission of Inception Report**

The report should include the following (with necessary maps/figures/diagrams/graphs etc.)

- (1) An introduction narrating the purpose of the study, objectives and scope of services and activities to be performed.
- (2) A brief of the Sixth Five Year Development Plan and Sustainable Development Goals(SDG) with principal objectives of the development plan within the broad scope of Urban and Regional Planning, Water Supply and Housing Sector of the National Development Plan, provision of National Water Management Plan (NWMP), National Perspective Plan and other relevant national level plan, policy etc.
- (3) A Review of the work plan, time schedule, input and management plan.
- (4) An assessment of the actual provision of inputs in relation to the expected outputs.
- (5) Analysis and findings from reconnaissance survey including problems and possible solutions to the survey activities and prospects of development. This would also include results of tea stall meeting, courtyard meeting and focus group discussion (FGD) in the project area.
- (6) Review of all relevant reports, documents and other materials, which will form the base for the contract indicating those items already acquired and those requiring official assistance for acquisition.
- (7) An assessment of all additional data collected and survey works to be carried out for completion of the database for the contract. This should be accompanied by a detailed program for the collection of the remaining data.
- (8) Development of methodology for each component of the survey work under the planning **package** (i.e., regional structure plan, sub-regional plan, structure plan, urban area plan, corridor development plan, rural area plan, action area plan)

**STEP 3 SURVEY ACTIVITIES (FIELD SURVEY INFORMATION IN ORIGINAL FORMAT HAVE TO BE SUBMITTED TO THE PROJECT DIRECTOR (PD) AT THE END OF EVERY WEEK) AND SUBMISSION OF SURVEY REPORT**

(1) A review of the work plans and time schedule for the remaining period of the contract.

(2) Activities to be performed by the survey firm for Socio-Economic Survey Report:

- All survey data including
  - Socio-Economic and Other related survey (traffic survey, bathymetric study report, tidal data and information, survey of Urban and Rural Economy, environment studies, disaster studies, social space studies, baseline survey of flora and fauna, hotel/motel accommodation survey etc. as specified in the ToR)
  - Collection of Socio Economic data from published sources

Step-wise detailed activities to be performed by the survey firms are described below:

**Step 3-I Socio-Economic Survey**

STEP 3-I-A A questionnaire shall be designed in online communication device (tablet) compatible format (apps) in consultation with PD

STEP 3-I-B House -hold sample survey will be done using the approved Questionnaire based on specified Questionnaire format indicated in TOR. **Sample size will be minimum 30 questionnaire each Ward level and 30 nos of each union level of Mirsharai Upazilas.** (sample size shall be determined in consultation with PD).

**STEP 3-I-C** Surveys will be conducted on the issues like tourism development, housing for disadvantaged group, land value, informal economic activity, traffic congestion, drainage, water logging, unauthorized encroachment, waste disposal, play ground and park, stakeholders participation for planning and development control etc.

**3-I-D** During conducting the survey, geo-coordinate and photograph of the household including photograph of the respondent has to taken and would be uploaded to website instantly by using online communication device (tablet).

**3-I-E** The survey firm shall check the quality of data and upload the data to computer at the end of same day.

**3-I-F** The survey firm shall identify the location of the household on physical feature map and link the household surveyed with that of spatial database in Arc GIS.

**3-I-G** The survey firm shall link the attribute data of socio-economic survey with that of spatial data base in Arc GIS.

**3-I-H** The survey firm shall provide spatial translation of the interpretation obtained from data analysis to draw a scenario of output of socio-economic survey on space.

**Step 3-I-I** Inventory of survey will have to be prepared as per format prepared in consultation with PD. Data processing, analysis of survey data, mapping, working paper containing planning strategy and development options, and reporting will be made as per requirement of TOR.

### **Step 3-II Other Related Surveys**

Other related surveys and studies (traffic survey, hydrological studies, bathymetric report studies, environment studies, disaster studies, pollution studies, formal and informal industries, formal and informal economy (both urban and rural), social infrastructure, recreational spaces (both open and closed), archaeology, social space studies, baseline survey of flora and fauna etc.) as specified in the ToR shall also be conducted in consultation with PD.

**Step 3-II A** The survey firm shall collect data and information through other related surveys and studies as specified in the ToR. He/She firm shall prepare questionnaire concerning each surveys and studies (wherever necessary) in online communication device (tablet) compatible format (apps) and conduct digital surveys. For those components of other related surveys and studies, digital survey may not be possible, manual survey shall be conducted in consultation with the PD.

**Step 3-II B** At the time of conducting surveys geo-coordinate and photograph of the feature and/or location and respondent (if conducting questionnaire surveys) shall be taken and shall upload them on website instantly through online communication device (tablet).

**Step 3-II C** If any anomaly is found in the collected data and/or wrong data entry/data missing etc. to be corrected by the survey firm and again re-upload them to website indicating corrected questionnaire. But the previous questionnaire shall not be removed from website.

**Step 3-II D** The data and information including photograph collected from digital surveys shall also be uploaded to computer at the end of the same day for processing and analysis.

**Step 3-II E** All the collected data and information (both spatial and attribute) shall be interlinked with that of different other surveys (including physical feature, topographic, land use etc.) conducted by different other survey firms. The survey firm shall also identify the location/ household/ feature surveyed on base map and also locate in spatial database.

Step 3-III After completion of all survey work and linking all attribute and spatial database with each other the survey firm will submit survey report stating actual methodology explaining detailed procure adopted in the field survey, problems faced during survey work, how the problems were solved, interlinking of database with that of different other surveys (including physical feature, land use, topography etc). The report shall also contain detailed information relating to data uploaded to website. The survey firm shall submit all raw database including map, questionnaire, photograph etc and spatially linked database along with survey report.

#### **STEP 4: DATA PROCESSING, ANALYSIS, INTERPRETATION, PRESENTATION, FORMULATION OF WORKING PAPER AND SUBMISSION OF INTERIM REPORT**

(1) A review of the work plans and time schedule for the remaining period of the contract.

(2) Activities to be performed by the survey firms for Interim Report:

- Preparation of working paper for all relevant components of the survey components under the planning **package** including, but not limited to the following:
  - Housing and socio-economic condition
  - Social and Urban Infrastructure
  - Agriculture
  - Utilities and Services including water supply, sanitation, sewerage disposal,
  - Transportation and traffic
  - Hydrology and bathymetric studies (if any)
  - Urban and Rural Economy including informal economic and industrial sector
  - Environment, Disaster Risk Assessment, Waste Management and Pollution
  - People's participation and Social space
  - Historical Importance, archaeology and Tourism etc.

Interim report containing requisite working papers (if more than above stated required) shall be prepared by the survey firms as directed by the PD.

Step 4-I: All the working papers (number and content of working papers shall be determined in consultation with the PD) shall contain analysis of existing situation and local demand; people's view, attitude and opinion regarding development problem.

Step 4-II: SWOT analysis, and Identification of problem area and requirement on space and analyzing them with respect to surveyed data and information.

Step 4-III: Assist the Project team members in formulation of planning standard with respect to spatial variation in character and natural setting with respect to analysis from socio-economic and other related surveys and studies and also by integrating results of different other surveys (including physical feature, land use, topography, geology etc.) in close co-ordination with different other survey firms, who conducted such surveys and studies.

Step 4-IV: Assist the Project Team members in formulation of policies for **planning package** and development of alternate strategies to attain the policies in close co-ordination with different other survey firms, who conducted different surveys and studies including physical feature, land use, topography, geology etc.

Step 4-V: Assist the Project Team members in analysis of alternative strategies and selection of most appropriate option among the developed alternatives in close co-ordination with different other survey firms, who conducted different surveys and studies including physical feature, land use, topography, geology etc. for preparing the **planning package**.

Step 4-VI: Submission of Interim Report along with all working papers containing the issues as stated in step 4-I to step 4-V.

## **Step 5 Preparation of Draft Final Report for Planning Package for the Project**

(1) A review of the work plans and time schedule for the remaining period of the contract.

(2) Activities to be performed by the survey firms for preparing Planning Package:

The survey firm shall assist UDD planning team in preparation of **planning package**, which consists of the following steps:

Step 5-I-A: Preparation of Regional Strategic Plan for **Chittagong** Districts would be prepared for 20 years according to the guidelines from: National policies, Formulated and integrated different sectoral strategies at sub regional level, spatially interpreted sectoral strategies at sub regional level, formulated Conservation Plan at sub regional level and formulated Development Plan.

Step 5-I-B: The economic disparity among the Upazila within districts under study shall be figured out by using “shift-share analysis” and “input-output analysis” technique for drawing the future socio-economic development scenario.

Step 5-I-C: The regional plan shall be formulated on the basis of regional (i) lands study, (ii) hydrology, (iii) Environmental studies, (iv) Hazard management, (v) Water Resource Management, (vi) Transport Studies, (vii) Population, (viii) Basic services, (ix) Economic Activities, (x) Anthropological and Ethnographical Study, (xi) Heritage, Archaeology and Tourism management and so on.

Step 5-I-D: Sub-Regional Structure Zoning Category would be determined following (i) Main flood flow zone, (ii) Sub flood flow zone, (iii) Wetland, (iv) Forest, (v) Agricultural land, (vi) Urban area, (vii) Rural settlements, (viii) Forest settlements, (ix) Industrial hazards, (x) Restricted flood protection reserve, (xi) tidal zone (x) Restricted military / public safety etc.

Step 5-I-E: Conservation Plan under regional plan shall be prepared depending on the ecosystems and resources of the existing nature and Land-use conflicts.

Step 5-I-F: Structure plan shall be prepared based on the outputs of sub-regional plan and other surveys and studies to develop the indicative plans for the upazilas. The structure plan would establish inter and intra-regional connectivity, economic base the upazlia, set policies and develop strategies to achieve the policies. The plan would identify the urban areas and different rural centres of the upazila; and would also determine the planning requirements for the urban area, rural centers and rural area. The plan would also come up with a basis for preparing urban area plan, rural area plan and detailed plan for the upazila.

Step 5-I-G: **Corridor Development Plan shall** be prepared along the national and regional Corridor outside the urban areas to prohibit ribbon development. The plan would emphasize over retaining efficiency of the national highway. Content (with thematic map) of The Development Control Plan for Highway Corridor will be the similar or revised version (where necessary) of The Urban Area Plan.

Step 5-I-H: Urban Area plan shall be prepared for the urban areas of the upazila, which would be identified at the structure planning stage, and based on the planning requirements for the urban areas, which would be identified at the structure planning stage. The plan would also come up with a basis for preparing detailed plan for the urban areas.

Step 5-I-I: Rural Area plan shall be prepared for the rural areas of the upazila, and based on the planning requirements for the rural areas, which would be determined at the structure planning stage.

Step 5-I-J: Action plan shall be prepared for the proposed bankable projects for the upazilas,

## **Step 6 Preparation of Final Report for Planning Package for the Project**

The survey firm has to assist the UDD planning team in preparation of final report in the following manner;

Step 6-I: After approval of the draft final report by the Project Implementation Committee, survey firm has to assist the UDD Planning team in public hearing at the respective upazilas.

Step 6-II: The survey firm shall assist the UDD planning team for necessary modification of **the planning package** and finalization thereby.

### Step 7: Printing of Final Reports and Maps and posting in WEB Page

The survey firm shall assist the UDD Project Team for final printing of the **planning package** report and also assist the web developer in prepare the documents in web compatible format and publishing in web page.

### 2.3 Report submission schedule and Mode of Payment

Reports shall be presented and illustrated in a clear and concise professional manner, including maps, plans, diagrams and other graphics. Schedule of submission:

Table 5: List of Report with Language, No. of Copies, Period of Submission, Binding status and Mode of Payment

Report	Language	No. of Copies	Period of Submission	Binding Status	Mode of Payment (% of Contract amount)
Mobilization Report	English	50	Within 10 days of signing contract	Spiral Binding	Not more than 10%
Inception Report	English	50	Submission Mobilization Report Within next 10 days	Spiral Binding	Not more than 25%
Interim Report	English	50	Submission Inception Report Within next 10 days	Spiral Binding	Not more than 35%
Draft Survey Report	English & Bangla	100	Submission Interim Report Within next 15 day	Spiral Binding	Not more than 10%
Final Survey Report	English & Bangla	100	End of 2 <sup>nd</sup> month	Spiral Binding	Not more than 20%

### 2.4. Presentation

(a) Study result should be presented in two forms: first on the map of RF 1: 50,000 indicating the national/ regional settings and RF 1: 250000 indicating the planning area; secondly in report form. The design of the map should be appropriate in size so that it is not difficult for handling. The Scale, colors and indications to be used must be according to the instruction of Urban Development Directorate (UDD).

(b) Final study results shall be analyzed, interpreted and presented in Report form.

(c) Reports shall be prepared in MS word 2010 version and font shall be Times New Roman 12 pt

(d) All table, graph, diagram, chart, map shall be interactive with its original program such as MS Office and GIS

(e) All report shall be submitted in Web format

(f) Audio-visual presentation shall be made by the survey firm before submitting each and every report

### 2.5 Deliverable:

- Working papers concerned with objectives of the study (both hard and soft copy)
- All collected data, information, book, journal and other relevant documents to be handed over to the client
- All customized data base management system for user
- All maps and reports shall be submitted as per direction of PD.

**2.6 Progress Reports:** Progress Reports shall have to be submitted to UDD by survey firm in every 3 (three) month on the basis of the approved working schedule.

Medium of language of the progress report shall be English.



- Both soft copy and hard copy shall be submitted by the survey firm.
- Progress report shall be submitted within 1<sup>st</sup> week of the next quarter

### **SURVEY FIRM'S PROFILE**

The survey firm should have at least the following criteria:

- At least 5 years of field level survey and planning related project work experience
- Adequate office space with all sorts of survey, mapping and printing equipment's, e.g.
- Adequate manpower with finest expertise and highest length of work experiences

### **2.7 Information leaflet (Submission at the end of the First month)**

- (1) The leaflet will be used by UDD to publicize the project.
- (2) A short illustrated five page leaflet describing the project, giving reasons for the project and advantages expected to be generated by the project.
- (3) 5000 copies of such leaflet should be prepared and supplied by the survey firm.
- (4) Periodical paper and TV cable advertisements shall be arranged at survey firm's cost.

### **2.8 Others**

- (i) The survey firm requires to gather 3-D data (all feature's vertex must have Z value) to identify flood flow zone (Main/sub), water logging, drainage system, drainage congestion, to get profile of road (any where), identify features more correctly and accurately and also to create precise DEM, it is very much needed to have 3D data.
- (ii) All vehicles, equipments and other inconsumable materials procured for survey firm by the UDD under this project must be returned to UDD after completion of the project.
- (iii) After completion of survey works and after submission of Final Report a Seminar / Workshop should be arranged by the survey firm with the elite, Draft reports, Public representative businessmen, professionals etc. of the region.
- (iv) Penalty shall be imposed or cancellation of contract shall be made by UDD on the survey firm who will violate the TOR or for any other misconduct by the survey firm.
- (v) No payment will be made to the survey firm before accepting the Reports by the Technical Committee.
- (vi) Full time survey firms must stay in the survey firm's office.
- (vii) All reports & detailed area plans will be prepared by the survey firms within the quoted price.
- (viii) The development plan for **Mirsharai Town** should be composed of in a DVD and supplied to UDD.
- (ix) The client reserves the right to accept any or reject any or all tenders within assigning any reason thereof.
- (x) The client reserves the right to increase or decrease any item or specifications in the schedule
- (xi) Scale, dimension and quality of Map/3-D map shall be determined in consultation with the PD.
- (xii) The survey firm team members shall be permanent employee of the survey firm and shall have practical knowledge experience as first and knowledge.
- (xiii) The survey firm shall submit Legal software license documents (License Number) in the proposal to prove their technical strength and capabilities.
- (xiv) An inventory shall be made on the logistics of the survey firm (if necessary).
- (xv) The survey firm shall present the technical proposal before PEC (if necessary).

### **2.9 Institutional arrangements**

Inter Ministerial Steering Committee and Project Implementation Committee (PIC) should be set up to monitor the project. The Secretary of the Ministry of Housing and Public Works will chair the Steering Committee and the Director of the Directorate will chair the PIC. In addition Proposal Opening Committee (POC) shall be formed to open the EOI and RFP of the Project and Propojal Evaluation Committee shall be formed to evaluate the EOI and RFP for selection of survey firm.

## **2.10. QUALIFICATION, EXPERIENCE AND RESPONSIBILITY OF GEOLOGICAL SURVEY FIRM**

### **2.10.1 Qualifications, Experience and Responsibility of Key Personnel of Survey Firm:**

#### **A. Socio-Economic Survey Expert 1 Person (1\*2=2 mm.)**

**Qualification:** M. Sc. in Social Science

**Experience:** 05 experience in conducting socio-economic survey, analysis and Participatory Rapid/Rural appraisal (PRA) related Works.

**Responsibility:** (i) To prepare, piloting, editing and finalization of socio-economic and other related survey questionnaire in consultation with the Team Leader and PD. (ii) To conduct, supervise and monitor socio-economic and other related questionnaire surveys. (iii) To supervise and monitor data entry, editing and presentation of data in tabular form. (iv) To analyze the data as directed by PD and presentation in graphs and figures. (v) Preparation of working paper, reports with recommendation as assigned by PD; (vi) Preparation of Socio-economic development model for the project area for the next 20-years. (vii) To work with a multidisciplinary team to integrate the outputs of socio-economic and other questionnaire surveys with attribute and spatial data of other components of the project in GIS database (viii) Any other related Jobs as assigned by the Team Leader and PD.

#### **B.Data Management Expert-1 Person (1\*2=2 mm.)**

**Qualification:** Master Degree in Statistics, Applied statistics, Geography, Bachelor of Urban and Rural/Regional Planning or related discipline.

**Experience:** 03 experience in database management and analysis

**Responsibility:** (i) Survey and database design for socio-economic survey data for the study area; (ii) Supervise and monitor data entry and maintain the quality of database. (iii) Management, processing, editing and cleaning of collected data. (iii) To assist the socio-economic survey expert in data analysis and interpretation. (iv) Spatially link socio-economic and other related survey data with base map. (v) Integrate socio-economic data with different sectoral data (both spatial and attribute) into GIS and develop an interactive matrix. (v) To assist the socio-economic survey expert in data analysis and interpretation and preparation of report. (vi) Any other related jobs assigned by PD.

### **APPENDIX-03 BIDDING FOR TENDER**

#### **3.1 Contents of the Technical Proposal**

According to the provisions laid in the Public Procurement Regulations 2008.

#### **3.2 Financial Proposal**

Financial proposal should be prepared as per following format in the firm's own letter head.

#### **Format of Financial Offer**

Sl No	Description of Survey and Studies	Area/no.	Rate (TK.)	Total Amount(TK.)
01	Questionnaire preparation, piloting, finalization, printing			
02	Conducting socio-economic and other related surveys			
03	Data entry into computer, data processing, editing, cleaning, analysis and interpretation and preparation of report			
04	Project Team of Survey firm			
	<b>TOTAL</b>			

N.B. – Above Quoted rates should be inclusive of the cost Salaries, Management, Transportation, Contingency, Incidental, Income Tax & VAT and other related cost including printing and binding of maps and reports etc.

**APPENDIX-04**

**FORMAT OF CURRICLUM VITAE AND PROJECT TEAM**

**4.1 Format of Curriculum Vitae of Professionals**

According to the provisions laid in the Public Procurement Regulations 2008.

**4.2 Format of the Proposed Project Team**

Sl. No.	Position	Name	Age (in Years)	Length of Experience (Year)	Qualification	Man month
1.						
2.						
3.						
4.						
5.						

**4.3 Format of the Major Experience in Similar Project Completed During Last 05 Years**

Sl. No.	Name of the project	Name of the Client	Cost of the Project	Project Duration
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				