

# IRRIGATION & WATERWAYS DIRECTORATE

## WEST BENGAL MAJOR IRRIGATION AND FLOOD MANAGEMENT PROJECT (WBMIFMP)

**Terms of Reference for “providing Human Resource Support to the Project Management Units of WBMIFMP during project implementation period” in the State of West Bengal in India**

### AA. Background

1. The Government of India applied for USD 290 million financing from the International Bank for Reconstruction and Development (IBRD) towards the cost of the **West Bengal Major Irrigation and Flood Management Project (WBMIFMP)** and intending to apply a part of the proceeds for Consultancy Services. The sub – borrower is Irrigation & Waterways Department, Government of West Bengal
2. WBMIFMP aims to improve the existing irrigation network in the Damodar Valley Command Area (DVCA) within the State of West Bengal, to optimize conjunctive and sustainable use of ground and surface water across the DVCA in different irrigation seasons, and to reduce flooding in the Lower Damodar Sub-Basin (LDSB) in West Bengal.
3. The duration of the project as envisaged now is for 5(five) years. The Project will be executed by the Irrigation and Waterways Department (IWD) of the Government of West Bengal (GoWB) located at Kolkata and the Project Management Unit (PMU) is the implementing agency / employer. The support of the Project Management Consultant (PMC) will be at the PMU at various levels viz the State Project Management Unit (SPMU), the District Project Management Units (DPMUs) and the District Project Implementation Units (DPIUs) and is expected to fully compliment the PMU in the execution of the Project in all aspects under overall control of the IWD at the PMU. The Consultant may note that the execution of the Project will be decentralized with District Units of IWD and the support will extend to the field units as well.

### BB. Overview of the Project

4. The Damodar River originates from the Chhotonagpur Plateau at Latehar District in Jharkhand and flows through the districts of Latehar, Hazaribagh in Jharkhand and enters Purulia District in West Bengal which is the lowermost riparian State in Damodar Basin. Five reservoirs have been built on the Damodar and its tributaries in Jharkhand to moderate floods in the lower basin area in West Bengal and for irrigation. These are operated by Damodar Valley Corporation (DVC). , The Damodar river bifurcates into two main branches, i.e. Mundeswari and Lower Damodar (Amta Channel) near the border of Burdwan and Hooghly Districts, and both the channels traverse through the districts of Hooghly and Howrah, and ultimately meet River Hooghly, which debouches into Bay of Bengal.

#### 4.1 Project Area:

The project area considering both irrigation and flood management aspects is as follows:

#### 4.2 Irrigation:

- 4.2.1 Northern Boundary: River Ajoy at Parulia, Block Katwa-I, District Burdwan (Latitude 233851 N).
  - 4.2.2 Southern Boundary: Outfall of NabinbaburKhal at Block Amta-I, District Howrah (Latitude 223547 N).
  - 4.2.3 Western Boundary: Durgapur Barrage on river Damodar at Block Barjora, District Bankura (Longitude 871813 E).
  - 4.2.4 Eastern Boundary: Howrah Burdwan Main Line of Eastern Railway at Nityanandapur, Block Balagarh, District Hooghly (Longitude 882517 E)
- 4.3 Flood management:**
- 4.3.1 Northern Boundary: Bifurcation point of river Damodar into Mundeswari River and Amta Channel at Beguahana, Block Jamalpur, District Burdwan (Latitude 23088.34 N).
  - 4.3.2 Southern Boundary: Outfall of Amta Channel in river Hooghly, Block Shyampur-I, District Howrah (Latitude 222059.76 N).
  - 4.3.3 Western Boundary: Ichhapur at Block Khanakul-I, District Hooghly (Longitude 87450.43 E).
  - 4.3.4 Eastern Boundary: River Saraswati at Eklakhi, Block Chanditala-II, District Hooghly (Longitude 881633.89 E).
- 4.4 The schematic drawing, brief project outlay, location and other particulars are available on the website [www.wbiwd.gov.in](http://www.wbiwd.gov.in) in the link "WBMIFMP".

## CC. Project Components

- 5.1 The irrigation network downstream of the Durgapur Barrage (West Bengal) was developed more than 6 decades ago and is now degraded. This system is managed by IWD of GoWB. Dilapidated hydraulic infrastructure, loss of irrigation water due to seepage and silted distribution networks have reduced the system's efficiency and led to water scarcity, particularly at the tail reaches. As a result, the gap between irrigation potential created vis-à-vis utilized is increasing, despite adequate water availability (around 140,000 hectare-meter (ha-m) for 332,000 hectare (ha) of command area under Kharif irrigation on an average). This is only 20% of the total water availability at the barrage during monsoon. Tail end farmers are compelled to abstract groundwater, which increases the costs of cultivation. This trend increases when rainfall is erratic or insufficient.
- 5.2 There is an urgent need to enhance the reliability and efficiency of water supply to increase water productivity and crop production, and to increase the amount of water that reaches tail-end areas. In response to these challenges, the West Bengal Major Irrigation and Flood Management Project (WBMIFMP) has been conceived. It aims to (i) ensure that water is distributed more equitably across the project command area, (ii) use of reduced water from the reservoirs during Khariff or Rabi irrigation and (iii) reduce flooding as much as can feasibly be achieved. A suitable system for real-time operation and monitoring of the irrigation management system, towards increased efficiency in operation and maintenance of canal system are being explored.
- 5.3 The project is preliminarily structured under the following Components:
- 5.3.1 Component A: Irrigation Management - The component includes the following

subcomponents: (i) Establishment of MIS, procurement of Software (ARC-GIS, ERDAS IMAGINE, MS Project; Hardware (Server) and High Resolution Satellite Imageries, (ii) Improving the Quality of Service Delivery, (iii) promotion of micro irrigation through 2 pilot projects , and (iv) Capacity Strengthening and (v) Interventions of 4 other Departments, i.e. Agriculture, Agri-Marketing, Food Processing & Horticulture and Fisheries.

- 5.3.2 Component B: Modernization of Irrigation Infrastructure - This component will invest in the modernization of irrigation infrastructure of the main (level 1), branch (level 2), distributary (level 3), and minor and sub-minor canals (level 4). Structural interventions on the canals include: desilting and reforming (restore shape and bank height) of selected canal sections across all canal levels; canal lining of unstable canal sections to ensure renewed canal section stability and hydraulic capacity; rehabilitating existing damaged flow control structures to restore and/or improve function, including measures to address foundation scour, structural degradation and mechanical wear; improved irrigation management by real time flow data collection through sensors and mobile app to serve as inputs in the decision support system and to perform need-based operation to ensure need based and equitable distribution of canal water at the entry point of chaks; improving of outlet structures (fully closeable and lockable), further ensure need-based supply and to avoid water wastage; and improving weirs and drop structures and arrangement of tail regulation as needed to maintain operational head in canals; sub-surface pressurized pipe systems that will deliver water to faucets on each plot; and cross regulator construction.
- 5.3.3 Component C: Flood management - This Component will invest in structural measures to reduce flooding in the Project area. Structural measures will include investments to ensure that the flood flow discharge is more evenly shared between the Mundeswari and Amta Channel. Increasing flood discharge capacity in Mundeswari requires dredging to restore/increase the low flow to moderate flood discharge capacity to reduce/limit peak discharge that will be shared in the Amta for all flood events.
- 5.3.4 Component D: Project Management - This component will strengthen capacity of the Project Management Unit set up for management of the project, monitoring and evaluation (M&E) (including, inter alia, the areas of procurement and financial management) through the provision of inventories, consultant services, training, and financing of incremental operating costs. Intermediate results indicators include the number of Project monitoring reports submitted on time annually. This component will (i) finance the preparation of several technical studies.

#### **DD. Objectives of engagement of Human Resource Consultant**

- 6.1 The objective of this consultancy is to procure the necessary experts and other category of personnel by outsourcing, through Consulting Firms, to augment and supplement human resources for functioning of the SPMU, DPMUs, DPIUs and Sub Divisional offices under PIU of IWD and to assist the government officials in discharging their functions and delivering the required outputs within stipulated timeframe during implementation of the project.

#### **EE. Project Implementation Arrangements**

- 7.1 The Client has engaged other consultants to carry out various studies, design, preparation of bid documents, Environmental & Social Impact Assessment, Project Management etc.
- 7.2 Project Implementation Arrangement within the Govt. of West Bengal:
- 7.2.1 At the State level, a Technical Steering Committee (SLTSC) headed by the Chief Secretary has been established and consists of the Heads of all concerned Departments. The SLTSC will review preparation and implementation progress, coordinate between Departments and provide guidance on policy matters
- 7.2.2 IWD Govt. of WB is responsible for project implementation. It has set up a State Project Management Unit (SPMU) headed by a Project Director (PD) / Chief Engineer of the IWD. The PD is supported by two Additional PDs / Superintending Engineer (SEs), 4 Deputy PDs / Executive Engineers (EEs), Accounts Officials and other support staff. Nodal officers from the Agriculture, Agri-Marketing, Fisheries, Horticulture & Food Processing Industries and Water Resources Investigation and Development Department (WRIDD) are members (Partner Departments) of the SPMU. At the district level, two District Project Management Units (DPMUs) have been established (one for Howrah and Hooghly, and one for Bankura and Burdwan) for coordination and monitoring which are headed by Additional Project Directors. The DPMUs are functional with a skeleton staffing structure. Other implementing departments will also be represented in the DPMUs by concerned district level officials. During project implementation, project components and sub-components execution will be overseen by the District Project Implementation Units (DPIUs) headed by the Deputy Project Directors / Executive Engineers in case of IWD and by other appropriate district level officers of partner departments. While the DPIUs of IWD will be full-time dedicated staff, such DPIUs of other Departments will implement project components in addition to their own duties.
- 7.3 The SPMU will recruit specialized Project Management Consultant's (PMC) Services who will work collaborate with the project authority to achieve the project goals. This consultant will be responsible for overall co ordination of the project works

## **FF. Role of Key Experts and other Non-Key Experts/Personnel**

### **8.1 Key Experts**

8.1.1 **Accounts Manager** : The Accounts Manager will be required to assist the SPMU in preparing Unaudited Interim Financial Reports (IUFR) in the prescribed format of World Bank, in evaluating financial proposals and will exercise test checks on the comparative sheets, if required, advise on financial matters, including budgeting, classification of expenditure, accounting and auditing, vet the bills before submitting to the treasuries in connection with the expenditures incurred by the SPMU and liaison with Accountant General, West Bengal for reconciliation of accounts at regular interval and for conducting annual audit in the SPMU and also to assist and advise the SPMU during such audits

### **8.2 Non Key Experts**

8.2.1. **Stenographer**: The Stenographer would take dictation of official letters and would type reports, documents as per requirement of the Project Director (PD). He would serve as personal assistant to the PD about attending phone calls, keeping appointments for

meetings, checking of his mailbox, bringing all mails to his notice and communicating prompt responses to the letters and e-mails

**8.2.2. Data Entry Operator:** The Data Entry operators (DEOs) are required to type letters, reports, and other documents and to upload data, bills etc. in the web portals, as per direction of the Engineer, Administrative, Finance and Accounts Officers under the overall guidance of the Project Director.

**8.2.3. Clerical Assistant:** The Clerical Assistants are required to perform variety of non complex, general clerical jobs, office support duties, deal with correspondences, taking inventory, sorting files and maintaining alphabetical, numerical and subject filing systems and records, check and compares data for accuracy and completeness, gather specific information and compile routine reports and other related job assignment, as required.

**8.2.4. Menial Support Staff:** The Menial Support staff are required to perform the following jobs such as placement of files, letters, documents, between office staff and maintaining files, photocopying documents, serving the officials and staff in the SPMU and DPMUs, as may be required and any other miscellaneous jobs as may be directed by the officials.

#### **GG. Expertise Required, Estimated Man Month and Assignment Period**

9.1 The Consultant is required to provide suitable staff and support services to carry out the tasks outlined in the "FF- Role of Key Experts and other Non-Key Experts/Personnel "for the periods shown below. The following describes the expected required technical inputs to be provided by the Consultant together with the expected qualifications, background and experience.

Sl. No.	Key Experts	Preferred minimum educational qualification	Preferred experiences or eligible assignments	Estimated man months
1.	Accounts Manager(1)	Graduation in Accountancy or any other streams.	Must be a retired officer from the office of the Accountant General (West Bengal), holding the post of Sr. Accounts Officer or above during retirement, with at least 25 years experience in Public Works Accounting and auditing in accordance with codal provisions and norms of the State / Central Government.	1X66=66

Sl. No.	Non Key Experts	Preferred minimum educational qualification	Preferred experiences or eligible assignments	Estimated man months
1.	Stenographer(1)	Graduation in any stream with certificate in Computer Application and training in stenography.	At least 10 years of experience of working with MS Office in Government / Private Organization. The incumbent must be conversant with e-mail communications & networking and should have a minimum speed of taking dictation at the rate of 100 words per minute and of typing at the rate of 50 words per minute.	1X60=60
2.	Data Entry Operator(19)	Graduation in any stream with certificate in Computer Application / Diploma in Information Technology / relevant field.	At least 3 years of experience of working with MS Office in Government / Private Organization. It is preferable to have experience of working on MIS. Minimum typing speed should be 40 words per minute. It is also desirable to have exposure on networking, preparation of Power Point Presentation and on exchanging communication through e-mail.	19X60=1140
3.	Clerical Assistant(17)	Graduation in any stream.	At least 10 years experience of serving in similar posts under Central / State / Private Organization	17X60=1020
4.	Menial Support Staff(14)	Higher Secondary or equivalent in any stream.	At least 2 years of experience of serving in Government / Private Organization as office attendant,	14X60=840

**Note:**For Non-Key Experts / Support Staffs, the maximum allowable age is 55 years (as on the last

date of submission of EOI) for the entry of this assignment.

## **HH. Counterpart Support and Facilities**

10.1The Consultant will get support and guidance of the Project Director and his sub ordinate officers as and when required

10.2The Consultant will be provided accommodation at various offices of the PIU, with water, electricity, fan and WIFI internet connections, as required, at free of cost. The office equipments, like printers, photocopiers etc .may be shared by the consultant subject to availability.

10.3It is proposed that (a) 1 no. of Clerical Assistant and 1 no. of Data Entry Operator will be provided office space in each Sub Division Office under Project Implementing Unit (PIU) of IWD, (b) 1 no. of Clerical Assistant, will be provided office space in each DPIU of IWD, (c) 1 no. of Clerical Assistant, 2 nos. of Data Entry Operators and 2 nos. Menial support Staff will be provided office space in each DPMU of IWD, The rest of the key/non key experts or personnel will be provided office space in SPMU.

10.4It may be noted that the key/non key experts or personnel of the consultant shall arrange for accommodation and commuting to the office, of their own. No transport facility will be provided to the Consultant.