



WEST BENGAL POLLUTION CONTROL BOARD

"Paribesh Bhavan", 10A, Block-LA, Sector-III, Bidhannagar, Kolkata-700098, India

Capacity Building for Industrial Pollution Management Project (CBIPMP)

(Loan no- 7924-IN and Credit no- 4755-IN)

Advt.Ref: 004/WBPCB/WB-CBIPMP/ 2013-14

Date: 26.02.2014

EXPRESSION OF INTEREST(EOI)

1. This invitation for bids follows the general procurement notice WB2018 for this project that appeared in United Nations' *Development Business* on 08.05.2010. The Ministry of Environment & Forests (MoEF), Govt. of India has received a credit from the International Development Association / loan from the International Bank for Reconstruction & Development towards the cost of CBIPMP Project and intends to apply a part of the funds to cover eligible payments under the contracts for consultancy services as detailed below. Bidding is open to all bidders from eligible source countries as defined in the *IBRD Guidelines for Procurement*. Bidders from India should, however, be registered with the Government of West Bengal or other State Governments/Government of India, or State/Central Government Undertakings:
2. The West Bengal Pollution Control Board, the Executing Agency for the State of West Bengal, intends to apply a part of the proceeds of this loan / credit for payment under the contract for the following two consultancy services
A) Consultancy Services to refurbish Central Laboratory, Kolkata by providing infrastructure including Civil Works, Electrical & Fire Protection Works, and Air-Conditioning and Mechanical Ventilations Systems (ACVHS) Works
B) Technical Consultancy for GIS mapping of the Hazardous Waste Generating Units in West Bengal .
3. Period of assignment is four years :**12 months for both A & B**. Firms are required to submit separate EOI which will be evaluated and short listed.
4. The West Bengal Pollution Control Board now invites eligible consultants to indicate their interest in providing the above mentioned Services. Interested consultants must provide information indicating that they are qualified to perform the Services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). Consultants may associate to enhance their qualifications. [*The "Association" may take the form of a joint venture (with joint and several liability) or of a sub-consultancy*].
5. Consultants will be selected in accordance with the procedures set out in the World Bank's Procurement Guidelines: *Selection and Employment of Consultants by Bank Borrowers* 7 May, 2004, revised October 2006 and May 2010.
6. Interested Consultants may obtain further information from Project Director, CBIPM Project, Ph- 91-33-23358213 Fax- 91-33-23352813 from 11 a.m. to 5p.m. The informations can also be obtained on the WBPCB Website: **cbipmp.wbpcb.gov.in** or **www.wbpcb.gov.in** (select **CBIPM Project**)
7. Expression of interest must be submitted by 3.00 p.m. of 14.03.2014 from the date of publication, (in case it falls on holiday, then the next working day shall be applicable as the last date of submission by 3.00 p.m. Expression of Interest must be dropped in the Boxes marked "**EOI for Consultancy Services to refurbish Central Laboratory**" & "**EOI for Consultancy Services for GIS mapping of the Hazardous Waste Generating Units in W. B.**" to be kept at "Paribesh Bhawan, 10A, Block – LA, Sec – III, Bidhan Nagar, Kolkata – 98..
Sd/- Project Director, CBIPMP/Member Secretary, WBPCB

WEST BENGAL POLLUTION CONTROL BOARD
(Department of Environment, Government of West Bengal)
Paribesh Bhavan, 10A, Block – LA, Sector – III,
Biddhannagar, Kolkata – 700 098
Capacity Building for Industrial Pollution Management Project
(CBIPMP)

Terms of Reference

for

Technical Consultancy for GIS mapping of the Hazardous Waste Generating Units in West Bengal

Scope of the Present Technical Consultancy Component

The main aim of the project is to integrate the spatial distribution of the units producing hazardous waste across the State of West Bengal. The data generated will be useful for knowing the pollution potential due to hazardous waste in different Districts of West Bengal. The advanced application of this project includes estimation of hazardous waste generation and routing them for disposal. The data will also be useful for effective decision making by the Government of West Bengal and regulatory agencies.

The Environmental Management information system (EMIS), implemented at the WBPCB is a JAVA based web application with data in a RDBMS PostgreSQL. The EMIS has all required attribute data of the identified industrial units (approximately 100 in number) generating hazardous waste within the state. The Consultant has to integrate this RDBMS with the PostGIS developed with the collected GIS (lat-long) data of the industrial units and develop reporting system(s) on QGIS or GRASS. Required digitized data of the state / district / block boundaries will be supplied by the WBPCB.

Tasks to be Performed by the Consultant

1. Geo-spatial Data shall have to be validated for 300 units from a list of about 1350 identified by the WBPCB.
3. The consultant shall closely interact with Regional Offices of the Board for correctness of the data being validated.
4. The consultant has to establish the applications on GRASS or QGIS platform with PostGIS as the Geoserver and Established PostgreSQL as the industry database. All required basic software packages will be supplied by the WBPCB.
5. This data will have to be initially be mapped on a GIS platform at 1:25,000 scale.. The consultant shall also take up the mapping of hazardous waste movement for different management models presently being followed from source to final disposal.
6. The consultant shall formulate/prepare mobile phone based protocol of transfer of data from the identified sites to the central data base and integrate with the GIS applications.
7. The consultant shall impart hands-on training on compiling the data and report preparation of the computer cell of West Bengal Pollution Control Board.

Deliverables of the Consultancy Works

The entire assignment is expected to follow all guidelines of the World Bank and necessary approvals may be taken from West Bengal Pollution Control Board whenever required. The assignment shall be for a period of 12 months and the delivery schedule shall be as follows:-

1. Preliminary study report with list of units and geo-special data – within 3 months from the date of commencement.
2. Second interim report after completing data integration with GIS platform – within 8 months from the date of commencement.
3. Draft final report – after implementation of reporting and imparting training – within 10 months from the date of commencement.
4. Final report after incorporating changes suggested by the Board and completion of land holding support to the developers of West Bengal Pollution Control Board – within 12 months from the date of commencement.

Deliverables are categorized hereunder.

Stage	Deliverable	Estimated time	Involvement with Consultant
Understanding the EMIS and requirement of the GIS implementation.	System Requirement Document	0-4 week	WBPCB Computer Cell.
Prototyping for coding language selection for retrieval/integration software	Writing prototype for data retrieval/migration from existing database to GIS applications.	3-8 week	WBPCB Computer Cell.
GPS data collection for validation of the identified (approximately 300) hazardous waste generating industries.	GPS data set, with validation documents and markers.	3-8 week	Regional offices of the WBPCB
Integration of GIS applications, data validation and testing of the retrieval software	Tested retrieval software for installation in application/web server & Location enabled map of West Bengal	10-36 week	WBPCB Computer Cell.
Mapserver Integration	Installation of Mapserver application with GIS feature	30-40 week	WBPCB developers
Mapserver Scripting	GIS enabled , web based reports (approximately 25 in number)	30-42 week	WBPCB developers
Testing of GIS environment	Tested web based GIS environment	40-44 week	WBPCB Computer Cell.
Writing of Reporting Module from Cell Phone	Software for cell reporting	36-44 week	WBPCB Computer Cell.
Testing of Reporting Module from Cell Phone	Tested Software for cell reporting	40-46 week	WBPCB Computer Cell.
Scripting for web enabling of reports	Scripts for direct web enabling from central server.	42-48 week	WBPCB Computer Cell.
Implementation and Roll over	Finished Open Scan Air Software	36-52 week	WBPCB Computer Cell.

All deliverables shall be provided in coloured hard copies (3 copies for draft version and 10 copies for final version) and also in electronic form.

The data collected shall be thoroughly verified and checked. It is suggested that they may compare the data collected with the standard inventories (conducted elsewhere) and also universally acceptable geo-special platform. The consultant shall finalize the data validation in consultation with West Bengal Pollution Control Board.

Duration of the Consultancy Works

The duration for completion of the project is one year from the date of commencement.

Qualification and Experience of the Consultant

The Consultancy team shall consist of an IT expert, a GIS expert and a field team with experience and expertise of collecting and validation of field data of geo-special nature.

- The consultancy firm shall have experience in executing similar type of works carried out earlier and should have demonstrated good technical skills in the earlier assignment of similar nature and scale.
- The team shall be headed by an experienced IT professional with B.Tech/MCA degree and established experience in mobile computing with more than 10 years' experience and shall have a member well versed in surveying with GPS and GIS data base/applications.
- The GIS specialist shall co-ordinate with West Bengal Pollution Control Board in thematic layer preparation and database development. The GIS specialist should have preferably prepared such data base and thematic layers earlier.
- The team members should have at least one qualified IT professional capable of working with JAVA platform, Apache/Tomcat Server and PostgreSQL and post GIS data bases.

N.B: After shortlisting, selection of consultant will be made under LCS method of World Bank Procurement Guidelines for Consultants