

Government of Bihar, Water Resources Department,
Office of The Director, Dam Safety Cell
3th Floor. Block-B, Jal Sansadhan Bhawan, Anisabad, Patna-800002

Request for Expression of Interest
(Consulting Services-Firms Selection)

for
**Conducting reservoir survey including hydrographic survey, preparation
of DEM & AEC Curve, sedimentation study and development of inflow
forecast model for Kharagpur Lake**

E- Procurement

India

National Hydrology Project
Loan No. IBRD Loan 8725-IN

Ref No: BIHAR/WRD/Kharagpur Lake /NHP-SW/EOI/02/2019-20
Procurement plan No-NHP-2019-20/BRSW-165176

1. This Invitation for Bid follows the General Procurement Notice for this Project that appeared in Development Business on 09/03/2017.
2. The Government of India has received financing from the World Bank toward the cost of the National Hydrology Project, and intends to apply part of the proceeds for the consulting services.
3. Water Resources Department, Govt. of Bihar, which is the implementing agency for Bihar (Surface Water Component), is interested in **Conducting reservoir survey including hydrographic survey, preparation of DEM & AEC Curve, sedimentation study and development of inflow forecast model for Kharagpur Lake** to estimate and study the sedimentation behavior of Kharagpur reservoir. The objective of the study to upgrade Elevation-Area-Capacity tables /curves of the reservoir at regular intervals to assess and review life expectancy of the reservoir, particularly in view of some apprehensions from certain quarters about the higher rate of sedimentation in reservoirs. On the basis of the study, planner can recommend suitable measures for increased benefits and enhanced life of reservoir, specific measures for Soil conservation, Catchment area treatment, watershed details etc. To create database for developing regional sediment indices and facilitate Rational Sedimentation Planning of future reservoirs. To prepare contour map of reservoir beds and develop an Inflow forecast model for the reservoir. The detailed topographic & hydrographic survey aims at 05 cm absolute and relative vertical accuracy for proper fitment into various proposed model studies on the reservoir.
4. **Scope of Consultancy:** The present consultancy package aims at addressing the challenging problem of creating a precise elevation model of Kharagpur reservoir and enclosing structures using modern survey techniques. The data received from this Consultancy would be used in sedimentation study of Kharagpur reservoir as well as

for other flood management works. Conducting hydrographic and topographic survey to cover the entire area of the reservoir up to maximum water Level for obtaining a fully representative bed profile of the reservoir. Analysis of data to obtain elevation-area-capacity table/curves, contour plots, balance life of reservoir, vertical sediment distribution curve/table, estimation of sedimentation in different zones of reservoir, Mathematical modeling studies etc. keeping in line with the objectives laid down for the study for obtaining a fully representative bed profile. The scope of this consultancy will cover to carry out Reservoir capacity Survey including Hydrographic Survey with preparation of DEM of resolution 0.3 m for more realistic estimate of rate of siltation for updating the area elevation curve relationship to provide reliable criteria for studying the implication of annual loss of storage area over a definite period of time with particular reference to reduction of intended benefit in the form of irrigation potential and flood absorption. The hydraulic model developed with the rectified DEM prepared using the data obtained through reservoir survey. Data should be of such a quality that allows its future usage for flood forecasting during the monsoon season.

Broad Terms of Reference (ToR) is attached with this EoI.

5. The duration of the assignment is 18 (**Eighteen**) months.
6. Director, Dam Safety Cell, Water Resources Department, Govt. of Bihar now invites eligible consultant to indicate their interest in providing the consultancy services for **Conducting reservoir survey including hydrographic survey, preparation of DEM & AEC Curve, sedimentation study and development of inflow forecast model for Kharagpur Lake.**
7. Interested Consultants must provide information indicating that they are qualified to perform the services (brochures, description of similar assignments in similar conditions, availability of appropriate skills among staff etc.). Consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualifications. Number of partners in a JV shall be limited to two including the lead partner
8. The criteria for short listing of the Consulting firms shall be as follows:
 - i. The eligible consultant shall be a consultancy firm, with over 10 years of experience in the field of Hydrological Survey specifically in the field of conducting reservoir survey and hydrological modelling.
 - ii. Should have at least two (2) experiences during the last ten (10) years in field as mentioned above in point (i). At least one Project of similar work costing not less than Indian National Rupee (INR) 25 million (US\$ 0.38million) or equivalent is required. In case of JV the lead consultant must meet 70% of this criteria and other member of the JV must meet 40 % of this criteria.
 - iii. The firms shall be financially sound with an average annual turnover of more than INR 60 million during the previous five years. In case of joint venture (JV) the minimum turn-over of lead partner should be 70 % whereas other member in Joint Venture minimum turn-over should be 40% of the required turn over for a firm. This should be clearly stated in the submission.

- iv. Firm's Organization set-up, structure and availability of key professionals with the firm (Team Leader-Hydrologist/ Hydraulic Modeller, GIS Specialist, Co-Team Leader/ River survey Expert, Database Specialist, Hydrologist, Environmental Expert, Surveyors, Technical support staff etc.) along with qualification and experience i.e. Technical team and expertise available with the organization.
9. The attention of interested Consultants is drawn to paragraph 1.9 of the World Bank's *Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers* January 2011 revised in July 2014 ("Consultant Guidelines"), setting forth the World Bank's policy on conflict of interest.
10. A consultant will be selected in accordance with the **QCBS (Quality And Cost Based Selection)** procedures set out in the World Bank's "*Guidelines: Selection and Employment of Consultants Under IBRD Loans and IDA Credits & Grants by World Bank Borrowers- Jan 2011, modified July 2014*". The Guidelines are available at www.worldbank.org/procure.
11. Interested Consultants may obtain further information at the address given below from 10.00 – 17.00 hours (IST) on all working days. This notice for Expression of Interest has also been posted on websites-<http://fmis.bih.nic.in> and <http://wrd.bih.nic.in>
12. Expression of Interest with all relevant information and documents must be uploaded on <https://eprocure.gov.in> for "**Conducting reservoir survey including hydrographic survey, preparation of DEM & AEC Curve, sedimentation study and development of inflow forecast model for Kharagpur Lake**" by not later than 6th January, 2020 time 15.00 hrs Server time. In the event, this last date being declared as holiday by the State Government, due date for submission of above EOI will be the next working day up till the same appointed time. **The Expression of Interests received till the appointed time and date shall be opened same day at 15.30 hrs Server time.** The electronic bidding system will not allow any late submission of the REOIs after due date and time as per server time. Physical, Email, Telex, cable or facsimile submission of REOIs will be rejected as non-responsive.


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(Director)
Dam Safety Cell,
Patna- 800002
Mob:-0612-2250121
Email: -dirdscbihar@gmail.com