

**Notice Inviting Tender (NIT)**

**GOVERNMENT OF INDIA  
NATIONAL HYDROLOGY PROJECT**

**EoI No:** NHP/2020-RDC-1/08/EOI

**Date of Issue:** 18.09.2020

**Assignment Title: Consultancy Services for development of Decision Support System for near real time Integrated Reservoir Operation System for Ganga Basin**

**Request for Expression of Interest (REoI)**

1. This Request for Expression of Interest follows the General Procurement Notice for this Project that appeared in Development Business on 21<sup>st</sup> Sept 2016.
2. The Government of India has received a loan from the World Bank under the National Hydrology Project (NHP) and intends to apply part of the loan proceeds to make payments under the contract for Consultancy Services for “**Development of Decision Support System for near real time Integrated Reservoir Operation System for Ganga Basin**”.
3. The objective of the consultancy is to equip CWC with a decision support platform with online interactive dynamic display. This will be achieved through the development and application of analytical tools and institutional capacity building. The consultancy would cover for “development/ updating of reservoir rule curve, reservoir operation manual and Decision Support System (DSS) for near real time integrated operation of reservoir systems for flood management in Ganga basin”. The broad objectives of the consultancy are as below:
  - A. To collect, compile and process data needed as input into modelling for Integrated Operation of Reservoirs for flood management for identified reservoirs under Ganga Basin in India. This involves calculation of historic inflows at all identified reservoirs based on the historic storage levels and outflow records, as well as estimates of precipitation and evaporation directly on the water surface areas of the reservoirs.
  - B. To develop Integrated Operation Rule curves, Operational Manual and Standard Operation Procedure for integrated reservoir systems for flood moderation considering various flood hydrographs and conservational benefits in Ganga basin, using simulation approach. Hereinafter the “rule curves” are defined as the ideal target storage levels for each reservoir as a function of the hydrologic conditions and the time of the year.

Reservoir operation guidance during floods is needed for minimizing downstream flooding, with due consideration to safety of the dam. This would work on near real time inflow forecasts as available at present and would have provision for inputs and use of improved forecast up to a few days in advance. The output of model will include GIS maps of areas likely to be inundated.
  - C. Development and customization of modelling tools, Decision Support System and Web-based dashboard for integrated operation of reservoir systems for flood management keeping in view conservational benefits, under following two scenarios:
    - i. Scenario 1: With the consideration of present format of input data system
    - ii. Scenario 2: With the consideration of future format of input data system

**Explanation:**

The present data for demand is available in cumecs only and is to be used in scenario 1, however, in future the system should be able to take input and perform direct calculations of demand from crop area, type of crop and ET requirements etc.

Further, for floods, if extended forecast and/or other downstream condition data is available, the system should be able to consider the same.

Similar configurations in system are to be provided for other input data also.

D. Capacity building of the personnel of Central Water Commissions and project authorities

4. **The Director, Central Water Commission, New Delhi**, now invites eligible consultants to indicate their interest in providing the above required consultancy. 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.)
5. Consultants may associate with other firms/ consultants to meet the necessary qualification criteria or enhance their capability. The EOI submitted by consultants in association should clearly indicate the nature of the association if it is a joint venture or a sub-consultancy. In case of Joint venture, the name of the lead firm should be clearly stated and the maximum number of JV partners including the lead partner, other partner or sub-consultant shall be limited to two.
6. The short listing criteria are:
  - a) The eligible consultants shall be a consultancy firm with minimum ten (7) years experience in providing consultancy services in the water sector, with particular emphasis and a track record of successfully delivering major analytical projects in the field of Hydrological and Hydraulic modeling. ,
  - b) The firm shall have similar experience of providing minimum one similar completed consultancy services contracts (Integrated Operation of Reservoirs for flood management for a system of at least 3 reservoirs in series or parallel including the key components of IRO studies namely Compilation, Collection & processing of required data, Development of Integrated Operation Rule curves for integrated reservoir systems for flood moderation for various flood magnitudes and development of a Decision Support System (DSS) for real time integrated reservoir operation) to Developing countries/Central Government/State Government/ Public Sector Undertakings each costing not less than Rs 120 Lakhs. (*Documentary evidence indicating the value and acceptance/completion certification should be provided by the consultancy firms*)
  - c) The firm should have an average annual turnover of Rs150 lakhs of the last five consecutive Financial Years (FY, 2015-16, 2016-17 2017-18, 2018-19 and 2019-20) from Consultancy Services(*Audited financial statements should be provided by the bidder*). *In case of JV, the lead partner shall have minimum 70 % of the required turnover whereas the other partner shall have minimum 40% of the required turnover.*)
  - d) Organization set-up, structure and availability of key professionals (Hydrologic Modeller, Hydrologists/ System Modellers, GIS/RS expert, Database specialist/web management specialist/IT expert etc.) of required qualification with the firm i.e. Technical team and expertise available with the organization (attach short CVs for reference only).
  - e) The consulting firm(s), including the JV partners and sub-consultants, should have at least 40% of the key professionals as permanent employees.
  - f) Undertaking towards correctness of information furnished with REOI.
7. 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 dated January 2011. ("Consultant Guidelines"), setting forth the World Bank's policy on conflict of interest.
8. A consultant will be selected in accordance with the Least Cost Selection(LCS) 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](http://www.worldbank.org/procure)

9. Interested Consultants may obtain further information at the address given below from 10.00 – 17.00 hours (IST) on all working days.

Director (RDC-1), Ground Floor, Wing-5, West Block-II,  
R.K.Puram, New Delhi-110 066  
Tel: +91-11-26100285: Fax: +91-11-26181267  
E-mail: [rdcdte-cwc@nic.in](mailto:rdcdte-cwc@nic.in)

10. Expression of Interest with all relevant information and documents must be uploaded on website <https://eprocure.gov.in/eprocure> for “**Development of Decision Support System for near real time Integrated Reservoir Operation System for Ganga Basin**” by **not later than 19-10-2020; 15.00hrs Server time**. In the event, this last date being declared as holiday by the Government of India, 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 would not allow any late submission of REOIs after due date & time as per server time. Physical, Email, Telex, Cable or Facsimile submission of REOIs will be rejected as non-responsive.

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