

**Strengthening Flood Modeling Capacity in Water Resources Department (WRD), Bihar**

**Request for Expression of Interest**

**No: WRD/FMISC/SAWI/EOI/01/2015-2016**

**Dated: 18<sup>th</sup> March 2016**

The Flood Management Improvement Support Centre (FMISC), Water Resources Department, Govt. of Bihar, Patna has received a 'Grant' under the South Asia Water Initiative (SAWI) Trust Fund of the World Bank and intends to apply part of the proceeds of this 'Grant' for payments for ***“Consultancy to develop, implement and operationalize a Flood Forecast Model and Inundation Mapping Tool in Bagmati-Adhwara Basin using public domain and license-free software”***.

2. The objective of the consultancy is to develop, implement and operationalize a comprehensive model/ suite of models for flood forecasting bundled with inundation mapping tools, using public domain and license-free software, in the Bagmati-Adhwara river basin to i) forecast water level and discharge at any section and ii) to predict extent, time of arrival, duration and depth of inundation at the community level.

3. The Consultant's services will consist of the following:

- i) Review current status of data availability and quality, and select appropriate public domain and license-free software to develop the flood forecasting model in the basin,
- ii) To evaluate satellite based ensemble precipitation estimates and short to medium range ensemble precipitation forecasts available from the customized meteorological framework developed under a different and separate consultancy, for supplementing existing ground measurements and current forecast system for integration in the flood forecast model.
- iii) Design, Develop, calibrate and validate the public domain and license-free model to provide flood forecasts at any location in Bagmati - Adhwara river system with longer lead-time (short range at one to three days and medium range up to ten days),
- iv) Develop Inundation mapping tools to predict extent, time of arrival, duration and depth of inundation at the community level in Bagmati- Adhwara river system, and validate,
- v) Implement and operationalize the flood forecast model and inundation mapping tool in WRD, and
- vi) Provide maintenance support for two years after successful implementation under a separate agreement.

4. The draft Terms of Reference (TOR) is uploaded on the websites <http://fmis.bih.nic.in> and <http:// wrd.bih.nic.in>.

5. The FMISC, Patna invites eligible Consultants to indicate their interest in providing the Consultancy Services for the above assignment.

6. Interested Consultants must provide the following information indicating that they are qualified to perform the Services: - Brochures, description of similar assignments, availability of skills among key staff, etc.

7. Consultants may associate to enhance their qualifications. [The "Association" may take the form of a **Joint Venture** (with joint and several liabilities) or of a **Sub-Consultancy**. This should be **clearly stated** in the EOI submission.]

8. The criteria for short listing of the Consulting firms shall be as follows:

- The firms should have been in similar business since at least 5 years;
- The firms shall be financially sound with an average annual turnover of more than INR 3,00,00,000 during the last five years (2010-11 to 2014-15);
- The firms should have at least two similar experiences in developing, implementing and operationalizing flood forecast and inundation model using public domain and license-free software;
- Availability of skills among staffs (Team Leader / Flood Modeler, Database/GIS Specialist, Software Programmer).

9. A consultant will be selected in accordance with Quality and Cost Based Selection (QCBS) 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 - January, 2011, Revised July 2014”*. The Guidelines are available at [www.worldbank.org/procure](http://www.worldbank.org/procure).

10. 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>, <http://wrd.bih.nic.in>, <http://www.prdbihar.gov.in> and <http://tenders.bih.nic.in>.

11. Expression of Interest with all relevant information and documents must be submitted and subscribed “Expression of Interest for - ***“Consultancy to develop, implement and operationalize a Flood Forecast Model and Inundation Mapping Tool in Bagmati-Adhwara Basin using public domain and license-free software”*** on top of a closed envelope *and* be delivered to the address below by not later than 15:00 hours (IST) on **Tuesday, 12<sup>th</sup> April, 2016**. In event this last date being declared as holiday by the State Government, due date for submission of EOI will be the next working day up till the same appointed time.

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