

## **TERMS OF REFERENCE FOR WATER QUALITY MONITORING AND SURVEILLANCE SPECIALIST, SPMU, JAL JEEVAN MISSION, GOVT. OF ASSAM (UNICEF SUPPORTED)**

### **1.0 Background**

Ministry of Jal Shakti was formed in June 2019 with two Departments: Department of Water Resources, River Development and Ganga Rejuvenation and Department of Drinking Water and Sanitation (DDWS). Jal Jeevan Mission (JJM) has been launched by Ministry of Jal Shakti, Government of India. JJM the flagship scheme of the Government seeks not only to provide functional household tap connections for all but also to promote the holistic management of local water resources. Under JJM water conservation, reuse measures are made mandatory to the scheme design. As per DDWS as on 31st March 2019, only 18.33 percent of rural households in the country, have Piped Water Supply (PWS). It has been planned to provide around 14.60 crore rural households with functional household tap connection (FHTC) through Jal Jeevan Mission (JJM) by 2024. In Assam, 34 percent of habitations are fully covered with piped water supply and only around 2.3 percent of total households have individual household pipe water supply connection. The goal is that every home gets drinking water in adequate quantity i.e. 55 liter per capita per day (lpcd) on a regular and long-term basis.

Various schemes and sub-missions under ester while NRDWP viz. Rural Water Supply and Sanitation Project for low income states (RWSSP-LIS), National Water Quality Sub-Mission (NWQSM), Japanese Encephalitis – Acute Encephalitis Syndrome (JE-AES), Swajal, Water Quality Monitoring and Surveillance (WQM&S) and all support activities under NRDWP has been subsumed into JJM. The JJM emphasises on community participation and making it as a movement- a Jan Andolon. As per JJM guideline at grassroot level local communities especially women are to be encouraged to participate and take ownership of water resource management, water supply and grey water management and its reuse. The Implementation Support Agencies (ISA) like NGO, SHGs, CBOs, Voluntary Organisations, Trusts, Foundations will play critical role as partner of Government in mobilising and engaging the communities to plan, design, implement, manage, operate and maintain in village water supply infrastructure.

To achieve the objective of providing improved and sustainable drinking water services in rural communities through JJM, it is important to focus on water distribution networks, water quality management, source sustainability, sustainable service delivery (including operation and maintenance), building professional capacity and strengthening decentralized governance.

The state has put in place a functional network of district laboratories, which is linked with the State level laboratory that has acquired NABL accreditation for certain parameters in the year 2016. This laboratory and the division of Water Quality Management & surveillance under the SPMU, Mission Directorate JJM, PHED Assam shall have a critical role of capacity building and mentoring of the district laboratories. The NABL accreditation for the state referral laboratory needs to be renewed. Moving on the footsteps of the state laboratory some of the district laboratories are also in the process of preparation to attain NABL accreditation. There is need to develop standard protocol for the sub-district level water quality laboratories being established in the State.

With the above context, WQMS will require a robust and structured approach so that all the water quality laboratories get the support and guidance to maintain the quality of water supplied.

## 2.0 Objective of the position;

The objective of this position is to support the SPMU, Mission Directorate JJM in developing SOPs, Water Safety Plans (costed) and proper adoption of the Uniform Drinking Water Protocol. The selected Consultant is expected to play a key advisory and coordination role between DWSM and the SWSM in getting the State, District and Sub-Division Labs NABL accredited and following the approved protocols and supporting the SPMU to address the following:

- i. Assist formulation and rolling out of the Covid 19 response of PHED and other departments.
- ii. Provide technical assistance to Public Health Engineering Department and allied departments (education, health, social welfare, P&RD) initiating Water Quality Monitoring & Surveillance and Water Safety Planning.
- iii. Facilitate development of a mechanism for monitoring at state and district level (Scheme implementation and Laboratory strengthening).
- iv. Facilitate development of community based improved water quality monitoring & surveillance system in select demonstration districts.
- v. During emergencies, support State/Districts to assess damage and loss to WASH sector, particularly to prepare, implement & monitor the response & recovery plan.

## 3.0 Reporting;

The Water Quality Monitoring and Surveillance (WQMS) Specialist will report to the Mission Director JJM and the Chief Engineer (PHE), Water cum Additional Mission Director for SPMU, JJM Mission, Government of Assam

## 4.0 Scope of work

The WQMS Specialist shall;

- a. In Consultations with the Heads of Department /focal points of WQMS, the WQMS Specialist will prepare, review, (where applicable) and monitor the implementation of protocols of WQM.
- b. Preparation of state guideline on Water Safety Planning, mentoring DWSM in preparation and adapting the Water safety plans in the Districts.
- c. Preparation of SOP on procurement and maintenance of laboratory equipments/instruments, reagents and chemicals.
- d. Initiate and ensure NABL of State Referral Laboratory, District Level Laboratory and Sub-Division Level Laboratory
- e. To monitor water quality tests & also supervision of the test being conducted in the State Referral Lab of the Department.
- f. Arrange training programmes, induction and refresher, for lab technicians, engineer and field level workers in Water Quality monitoring & Surveillance (WQM&S)
- g. Monitor regular data updation and online reporting of all Water Quality Monitoring & Surveillance (WQM&S) Parameters.
- h. Support to state/district/CSO partners in development, rolling out, and monitoring of various initiatives- community based O&M of PWS, Integrated Arsenic and Fluoride Mitigation Programme, and other such initiatives in areas of arsenic, fluoride and other contaminants.

- i. Provide support to laboratories in assessment of the performance/ capacity of district/ sub division water testing laboratories and suggest improvement
- j. Ensure adoption of the Uniform protocol on drinking water quality monitoring
- k. Prepare & analyze Water Quality reports for discussion and review with district and block level functionaries etc.
- l. Collect, analyse, disseminate various successful models on WQMSP water sustainability.
- m. Assist to organize review meetings seminars workshops on water quality and sustainability aspect of RW Prepare base papers and final reports.
- n. To ensure supply of field Test kits/Bacteriological kits to all gram panchayat and refill every year.
- o. To work in close liaison with hydro geologist of the State to understand ground water quality in different areas;
- p. Visit district to monitor implementation as and when directed and the functioning of district level water testing laboratory;
- q. Any other duties that may be assigned by his/her Superiors from time to time in furtherance of the above responsibilities.

#### **5.0. Qualifications**

- a. Master's degree in Chemistry/ Chemical Sciences/ Pharmaceutical sciences or allied subject. PhD or equivalent research experience in relevant field would be an asset.
- b. At least 3 years research or laboratory experience related to water quality studies.
- c. Preference will be given to candidates with experience in institutional capacity management, research, publications or reports in water quality.
- d. Previous experience in time bound missions, working in international development agencies with multi-sectoral teams are added advantages.
- e. Good oral and written communication skills. Should be fluent in English. Knowledge of Assamese is an advantage
- f. High level of interpersonal and management skills and ability to work with teams in the organisation at all levels
- g. Must be able to work under pressure and tight deadlines
- h. Computer knowledge and skills in MS Office (Powerpoint, MS Word, MS Excel)

#### **6.0 Duty Station.**

The WQMS specialist will be stationed at the SPMU under the Mission Directorate JJM, Government of Assam in Guwahati

#### **7.0 Time frame**

Initially for one year which will be renewed based on performance and requirement of the project

#### **9.0 Remuneration**

The proposed remuneration will be in the range of Rs. 60000 to Rs. 80000 per Month (Inclusive of all incentives & perks). Salary is no bar for deserving candidates and will be commensurate with experience and previous salary.