

## Guidelines for engaging Technical Experts in Rural Water Supply and Sanitation Sector

### 1.0 Background

The Accelerated Rural Water Supply Programme (ARWSP) was introduced in 1972-73 by the Government of India to assist the States and Union Territories (UTs) to accelerate the pace of coverage of drinking water supply. The entire programme was given a Mission approach with the launch of the Technology Mission on Drinking Water and Related Water Management in 1986 and renamed as Rajiv Gandhi National Drinking Water Mission in 1991. Later in 1999 Department of Drinking Water Supply was formed to give more emphasis on Rural Water Supply programme.

The Bharat Nirman Programme is a step taken towards building up a strong Rural India by strengthening the infrastructure in six areas viz. Housing, Roads, Electrification, Communication(Telephone), Drinking Water and Irrigation, with the help of a plan to be implemented in four years, from 2005-06 to 2008-09. The primary responsibility of providing drinking water facilities in the country rests with State Governments. The efforts of State Governments are supplemented by Government of India by providing financial assistance under the Centrally Sponsored Scheme of Accelerated Rural Water Supply Programme (ARWSP).

As per Bharat Nirman programme, it is proposed to provide safe drinking water in adequate quantity to all uncovered habitations and address all water quality problems in the country. Sustainability of drinking water sources should be mandatorily included into all projects so that they do not slip back again from the fully covered status. The issue on rural drinking water supply should primarily address 3 major components i.e., Availability, Quality and Sustainability. Different State Governments have followed different strategies and trying to achieve this goal. However, there is a need to augment/enhance the technical expertise and provide proper hand holding for adopting low cost, eco-friendly sustainable solutions.

Another important goal of the Department is to provide access to safe sanitation to all by 2012. Various technological options on toilet designs have already been provided to States. However, any improvement in cost, durability, etc. could be advised by the technical experts. Environmental friendly "Ecosan toilets" needs to be promoted. Design of urinals is still not properly done in many States. This is another area, wherein technical expertise could be useful. The issue of solid and liquid waste

management has been recently introduced into TSC guidelines. There is a lot of scope of technical intervention in this regard.

In order to incentivize good behaviour, Nirmal Gram Puraskar was launched in the year 2004-05. This award is given to those Panchayats which achieve the unique distinction of achieving open defecation free environment with good solid and liquid waste management.

Similarly, in order to incentivize good behaviour in water supply, an award called “Sajal Gram Puraskar” is conceived to reward those Panchayats which achieve the distinction of creating drinking water security during the last 3 years with no reporting of water borne diseases arising out of water supply and sanitation activities.

The ultimate aim of the Government is to ensure permanent drinking water security to all in rural India, considering the guiding principles of potability, reliability, sustainability, convenience, equity and consumer’s preference, while planning for community-based drinking water supply schemes. In this regard, measures to improve existing drinking water sources through conjunctive use of ground-water, surface-water and rain-water harvesting will be adopted based on the village water budgeting and security plan prepared by the community.

There is a lot of technical expertise required by the Panchayats to achieve the above-said distinctions. The National Level Monitors Programme, which also monitors ARWSP and TSC guidelines, are not having the specific expertise that is required by the purpose. Therefore, this specific programme, is devised, to assist the State Governments and is a 100% centrally sponsored programme and would continue during the XI Plan period.

## **2.0 Specific objectives and tasks**

- To assist State Governments in providing appropriate technology and bringing sustainability of drinking water supply systems, safe sanitation, proper handling of water and hygiene practices and solid/ liquid waste management, etc.
- Promoting sustainable technologies like Eco-sanitation, production of sanitary napkins through women SHGs, etc.
- Assist in demand driven community mobilized projects duly addressing equity, gender and vulnerability issues.

- Assist the States in developing district and State level Master Plans for water supply and Sanitation.
- Training/capacity building of State/ PRI officials
- Creating household level drinking water security and access to safe and sustainable drinking water supply to all.
- Assist in conducting National/State level Workshops both for water and sanitation.
- Attend the State Scheme Sanctioning Committee meetings and provide proper direction in approving good and sustainable projects
- To review the progress of implementation of rural water supply and sanitation programmes.
- To bring awareness on conjunctive use of water and water budgeting
- Conduct refresher training courses as per demand of States
- Providing all technical support for achieving Nirmal Gram Puraskar and Sajal Gram Puraskar.
- Assist in developing publishing technical manuals/ operational guidelines/ publications/ brochures/ leaflets on water, sanitation, health & hygiene related issues.
- Bring in change management principles and awareness thereof
- Assisting RGNDWM regularly in updating the technology/information database and making the Mission, a Technology Hub.
- Evaluate technologies/ conduct impact assessment studies on specific cases
- Exploring sustainable and low cost technologies, use of new and renewable energy systems within and outside the country and updating the States about the information.
- Assisting the States in using high-end technologies like GIS/RS for preparing good quality hydro-geo-morphological maps and identification of appropriate sites for recharge structures.
- Review district water testing laboratories and provide necessary technical advice for improvements/ upgradation of these labs.
- Bring in legal opinions and assess legislative requirements for protection of drinking water sources
- Nutritional intervention, preventive medicine, accurate diagnosis for specific diseases like fluorosis.
- The Panel of Experts shall be validated once in 2 years. The Ministry reserves the right to delete any technical expert from the suggestive list, without assigning any reason thereof.

- Any other technical work/discussions referred to the Experts, by the Department of Drinking Water Supply.

### **3.0 Qualification and experience of Technical experts and methodology of empanelment**

The focus of extending technical support to the State Governments is to utilize the technical competency of experts in the water and sanitation sector who have worked at Senior positions in various Organizations. Retired professionals and professionals who have worked in the sector in responsible positions are preferable as their contribution to the sector will help in improving the living conditions of the most vulnerable sector of the rural population.

The following are suggestive requirements for empanelment of these experts by the Department.

Relevant university/ Engineering or other relevant Degree

At least 20 years of rich experience in senior position in any specific area relating to water and sanitation sector e.g. environmental engineering/ science, water supply & sanitation engineering, repair and installation of water treatment plants and designing optimum cost distribution network, water auditing, social auditing, energy auditing, new and renewable energy systems, impact assessment studies, ISO-14001 lead auditor, expertise in handling sludge/waste-water, ecological sanitation, geology, hydrology, chemistry, micro-biology, preventive medicine, specialist diagnosis, legal experts, creation of low cost local solutions by conjunctive use of water, special techniques in ground water recharge, Oorani development and revival of traditional ponds, roof-water harvesting, carbon credits exchange for bio-gassifiers, community mobilization specialists, software solutions for reducing O&M cost, on-line monitoring, etc. or any related field of work.

The initial empanelment of Technical experts has been done with professionals known to the Department directly or indirectly who has worked for the Department in the past. In future, in order to bring in more technical expertise and transparency in the process of empanelment, an “Expression of Interest” will be floated in selected major news papers of the Country for the purpose.

### **4.0 Institutional Mechanism for engaging Technical Experts**

Under the revised and approved Rural Water Supply Programme guidelines, the State Water & Sanitation Mission (SWSM) is the key institution for implementation of all programmes relating to rural drinking water supply and sanitation. The SWSM will be chaired by the concerned Secretary in-charge of Rural Water Supply and Sanitation. In States, where the Rural Water Supply and Sanitation are handled by different Departments, the Chief Secretary of the State or any other suitable senior officer should be the Chairman and the Secretaries in-charge of rural water supply and sanitation could be co-chairpersons. This SWSM will be a registered society and will have a bank account in any nationalized bank. The Engineer-in-Chief or the senior most Chief Engineer will be the Member-Secretary of the SWSM.

Under the Member Secretary of the SWSM, there will be two major divisions viz., Line department involved in the implementation of rural water supply and sanitation programme and the State Water & Sanitation Support Organization (WSSO) which will comprise of State Technical Agency (STA), CCDU, MIS and Computerization programme, Water Quality Monitoring & Surveillance, Monitoring & Evaluation and R&D units.

The STA will provide all technical inputs to the SWSM and the State Level Scheme Sanctioning Committee for approving new rural water supply projects with sustainability component built into every project so that they do not slip back from fully covered status. A senior Officer may be nominated as the in-charge of the STA with certain minimum staff support within the manpower available in the Organization.

It is the responsibility of the STA to engage technical experts on specific assignments. For preparation of Sustainability projects, the STA may depute technical expert(s) to the concerned district. Once such projects are prepared, the STA may hire subject matter specialists to examine these projects before they are submitted to the SLSC for approval. The concerned Technical Adviser from the Department of Drinking Water Supply, New Delhi shall be involved mandatorily at the SLSC meetings to ensure that Sustainability component is invariably built into the project proposals, before these are approved for implementation.

For other tasks e.g. preparation of manuals, hand books, review of projects, field visits for overseeing implementation of new technology, impact assessment studies, etc. STA will hire the services of the Technical experts directly and involve them at the State level.

## **5.0 Major activities and Funding pattern**

Specific objectives and tasks have already been stated at Para 2.0. These tasks can be broadly divided into the following categories:

- a) Attending State level Scheme Sanctioning Committee (SLSC)/ State or Central level discussions/ Reviewing the Sustainability component in projects already prepared by the State Governments for sanction of SLSC/ Review of water supply and Sanitation projects. A brief report in 3 copies will have to be prepared by the technical expert, of which one copy is to be submitted to the Department of DWS and two copies to the concerned State Government.
- b) Preparation of Projects by Technical Experts – These projects may be of two types i) DPRs/FRs already prepared by State officials but Sustainability component is not built in and has to be designed with all details. ii) Totally new projects are required to be prepared along with Sustainability component with focus on developing local solutions through conjunctive use of ground water, surface and roof-water harvesting. In either case, all relevant basic data required for preparation of projects will have to be provided by the State Government. The Technical expert would design the project based on the inputs from the State Government concerned. The project report preparation cost is to be built into the total project cost. All such reports would be placed for examination by the State Technical Agency (STA) to be created by all State Governments, which is one of important wings of the State Water and Sanitation Mission. The SLSC should not approve any project unless the STA clears the said project in the first phase. A set of additional technical experts from reputed Institutions/Universities/ Engineering Colleges can also be hired as empanelled specialists with the STA.

It is the responsibility of the State Governments to replicate any successful sustainability model and experts should not be hired for creating similar model elsewhere.

- c) Developing Training Manuals/Modules/Design/Hand book, etc. on Water Supply or Sanitation
- d) Conducting specific training/awareness generation programme
- e) Conducting impact assessment studies

It may be noted that no consultancy fee, honorarium will be payable to any technical expert. However, TA/DA, local travel and incidental expenses etc. will be

reimbursed by the State/UT Government on actual basis as per the existing Government of India guidelines for travel of Grade-A Central Government Officers on duty. This expenditure could be met from the funds provided to the State Water & Sanitation Support Organization (WSSO) under the revised National Rural Water Supply Programme – Framework for implementation, 2008-2012.

A suggestive list of Technical experts State-wise has been provided in the departmental web site. However, the State Governments are free to select their expert as per the local conditions based on the provisions of the guidelines as above.

## **6.0 Continuation of the Programme in the XI Plan Period**

The Programme will continue in the XI plan period starting from the financial year 2008-09. Release of funds to WSSO in the subsequent years, will be governed by provisions mentioned in the revised National Rural Water Supply Programme – Framework for implementation, 2008-2012.

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