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## **Training Needs Assessment (TNA) workshop for professional development of PHED Engineers**

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A two-day National Workshop on Training Need Assessment for professional development of PHED Engineers was organized by the Department of Drinking Water Supply in collaboration with UNICEF on 9<sup>th</sup> - 10<sup>th</sup> December, 2009 at New Delhi. The following were the objectives of the workshop:

- i.) to identify the gaps in the existing set of knowledge, skills and capabilities of the existing Public Health Engineers across the country;
- ii.) to identify issues and means to upgrade the existing set of knowledge and skills in order to upgrade their efficiencies; and
- iii.) to identify/ suggest possible training courses and institutions for providing training/ exposure on the identified themes/ subjects to public health engineers.

The group of eminent people, including in-service engineers and practitioners, Consultants and representatives of noted NGOs working in the field of water supply and sanitation participated in the two-day workshop which consisted of presentations, focused group discussions, group works and brain storming exercises.

The programme of the workshop is at Annex-I and list of the participants is at Annex-II.

### **Day - I : 9<sup>th</sup> December, 2009**

#### **Inaugural Session**

#### **Welcome note : Mr. T. M. Vijay Bhaskar, Joint Secretary (Water), Department of Drinking Water Supply**

Shri T. M. Vijay Bhaskar, Joint Secretary (RWS) extended a warm welcome to all the participants. In the welcome address, he said that capacity building of public health engineers is very important for which Training Need Assessment (TNA) is the first step. He highlighted the need of training, exemplified by the training and capacity building of professionals already existing in various fields/ work units. He said that although CCDU are established in the States with the objectives of carrying our IEC and HRD activities at State level, but unfortunately the HRD programme has not attained the desired impact. Training is required to all. Engineers from PHE who have received training during their career, have to update the same by renewing their knowledge on new technologies.

Stressing on the need for capacity building of PHE engineers, Mr. Vijay Bhaskar said that with the recent paradigm shift in the National Rural Drinking Water Supply Programme (NRDWSP), there has been a shift from coverage of habitations to drinking water security at household level; shift from a supply-driven approach to demand-managed approach; effective assessment and evaluation of the programme implementation etc. He stated that the evaluation report of Sub-Mission programme has brought out disturbing results. For example, it revealed that in Uttar Pradesh, only 3% of the targeted households were getting potable drinking water as per norms, while across the country coverage is 50% - 60%. He said that the supply-driven model is wasteful and

hence the paradigm shift is necessary. Similarly, with over-exploitation of ground water resources there is need to shift from single source to multiple sources and conjunctive use of water i.e. surface water, rain water and ground water. On the management front, the involvement of PRIs and communities is also a vital factor and cannot be ignored. The shift in financial assistance to states which were earlier being awarded for non-performance has also been done away in the recent NRDWSP guidelines where better performing States would be incentivized for handing over the ownership of sources, systems and management to the local communities. He also said that planning for sustainability has to be kept in mind from initial phase and it can be achieved by an integrated approach of technology, management and ownership. Sustainability in terms of technical aspects, convergence with various programmes like NREGA, integrated water development programme, watershed project etc. at the grass-root level, thereby ensuring the institutional sustainability.

He urged the participants to deliberate and identify the existing gaps in knowledge, skills and attitudes of PHED engineers and identify Resource Centres for capacity building and empowerment, hand holding. Training Needs Assessment and development of training modules, curricula, delivery of training etc. is focused at the workshop. He said that lack of dedicated staff for HRD and other tasks is a concern and this needs to be addressed.

**Background and objectives of the workshop - Shri Bharat Lal, Director (Water Quality), DDWS, MoRD:**

Shri Bharat Lal, Director (WQ) made a presentation giving background information and objectives of the workshop. He also covered the overall context of consumption of safe drinking water and its impact on various health parameters. The presentation focused on the availability of adequate and safe drinking water to the users, which had a drastic decrease in the IMR, occurrence of water-borne diseases and thereby an increase in the socio-economic and sustainable growth of the country. In his presentation, he also highlighted the disparity in the development indicators, and the lack of reach of the basic amenities (infrastructure as well as services) especially to the tribal and SC/ ST categories.

In the context of the existing structure and functioning of the PHE department, he said that the PHE departments are unable to provide the desired results as field engineers are handling too many issues without any training or support; there is no professional development or any specific HR policies directed towards people running the organization which could hone-up their skills; and there are no institutional mechanism for inter-change and flow of new ideas, modern sectoral knowledge & skills. However, as per the new NRDWP guidelines there has been a shift from habitation coverage to household level water security which expects the PHE engineers to deal with the assertive community in a transparent manner.

He said that outcomes viz. identification of the issues and challenges faced by the Public Health Engineers – leadership, managerial, administrative, technical, socio-economic, attitudinal, organizational, contractual and legal; will be identified which can be tackled by training, orientation and capacity development. It is also expected to bring harmonization of sectoral, organizational and individual goals to move forward in the sector. At the end of the workshop it is expected that a number of training programmes and institutions will be identified to take it forward. At this stage, this exercise is limited for PHED engineers and in future, we have to do it for others stakeholders viz. PRI, leaders, civil servants etc.

**International examples on continuous professional development : Mr. Dara Johnston, WESS Specialist, UNICEF, New Delhi**

Mr. Dara Johnston, WES Specialist from UNICEF presented the concept of Continuous Professional Development (CPD) and some of the international examples from Europe, Australia, UK, etc. As per the existing Continuous Professional Development practices, a blend of approaches, ideas, techniques, etc. help an engineer to manage his/ her own learning. CPD focus firmly on the results the benefit that professional development brings change in the persons.

He said that in most of the European Union, countries have either mandatory or voluntary CPD programmes, supported by the national governments. Several countries or institutions have compulsory CPD Programmes like in Australia, a professional engineer is required to keep an auditable log demonstrating that he or she has undertaken at least 150 weighted hours of CPD over any three year period in order to remain on the National Professional Engineers Register.

Mr. Dara Johnston specifically outlined the need to instill pride in the individual's performance and a desire for continuous learning and improvement through CPD. CPD for PHED Engineers should provide them the knowledge for implementing sustainable water and sanitation programmes. He suggested that some of the areas in which CDP to be provided could be as below:



- i.) Technical and specialist areas
- ii.) Legislative and contract management
- iii.) Communication
- iv.) Information technology aspects
- v.) Strategic management
- vi.) Self development

**Institutional Analysis : Mr. Manish Kumar, UNICEF, New Delhi**

Mr. Manish Kumar, WES Specialist, UNICEF explained about the four levels of institutional development which are as follows:

- i.) Level 1: Culture, Tradition, Social norms and religion
- ii.) Level 2: Constitution, Property rights, laws and policy
- iii.) Level 3: Governance, regulations and rules
- iv.) Level 4: Incentive alignment

He said that level 3 and 4 are impacted by capacity development which strengthens organization and individual goal. To implement water supply program successfully it is necessary to analyze in broader perspective the rules and regulations, incentive and motivation, roles and responsibility as well as management culture.

**TNA & Capacity Building of PHED Engineers - Mr. B. J. Vasavada, Water Sector Specialist & Techno-Legal Consultant**

Mr. B. J. Vasavada from his vast experiences in water supply sector specified various diverse roles and responsibilities of the different levels in the PHED right from the Asst. / Jr. Engineer to the Superintending Engineer. Furthermore, he detailed out the various issues and problems in project engineering like:

- i.) Inadequate engineering surveys and site investigations;

- ii.) Adoption of standard engineering designs without assessing its compatibility with local situations/ conditions;
- iii.) Cost Estimates are based on unrealistic Schedule of Rates (prevailing market rates are not properly assessed);
- iv.) Work specifications in contracts are not project specific and tailor made. Some times standard specifications are impracticable and not pragmatic;



He focused on project implementation and said that the nine critical factors which affect the project success. PHE Engineers lack training and exposure to Project Management, Construction Management, Contract Administration. At the end of his presentation, Mr, Vasavada outlined nature and types of training on Training for Asst. Engineers, Dy. Executive Engineers and Executive Engineers, Superintending Engineers and Chief Engineers.

**Group Work:**

After the presentations and remarks by persons having experience in the water and sanitation sector, to effectively indentify the issues and find out mechanisms to address them, the participants and organizing team consisting of representatives from the Department of Drinking Water Supply commenced the group work. Four groups were constituted which included professionals from all fields, social technical, management and those belonging to the NGO sector. Four groups formed for the brainstorming and identifying issues/ challenges and means to address them are listed below:



- Group - 1: Leadership & Managerial aspects, Communication issues
- Group - 2: Administrative & Technical issues
- Group - 3: Socio-economical and attitudinal issues
- Group - 4: Organisational & contractual issues

Each group had to make a presentation after the discussions and seek suggestions/ modifications from all present so that the discussions carried out may be vetted and agreed upon. After all the four groups worked in two sessions, they finalized their group reports.

The presentations of each of the Groups are at Annex III - VI. Shri Ravi Narayanan chaired the session. He said that based on these issues, training needs of the PH engineers will be identified. This may not be exhaustive but is illustrative. He said that this is a great beginning and will help the sector in taking it to the right direction. He requested the participants to ensure that next day right kind of training needs are identified to enable the engineers to change their attitude, update their knowledge and improve their skills to meet the emerging challenges.

## Day - II : 10<sup>th</sup> December, 2009

At the start of the day, Mr. Manish Kumar, WES Specialist, UNICEF gave a wrap up of the previous day's discussions and salient features of the group work carried out by the four identified groups. The identified groups formed on previous day were requested to list various possible courses for public health engineers about purpose of the course, content, discipline and suggested key institution(s) to carry out the course based on identified challenges and issues.

### **Training course design - Consideration and Approach: Dr. V. M. Chariar, Centre for Rural Development & Technology, Indian Institute of Technology, Delhi**

Dr. V. M. Chariar, IIT Delhi outlined the concept of TNA in terms of where, what and who need the training. He threw some light on training tools with respect to various dimensions of goals and different approaches. He further mentioned about institutional, operational and technological areas. He explained about guidelines for effective training which has to be logical, inspirational, illustrative, visual, open-ended, etc. He sketched out the framework for community transformation which comprises of instruction, interaction and intervention based on behavior, attitude and wisdom of the community. He also explained about the concept of creative training which helps in dissolving personality barriers and developing leadership in the trainee.



### **Group Work**

On second day, respective groups carried forward their group work deliberating to identify the thematic areas with details about the course content and key institutions to impart the training/ capacity building for the suggested courses. Further to the group work, each group presented the detailed courses and outlines for identified thematic areas.



The presentations of the Groups are annexed at Annex 7 - 10.

### **Concluding Session**

#### **Ms. Lizzet Burgers, Chief, WES, UNICEF, New Delhi**

Ms. Lizzet Burgers, Chief WES, UNICEF expressed her concern about the overall low sanitation coverage in comparison to drinking water which requires more attention. She suggested to carryout similar TNA workshop for sanitation officials of States. She also highlighted that there is need to develop linkage with institutions working in water sector. Gender factor also play a key role in implementation of the programme. Water being women issue whereas in PHED most of the staff is male dominated, this in turn

affects the output of the program. With the recruitment of more women professional as staff in PHED we can make a difference in the field.

**Mr. T. M. Vijay Bhaskar, Joint Secretary, Department of Drinking Water Supply**

Mr. Vijay Bhaskar congratulated the participants who came out with very good suggestions and tapped the issues/ challenges which can be dealt by capacity building in terms of attitude, skills and knowledge. He stressed that there is further need to identify institutions which can offer online course for PHE Engineers.

**Smt. Rajwant Sandhu Secretary, Department of Drinking Water Supply**

Summing up the two days learning, Secretary (DWS) in her concluding remarks thanked all participants for coming out with very useful suggestions and outputs. She said that from training point of view, States can be divided in three groups, which are as under:

- i.) States with good training network provide training in all aspects right from the induction to in-service training on regular basis - A category
- ii.) States having off and on training programmes - B category
- iii.) States which don't provide any training to it's engineers - C category



She gave the example of All India Services wherein there are well-structured training programmes at different stages of their career to prepare the officials to perform their duties. She said that it is expected that public health engineers should also have similar arrangements wherein they undergo 'induction training' as well as various trainings at different stages of their career to meet the challenges of their assigned jobs.

She stressed that States should initiate the practice of providing induction training to systematic thematic training to their staff especially PHE engineers on regular basis. It is also observed that PHED do not pay much attention to HRD component with repetition of trainees. States need to understand that learning from degree/ diploma courses is different from the skills required for the implementation of the programme. TNA is required for States falling under B and C categories. TNA workshops are needed which are State-specific. Secretary (DWS) requested States to sharpen the skills of PHE Engineers with regular training and exposure. Lead institutions should develop master trainers who in turn should strengthen the capacity of district and block panchayat trainees. There is also need to develop standardized training modules which are user friendly with use of various tools like CD, audio-visual aid, brain-storming exercises, etc.

Secretary (DWS) also underlined the importance of distance learning. This requires development of standardized training modules by distance learning institutions like IGNOU on water sector. Lastly Secretary (DWS) emphasized that more attention toward PRIs is required. With these concluding remarks of Secretary (DWS), the workshop ended.

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