

# **Safe Drinking Water Supply Through RDA-Developed Low-Cost Deep Tubewell**

**M.A. Matin  
Mahmud Hossain Khan  
Md. Nazrul Islam Khan**

**6317  
MAT  
C-4**



**Rural Development Academy, Bogra  
Bangladesh**

## EXECUTIVE SUMMARY

The National Workshop on **Safe Drinking Water Supply through RDA-Developed Low-cost Deep Tubewell** was held on 19 – 20 September, 2001 at RDA Conference Room. The inaugural session was held on 19 September at 10.30 am and it was chaired by Mr. M. A. Rashid, Director General (in-charge) of RDA, Bogra. Mr. Dhiraj Kumar Nath, Secretary, RD & Cooperatives Division, Ministry of LG&RD, was the Chief Guest of this session. The session started with recitation from the holy Quran by Hafez Md. Abdullah and an address of welcome by Mr. Sk. Z. Ferdous, Director (Crop Science), RDA. In his inaugural speech Mr. Nath emphasized the need and importance of Action Research in order to develop sustainable appropriate technology relevant to the rural development of our country. In this regard, honorable Secretary apprised about RDA's involvement in rural based action research projects and appreciated the faculty members for their outstanding performance and endeavor to make the Academy as a Center of Excellence. He particularly mentioned that RDA developed transferable appropriate technologies like **Multi-purpose use of Deep Tubewell and Water Filtration Plants** for supplying safe drinking water are the most popular and demandable ones? However, it was suggested to assess the workability, durability and acceptability of these technologies in order to make them easily

available to the rural people. On the basis of study findings, future investment for replication of low-cost multi-purpose DTW and safe drinking water supply plant models can be made in other areas of the country. He wished that such technologies should be appropriate, cost-effective, users friendly and less hazardous towards environmental pollution.

In delivering the presidential address Mr. M. A. Rashid, Director General (in-charge) narrated briefly the mandate of RDA in nation building activities and also gave a scenario of the action research projects undertaken so far in rural development perspectives. He highlighted the RDA developed low-cost multi-purpose DTW and Water treatment plant as the prime achievement of the action research in water resources development conducted by the faculty members of Irrigation Discipline of the Academy. In order to popularize these low-cost technologies RDA needs sufficient financial support of the GOB. He hoped that expert opinions, suggestions and recommendations of the Workshop would, of course, help RDA scientists to modify/update models for further extension of their projects.

After inaugural session there had been a video show on Irrigation and On-farm Water Management activities of RDA with a refreshment and tea break.

The working session of the Workshop started at 12:00 noon under the chairmanship of Mr. R. N. Shil, Executive Director of BMDA, Rajshahi. The key note paper entitled **Safe Drinking Water Supply through RDA-Developed Low-cost Deep Tubewell** was presented by Mr. M. A. Matin, Joint Director (Irrigation), RDA. Messrs. M. H. Khan and N. I. Khan, Deputy Directors, who are also co-authors, assisted the speaker during presentation. There had been presentation of review comments and discussions by Prof. Dr. L. R. Khan of B.A.U. who was the selected discussant on the report. Dr. Khan made critical review of the methods/approaches adopted by RDA in purifying raw water. Physical constraints and practical limitations of the methods were stated by the discussant. In addition, some suggestions were made for improvement of the technologies and better management on sustainable basis. Later, there was open discussions on different aspects of the subject matter and in total 49 participants took part in that open discussion session.

In the afternoon a Field Visit was arranged by RDA in order to see the performance and acceptability of the low-cost DTW technology for multi-purpose uses by the stakeholders. The visit site was Bashubihar in Shibganj upazila under Bogra district, which is about 38 km from RDA. An arsenic free low-cost DTW was installed at this village under the GOB funded Action Research project of RDA. The DTW has been sunk for multi-

purpose uses such as drinking and domestic water supply, irrigation (through buried pipe), livestock and poultry rearing, horticulture and nursery development, and aquaculture. Total cost of the project, which includes tubewell installation, overhead tank construction and distribution network for irrigation and domestic supplies, is Taka 8.4 lac only. From field visit experience at the pilot site, it has been observed that the overall performance of the DTW is good and the project has been well accepted by the stakeholders. Here, the water users association has been found to work satisfactorily. It has been reported that cost of water for domestic and drinking purposes has been reduced to Tk. 4000 per family, whereas the cost for same purpose using a HTW at this site is around Tk. 10,000 per family. The irrigation command area of the DTW has been increased to 120–160 acres from the traditional 40–80 acres.

Working session – II of the Workshop started at 09:15 a.m. in the second day (i.e. 20 September, 2001). This session was comprised of mainly Group discussion and preparation of Group reports. Three groups were formed based on the following topics which are pertinent to the stated objectives of the Project.

Group –I : RDA developed low-cost DTW technology for multi-purpose uses.

Group –II: Issues relating to safe drinking water supply – RDA concept.

Group –III: Replication of RDA developed technologies related to safe water supply through GOs and NGOs.

Each group had a Chairman and Rapporteur. The groups discussed separately on the selected topics until 11:00 a.m. A threadbare group discussion was continued until 01:30 p.m. on the various issues and each group then prepared a report for presentation at the wrap-up session.

The closing session of the Workshop was held from 02:25 to 04:10 p.m. and the it was chaired by Dr. Md. Amzad Hossain, Ex- ADG of RDA. Unfortunately, the honorable Chief Guest ( Dr. Towfiq-e-Elahi Chowdhury, Bir Bikram) and Secretary, Planning Commission, could not attend the session. The group reports prepared in the Working session-II were presented and then discussed by the participants. After thorough discussions some specific recommendations were formulated and these were placed before the audience. A set of recommendations was then accepted by the participants after necessary modifications. On be half of RDA, a vote thank was given to the participants and invited guests by Mr. M.B. Karim, Director (Adm) of RDA. The Workshop was then closed with a hope for further improvement of the RDA developed safe drinking water supply models and their application in the rural areas of Bangladesh.