

INTERNATIONAL CONFERENCE ON “INNOVATIVE TECHNOLOGIES FOR
RURAL
WATER SUPPLY & ENVIRONMENTAL SANITATION”
AT THE UNIVERSITY OF ROORKEE, ROORKEE. (October 12-13, 2000)

Key Note Address by
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It is my privilege and pleasure to be here with all of you to participate in the International Conference on Innovative Technologies for Rural Water Supply & Environmental Sanitation organized by the Centre for Continuing Education, University of Roorkee in association with the Project Management Unit of the World Bank assisted SWAJAL project of the Government of Uttar Pradesh. I am grateful to the organizers for being invited to deliver the key note address.

Providing safe drinking water and ensuring improved sanitation services to the unserved and underserved has been seen as a most challenging and priority task by the developing communities all over the world. Inadequate coverage, poor quality as well as unreliable and unsustainable supply of water have an adverse impact on the socio-economic development of such countries. Furthermore, ensuring safe water alone will not be adequate if people do not have appropriate sanitation facilities or develop good hygienic practices, as diseases can not only be spread through the contamination of water, but through other means. Both water supply and environmental sanitation should be provided as a package to the rural community.

Despite the growing level of investment as well as considerable progress in the water supply and sanitation sector all over the world, still more than one billion are waiting for their turn to gain access to safe water and almost half of the world's population lack access to sanitation facilities. UNICEF has estimated that water-related diseases contribute to nearly 4 million child deaths each year globally. Millions of people all over the world, mostly in the developing countries, have been suffering from water and sanitation related illness. Though inadequate provision of water supply and sanitation facilities due to resource constraints may be one of the reasons, but the major reason for such a dismal situation is our mis-directed emphasis on setting up physical infrastructure without ascertaining its use or ensuring its effective O&M and sustainability, as a result of which the desired impact on the development of socio-economic and health status of the targeted population has not been achieved.

There has been growing realization that for providing better service to the vulnerable sections of the society, the “old paradigm” needs to be changed through a new approach. The new approach should be demand-responsive, instead of supply driven, and should primarily focus on sustainability. Selection of appropriate technological options and judicious decisions on the levels of service required are to be made integral elements of

this new approach. The community should be empowered to take informed decision about the services they want and for which they are willing to pay.

In the above context, this International Conference on “Innovation Technologies for Rural Water Supply & Environmental Sanitation” has been organized at the most appropriate time when many countries, including India, are in the process of evolving new people-centered participatory approaches. I wish to convey my sincere thanks to the University of Roorkee, one of the leading technical institutes of the country, and PMU SWAJAL for their initiative in organizing this International Conference. The unique experience acquired by SWAJAL in operationalizing new innovative approaches will no doubt provide one of most valuable inputs for the deliberations in the Conference.

In India, in the Rural Water Supply sector, as a result of concerted efforts and heavy investment, we have achieved impressive coverage. At present, according to available statistics, about 82 per cent of the rural habitations are fully covered and about 16 per cent habitation are partially covered as per the prevalent norms. The National Agenda for Governance of the present Government envisages to provide safe drinking water to all the habitations within five years from 1999. From the point of coverage alone, there may not be any problem to ensure 100 per cent coverage within the stipulated time frame. But mere coverage alone without addressing other associated issues being encountered in the sector, will not be sufficient to achieve the desired objectives.

The twin problems of water quality deterioration as well as of ensuring sustainability, both of source and system, are causes of serious concern. Due to these problems, the systems so far installed with huge investments have not been able to deliver the desired services to the targeted population in terms of quantity, quality and reliability. The presence of excess Fluoride, Arsenic, Brackishness, & Iron in groundwater sources beyond the permissible limits along with widespread bacteriological contamination due to poor environmental sanitation, is posing serious hazard to the rural community. In spite of initiating various measures, both preventive and remedial, under quality-wise exclusive Sub-Mission programmes of the Rajiv Gandhi National Drinking Water Mission, the problem still remains elusive and challenging. Though various technologies have been tried and tested for removal of these impurities from water, but the functioning of these treatment plants in actual village conditions remain far from satisfactory. There is a strong felt need for improvement in treatment technology to make it more cost effective and user friendly, as also to be in tune with the environmental requirements.

I have been informed that low-cost appropriate technology, both for rural water supply and environmental sanitation, is one of the selected themes of this Conference. I hope the Conference will deliberate in depth on the various issues connected with water treatment technology in the rural context and will be able to suggest various improved methods for adoption.

The selection of technology can no longer be treated as an isolated activity; rather it should be closely linked with the level of service to be provided as well as be cost effective to the community to be served. The technology must be simple and manageable so that the community itself can undertake the task of operation and maintenance, both from the managerial and financial point of view.

Since the last one year after taking over as Secretary, Department of Drinking Water Supply, through different fora, I have been stressing upon the various scientific and technical organizations as well as individual experts to concentrate on improving the design of handpumps, not only for better performance efficiency, but also to increase its design life. There is, no doubt, that substantial improvement in hand pump technology has already taken place, but there is urgent need and scope for further refinement. Improvement in hand pump technology will not only help in the accelerating the coverage as a cost effective approach, but also facilitate the process of Village Level Operation and Maintenance (VLOM). However, the major problem in hand pump technology continues to be limited design-life as well as high down time. When used by the community, it has been observed that most of the hand pumps become defunct within 7 to 10 years from the time of installation. Considering the importance of the issue, I would again like to draw the attention of the learned participants of the Workshop and also to request them to deliberate on how to enhance the life span as well as to minimize down-time of handpumps with appropriate VLOM back up.

Due to continuous efforts of a large section of scientists and technicians all over the world, various appropriate technological options in environmental sanitation have been evolved to provide the best value for money to the various user groups in consonance with their needs. Though these technologies have achieved a certain level of maturity in respect of cost-effectiveness, flexibility, vertical upgradation, etc. but still a lot remain to be done. Proven appropriate technologies for hygienic excreta disposal for certain specific geo-hydrological situations, viz. high water table, rocky strata etc. need to be improved, particularly keeping in view the requirement of women and children.

I am very happy to note that some of the very important aspects of the sector, viz. Community Participation, Water Resource and Watershed Management, Human Resource Development, Role of Women and Non-Government Organization in Water Supply and Environmental Sanitation projects etc. also have been included among the themes for deliberation.

In our country, we have taken up major initiatives for inducing reforms in the Water Supply and Sanitation Sector for ensuring sustainable improved service delivery to the un-served and underserved sections of the society. In 58 selected pilot districts, activities have already commenced in this direction. Besides adopting appropriate technologies, the success of our efforts, to a great extent, will depend on creating “Enabling Environment”.

In this context, evolving community participation in each stage of the project cycle, providing opportunities to the women and NGOs for their purposeful involvement in the programme should have sharp focus.

We are aware of the fact that there cannot be any standard blue prints which can be prescribed for successfully operationalising the reform process. For evolving situation specific appropriate innovative approach, there is a need for creativity, and above all, clear understanding and deep sensitivity to the needs of the population to be served.

This two-day International Conference will provide a rare opportunity for extensive deliberation and experience sharing as well as in-depth analysis by the learned

participants on the judiciously chosen themes having great relevance for the sector.

I am confident that not only India, but many other countries of the world, will immensely benefit from the outcome of this International Conference. I wish the Conference all success and again thank the organizers for giving me this opportunity to share my thoughts with you on this occasion.