

**Workshop on
Sustainable Water and Sanitation
- Issues and Challenges with Best Management Practices:
Proceedings**

Centre for Science and Environment (CSE) organized a one day regional workshop on 'Sustainable Water and Sanitation: Best management Practices' on May 1, 2013 at the Naveen Bhawan, UP Housing and Development Board (UP Awas Evam Vikas Parishad), Lucknow, Uttar Pradesh. The workshop was supported by Urban Development Department (UDD) and UP Jal Nigam as the local state partner. The workshop is part of various activities supported by Jawaharlal Nehru National Urban Renewal Mission - Comprehensive Capacity Building Programme (JnNURM – CCBP), Ministry of Urban Development and Government of India. The states targeted though this workshop were Uttar Pradesh, Uttrakhand, Bihar, Chhattisgarh, Jharkhand, Bihar, Madhya Pradesh & West Bengal.

Session 1: Inaugural Session

Mr. A.K. Mittal, Managing Director, U.P. Jal Nigam welcomed the participants representing key functionaries from Municipal Corporations, Public Health Departments, Water and Sanitation Boards, Ground Water Boards, Pollution Control Boards, Programme Management Units (PMU), Programme Implementation Units (PIU) and local bodies of the Government of Uttar Pradesh, Jharkhand and Uttarakhand. Other key participants included faculty, researchers and students from IIT-Kanpur, Babasaheb Bhimrao Ambedkar University, practitioners, consultants and NGOs involved in the advocacy of sustainable urban water and wastewater management in northern states such as Uttar Pradesh, Jharkhand, Bihar and Uttarakhand.

Dr. Suresh Kumar Rohilla, Programme Director, Water Management, CSE presented an overview of water and wastewater management in the NURM phase I and challenges in expanding the accessibility and availability of water supply and sanitation facilities to make the cities vibrant. He emphasized the importance of the linkage between water and energy as being the key object for the NURM phase II beside the need to understand the socio-economic connect for technological interventions. He set the tone of the workshop by laying out the objectives of the regional workshop as follows:

- To generate awareness about the best management practices (BMPs), state of art knowledge and reforms in the area of sustainable water and sanitation.
- To discuss with key state holders the concept, issues/barriers and experiences in mainstreaming of BMPs/NURM reforms in the sustainable water management area.
- To explore capacity building support required to implement projects aimed at mainstreaming BMPs and reforms in the NURM schemes.

Alok Ranjan, Agricultural Production Commissioner the chief guest of the workshop addressed the participants by giving the existing and proposed legislations for urban water management with special reference to sustainable water and sanitation.

A.K. Mittal, Managing Director, UP Jal Nigam, spoke about the reforms that are necessary to be undertaken to bring management of water and sanitation.

C. B. Paliwal, Principal Secretary, UDD, Govt of Uttar Pradesh, presented a special address and talked

on Policy overview for Sustainable water and sanitation management in UP.

Representatives of the State, Jharkhand presented an Overview of NURM water/wastewater projects by giving the existing and proposed reforms on BMPs of sustainable water and sanitation.

Technical session: Sustainable Water and Sanitation in Urban Water Management: BMPs and Case studies

Pradeep Kumar, Director, ASE, Bangalore gave a presentation on Energy Efficiency Opportunities and Challenges in Water Supply System. He shared his vast experience and case studies with the participants and pointed out that even simple reforms undertaken in the operation of systems can bring about effective reduction in the energy cost of the projects.

Prof. H.S. Shankar, IIT-Mumbai, gave a presentation on the use of soil biotechnology for waste-water treatment. He explained the principle and technique of Soil Biotechnology for treating the wastewater and reusing it.

Sanjay Kumar Guleria, NJS Engineers India Pvt Ltd. Delhi, talked on the Recycle and Reuse of Wastewater for Sustainable Water: Potential and Challenges. He explained the importance of reuse and recycle of wastewater in this age of urbanisation when we are on the brink of water scarcity.

Dr. Rakesh Kumar, NEERI, Mumbai talked on Conventional Systems of sanitation for Safeguarding Water Quality and gave a brief on the design approach and performance characteristics of the various treatment methods. He highlighted the advantages and successful applications of the phytoid system for treatment of the waste water generated and accepted that constructed wetland system is the need of the day. A glimpse of the successful case studies where this technology has been implemented had also been presented.

Technical Discussion: Operational challenges and strategies for mainstreaming reforms in NURM projects

PANEL 1: Mainstreaming BMPs in sustainable urban water management

This session was chaired and moderated by Dr. Suresh Kumar Rohilla, Programme Director, Water Management, CSE

Mr. A.K. Gupta, Executive Engineer, UP Jal Nigam, talked on the BMPs for water supply in Lucknow. He emphasised on the point that if the reforms were incorporated right at the design level of a project then efficiency can be achieved easily in the implementation stage.

Dr. R.A. Yadav, Manager (Ground Water), UP Jal Nigam talked on the BMPs for groundwater management in sustainable water management. He explained the importance of groundwater harvesting as the need of the day and also explained the geological difference in the areas of UP. In his presentation he explained as to which areas need groundwater recharge urgently and which areas do not support ground water recharge geologically but rainwater harvesting and reuse should be done in those areas.

K.P. Singh, Population Foundation of India-Health of the Urban Poor Programme talked on Advocating the issue of water for the urban vulnerable. He explained how pollution of rivers and other water bodies is affecting largely the poor and vulnerable population of UP and how steps should be taken to curb it.

R. S. Sinha, Sr. Hydro-geologist, Groundwater Department, Government of UP talked on Sustainable urban groundwater management: Present scenario and future challenges. He explained the present scenario of groundwater in UP and the projects undertaken in increasing the groundwater level. Being a Hydro-geologist he explained the hydrogeology of various areas of UP and presented an overview of the proposed projects for groundwater management in UP.

Other Panel discussants were Dr. P. Murali Prasad, Associate Professor, IIT- Kanpur; Narendra Kumar Singh Chauhan, MC Kanpur and Pradeep Kumar, ASE, Bangalore

PANEL 2: Mainstreaming BMPs in sustainable urban waste water management

This session was chaired and moderated by Mr. A.K. Mittal, Managing Director, UP Jal Nigam

Dr. Venkatesh Datta, Babasaheb Bhimrao Ambedkar University talked on *Issue of wastewater sustainability from the study on performance evaluation of STPs in Lucknow*. Dr. Datta has been studying the ill effects of pollution on the Ganga and Gomati river. He presented the results of his study on the performance of STP which dump their effluent water in the Gomati river. His presentation gave an overview of the real scenario of the STPs in Lucknow.

Mr. Rakesh Jaiswal, Eco Friends- Wastewater talked on *Environment, livelihood and health impacts in Kanpur*. He presented a case study of a village in Kanpur which receives the polluted river water from Kanpur. The effluent of the STPs in Kanpur is sent to the villages for irrigation purpose. He showed that how even the effluent is so polluted that it is causing serious problems for the farmers of the area. Even the residents of the surrounding villages are facing serious health effects due to the heavy pollution of the river. His presentation was very informative explaining the real scenario of Kanpur and the surrounding areas.

Project Implementation Units of Agra, Ghaziabad and Kanpur talked on Reforms BMPs for sustainable wastewater management. The PIU of Agra talked on the Decentralized wastewater treatment system implemented in Agra and Kachpura area. The PIU of Ghaziabad talked on the Recycle of wastewater treatment system that they have implemented in their district. The PIU of Kanpur talked on the E-governance and management of solid waste with the help of GIS that Kanpur had implemented.

Mr. R.M. Kant, General Manager, Yamuna Pollution Control Board, Ghaziabad talked on the Selection of sustainable Technology for Wastewater treatment and its reuse and recycle. He shared his experience and gave value information on the topic.

WAY FORWARD

The workshop concluded with the idea that there was a need of capacity building programmes to promote decentralised water-waste management systems and CSE definitely needs to get involved in the state programmes and train the government officials on the tools, techniques and policies on decentralised techniques of water management related to reforms of JnNURM.