

## Providing Solutions for Safe Drinking Water and Sanitation through IWRM Approach

*WACREP Activity 3D: Promotion of Integrated Water Resource Management in Peri-Urban Settings*

Increasing population and rapid economic growth in India has created strong pressure to convert agriculture land to industrial and residential lands – areas having land use change is called as peri-urban areas. Inhabitants of these peri-urban areas are exposed to deteriorating quality of life stimulated by deforestation, water depletion, non-existent mechanisms of sewage disposal and higher pollution density.

India Water Partnership (IWP) partnering with TARU Leading Edge conducted an Integrated Water Resources Management (IWRM) Action Research in a peri-urban area of National Capital Region of India under WACAREP Phase-II with the objective of developing an innovative two year IWRM plan supported by advocacy strategy for policy and funding. The initiative is planned to be owned by local community and institutions for improved sustainability of the project inputs. For the effective implementation of the programme, TARU partnered with S.M SEHGAL Foundation which provided technical assistance in terms of supporting implementation, providing guidance and review the project outputs.

IWRM is one of the key tools to address the water issue which is interactive, community based and specific to local area requirements and promotes sustainable water use. It integrates all the resources to be together and incorporates both social and environmental considerations directly into policy and decision making in water policies.

After several field observations and meetings with the community in peri-urban villages of Gurgaon on condition of water and sanitation, the village Garhi Harsaru was selected for conducting the activity 'Promotion of IWRM in Peri-Urban Settings' (Action Research to develop innovative IWRM Investments). The activity consisted of two steps; identification of the problem in the study area with extent and severity and possible remedies through evidence building and consultations.

Major problems identified based on the study were;

- Over-dependence on groundwater
- Inadequate and inefficient service levels
- Issues of salinity
- No system of solid and liquid waste

Solutions for ground water depletion are rain water harvesting, recharging of ground water and reusing waste water. These problems shall be addressed through a systematic Water Investment Plan, Institutional and Advocacy strategy and solid and liquid waste management plan.

Salinity and contamination are identified as key problems in relation to water quality, for which filtration and disinfection techniques are proposed as possible solutions. IWP and TARU team installed five water filters in the Anganwadis<sup>1</sup> of the village as awards to the winners of the extempore competition held during the awareness campaign in schools and distributed some bio-sand filters to the local community as demonstrations.

<sup>1</sup> Anganwadi means "courtyard shelter" in Indian languages. They were started by the Indian government in 1975 as part of the Integrated Child Development Services program to combat child hunger and malnutrition



Inadequate and inefficient service levels were the issues identified under service delivery and it has been proposed to increase the coverage, efficiency, introduction of metered system to address these shortcomings. Dependence on individual water sources and excessive water usage for agricultural purposes are common which can be addressed through improved agricultural practices, awareness raising and use

of low cost water saving technologies.



Consultations with stakeholders Panchayat members and School Principals were organised and awareness raising programmes were held for the community on water related problems in the area both in terms of quality and quantity.

A detailed project report on Integrated Water Resource Management for village Garhi Harsaru, Gurgaon has been prepared which consists of the assessment of existing scenario and proposals for IWRM, drinking water supply system, rainwater harvesting, solid waste management system, liquid waste management system, institutionalisation, awareness generation and project implementation. The report discusses about project implementation plan and its sustainability. Further a detailed project report on solid liquid waste management has also been prepared by IWP and the TARU team.

The expected outcome of the proposed plan for village Garhi Hasaru are;

- Adequate quantity of water to all at all times,
- Availability of safe water (free from contamination),
- Equal access to water supply systems and ensure coverage through Public Water Supply Systems,
- Water access regulated to ensure minimal wastage of water,
- Improved water supply,
- Improved water resources,
- Proper solid waste management through a zero waste model, where the output of one activity serves as the input for the other.

Water and Climate Resilience Programme (WACREP) is an innovative initiative of Global Water Partnership (GWP) South Asia devised to improve the climate resilience of South Asian countries to withstand the impact of climate change.

This is a Success Story documented by IWP.

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