

INTEGRATED RURAL URBAN WATER MANAGEMENT FOR CLIMATE BASED ADAPTATIONS IN INDIAN CITIES (IAdapt)

Rural Exposure Visit to BibiDarfal and Wadala Villages

6th June 2018

Proposal Code:	Proposal # A-69683
Submitted to:	International Development Research Centre (IDRC) Canada
Submitted by:	ICLEI South Asia
Project Consortium:	ICLEI South Asia (Lead Member) Athena Infonomics LLC International Water Management Institute (IWMI) Indian Institute of Technology, Madras (IIT M)



Report on Rural Exposure Visit

Introduction

A rural exposure visit was organized on 6th June 2018 by ICLEI – South Asia under the project on Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt) supported by IDRC, Canada. The main objective of the visit was to showcase best practices in water management at rural level with participatory approach of villagers to solve their own water issues. Political and administrative leaders of three villages (viz. TaleHipparga, Haglur and Ekrukh) from the selected micro-catchment in Solapur participated in this exposure visit to BibiDarfal and Wadala villages in Solapur district. Associate agriculture officer of Agriculture Department (district level nodal department for IAdapt project) involved in Integrated Watershed Management Program (IWMP) was also accompanied the team during this visit.

Village BibiDafal

BibiDarfal and Wadala villages are situated in North Solapur tehsil of Solapur District about 25 kms from Solapur. These villages are becoming famous for their participatory works to deal with water scarcity issues in the village. The visit began with a brief introduction by ICLEI – South Asia about the project and its objectives. Mr. Vishal Deshamukh, an expert in participatory water management works welcomed all the participants and explained basic topography of both the villages. He spoke about the issues faced by villages regarding water availability, pollution of existing water resources and waste water management problems. All these problems were leading to health issues, economic loss from agriculture sector and superfluous efforts to collect water for domestic usage for villagers.



Siltation, vegetation and encroachments in the nallah (local storm water stream) reduced its runoff holding capacity and resulted in floods during monsoon. Apparently few months after the monsoon, the stream gets dry resulting in water scarcity for villagers. A local NGO named Lokmangal Foundation motivated villagers of BibiDarfal to initiate participatory efforts for water resource management. Connections between a lake and nallah were cleaned and overflow was diverted to the nallah. Depth (increased from 1 meter to 6 meters) and width (increased from 5 meters to 25 meters) of a nallah was augmented and 8 check dams/weirs were constructed in a 2 km stretch with proper level difference. Total 63,000 cubic meter of

soil was removed and spread on agricultural lands. These efforts resulted in developing additional 70 million liters of water storage capacity. Plantation was also done to stabilize the soil on the banks of nallah. Financial aid was provided by the Lokmangal Foundation and many farmers voluntarily donated their lands for this work. A bore well was also dug to observe ground water levels. Additionally agriculture department has made compartment bunding to arrest runoff and increase ground water recharge. All these efforts resulted into ground water recharge as nallah can store more water for longer durations. Because of this nearby open wells and borewells are receiving more water throughout the year. This has increased the financial incomes for farmers and shortened the distance for drinking water availability.



Village Wadala

Participants then moved to Wadala village to see wastewater management and participatory water conservation efforts. Mr. Baliram Sathe, famous political leader of the region was a source of motivation for villagers and involved them in planning and implementation process to solve their water issues. Wadala village has executed a huge work for sanitation and water conservation on the basis of participatory involvement from planning to implementation which resulted in to demonstrating Wadala pattern for water conservation works.

On arrival, Mr. Baliram Sathe and other volunteers of village welcomed all the participants and shared their experiences of motivating each villager and problems faced during this journey. Mr. Baliram Sathe being a leader of the village encouraged each and every house for their involvement in voluntary labour contribution. Each house of the village participated in water conservation activities for more than 40 days for 3-4 hours a day. Regional NGO called Pani Foundation helped them for capacity building and awareness activities.



A nallah (storm water stream) flowing near to the village was about to vanish because of siltation and vegetation. Same as BibiDarfal village, this nallah used to dry just after monsoon but leads to water logging during heavy rainfall. Villagers worked to increase the depth and width of the nallah and constructed 4 interconnected tanks with about 25 X 30 X 2 meters to hold excess runoff. The runoff earlier used to flow within 60 meters will flow for more than 170 meters increasing ground water recharge. Abandoned open well is also desilted and now working as a storage tank for water to be used in lean periods. About 6-7 weirs of 10 to 15 meters length and 1 to 2 meters deep are constructed within 3 kms stretch to arrest monsoon runoff in nallah. Compartment bunding are also executed near this nallah to reduce soil erosion and increase the rate of ground water recharge. Awareness messages and water balance of the village are displayed at vantage places including primary health clinic, school etc.



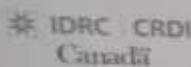
Village has also aimed to become a gutter (sewage lines) free village by implementing soak pits for gray water and septic tanks for toilets. The innovative idea of soak pit has been applied using settling tank followed by recharge pits with local filter media. This 3-5 meter deep recharge pits are full of stones, bricks and layers of sand to capture impurities. Out of 1000 houses more than 700 households have constructed these kind of soak pits with own financial contribution. The design varies from house to house depending on number of individuals in a family and financial capabilities of families. Cost of the soak pits varies from Rs. 700/- to 6,000/- depending on finishing and material used during construction. Because of such work gray water has stopped flowing on land to pollute existing water resources and reduced mosquito, odour problems with improvement in health of villagers. Wadala village then decided to increase its green cover to reduce evaporation losses of water and overall temperature of the village. Mentally challenged children were involved to prepare about 16,000 saplings for plantation drive in the village.



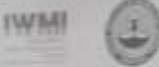
Conclusion

Representatives of the three visiting villages were impressed by the participatory work done in both the villages. The visit helped them understand practicalities of the implemented projects and technical concepts behind execution. Hosts of both the villages stressed on the need and importance of such efforts to deal with climate change and water issues. Participants and hosts thanked project team for this exposure visit and promised their support for other project activities in future.

Annexure 1: Attendance Sheet



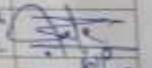
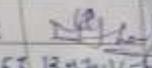
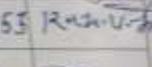
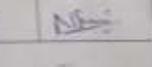


Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt)
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RURAI Exposure Visit

6th June 2018 Solapur, Maharashtra

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