

Improved Water Resources Management through Bio-Engineering Technology

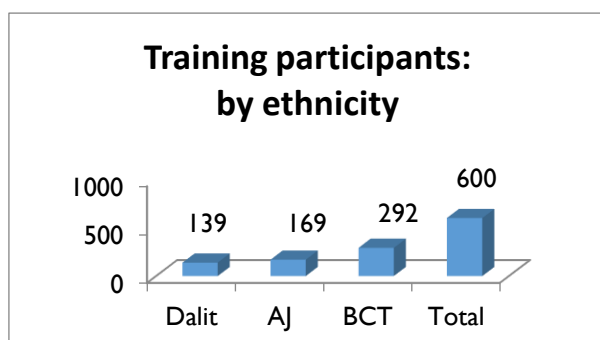
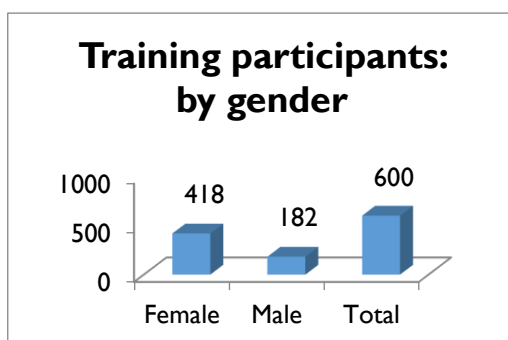
BACKGROUND AND STUDY OBJECTIVES

The people of upper Rangun Watershed realized that the availability of water in their water sources is gradually reducing due to watershed degradation and erratic nature of rainfall patterns. Thus, it became essential to conserve and revive the spring/water sources in order to improve availability of water for domestic and agricultural use.

The USAID Paani Program provided support to implement a 12-month research-cum-demonstration project in watershed management by building local capacity and improving integrated management of water resources. RDC provided workshops and training activities to strengthen the capacity of local communities and institutions to better communicate, coordinate, and negotiate with concerned stakeholders for the sustainable management of natural resources. Similarly, RDC implemented participatory low-cost soil and water conservation technologies to help increase discharge of the critical spring sources. When low-cost soil and water conservation and plantation activities are successful in augmenting spring water availability, the pro-poor women and marginalized people will be able to fetch increased amount of water for their use. This approach can be replicated in other river basins of similar agro-ecological regions.

KEY FINDINGS

- The analysis showed that the upper Rangun sub-watersheds have very steep slopes, which have high runoff rates and less infiltration capacity. Hence, spring sources here are in critical risk of drying out.
- The training on institutional arrangement and leadership development empowered Resource Management Committee (RMC) members to develop Resource Management Group (RMG)'s statues, which were registered at the Alital Rural Municipality office. The RMG members became skilled in preparing project proposals for funding from Alital Rural Municipality and other concerned stakeholders.
- The training on the role of women and marginalized groups in building climate-resilient watersheds empowered RMC members in gender equality and social inclusion, empowering women and marginalized groups to participate in decision-making processes.
- The training on low-cost soil conservation technologies gave participants skills for solving soil erosion problems and for improving spring source protection using locally available materials.
- Local government authorities highly recognized and appreciated the concept of water recharge technologies using low-cost soil conservation technologies and capacity building training activities.





Eye-brow trench to collect and infiltrate rainwater



Recharge pond to collect rainwater

According to beneficiaries of the Dolakot spring, the installation of low-cost soil and water conservation / water harvesting structures facilitated increased amounts of spring discharge compared to that of previous years. (RDC/USAID Paani Program)

ACTION / RECOMMENDATIONS

The local communities involved in this study continuously suffer from serious water stress problems. They were most interested with spring/ water sources protection and improvement activities. Hence, spring/ water source protection and improvement activities should be implemented simultaneously with capacity building activities.

This spring/ spring shed improvement project fully relies on annual precipitation. This should have been started well before the monsoon season, to provide the recharge ponds and water harvesting structures more time to collect rainwater for infiltration.

Both spring sheds were improved with a limited number of surface, fodder grass, fruit sapling, and recharge ponds or water harvesting structures. In order to capture larger amounts of rainwater to infiltrate into the subsoil, the remaining area of spring sheds should be improved with additional recharge ponds or water harvesting structures. This should be done in addition to conservation plantation activities.

The training activities—especially on institutional arrangements and leadership development, and on the role of women and marginalized groups in building climate-resilient watersheds—were found to be very fruitful in reinforcing the capacity of women and people from marginalized groups. Hence, in order to empower and mobilize local communities, these training should be conducted by all grantees of the Paani Program at the very beginning of the project.



Local women were empowered to participate in decision-making processes through RDC-led training activities. (RDC/USAID Paani Program)