

Ridge-to-Valley Approach for Water Conservation through MGNREGA

The frequent dry spells due to subsequent droughts in Kondamanayunipalem village of Anantapur district in Andhra Pradesh resulted in fall of water tables in the region. The majority of the farmers who depended on groundwater for irrigation could not cultivate their lands causing livelihood challenges. Faced with the grave situation, a Gram Sabha meeting was convened to address the problem of water scarcity and it was agreed to develop the village lands using ridge-to-valley approach under MGNREGA. Taking up activities like digging trenches and sunken pits across the slope of hillocks was part of the approach.

Over a period of five years (2014-2018), numerous staggered trenches and sunken pits were dug on about 465 acres of common land along the slopes of the hillocks at a total cost of Rs. 71.24 lakhs (Rs. 70.71 lakhs for wages and Rs. 0.53 lakhs for material). One of the major challenges faced by the workforce was difficulty in digging the hard dry soil under intense heat, which was overcome by the continuous motivation and support of the panchayat officials.

The hard work and patience paid off and the green cover over the barren hillocks increased significantly. About 25 acres of barren land was brought under cultivation downstream. The water levels in 14 old wells and 70 bore wells showed remarkable improvement benefitting as many as 200 households. Fallow lands of some families have now been developed with mango plantation under horticulture. The farmers are also able to cultivate bottle gourd, tomato, green gram, leafy vegetables, groundnut, etc. inside the mango orchard by intercropping which has doubled their income. The works done under MGNREGA have also ensured livelihood security for poor households. This case study is a perfect example of how resolute action at the grassroots level and good coordination with the government officials can make a big difference in ensuring water and livelihood security in villages.

What is ridge-to-valley approach?

With an intention to conserve every drop of water starting at the ridge and reduce to a considerable extent both the surface run-off volume and the velocity of water, the ridge-to-valley approach seeks to detain, divert, store and use available rainwater. This allows better management of water flowing from the ridge to the valley and ensures conservation of rainwater, which in turn, bring agricultural and economical stability. This approach also helps in strengthening the durability of soil and water conservation structures downstream.

