

Theme	Water Stewardship
Title	Tank Rehabilitation: Improving Soil Fertility and Agricultural Productivity
State (s)	Andhra Pradesh
District (s)	West Godavari
Evaluation Agency	Ingrain Technologies Pvt. Ltd.
Period of Study	May – July 2016

Executive Summary

Objective(s):

Impact of the tank restoration programme on improving the soil and moisture regime in the project area, enhancing groundwater recharge, improving soil health and agricultural productivity, and building strong institutions.

Key Findings:

1. Total surface storage increased by almost two and half times due to tank desiltation while the ground water levels showed an increase in the range of 13-18% compared to the pre-project period and 14-22% when compared to the control area.
2. Yield per hectare increased by approximately 14% on an average for all the major crops sown. Net cropped area increased by 20% in the intervention locations.
3. Organic soil carbon content increased from 0.66% to 0.70% in the project locations while the average for the control plots was 0.64%.
4. Silt application on farmlands led to a reduction in usage of chemical fertilisers, thus directly lowering the cost of cultivation by 32% as compared to the pre intervention scenario for all the major crops. In contrast the control area farmers incurred 49% higher on chemical fertilisers.
5. Tank rehabilitation also brought other benefits like fish rearing, provision of drinking water for cattle, using bunds for transportation and livelihood opportunity for washer women. About 23,400 cattle and small ruminants drink water from the de-silted tanks regularly.

Areas for Improvement

1. An important indicator to consider is the proportion of irrigated area from tanks v/s other sources like bore-wells.
2. Predominant beneficiaries seem to be farmers with irrigated land (over 90%). Going forward, this should be considered as an additional filter for selection of tanks - ideally the tanks selected should mainly benefit rain-fed farmers.
3. Improvement in water flows for a significant number of tanks in the Bundacut cascade system was reported by farmers post de-siltation. Since this is a good indicator of long-term impacts systems need to be put in place to measure flows.
4. In order to ensure that there is no duplication of work by the state governments it is recommended that: (a) Post completion of works, a detailed report (along with design and measurements) is

filed with the Neeru-Chettu office; and (b) Provide a master plan of the tanks ITC intends to work on to Neeru-Chettu to promote collaboration going forward.

In case you would like to know more on the study please write to us at: itcmsk@itc.in