Groundwater levels rise in Chittor, locals and farmers benefit

- **Central Ground Water Board (CGWB) constructs 27 artificial structures in Chittor district of Andhra Pradesh.**
- **Groundwater levels rise in Karvetinagram, Kollakadriga, Settinetham, Pathapelam and Santhabylu localities; yield of wells nearly 3 times.**
- **Recharge structures also result in expansion of cultivable irrigated area.**

Responding to the deteriorating groundwater levels across the country, Central Ground Water Board (CGWB) of Ministry of Water Resources, River Development and Ganga Rejuvenation has been undertaking certain steps to recharge the groundwater in various states. The efforts of CGWB has not only resulted in improvement in groundwater levels, but has also led to increase in cultivable land.

One such success story unfolded in Chittor district of Andhra Pradesh where construction of artificial recharge structures enabled immediate rise of water levels. The *mandals* in Andhra Pradesh where the structures were constructed include Vedurukuppam, Karvetinagram, SR Puram, Nagri, Palasundram, Vijaypuram and Madanpalle *mandals*. The executing agency of the project was irrigation department, Government of Andhra Pradesh. The project was funded under Central Sector scheme by Central Ground Water Board (CWGB).

In the project, 27 artificial recharge structures were constructed out of which 26 were check dams and one percolation tank. Check dams are small barriers built across the direction of water flow to reduce its velocity. Check dams are built on shallow rivers and streams for the purpose of water harvesting. The small dams retain excess water flow during the monsoon rains in a small catchment area behind the structure. Pressure created in the catchment area helps force the impounded water into the ground which leads to replenishment of nearby groundwater reserves and wells. The water then could be used for use in irrigation and domestic needs. Percolation tank, also constructed to store excess flowing water, is an artificial surface body to entrap the surface run-offs for recharge of groundwater.

With the construction of 27 artificial recharge structures, immediate impact was witnessed as groundwater levels rose sharply in Karvetinagram, Kollakadriga, Settinetham, Pathapelam and Santhabylu localities.

The creation of new structures also resulted in expansion of cultivable irrigated area which increased by 18.5 hectare for paddy and 25.4 hectare for non-Paddy in *kharif* and 23.8 hectare of non-Paddy cultivation in *rabi*.

The yield of wells also increased from 2,500 litre per hour to 8,000 litre per hour and 1666 litre per hour to 8,000 litre per hour in monsoon and dry seasons respectively.

Thus, the creation of 27 artificial recharge structures in Andhra Pradesh served the twin purpose of Water Conservation and Agricultural Productivity.

Niti Aayog in its Composite Water Management Index has flagged the issue of deepening water crises in India. While the Government of India is making all possible steps in the direction of Water Conservation and Water Management, it is the duty of each and every citizen of the country to contribute in this mammoth but critical task.

Figure 1: Check Dam at Karvetinagram in Andhra Pradesh.

Figure 2: Percolation tank at Pathapelam village in Andhra Pradesh.