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**WATERSHED MANAGEMENT – A CASE STUDY OF CHINNADUDYALA WATERSHED,  
MUDDANUR MANDAL, CUDDAPAH DISTRICT, ANDHRA PRADESH**

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**Concept**

The concept of watershed advocates the improvement by scientifically managing the natural resources preserving every drop of water received over the basin to increase soil moisture, recharge to ground water bodies and conjunctive utilization of surface water with ground water, adopting available improved technology available.

**Activities**

Water shed activities were taken up in Chinnadudyala basin by different departments during the years 1985-89 to improve the conditions in different aspects such as ground water, agriculture, soil conservation, forestry etc., In this aspect of ground water, potential zones were delineated and 20 bore wells were drilled ranging in depths from 45 to 75m. The yield range from 6000 to 60000 lph. Water harvesting structures like percolation tanks (3) check dams (14) were constructed to improve the ground water conditions. About 20 rockfill dams and contour bunding in the entire water shed area have been taken up to moisture to preserve soil moisture and fertility by curtailing erosion

**Conditions prior to watershed management**

Almost all the area was under rain fed conditions prior to taking up water shed management. Crops like Bazra, Ground nut, Redgrams, Horsegram, Jowar were being grown only in one season. It was observed that the static water levels range from 9.5 to 18.5 m bgl.

**Developments after watershed management**

Improvements in ground water conditions were observed. The static water levels raised 8.0 – 12.0 from 9.5 – 15.0 m and improvement in yields observed. Crops were raised in two seasons. Additional crops like Sunflower, Cotton and Vegetables were being raised. Increase in agriculture produce doubled, increase in socio-economic status of the villages noticed during 1990-93 (after watershed management.)

**Present conditions**

Unscrupulous development of ground water structures (additional 30 bore wells drilled by private people) without observing spacing stipulations, indiscriminate exploitation of ground water while bringing much area into irrigation, scanty rainfall lead to drastic depletion of ground water levels (as low as 36.8 mts. bgl observed on 4.4.1995) resulting in defunct of as many as 30 bore wells to while remaining 20 bore wells are giving meager yields of 6000 to 9000 lph. The agriculture output is deteriorated by 50% which definitely has its impact over the socio-economic conditions of the villages.



## **Conclusions**

The adsorption of watershed management which has given fruitful results has been spoiled by the unscrupulous activities such as over-exploitation of ground water, construction of ground water structures (bore wells) without following spacious stipulations. It has to be advised to the formers to follow the spacing stipulations and optimum utilization of ground water by sprinkler and drip irrigation methods, raising of drought resistant crops

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Recent information collected by the authors in the field.