

1213. **Adhikari, R.N., Rama Mohan Rao, M.S., Chittaranjan, S., Srivastva, A.K., Padmaiah, M., Raizada, A. and Thippannavar, B.S. 1998.** Response to conservation measures in a red soil watershed in a semi-arid region of south India. Selected Paper, 9th ISCO Conf. "Towards Sustainable Land Use: Furthering Cooperation between People and Institutions". In: *Advances in Geoecology* 31, Vol. II. (Eds.) H.R.Blume, H.Eger, E.Fleischhauer, A.Hebbel, C.Reij, K.G.Steiner, Catena Verlag GMBH, 35447, Reiskirchen, Germany: 1281-1286.

Achievements of watershed management project initiated in 1976 and monitored in 1979 for its impact on resource conservation and productivity increase in an alfisol semi-arid region of south India have been highlighted. Conservation measures viz. graded bunds in arable lands, contour trenches in non-arable lands combined with gully treatment, reduced annual runoff from 17 to 2.3 per cent, peak rate of runoff from 15 to 4.4 m³/sec and soil loss to 1.1 t/ha/year. Conservation of rain water, coupled with improved practices, increased food production from 42 to 78 t/year over 103 ha under dryland conditions. As a result of

conservation and gully control measures, a surface water storage of 6110 m³ was created across the watershed which resulted in 14% of the annual rainfall becoming ground water recharge. This is reflected in the increase in irrigated area under the wells located in the watershed from 19 ha in 1985-1986 to 56 ha in 1993-1994. The average cost of such development worked out to Rs. 752 per ha at the 1979 price level. The overall project gave a cost-benefit ratio of 1.53.