

**ON WATER AND SOIL QUALITY ASPECTS OF CATCHMENT AND COMMAND AREAS  
OF IRRIGATION TANKS IN ANEKAL TALUK, BANGALORE URBAN DISTRICT,  
KARNATAKA, INDIA**

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**ABSTRACT**

Tanks and lakes occupy a prominent place in the history of irrigation in South India. A tank was considered to be a useful life saving mechanism in the perennial water scarce areas, which are categorised as arid and semi-arid regions. Tanks are the main source of water supply in those areas for ages. Tanks occupy an important place in the economy of a village and are almost considered to be the back bone of rural economy. Due to urbanisation and improper management, these irrigation tanks are in the state of deterioration. Hence, management of tanks and lakes is of prime importance, and need of the hour.

The paper discusses the present status of irrigation tanks such as Jigani and Hennagara Tank and Muthanallur Tank, in Anekal Taluk of Bangalore Urban District (Karnataka). The physico-chemical analysis and results of bacteriological analysis of water samples drawn from the tank catchments and command areas are presented. The results reveal that water is highly contaminated and unfit for drinking and irrigation purposes.

The micro and macro nutrient analyses of soil samples collected in the catchments, tank beds and command areas also reveal that the soil is contaminated. The tank bunds are partially eroded and tanks are encroached at certain areas. The waste weirs and sluices are to be restored and modernised. Rapid urbanisation and industrialisation in the Lake Catchment and intensive irrigation have resulted in the deterioration of quality of lake water and soil in the catchment and command areas. Modernization of tank irrigation system should be of prime importance. The paper also discusses some aspects of management of these lakes.

**KEYWORDS:** Lake Catchment, Urbanisation, Irrigation Techniques, Lake Management, USSL Diagram