

## **Theme 7: Lakes, rivers, estuaries: water quality, biotic resources, sustainable management**

T7\_Oral\_26

---

### **TECHNO-ECOLOGICAL STUDIES ON THE STATUS AND MANAGEMENT OF IRRIGATION TANKS**

[A case study for Begihalli Tank, Jigani Tank and Hennagara Tank in Anekal Taluk, Bangalore Urban District]

H. Chandrashekar<sup>1</sup>, K.V. Lokesh<sup>2</sup>, V.G. Hiremath<sup>3</sup>, Joythi Roopa<sup>4</sup> and G. Ranganna<sup>5</sup>

<sup>1</sup> Research Scholar, Dr. Ambedkar Institute of Technology.

<sup>2</sup> Engineering Consultant.

<sup>3</sup> Research Scholar, Dr. Ambedkar Institute of Technology.

<sup>4</sup> Professor, Dept. of Civil Engg. Dr. Ambedkar Institute of Technology.

<sup>5</sup> Visiting Professor, CAS in Fluid Mechanics, Bangalore University.

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

The paper discusses the present status of irrigation tanks such as Begihalli, Jigani and Hennagara Tank, in Anekal Taluk of Bangalore Urban District. The physiochemical and results of bacteriological analysis water samples in the tank catchments and command areas are presented. The results reveals that water is highly contaminated and unfit for drinking and irrigation purposes. The micro and macro nutrient analysis of soil samples collected in the catchments, tank beds and command areas also reveal that the soil is also contaminated. The tank bunds are partially eroded and tanks are encroached at certain areas. The waste weirs and sluices are to be modernised. Rapid urbanisation and industrialisation in the lake catchment and intensive Irrigation have resulted in the deterioration of lake water and soil in the catchment and command areas. Modernisation of tank irrigation system should be of prime importance in these tanks. The paper also discuss some aspect of management of these lakes.