

## **7. ASSESSMENT OF HYDROLOGICAL AND PHYSICAL STATUS OF TRADITIONAL WATER HARVESTING SYSTEMS IN KARNATAKA STATE USING GEO-SPATIAL TECHNOLOGIES AND MEASURES FOR RESTORATION AND REJUVENATION**

Project Investigator : Dr. U.T.Vijay  
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### **Background:**

Traditional Water Harvesting Systems were constructed to store water for various needs of rural communities such as drinking, washing, cattle drinking, irrigation and temple purposes including recharging of ground water.

At present most of these ancient water bodies have become dump yards and dry resulting into the decline in their potentials. Keeping this importance in view, KSCST has taken up a project on assessing the hydrological and physical status of ancient water harvesting structure such as Kalyanis, Pushkaranis / Temple tanks, Gokatte and Kunte etc., of the state for suggesting scientific interventions for rejuvenation.

### **Objectives:**

- To carryout field survey and map the Geographic location of Traditional Water Harvesting Systems using GPS technology
- To create digital database on both spatial & non spatial database on various parameters and hyperlink the present photographs using Geo-spatial technologies
- To assess the Physical and Hydrological status of these water bodies by integrating various thematic layers in GIS Environment
- To ascertain the status of water quality on various parameters
- To provide suggestions and scientific measures for restoration and rejuvenation based on its Physical and hydrological status and usage.
- To conduct District level workshops to highlight the importance of TWHS, present status and measures for restoration and rejuvenation

### **Progress :**

- Field survey of Traditional Water Harvesting Systems(TWHS) in Ballary, Davanagere, Bengaluru Rural, Bengaluru Urban, Chikkamagaluru and Bidar has been completed
- Field survey of around 1800 Water harvesting structures has been completed and collected the data on hydrological and physical status of these systems as given in table no.1.

- Initiated the field survey of TWH Structures in Chitradurga, Shimoga, Kodagu, Belagavi, Dharwad, Haveri, UK and Koppal districts
- Creation of database in GIS Environment, Geo-tagging and GIS analysis is under progress
- Preparation of report containing the present physical and hydrological status along Measures for Restoration and Rejuvenation for completed districts is under progress
- Presented the status of Traditional water harvesting systems in General Body meeting of Zilla Panchayath in Karwar, U.K.district to create awareness on importance of TWHS

**Table 1. : District wise status of Field survey completed**

Sl.No.	District	No. of TWH Structures visited
1	Bengaluru Urban	171
2	Bengaluru Rural	351
3	Ballary	436
4	Bidar	374
5	Chikkamagalur	160
6	Davanagere	295

**Glimpses of Photographs on Traditional Water Harvesting Systems**



**Kalyani in Bagalur, Bengaluru North Tq, Bengaluru Urban District**



Kalyani in Subbarayanahalli (Kuareswara Temple), Sandur Tq, Ballary District



Kalyani in Doddaballapur, Doddaballapur Tq, Bengaluru Rural District