

"ASSESSING THE STATUS OF ANCIENT KALYANIS FOR REJUVENATION IN TUMKUR DISTRICT USING GEOSPATIAL TECHNOLOGIES".

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ABSTRACT

In the recent past, several parts of our country have been experiencing drought conditions very often due to vagaries of the nature, mainly monsoon. In Karnataka, Tumkur district comes under this category. Depending on the ground water resources available even at the times of severe drought conditions, when major part of this surface water resources are exhausted, it has been conceived to develop ground water base irrigation system in certain part of the district. Nearly 2/3rd of the state receives less than 750mm of rainfall. Many parts of the south and north interior Karnataka depends on ground water for its domestic and agricultural needs.

Kalyanis are traditional tanks, which used to store rain water for domestic use such as drinking, bathing, washing. These are ponds paved with stones on the banks and gradually sloping towards the centre. The water is thus in contact with soil only for half its area. Kalyanis constructed near temples called Pushkaranis plays very important role in socio-religious and cultural activities of Indian tradition and as a storage reservoir to supply water for temples. Apart from the sanctity attached to them, these ponds helps to recharge the wells in and around the area. That was one of the reasons for the ancient rulers to allot funds for their maintenance.

Traditionally, where the rainfall was relatively low, every effort was made to retain all the water that fell on the ground through appropriate water retention and

conservation strategies such as Kalyanis, temple tanks and ponds. A proper survey is required to assess the present status, water storage capacity along with water quality of such Kalyanis in the state to suggest various measures for their renovation. With this backdrop, this study makes an attempt to assess the present status of Kalyanis and suggests scientific measures for their rejuvenation in different agro-climatic zones of the state. The renovation work has six components, i.e. cleaning the inlet and outlet channels, bailing out contaminated water, removing weeds and slush and de-silting, spreading of clay and sand, repairing of steps and parapet wall and rearing of fish in some kalyanis

The present study is an attempt to investigate the hydro-geological, lithological, geomorphological status of Kalyanis in 2 Taluks in different agro-climatic zones of the District by using advanced scientific tools like Geographic Information System (GIS), Global Positioning System (GPS) and Remote sensing. The results of which might serve as a first hand information on current status to user agencies for better Planning, Monitoring, Evaluation and implementation of various developmental activities for Rejuvenation for sustainable development of the area. Similar data shall be obtained for entire state and synthesized to prepare plans for proper management, development and utilization of the potential water resources of the Kalyanis for multiple uses.