

(A Peer Reviewed Quarterly Online Journal)

# THE DETERIORATION OF TRADITIONAL WATER PRACTICES IN TAMIL NADU

Ranjitha Grace A
Research Scholar & Dr.Anitha Suseelan
School of Architecture, Bangalore, India.
E-mail: ranjitha.a@res.christuniversity.in



#### Abstract:

"The Indian's have historically been the world's greatest water harvestors" [3]

The research reflects on the fact that the traditional water harvesting systems have met the needs of our ancestors for many centuries indicating that the traditional water harvesting techniques were effective and sustainable. Historically people in India had indigenous ways by which water has been tapped according to its potential in various ecological regions. Thas has resulted in different ancient water harvesting system and techniques according to the ecological zones. With the advent of colonization in India the centralized water managing system and large hydraulic structures such as dams, canals, piped water and bore wells have evidently become the order of the day. However, it failed to meet the nation's irrigation, thus bringing a continuous downfall in agriculture and India chronically affected by famines and flood. [3]

Keywords: Traditional Water Practices, Centralisation, Decentralization, Rapid Urbanism.

#### 1. INTRODUCTION

Water is a necessity for life, however, many of us assume it to be an unlimited resource. In reality, fresh water is a finite resource that is rapidly getting depleted. In India, the climate change, causing drying up of lakes and rivers, rapid urbanization and water pollution are assuming enormous pressure on the quantity and quality of surface and groundwater. India is currently facing one of its major and most serious water crises.

After two consecutive years of weak monsoons in the year 2014 and 2015? 330 million people in India are affected by a severe drought. According to the Composite Water Management Index (CWMI, 2018) report released by the Niti Aayog in 2018, 21 major cities including Delhi, Bengaluru, Chennai, Hyderabad and others are racing to reach zero groundwater levels by 2020, challenging access to potable for 100 million people and that 12 percent of India's population is already living the 'Day Zero' scenario. [1]

#### REASON FOR THE DETERIORATION OF DECENTRALISED WATER SYSTEMS

The problem for deteriorating of water systems is due to the disconnect with the local communities. It is identified as a major problem faced due to centralization of the water system [2]. However, the ordinary people are still hoping for the bigger system to provide for their basic needs. In the primordial times water was always associated with public spaces which rendered a dependency and a deep sense of ownership amongst the local people. South Indian temple tanks hold a key role in water recharge right from the primordial times Temples were encouraged to invest in water harvesting structures through customs, rituals and were integral social gathering spaces. The onset of the north-east winter monsoon over South India heralds the arrival of the tanks which celebrate float festivals (Theppakulam – "Theppa"=float, "Kulam"=tank) in Tamil Nadu, which is held just after the rains cease. The tanks are usually attached to temples and occupy an important space in the region's cultural landscape and as a public space.



அண்ணா பல்கலைக்கழகம், சென்னை
(பொறியியல் தொழில்நுட்ப தமிழ் வளர்ச்சி மையம்,
கட்டிடக்கலைத்துறை & கட்டுமானத்துறை)
தமிழ்ப் பல்கலைக்கழகம், தஞ்சாவூர்
(கட்டடக்கலைத்துறை) மற்றும்
பிரணவ் நுண்கலை ஆய்விதழ்
இணைந்து நடத்திய பன்னாட்டுக் கருத்தரங்கம்
தமிழரின் கட்டடக்கலை தொழில்நுட்பம் "
Special Issue - Volume -2 Issue -2





(A Peer Reviewed Quarterly Online Journal)

### 3. DECENTRALIZED WATER SYSTEMS (TRADITIONAL PRACTICES)

The fact that the primordial water harvesting systems have met the needs of our ancestors for many centuries indicating that the locally managed water system water was effective and sustainable. Ancient Indian villages played an important role in managing their resources. The local communities, ordinary people and majorly all the temples were encouraged more to invest in water harvesting structures through customs, rituals and as a social gathering. Temple was always helm of social, moral and economic transactions. Evidently between AD1300 and 1750 in South India we can see the expansion and intensification of agriculture, during which the temples and tanks linked together to create a social storage. By researching we find that Water harvesting clearly emerges as a practice related to local community needs and sensitive to local ecological demands. The temple tank, apart from being a religious relic and a mere water harvesting structure, it has a role in the realm of public space making. The strong dependency of the local community with the system connected with higher value of rituals and practices. Hence the relationship with water for people's life was much more valued.

### 4. MAPPING AND ANALYSING OF WATER GOVERNANCE IN MADURAI THE HISTORYCITY



Figure 1: Madurai Water Governance Evolution & Timeline

The Pandya kingdom seems to have introduced some of the most innovative administrative strategies. In comparison to other dynasties, involving the local population and community in the upkeep of public facilities was a more popular practice there. Vital activities like upkeep of water bodies, widening or deepening of reservoirs, desilting, monitoring embankments, etc., especially seem to have been managed by local governing bodies with enough support from the common people.

All irrigation channels had appointed watchmen to monitor that no breaches occurred and in case there were any, they were attended to immediately. The king nor his ministers in the capital city seem to have had any major role in looking after irrigation and associated activities. In most of the cases, it was within the local administration's purview. Drafting of norms and approving and passing them seem to have been more a duty of the local governing body. Pathways to approach the river or canal were taken into account during demarcation of land or division of properties. Public access was considered important during land division.

During the British Era, Decentralised water management was replaced with a more centralised, authority-driven system, with maintenance falling under the purview of the Public Works Department, or PWD. The common law notion that a landowner controlled all water resources stored under his land was the greatest philosophical legacy of the British. This laid the groundwork for the groundwater revolution that occurred decades later.



அண்ணா பல்கலைக்கழகம், சென்னை
(பொறியியல் தொழில்நுட்ப தமிழ் வளர்ச்சி மையம்,
கட்டிடக்கலைத்துறை & கட்டுமானத்துறை)
தமிழ்ப் பல்கலைக்கழகம், தஞ்சாவூர்
(கட்டடக்கலைத்துறை) மற்றும்
பிரணவ் நுண்கலை ஆய்விதழ்
இணைந்து நடத்திய பன்னாட்டுக் கருத்தரங்கம்
தமிழரின் கட்டடக்கலை தொழில்நுட்பம் "
Special Issue - Volume -2 Issue -2





(A Peer Reviewed Quarterly Online Journal)

The large-scale modification of a nation's infrastructure without considering the past land-water relationship.

- (a) precipitate action resulting from an incomplete understanding of the ecosystem services provided by forests and riverine systems, or
- (b) overwhelming hubris of a conqueror subjugating Nature to serve Man's will.

After the British Era the politicians who discovered a new political lever aided tube well technology. The states directly subsidised bore well pumps, while several others gave free electricity to power the pumps. Politicians learned that supplying "free" water in the form of free electricity to power pump sets was an excellent political gamble. Farmers and common people, long conditioned to expect water as a handout, complied and voted for those who provided the greatest benefits to power.

The groundwater, our drought insurance, is being mismanaged.

#### 4. **CONCLUSION**

Our environment has been adulterated physically and culturally over the course of time and this clearly shows due to the negligence of our traditional knowledge developed by our ancestors it is absolutely necessary for us to secure the water resources and environment, which many a times the governments have developed and initiated many policies for water resource management. However, these developmental policies are often directly or indirectly independent to our traditional knowledge and primordial concepts of water harvesting. The traditional water-wisdom at all levels of the society ensured adequate availability and equity of water for all, which in turn, formed the basis for a well-rounded developmental model.

The study has revealed that temple tank, apart being a religious relic and a mere water harvesting structure, has multifarious roles to play in the society and its major impact of public space making.

The traditional water wisdom and must be redefined and should be able to apply in our modern society. We should propose an interdisciplinary approach that integrates current knowledge of the social and cultural aspects associated with water to achieve a sustainable water management practice. It assumes that water system cannot be different from people who need it, use it and do things to it. [6]

#### **BIBLIOGRAPHY**

- [1] D. Mosse, Colonial and Contemporary Ideologies of 'Community Management': The Case of Tank Irrigation Development in South India. Modern Asian Studies., Cambridge University Press, 1999.
- [2] A. A and N. S, Dying Wisdom: Rise, fall and potential of India's traditional water harvesting systems., Centre for Science and Environmental Publishing., 1997.
- [3] R. D'Souza, ""Water in British India: The Making of a 'Colonial Hydrology'," *History Compass*, pp. 621-628, 2006.
- [4] W. E. Walker, D. P. Loucks and G. Carr, "Social Responses to Water Management Decisions," *Environmental Processes volume*, vol. 2, pp. 485-509, 2015.
- [5] W. E. a. D. P. L. Walker, "Social Responses to Water Management Decisions.," *Springer International Publishing*, pp. 485 509, 2015.
- [6] S. Vandana, Water Wars: Privatization, Pollution, and Profit, Cambridge: Sourh End Press, 2001.
- [7] M. Alaguraj, C. Divyapriya and S. Lalitha, "Temple Tanks-The Ancient Water Harvesting Systems and Their Multifarious Roles," *GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES*, vol. 4, no. 12, pp. 138-142, 2017.
- [8] A. Baba, C. Tsatsanifis and F. El Gohary, "Developments in water dams and water harvesting systems throughout history in different civilizations," *International Journal of Hydrology*, 2018.



அண்ணா பல்கலைக்கழகம், சென்னை போறியியல் தொழில்நுட்ப தமிழ் வளர்ச்சி மையம், கட்டிடக்கலைத்துறை & கட்டுமானத்துறை) தமிழ்ப் பல்கலைக்கழகம், தஞ்சாவூர் குட்டடக்கலைத்துறை) மற்றும் பிரணவ் நுண்கலை ஆய்விதழ் இணைந்து நடத்திய பன்னாட்டுக் கருத்தரங்கம் தமிழரின் கட்டடக்கலை தொழில்நுட்பம் "





(A Peer Reviewed Quarterly Online Journal)

- [9] N. J. Bhatt and B. J. Kapil, "An Analysisof Water Governance in India: Problems and Remedies," *International Journal of Advance AEngineering and Research Development*, 2017.
- [10] S. Bhattacharya, "Traditional Water Harvesting Structures and Sustainable Water Management in India: A Socio-Hydrological Review," *International Letters of Natural Sciences*, 2015.
- [11] P. Chinnasamy and G. Agoramoorthy, "Groundwater Storage and Depletion Trends in Tamil Nadu State, India," *Water Resour Management*, vol. 29, pp. 2139-2152, 2015.
- [12] A. Dutta, "Economics of Water in India: Why does it Matter?," *International Journal of Trend in Scientific Research and Development* (, vol. 3, no. 5, pp. 2247-2452, 2019.
- [13] D. Molden, "Scarcity of water or scarcity of management?," *International Journal of Water Resources Development*, Vols. 36:2-3, pp. 258-268, 2020.
- [14] A. Ramesh, "The value of tanks: maintenance, ecology and the colonial economy in nineteenth-century south India," *Water history*, 2019.
- [15] M. S, "Temple Tanks- the ancient water harvesting system of Kerala and their multifarious roles," *Indian Journal of Traditional Knowledge*, pp. 224-229, 2003.



அண்ணா பல்கலைக்கழகம், சென்னை
(பொறியியல் தொழில்நுட்ப தமிழ் வளர்ச்சி மையம்,
கட்டிடக்கலைத்துறை & கட்டுமானத்துறை)
தமிழ்ப் பல்கலைக்கழகம், தஞ்சாவூர்
(கட்டடக்கலைத்துறை) மற்றும்
பிரணவ் நுண்கலை ஆய்விதழ்
இணைந்து நடத்திய பன்னாட்டுக் கருத்தரங்கம்
' தமிழரின் கட்டடக்கலை தொழில்நுட்பம் "
Special Issue - Volume -2 Issue -2

