

Ancient Indian Urbanism: Cities of Water and Purity

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Most Indian citizens today have never experienced high-quality urban design and planning in their lifetime. Our cities are largely broken, filled with solid waste, sewage, and wastewater, broken footpaths, dusty air, heavy pollution, and segregated spaces that exclude the larger civil society from high-quality private areas. Many of us might believe that this was always the case. However, our ancestors would have looked upon us with pity. They would be filled with disgrace to see what has become of our magnificent cities after centuries of foreign rule. In this article, we will give a small glimpse into the legacy of ancient Indian urban design/planning, while focusing on the aspect of urban water management. Water in our cities today is something which we largely avoid, it is usually the source of mosquito plagues, intolerable stench, and dead flora/fauna. However, what if I tell you that scholars from ancient India have described water in cities as having tasted like pure, pristine sugarcane juice, that water was worshiped as a spiritual being, and that the built environment followed the regime of hydrologic systems.

1. Hydrology-based site planning
2. Diverse water infrastructure
3. Sacred Urban Landscape

The Mahabharata describes a scene where Bhishma advises Yudhishthira to establish sufficient water resources for all animals and the biosphere, before the construction of the city of Indraprastha. The Vastu Shastra advises urban planners not to build on soil which were on a wetland.

Furthermore, if trees are to be cut during the construction process, they are to be compensated in other locations. The Manasara recommends building on soil only if the soil has a low water hydraulic conductivity.



Fig 2. Ancient India Stepwell (Generated with Google Gemini AI)



Fig 1. Ancient South Indian city (Generated with Google Gemini AI)

This is to avoid the urban systems sinking or getting damaged by the water percolating force. After a site is chosen, all urban surface infrastructure should be integrated with a natural slope for drainage and be built with limestone. Drainage engineering was a specific expertise, and the Manasara prescribed water gates or drains, called “Jaladvara” in Sanskrit for water outflow.

The text goes on outlining four types of water bodies: a “Kupa”, a vertical well, a “Vapi”, a stepped well with architectural access, a “Tadaga”, a large artificial tank, and a “Kunda”, a large artificial constructed pond. Varāhamihira’s *Br̥hat Saṃhitā* states that ponds should be located in a specific direction to be auspicious and avoid being connected with strong wind flows. It also recommends planting thick vegetation on river embankments for flood protection, which can be interpreted as modern-day nature-based solutions or sustainable development. Telugu scriptures such as *Kāṭhīniya Kāraṇa Citralu* and *Manasollāsa* talk about the maintenance of water bodies, who is responsible, and when maintenance should be undertaken. Tamil scriptures devise different types of water bodies for different water usages and water purification, such as *Kuṭṭam*, *Āppu*, *Eris*, *Kulam*, and *Āppānai*. In all of this, the most unique aspect of Indian hydrologic urban practices is the spirituality linked to water bodies. Water has the power to elevate the consciousness of humans, and this is stressed in the *Rigveda*, *Bhagavata Purana*, and *Upanishad*. This is what differentiates Indian knowledge systems from modern urban science.

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