Regenerating Sacred Systems: Engaging Systems Thinking to Rediscover the Living Tradition of the Hindu Temples of India


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A strategic journey into the living heart of India's temple heritage—where ancient wisdom meets 21st-century systems science. Amid the dense urban and rural envelope of India's ancient urban-industrial pattern lies a web of temple complexes, ancient heritage, worship sites, and much more. These sacred places are alive with cultural rituals, economic exchange, social cohesion, seasonal cycle, and ecological consciousness. However, these living heritages are threatened with extinction by urbanization, environmental deterioration, and disintegrated production and management systems. This PhD research at IITH – Design Department proposes revolutionizing the approach of using Systems Thinking to comprehend, model, and enable sustainable management of temple ecosystems.

The present study views temple compounds not as static architectural remains but as living structural bodies. Systems approach allows the researcher to follow the dynamics of interdependencies and feedback loops across several spatial, ritual, ecological, economic, and social domains. Based on intense fieldwork and in-depth case studies of temple spaces, the study highlights how sacred forms, community life, seasonal festivals, and governance interventions produce life in these heritage landscapes.

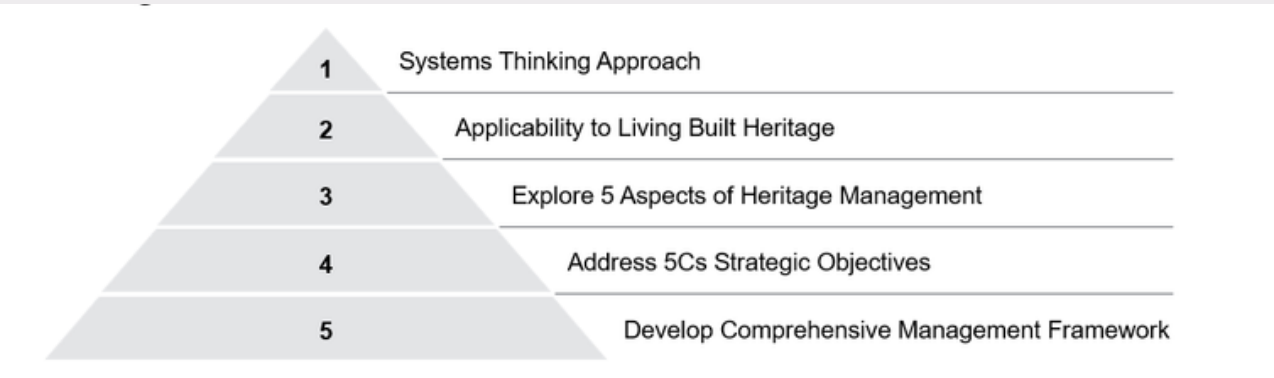
Each case study is a window on a specific temple ecology, its complexity, and its singularity. For example, the Chilkur Balaji Temple, with its environs, tangible and intangible heritage, etc., offers a complex water usage system, footfalls, local economies, and volunteer-led management. Urban temples are investigated for their resilience, traditional interaction with evolving cityscapes, and contribution to neighborhood identity. These site-specific studies reveal the intangible elements of heritage — religious performances, community celebrations, oral traditions — that are typically not included in the pages of a traditional conservation plan.
The study has built up holistic models to consider temple systems as adaptive, emergent entities by mapping core elements, characteristics, actors, and cycles. Moreover, the emphasis is not simply on preservation but on co-evolution: how communities and heritage might grow together without losing authenticity.

This study has significant implications for heritage policy, urban planning, and community-based management. It opens up new avenues for involving local stakeholders, increasing stewardship, and building system-based tools to keep the sacred living sites sustainable for future generations. Through the systems thinking lens, and enriched with thickening case study evidence, this study allows us to regard temple complexes not as things – but as living processes worth knowing, caring, and valuing.
Professional projects:

"Unearthing Futures: Sanganakallu Heritage Park — A Living Laboratory of the Past, Present, and Possibility"

Sanganakallu Reimagined: IITH Design research scholar Ar Nitin Ranveer Sinha pioneers an international-standard project of an Archaeological Park integrating Heritage, Innovation & Community. In an effort that bridges ancient history with contemporary innovation, this consulting project spearheads a groundbreaking project at Sanganakallu, one of India's largest prehistoric settlements, in Karnataka. This internationally benchmarked initiative is not just about preserving Neolithic to Megalithic-era heritage—it's about activating it for education, empowerment, and enterprise through a unique fusion of technology, architecture, sustainability, and public engagement.

Titled the Sanganakallu Heritage & Innovation Park, the project aims to create an immersive, multi-functional campus that includes a theme park, skill development and hospitality training center, and eco-sensitive garden landscapes—all woven around the site's authentic archaeological features. Designed as a living museum and learning ecosystem, this ambitious undertaking positions Sanganakallu as a world-class destination for experiential tourism, research, and rural rejuvenation.
At its heart, the project is a testament to the commitment to transdisciplinary research. The design draws upon systems thinking, living heritage conservation, architecture, museum curation, and community-based tourism models, bringing together archaeologists, architects, conservationists, hospitality experts, and local artisans.



More than a static conservation effort, the park acts as an active incubator of cultural heritage, enabling local youth through training in sustainable gardening, heritage interpretation, eco-tourism, and craft entrepreneurship.

The effectiveness of the project lies in its integrated and inclusive approach. Using scientifically grounded Heritage Impact Assessment (HIA) protocols, robust carrying capacity models, and alignment with the Government of Karnataka's Schedule of Rates, the project team has created a model that is both technically sound and financially viable, with a budget meticulously structured under ₹12 crore.

The plan ensures accessibility, community participation, and zero compromise on ecological sensitivity. As a living lab, Sanganakallu is poised to influence how we engage with prehistoric landscapes across India and globally. For Ar Nitin, it marks yet another chapter in his professional journey of designing futures from the roots of civilization, where the past becomes not only a subject of study but a catalyst for transformation, wherein the project aims to turn stones into stories, and stories into sustainable futures.

"Reviving Sacred Waters: A Living Heritage Innovation at Daroji Kere"

A Landmark Research-Based Project for Blending Ecology, Culture, and Community

In a notable fusion of research, sustainability, and design excellence, a multidisciplinary team led by IITH Design research scholar Ar Nitin Ranveer Sinha has developed a master plan for the Daroji Lake Visitor Centre and Interpretation Hub — a living heritage initiative rooted in ecological conservation, cultural revitalization, and community engagement.

Nestled on the banks of Daroji Lake (Daroji Kere) in the heart of Bellary's Sloth Bear Sanctuary, this 13th-century artificial reservoir — steeped in sacred, agrarian, and ecological legacy — is being reimagined not merely as a tourism destination but as a model of responsible, research-driven development for heritage-sensitive natural ecosystems across India.

Led by conservation architects, environmental planners, and systems thinkers, the project employs cutting-edge methodologies in Environmental and Heritage Impact Assessment (EHIA), systems mapping, and visitor carrying capacity analysis, grounded in international best practices from UNESCO World Heritage Sites like Machu Picchu (Peru), Angkor Wat (Cambodia), and India's own Keoladeo and Ranthambore parks.

Designed for ecological balance, the centre integrates climate-responsive architecture, renewable energy, rainwater harvesting, and interpretive programming through gardens, pergolas, screen walls, yoga pavilions, children's zones, and cultural craft shops. More than a space—it is a storytelling platform where natural history meets human heritage.

The plan's community-first philosophy ensures that the region's artisans, farmers, educators, and women-led groups benefit from direct economic and social participation. Moreover, with a project budget capped efficiently at ₹ 9 crore, the solution is scalable and replicable across India's ecologically sensitive tourism belts.

"This is not just about building a visitor centre; it's about cultivating a living laboratory for sustainability, conservation ethics, and public engagement," said Project leader Ar Nitin Sinha. "Daroji represents design with dignity—for people, place, and the planet".

As India reimagines heritage and ecological stewardship in the era of climate urgency, Daroji project initiative offers a compelling blueprint for future-ready, values-driven development.

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