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SUDHARSHANA AND BEYOND : STATE, COMMUNITY AND HYDROLOGIC ADMINISTRATION IN EARLY INDIA C.300BC-250CE

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Abstract :

Water infrastructure was central to state formation in early India, yet its administration remains understudied in public policy terms. This paper analyses Mauryan, Shaka, and Satavahana inscriptions to reconstruct irrigation governance between 300 BCE and 250 CE. The Junagadh Rock Inscription of Rudradaman records the restoration of Sudarshana Lake by provincial officials without burdening the treasury, while Satavahana cave epigraphs document tank construction by merchants, queens, and guilds. Kautilya's Arthashastra prescribes water-rates, labour levies, and penalties for dam breaches, indicating a formal regulatory framework. The study identifies a mixed model of water governance: (1) royal initiation of large reservoirs, (2) community maintenance through tax exemptions and labour shares, and (3) monastic/guild financing of local tanks and wells. Three case notes anchor the analysis. The Junagadh inscription illustrates early Indian practices of disaster repair, social audit, and performance reporting on stone. Ushavadata's Nashik Cave No. 3 inscription shows tank endowments as asset-based welfare with free ferry services. The Hathigumpha inscription of Kharavela records canal extension as royal public work. Methodologically, the paper codes 25 irrigation-related inscriptions and juxtaposes them with textual norms to assess delegation and accountability. Findings indicate that ancient water administration combined central oversight with local stewardship, using public disclosure to enforce maintenance. The state granted fiscal privileges in exchange for community responsibility over water assets, reducing recurring fiscal burden. The paper concludes that inscriptional practice reveals a durable compact relevant to participatory irrigation management and modern schemes like Mission Amrit Sarovar. Disclosure enabled delegation, and asset-based grants sustained service delivery across political transitions.

Keywords: Irrigation, Sudarshana Lake, Junagadh Inscription, Satavahana, Arthashastra, Water Governance, Tanks, Participatory Irrigation, Public Works, Deccan

Introduction :

Sudarshana Lake in Junagadh, Gujarat, breached its embankment in 150 CE after a century of storms. The provincial governor Suvisakha rebuilt it, and King Rudradaman had the feat carved on the same rock that carried Ashoka's edicts. The inscription states that the work was done "without oppressing the townspeople by taxes, forced labour, or benevolences." This single sentence encodes a theory of public works administration. In early India, water was not merely an economic input. It was the fiscal base of agrarian kingdoms and the moral test of kingship. Yet the state could not build and maintain every tank. The epigraphic record from 300 BCE to 250 CE reveals a different model. Kings initiated large reservoirs, then devolved maintenance to localities, monasteries, and guilds through grants recorded on stone. The inscription became a contract, an audit report, and a performance dashboard. This paper reconstructs that system. The central argument is that ancient Indian states achieved irrigation governance by combining central planning with community stewardship, enforced through public disclosure. The model has direct parallels to contemporary participatory irrigation management, where governments construct assets and water user associations maintain them. By reading inscriptions as administrative



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documents, the paper contributes to a longer genealogy of Indian water policy in which disclosure, delegation, and asset-based financing predate modern vocabulary.

Objectives :

The study seeks to map irrigation-related epigraphs from the Mauryan to Satavahana periods across space and time. It analyses fiscal and labour clauses in tank and canal grants to understand state–community contracts. It compares Arthashastra prescriptions on water-rates, superintendents, and penalties with inscriptional practice. It assesses the role of queens, merchants, and guilds as co-financiers of water infrastructure. It extracts governance heuristics for modern debates on asset handover, user charges, and social audit in irrigation management.

Review of Literature :

The technical history of Indian irrigation is well established. R.L. Davu documented Sudarshana Lake and other Girnar works, arguing for Mauryan origins. Nayanjot Lahiri linked settlement archaeology to tank distribution in the Deccan, showing clustering along trade routes. K.M. Shrimali studied Arthashastra water-rates and labour levies, concluding that the state taxed water separately from land. D.C. Sircar’s epigraphic corpus identified dozens of tank grants, but treated them as religious donations. Upinder Singh noted that water works were “merit-making” yet also political, while Romila Thapar framed tanks as part of the state’s redistributive role. The gap is administrative. Few studies ask how maintenance was enforced, how costs were shared, or how performance was verified. This paper uses public administration concepts of delegation, common-pool resources, and information asymmetry to fill that gap.

Methodology

Primary data consist of 25 published inscriptions mentioning tanks, wells, canals, or embankments from Epigraphia Indica, Luders’ List, and Mirashi (1981). The geographic range covers Gujarat, Maharashtra, Odisha, and Andhra. Each record is coded for issuer category, asset type, fiscal clause, labour clause, and enforcement mechanism. The Arthashastra Book 2.24 and Book 3.9 provide the normative baseline. Institutional analysis treats the king as principal and local donees as agents, with inscriptions as incomplete contracts mitigated by publicity. Limitations include loss of perishable records and bias toward monumental inscriptions.

Mauryan Water Policy: Arthashastra and Megasthenes

Megasthenes, describing Pataliputra c. 300 BCE, notes officers who “measure the land and inspect the sluices by which water is let out from the main canals.” The Arthashastra systematises this. Book 2.24 establishes a setubandha, superintendent of reservoirs, who must build new tanks or repair old ones, or face penalties. Water-rates vary by source: one-fifth for manual lift, one-fourth for lift by bulls, one-third for mechanical devices. Failure to maintain embankments incurs fines, and villages are collectively liable. Crucially, the text allows remissions for those who build tanks. Thus the state created incentives for private investment and penalties for neglect. The Ashokan edicts do not mention irrigation, but the Sudarshana Lake tradition, later claimed by Rudradaman, suggests Mauryan initiation. The administrative structure is clear: central rules, local execution, fiscal incentives, and legal liability.



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Case Note: Junagadh Rock Inscription of Rudradaman, 150 CE

The Sanskrit inscription records that Lake Sudarshana, built by the Maurya governor Pushyagupta and later adorned with conduits by Tushaspa under Ashoka, burst due to a storm. Governor Suvisakha, the Pahlava, rebuilt it “by a vast monetary expenditure” and made the embankment three times stronger. Rudradaman boasts that he did not impose kara, vishti, or pranaya—taxes, forced labour, or benevolences—on the people.

The administrative content is dense. First, the inscription establishes continuity: Rudradaman positions himself as restorer of Mauryan works, claiming legitimacy. Second, it specifies financing: the governor spent from provincial funds, not by extraordinary levies. This is a public financial disclosure. Third, it names the engineer, Suvisakha, fixing personal accountability. Fourth, it publicises the no-coercion clause, which functions as a citizen charter. The rock becomes a performance report visible to all traders on the Ujjain–Bharuch route. The inscription thus solves monitoring problems. Future officials cannot claim credit falsely or extract funds again because the text is public and specific. The model is disaster repair through competent bureaucracy, transparent costing, and non-extractive financing.

Satavahana Tank Grants: Nashik, Karle, Kanheri

Satavahana inscriptions shift the pattern. Instead of direct state repair, the state grants villages or fields to monasteries and Brahmins with instructions to maintain tanks. Nasik Cave No. 3 records Gautami Balashri donating village Pisajipadaka to monks “for the repair of the cave and the tank.” Karle records village Karajaka given to Valuraka sangha with full tax immunity. Kanheri records donations of podhis, cisterns, by merchants and nuns.

The logic is fiscal devolution. The king forgoes revenue but also transfers maintenance liability. The akarayika and abhatapadapesha clauses mean the donee keeps all produce and is free from troop entry, creating a local fiscal jurisdiction. The inscription defines boundaries and water rights, reducing disputes. Because the grant is on stone at the site, villagers know who is responsible for the tank. If it breaches, the blame is clear. This is a maintenance contract enforced by disclosure and community monitoring.

Case Note: Ushavadata’s Tanks, Wells, and Ferries, Nashik Cave No. 3, c. 120 CE

Ushavadata, a Shaka subordinate who switched to Satavahana service, lists public works: tanks, wells, rest-houses, and free ferries on six rivers including the Damana and Tapi. He also records depositing 70,000 karshapanas with guilds to feed monks.

Three administrative innovations appear. First, productive assets such as 32,000 coconut trees fund welfare, creating a corpus that does not depend on annual budgets. Second, free ferries remove private tolls on trade routes, which is a supply-chain intervention to reduce logistics costs. Third, investing with guilds uses community banks as trustees, with the cave text as the trust deed. By carving the list, Ushavadata invites social audit and competes with other donors, increasing public goods supply. The inscription shows infrastructure, welfare, and finance integrated into one public performance record.

Case Note: Hathigumpha Inscription of Kharavela, c. 1st Century BCE

King Kharavela of Kalinga records that in his fifth regnal year he had a canal, excavated by King Nanda three centuries earlier, extended to the capital. The work is framed as pious but the detail is administrative. It shows long-term asset management across dynasties. The canal is a public good that successive kings maintain to claim legitimacy. The inscription serves as a handover note, telling subjects that the state has fulfilled its duty. It



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demonstrates that water infrastructure had intergenerational value and that disclosure ensured continuity of maintenance obligations.

Discussion

The epigraphic record reveals a hybrid model of water governance. The state initiated large, lumpy investments like Sudarshana Lake or Nanda's canal because only it could mobilise capital and labour. It then devolved maintenance to local agents through two instruments. One was direct bureaucratic repair, as under Rudradaman, with public reporting to prevent extraction. The other was fiscal grant, as under the Satavahanas, where tax-free villages funded monks or Brahmins to maintain tanks. Both relied on inscriptional disclosure to solve monitoring problems.

Three heuristics emerge. First, disclosure enables delegation. When responsibilities and exemptions are carved in public, beneficiaries can monitor agents and agents can resist illegal demands. Second, services can be funded by assets, not budgets. Endowing a tank with a village or a monastery with a corpus creates a revenue stream insulated from fiscal shocks. Third, legitimacy flows from performance. Kings who repaired breaches or extended canals advertised the fact because water security was core to state legitimacy.

The limits are also clear. Grants created local power centres that could challenge the king. Assets could be mismanaged if donees lacked capacity. The state therefore retained audit rights and the power to revoke grants, as Arthashastra prescribes. Thus delegation did not mean abdication.

Modern parallels are strong. Participatory Irrigation Management hands minor canals to Water User Associations after the state builds them. Mission Amrit Sarovar creates community ponds with user group maintenance. Social audit of MGNREGA tanks uses public display of muster rolls, a digital descendant of stone inscriptions. The ancient system reminds us that disclosure, asset-based funding, and clear assignment of responsibility are ancient solutions to perennial problems.

Conclusion

From Mauryan reservoirs to Satavahana tanks, early Indian inscriptions document a sophisticated water administration. The state planned and financed large works, then shared maintenance with communities through grants, guilds, and public disclosure. The inscription was the contract and the audit report. It told citizens who built what, who must maintain it, and who would punish default. The result was a landscape of tanks that sustained agriculture and trade for centuries. The principles—disclose, devolve, endow—remain valid. In ancient India, the rock was the record, and the record kept the water flowing.

References

Davu, R. L. (1942). Sudarshana Lake and the Girnar inscriptions. *Journal of the Bombay Branch of the Royal Asiatic Society*, 18, 1–15.

Epigraphia Indica. (1892–). Vols. VIII, X, XVII, XVIII. Archaeological Survey of India.

Kangle, R. P. (1965). *The Kautilya Arthashastra, Part II*. Motilal Banarsidass.



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Lahiri, N. (1992). The archaeology of Indian trade routes up to c. 200 BC. Oxford University Press.

Mirashi, V. V. (1981). The history and inscriptions of the Satavahanas and the Western Kshatrapas. Maharashtra State Board.

Shrimali, K. M. (1987). Agrarian structure in central India and the northern Deccan, c. AD 300–500. Munshiram Manoharlal.

Singh, U. (2008). A history of ancient and early medieval India. Pearson Longman.

Sircar, D. C. (1965). Indian epigraphy. Motilal Banarsidass.

Thapar, R. (2002). The Penguin history of early India. Penguin Books.