Ancient India's Environmental Thought: Insights from the *Arthaśāstra*

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Abstract: **The Arthaśāstra, an ancient Indian text, showcases a remarkably forward-thinking approach to environmental management. It highlights the importance of preserving forests, protecting wildlife, and managing water resources sustainably. The text also emphasizes the need for responsible governance, civic cleanliness, and environmental hygiene. The Arthaśāstra's guidelines on forest conservation, wildlife protection, and water management demonstrate a clear understanding of the importance of preserving natural resources. Its emphasis on sustainable practices and punishments for polluters shows a commitment to environmental protection. The text's focus on urban planning and civic cleanliness is also noteworthy, with guidelines for city planning, waste management, and public health. Overall, the Arthaśāstra presents a holistic approach to environmental management, recognizing the interconnectedness of human and natural systems. Its wisdom on sustainable living remains relevant today, offering valuable insights for addressing modern environmental challenges.**

Keywords: Environmental Management, Sustainability, Conservation, Wildlife Protection, Water Management, Urban Planning, Civic Cleanliness, Arthaśāstra, Kautilya, Ancient India, Natural Resources, Responsible Governance.

1. Introduction

The current awareness of environmental issues has arisen from the consequences of excessive pollution, prompting global research and study. Ancient India's perspective on the environment differed from modern thinking, as environmental problems were largely absent then. The *Arthaśāstra*, written by *Kauṭilīya*, is a vital text offering insights into ancient India's politics, society, economy, and governance. Notably, it contains implicit and explicit elements of environmental thought that remain relevant today, reflecting ancient India's unique perspective.

To understand the environmental concept in the *Arthaśāstra*, it's essential to know that ancient Indian philosophy prioritized four categories: *Dharma, Artha, Kāma*, and *Mokṣa*. Kautilya focused on *Artha* or

wealth, as the primary objective, considering it the foundation for achieving the other goals. He viewed land as the ultimate source of wealth, supporting diverse livelihoods.

The *Arthaśāstra* is a treatise on acquiring and protecting worldly wealth and resources[1]. While environmental science wasn't its primary focus, the text reveals Kauṭilīya's environmental awareness through rules for maintaining the earth. In ancient times, environmental concerns were minimal, and Sanskrit literature reflected humanity's compassion for nature.

The *Arthaśāstra* offer insights into state governance, highlighting the importance of conservation and responsible resource management. As urbanization grew, so did the need for revenue collection and conservation, ensuring the state's prosperity. The *Arthaśāstra*'s rules for wealth conservation reflect ancient India's environmental consciousness, demonstrating a thoughtful approach to balancing human needs with nature.

2. Forest Conservation:

The state revenue was collected from *Setu, Vana, Vraja. Setu*[2] mean flowers, fruits, plants, crops etc., *Vana*[3] mean animals, deer, forest resources etc. and the word *Vraja*[4] means domesticated animals. Therefore, the protection of these natural and livestock resources for the increase of revenue was one of the duties of the king. Let us first discuss the land system.

The king or the administration owned all the unused land of the state. The land that was not suitable for agriculture was called *Bhūmichidra*. Thoughts were given to how this land could be used. According to *Arthaśāstra*, some part of this land should be used as pasture and some part should be afforested. This forest was of two types (1) *Dravyaban* and (2) *Hastiban*. Flowers, shrubs, hornless trees were planted in this forest. Water reservoirs were dug. Animals with broken claws and teeth and deer were left in the forest. This forest area was given to ascetics to use as *Brahmasomāranya*[5] i.e. as a hermitage. Sometimes, such forests, which were inhabited by animals and birds, were reserved for the king's forest retreat[6]. Apart from the forest for food, such uncultivable land was also used as elephant forest. Apart from economic

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[1] 'tasyāḥ pṛthibyāḥ lābhapālanōpāyaḥ śāstramarthaśāstramiti' (15.1.1)'

[2] 'Puṣpaphalabāṭaṣaṇḍakēdāramūlabāpāḥ sētuḥ' (2.6.5)

[3] 'paśumṛgadravyahastivanaparigraho vanam' (2.6.6)

[4] 'gomahiṣamajāvikaṃ kharoṣṭramaśvāśvataraṃ ca vrajaḥ' (2.6.7)

[5] '......brahmasomāraṇyāni tapasvibhyo gorutaparāṇi prayacchet'.(2.2.2)

[6] ' svāduphalagulmagucchamakantakidrumamuttānatoyāśayam dāntamṛgacatuṣpadam bhagnanakhadaṃstravyālam mārgayukahastihastinīkalabhaṃ mṛgavanaṃ vihārārthaṃ rājñaḥ kārayet (2.2.3)

purposes, elephant husbandry was also very necessary for war in the society of that time. Kauṭilīya says—*'hastipradhānaṃ vijayo rājñaḥ'* (2.2.13). Sometimes, for the production of a particular tree, a forest of that particular tree was created and preserved separately[7]. The main purpose behind this was certainly economic. But such alternative use of land unfit for agricultural use proves how aware the *Arthaśāstrakāra* was about the good use of land. At the same time, the preservation of forest areas like the *Abhyavan*a adjacent to the village undoubtedly shows his environmental awareness and aesthetic sense.

Along with the establishment of villages and urbanization, it was the duty of the kings to create forest areas for the needs of the people and the kingdom[8]. Trees were planted in the areas adjacent to temples, crematoriums or other important places in the village. This tree planting was undoubtedly done for beautification. Harming these trees was a completely prohibited and punishable offense. The *Arthaśāstrakāra* says that if someone cuts flowers, fruits or the vines of a shade tree in a city garden, he will have to pay a fine of six *paṇa* , if one cuts a small branch, twelve *paṇa* , if one cuts a weak branch, twenty-four *paṇa*, etc. In fact, there was a strict punishment for cutting down a whole tree (3.19). That is, the responsibility of the administration did not end with planting trees, their proper protection and maintenance were their watchful eye. Although there was no slogan like *'one tree, one life'* like today, it is certain that there was no deficiency in the care and preservation of trees.

3. Wildlife Protection:

We are all familiar with the name sanctuary today. It is in this sense that the word *'Abhyavan'* is mentioned in *Kauṭilīya*'s *Arthaśāstra*[9]. Animals and birds were kept in this forest. Any kind of cruel treatment towards the animals in this reserved forest was prohibited. Even if these animals entered someone else's land for grazing, they were expelled from there without hurting them in any way. Animals other than the animals of the sanctuary were not shown so much favor. The use of ropes or whips was permitted for them. However, hitting them in any other way was also against the rules. Otherwise, the attacker had to face physical punishment[10].

It is noteworthy here that *Kauṭilīya* did not intend to hurt any animal unnecessarily. Even if small

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[7] 'kupyapradiṣṭānāṃ ca dravyāṇāmekaikaśo vanāni niveśayetdravyavanakarmāntānaṭavīśca dravyavanāpāśrayāḥ.' (2.2.5)

[8] ' evaṃ dravyadvipavanaṃ setubandhamathākarān ǀ rakṣetpūrvakṛtān rājā navāṃścābhipravartayet ' (2.1.39)

[9] 'sūnādhyakṣaḥ pradiṣṭābhayānāmabhayavanavāsinām ca mṛgapaśupakṣimatsyānāṃ bandhavadhahiṃsāyāmuttamaṃ daṇḍaṃ kārayetkuṭumbināmabhayavanaparigraheṣu madhyamam' (2.26.1)

[10] 'paśavo raśmipratodābhyāṃ vārayitavyāḥ ǀteṣāmanyathā hiṃsāyāṃ daṇḍapāruṣyadaṇḍāḥ ǁ' (3.10.32 & 33)

animals were hit with a stick, etc., a penalty of one or two *paṇa* was prescribed. If the injury resulted in bleeding, a double penalty was to be paid. If the animal was large, a further double penalty was prescribed, and the cost of the animal's treatment had to be borne[11].

Elephants were considered a very necessary and valuable animal at that time. Therefore, the punishment for killing an elephant was death[12], besides elephants, the teeth, horns, and skin of other animals were also valuable, so perhaps poachers still existed. But *Kauṭilīya* has instructed that for collecting these, instead of killing the animal, it should be collected from '*Kāraṇamṛta*' animals. Although killing animals is generally prohibited, *Kauṭilīya* has given a provision for killing wild animals when necessary. If a wild animal caused trouble in the locality, it had to be trapped in a net or even killed if necessary[13].

Several similarities can be seen in today's state laws and regulations with these animal conservation regulations. Today, there is a Ministry of Environment for monitoring and preserving the environment, a Pollution Control Board, and a 'Green Bench' in the High Court for resolving environmental complaints. However, during *Kauṭilīya*'s era, there was no Ministry of Environment because, there was no concern about the environment in that era. But *Kauṭilīya* gave considerable importance to the protection and growth of the state's livestock and forest resources. Therefore, a post called '*Sūnādhyakṣaḥ*' was created to monitor the animals and birds. This person would ensure that no one captured, injured or killed the animals and birds in the reserve[14].

One of the main purposes of killing animals and birds was the need for food. There was a ban on killing certain animals, birds and fish. In particular, killing of cows, trees and milk cows was prohibited[15]. However, the fact that he never approved of indiscriminate animal killing is permitted by his prohibition. Under the supervision and expense of the administration, cowsheds, stables and elephant sheds were built and the animals were maintained and raised under the supervision of experienced herders and doctors. Sufficient attention was paid to cleanliness in their living quarters. Different foods were given to them in

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[11] 'kṣudrapaśūnāṃ kāṣṭhādibhirduḥkhotpādane paṇo dviguṇo vā daṇḍaḥ śoṇitotpādane dviguṇaḥ ǁ (3.19.26)
    'mahāpaśūnāmeteṣveva sthāneṣv dviguṇo daṇḍaḥ samutthānavyayaśca ǁ (3.19.27)

[12] 'hastighātinaṃ hanyuḥ' (2.2.8)

[13] 'āvaraṇinaḥ śastrapāṇayo vyālānabhihanyuḥ' (4.3.30)

[14] 'sūnādhyakṣaḥ pradiṣṭābhayānāmabhayavanavāsinām ca mṛgapaśupakṣimatsyānāṃ   bandhavadhahiṃsāyāmuttamaṃ daṇḍaṃ kārayetkuṭumbināmabhayavanaparigraheṣu madhyamam' (2.26.1)

[15] 'vatso vṛṣo dhenuścaiṣāmavadhyāḥ' (2.26.10)

different containers according to the needs of different animals. The *Arthashastra* reflects the idea that proper animal care is necessary for public interest, making animal care a part of administrative principles and duties.

4. Water Management:

Water conservation is another crucial environmental aspect. The *Arthaśāstra* talks about water conservation in the village for agriculture, drinking or other purposes. According to the *Arthaśāstra's* writer, the place where there is a natural source of water like natural lakes, rivers etc. and as a result it is not only dependent on rain, that place is the best and this land is called '*Adēbamātṛkā'*. Elsewhere, i.e. the place where it is dependent on rain, irrigation for agriculture has to be arranged. Along with *Kūpa, Tarāga* etc., reservoirs have to be constructed. The king himself would build wells, reservoirs, etc., and would take personal initiative to ensure that these were built. Along with new reservoirs, he would also preserve the old reservoirs[16]. He would keep a watchful eye on the water of the reservoirs so that no one polluted them. If anyone did this, he would be immersed in the water of the reservoir [17]. Even if a reservoir was dry, broken or abandoned, polluting it was a punishable crime. *Kautilya* emphasized reservoir preservation, recognizing their importance. Water pollution control is a part of modern governance, reflecting Kautilya's forward-thinking approach to environmental management.

Finally, let us discuss the rules of *Arthaśāstra* regarding the protection of the civic environment. The city was built in a well-planned manner. There was adequate water supply in the city[18]. Just as there was a specific place for temples and *Caitya* in the city, there was also a specific place for cremation. In addition, flower and fruit gardens were also arranged.

5. Urban Planning & Civic Cleanliness:

Good planning and health consciousness were also evident in the matter of house construction. A certain distance had to be kept between the boundaries of two houses[19] . Special importance was attached to the provision of good water drainage[20]. It was also necessary to ensure that the drainage canal did not fall on the neighbor's land. Damaging the neighbor's house with dirty water was a punishable crime. If such damage was caused by urine, etc., a double animal had to be paid. These rules are a sign of

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[16] 'rakṣetpūrvakṛtān rājā navāṃścābhipravartayet.' (2.1.39)

[17] 'udakadhāraṇaṃ setuṃ bhindatastatraivāpsu nimajjanam…..' (4.11.17)

[18] 'trayaḥ prācīnā rājamārgāstraya udīcīnā iti vāstuvibhāgaḥ' (2.4.1)

[19] 'sarvavāstukayoḥ prākṣiptakayorvā śālayoḥ kiṣkurantarikā tripadī vā' (3.8.13)

[20] 'avaskaraṃ bhramamudapānaṃ vā na gṛhocitādanyatra anyatra sūtikākūpādānirdaśāhāditi' (3.8.6)

cleanliness and proper city planning[21].

Ancient India's *Arthaśāstra* reveals a remarkable emphasis on environmental cleanliness. Laws mandated clean roads, prohibiting garbage disposal and penalizing offenders. Throwing garbage on the roads was a punishable offense. If a road was blocked with dirty water, a penalty had to be paid. If the same crime was committed on the highway, the penalty would be doubled. If someone desecrated a temple or other holy place with urine, he would have to be punished. However, if a sick person committed this crime, he would be exempted from the penalty[22]. It's striking to note that ancient India had strict rules for keeping cities clean, with penalties for throwing garbage on roads or polluting public places. This shows they prioritized environmental hygiene, unlike many modern cities today.

6. Conclusion

The *Arthaśāstra* shows how ancient India lived in harmony with nature. It teaches us to use natural resources wisely, so they are available for future generations. This text highlights the need to balance human needs with environmental conservation, showing a deep understanding of how humans and nature are connected.

The *Arthaśāstra*'s wisdom on environmental management is still relevant today, guiding us towards a more sustainable future. It reminds us that responsible governance, civic responsibility, and environmental care are not new ideas, but rather, a continuation of our ancestors' understanding of the natural world.

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21 'khātasopānapraṇālīniśreṇyavaskarabhāgairbahirbādhāyāṃ bhoganigrahe ca' (3.8.21)
' parakuḍyamudakenopaghnato dvādaśapaṇo daṇḍaḥ mūtrapurīṣopaghāte dviguṇaḥ' (3.8.22)

22 'pāṃsunyāse rathyāyāmaṣṭabhāgo daṇḍaḥ paṅkodakasamnirodhe pādaḥ'(2.36.26) 'rājamārge dviguṇaḥ' (2.36.27)
'paṇyasthānodakasthānadevagṛharājaparigraheṣu paṇottarā viṣṭādaṇḍāḥ mūtreṣvardhadaṇḍāḥ' (2.36.28)

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