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# The Attitude of Kauṭilya to Araṇya

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## SUMMARY

The *Kauṭīliya Arthaśāstra* is a famous treatise on state-craft which within its state policies includes ecological concerns, implicitly but effectively. The *Kauṭīliya Arthaśāstra* gives a vivid and lively description of different categories of forests. The essence of the text lies in the fact that it makes a clear departure from the Vedic texts and Puranas, where forest is depicted as an abode of demons and a place of exile for unfortunate kings and evil-doers. It is *Kauṭīliya Arthaśāstra* which for the first time stresses the economic importance of forests in the formulation of principles and policies of the state.

## I.

If history is considered as a subject dealing with the past activities of man as a social being, then a thorough understanding of man and his surroundings is to be regarded as an essential part of historical studies. The historians' growing interest in the study of mutual interdependence between human life and its related surroundings has helped towards the understanding of nature vis-à-vis human nature in historical terms. The hegemony of western ideas in the socio-economic, political and intellectual spheres of life the world over led to the assumption that the greater the utilisation of natural resources, the faster the rate of human progress. The resultant indiscriminate indulgence in exploiting relatively scarce resources has virtually spelt disaster for the very survival of the human species.

Recently, there has been an increasing awareness that the 'western' perception of human progress in relation to the environment does not hold the master-key to all the pressing problems regarding our position in the universe. The importance of the attitudes of non-western societies to their surroundings is now being taken into consideration. It would therefore be timely to undertake a thorough study of the Indian attitude to nature, and to evaluate the role of ancient Indian writers and philosophers with regard to nature and the environment.

The Indian attitude to nature differs from its western counterpart in viewing human existence as merely one part of the universe, rather than considering it the supreme element in nature. The vast literary and philosophical texts of early India are a storehouse of ideas for understanding the Indian attitude to the close integration of human existence in nature. Traditional Indian literature is replete with references to sublime natural beauty and love for nature. A major theme in the accounts of nature and natural surroundings are forests, and also forests in relation to humanity. To uncover all the treasures of the classical texts of early India is undoubtedly a herculean task. What I propose to do here is to undertake a case study, on the basis of the *Kauṭīlīya Arthaśāstra*.<sup>1</sup>

In India, a wide range of rainfall combined with suitable soil types provides profuse vegetation. Hence, forests known for their timber and other economic products have been known from time immemorial. In ancient India, forest was considered as one of the four land categories: arable land (*kṣetra*), homestead land (*vāstu*), pasture (*vraja* or *gocarana*) and forest (*aṛanya* or *vana*). In the vedic texts and the epics, forest mainly features as a habitat for hermits, demons and *rākṣasas* and as a place of exile for criminals, evildoers and unfortunate kings and princes. It is the *Arthaśāstra* of Kauṭīlya which first gives full recognition to the significance of forest in the economy of the state. The *Kauṭīlīya Arthaśāstra* recognises the sovereign right of the ruler over certain land types. These are (i) wasteland (ii) newly colonised areas (iii) irrigation projects (iv) forest (v) mines and (vi) treasure trove.<sup>2</sup>

## II

Kauṭīlya categorically states that forests are mainly of four kinds: forests of wild animals (*paśuvana*), forests of domesticated animals (*mṛgavana*), economic forests (*dravyavana*) and elephant forests (*hastivana*).<sup>3</sup> Kauṭīlya next refers to the use of forests essentially as a boundary demarcation or a landmark.<sup>4</sup> While describing the forest dwellers as trappers, Sabaras, Pulindas and Caṇḍālas, Kauṭīlya points out that they reside in the intervening region between the frontier (of the kingdom) and the *durga* (fortified urban centre, capital). This evidence is indicative of the fact that forests acted as a buffer zone between the forest and the *durga*. As the forest is considered one of the seven sources of revenue in the *Kauṭīlīya Arthaśāstra*, these forest dwellers, it seems, paid revenue to the state. This fact is corroborated by the *Indica* of Megasthenes, who refers to hunters and husbandmen as the third group among the seven divisions of the Indian population.<sup>5</sup> According to one summary of Megasthenes (by Diodorus)<sup>6</sup> they keep the country free from obnoxious birds and beasts. Those who are employed by the king are exempted from paying any taxes, but the rest have to pay a tribute in cattle.

The classical accounts of the seven-fold division of the Indian people always highlight the position of any particular group in relation to the state. The perception of the classical author is that any role or function of the group as a public benefactor is rewarded by exempting the said group from the payment of taxes to the state. That is why some hunters employed by the state are exempted from paying any revenue on the ground of their keeping the country free from obnoxious beasts and birds. The Kauṭilyan scheme of things of course does not have any such scope for allowing remission of revenue for a section of forest people.

As the *Arthaśāstra* underlines the primary importance of *artha* (material/economic factors) in all possible state activities (*arthaivapradhānam, kośapurvāsarvārambhā*), it is only natural that it lays considerable stress on the economic importance and resource potential of *dravyavana*,<sup>7</sup> (i.e. forests yielding raw materials for production of goods). According to Kauṭilya, the groups of economic products are (i) hardwood, like *śāka, arjuna, madhūka, śāla, kuśa, āmra*, etc.; (ii) bamboo types, like *cāpa, veṇu, vaṁśa, kaṇṭaka*, etc.; (iii) plants, like *vetra, syāmalatā, nāgalatā*, etc.; (iv) rope-making materials, like *muñja, balbaja*, etc.; (v) bark or leaves for writing on, like *tali, bhūrja*, etc.; (vi) dyeing materials and medicinal substances, like flowers of *kiṁśuka, kusumba* and *kuṅkuma*; (vii) poison producers such as *kālakūta, kuṣṭha, mahāviṣa, bālaka* etc.; and (viii) the remains of dead animals, base metals such as iron, copper, lead, tin, bronze, bamboo products, and earthenware. References to roads leading to forests are extant<sup>8</sup> which prove beyond doubt that the products of these forests were processed in the *karmāntas* (royal factories) and were transported along these roads. Kauṭilya also states that during the period of acute financial stringency, the list of extra impositions levied on the cultivators include, among other items, one-sixth of the forest produce (*vanyānām*) and also shares of commodities such as cotton, lac, fabrics, barks of trees, hemp, wool, silk, medicines, perfumes, flowers, fruits, vegetables, firewood, bamboo, flesh etc. The exact rate of levy on forest products could have been less than one-sixth in normal times, though Kauṭilya is not explicit on this point. A significant point here is that one-eighth levy is generally imposed on agrarian products in normal times. During a financial crisis, forest products are levied at the rate of taxes on agrarian output, which would be levied at an even higher rate during times of financial stringency.

Kauṭilya considers that 'it is possible to plant many material forests in many tracts of land' (*śakyam dravyayanamanekamanekasyaṁ bhūmau paituṁ na hastivanam*). This may imply that the producer forest was not located in any fixed and permanent tract. The passage also indicates the possibility of planting *dravyavanas* in areas where there had not been any such before. From this, one may conclude that the above Kauṭilyan dictum implies a conscious effort on the part of administration to create new forests for utilising untapped material resources.

It appears that quite a substantial amount of income came to the state treasury from forest wealth, as a special storehouse (*kūpyagr̥ha*) was erected in the capital for forest produce.<sup>9</sup> The Director of Forest Produce (*Kūpyādhyakṣa*) was to collect the forest products through the agency of forest guards.<sup>10</sup> Men engaged in cutting down trees for their products were to be paid proper wages.<sup>11</sup> They were thus clearly employed by the state. Kauṭilya encourages participation of the state in various productive and commercial enterprises parallel to other non-governmental agencies, and the working out of the material forest is viewed in this light. A penalty was charged for those doing it unlawfully, extreme in the case of extreme situations.<sup>12</sup> Separate factories or workshops (*karmāntas*) were to be established by the Director of Forest Produce for civil and military purposes. These *karmāntas* or royal factories were state managed, which definitely points to the intervention of the state at different stages of production of commodities from forest goods.

### III

Regarding elephant forest (*hastivana*), Kauṭilya states that a forest for elephants should be established on the border of the kingdom for military and strategic needs.<sup>13</sup> The recommendation of keeping a record of every elephant<sup>14</sup> indicates maintenance of a register of elephants. This could have been a forerunner of the present day census of wild and domesticated animals. The references to the Superintendent of elephant forests and the guards of elephant forests prove beyond doubt that these elephant forests were protected areas. This is corroborated by the Fifth Pillar Edict (Delhi-Topra version) in which Asoka states that animals residing in the *Nāgavana* (elephant park) must not be killed.<sup>15</sup> The *Arthaśāstra* of Kauṭilya gives a list of eight elephant forests. These include (1) The *Prācyavana* – Prācyā or eastern forest is a vast area bounded by the Brahmaputra river in the east and the confluence of the Ganga and the Yamuna at modern Allahabad in the west, Himalaya in the north and the Ganga in the south. (2) The *Kaliṅgavana*. The majority of sources give the Bay of Bengal as the boundary of Kaliṅgavana. Three other sources give Utkala centring on Bhubanesvar and Puri in Orissa, and the Vindhya as well as the Sahya mountains, i.e. the Western Ghats from the river Tapi to the Cape, hence this forest comprises most of the interior of the Deccan. (3) The *Cedī-Karūṣavana*. It is one name and not two as might be inferred from Kangle's translation (from Cedi Karusa), but the name of the forest clearly combines the names of two adjacent countries along the Yamuna river to the west and south of Allahabad. (4) The *Daśārnavana*. This forest must be connected with the Daśārṇa country, having at its border the Mahendragiri (Eastern Ghats) and the Vindhya moun-

tains and the Betravati (Betwa river). In the *Periplus of the Erythraean Sea*<sup>16</sup> Dosarene (Dasārna) is mentioned as a country which was famous for its ivory products, which further indicates the availability of elephants in the area in question. But Dosarene in the *Periplus* refers to coastal Orissa and not to the area mentioned above. Moreover, elephants in the *Arthaśāstra* of Kauṭilya are mentioned as a war machinery and not as a source of ivory industry which doubtless catered to the needs of more affluent people. (5) The *Aṅgareyavana*. It was situated between the Narmada river, the Pariyatras (central part of the Vindhya range) and the country of Vidisha (eastern Malwa). But the country of Aṅga generally meant eastern Bihar (Bhagalpur region). (6) The *Aparāntavana*. It was situated in the western coast of the Deccan as far south as Goa (Konkon region). (7) The *Saurāṣṭravana*. This forest was situated in the Kathiawar peninsula, but the forest extended to Avanti, the region of Ujjayini. (8) The *Pañcanadavana*. This forest covered a vast area bounded by the Kurukshetra to the north of Delhi; the Himalayas and the Indus river (Sindhu).<sup>17</sup> The list of elephant forests given by Kauṭilya does not include the elephant forests of Kerala or of the Karnataka-Tamil Nadu border where elephants are found even today.

Kauṭilya clearly recognises that the destruction of an enemy's forces is principally dependent on elephants.<sup>18</sup> Elephants seem to have been in regular operation as a war machinery since the times of the sixteen *mahājanapadas*. The historians of Alexander's invasion leave little room for doubt that the elephant forces of Porus provided stiff resistance to the Macedonian army.<sup>19</sup> The formidable contingent of elephants in the army of the ruler of the Gangaridai and Prasioi (probably denoting the Nanda rulers of Magadha?),<sup>20</sup> once again according to the classical sources, was largely responsible for Alexander's deciding against a plan to penetrate into the Ganga valley from the Punjab. This military tradition was clearly continued by Candragupta Maurya who had a formidable number of elephants in his army. Pliny, basing his statement on Megasthenes, gives the number of elephants in the army of Candragupta Maurya as nine thousand. The number is two thousand according to Diodorus and Curtius and eight thousand according to Plutarch.<sup>21</sup> Despite the differences in figures, the classical authors give an unmistakable impression of the large numbers of elephants in the Maurya army.

Megasthenes states that horses and elephants were not permitted to be used by any private person, i.e. they were to be used only by rulers.<sup>22</sup> This once again underlines the importance of elephants as a war machinery and suggests monopoly control and exclusive use of elephants by rulers during the Maurya period. Medhātīthi's commentary (9th century) on Manu also mentions elephants as an article of royal commodity whose export was forbidden.<sup>23</sup> But neither the *Arthaśāstra* of Kauṭilya nor any other ancient authority hints at a royal monopoly of elephants and horses.<sup>24</sup>

## IV

In many sections of the *Arthaśāstra* forest appears to be viewed as an object of conquest. On various occasions Kauṭilya advocated raising forests, particularly elephant forests (*Hastivana*), to get the better of the enemies.<sup>25</sup> As stated earlier, elephant forests were made to grow in the border areas so that elephants could be put into military operation as and when needed. Kauṭilya preferred an elephant forest with many brave animals which might cause trouble to enemies on the border of the territory.<sup>26</sup> Kauṭilya also stressed the numbers of elephants rather than their bravery since, according to him, 'bravery can be imparted by training, but numerousness cannot be created at all in a brave few'.<sup>27</sup> Kauṭilya was also in favour of curbing the powers of the forest tribes who, according to him, could start acting as kings in their local areas and cause disturbances in the rear, eventually aggravating disturbance on all sides.<sup>28</sup> Kauṭilya considered a small disturbance in the rear of greater importance, and stressed the need to crush it even at the cost of a large gain in front.<sup>29</sup>

## V

Forests were often cleared for the purpose of creating new settlements. In ancient India, two methods were frequently applied to clearing forests – cutting and burning.<sup>30</sup> The process of clearing forests by burning may be seen as early as the *Śatapatha Brāhmaṇa*<sup>31</sup> (c. 8th century B.C.). The story is as follows: A Brāhmaṇa, Videgha Māṭhava, resided on the banks of the river Sarasvati. During that time Agni Vaiśvānara travelled through the east by burning the earth. Agni Vaiśvānara was followed by Gotama Rahugana and Videgha Māṭhava. They advanced as far east as Videha on the Sadānīrā (literally, 'a river always filled with water' or in other words, a perennial river, identified with the present Gandak). Earlier the Brāhmaṇas did not even try to cross this river, thinking that it had not been burned over by Agni Vaiśvānara. 'Even the land lying to the east of Sadānīrā remained *uncultivated* and *marshy* for it had not been tasted by Agni Vaiśvānara'. But now many Brāhmaṇas are moving towards the east of the Sadānīrā: 'The land is now *very fertile for the Brāhmaṇas have caused [Agni] to taste it through sacrifices*' (my italics).

This long journey from present day Haryana to North Bihar (Videha) symbolises the expansion of the brahmanical culture into the eastern part of the Ganga valley. The spread of brahmanical social and cultural norms in the Later Vedic times could have hardly been possible but for the establishment of sedentary agricultural society in the Ganga valley. It would be only natural to infer that the Ganga valley, prior to its being brought under regular plough

cultivation, had been a thickly forested area. The emergence of sedentary agricultural settlements in the Ganga valley could be made possible largely by clearing this forest. One of the methods of clearing forest in ancient times must have been the burning method. The story of Māṭhava's journey with a sacred fire in his hand may, therefore, indicate such a process of clearance of the forests of the Ganga valley.

We may also consider the well-known urban settlement at Śrāvasti (identified with the present Sahet-Mahet Gonda Bahraich districts, M.P.),<sup>32</sup> one of the foremost urban centres of early historical times. This capital city of Kośala, *Mahājanapada*, was hallowed by the memory of the Buddha. One of the major landmarks of the city was the Jetavanavihāra. Originally a pleasure garden, Jetavana was first purchased by the very rich *gahapati* Anāthapiṇḍika and then donated to the Buddha as a site for *Vihāra*.<sup>33</sup> The name Jetavana calls for close scrutiny. The very name-ending *vana* of a pleasure garden located in an urban settlement may indicate the existence of a larger forest tract prior to the days of the Buddha. This may further lead us to conclude that prior to the emergence of Śrāvasti as an urban centre, the area could have had a larger forest cover. In other words, the emergence of the urban settlement at Śrāvasti may have been preceded by the clearance of the forest tract, the memory of which could have been retained in the name Jetavana.

The *Arthaśāstra* of Kauṭilya makes a definite departure from the idea of clearing forest by indiscriminate and widespread burning. It categorically states that 'he shall cause to be burnt in fire one who sets on fire a pasture, a field, a threshing ground, a house, a produce forest or an elephant forest'.<sup>34</sup> This is also corroborated by the fifth Pillar Edict (Delhi-Topra version)<sup>35</sup> in which Asoka states that forests must not be burnt either uselessly or in order to destroy (living beings). Regarding deforestation by clandestine cutting down of trees, Kauṭilya states that a normal levy (*deya*) and also a fine (*atyaya*) was imposed for cutting down of trees.<sup>36</sup>

The programme of prevention of indiscriminate burning of forests undertaken by Asoka may have been either out of his concern for environment and nature or perhaps for implementing his policy of *ahimsā* or non-violence. The imposition of *atyaya* by Kauṭilya seems to be an indirect check against widespread and illegal clearing of forests. Whether the fines were imposed to cover the resources lost by cutting produce forests or to protect the environment cannot be ascertained. Whatever may be the motive or motives behind such measures, they probably lessened, to a considerable degree, the indiscriminate destruction of forest by burning. Also, one must not lose sight of the fact that with the increasingly regular use of metal implements (both copper and iron) clearance of forest tracts by burning probably became a less advantageous method from the 6th century B.C. onwards.



## NOTES

<sup>1</sup> Kangle, R.P. (editor and translator) 1969, *The Kauṭīliya Arthaśāstra* (in three parts), Delhi. The dating of the *Kauṭīliya Arthaśāstra* is a controversial issue. The present state of research suggests that the *Kauṭīliya Arthaśāstra* was not the work of a single author, though Kauṭilya is traditionally supposed to have been the prime minister of Candragupta, founder of the Maurya dynasty. The historicity of this tradition is difficult to prove. It is generally considered that the text assumed its present form around the 2nd century A.D., i.e. much later than the Maurya period. The earliest stratum of the text, namely *Adhyakṣapracāra* (Book II) has been assigned to the 3rd century B.C. This section contains invaluable data regarding the state and economy. Since this section may not be far away from the Maurya period, it follows that the *Arthaśāstra* text can be compared and supplemented with the Asokan edicts and the classical accounts for the study of the Mauryan epoch.

<sup>2</sup> This seems to be different from the royal ownership of *sītā* or crown land. See Ghosal, U.N., 1973, *Agrarian Systems in Ancient India* Calcutta, p.62.

<sup>3</sup> *Kauṭīliya Arthaśāstra* (hereafter KAS), II.6.6.

<sup>4</sup> KAS, II.

<sup>5</sup> Majumdar, R.C. (ed.) 1960. *The Classical Accounts of India*. Calcutta, p.225.

<sup>6</sup> Ghosal, U.N. 1972. *Contributions to the History of the Hindu Revenue System*. Calcutta, p.232.

<sup>7</sup> KAS, II.2.5.

<sup>8</sup> Sen, B.C. 1967. *Economics in Kauṭilya*. Calcutta, pp.4-76.

<sup>9</sup> KAS, II.5.5.

<sup>10</sup> KAS II.35.1.

<sup>11</sup> KAS VII.12.6.

<sup>12</sup> Sen, op.cit., p.121.

<sup>13</sup> KAS, II.20.6

<sup>14</sup> KAS, II.20.11

<sup>15</sup> E. Hutzsch, *Corpus Inscriptionum Indicarum* (hereafter *CII*) Vol.I, *etani yevā divasāni, nāga-vanasi kevatabhogasi yāni amnani pi jiva-nikāyāni no hamtaviyāni* p.128, ll.13-15.

<sup>16</sup> *The Periplus of the Erythraean Sea* translated and edited by G.W.B. Huntingford, London 1980. Sect. 62, p.55.

<sup>17</sup> Thomas R. Trautmann, 'Elephants and the Mauryas', in S.N. Mukherjee (ed.), *India: History and Thought*, Calcutta, 1982, pp.273-6.

<sup>18</sup> KAS, VII.11.16

<sup>19</sup> R.C. Majumdar (ed.), *op cit.*, pp.37-42

<sup>20</sup> *Ibid.*, pp.28-32.

<sup>21</sup> K.A. Nilakantha Sastri (ed.) *The Age of the Nandas and Mauryas*. Benaras, 1952, p.188.

<sup>22</sup> Trautmann, *op. cit.*, pp.257-8.

<sup>23</sup> U.N.Ghosal, *Contribution to the History of the Hindu Revenue System*, p.241.

<sup>24</sup> Ranabir Chakravarti, 'Horse Trade and Piracy at Tana (Thana, Maharashtra): Gleanings from Marco Polo. *Journal of the Economic and Social History of the Orient*, 34, 1991, p.168.

<sup>25</sup> KAS, VII.12.8.

<sup>26</sup> KAS, VII.12.9.

<sup>27</sup> KAS, VII.12.12.

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<sup>28</sup> KAS, IX.3.22.

<sup>29</sup> KAS, IX.3.1.

<sup>30</sup> This should not be taken to imply that creation of sedentary agricultural settlements in ancient times led to widespread deforestation and rampant denudation of the forest cover. Such a situation would actually be highly unlikely in a pre-industrial society. In fact rapid deforestation in India began during the colonial period, largely because of the use of wood for manufacturing railway sleepers. See in this context Dharma Kumar (ed.) *The Cambridge Economic History of India*, Vol. 2, Delhi, 1989.

<sup>31</sup> J. Eggeling (trans.) *The Śatapatha Brāhmaṇa*, Sacred Books of the East Series Vol. 12, pp.104-6.

<sup>32</sup> G.P. Malalasekara, *A Dictionary of Pali Proper Names* 1937, pp.1126-7.

A. Ghosh, ed., *An Encyclopedia of Indian Archaeology* Vol. 2, 1989, pp.419-20.

<sup>33</sup> The purchase and gift of Jetavana by Anāthapiṇḍaka has been immortalised on a medallion in the railing pillar at Bharhut. See Heinrich Zimmer, *The Art of Indian Asia* Vol. 2, New York 1960, Plate 31, fig. E.

<sup>34</sup> KAS, IV.11.20.

<sup>35</sup> E. Hultzsch, *CHI*, Vol.1, *dāve anathaye vā vihiṣāye va no jhapetaviye*, p.126, l.10.

<sup>36</sup> KAS, II.17.3.

