

BIODIVERSITY: METHODS OF CONSERVATION IN THE *UŚANAḤ SAṂHITĀ*

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Intimate relationship with plants and animals of ambience, and concern for their conservation have remained integral components of Indian culture since hoary past. Information regarding these are available in ancient literary works of various categories. The *Uśanaḥ Saṁhitā*, a *Smṛti-śāstra*, contains, in different chapters, some beliefs and instructions – direct and indirect – about conservation of the constituents of biodiversity. The same have been collected, analyzed and tabulated under two heads- Plants and Animals. Efforts have also been made to evaluate the data, and to determine the relative importance of this *Smṛti-śāstra* as a store-house of information on conservation of biodiversity. It has been estimated that *Uśanaḥ Saṁhitā* contains reckonable wealth of such information.

Key words: Animals, Conservation, Plants, *Uśanaḥ Saṁhitā*.

INTRODUCTION

Since the dawn of existence, humans are intimately connected with the biodiversity of ambience for food, shelter, attire, medicine, ornamentation, beautification, and for many other purposes. Actually socio-cultural-religious customs and beliefs of any human society are closely related with and dependent on the biodiversity and ecological system of the particular habitational area.

It may be mentioned here that the term ‘Biodiversity’ includes the total number of species, genera, families of plants and animals, as well as the same of microbes of a particular habitational unit, e.g., village, town, district, etc., and geographical entity like forest, mountain, desert, river, sea, etc. The Convention on Biological Diversity (CBD) defines biodiversity as the variety and variability

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among living organisms from all sources (aquatic, marine, xeric and mesic ecosystems) and the ecological complexes of which they are a part. Biodiversity is natural attribute of any area. But because of human activities like establishment and extension of organized habitations, deforestation, expansion of agricultural fields and pastures, industrialization, etc., a large number of species of plants and animals have ceased to exist, some have become rare, while the existence of many is threatened. This depletion of biodiversity has been adversely affecting the environment, and is causing various problems for mankind, even endangering the survival of *Homo sapiens*.

In this situation, peoples, all over the world, have become interested in conservation of biodiversity. During the course of last few decades, and especially since the organization of the United Nations Conference on 'Environment and Development' in 1992 in Rio de Janeiro (the 'Rio Summit'), biodiversity has become a thrust area of research and related conservational activities. International Union for Conservation of Nature and Natural Resources (IUCN) has declared many areas of the World as Biodiversity heritage sites. Nations are demarcating protected areas where any work causing disturbance to the biodiversity is considered as penal offence. Various acts, laws, rules and regulations, are being made for conservation of biodiversity.

But mere creation of protected areas and enacting different laws, rules and regulations, etc. cannot ensure conservation of biodiversity unless traditional beliefs, customs, and attitude of local human populations are taken into consideration by the concerned authorities. In this connection it may be stated that the socio-religious activities of any community of men are intimately linked with biodiversity. Elmandjra¹ opines that 'Biodiversity is not an end in itself, it can no longer be thought of independently of the socio-cultural environment in which it sustains'.

In this situation analyses of religious scriptures assume significant importance in evolving methods for conserving biodiversity. The religious works contain respectful references to biodiversity, and men's relation with the same. The beliefs and instructions, contained in the religious literature, indelibly influence the common-folk. Meffe and Carroll² observe, 'ordinary people are power-fully motivated to do things that can be justified in terms of their religious beliefs'.

The religious works, belonging to several categories of Sanskrit literature, contain beliefs and instructions about forests, plants and animals. The *Smṛti-Saṃhitās*, which normally deal with *Ācāra* (social and religious customs, including

those regarding edibles and non-edibles), *Prāyaścitta* (methods of expiation in connection with different types of sins and faults), *Vyavahāra* (legal aspects), and *Rājadharmā* (duties of a king, including the statecraft), have been strongly influencing the Hindu Society for centuries. These works also contain instructions about conservation of biodiversity. Few of these commands are direct in character while some socio-religious directions also help the purpose of conservation. Hence analytical investigations of these works, for the view-point of conservation of biodiversity, may help comprehension of the traditional Indian approach towards sustainable utilization of other living creatures, and at the same time ensuring natural perpetuation of those species. Being guided by this idea the present inquest on the *Uśanaḥ Saṁhitā* has been carried out.

MATERIAL AND METHOD

The *Smṛti-Saṁhitās* are also known as *Dharmaśāstras*. The *Yājñavalkya Saṁhitā* (1.4 & 5) names twenty sages as originators of the *Dharmaśāstras*, and Uśana is one such sage. According to the Bangabasi edition of *Uśanaḥ Saṁhitā*, edited by Tarkaratna³, this compilation is the product of the answers given by Auśana, son of Uśana (nas) to the queries of the ascetics. According to Monier-Williams⁴ and Apte⁵, Uśana is the name of an ancient sage, who in later times has been identified with Śukra, a son of Bhṛgu, and preceptor of the Asuras.

Chattopadhyaya⁶ writes that two manuscripts, containing the name of Uśanas, have so far been discovered. They are *Auśanasa Dharmaśāstra* and *Auśanasa Smṛti*. She continues that the manuscript of the *Auśanasa Dharmaśāstra*, that has reached us, is torn, incomplete, and contains only fiftyone (51) couplets and discussions mainly on half-castes and hybridization of castes (*Varnaśaṅkara*). On the other hand, the *Auśanasa Smṛti* is divided into nine (9) chapters and contains six hundred (600) couplets on various aspects. The Bangabasi edition of the *Uśanaḥ Saṁhitā*, on which the present investigation is based, however, contains six hundred twenty (620) ślokas, distributed in nine (9) chapters.

The time of origin and provenance of this *Saṁhitā* are not yet ascertained⁷. But as it has been mentioned in the *Yājñavalkya Saṁhitā* (c. 1st or 2nd century AD) it can be assumed that his work is of earlier origin. In this connection it may be mentioned that according to Kane⁸ the works on the *Dharmaśāstras* had attained a position of supreme authority in regulating the conduct of men by the 2nd century BC.

The information and instructions regarding the conservation of flora and fauna, presented in this article, are scattered in different chapters of the text under study. The same have been collected and recorded under two heads, viz. (a) Plants, and (b) Animals. References to the respective chapter and verse have been given along with each information in parenthesis. The Sanskrit names of the plants and animals, as mentioned in the text, have been retained in this article, while in possible cases the common English and Latin equivalents of the same are mentioned in brackets.

ENUMERATION OF INFORMATION

(a) Plants

It appears that the *Uśanaḥ Samhitā* considers stealing of plant part(s)/vegetal products, injuring or destroying plant(s) and plant-part(s) as offence, and it prescribes punishment(s) for the offenders (Table 1). The threat of punishment acts as an effective deterrent, and prevents the covetous people from stealing the vegetal materials and cutting or lopping of plants/plant-parts.

Table 1: Protection of plants

| Sl. No. | Nature of offence | Punishment prescribed |
|---------|--|--|
| 1. | Stealing (a) <i>dhānya</i> (paddy: <i>Oryza sativa</i>); (b) <i>tṛṇa</i> (straw), <i>kāṣṭha</i> (wood), <i>druma</i> (tree), <i>puṣpa</i> (flower); (c) <i>oṣadhi</i> (monocarpous plant). | 1. Culprit should (a) drink <i>pañcagavya</i> (five products of a cow viz. milk, curd, <i>ghee</i> or clarified butter, urine and cow-dung, taken collectively) for purification of self (9.18b); (b) starve for three nights (9.19a); (c) consume only milk for three days (9.21b). |
| 2. | Cutting (a) fruit laden tree, shrub, twinner, herb; (b) plants on the eve of blossoming (<i>puṣpāgamanāñca</i>). | 2. Offender has to (a) chant 100 Ṛks (9.14); (b) consume only ghee for purification for self (<i>ghṛta-prāśo viśodhanam</i> (9.15a). |

(b) Animals

Killing, stealing animals and animal products are treated as penal offence by the text, and it dictates punishments for the crimes (Table 2).

Table 2: Protection of animals

| Sl. No. | Nature of offence | Punishment prescribed |
|---------|---|---|
| 1. | Stealing (a) hide or flesh; (b) bird(s); (c) <i>dviśaḥ</i> i.e. two-hoofed animals like cow, <i>ekśaḥ</i> i.e. one-hoofed animals like horse. | 1. Offender has to (a) starve for three nights (9.19b); (b) subsist for three days on milk only (9.21b) (c) starve for twelve days (9.21a). |
| 2. | Killing (a) any of the following <i>maṇḍuka</i> (frog: <i>Rana</i> sp., or toad : <i>Bufo</i> sp.), <i>nakula</i> (mongoose : <i>Herpestes auropunctatus</i> or <i>H. edwardsii</i>), <i>kāka</i> (crow: <i>Corvus</i> sp.), <i>viḍvarāha</i> (wild boar: <i>Sus scrofa</i>), <i>muṣika</i> (mole rat: <i>Bandicota bengalensis</i>), <i>kukura</i> (dog: <i>Canis familiaris</i>), <i>mārjāra</i> (cat: <i>Felix domestica</i>); (b) <i>aśva</i> (horse: <i>Equus caballus</i>); (c) <i>sarpa</i> (snake). | 2. The offender has to (a) perform <i>ṣoḍasākhyā mahābrata</i> or sustain three nights by consuming milk only (9.7), or walk a distance of one <i>yojana</i> (9.8a); (b) perform <i>prājāpatya</i> for twelve days (9.8b); (c) donate (to a Brahmin?) a spade made of iron (9.9a). |
| 3. | Killing Any one of the following: (a) <i>balākā</i> (common teal: <i>Nettion crecca</i>), <i>tilāṭa</i> (spotted dove : <i>Streptopelia chinesis</i>), <i>tiladroṇa</i> (this word may mean <i>droṇa</i> quantity of <i>tila</i> i.e. sesame, but since here it has been mentioned along with the names of some common birds it may be assumed that it refers to a bird with small bridge shaped beak, can it be sparrow i.e. <i>Passer domesticus</i> ? However, it should be | 3. The offender has to donate (possibly to a Brahmin) (a) a two-years old calf (9.10); |

| Sl. No. | Nature of offence | Punishment prescribed |
|---------|--|--|
| | mentioned that appropriate equivalents of the same in common English and Latin could not be obtained); <i>tittiri</i> (francoline partridge: <i>Francolinus</i> sp.), <i>suka</i> (parrot: <i>Psittacula kramari</i>), <i>varāha</i> (boar : <i>Sus scrofa</i>); | |
| (b) | <i>krauñca</i> (crane or heron: <i>Grus</i> sp. or <i>Ardeola grayii</i>); | (b) a 3 year old calf (<i>trihāyaṇam</i>) (9.10 b); |
| (c) | <i>haṃsa</i> (swan: <i>Anser anser/ A. indicus</i>), <i>balāka</i> (Monier Williams explains in <i>A Sanskrit-English Dictionary</i> , p. 723, this as 'a kind of crane the flesh of which is eaten'; in this case it may be medium egret: <i>Egretta intermedia</i> , or <i>Ardeola grayii</i>), <i>baka</i> (cattle egret, heron: <i>Ardea</i> sp. or <i>Bubulcas ibis</i>), <i>bhāsa</i> (white backed vulture: <i>Gyps bengalensis</i>), <i>ṭiṭṭibha</i> (pheasant-tailed jacana: <i>Hydrophasianus chriugus</i> or bronze-winged jacana: <i>Metopidius indicus</i>), <i>vānara</i> (monkey: <i>Macaca mullata</i>); | (c) a cow (9.11); |
| (d) | carnivorous bird, <i>mṛga</i> literally it means an animal which runs fast in search of food/shelter, but in practice it refers to deer; in India few species of deer are available, in the absence of detail description of the animal it is not possible to identify the same); | (d) a milch cow (9.12a); |
| (e) | non-carnivorous animal; | (e) one <i>vatsatari</i> (heifer) (9.21b); |
| (f) | <i>uṣṭra</i> (camel: <i>Camelus dromedarius</i> or <i>C. bactrianus</i>); | (f) one <i>kṛṣṇala</i> (5 ratis) of gold (9.12 b); |
| (g) | small bony animals; | (g) some gifts (not specified) proportionate to the size of the slain animal (9.13a) |
| (h) | any boneless animal. | (h) the offender should do <i>prāṇāyama</i> (9.13b). |

DISCUSSION AND CONCLUSION

The *Uśanaḥ Saṁhitā* contains some instructions which help protection of biodiversity from the assaults of man and thus ensures perpetuation of all the species. Besides these, this *Saṁhitā*, like most of other *Saṁhitās*, have some discussions on dietary and religious biodiversities which also facilitate the conservation of biodiversity. Since these instructions deserve elaborate analyses, they have not been included in this article.

It appears that the originator of the *Uśanaḥ Saṁhitā* is concerned with protection of the crops, plants, animals – domestic and wild, from stealing and lopping / killing. The *Saṁhitā* also considers the aforesaid acts as moral offence. The types of plants, number of animals, and varieties of violations discussed in this *Saṁhitā*, however, are much less than the same mentioned in the *Saṁhitās* named after Manu⁹, Yājñavalkya¹⁰, and Viṣṇu¹¹.

Like other *Smṛti Saṁhitās* the *Uśanaḥ Saṁhitā* also prescribes punishments for various types of anthropogenic assaults on plants and animals; and different punishments for same offence, e.g., killing *Sus scrofa*, have also been recommended. However, all the recommended punishments are basically religious in character, and on many occasions include donations to Brāhmins. Some chastisements involve regulation of diet of the offender and also fasting by the same. In this regard, the *Saṁhitā* bears close similarities with the *Śātātapa Saṁhitā*¹², though the punishments recommended by these two *Saṁhitās* are not identical. It may be mentioned here that the approach of *Kauṭīlīya Arthaśāstra*¹³ (c.4th century BC) and *Agni Purāṇa*¹⁴ (anterior to the 8th /9th centuries AD) towards conservation of biodiversity is essentially materialistic, and the punishments enumerated by these works include corporal/financial penalties, while the directions in the *Manu Saṁhitā* (compiled between the 2nd Century BC and the 2nd Century AD), *Yājñavalkya Saṁhitā* (originated between 100 AD to 300 AD), and *Viṣṇu Saṁhitā* (time of origin not yet determined) are of mixed character – financial and religious.

It is interesting to observe that the methods of chastisement mentioned in the *Uśanaḥ Saṁhitā* in connection with stealing of paddy and other plant-products are similar with the same recommended in the *Manu Saṁhitā* and *Yājñavalkya Saṁhitā*. The offences and punishments referred to in the serial numbers 2 (c) 3 (a, b, c, d, e, f) of Table II of this article are identical or almost so with the instructions contained in the *Viṣṇu Saṁhitā*.

Thus on the basis of the above, it may be said that though the *Uśanaḥ Saṃhitā* is a small work and does not include deliberations on all characteristic aspects of a *Dharmaśāstra*, it contains reckonable information on biodiversity. It should be considered as an important document of traditional wisdom on conservation of biodiversity.

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