

Role of Indian Traditions in Biodiversity Conservation

***Dr. Sunita Shekhawat**

****Dr. Prerna Singh Lavania**

To live in harmony with nature has always been an integral part of Indian culture. The natives have played a significant role in conserving the biodiversity in and around localities of their natural habitat. This has been several times reflected in our traditional practices and religious beliefs by our ancient cultures. The people had tremendous understanding of ecosystems and the factors which would sustain them. Plants not only serve as a source of edible food in the form of roots, tubers, rhizomes, seeds, fruits but also as agricultural and horticultural plants. Conservation of plants is on priority in their natural habitat due to their magico - religious belief of the natives as they are considered as habitat of god and goddess.

Environmental conservation is not a new concept. Historically, the protection of nature and wildlife was an ardent article of faith and very well reflected in the daily lives of people. It has also been enshrined in myths, folklore, religion, arts and Indian culture. The fundamental principles of ecology-the interrelationship and interdependence of all life so as to create homeostasis is well observed. It is also reflected in the ancient scriptural text, the Isopanishad, over 2000 years ago. It says, 'This universe is the creation of the Supreme Power meant for the benefit of all his creation. Each individual life-form must, therefore, learn to enjoy its benefits by forming a part of the system in close relation with other species. Let not anyone species encroach upon the other's rights.'

The Nature Worship is the age- long tradition in many religions in India. Living beings have always lived in harmony. This can be very well traced back 10,000 years old cave paintings at Bhimbetka in Central India. Different religions followed in India also speak the same. The tradition to worship trees, animals, forests, river, mountains and earth are basically the strategy to conserve the intrinsic relation between man and environment. One of the smartest traditional practice to conserve our surrounding is the creation of 'Sacred Grooves'. Sacred Groves are small patches of native vegetation, traditionally protected by local communities. The local communities in different Indian states are protecting and worshipping sacred groves since the emergence of civilization. Many sacred grove- areas are designated as sacred places of Gods and goddesses where people go for worship. The concept of Panchvati (a group of five Banyan trees; vati is derived from the Sanskrit word 'vat' meaning vat-vriksha or banyan tree) has been elaborated in many of Indian Epics. Sacred groves or sacred forests preserved with reverence have been part of Hindu and Buddhist culture. The holy books like Quran and Bible clearly reveal that nature and its components are created by God and humans are responsible of protecting it. Sacred Groove is basically a piece of land which may vary from about fifty hectares to few hundred square metres. These lands are spread all over India . In Kerala, several small jungles are dedicated to snakes i.e. Sarpakavu (Sarp= Snake, kavu=jungle). The celebrated Padmanabaswami temple in Thiruvanthapuram has Lord Vishnu reclining on a mighty serpent. These grooves serve an excellent example reflecting a fine balance of religious faith and nature conservation. Thus, very effectively preserving biological diversity. As a matter of fact, even rarest and endangered species can also be found here. Human civilization is under the obligation of nature so as to conserve the nature for our future.

There are also examples of sacred ponds attached to temples in many parts of India which consider their responsibility for the protection of certain endangered species of turtles, crocodiles, and the rare fresh water sponge. Many other animals are also worshipped as they are considered vehicles of gods and goddesses. Different water conservation strategies and traditions have been in practice in many parts of India. Some of those indigenous strategies are- Tanka and Kund in Rajasthan and Mizoram ; Bamboo drip system in Cherapunji, Eris in Tamil Nadu; Haveli in Madhya Pradesh; Apatani in Arunachal Pradesh; AharPyne system of water conservation in Bihar and adjacent West Bengal; Zabo system in Nagaland etc. The kund at Trayambkeshwar is considered to be the origin of the sacred Godawari river.

Some of the plants growing in Indian sacred groves which are protected by local communities are:

S.No	Name of plant	Uses
1	Buteamonosperma	Medicinal, Dye
2.	Cordiadichotoma	Food, Medicinal
3.	Ravuolfia serpentine	Medicinal
4.	Alstoniascholaris	Medicinal
5.	Helicteresisora	Medicinal
6.	<i>Boswellia serrate</i>	Medicinal
7.	Calotropis gigantean	Medicinal
8.	Carissa congesta	Medicinal
9.	Diopyros Montana	Medicinal
10.	Bambusaarundinacea(wild bamboo)	Miscellaneous

Source: Jain,S.K. Ethnobiology in Human welfare

Plant species are of extreme economic importance : as rhizomes of plants like *Acoruscalamus*, stem bark of *Bunchanialanzan*, stem and leaves of *Moringaoleifera*, *Achyranthusaspera*, *Gynandropsisgynandra* and *Bombaxceiba* are being used as antidote of snake - bite and scorpion sting. Many plants and animals have been considered sacred by various communities in India. The peepal tree (*Ficusreligiosa*), The banyan tree (*Ficus 'bengelensissand* Khejdi tree (*Prosopis cineraria*) are the well-known examples in Rajasthan. Since, these are religiously considered as pious, so they are never cut. There are several other trees and plants that hold the same position as sandalwood tree, beetlenut, palm, neem, coconut palm, juniper, champa, lotus, tulsi, pepper, etc. This has made a significant contribution in the protection and propagation of various species of trees and plants in India. Even the plants and trees growing in temple premises uphold the same position and religious belief of not cutting extends here also.

Respect for nature is inherent in traditions and culture. It has been depicted that many Hindu gods and goddesses used animals as their mounts. Many animals are also considered sacred and worshipped by several Hindu and other communities. The peafowl, sacred to lord Karttikeya is never hunted, the blue rock pigeon is considered sacred to Saint Hazrat Shah lal and is protected in the Bengal region. Even

rodents are considered sacred and are allowed to breed in the famous temple of goddess Karnimata in Rajasthan. The tiger and the cobra, though greatly feared, are afforded protection on religious grounds and this has been vividly showed how the ancient culture and traditions of Indian society contributed to the conservation of natural ecosystems and the plants and animals that inhabited these.

Importance of plants and animals have also been depicted in our traditions and sculptural art. Paintings and potrays of sacred trees, mounts of gods and goddess have been depicted in stone and metal sculpture as a part of palaces and temples. All this clearly indicates our intention of conserving nature from times immemorial. The concept of keeping forest reserves was first developed by Kautilya. Even during the reign of Emperor Ashoka, it was inscribed everywhere in his kingdom, on rocks and pillars that, whosoever, found destroying biodiversity or killing animals would be strictly punished. It is the first recorded measure on conservation anywhere in the worlds, surviving till date. Considering nature as a part of the family can be best exemplified by Bishnois in Khejri village, Rajasthan. They have a tradition of protecting wildlife including Black Buck and Khejri trees since 1451 or so. In 1730 AD, the then ruler of a native state had ordered the khejri (*Prosopis cineraria*) trees to be cut in order to bake lime for the construction of a fort. A strong collective protest from the local Bishnoi community against the king was made. 363 men and women, young and old, hugged the trees to prevent them being cut and were unfortunately, axed along with the trees. After knowing the tragic incidence, the ruler of the state sought pardon from the people and issued an order that no green trees should in future be cut in the Bishnoi village. This happened over two centuries ago when the world had scarcely become conscious of ecological consequences of the reckless felling of trees. (Man Mohan Singh,1990).

The love for nature and strong belief to conserve the nature was also vividly alive in contemporary times. Another successful conservation movements in India is the Chipko movement spearheaded by the womenfolk of Gopeshwar village in Garhwal in the Himalaya. Commercial felling of trees was effectively stopped by them. This eventually saved 12,000 sq.km. of a sensitive water catchment area to be deprived of trees. There was a similar Apiko movement in the southern state of Karnataka.

Presently, India is no exception to the global phenomenon of environmental degradation brought about by rapid industrialization, growing urbanization, intensive cultivation, and other developmental activities. This coupled with increasing biotic pressure has created an adverse impact on India's biodiversity. The prime areas of environmental concern today include,

- (I) **Habitat Destruction:** Increase in human population density has endangered the survival of a number of plants and animals and has led to extinction.
- (ii) **Pollution of air, soil and water:** Loss of biodiversity, rapid industrialization and urbanization is causing adverse climatic conditions which would, someday, lead to human race extinction also.
- (iii) **Threat to natural living resources:** Use of advanced technology is on alits way threatening survival of wildlife, fisheries, etc,
- (iv) **Problems associated with urbanization** - The policies to promote sustainable use of natural resources are seldom inadequate in remote rural areas. Law enforcement personnel are unable to fulfil the financial, material and training resources leading to pollution, slums and sanitation problems.

As a result, we have already lost some species of mammal, such as, the Indian cheetah and the Lesser Indian rhinoceros and two species of birds-the Pink headed duck and the Mountain quail-have become

extinct during twentieth century alone. Eighty-one species of mammals, 38 species of birds, and 18 species of amphibians and reptiles are now listed as 'rare' and 'threatened'. Among these are the tiger, leopard, Asiatic elephant, and all- the three species of the Indian crocodile. About 1500 species of plants are on the endangered list. If this continues, more species of flora and fauna would vanish causing environmental imbalance. India is a developing country. Economic development has to go in hands with nature conservation. A fine tuning between environment protection and policies and programmes of development is the need of the hour. At this juncture, we have to look back towards our age old glorious rich traditions of which environmental conservation was an integral part.

Protection of wildlife and natural resources as enshrined in Hindu religion and culture, has also been stressed in the Constitution of India. The Indian Constitution for the first time imposed the responsibility of protection of the environment upon the States by Forty Second Amendment Act, 1976. Article 48-A states that "The State shall endeavor to protect and improve the environment and to safeguard the forest and wildlife of the country." The Amendment also inserted Article 51-A in Part VI-A (Fundamental duty) in the Constitution, which says "It shall be duty of every citizen of India to protect and improve the natural environment including forests, lakes and wildlife and to have compassion for living creature." Therefore, Governments of different Indian states are under the responsibility to promote regeneration of forests and their protection with the help of action and rational participation of the local people.

Conclusion

Today, when people throughout the world are perturbed by the degradation of the environment and the disastrous consequences of this, traditional ethics of nature conservation could be looked upon as a source of inspiration and guidance for the future. Perhaps no other culture can provide such a profound variety of cultural practices and ecologically sound relationship with nature as the Indian. The Conservation of Forests and Natural Ecosystems Act of India, 1994, proposes to create a different category of forest "village forest", which would be virtually handed over to the village communities for management and maintenance with rights to the forest produce. This is to introduce the concept of "biodiversity conservation". Times immemorial, India always had rich traditional and indigenous knowledge, both coded and informal. In this light, Van -Panchayats have been organised in Uttar Pradesh for the management and conservation of forests. These are village level institutions members of which are elected at local level. These Van Panchayats are linked to the forest department for technical know-how and for planning strategies.

However, there is a urgent need to explore valuable germplasm. A periodical survey and evaluation of modern technology has shown that floral diversity has been conserved in the local eco -system. Ecological imbalance needs to be restored by conserving our precious biological diversity. This can be very well done by in-situ and ex-situ conservation. Ex-situ conservation of genetic material can be made in seed bank, botanical garden herbal garden, arboreta and conservation of ex-plants or organs in in-vitro as cryo-bank, genomic DNA, DNA library and DNA bank while in-situ conservation of genetic resources within their eco-system.

Asst. Professor,

**Department of Zoology, Kanoria PG Mahila Mahavidyalaya, Jaipur*

***Department of Political Science, Kanoria PG Mahila Mahavidyalaya, Jaipur*