

Research Papers



**Bio-cultural Importance of Indian Traditional Plants and Animal's
For Environment Protection**

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Abstract

Human faith, beliefs, traditions and superposition have played a significant role in biodiversity conservation in India for centuries and will continue to have an impact on nature conservation for some time to come. Common beliefs and superstitions regarding trees, herbs, flowers, fruits and vegetables are prevalent among the people of both rural and urban India. Interestingly these superstitions are not only confined to India but to several other parts of world particularly in Asia, Africa and Australia. The concept of "sustainable development" which the modern environmentalists are harping upon to use the natural resources more judiciously and equitably for a more stable and balanced development and without impairing with the abilities of the future generations to use those resources and without interfering into their living rights was perhaps inspired by Indian mythology.

Keywords: Tradition, Faith, Culture, Biodiversity, Ecosystem

Introduction

Communion with nature has been an article of faith with man and has been an integral part of his life since time immemorial. This has been both a phenomenon and a legacy which has been handed down from one generation to another. For millennia, an incredible variety of human cultures had developed and in turn nurtured an even more amazing diversity of natural habitats. The relationships thus built up were at material, subsistence, spirit intellectual and at cultural levels. 2000 species of plants are known to be used for medicinal purposes and several hundred species for food, drink, clothing, housing, implements, ritual purposes, aesthetic and intellectual stimulation¹. This represents wealth knowledge of biodiversity and a range of related skills, which even the modern scientific society, is

unlikely to possess².

This knowledge, the culture in which it is embedded and the natural diversity which is its foundation, are all lost in the homogenizing sweep of modern industrial economy. For the last few decades, diversity has been out and standardization in. A teak plantation is considered an improvement over a mixed forest and industrial agriculture has dictated the replacement of 50,000 traditional rice varieties by about two dozen high yielding ones.

Respect for plants and animals in ancient Indian literatures

The ancient Indian treaties called Vedas and Upanishads (2500 - 1500 BC) - a compilation OF the Aryan period - mention conservation and protection of plants and animals on several occasion.

"Thousands and hundreds of years if you want to enjoy the fruits and happiness of life, and

Please cite this Article as : Chintan Pathak, Dr. Hiren Mandalia & Dr. Yogesh Rupala ,Bio-cultural Importance of Indian Traditional Plants and Animal's For Environment Protection : Review of Research (March ; 2012)

then take up systematic planting of trees" says Rigveda (2000 BC). Rigveda has dwelled upon various components of the ecosystem and their importance. "Rivers occasion widespread destruction if their coasts are damaged or destroyed and therefore trees standing on the coasts should not be cut off or uprooted (RV 5.54.6)."Don't uproot nourishing trees. Others would die consequently. The food chain will break and the entire universe will come to an end" (RV 6.48.17).

The Alhravaveda also mentions about the importance of air, water and green plants essential for human existence. "Plants and herbs destroy poisons (pollutants)" (AV 8.7.10); "Purity of atmosphere checks poisoning (pollution) (AV 8.2.25); "Plants possess the qualities of all duties and they are saviours of humanity" (AV 8.7.4).

The Yajurveda too mentions about plants and animals, "No person should kill animals helpful to all" (YV 13.47). "O king you should never kill animals like bullocks useful in agriculture or like cows which gives us milk and all other helpful animals, and must punish those who kill or do harm to such animals (YV 13.49)."While energy flow and balance is maintained in the universe yet some imbalances occur mainly due to destruction of "vanaspati" (vegetation) and that result into change in the function of seasons. This causes several natural disturbances (hazards in modern context) like untimely rain, heavy rain, drought and flood, warm winter and cool summer". These verses from the Yajurveda establish that ancient Indian erudites had complete concept of functioning of the ecosystems on earth.

Pronouncements from the Hindu scriptures with respect to usefulness of "vegetation" (forest in modern context) in environmental protection makes one wonder as the problems of deforestation and biodiversity erosion then was not so formidable as today³. That the erudite of ancient India for and foretold the dangers of environmental degradation due to forestation and loss of plant and animal life is amazing⁴. They had even predicted about the dangers of heating of the earth (global warming in modern context) in the absence of green plant and vegetation. "The earth provides surface for vegetation which controls the heat build up. The herbs and plants having union with sun rays provides congenial atmosphere for the life to survive" (AV 5.28.5). It is a scientific fact that the green plants (forest) through the process of

photosynthesis (utilizing the sun's energy) works as a "natural sink" absorbing the green house gas 'carbon dioxide' and help in reducing the warming effect.

Indian people: faith and beliefs in nature

Animism, naturalism, reverence and respect for nature and its creations such as plants, animals, rivers and mountains have all been part of the cultural life and tradition of the Indian people since the Vedic period (5000 BC). The Indian traditions teach us that all forms of life - plants, animals and human beings are closely interlinked and interdependent and that disturbances in any one of them would jeopardize the entire ecological balance of the universe⁵.

In the course of living, the ancient Indian people began to see nature with reverence. Their sense of gratitude went to the extent of investing godhood in all forces of nature⁶. As a part of this process, they began identifying several species of flora and fauna with particular personalities of the Hindu pantheon and started worshipping them. The 'snakes' were identified with Lord Shiva and worshipped, the 'figus tree' (*Ficus religiosa*) became symbolic of Lord Krishna and the 'sacred basil' (*Oscimum sanctum*) of Lord Rama. The elements of 'prithvi' (earth) were identified with Lord Ganesh and the plants shami (*Acacia ferruginea*) and decob grass (*Cynodon dactylon*) were considered sacred for its worship. The element of water was identified with the Goddess Bhavani, the plants ashoka (*Saraca indica*) and vishnukranta (*Evolvulus alsinoides*) being sacred for its worship. For the element air, Lord Vishnu was identified and the plants ficus (*Ficus religiosa*) and sacred basil (*Oscimum sanctum*) were considered sacred for its worship. With 'cosmos' and 'light' were identified Ishwara and Surya (Sun God), respectively, and accordingly wood apple (*Aegle marmelos*) and drona (*Lucas cephalotus*) were held sacred for the former, while kaner (*Nerium odorum*) was held sacred for the latter⁶.

This belief and these practices have continued in one form or another even to the present in certain sections of Indian society, particularly the rural folks. The belief systems of the traditional people of India extended their relationships from social to the natural environment, treating rivers as mother Goddess, forests as gods, and totemic animals as brethren and prey species as mutualities. Many elements of nature were offered protection from harm at human hand. In terms of religion, such practices might then have helped territorial hunters

and food gatherers to safeguard the health of their biological resource base in order to promote long-term persistence of the scarce natural resources⁷. Many such traditional environmental conservation practices have continued on the Indian sub-continent to conserve the physical and biological resources and the ecosystems.

Importance of significance in ecosystem preservation

Several tree species in India, which constitute a major part of the terrestrial ecosystem of the peninsula, have imprint historical antecedents for their growth and past events. Many of them occupy a significant position in Hindu mythology, relating to the right and wrong acts of human beings. Others have hygienic importance from the viewpoint of purifying the atmosphere and curing certain human diseases. Several trees, herbs, bushes, grasses and creepers enjoy importance as an object of divinity and sacredness. They symbolize the God and Goddess in rural folklore.

Trees such as ficus (*Ficus religiosa*), banyan (*F. bengalensis*), mango (*Mangifera indica*), sandalwood (*Santalum album*), wood apple (*Aegle marmelos*), coconut (*Cocos nucifera*), ashoka (*Saraca indica*), arjuna (*Terminalia arjuna*), kadamba (*Anthocephalus cadamba*), black berry (*Syzygium cumini*), emblica (*Emblica officinalis*), margosa (*Azadirachta indica*), agastya (*Sesbania grandiflora*) and tamarind (*Tamarindus indica*) etc., shrubs such as shoe flower (*Hibiscus rosasinensis*), yellow kaner (*Thevetia nerifolia*), etc., and grasses such as decob (*Cynodon dactylon*) and bamboo (*Bambusa spp.*) are considered sacred in Indian mythology and their destruction is sacrilegious. Their leaves, fruits and flowers are required at several religious and cultural functions such as marriage, death, and childbirth, various other ceremonies and festivals. They are widely grown and protected for their religious, cultural, economic and ornamental value^{6,7}. They have helped considerably in the maintenance of the terrestrial ecosystems and the ecological balance of the country, in the urban and the rural India.

There are some mythological trees in India called 'kalpabriksha' (tree of eternity) which are of multipurpose use (as food, fodder, fuel, fertilizer and timber, etc.) to the people where they grow. People have great reverence for such trees. One such tree is the khejris (*Prosopis cineraria*), grown

in large numbers in the deserts of Rajasthan in India. Khejris have played a significant role in the maintenance and preservation of the Thar Desert ecosystem in the arid zones of Rajasthan⁸.

Many wild animals have been revered in Hindu mythology as "vahanas" (vehicles) of Gods and Goddess. Mythology depicts the "tiger" as the vehicle of Goddess Durga and identifies the "lion" with the Goddess Kali, the "peacock" with Karthikeya; the "swan" with Saraswati; the "owl" and the "elephant" with the Goddess Lakshmi; the "wild goat" with Agni (fire) and so on. Similarly, crocodiles are depicted as vehicles of the Goddess Ganga, Varuna, the Rain God and Khodiyar, the Goddess of Shakti in Hindu mythology⁸. This identification underlines not only a sense of respect for these animals, but also a reason for protecting them.

The list is almost endless, with similar favorite plants and animals being associated with other members, so forming part of the religious and spiritual milieu. In such worship began an appreciation of the harmonious links between man and nature.

Conclusion

Reverence and regard for nature and its creation - the air and water, land and soil, plants and animals, rivers and mountains, forests and oceans - is the unifying ethical principle in almost all human religion be it Hinduism, Jainism, Buddhism, Islam or Christianity. They have all kept nature above man. Hinduism has gone one step further. They identified several flora and fauna with particular personalities of the Hindu pantheon and started worshipping them. Based on religious faith and philosophy of the people of India belonging to various sects have preserved several forests, rivers and lakes in its pristine state for centuries. But owing to the onslaught of rapid industrialization and modernization resulting from affluence of certain elitist sections of the Indian urban society on one hand, and the rapid developmental activities to alleviate poverty of the masses on the other hand, the forests, lakes, mountains and rivers of India have badly suffered.

Abbreviations

1. BC: Before Christ
2. RV: Rug Veda
3. YV: Yajur Veda
4. AV: Atharva Veda

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