



Conserving Biodiversity Based on Cultural and Religious Values

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Introduction

The rich biodiversity of India comprises multitude of religions, casts and creeds. There are about 68 million people belonging to 227 ethnic groups and 573 tribal communities derived from six racial stocks in the country (Pushpgandhan, 1994). Plant diversity is the basis of life for all living creature, it has great economic and environmental importance. The forests have been the lifeline for forest dwelling communities since time immemorial. The people who have traditionally lived in forests are key to understanding, utilizing and conserving the plant diversity. These indigenous tribes live close in the vicinity of forests with harmony in nature and have managed and conserved the biodiversity of their ambient vegetation since prehistoric and historic period subsequently, they developed their own cultures, religions, customs, taboos, folk-tales, food, medicines and large number of other plants for multifarious uses on which they depended for most of their essential requirements. This vast repository of knowledge related to plants has been cared, nourished and conserved by the tribal communities as a common property since thousands of years by experience, trial and errors, and it is also being freely transmitted from generation to generation by means of oral communication.

India is known as a land of celebrations, fairs and festivals, crowded ceremonies, communication, dancing and other social leisure activities. There is a great variety of ethnic groups and communities

with their beliefs, languages and culture living in India. The contribution of Indian culture and science to the world is unprecedented. Significant innovations in astronomy and herbalism, traditional system of medical practices and conservation of biodiversity through traditional ceremonial and religious functions are among the most valuable and precious gifts of the Indians to the humanity. Our ancestor has a unique and rich cultural heritage, which can be seen in their visionary traditionalism and innovations. There are some rituals in which number of individual plant or any specific patch in the forest protected and used as a tool to communicate with souls and God. The phenomenon of conservation of sacred groves is as old as civilization in which a group of plant or individual plants are protected by the local communities by giving them sacred status on the basis of religious faith.

The plant species saved from centuries by primitive people for their use in variety of rituals, ceremonies, cults, taboos and beliefs are broadly categorized as: (i) Conserving plants through social and religious (Sacred) ceremonies, cults and belief (ii) Conserving plants through astrological practices and others.

Conserving plants through social and religious (sacred) ceremonies, cults and belief

Plant offered or symbolized to various Gods and Goddesses

Many plants as used today were originally



identified and domesticated by primitive people through indigenous knowledge. The tribal people are not only familiar with the thousands of economic plant species in their ecosystems, but they have also good knowledge of religious and cultural value of plant diversity and many plants have been conserved in their natural habitats through their deep knowledge of beliefs, faith and taboos in biodiversity. With the result of this, large number of trees, shrubs and herbs are conserved in many sacred groves and other places for their religious and cultural importance viz. *Saraca asoka*, *Ficus religiosa*, *Aegle marmelos*, *Musa paradisiaca*, *Mangifera indica*, *Cannabis sativa*, *Terminalia arjuna*, *Coccoloba nucifera*, *Sesbaia grandiflora*, *Nelumbo nucifera*, *Azadirachta indica*, *Ficus benghalensis*, *Santalum album*, *Ocimum tenuifolia*, *Desmostachya bipinnata*, *Cynodon dactylon*, etc.

Psychoactive plants

Psychoactive plants contain Psychotropic chemical substance that crosses the blood-brain barrier and acts primarily upon the central nervous system where it affects brain function, resulting in changes in perception, mood, consciousness, cognition, and behavior. Psychoactive drug use is a practice that dates to prehistoric times. The property of psychoactive compounds vary with plant to plant. Based on effectiveness of chemical compound in different plants, they are divided into three groups: (Anonymous, 2005)

- ❖ **Stimulants:** In this category, plants may be used recreationally, to purposefully alter one's consciousness. These plants contain chemical compounds that wake one up, stimulate the mind and may even cause euphoria, but do not affect perception such as coffee, tea, cacao, ephedra,
- ❖ **Depressants:** In this category, plants have sedatives, hypnotics, and narcotics property. This category includes all the calmative, sleep-inducing, anxiety-reducing, anesthetizing substances, which sometimes induce perceptual

changes, such as dream images and also often evoke feelings of euphoria such as opioids, and alcohol.

- ❖ **Hallucinogens:** Including dissociatives, deliriant and or shamanic -The plants used as a tool for studying or augmenting the mind, or therapeutically as medication. This category encompasses all those substances that produce distinct alterations in perception, sensation of space and time and emotional states such as Psychedelics, *Salvia divinorum* and nitrous oxide (dissociatives), and *Datura metel*, *Datura stramonium* and *Atropa belladonna* atropine (a deliriant). Hallucinogens have been used since prehistory and for centuries has been associated with religion as well as with magic and medicine. Many indigenous peoples attributed the fantastic effects on the body and mind to a divinity or spirit residing in the plant. And so hallucinogenic plants came to be regarded as sacred, as objects of worship.

Shamanic herbalism : sacred plant medicine

(Shamanic Herbalism - Honoring and Using Plants of Power)

"Plants have long been primary teachers for those who travel deep into the heart of the world, for those who seek the soul teaching that only the wild can bring."

- Stephen Harrod Buhner

Shamanic Herbalism is an exploration into the ancient ways of honoring and using plants of power. Plants of power support the evolution of consciousness and spiritual growth. Spiritual Shamanic Herbalists work directly with the plants and nature to receive the secrets of the plants. They become a "seer" who can read the signs of nature for guidance and be consciously aware of Nature's web string attractions, loves, and intelligences. Their work with the plants is inspired rather than simply memorized. They know that the plants have grace, wisdom, and love that surround their healing cures. Shamanic herbalism is a soulful journey of self and spirit that



Mangifera indica



Ocimum tenuifolium



Sesbania grandiflora



Saraca asoka



Shamanic performance by
tribes in Manipur

Psychoactive Shamnic plants



Datura metal



Withania somnifera



Atropa belladonna



Cannabis sativa



Left to right : *Taraxacum officinalis*, *Altheaea officinalis*, *Valeriana officinalis* and *Cnicus arvensis*



takes us deep into the ancient secrets of the Earth. This way large number of plants are being conserved and maintained by indigenous people since ancient time.

Magical Herbalism (Witchcraft)

Plants conserved for magical healing

Thousands of years ago magical and mystical powers were ascribed to certain plants. It is no wonder, since today we still turn to plants for food, shelter, clothing, weapons, and even healing. The magic and mystical beliefs came from the plant's display of vital energy during its growth and seasonal rebirth. Witchcraft (magic) can be roughly defined as the power of a person to do harm or influence nature through occult means. Some plants used by witch for different beliefs are given as:

Smilax spp.

Mix with cinnamon and sandalwood powder and sprinkle around the premises to bring money.

Other names: Bamboo Briar.

Syzygium aromaticum- Flowers

Add to the bath water to aid in financial dealings of all manner. Can be used sprinkle an infusion to remove negative spirits.

Taraxacum officinalis- Root

The tea can promote psychic powers.

Can be an irritant.

Juniperus

Protection.

Fruits are hang over the door for protection from theft. The fruits powder is used as incense.

Altheaea officinalis (Flowers)

Place in a glass bowl for a magical natural pot. Used in protection rites and also to stimulate psychic powers. Althea can also be used as incense.

Valeriana officinalis- Root Cut

Known as an 'Herbes for Protection'. A cleansing herb can be used to cleanse a space before doing magical workings. Purifying use in purification bath.

Cnicus arvensis (Blessed Thistle)

Protection and Blessing. Use in all works of protection and blessing. Used in purificatory baths and in spells to break hexes.

Psychoactive plants used in tantra

The term "tantra" refers to a great many religious practices and beliefs. It is so difficult to define, that some religious historians argue the word has little meaning other than to mark extreme or taboo practices (Urban, 2003). The Sanskrit word and its Tibetan equivalent (rgyud) refer to the texts that form the scriptural basis for the religious movement, and also mean "continuum" or "lineage".

Despite the difficulty in defining the term, different tantric lineages generally share some characteristics. Many tantric practices must be authorized by empowerment ceremonies, which sometimes last for days or weeks and may carry life long practice commitments as a condition of receiving them (Parker and Lux, 2008).

Datura (*Dhatoora*) in Buddhist Tantra

Both *Datura stramonium* and *Datura metel* are well-documented in India and Tibet. In Sanskrit datura is known as *dhattura*, while in Tibetan the plant is *dadhura*.

Cannabis (*marijuana*) Buddhist Tantra

Like datura, cannabis has a long history in Asia. Scholars have argued that cannabis may have been first cultivated in China in Neolithic times and the plant has been well-known throughout India, Nepal, and Tibet for millennia. Cannabis is referred to in the Vedas as "source of happiness" and "liberator" (Touw, 1981).

Three grades of *Cannabis* have been recognized in India

Bhang, the least potent, consists of dried, cut tops



that are ground with spices to prepare a drink or candy.

Ganja is prepared from resin-rich flowers and tops of specially bred high yielding strains; it is usually smoked.

Charas, the most potent, consists of pure resin (also known as hashish) from these special strains and is also smoked.

Sacred groves

Concept of Sacred Groves is as old as the civilization where a patch of forest or water body is dedicated to local deities and nobody is permitted to cut plants or to kill animals or any form of life. These sacred groves vary in size from a few trees to dense forests covering vast tracts of land. The institution of sacred groves dates back to the pre-agrarian hunting-gathering phase of human civilization, and is known to thrive in most parts of India (Kosambi, 1962). It has been estimated that total number of sacred groves in the country lie between 100,000 and 150,000 (Malhotra, *et al.*, 1999). These are mainly distributed in the states of Andhra Pradesh (WWF, 1996), Bihar, Jharkhand, Orissa, Maharashtra (Gadgil and Vartak, 1981; Deshmukh *et al.*, 1998), Rajasthan, Uttarakhand (Sinha and Maikhuri, 1998), Tamil Nadu, Kerala, Pondicherry, Gujarat, Goa, West Bengal, and some north-eastern states such as Meghalaya (Tiwari *et al.*, 1998).

There are no records of existence of sacred groves in Uttar Pradesh and central part of India, except in some parts of Madhya Pradesh. India's first Inspector General of Forest Dietrich Brandis in his book *Forestry in India: Origins and Early Development* (1897) referred to the discovery of a forest of Sal (*Shorea robusta*) in 1864 near Gorakhpur (UP) in which a Mohammedan Saint belonging to a peculiar sect maintained a perpetual fire in the courtyard of the building he occupied. Nothing was allowed to be cut in this forest except the wood

required feed the sacred fire. This involved the annual cutting of a small number of trees—carefully selected among those that showed signs of decay (Pandey, 2000).

These groves are important today as they are banks of genetic diversity that have to be preserved and sustained. These areas often contain species that have disappeared from the regions outside the grove. This practice best demonstrates the nature caring and biodiversity conservation attitude of our ancestors. Though the sacred groves are a biological heritage and a system that has helped to preserve the representative genetic resources existing in the surrounding regions for generations, they are declining in numbers and size rapidly, due to modernization and urbanization. This calls for consistent efforts to conserve these pockets of rich biological diversity.

Conserving plants through Vastu Shastra

- Vastu Shastra being an ancient science deals with position of different rooms in residential buildings, factories and industries. Vastu can be applied on flowers and plants in the house. The plants play significant role in activating positive energy to our day to day life. Here, what Vastu says about plants is discussed.

***Ocimum tenuifolium* (Tulsi):** Should be planted in North, East or North-east and in the front of house.

***Ficus religiosa* (Pippal):** Should be planted near the temple or any other sacred places.

***Ficus benghalensis* (Vat):** Should be planted near the temple or any other sacred places.

***Epipremnum aureum* (Money plant):** May be planted inside the room as it gives good luck thouse.

Big tree: Should be planted in South and West direction of house and should not planted in front of house.



Small tree: Should be planted in North and East direction of house and should not be planted in North-east corner.

Spiny plant: Should be planted in open area and should not be planted in the house because it produces bad energy.

Rock garden: Should be planted In South-west direction and should not be in North-east direction

Creepers: Should be planted near the entrance door and southern wall of house.

Milky plants: Avoid plantation in the house as it may effect the health of family.

Conclusion

It is apparently evident from the above that the tribal people have contributed a significant role in conservation of the biodiversity, in environmental management and development process in and around localities of their natural habitat since the beginnings of civilization which have been very useful for eco-restoration and socio-economic development of the area. However, during recent times the plant diversity and tribal communities in India are in peril on account of percolation of modernization in tribal area, over-exploitation, and indiscriminate destruction of natural forest cover for meeting the multiple requirements of ever growing population. Consequently, many important plants species are becoming rare and critically endangered or some of them are even extinct. It is estimated that 10% of all species are currently endangered in India (Pandey *et al.*, 2005). These extinctions are

References

- Deshmukh, S., M G Gogate and A K Gupta 1998. Sacred groves and biological diversity: Providing new dimensions to conservation issue. Pp. 397-414. In: P.S. Ramakrishnan, K.G.Saxena and U.M. Chandrashekhara (eds), *Conserving the Sacred for Biodiversity Management*. Oxford and IBH. New Delhi
- Kosambi, D. D. 1962. *Myth and Reality: Studies in the Formation of Indian Culture*. Popular Prakashan. Bombay

irreversible and given our dependence on food crops, medicines and other biological resources, pose a threat to our own well-being. The great forests that still exist are a reminder of what paradise was once and what could soon be lost. Nevertheless, the situation is not too bad to overcome. The vast majority of important plants are still conserved by tribal people in the remote forests of different biogeographic zones of India and waiting attention towards their conservation and sustainable utilization. Our ancestors had left various religious beliefs for us towards nature and it was a very constructive device for conservation of plant biodiversity not only during their time but at present also.

Today, ethnobotany has become important and crucial area of research and development in resources management, conservation of biodiversity at genetic, species and ecosystem levels, and socio-economic development of the region. Thus, the indigenous people have managed and conserved the biodiversity of their localities. If the biodiversity of different biogeographic zones of country is to be protected and forest biota itself to be used for the benefit of mankind, the knowledge of tribal people about land-use and conservation practices should be used in strategic planning. The involvement of tribal communities is also need to be strengthened and expanded for cultural and mythological way of preservation of natural vegetation. The communication provides an account of religious and cultural ways of conservation of biodiversity for exploration of the possible ways and means of conserving sacred groves, individual tree, shrub and herb with the help of local communities.

- Malhotra, K C 1998. Anthropological dimensions of sacred groves in India: an overview. Pp. 423-438. In: P.S. Ramakrishnan, K.G. Saxena and U.M. Chandrashekhara (eds), *Conserving the Sacred for Biodiversity Management*. Oxford and IBH. New Delhi.

- Pandey AK, Patra AK and Shukla PH. 2005. Medicinal plants in Satpura Plateau of Madhya Pradesh; Current Status and



National Conference on
Forest Biodiversity : Earth's Living Treasure
22nd May, 2011

- Future Prospects. *Indian Forester* 131: 857-883.
- Pandey, D.N. (2000). Sacred water and sanctified vegetation: Tanks and trees in India. Paper presented in IASCP Workshop, Bloomington, 31 May-June 2000.
- Parker, R. C. and Lux. 2008. Psychoactive Plants in Tantric Buddhism Cannabis and Datura Use in Indo-Tibetan Esoteric Buddhism. *Erowid Extracts* - Number 14 /pp 6-11. June 2008
- Pushpagandhan P. (1994) Ethnobiology in India. *A status report*, Ministry of Environment and Forest, GOI, New Delhi.
- Rao R. R. 1994. *Biodiversity in India* (Floristic Aspects). Bisen Singh Mahebdra Pal Singh, Dehra Dun, India.
- Sinha, B. and R.K. Maikhuri 1998. Conservation through socio-cultural-religious practices in Garhwal Himalayas: A case study of Haiyali sacred forest. Pp. 289-300. In:
- Tiwari, B.K., S.K. Barik, and R.S. Tripathi. 1998. Sacred Groves of Meghalaya. pp. 253-263. In: P.S. Ramakrishnan, K.G. Saxena and U.M. Chandrashekhara. (eds). *Conserving the Sacred for Biodiversity Management*. Oxford and IBH Publishing Co. Pvt. Ltd
- Touw M. 1981. 'The Religious and Medicinal Uses of Cannabis in China, India and Tibet.' *J Psychoactive Drugs*. 1981 Jan-Mar; 13(1):23-34. p 24,25,28,28,28.
- Urban, HB. 2003. *Tantra: Sex, Secrecy, Politics, and Power in the Study of Religion*. University of California Press. 2003.
- Vartak, V. D. and Gadgil, M. (1981) Studies on sacred groves along the Western Ghats from Maharashtra and Goa. Role of Beliefs and Folklore. In: S. K. Jain (ed). *Glimpses of Indian Ethnobotany*, pp. 272-278. New Delhi.
- Zeven A.C. and Zhukovsky P.M. 1973. *Dictionary of cultivated plants and their centers of diversity*. PUDOC, Wageningen.