

## **INDIGENOUS KNOWLEDGE AND BIO-CULTURAL CONSERVATION: A CASE OF SAVARA-LODHA FROM WEST BENGAL**

Progya Ghatak

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Indigenous knowledge research is a recent trend in the sociological and anthropological domains. Hitherto, all developmental programmes initiated especially by the Government agencies have adopted a top-down approach, i.e., planning, distribution, and resources in-flow and perceptions flow from top to down. According to WHO, about 80% of the world's population depends on traditional medicine for their primary health care. Currently the Government of India, realizing the value of the country's vast range of medicinal plants, has embarked on a mission of documenting the traditional knowledge. The paper is to expose how the social and ecological status of the minority groups of tribal people is correlated with that of their age-old "forests of goddess" in the emerging threat of unsustainability syndrome. The growing pressure on land forced these tribal to acquire different skills for maintaining their livelihood. This type of production organization does not even break the community in-group feeling but on the contrary, the community control on social life, economic life becomes independent.

**Keywords:** Livelihood, Subsistence, Health, Ecology, Belief, Culture

### **INTRODUCTION**

Indigenous knowledge was conceptualized by Wang (1988) as the sum-total knowledge and practices which are based on people accumulated experiences in dealing with situations and problems. The general health related problems are very common and their prevention and care can be effectively done at the household level through indigenous practices involving the use of plants possessing medicinal properties. The identified plants have been found to possess properties which make them effective in prevention and cure of simple problems. Borthakur (1992) reported the use of thirteen plant species for the treatment of worm infestation in children and twenty one species during menstruation, pregnancy and child birth. As the use of these plants has been time tested, the dissemination of information and knowledge regarding their properties and use in prevention and cure health related problems can go a long way in increasing their use and also in preserving the wealth of indigenous knowledge. There enhanced use can be a step towards reduction in resources spent on other forms of medication. The plantation of plants possessing medicinal properties both at household and commercial level can help to ensure their availability for indigenous use in health care practices. Throughout the world, plants have been in continuous use in one way or the other for the Treatment of various ailments. In India, the sacred Vedas, which date back between 3500 B.C.

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*Address for communication:* **Progya Ghatak**, Assistant Professor, Social Anthropology, (NISWASS), National Institute of Social Work And Social Science. Bhubaneswar. Odisha. India, *E-mail:* Progyaghatak@gmail.com

and 800 B.C., give many references of medicinal plants. One of the remotest works in traditional herbal medicine is “Virikshayurveda,” compiled even before the beginning of Christian era and formed the basis of medicinal studies in ancient India. The local uses of plants as a cure are common particularly in those areas, which have little or no access to modern health services, such as the innumerable tribal villages and hamlets in India indicates that the dependency of traditional societies on the wild collections for subsistence needs (Campbell *et al.* 1997). The indigenous traditional knowledge of medicinal plants of various ethnic communities, where it has been transmitted orally for centuries is fast disappearing from the face of the earth due to the advent of modern technology and transformation of traditional culture. There is an urgent need to document the ethno biological information presently existing among the diverse communities before the traditional knowledge are completely lost (Rao 1996). Much of this wealth of knowledge is totally becoming lost as traditional culture gradually disappears (Hamilton 1995). Thus, there is now urgency for ethno-botanical research amongst aboriginal people (Maheshwari 1983). In recent years, traditional ethno-botanical studies have received much attention due to their wide local acceptability and clues for new or less known medicinal plants (Tripathi 2000). The indigenous knowledge consists of a vast array of knowledge regarding the use of plant material for health purposes. World Bank Report (1998) has shown twenty percent of medicines as contribution from ‘Indigenous Knowledge World’. Nearly seventy-five per cent of the 121 plants derived prescription drugs used worldwide were discovered following leads from indigenous medicine (Paul and Ramanathan 2002).

The tribal people of West Bengal constitute 5.6 percent of the total population of the state with as estimated in the latest census. There is fourty Scheduled Tribes and three Primitive Tribal groups found in West Bengal according to the latest official records of the state. Three Tribal communities namely Birhor, Toto and Lodha were declared as Primitive Tribal Groups in 1981. Some other tribal communities like Lodha and Kheria have also been claimed the name of Savara. The term Savara is used for the tribal population living in forest (Risley2005). Some of them have been maintaining social contact with mainstream by supplying forest produce to the Hindu neighbours. At present the term Savara was used as particular Scheduled Tribe population. Some other tribes also adopt the term to designate themselves as a branch of Savara. Thus the identity of Savara as an independent ST community of West Bengal creates confusion with another ST community of West- Bengal such as Lodha. The Lodha prefer to call them as Lodha–Savara or Kheria-Savara (Bhowmick 1963). In fact, they are two distinct endogamous tribes with different traditions and customs. They live in the interspersed among other non tribal communities of south West Bengal. They are conventionally designated as hunters-gatherers, who have lost their language and good number of traditional customs and rituals.

## Materials and Methods

Data was collected from rural folks through the use of participatory techniques regarding aches and pains, eye infection, fever, weakness, dog bite, boils and wounds and hair fall. Their past practices regarding the use of medicinal plants were recorded. The information pertaining to use of medicinal plants was documented for the purpose of the study. Three step approach was used to document the information: Information was elicited through key informant interviews and focus group discussions. Participant observation helped in mutual sharing and learning. Transect walk and note-taking were used to seek in-depth information and document the first hand information in the rural setting.

### *Size of Sample Population*

The sample survey comprises seven villages belonging to two sub-divisions of the two districts of south Bengal namely North 24 Parganas and Paschim Medinipur. The Savara and Lodha are the smallest tribal community distributed in the South Bengal. The concentration of the selected tribe is not spatially clustered and not found in a particular geographical region or locality. They are spatially diffused and live in tribal areas interspread among the tribal and non-tribal communities without having well defined territorial distribution pattern. Two tribal communities of West Bengal, namely Savara and Lodha are specifically selected for the research problem. The total 1024 sample population of Savara and Lodha were selected for the present study (Table 1).

TABLE 1: DISTRIBUTION OF SAMPLE POPULATION BY GEOGRAPHICAL LOCATION

<i>District</i>	<i>Subdivision</i>	<i>Village</i>	<i>Tribe</i>	<i>Population</i>	
				<i>Number</i>	<i>Per cent</i>
North 24Parganas	Bongaon	Sundarpur	Savara	141	13.8
		Amdhop	Savara	323	31.5
		Nathpur	Lodha	161	15.8
PaschimMedinipur	Jhargram	Sirishchak	Lodha	211	20.7
		Kadamkanon	Lodha	94	9.1
		Khayarsuli	Savara	48	4.7
		Lalbazar	Savara	46	4.4
Total	2	7	2	1024	100

## Results and Discussion

### *Livelihood Pattern*

The Savara and Lodha were involved around eight types of primary and secondary livelihood pattern. The occupations are mostly seasonal in nature. Daily and agricultural labour, fishing, collection of medical herbs were exclusively done by the Savara of North 24 Parganas whereas collection fuel wood and daily labour work are only done by the Lodha of Paschim Medinipur. The Lodha are not as

skilful in agriculture as like peasant neighbours. They worked mainly in the paddy field and the wages are very less compare to other labour work. Daily labour work is the prime source of livelihood of the Savara and Lodha men. The nature of works are constructing road, building construction, soil digging, brick transferring, cannels construction work. Fishing was one of the prime sources of livelihood of the Savara. The forest produces are very important source of income for the Savara and Lodha womenfolk. Non-timber forest produces provides greater employment opportunities to the Lodha women. Sometimes the unmarried teenage girl also works with her mother as maid servant. This is a new trend found among the teenage girls that they prefer to work as maid servant rather than going to forest and collect fuel wood. The brides whom are married from outside the village prefer to work as housemaid rather than agricultural or daily labour. The present generation of male and females started losing interest in traditional occupation. The major occupations found among them are given in Table 2.

TABLE 2: LIVELIHOOD TYPES OF SAVARA AND LODHA

<i>Types of Occupation</i>	<i>Savara</i>			<i>Lodha</i>		
	<i>Total per cent</i>	<i>Male per cent</i>	<i>Female Per cent</i>	<i>Total per cent</i>	<i>Male per cent</i>	<i>Female Per cent</i>
Daily Wage labour	21.3	15.6	5.7	29.7	18.9	10.8
Agricultural Labour	11.5	5.7	5.8	10.4	5.8	4.6
Fishing	18.5	18.5	—	4.6	4.6	—
Collection Of Medical Herbs	20.5	5.7	14.8	—	—	—
Collection of Fuel Woods	6.5	—	6.5	28.4	10.2	18.2
Liquor Selling	9.6	6.3	3.3	9.5	5.1	4.4
House Maid	9.8	—	9.8	7.6	2.1	5.5
Service	3.3	—	3.3	9.8	3.4	6.4
Total	100	51.8	48.2	100	50.1	49.9

### ***Practicing Ethno Medicine***

With the advent of indigenous knowledge perspective, there is a radical shift in the mind set from viewing native systems of thought as naïve and rudimentary, even savage to recognition that local cultures know their plant, animal and physical resources intimately. The idea that traditional ethno medicine as science, we must ask how this can be so: scientific principles are constructed through scientific theory and practice where as tribal healing is rooted in the latent knowledge structures and livelihood practices of local people. Both kinds of knowledge are grounded in social practice but very different kinds of practice, based on different categories and assumptions, involving particular experiences, values and cultural definitions. Atran (1999) maintains that indigenous knowledge structures are like scientific theories in that they generalize from concrete experience, but unlike theories they are not systematic formulations of laws or methods. Rather, they involve the

adjustment of forms of human livelihood to the environment in which they are embedded. The idea that indigenous knowledge must be science because it leads to empirical results consistent with Western Science is based on a concept of nature as a “pre given” and “science” as the only means of discovering its universal laws . However, the nature itself is not perceptually ‘given’ but ‘constructed’, in the microscope or in the forest, by ‘perceptually guided action’, the practices that make up our experience .Attempting to force indigenous knowledge into the mould of “scientific principles” is to reduce an objective reality independent of human experience. Tambiah (1990) attests that, in reality, rather than an empirical ‘folk’ science conforming to universal principles of ‘real’ science, what we have is multiple contrasting orderings of reality. People construct their worlds by their knowledge and live by it, and therefore Anthropology of knowledge should ask how these varieties are variously produced, represented, transmitted and applied. Collection of medical herbs is exclusively done by the Savara of Paschim Medinipur and North 24 Parganas. They used to collect around twenty five varieties of medical herbs. The list of the name of the medical herbs, their part used to cure disease is listed in Table 3.

TABLE 3: USE OF DIFFERENT PLANT SPECIES BY THE SAVARA

Sl.N	Vernacular Names	Plant species	Parts used	Ethnobotanical claims
1	Ankula	<i>Alangium salvifolium</i>	Leaves	Applied drop by drop twice for a week against conjunctivitis
2	Agora	<i>Argemone mexicana</i>	Seed	Skin against eczema
3	Iswarjata	<i>Asparagus racemosus</i>	Root	Spermatorrhoea
4	Kulthia	<i>Atylosia scarabaeoides</i>	Seed	Indigestion
5	Kachu	<i>Bauhinia variegata</i>	Root bark	Reducing cholesterol of the body
6	Puruni saga	<i>Boerhavia diffusa</i>	Leaves	Kidney problem
7	Arakha	<i>Calotropis procera</i>	Root/Leaves	Used in any other wound
8	Kumbhi	<i>Careya arborea</i>	Root	Against joint pain.
9	Atundi	<i>Combretum decandrum</i>	Leaves/Stem	Against acne.
10	Nirmuli	<i>Cuscuta reflexa</i>	Whole plant	Treatment of Hydrocele
11	Saloporni	<i>Desmodium gangeticum</i>	Leaves	Against typhoid and other fever
12	Rai	<i>Dillenia aurea</i>	Root bark	Stomach disorder
13	Khamba-alu	<i>Dioscorea bulbifera</i>	Tuber	Against rheumatism.
14	Aswatta	<i>Ficus religiosa</i>	Stem bark	Against rheumatism.
15	Anantamul	<i>Hemidesmus indicus</i>	Root	Against eczema.
16	Basango	<i>Justicia adhatoda</i>	Root	Against piles
17	Putus	<i>Lantana camara</i>	Root bark	Blood dysentery
18	Kamini	<i>Murraya paniculata</i>	Root	Against viral fever.
19	Gangaseoli	<i>Nyctanthes arbortristis</i>	Stem bark	Against cold, cough and fever.
20	Chintamula	<i>Plumbago zeylanica</i>	Root	Against leucorrhoea.
21	Chirarita	<i>Scoparia dulcis</i>	Leaves	Against sore throat
22	Kulathio	<i>Tephrosia purpurea</i>	Seed	Against post natal complications
23	Bichhuati	<i>Tragia involucrata</i>	Leaves	Against asthma.
24	Dhatuki	<i>Woodfordia fruticosa</i>	Leaves	For irregular menstrual

Both men and women involved in such collection. The aged members have more experienced in identification of herbs and therefore the involvement in much more than compare to the youths. The Savara inherit rich traditional knowledge about the flora. These crude herbal medicines are based not only on traditional knowledge but also on rituals and beliefs. Presently, very few elders and women in the Savara community practice the collection and selling of medical herbs.

### ***Tribal Medicine and Belief System***

Tribal religion is mostly animistic although the influence of Hinduism is seen in some religious practices. Invoking divine beings for blessings is a common practice at the time of agricultural operations. In the area of health too, dependence on divinatory forces is distinctly visible in their curative practices. In many tribal societies knowledge related to these aspects is treated as esoteric and is associated with certain specialized roles, inherited by certain people, most notably, the shaman. The medicine man or shaman is called as *Deheri* among the *Savara and Lodha*. . Just as supernatural wrath casts its spell occasionally in the form of varieties of illnesses, the shaman looks at the cure for these illnesses as located in the very supernatural beings who cause them. Thus, the etiology of the disease and the cure of the disease are located in the same source, i.e., the supernatural. The shamans are powerful stewards in a symbolic and metaphysical domain which is central to 'supernaturalism' of the tribal communities. By supernatural favour, the shaman is believed to possess the gift of healing as well as the knowledge about medicinal plants. The shaman treats disease essentially by religious means, through sacrifice and prayer. Herbs have healing power because of the prayers recited and rituals performed by the shaman. The etiology of sickness varies – human intention and behaviour, either of the patient or of others in the patient's life-world, result of deviant behaviour, disrespect towards elders and refusal to meet obligations of reciprocity with neighbours and relatives etc., Misdemeanor results in soul loss or illness. Also, economic or other success or refusal to share good fortune provokes envy and sorcery among neighbours. Etiology, diagnosis, treatment and prognosis among the tribals of Eastern Ghats show more similarities than variations. The curing ceremonies are 'socially reconstituting and reoriginating' (Kapferer, 1996). The shaman seeks to restore the patient's relationship to the physical, metaphysical and social worlds – to correct the imbalance that is the root cause of illness. The recovery of good health and good relationship with fellow community members is achieved by one or more curing ceremonies. Unlike the linear cure-for-disease equation of modern (allopathic) medicine, the local medicine practiced by shamans (Harper, 1957) who use herbs is located in a more complex 'socially reconstituting and re-organizing' context. Shamans base their practices on holistic epistemologies of illness and curing handed down through generations (Kakar 1982). In their therapeutic interventions, shamans seek to manipulate the bodily, spiritual and

social domains at once. They do not sharply dichotomize between organic and supernatural causes of disease – all sickness has both aspects, though in varying degrees, and both aspects must be treated if the patient is to be cured. The ethnography of a wide variety of tribal communities in the South Bengal in general suggests a native cosmology in which the notions related to metaphysical balance is a key concept. It is the belief that “continued human existence is predicated on the maintenance of cyclic cosmic balance that both affects and reflects earthly conditions” in terms of “harmony between the physical and metaphysical worlds” (Fischer, 1999: 480).

***Baram: Sacred Grove Worship and Ecological Conservation***

*Baram* is the tutelary deity of the Lodha. It is the deity of village. This is a common festival among the Lodha. A common *Baram* than were found in every village. They have one fixed priest for this purpose and assistant priests are taken from person who acts as any community who are participating in this festival. *Baram* is residing in a grove of Sal tree and Neem tree. *Baram* appears in human form but is taller than average man. His body is covered with long hair all over. His eyes are usually broad and open. He holds a long axe in his hand. At dead of night, cracking and grating sounds are heard from the woods. If he becomes furious or feels disturbed, tigers visit the village or elephants may rush into the locality. He also saves villagers from epidemic disease and appears in dreams to the village priest to foretell the future of the village. They mainly worshipped on the last day of the month *Chaitra* (march-April) and also last day of *Pous* (December-January). The elderly women of the village cleansed the shrine with cow-dung paste and put white dot marks of rice paste on the front wall of the shrine. The *Baram-than* is a heap of mud under the shade of a common tree where there are at least twenty four horses of burnt clay arranged typically. These horses (one pair of big size, five pairs of middle size or six pairs of comparatively smaller size) are arranged in a particular pattern. These horses are believed to be the representative of the *Baram* deity. In fact, these are votive figure offerings. The worships continued for at least two hours and black goats, cocks and hens of different colures are scarified. They are also offer *haria* (indigenous rice beer) to the deity with sweets and fruits. A fair is held in this occasion. Local non tribal vendors and tribal people participate with their goods to sell in the mela. The mela continued till late in the night. A puja committee is elected for every year in the village. This committee controls all the functions and collection of subscription from the people to celebrate this festival. *Baram* is one of the important religious festivals of the Lodha and Savara of Paschim Medinipur. The agricultural land holders or small agriculturist among all of the tribal groups of the village celebrate jointly this festival. *Baram* is integrated in their religious life and maintaining village solidarity. The elements used in the *Baram* and their way of performance close to Hindu Caste society of the locality.

They become nearer to Hindu religious Caste society. It signifies their status in Tribe-caste peasant continuum.

These *Thaans* serve the religious need of the people no doubt, but it also serves the protection of their environment. These places are considered sacred and auspicious as it is believed that some supernatural spirits haunt these places. So the common people normally avoid these places, except on religious occasions and never cut wood or collect tree branches from those localities. Thus a vast tract of land is protected from destruction. The basic philosophy behind these groves among the communities is keeping control of the community over the patches of land. The existence of totemic belief also plays a significant role in maintaining the bio-diversity. Several tribes claim to have mysterious or mischievous relationship with some physical object, namely plants, animals, etc. A totem, wrote Frazer in his first essay, "is a class of material objects which a savage regards with superstitious respect, believing that there exists between him and every member of the clans an intimate and altogether special relation. The connection between a person and his totem is mutually beneficent, the totem protects the man and the man shows his respect for the totem in various ways, by not killing it if it be an animal, and not cutting or gathering it if be a plant".

The community employs all the efforts to keep it free from destruction, primarily by dedicating it to a deity. Social scientists believe that in the absence of written laws, the religion played a vital role in protecting these patches of forest in wilderness. Ecologists call them "social fencing". They normally collect these plants from the nearby reserve forest. All have medicinal values and the people are aware about their preventive capacity against many common ailments. They take special care to preserve the particular area, where these herbs and shrubs grow naturally. Thus, along with meeting the communal need, it also helps in preserving the natural environment.

### ***Ecology, Health and Subsistence***

The man-made environment has a sociocultural component, which is responsible for its range of diversity. The mutual interdependent on nature and man play a significant role in the existence of society. It is a fact that diversity in nature exists due to human culture, but it is equally correct to say that cultural traditions helped in conserving the natural diversity; both are the two sides of a coin. In a small tribal society, the community life or man-nature interaction may easily be focused. Conservation of environment has been regarded important for development. Similarly, human societies have since their inception been developing mechanism of managing the natural resources to meet their needs and greed, according to the values and norms, that have grown among the members of procedures became embedded in the social structure of each community, and, helped its members to manage the natural resources on a sustainable basis. Moreover, many species of



plants and animal life are interdependent for their sustenance, growth and development. Such mutually beneficial interdependence is called a symbiotic relationship.

Thus, environment plays an important role in the formation and development of society and culture. The environment is everything around us, man being the central point. To maintain his living, man has directly utilized the natural environment for food, clothing, shelter, medicine and relaxation. With his knowledge and ability, he has also made use of the environment to build machinery and various constructions for his own comfort. Moreover, he has used society as a tool to pass on knowledge, thought and behaviour to himself and following generations in order to live in society happily and usefully. The environment, natural, man-made and social are deeply and intricately related, creating a relationship often referred to as the "Eco System".

The tribal people or indigenous people all over the world have accumulated knowledge over time, which in traditional set up allow them to live in balance with their environment and this help them to adjust with the natural resources for their livelihood. Further, such knowledge system, which is conceptualized as Indigenous Knowledge System (IKS) is handed down through oral tradition as well as through various sacred rituals, cultural practices and beliefs in which they remain embodied. During field survey in most of the tribal and non-tribal villages, it is revealed that each village has common property in the form of forest, sacred bushes, temple land, sacred grooves etc. Besides each household in the villages has individual bamboo and pine grooves surrounded by green vegetation and agricultural fields. The physical environment in most of the villages reflect more or less same environmental picture. They are getting necessary requirements from their natural surroundings. Various sacred places play an important role in maintaining ecological balance in most of the communities. Moreover, forests have been the traditional habitat of tribal throughout the world. Tribal have a symbiotic relationship with the flora and fauna of the forest. The value of the forest for them has been for survival, satisfaction of their wants and not for commercial exploitation. Because of it, the tribal have an inbuilt concern about nature and its importance in the tribal customs and traditions.

The Integrated Tribal Development Programme is also too elusive to need elucidation. If tribal sustainability is subject to unprecedented threat, how is it possible to imagine the sustainability of the tribal *Sacred Groves* preserved on religious taboos and sanctions? Irrespective of the necessity of cultural diversity, like biological diversity needed to sustain the existence of diverse species in the tiny little spaceship of life, some cultural traditions or traits act as the suicidal input for the culture itself as they are maladaptive instead of being adaptive. The maladaptation of the cultural practices leads to the extinction of the cultures in which people are born and brought up. The "terror of taboos" is not the monopoly

of the tribal communities. In tribal society, tradition, traditionalism and traditionalization are prioritized over detraditionalization and dynamism that is why tribal people fail to come out through breaking the persistent vicious cycle of social and ecological unsustainability.

### **Conclusion**

As the indigenous people are living at the mercy of nature they are to develop various conservative measures for the security of the own community. Depending on environment and cultural values, the procedures of utilization vary from community to community, but it is also a universal fact that human beings are always aware of balancing ecosystem and maintaining harmony with nature. Man live in a variety of ecosystems, warranting both biological and cultural adaptations. The adaptive mechanism and the knowledge of utilizing the natural resources is the key factor of surviving the human society. The study focuses that the knowledge system or precaution which the indigenous people emphasize is entirely mean for ensuring larger social security. The various sociocultural beliefs and practices emerged in course of development of human society no doubt reflects the unwritten laws for their action. Different communities maintain their indigenous ways to manage the community resources in terms of food, storage, wild herbs and shrubs for their benefit. The sacred conservation practices, superstitions, religious taboos and prohibitions no doubt play an important role in protecting the natural resources and thereby managing the ecosystem. It has also been revealed that their knowledge about different aspects and elements from their traditional environment is also reflected in their folk literatures. Thus, to have a greater understanding of the entire process of preservation and management, the various aspects i.e., cultural, historical and political factors need analysis, what anthropologists refer as holistic approach. It is the responsibility of a social scientists and anthropologists to explore the indigenous process, because there rest the basic philosophy of survival mechanism of society. The indigenous people may not be aware of the scientific reasoning behind each action and it is the job of the social scientists to put scientific meanings into what may be referred as traditional wisdom.

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