

Folk and Indigenous Knowledge in Environmental Sustainability: A Study in the Context of Odisha

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Abstract

Technological advances and rapid industrialization have affected our economy, environment, and society at large. In other words, the most important aspects of sustainability have become the victims of the symptoms of modernity. The indigenous knowledge system which revered the environment as a divine form and advocated a harmonious living with one's surroundings, never promoted any deviation that might affect the environment adversely. Tribal people have lived amongst Nature from time immemorial and made it an integral part of their lives. Their concept of environment is formed as an organic whole that sustains and nurtures. There is not a single event in their lives which is not related to Nature. The presence of the environment in their collective consciousness is best understood through an analysis of their cultural heritage. In this context, the indigenous knowledge system of Odisha, particularly the tribal wisdom regarding sustainability should be studied in detail to build a framework for combining conservation with development goals. This concept becomes more pertinent as the indigenous people are victims of environmental degradation and are generally blamed for this degradation. The assumed gap between indigenous knowledge and scientific practices fuels the argument. The paper proposes to explore the ideas of the indigenous people of Odisha towards sustainability. The paper aims to study their views as reflected in their folklore, myths, legends and traditions. The study is likely to dispel certain misconceptions about the indigenous people who are assumed to be apathetic towards sustainability and thus incongruous with the global discourse on development.

Keywords: Indigenous knowledge system, sustainability, folklore, environment, conservation

Sustainability, with its modern connotations, is a relatively new concept that has entered the academic world. According to the

Oxford English Dictionary ‘sustainability’ is the ability to continue economic, social, cultural, and environmental aspects of human society and the nonhuman environment. In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs¹.” The term gains much significance considering the fury of Nature in various parts of the world-the recent horrible examples in Uttarakhand, Himachal Pradesh, Sikkim and Assam. Geneva-based Internal Displacement Monitoring Centre reports that natural disasters triggered 2.5 million internal displacements in India in 2022 (The Hindu, 18 May 2023). Moreover, the havoc created by rain in and around the urban centres has made people ask a common question- “How much risk can be taken in the name of development?” In this context, this paper aims at exploring the idea that the usual life lived by the indigenous people can be useful in protecting and nurturing a major aspect of sustainability-that is environment. The study tries to highlight the way of life as lived by the indigenous people of Odisha and suggests that it can be taken as a model for sustainable development.

The adivasis generally live in the forest, hills and relatively isolated regions known as a rule by different names meaning either the people of the forest and hill or the original inhabitants. Their lives are in harmony with nature and the environment. The entire span of their life revolves around nature in a significant way. Their symbiotic relationship with the environment which is generally rich in biodiversity is central to their existence. Therefore they have protected and preserved these resources for so many years down in the history of humankind. However, they are blamed for their ‘ecological ignorance’ by their so-called civilized counterparts. Thus, it becomes pertinent to reason whether this allegation can be countered by analyzing how they interact with their natural environment. The socio-cultural life of the indigenous people is hugely dependent on nature; thus creating an ‘ecological imperative’ in the larger order of necessities.

Xaxa gives two basic states of dependence by the indigenous people-existential and cultural (102-106). This dependence can be considered to be ‘constructive dependence’ which turned into a ‘destructive’ one due to industrialization and other such aspects of

development (Fernandes 147-48). The dependence on forests for life and livelihood is a vital part of indigenous people. From time immemorial, they have been amidst nature and exploiting it constructively to survive. Apart from shifting cultivation, their dependence on forest produce for food, medicines, fodder, house building and implements is noteworthy. Their dependence on food varies between 50 to 80 per cent (Fernandes 48). There are about 3900 plant species which are used by the tribal people as food². Further, they depend on the forest produce to make their various tools and equipment including household items, agricultural tools and weapons. Apart from this, they depend heavily on the forest produce as far as their knowledge to treat their diseases is concerned. The rich biodiversity in India is known for the ethnobotanical study of plants. There are about 7500 species used by the indigenous people for their medicinal value³. Moreover, the indigenous people depend on the forest to earn their livelihood. Firewood, lac, *mahua* flower and fruit, *kendu* leaves and fruit, bamboo etc. are the forest products that give the indigenous people a major portion of their income. Thus, the entire life of the indigenous people is intimately connected with the forest in various ways.

In the same way, the indigenous people depend on the forest for agricultural purposes. Their traditional method of cultivation is known as '*daahi*' or '*jhum*'. This traditional method of cultivation is criticized as it is done by cutting down trees and rendering the land infertile after two or three cycles. It is also argued that this practice leads to soil erosion. The following extract from an essay published in *Utkal Sahitya* talks about the *Juanga* community of Odisha practising this method of cultivation. The author Sri Prabasi⁴ advises to discontinue the practice of shifting cultivation and resort to the modern methods of cultivation;

Daahi is not there in any other Garhjaat except Paallahadaa. The subjects here are mad for *daahi* which is one of the reasons for the backwardness of the place. *Kamaana's* method of cultivation is the monopoly of the Bhuyans, Juaangs, and Kohlas. *Daahi* cultivation belongs to the primitive races like Soaras, Malhaars, and Bhumijas. The primitive people have been cultivating without paying any tax using these methods till now. Chasaas also used to do *daahi* chaasa; they have stopped for the last two or three years considering the loss in this. The peasants have lost their interest since that time. For *daahi* cultivation

method, Sal and other precious trees are cut down and piled knee-deep on a little bit of land. When the trees dry up, they are burnt down, which burns about eighteen inches of the soil. After rain the burnt land is cultivated and seeds are sown.

Daahi is of two types- *Kangu daahi* which is cultivated at the foot of the hill and *dhaana daahi* which is cultivated in plain land. In *Kangu daahi*, they cultivate Kangu, and then cereals in the first year followed by different crops in the subsequent years. In *dhaana daahi*, paddy is produced for two years and then it is stopped. In *daahi* cultivation, there is plenty of harvest during the first two or three years; then the land becomes completely infertile. (pp 224-26)

However, several scholars have also supported shifting cultivation as a practice evolved in response to the physiographical character of the land'.⁵ It is argued that shifting cultivation helps the environment. In this context, the observation by Aryal and Choudhury is pertinent. They argue that shifting cultivation can be beneficial in several ways. They support this traditional practice as a supplementary to the modern methods of cultivation.

The disappearance of shifting cultivation will mean the simultaneous loss of the management approaches inherent in the practice. In our determination to replace shifting cultivation, we are inadvertently 'throwing the baby out with the bath water'. We need to ensure that the strengths of shifting cultivation – maintaining inter- and intra-specific crop diversity and the principles of fallow management – are incorporated and assimilated into 'modern' agricultural development and into forestry- and landscape-management policies and practices. Ignoring lessons from the management practices of shifting cultivation – practices that evolved across the entire time in which humans have cultivated the Earth – could prove to be too high a cost in the context of our future, and the threats of climate change. The world, and especially its many marginalized communities, can ill afford such a cost. (p 287)

Apart from their dependence on subsistence, indigenous people also protect the environment for cultural purposes. Nature is omnipresent in their customs. Their festivals are often associated with natural environment. Moreover, they lead a community life as distinguished from the individualistic life of modern people. Duryodhan Swain gives a vivid picture of the Santal festivals in Odisha. His essay⁶, 'Santali Parbaparani' depicts the community life of the adivasis as opposed to the individualist society of the Odias. Here the writer argues that Santal festivals are community based whereas

Hindu festivals are more individualized. This contrast brings out the community life of the festivities. Like the Hindu practices, most of the Santali festivals are associated with agriculture. The growth of Santal life is simple and musical in the midst of natural beauty. Their lives are a playfield of several festivals which are associated with different agricultural forms. Whereas their counterparts in the plains observe certain festivals individually at their homes, they celebrate the festivals collectively. A majority of their festivals are connected with nature in one way or the other. Duryodhan Swain observes;

Erosim is the first agricultural festival. Before sowing seeds in June, they celebrate this festival for three days continuously.

Harialasim is another festival. In July the seeds turn into plants. Santals feel ecstatic to see green paddy fields with the hope of a good harvest. Thus, they celebrate the *Harialasim* festival. Puddling of paddy cannot be done without observing this festival. Here Santals thank Gods for the fruit of the labour of June. Only the village deities are worshipped during this festival and the prayers are the same as those during the *Erasim* festival. This is their puddling festival without their folk dance.

Then comes the harvesting festival. The early paddy ripens in August and a type of wild grass 'Gundlu' also ripens during this time. No one is allowed to cut *Gundlu* before this harvesting festival. This festival is known as *Ilagundli*.

Sohrai or *Bandhna* is the greatest Santal festival. On the first day of the festival, all of them gather near water and sing in chorus. Their song describes the beauty of the creation and the world with its wonders. Then they eat and drink together.

Another important festival is '*Shalei Puja*' or '*Pani Parba*'. This festival continues for three days. Their New Year starts with the advent of spring. It is said that they do not use any new leaves of new flowers till the completion of this festival. Sal leaves, *Mahua* flowers and fruits, and other forest products are their main sources of livelihood. Before the completion of the festival, women cannot wear any new flowers on their chignons. Anybody breaking the law is punished by the priest. (pp 608-10)

In the stories and folklore of the indigenous people, we come across trees, animals and birds. Mr. C.H. Bompas has translated some of the stories and published a book named *Folklore of the Santal Parganas*⁷. In the story 'The Fox and the Crow', the fox betrays its intimate friend Crow and eats its flesh. In another story, the fox makes a hen its sister and in the end, kills its entire family and eats

them. There are also other animal characters. There is a description of a race between an elephant and an ant despite the dissimilarity of strength and intelligence. In another story, the friendship between a tiger cub and a calf has been a consistent one.⁸ Even in their myths, nature and its aspects assume great significance. The creation myths are there in almost all races. The origin myth always depicts a tale about the creation of the universe and the ancestors of a particular community. Santals believe that human beings first originated in the distant eastern part of the earth. Initially, the earth was covered with water and there was soil under the water. Then God created some water animals like crocodiles, fish, tortoises, and prawns. The myth also connects with birds, *Mahua* Tree, and earthworms.

Oraons are described as a progressive tribe engaged in agriculture and rural crafts in Odisha. They as well as other tribes have certain pre-wedding customs that are intimately connected with nature. The setting of *marwa* is an important custom in which nine sal saplings are planted in the courtyard. Branches of bamboo, *sidha*, *bhelwa*, mango, and mahua are also planted. The mango suggests the perpetuity of descendants, the bamboo symbolizes progeny, the *sidha* stands for marital fidelity, the *bhelwa* offers protection from the evil eye, and the mahua symbolizes the love between husband and wife (Xaxa 105).

Mahendra Kumar Mishra observes that adivasis have an intimate relationship with nature. To justify this he gives the example of *Mahul* or *Mahua* tree⁹;

The Mahul tree is an indispensable part of the socio-economic life of the adivasis. They prepare liquor from its flower and also collect and sell it. The boiled flowers are eaten. The fruit is called 'tola' fruit and its peel is called the 'tola peel'. They eat the curry prepared by boiling such raw peels whereas they eat the ripe peels as they are. The dried raw tola peels are also preserved for many days before cooking them as a curry which is called 'shola'. Further, tola oil is extracted from Mahul flowers. Adivasis apply this oil to their bodies and use it for cooking. They also earn something by selling this oil which is believed to cure skin diseases. The epiphyte on the Mahul tree is used to prepare medicine. The tree is also used as firewood.

During wedding ceremonies, branches of *Mahul* trees are erected as good omens. Sitting on two *Mahul* branches the bride and the groom

have their bath on the third day of their marriage. This shows the intimate connection of adivasi life with the *Mahul* tree. (pp 169-70)

The worship of nature in her various forms is another reason for the adivasis to go to the lap of nature. Like the people of the Vedic age, they have prayed to nature because they get so much from nature. They protect nature because they are completely dependent on nature for its vital role in their socio-economic and cultural life. Mishra opines that the hymn that prays for plenty of rain, plenty of harvests, the spread of vegetation all around, and the welfare of the kingdom is a worldview that is inspired by the adivasis.

Self-sufficiency is another aspect of tribal life which is connected with sustainability. Indigenous people get all their requirements in their surroundings and live a satisfied life. In this regard, the following observation by Tripathy and Mohapatra is noteworthy. The authors also highlight how the so-called civilized pursuit of lifestyle takes away their traditional ways leaving a space;

They (adivasis) are far behind us as far as industry and technology are concerned. In this modern age, they cultivate in the ancient style by burning the forest or hillsides, and by using those outdated tools without any knowledge of manure or fertilizer. Somewhere they believe that animal sacrifice will yield a better harvest. In comparison with the caste system of India, it is evident that they don't depend on a particular occupation. They are their washermen, barbers, and carpenters, and they do not depend on others. Thus they do not have many labour divisions and they do not have scarcity. Moreover, there is no extra production as the greed and opportunity for hoarding are nowhere to be seen.

In several tribes, the dormitory for unmarried boys and girls (*dhangdas and dhangdis*) is a useful organization. They learn all the basics of a healthy life-social rules, economics, law, religion etc.-and there is self-learning here. Thus they live comfortably keeping pace with the time. They also select their life partners here. The fine arts like singing and dancing flourish here and continue. However, due to external pressure, they reject it as an 'uncivilized tradition'. As a result, they have moral degradation and their happiness and liveliness are fading away; their confidence is disappearing.¹⁰ (pp 500-06)

The above discussion shows the unique interaction of the environment with the indigenous people's flow of life in the mountains and the forests. This consciousness and intimacy with Nature creates a symbiotic relationship between the indigenous

people with nature. A survey among 4 PVTGs (Particularly Vulnerable Tribal Groups) by SCSTRTI in Odisha, shows that about 90.8 % of households are highly dependent on the forest for deriving essentials of their livelihood¹¹. The survey further says that the indigenous people treat the objects of flora and fauna with respect for their ritual significance. They believe that any kind of ignorance or insult to these objects would lead to loss of property and lives. This veneration for nature is a significant aspect of tribal life and it contributes towards sustainability immensely.

Indigenous people's contribution to sustainable development is generally woven around their basic lifestyle. Living in harmony with nature which helps in protecting biodiversity and conserving natural resources including water resources, respect for community living and collective decision-making, regenerative agriculture and self-sufficiency are the aspects of indigenous people's lives which may show us the way to sustainable development. Moreover, indigenous practices and knowledge play a vital role in resource management and conservation. Scientific documentation of indigenous knowledge is the need of the hour. Odisha has rich biodiversity and accordingly has a large repository of indigenous knowledge systems that should be analysed and made available for further research. The Ministry of Tribal Affairs, the central government, and both the local and the state administrations should work in an integrated way to minimize the adverse effects of development and create a sustainable society for all. Involving the local communities in the protection and conservation of the environment will bring tangible results.

Notes

1. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf> (accessed 20.09.2023)
2. <https://www.fao.org/3/xii/0186-a1.htm>
3. <https://www.fao.org/3/xii/0186-a1.htm>
4. *The Primitive Race of Odisha Juanga*. Published in two parts in *Utkal Sahitya*, Vol.-8 No.-8, 1904 and Vol.-9, No.-7, 1905. The author used a pen name Sri Prabasi. The translation is mine. All the translations from '*Utkal Sahitya*' are from my PhD thesis.
5. P.K.Bhowmik quoted by *Xaxa in his State, Society, and Tribes: Issues in Post Colonial India*, Pearson, 2008, p. 104

6. Duryodhan Swain. "Santali Parbaparbani (Festivals of Santals)", *Jhankar*, Vol. 02, No. 7, 1950. The translation is mine. All the translations from 'Jhankar' are from my PhD thesis.
7. Cecil Henry Bompas. *Folklore of the Santal Parganas*. David Nutt, London.1909.
8. Duryodhan Swain. "Santali Galpa (Santal Tales)", *Jhankara*, Vol. 03, No. 02, 1951. All the translations from 'Jhankar' are from my PhD thesis.
9. Mahendra Kumar Mishra in his *Loka Sanskruti Parikrama* published by Grantha Mandira. 2017. pp 169-170. Translation mine
10. Kshetrabasi Tripathy and Lakshman Kumar Mohapatra. "Odishara Parbatiya Jati (The Hill Tribes of Odisha), *Jhankara*, Vol.03, No. 06, 1951. Translation mine. All the translations from 'Jhankar' are from my PhD thesis.
11. https://repository.tribal.gov.in/bitstream/123456789/74427/1/SCST_2014_research_0338.pdf

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