

Relation between Forest and Tribal people: An Anthropological Study of South Bengal

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Abstract: *Forest is the natural resources as economic asset. Natural resource should be utilized by all without hampering the diversity. Conservation of natural resources should be kept in mind while using it for the future generation. The indigenous people are mostly associated with the natural resources. They are mainly dependent on the forest product for to sustain their livelihood. It is the general theory that no one can look after the forest and environment better than the ethnic people because their survival and identity depends on it. They are considered to the best conservationists as they have managed their cultivated lands and conserved their forest products for many generations. They are also often engaged in shifting cultivation i.e. agricultural system in which plots of land are cultivated temporarily, then abandoned and allowed to revert to their natural vegetation while the cultivator moves on to another plot. Slash and burn is one of the primitive practices of cultivation. Moreover the indigenous peoples depend on the collection of forest products such as wood, honey, wax, timber, fruits and other items to earn money and also to lead their daily livelihood. This paper aims to identify the relationship between forest and the indigenous people. The study revealed that a strong relationship has been found among the forest and Tribal people. (214)*

Keywords: Forest, Natural Resources, Utilization, Preservation, Tribal, livelihood

1. Introduction

India has a diversify features which attracts all towards itself. The six relief features are present together in this country. Due to the immense fertility of the soil agriculture is the largest sector followed by the forest sector. Approx.300 million tribal people depend solely on forest product for their livelihood. Apart from the indigenous people about 70 percent of the rural population depends on forest products to meet their daily needs of fuel consumption. Many families in this 21st century also depend on forest products as a source of income ranging from selling of woods to non - timber forest products or other constructive materials.

Forest division is the second largest land use after agriculture. In remote forest fringe villages about 300 million tribal and other local people depend on forest for their subsistence and livelihood and about 70% of India's rural population depends on fuel wood to meet its domestic energy needs. For about 100 million of them, forests are main source for livelihood and cash income from fuel wood, non - timber forest products (NTFP) or construction materials. More than half of India's 70 million tribal people, the most disadvantaged section of society, subsist from forests. [1]

After China, the second populated country is India consisting of 68 million people belonging to 227 ethnic groups and comprising of 573 tribal communities. These people owe their origin from six racial stocks namely - Negroid, Proto - Australoid, Mongoloid, Mediterranean, West Breachy and Nordic exists in different part of the country (Pushpgandhan). Since long time these tribal people live close in the vicinity of forest and conserved their own culture and bio diversity. The indigenous people depends

directly on forest products not only for fuel but also for their consumption of food either raw products like fruits and edible plants and sometimes they cooked the food they collect. The indigenous people have affinity towards the forest as they live the forest since a long past and they believe that if they break out from their traditional culture the God will punish them. In India, there are 45, 000 species of wild plant out of which 9, 500 species are ethno botanically important species. Of these 7, 500 species are in medicinal use for indigenous health practices. About 3, 900 plant species are used by tribal as food (out of which 145 species comprise of root and tubers, 521 species of leafy vegetables, 101 species of bulbs and flowers, 647 species of fruits), 525 species are used for fiber, 400 species are used as fodder, 300 species are used in preparation and extraction of chemicals which are used as naturally occurring insecticides and pesticides, 300 species are used for extraction of gum, resins, dyes and perfume. [2]

Present situation of forest in India

The land area of India totals 328.7 million hector of which 142.5 million ha. (43.3%) is under agriculture, forests cover 76.5 million ha. (23.27%). According to the State of Forest Report (FSI 1997), the actual forest cover is 63.34 million ha (19.27%) of which 26.13 million ha. are degraded. (NFAP 1999). However, forest area is being rapidly depleted due to the heavy pressure of population on land. Having about 2.5% of world's geographic area, India at present is supporting 16% of planet's human population and 18% of cattle population. The forest cover has been reducing both in quality and extent. The degradation is not only indicated by crown density decline but also soil erosion, lack of natural regeneration. A recent World Bank report estimated that due to degradation and deforestation the loss has been up to one million hector per year during 1970s to 1980s. The depletion of the forest resources has aroused the passion of the rural

poor in particular and the general public. As such, there have been spontaneous popular movements. Conservation and protection of forestland has become a top priority for the country's development.

Joint Forest management (JFM)

JFM provides an opportunity for managing forest resources for better productivity and availability of forest produces. Forest provides direct benefits (physical products such as wood, food, medicine, fuel, fodder, fiber, organic fertilizers and host of other products) and indirect and attributable benefits for environmental enrichment. As an inseparable component of the total land use systems, forestry has significant inter - relationships with agricultural, pastoral and food - producing systems. Through soil and water conservation, and maintenance of soil fertility, forest provides critical support for agricultural development. In addition, forest based small and cost effective enterprises can help increase in rural employment and raise the income and living standards of rural people including forest dwellers and indigenous groups. The quality of life in rural areas depends on the rehabilitation of forests, which in fact, is principal aim of Joint Forest Management. [3]

In 1972 at Arabari in Midnapore district of West Bengal the village forest committees were formed and in turn, provided with usufructs of all NTFP, first preference for employment, plus 25% of net cash benefit from the sale of Sal (*Shorea robusta*) poles. The material benefits which are potentially sustainable were the clear motivation. This kind of joint efforts/collaboration between Govt. and people led to evolution of Joint Forest Management (JFM) programme in India, which essentially is a participatory management tool or strategy.

The potential of NTFPs for poverty alleviation is very important. The rural poor and tribal communities collect various kinds of products throughout the year to sustain their livelihood. Activities related to NTFPs provide employment during slack periods in the agricultural cycle and provide a buffer against risk and household emergencies. In fact sustainable NTFP management is a key to the success of JFM [4].

Forest and tribal

According to the 1971 Census Report, a majority of the tribal lived in the countryside and relied mainly on agriculture. From an economic point of view, the tribes could be classified as semi - nomadic, the jhum cultivators and the settled cultivators, living completely on forest produce. Forests are the main source of subsistence for them. They collect their food from them; use the timber or bamboo to construct their houses; collect firewood for cooking and in winter to keep warm; use grass for fodder, brooms and mats; collect leaves for leaf plates; and use *harrebehra* for dyeing and tanning. The forest regions are also inhabited by non - tribal, who depends on forests for fuel, fodder and so on. [5]

In West Bengal, since Independence, forests have been the bone of contention between the forest department and the

forest dwellers, most of whom are tribals. In forest dwellers contend that they, by virtue of being native people, have the right to use forest trees for their livelihood. One of their complaints is the cattle trenches dug around the forest areas prevent the free flow of water into their arable land. [6]

Ecological Problem

India's national forest policy has not been successful in protecting the ecosystem. According to a UN estimate, 50 percent of the total land area in India is seriously affected by water and wind erosion. The displacement of fertile soil is estimated to be around 6 billion tons a year, thus depriving the country of a vast amount of total plant nutrients.

The past experience shows that the forest policy seeks to protect forest wealth from forest dwellers, not from the unscrupulous contractors. In estimating the loss caused by the disturbance of the ecosystem, the dangers posed to the lives and economy of forest dwellers by floods and landslides are ignored. The deforestation program gives top priority to quick - growing species that can be used as raw material for forest - based industries. Even ecological considerations are often overlooked.

2. Review of Literature

According to Das .N et al.... (2014) focuses on the use of non timber product by the tribal people of karkatia village in Purulia district. Due to the lack of agricultural land, unfertile soil, lack of irrigation and poor communication forced these indigenous people to depend completely on the forest ecosystem to satisfy their daily needs. These indigenous people collect and sell different types of non -timber forest products (NTFPs) for their domestic purpose and also for commercial purposes. These indigenous people seasonally collect the seasonal forest product to satisfy the needs for their food, fodder and also medicine. [7]

According to Rai .R et al. (2013) focus on the importance of the forest product among the tribal people of Bundu block in Ranchi district of Jharkhand state. The study is based on the personal interview of selected number of people to collect the date. The study reveals the average size of forest based direct paid employment among sample population and the mean income earned from these activities. [8]

According to Sadashivappa .P et al (2006) this paper focus on the role of non - timber forest products (NTFP) in the rural household economy and the demographic and economic factors determining the participation behaviour in forest gathering in the dry deciduous forests of Karnataka, South India. It is noted here that availability of women and child labour played an important role in the participation decision and income related matter which are based on collection of forest gathering by them. The closely knitted agriculture and forestry sectors calls for a multifaceted approach for forest management programmes, keeping an eye on the development of the farming sector of the locality.[9]

As per the article by Kumar. V (2015) ... focuses on the livelihood of the indigenous people living in the protected area and the different factors influencing the extent of their

dependence on the forest. Non wood forest products have a strong potential to create large scale employment opportunity which helps in reducing the poverty and increase empowerment of indigenous people in the backward district of the country. This study is taken in the backward region of Gujarat regarding the importance of NWFP's in determining the income of the indigenous people. [10]

According to Hegde. R et al (2000) this study is undertaken in the Mudumalai Wildlife Sanctuary and the adjoining Sigur Plateau in the state of Tamil Nadu, India. Its focus on the focus on the addressed the importance of forests in the household economy of indigenous communities. Its main objective was to quantify the forest dependence of local people, and assess to what extent restrictive biodiversity conservation strategies would affect their livelihood. [11]

According to Meher. R (2010) ...This paper aims to focus on the problem due to the economic liberalization, privatization and globalization model of development in India which results in depriving the tribal people and other agriculture dependent poor people of their traditional means of sustainable livelihood by promoting the unregulated growth of mineral - based industries in the tribal regions of India. The mining and other industries that are taking over the resources of the ecosystems of these tribal people and poor peasants fail to provide them with an improved and sustainable means of making a living.[13]

Role of Forest Rights Act, 2006

In India, tribal are considered to be the weaker and marginalization and deprived section in the society. They are also deprived from their own natural resources. The tribal economy mainly depends on the forest products which they collect for their survival. The use of the forest product by the tribal peoples led to the extinction of thousand of natural fauna and flora. The aim of the Act is to strengthen the local self governance power. Beside the above mentioned object of the Act other object is consider the issues relating to conservation and management of the natural resources in India. Further the Act emphasis on the poverty problem along with livelihood security of these tribal peoples. [15]

Beside this there are other development activities initiated by the Government from time to time to protect and promote the tribal peoples who stayed in darkness for many years like Building of schools, road facilities, safe drinking water, anganwadi system, minor canals, water pipe lines, fair price shops etc.[16]

The Forest Conservation act 1980 restricts the encroachment of the adivasis and the tribal people in the forest area all over India. The Act recognizes the tribal as the enemy of the forest, which is considered as a injustice approach done towards the tribal people. The Scheduled Tribes and Other Forest Dwellers (recognition of forest rights) act, 2006 was enacted with the objective to empower the local self governance. Moreover the Act also addresses the growing concern of poverty alleviation amongst the tribal people India along with question of livelihood security is. The Act is applicable to the whole of India. The Act is further amended in the year 2012. [17]

Objective of the Study

The objective is the root or way of any scientific research. The study is required to promote the true impact of the utilization of forest products by the indigenous people of South Bengal and the ways to preserve the resources by this indigenous people for the future. With the passage of time several Acts have been passed from time to time which restrict the indigenous people to use the forest products in the 21st century.

- 1) To know the method about the utilisation of natural resources by the indigenous people;
- 2) To know about the laws passed by the Government imposing the restriction in utilisation of the forest products;
- 3) To know how relationship between indigenous people and forest resources with preservation for future generations;
- 4) Finally, some policy oriented suggestion has been made for the policy maker of government forest department;

3. Methodology

The data has been collected from the various villages of the South Bengal. For this study interview, case study, observations method has been applied. It is a short term study; the qualitative or quantitative data has been collected to prove our thought or analysis. Some earlier studies have been followed to find out some previous knowledge through various literatures. The study area was South Bengal Districts like Purulia, Bankura, Jhargram and Paschim Medinipur. The study unit was village, the sampling technique was random sampling and the criteria was those villages are situated vary vicinity to the forest. The first author conducted the fieldwork.

Table 1: Districts, blocks & Village wise Study area

South Bengal Districts	Name of the Block	Studied villages	No, of household
Purulia	Bagmundi	Bereria	18
		Bhupatipally	46
	Jhalda I	Mahultanrd	13
		Ghatihuli	12
	Bandwan	Popo	23
		Pargora	27
		GhagraHaludkanali	32
Bankura	Ranibandh	Routora	10
		Sarengsukra	26

Jhargram	Binpur II	Sarisabasa	36
		Dadra	26
		Sankhabhanga	22
		Amlasole	15
		Chakadoba	45
	Nayagram	Parasia	145
		Bansiasole	55
		Bnaksole	62
	Binpur I	Bhumidhansole	63
		Purnapani	23
Paschim Medinipur	Salboni	Jugdiha	25
		Buriso	30
	Medinipur Sadar	Lohatikri	89
		Muchiberiya	45
		Fulpahari	43
Total household covered			931

4. Findings of the Study

A micro level study has been conducted to know the indigenous way of tribal life or their livelihood. Most of the tribe of the South Bengal inhabited in the forest covered areas; their socio - economic life depends on forest. Since independence, with the passage of the zamindari Abolition Act. In 1955, the central and state governments assumed control of all private forest lands that now came under the jurisdiction of state forest departments. The new Indian state adopted the European model of industrial development exemplified by the Soviet Union and Western Europe. The dominant socio - political elite thus attempted to forge a socialist democratic state, assuming that within new paradigm of an equitable state, inherent traditional socio - cultural, economic and religious hierarchies, and mechanisms of control and disparities would dissipate. It was also assumed that the rigorous agendas for industrialization would benefit and 'uplift' the socio - economically marginalized segments of the society. Within the new economic context, the decree intended to optimise forest utilization for industrial revenue [18]. The present study has been conducted south Bengal districts like Purulia, Bankura, Jhargram, Medinipur. The survey was very vicinity

to the forest. The main broad theme is to protect the indigenous way of life among the tribal. In south, we have found most of the tribal houses are situated in the forest land. The reality is some of them have forest patta and few of them no patta record. The Lodha/ Sabar and Birhor are forest depended indigenous people. According to the Lodha/Sabar member of the south Bengal "Forest is our economic resources and generation wise we are depending forest produce collection, the children of our families went to forest from the age of five to collect minor forest produce". They are also further added "medicinal plant, fire wood, furniture wood, various leaf, root, and fruit, mushroom, potato, Bowla, skin of tree, creeper and hunting animal and bird are our forest product. . We are surviving them with full utilization of forest product day by day. " We have found about twenty type of minor forest produce, which has high economic value and natural food value of the consumption products. The study revealed that most of the families depend on fire wood collection (68 %) and about 37 percent collect shal leaves as economic resources. Significantly, about 28 percent collect Mahul fruit, this product has high economic value. About 21 percent families earn money through selling honey; it is one major value added forest product. (Table 2)

Table 2: Forest product collection and utilisation

Name of the forest produce	Number of family	Utilization
Fire wood (NFTP)	636 (68 %)	Most of the families are utilized as selling, very few families are used as only fire wood
Wood product for minor domestic	125 (13.43%)	This wood is used to prepare handle of axe, spade, khat, plough etc. These items for personal use and sometimes for selling.
Shal leaf	340 (36.52%)	Few families are used as direct selling and most of the families are prepare plate for selling.
Kendu leaf	150 (16.11%)	After bringing this leaf to the home at first make bundle, then it was kept in sun shine for drying, it is used as direct selling for preparing <i>Biri</i> .
Mahul fruit	256 (27.50%)	Most of the families are collect for direct selling; few families are used to prepare liquor.
Piyal fruit	120 (12.89%)	For selling
Date leaves	133 (14.28%)	For selling
Kendu fruit	125 (13.43%)	Consumption and selling
Kaju fruit and seed	185 (19.87%)	Consumption and selling
Potato	175 (18.80%)	Only consumption
Bawla	175 (18.80%)	Only consumption
Shak & green vegetables	116 (12.46%)	Only consumption
Haritaki fruit	50 (5.37%)	Only Selling
Shal gum	84 (9.02%)	Only selling
Honey	192 (20.62%)	Only Selling
Various root for medicinal use	56 (6.01%)	Only Selling

Various plant for medicinal use	76 (8.16%)	Only Selling
Babui grass	135 (14.50%)	Prepare rope for selling and domestic uses
Various creeper (<i>chiharlata</i>)	172 (18.47%)	<i>Chiharlata</i> used as rope making and other creeper used as selling
Skin of various trees	163 (17.51%)	Only Selling
Animal	53 (5.69)	Only consumption
Bird	65 (6.98%)	Only consumption

Table: 3 Opinion of the exclusive forest villagers on Minor Forest Produce collection

Village name	No of villagers who are responded	No of villagers who are satisfied	No. of villagers who are not satisfied
Muchiberiya	39 [15.48]	(30.49) 25 [9.92]	(8.24) 14 [5.55]
Raoutora	13 [5.16]	(2.44) 2 [0.79]	(6.47) 11 [4.37]
Parasia	101 [40.08]	(39.02) 32 [12.70]	(40.59) 69 [27.38]
Bansiasole	21 [8.33]	(3.66) 3 [1.19]	(10.59) 18 [7.14]
Banksole	40 [15.87]	(15.85) 13 [5.16]	(15.88) 27 [10.71]
Mahultanred	13 [5.16]	(1.22) 1 [0.40]	(7.06) 12 [4.76]
Sarisabasa	12 [4.76]	(3.66) 3 [1.19]	(5.29) 9 [3.57]
Bhumidhansole	13 [5.16]	(3.66) 3 [1.19]	(5.88) 10 [3.97]
Grand total	252 [100]	(100) 82 [32.54]	(100) 170 [67.46]

() represent percentage out of column total [] represent percentage out of grand total

Diminishing marketability of the forest produce and lack of value addition is probably also the reason of such response. One of the main MFP is sal leaves and a collector hardly get Rs.50 - 60 per 1000 leaves but finished product as plate of shal leaves can cost Rs.1.00 per plate i. eRs.160 - 170 for 1000 leaves. This profit of value addition can easily be provided to the leaf collector by providing them a plate making machine. Forest produce other than shal leaves like honey, mushroom, medicinal plant parts are hardly been explored in a organized way and remain largely unexplored. We have found village wise forest produce collection and who are satisfied and not satisfied that FPC is one of the major economic resources. About 68 percent are not satisfied to collect forest produce and sold it as well as entering into the forest and deforestation. According to them the Lodha/Sabar are not a member of JFM and sometimes they are arrested by the forest guard. When we come to the specific villages, in the Bhumidhansole village the 13 families collect Dudhilata (a creeper) from the forest, after that prepare a bunch and sold it Rs.10/- . One day a person collect some amount of Dudhilatam, from that amount they are prepared about ten bunch. So, end of the day they are received Rs.100/- . As a result most of them are not satisfied to sell the forest produce. Their opinion is the middleman sold it in high price. According to them” Forest is our life, our dissatisfaction to the rate of the product not to the minor forest production. We will protect our forest from deforestation and build up an eco - friendly relationship with the forest.

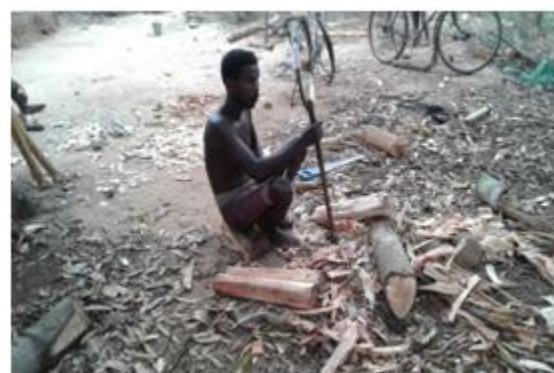
5. Discussion

Tribal have been living in the forest ecology and that has shaped their life and determined the kind of society they presently have. Most of the tribal people gain their tradition knowledge from forest. Dwelling amidst hills, dense forests, coastal areas, tribal over the state have gained precious and vast experience in combating environmental hardships and leading sustainable livelihoods. Their wisdom is reflected in their water harvesting techniques, indigenously developed irrigation channels, construction of cane bridges in hills, adaptation to desert life, utilization of forest species like

herbs, shrubs for medicinal purposes, meteorological assessment etc. Such invaluable knowledge of theirs needs to be properly documented and preserved lest it should get lost in the wake of modernization and passage of time. According to the JFM local people will be the member of this committee, but we have not found any single village, where a Lodha/Sabar & Birhor are the member of the JFM. We are collect opinion from eight villages regarding their satisfaction on selling of MFP; most of them are not satisfied from each village. (Table 3)



After collection of Piyalfruit



The Lodhas are used the forest product for furniture



After collecting *Shall* leaf, they dried in the Sun shine and kept it in the net.



Dried Babui Grass kept in the Courtyard

Case study on Chiharlata rope

According to the 1981 census about 90% Birhor families were engaged in rope making as primary occupation. During that time the Birhor prepared rope from the *ChiharLata*, it was collected from forest by the male member because this lata has been found in the big tree as *porgachha*. The *chiharlata* ropes sell by the Birhor himself. They are selling the *chiharlata* ropes to known neighbours among the ethnic community. They were made cow & goat's rope, to pick up water from well this rope also used, to prepared khat this rope also used.

6. The End Note

The study concludes that forest products among the indigenous people of South Bengal. The indigenous peoples till today stay in complete isolation and are fully depends on the forest products for the daily life and also for their income. It is found that these indigenous people are always gone to forest whole years. According to the forest rights act.2006, the tribal have every right to entire the forest as and when required. Only honey is high economic value and it is found throughout the year in the forest. The forests are most vital natural resources for the people and tribal as well as day to day life are very much related in this study village. Forest produce is their traditional natural resources to smooth running the livelihood. Their economy was subsistence in nature. Moreover, a number of small tribal

groups are completely dependent on the forest for their livelihood. Medicinal plant and non timber plant are the main tradition resources to survive their life. It is observed that the Lodhas have strong knowledge of medicine is either on the verge of extinction or being destroyed. In environment science studies deforestation, soil erosion, pollution, disaster management, human ecology, bio - diversity, and man animal conflict are also would be cover to know the environment history. So, forest is a resource to develop the village and livelihood of the condition of the human beings. Environment ecosystem is always balanced by natural resource es which are found in our forest. The results of the present study reveal the ecological effects of commercialization of forest products and the constraints of sustainable extraction due to the change in the tribal culture. Research findings indicate that the biological properties of many tropical species face the stage of extinction. The transaction of tribal culture from substance agriculture to commercial exploitation has higher risk on forest ecosystem sustainability. High biodiversity forest inhibits commercial exploitation if tribal culture remains static. The change in tribal culture with limited biodiversity, high population densities and clustered distribution of tribal dwellings make commercial exploitation of forest simple. No longer has the younger tribal population depended on forest for their livelihood but they tasted opportunities outside the forest.

To protect the forest and bio - diversity need some recommendations and law related policy.... These are as follows.....

- 1) All tribal should be includes in the joint Forest Management (JFM) committee as permanent member, who are the known person to protect the forest.
- 2) Follow the guideline of JMF and Forest rights Act, 2006
- 3) Should be stopped the tree cutting and de - forestation.
- 4) Jointly organized a awareness camp regarding the law of forest protection in the forest vicinity villages of the South Bengal.
- 5) Various Acts are passed from time to time by the Government to protect the forest. In spite of that lacuna are there in proper implementation, so effective steps must be taken by the Government which will both protect the interest of the indigenous people who solely depend on forest products for their consumption and earning and also restore the products that are utilized by the people.

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