## Implementation of Forest Rights Act in Odisha: An anthropological understanding to upgrade the livelihood of Tribal people

Dr. Nilakantha Panigrahi <sup>1</sup> Rashmirani Balabantaray <sup>2</sup>

#### ABSTRACT

Ethnic groups are the organic components of Odishan society. Broadly they can be classified as scheduled tribe, scheduled caste, other backward castes and general caste group. For centuries they have been living in and around the bounty of natural resources. Their intangible cultural heritage influences their life and living. Since independence many of these communities who are popularly known as the Scheduled groups in India and also in Odisha have been provided with some preferential benefits. Government, as the major agency to formulate welfare policies has been implementing various development programmes for their upliftment. In spite of this, it is observed that over the decades these indigenous communities have been losing control over their livelihood sources like land and forest resources. As a result, the livelihood resource base and living of these communities have been marginalized.

With this background the paper first critically explains the concept of ecological anthropology and ecology of indigenous groups. Secondly, it briefly describes the life and living of the people of Odisha, particularly of tribal people covered under Fifth scheduled areas of the State. Thirdly, it gives an overview of governance of forest and land resources of the state and the rights enjoyed by tribal communities over them. Fourthly, it provides a brief description of some of the features of the Forest Rights Act 2006. Fifthly, the paper attempted to review the status of implementation of FRA, its regional variations in the achievements in the state of Odisha. Finally, the paper while looking at the prospects and the challenges of implementation of FRA argues that in order to upgrade the livelihood, the forest dwellers are to be integrated with various stages of the implementation of both individual and community claim settlement processes of FRA within a time frame.

The paper reviewed the secondary data on the implementation of FRA upto June 2011 collected from ST SC Development Department website. In addition, the authors have used the major observations of two different workshops organized one by Government

<sup>&</sup>lt;sup>1</sup> Faculty in Anthropology, NKC Centre for Development Studies (ICSSR Centre), Samanta Vihar, Bhubaneswar-751013, E-Mail: nilakantha.panigrahi@gmail.com, Phone-09437920834 (M).

<sup>&</sup>lt;sup>2</sup> ICSSR Doctoral Fellow, PG Dept of Women Studies, Utkal University, Bhubaneswar, Odisha.

and another by the civil society during the month of August and December 2011 respectively. The analysis of the data has been made on the basis of categorization of districts into certain categories based on the concentration of tribal people. The districts of Odisha have been grouped into three categories of region. They are viz: scheduled area districts, partially scheduled area districts and non-scheduled area districts. The data on the achievements of the implementation of FRA in each district have been categorized and analysed according to scheduled area, partially scheduled area and non-scheduled area of the state.

## CONCEPT OF ECOLOGY AND ECOLOGICAL ANTHROPOLOGY

During last couple of decades one finds plethora of materials in social sciences relating to ethno-ecology, ecological anthropology, environmental economics, human ecology and political ecology. Such areas of specialization describes a type of research that is interested in deepening our understanding of how human have been affected by their natural environment through time and conversely how they have influenced their natural environment and with various results (Worster, 1988a, 290-91). The term ecological anthropology came during 1960s by the thinkers like Alfred Kroeber and Julian Steward. The concept of cultural ecology influenced the concept of ecological anthropology, but one finds a shift from the concept of 'cultural population' to the 'ecological population'. The ecological anthropology is known for its functionalism and systems theory. For anthropologists role of cultural practices and beliefs in enabling human population to optimize their adaptations to their environments and in maintaining undegraded local and regional eco-systems are important. Rappaport (1971) used the word 'ecological population' as an 'aggregate of organisms having a common pattern of distinctive means by which they maintain a common set of material relations within the eco-system in which they participate'.

The native landscapes are created through human actions, including environmental features as legacies of past action both intended and unintended. Whether these are patches of highly fertile soil, islands of distinct vegetation types or areas of land degradation, an understanding of land use histories and the intersection of social, institutional, political, and economic processes over time is essential. Crumeley (1994:6-7) defined landscapes as the material manifestation of the relations between humans and the environment, which 'represent another means of introducing geographical space into anthropological analysis, where it can serve as the laboratory of past human choice and response in which the effects of environmental changes can be palpably understood. An ecological understanding of landscapes involves analysis of the knowledge systems, productive practices, and religious rites that natives have developed over the course of centuries as a means of interacting with and gaining sustenance from their biophysical environments.

The 'cultural materialism' of Harris and the 'ethno-science' of Berlin Conklin explained that the indigenous groups have traditional ways of categorizing resources, regulating their use and preserving the environment. Ethno-ecology is the traditional set of environmental perceptions i.e its cultural mode of the environment and its relation to

people and society. Vayda and Walters (1999) maintain that ecological research should not make prior judgments concerning the causes of environmental change, but must be willing and able to assess all possible factors of biological and social origin. In anthropological and ecological research different kinds of generalizations are obtained from different levels of analysis (Bennett, 1976). In biological term the distinction are made between 'eco-system people' whose subsistence is tied with particular local ecosystems and 'bio-sphere people', who drew their support from resources obtained at a planetary level (Dasmann, 1988). Human ecology research on global climate change considers the impact of these changes on regional, bio-cultural systems (Gunn, 1994) and the human causes of these changes (Stern et al,1992). The landscape, ideas, values and traditional management systems are identical with the natives.

When one looks at the changing scope of ecological anthropology, one finds that the earlier ecological anthropology was based on cultural relativism, while the new ecological or environmental anthropology blends theory and analysis with political awareness and policy concerns. This led to the new field of applied ecological anthropology and political ecology (Greenberg and Park, 1994). Orlove (1980) while reviewing the literature on ecological anthropology noted the processual ecological anthropology as a stage gradually supplementing neo-functionalist approach. Within the processual ecology human system ecology (Bennett,Ibid) emphasized on human ecology as human behavior. Anthropological political ecology established relation with geography and political economy in which concepts such as claims, rights, power and conflicts predominant. Anthropological human ecology established relation with biological sciences and concepts like energy flows, knowledge systems, subsistence and adaptation.

However, ecological anthropology many time face methodological difficulties to understand geological, biological and cultural temporalities developed over millions of years. In new ecological anthropology everything is on a larger scale. The focus is no longer the local eco-system. The outsiders are the key players in local ecology. With the changing scope of the subject ecological anthropologist need to pay attention to study the importance of external organizations and forces like government, NGOs and the market that are nowplaying claims to local and in the regional eco-systems throughout the world.

The fact remains that sustainable development aims at culturally appropriate, ecologically sensitive, and self regenerating changes. It has to mediate among traditional native ethnoecology, environmentalism and developmentalism. Sustainability has become a *mantra* in the discourse of planning of conservation and development projects but clear cases of successful sustainable development are few. The biggest difficulty with applying cultural theory to ecological resources management is the paucity of good ethnographic data by and large not observed during last fifty years particularly in Indian context. The resource management information is usually focused on the resource itself and not on the users. Rare or no data is available on non-technical parameters like group affiliations and/or the concept of cultural ecology of the people and the area. It is popularly observed that the role of research institutions and Universities in building ethnographic data pool is quite inadequate or non-contributory for last couple of decades. Again with the increasing user pool various cultural biases also increases, as a result the application of one management

strategy became inconsistent and problematic to another. Therefore, the development of an ecological theory that incorporates both natural and cultural dimensions within a single broad paradigmatic framework is more urgent than ever.

#### **ODISHA: PEOPLE AND AREA**

Last decade of 20th Century has witnessed a visible shift in the development planning. consumption of goods and services. It also talked of accessibility of all people particularly of minority communities like Scheduled Tribes (STs), Scheduled Castes (SCs), women and other deprived sections of the population. Such approaches in the development planning primarily aimed at removing those conditions of social deprivation and discriminations that restrict capabilities of, and deny opportunities for participating in normal economic and social activities. These social activities include attending school at the primary level, having access to quality health care, safe drinking water, sanitation, and gainful employment of an assured nature which connotes the processes of widening people's choices as well as various levels of their well being.

The tribal population recorded as Hindu has never been referred to *Jati*/or caste norms as organic components of the Hindu society. Odishan society incorporates the major divisions or categories, which are hierarchically, ordered as Brahmans, Kshatriyas, Vaishyas (Traders), Sudras (Servents), and the *Asavarna jatis* (Exmp Untouchable Castes). As a part of the larger caste structure of Indian society caste groups in Odisha are functionally inter-dependent and are thus organically related. Besides, there are different tribal communities who are socio-culturally nearly autonomous. These tribal communities have economic ties with caste population. They constitute the folk segment of Indian society and are in constant interaction with village communities or peasants, the latter are in interaction with the urban literates.

In accordance with the provisions of Article 342 (1) of the Constitution of India, the President of India notifies a community as Scheduled Tribe on the recommendation of the concerned State Government for being eligible to enjoy Constitutional safeguards and protective discriminations. Next to undivided Madhya Pradesh, Odisha has large concentration of tribal population in the country. There are a total of 62 S.T communities identified in Odisha. Tribal communities constitute the base of Odishan society. About 45 per cent of the total land area in Odisha has been declared as Scheduled Area. Excepting the coastal belt and few in western as well as in central Odisha, rests of the districts of the State are either partially or fully Scheduled Area. Out of 30 districts of Odisha the districts largely dominated by Scheduled Tribes are Malkangiri, Mayurbhanja, Nawarangpur, Rayagada, Sundargarh, Koraput and Mayurbhanja, while the districts partially dominated by tribal communities include Kalahandi, Balasore, Ganjam, Keonjhar, Sambalpur, Gajapati, Nuapada and Kandhamal. The non-scheduled districts include 16 district spread over coastal and central part of the state.

Tribal communities living in the State range from numerically small communities like *Chenchu, Bonda, Juang, Didayi*, to large communities like *Munda, Santal, Kondh, Oraon*,

Saora and Bhuyan. The tribal communities of the State can be categorized as huntergatherer-nomads living in hilly and forest areas, hunter-gatherer and shifting cultivators, simple artisans, settled agriculturists, industrial and urban unskilled and semi-skilled workers (Behura, 1990). In Odisha out of 62 Scheduled Tribes, 13 groups have been declared as Primitive Tribal Groups. They are: Bonda Paraja, Chuktia Bhunjia, Didayi, Dongaria Kondha, Hill Kharia, Juang, Kutia Kondh, Lanjia Saora, Lodha, Mankiridia, Birhor, Paudi Bhuiyan, and Saora. These vulnerable communities have differences with each other, which are reflected in their political, economic and socio-cultural life. However, these communities have similarities as regards their dependency on the nature for livelihood and in adherence to nature-spirit complexes. It is observed that few of these vulnerable communities like Santal, Munda, Birhor, Kondh and Paudi Bhuyan are also found beyond the State boundaries and are distributed in the States of Jharkhand, Chhatishgarh, Assam and West Bengal. The tribal economy by and large is based on natural resources and overwhelmingly subsistence-oriented. Circulation of goods is largely based on barter. However, changes have been observed on their ownership and use of natural resources, adoption of cash crop or multi-cropping etc.

The attention on the tribes in transition has neither re-examined the notion of internal dynamics in tribal society, nor freed itself from the Indian sociological overemphasis on castes. Virtually many tribes are shifting towards *jati* characteristics, a movement which has greatly accelerated as communications have improved and external forces have impinged more closely (Mandelbaum,1956). It is true that most of the major tribal communities have had interactions with the Hindus, and other religious groups, in the process of which changes have appeared in the cultural and structural complexes of the tribes, the castes and others. Such a transition is very well present, but justifying this change may be inadequate and misleading, unless it is associated with the universal dynamics of the primitive societies and the contradictions and negations within the tribal society. More or less tribal communities are still living as culturally living entities through there are many changes observed in their political economic life and living.

## GOVERNANCE OF LAND RESOURCES: CORPORATE RIGHTS OVER LAND

The land has always played a major role in the life of the tribal communities of the State. The management of land by these communities has long been carried out through corporate rights which are firmly rooted in their customs and practices. The vulnerable tribal communities by and large are adhered to forest based economic pursuits like food gathering, hunting and shifting cultivation. They have rudimentary technologies, gender-based division of labor and pre-capitalist modes of production, consumption, distribution and exchange system. The strong corporate social ties not only influences their mind but also provides guidelines to build the gamut of their entire social organisation and structural arrangements like *Mutha*, *Pirha*, *Mandals*, *Praganas* etc.

The shifting cultivation i-e slash and burn cultivation practised by many of these vulnerable tribal communities has been a major economic activity. The authority for the distribution of the shifting cultivation patches has been vested in the hands of the village elders with

no property right on land, except in those areas where *rayatwari* tenure was imposed on the tribal people along with taxes and tributes, by the local chiefs. The growth of population, restricted government forest policies, commercial plantation, deforestation, land alienation, non-availability of suitable hill slopes and availability of alternative livelihood has reduced the cycle of shifting cultivation from 10-15 years to a short period of 5-2 years gap which is more pernicious (Panigrahi, 2006). The practice of shifting cultivation among these communities is being criticized from various corners and all have attempted to wean away tribals from this practice. Unlike today land had never been treated as a commodity in earlier social formations and these tribal communities have rarely encouraged the individual proprietorship of land rather this has been foisted on them. In Independent India, with the introduction of various laws and regulations, lands become a commodity under individual proprietorship, which treats land either as a means of survival or shelter.

Another dimension of tribal land problem is its alienation by the non-tribals for individual interests and by the State in the name of development projects. Establishment of megadevelopment projects in tribal regions have encroached tribal land and displaced them from their age old land. These projects have immense impact on the life and livelihood of these tribals. They are Hydroelectric-cum-irrigation projects like Hirakud (1948), Balimela (1963), Machkund (1949), Upper Kolab (1978), Indravati (1978), Mandira, Rengali (1973), Subarnarekha; mineral based industries like Rourkela Steel Plant, National Alluminium Company at Angul (1985), Hindustan Aeronautics Limited (1962), Buxite Mining Project at Koraput (1981) and projects on Cement, iron, Dolomite and lime stone, etc. All these projects have immense impact on the village economy, family life, and village power structure of the tribal people which have been presented through various empirical studies in the State (Panda & Panigrahi, 1986; Behura and Nayak, 1993; Mohapatra 1998).

#### DECLINE IN OPERATIONAL HOLDING

The Agriculture Census Report of the State for the year 1980-81, 1985-86 and 1990-91 reported a fall in the size of holdings of the Scheduled Tribes. More specifically, the average size of holdings of marginal and small farmers among the STs have increased overtime, while medium and large holdings have declined both in absolute numbers and the area covered. For example, for the period of 1980-81 to 1985-86 the number of ST households working on land has increased from 9.18 lakh to 9.65 lakh, however, the total operational area of these households has declined from 15.79 lakh hectares to 15.47 lakh hectares. This clearly indicates a decline in ST holdings by 31,000 hectares (Panigrahi, Ibid). Another dimension of tribal land holding is the impact of Government policies on the distribution of waste land to the tribals and restrictions imposed on the alienation of tribal lands. The Odisha Land Reform Act 1960 (OLR Act) emphasizes on the distribution of wasteland for households and agricultural purposes. Due to lack of data to assess the impact of this policy on the vulnerable tribal communities here an analysis has been made from the achievements made under this policy during 1980-81 to 1995-96. The data show that 29, 678 STs have been benefited from the distribution of 41, 263 acres of wasteland, which is less in average when compared with SC households.

In case of the vulnerable tribal communities of the State, who are basically residing on the hill beyond 9 degree slope the State has failed to measure their lands through Cheaper Plane Table Method of Cadestral Survey, rather the State blames these vulnerable tribal communities for encroaching on Government land. This has become an issue whenever the State has attempted to establish a mega-project in the resourceful tribal regions ignoring the corporate rights of these vulnerable communities over their community land and forest based resources enjoyed for generations together.

#### **GOVERNANCE OF FOREST RESOURCES:**

### Forest policies of Pre-Independent India

The Forest Act 1865, which came into force during the British period, empowered the Government to declare any land covered with trees as forest land. As a result, the rights of the tribal people were restricted in the name of 'national interest'. The Indian Forest Act 1878 divided forest into three categories, such as reserve forest, protected forest and village forest. This way of division of forest strengthened government control over forest and forest resources. This not only restricted tribal communities as regards free entry, but also restricted certain forest areas for the people in the name of forest classification. Thirdly, the National Forest Policy 1894 again laid emphasis on the regulation of community rights and restrictions on the privileges previously enjoyed by the villagers in the immediate neighbouring forest, and brought out a formal relation maintained by the tribals with that of Forest Department as a crucial issue in forest management. It protected hill slopes and imposed ban on shifting cultivation. Fourthly, the Indian Forest Act 1935 consolidated the power of the State on forest so as to meet the requirements of British industry, military and commerce. By this forest resources of India during pre-British era were siphoned for commercial use by non-tribals and even non-Indians.

#### FOREST POLICIES OF POST-INDEPENDENT INDIA

In the post- independent period the first National Forest Policy of 1952 attempted to redefine the forest policy and the traditional rights of the forest dwelling tribes which converted certain concessions enjoyed by tribals for long by withdrawing the release of forest land for cultivation, controlling free grazing, discouraging tribals to do away with the practice of shifting cultivation. The National Commission on Agriculture (NCA) 1976 revised the National Forest Policy which recommended that forests be managed efficiently for commercial purposes and for the minimization of forest productivity, but NCA became silent about the traditional rights of the tribals. Gaining over experiences the Govt. of India under 42nd Amendment of the Indian Constitution deleted forest from State list and entered it under concurrent list in 1976. The Indian Forest Bill 1980 after a thorough consideration vested powers with forest officers to arrest and for the seizure of forest goods from the people who are caught with such resources. This policy also reflected the colonial legacy which did not treat adivasis as the friend of forest and empowered State Government to declare any reserve forest as non-reserved and also allotted forest land for non- forest purposes. The National Forest Policy 1988 talked more on environmental stability through the preservation of forest by replacing contractors by tribal co-operatives, gave concession to the ethnic minorities, and provided suitable alternatives for the shifting cultivators. But in practice the official draft did not follow the letter and spirit made in the resolution.

#### FOREST RESOURCES ADMINISTRATION IN ODISHA

In Odisha originally the forest administration was a part of Bihar and Bengal Government. During the formation of a separate State of Odisha a Forest Department came into existence in 1936. The villagers by paying nistar cess were enjoying rights over the collection of MFPs in 'B' class forests only. With the new classification of forest, access of tribal people into the forest started declining and their alienation from forest resources started. All the forest policies promulgated during both pre-and-post-independent periods have been directly implemented in the State. As a result of this, the tribal communities particularly the vulnerable ones were steadily isolated and segregated from appropriating the forest resources: the only source of their livelihood. The traditional rights of these communities over the time have been transferred to concessions and controlled under various State policies. The implementation of these policies during different plan periods has drastically affected the economic, social and cultural life of the tribal people. This also directly affected the livelihood interests of many Vulnerable Communities (popularly covered under Particularly Vulnerable Tribal Groups) who started migrating to outside. The continuation of this migration of these vulnerable tribal communities to outside was also observed for a couple of years even in post-independent period. Much before the introduction of Joint Forest Management in the State it was seen that around 3 to 10 percent of all reserved and protected forest lands of Odisha were under informal Community Forest Management (Ghosh, 1981). The tribal people had very intensive and intimate relationship with forest where local people were considered as equal partner (Banarjee, 1989). Prior to the Introduction of Joint Forest Management (JFM) in Odisha during 1990 it was found that in hill top land areas the tribal people of Odisha seen to have shown remarkable performance in managing their land and forest resources.

From time immemorial forest produces have been playing a major role in the life and livelihood of the tribal people. Various studies carried out in the tribal societies have found out that around 60.percent of the procured forest produces are consumed by the forest dwellers (Malhotra et al 1992; Gupta and Guleria, 1982). Roy Burman Committee (1982) has pointed out the commercial viability of around 300 NTFPs, explained the close linkages between the tribals and forest; and the potential of prosperity of different traders to trade forest produces at various levels. The study of Mallik and Panigrahi (1998) on the NTFP Collection; Benefits and Management in Odisha with special reference to two PTGs of Juangas and Bhunyas of Odisha have observed that among the Bhunyas almost 32.8 percent NTFPs are consumed by themselves, while it is 45.0 per cent among the Juangas. The study has also found out that around 28.98 percent of the total annual income of the Bhunyas is raised from the sale of different forest produces, while it is 29.18 percent among the Juangs who are largely depending on it. NTFP have been used by these communities for various purposes like construction of houses, preparation of household articles, tools and implements, music instruments, food, fuel, fodder, medicine, decoration of houses, and for ritual requirements during birth, marriage and death ceremonies

With the **73rd Amendment of Indian Constitution**, which gave power and revitalized the Panchayati Raj Institutions, Govt. of India extended this special power to the scheduled areas through the **Panchayats (Extension to the Scheduled Areas) Act (PESA) 1996**. Following this Government of Odisha has announced and formed the Odisha Panchayati Raj (Amendment) Act of 1997 and extended the Central Act 40 to the Scheduled areas of the State. Recently (2000) Government of Odisha have considered these special provisions and involved the local communities as partners in the management of degraded forests and the members of the **Vana Samrakshyan Samiti (VSS)** are entitled to share the use of forests. Considering this the Government of Odisha has handed over 70 NTFP items during 2000 to Gram Panchayats as regards its procurement and marketing at local level.

### SCOPE OF FOREST RIGHT ACT (FRA) 2006

The Forest Rights Act 2006 (Thus known as FRA) recognizes and vests the forest rights and occupation in forest land by forest dwelling scheduled tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded. The forest rights on ancestral lands and their habitat were not adequately recognized in the consolidation of state forests during the colonial period as well as in Independent India resulting in historical injustice to the forest dwelling Scheduled Tribes. FRA addresses the long standing insecurity of tenurial and access rights of forest dwelling scheduled tribe and other traditional forest dwellers. Some of the basic and important features of "The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006" are explained below.

- 1. This Act may be called as "The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006;
- 2. (a) "Community Forest Resource" means customary common forest land within the traditional or customary boundaries of the village or seasonal use of landscape in the case of pastoral communities, including reserve forest, protected forests and protected areas such as sanctuaries and National Parks to which the community had traditional access;
  - (b) "Forest Dwelling Scheduled Tribes" means the members or community of the Scheduled Tribes who primarily reside in and who depend on the forests or forest lands for bonfire livelihood needs and includes the Scheduled Tribe pastoralist communities;
  - (c) "Forest Land" means land of any description falling within any forest area and includes unclassified forest, undemarcated forest, existing or deemed forests, protected forests, reserve forests, sanctuaries and national parks;
  - (d) "Forest Villages" means the settlements which have been established inside the forests by the forest department or any state government for forestry operations or which are converted into forest villages through the forest reservation process and includes forest settlement villages, fixed demand holdings, all types of taungya settlements, by whatever name called, for such villages and includes lands for cultivation and uses permitted by the Government;

- (g) "Gramsabha" means a village assembly which shall consist of all adult members of a village and in case of State having no panchayats, padas, tolas and other traditional village institutions and elected village committees, with full and unrestricted participation of women;
- (h) "Habitat" includes the area comprising of the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other dwelling Scheduled Tribes:
- (m) "Scheduled Areas" means the Scheduled Areas referred to in clause (1) of Article 244 of the constitution;
- (p) "Village" means-
  - (i) A village is referred to in clause (b) of Section 4 of the provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996; or
  - (ii) Any area referred to as a village in any state law relating to Panchayats other than the Scheduled Areas; or
  - (iii) Forest villages, old habitation or settlements and unsurveyed villages, whether notified as village or not; or
  - (iv) In the case of states where there are no Panchayats, the traditional village, by whatever name called;

The scope of FRA absolutely touches all the livelihood options of tribal area. Chapter II Section 3(1) of the FRA mentioned that:

- Right to hold and live in the forest land under the individual or common occupation for habitation or for self cultivation for livelihood.
- Community rights such as *nistar*, by whatever name called, including those used in erstwhile princely states, zamindari or such intermediary regimes.
- Right of ownership, access to collect, use and dispose of minor forest produces which has been traditionally collected within or outside village boundary.
- Other community rights of uses or entitlements such as fish and other products of water bodies, grazing and traditional seasonal resource, access of nomadic or pastoralist communities.
- Rights including community tenures of habitat and habitation for primitive tribal groups and pre agricultural communities.
- Right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.
- Rights which are recognized under any state law or laws of any Autonomous District Council or Autonomous Regional Council or which are accepted as rights of tribal under any traditional or customary law of the concerned tribes of any state.

- Right of access to biodiversity and community rights to intellectual property and traditional knowledge related to biodiversity and cultural diversity.
- Any other traditional right customarily enjoyed by the forest dwelling Scheduled Tribes or other traditional forest dwellers, as the case may be, which are not mentioned in clauses 'a' to 'k' but excluding the traditional right of hunting or trapping or extracting a part of the body of any species of wild animals.

So the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 recognizes all the livelihood option of the forest dwelling tribal's, except hunting and given title over it.

# STATUS OF IMPLEMENTATION OF FRA IN ODISHA: Settlement of Individual Claims (IC)

Odisha claims to be the second best state in India as far as FRA implementation goes (after Chhattisgarh). The study attempted to analyse the data of the achievements of FRA in Odisha. The analysis is based on the data collected from the website of ST SC Development Department of Government of Odisha which was uploaded upto the period August 2011. The district wise achievements were clubbed under three broad divisions. The districts covered under fully scheduled areas include Mayurbhanja, Sundargarh, Malkangiri, Nawarangpur, Rayagada and Koraput were kept in one category. The districts clubbed under partially scheduled district include Kondhamal, Keonjhar, Gajapati, Balasore, Sambalpur, Ganjam and Kalahandi kept in another category. In addition, other17 districts of Odisha popularly known as non-scheduled area districts kept in one category for analysis. The analysis reflect that around 99.30 per cent villages in Odisha have formed Forest Rights Committee (FRC) who have initially verified the claim forms of around 50428 individual claims for the settlement. Of the total verified claims, around 94.99 percent applications were send to Gram Sabha for further verification. A regional look

Forest Rights Committee means a committee constituted by the Gramsabha under Rule (3)- The Gram Sabha shall be convened by the Gram Panchayat and in its first meeting it shall elect from amongst its member, a committee of not less than ten but not exceeding fifteen persons as members of the Forest Rights Committee, where in at least one-third members shall be the Scheduled Tribes: provided that not less than one-third of such members shall be women.

The state Government shall constitute Sub-Divisional Level Committee with following members, namely Sub-Divisional Officer or equivalent-chairperson, Forest Officer in charge of a sub-Division- as member, three members of the block or Tehsil level Panchayats to be nominated by the District Panchayat of whom at least two shall be the scheduled Tribes preferably those who are forest dwellers, or who belong to the primitive tribal groups and where there are no scheduled Tribes, two members who are preferably other traditional forest dwellers and one shall be a woman member; or in areas covered under the sixth schedule to the Constitution, three members nominated by the Autonomous District Councilor Regional Council or other appropriate zonal level, of whom at least one shall be a woman member.; An officer of the Tribal Welfare Department in charge of the subdivision or where such officer is not available the office in-charge of the tribal affairs.

at the settlement of individual claims at Gram Sabha level shows that in fully scheduled area districts of Odisha around 85.14 per cent individual claims have been approved in the Gram Sabha, and send to Sub-Division Level Committee (SDLC) for further action, while it was only 77.48 per cent in partially scheduled area and 83.94 per cent in non-scheduled area villages of the state. As regards the average areas of land per household approved by the Gram Sabha, it was 1.73, 4.69, and 1.32 acres in fully scheduled area, partially scheduled and non-scheduled area districts respectively. On an average the Gram Sabha in the state has approved 1.64 acres of land per family and proposed to Sub Division Level Committee (SDLC) (Table no-1).

Table No.1. Implementation status of Individual Claims under FRA 2006 in the Gram Sabhas of Odisha

Sl	Districts	No of	Individual Claims					
No		district	Received by district	Approved by Gram Sabha & send to SDLC	No. of families	Land in acre	Average land per family	
1	Fully Scheduled area	6	193616 (100)	1,64,855 (85.14)	1,64,855	2,85,486.91	1.73	
2	Partially Scheduled area	7	2,02,107 (100)	156594 (77.48)	156,594	2,65,587.02	4.69	
3	Non Scheduled area	17	83267 (100)	69897 (83.94)	69,894	92647.87	1.32	
	G. Total	30	4,78,990(100)	2,91,346 (60.82)	3,91,343	6,43,721.18	1.64	

Source:- SC & ST dept. Govt. of Odisha, August 2011

With respect to the disposal of the individual claims at SDLC level the data indicate that around 76.86 per cent claims have been settled against 1,26,410 individual families in fully scheduled area districts, while it was 92.34 per cent and 34.94 per cent in non-scheduled area districts respectively. The average land area allotted per each household has reduced in all the regions when compared with the extent of land allotted by the Gram Sabha. The details of achievements can be viewed from Table No-2. In some places people have claimed for forest land along with revenue land, so during verification the extent of revenue land excluded from the claimed land. Without proper measurement people claimed for the land, but after measurement in many cases the land area was reduced. Govt. has not taken into consideration of the disputed land and allotted without their settlement, as a result, those lands were delisted afterwards. It is also observed that the number of claim forms forwarded by Gramsabha was not fully approved by SDLC due to the lack of proper evidences attached with the claim forms, and rejection of the claim forms of Other Traditional Forest Dwellers due to the want of evidences for their settlement for three generations.

Table No-2. Implementation status of FRA 2006 at Sub Divisional Level Committee (SDLC) in Odisha

Sl	Districts	Individual Claims						
No		Received by SDLC	SDLC sent to DLC	No. of families	Total area (Area in acre)	Average land per family		
01	Fully Scheduled area	1,64,855 (100)	1,26,710 (76.86)	1,26,410	2,27,492.87	1.79		
02	Partially Scheduled area	1,56,594 (100)	1,44,605 (92.34)	1,44,605	2,23,105.14	1.54		
03	Non Scheduled area	69,897	30714 (100)	30714 (34.94)	39,725.47	1.29		
	G.Total	2,91,346	3,02,029	3,01,729	4,90,323.48	1.62		

Source: - SC & ST dept. Govt. of Odisha, August 2011

Settlement of individual claims at district level was analysed. The data indicate that on an average 97.59 per cent individual claims have been settled at district level, where as allocation of average land per family varies from 1.78 acres in case of fully scheduled area to 1.36 acres in non-scheduled area districts (Table No-3)

Table No-3. Implementation status of FRA 2006 at District Level Committee (DLC) in Odisha

Sl	Districts	Individual Claims						
No		Received from SDLC	Approved by DLCC	No. of families	Total area	Average land per family		
1	Fully Scheduled districts	1,26,710 (100)	1,22,733 (96.86)	1,22,733	2,18,537.91	1.78		
2	Partially Scheduled districts	1,44,605 (100)	1,43,634 (99.32)	1,43727	2,21,896.08	1.54		
3	Non Scheduled districts	30714 (100)	28,403 (92.47)	29,438	40,304.20	1.36		
	G.Total	3,02,029 (100)	2,94,770 (97.59)	2,95,898	4,80,738.19	1.62		

Source:- SC & ST dept. Govt. of Odisha, August 2011

The state Government shall constitute District Level Committee (DLC) with following members, namely District Collector or Deputy Commissioner as chairperson, concerned Divisional Forest Officer or concerned Deputy Conservator of Forest as member, three members of the District Panchayats to be nominated by the District Panchayat of whom at least two shall be the Scheduled Tribes preferably those who are forest dwellers, or who belong to the primitive tribal groups and where there are no Scheduled Tribes, two members who are preferably other traditional forest dwellers and one shall be a woman member; or in areas covered under the sixth schedule of the Constitution, three members nominated by the Autonomous District Council or Regional Council, of whom at least one shall be a woman member; An officer of the Tribal welfare Department in charge of the district or where such officer is not available the office in-charge of the tribal affairs.

A look into the gap between total cases approved and finally distributed with title by DLC shows that 27.68 per cent cases have been rejected by the District Level Committee (DLC) when compared with the approved cases by the Gram Sabha. This gap tunes to the extent of 60.43 per cent in case of non-scheduled districts, followed by fully scheduled districts (28.81%) (Table No-4).

Table No-4. Distribution of land title under FRA 2006 in Odisha (Land in Ac)

Sl	Districts	Individual Claims				
No		Approved by Gramsabha		Title distril	Average land	
		No. of claims area		Title	area	per title
1	Fully Scheduled districts	164855 (100)	2,85,486.91	1,17,365 (71.19)	2,04,625.85	1.74
2	Partially Scheduled districts	156594 (100)	92,647.87	1,38,002 (88.12)	2,18,833.64	1.58
3	Non Scheduled districts	69897 (100)	2,65,587.02	27662 (39.57)	37,692.81	1.36
	G.Total	3,91,346 (100)	6,43,721.18	2,83,029 (72.32)	4,61,152.3	1.62

Source: - SC & ST dept. Govt. of Odisha, August 2011

With respect to the settlement of individual rights among the PTGs of Odisha, the data show that such a settlement process has been carried out among all the 13 PTGs of the state, which covers 21,974 households. Among the PTGs of Odisha FRC had received 20309 claims and 18644 claims were verified and send to Gram Sabha, of which 17,511 cases were approved and send to SDLC. SDLC approved 16909 cases and distributed the title of individual rights which covered a total land area of 26,239 acre with an average land area distribution to the tune of 1.56 acre per individual family.

### SETTLEMENT OF COMMUNITY CLAIMS (CC)

Provision of handing over of community rights under FRA seems to have special importance when one looks at the life and living of the tribal communities and more particularly the primitive tribes of the State. For the purpose the analysis is made with respect to the settlement of such claims at various levels of Implementation of the Act. The data reflect that on an average 59.74 per cent community claims have been approved by the Gram Sabha, which was highest (93.14%) in fully scheduled area, followed by non-scheduled area (71.53%). With respect to the land settled under community claim, in one village it was observed that maximum land to the extent of 91.14 acres was allotted in a village covered under fully scheduled districts, followed by partially scheduled districts (59.62 acres) and non-scheduled districts (42.66 acres). Similarly, on an average 58 families per one community claim in a village have been provided with rights in fully scheduled districts, while it was 48 families in partially scheduled districts and 14 in non-scheduled districts. This shows that the importance of community claims in the villages of non-scheduled districts are not important and community claim settlements are quite important in case of fully scheduled area districts (Table No-5).

Table No-5.	<b>Implementation of Community Claims under</b>
FRA 2006	at Gram Sabha level in Odisha (Land in Ac)

Sl	Districts	Community Claims				
No		No. of claims verified by	Received by Gram Sabha	Approved by Gram Sabha	Total Land area **	Total families ***
1	Fully Scheduled districts	704 (100)	350 (49.71)	326 (93.14)	29713 (91.14)	18842 (58)
2	Partially Scheduled districts	1590 (100)	1491 (93.77)	727 (48.75)	43351 (59.62)	34587 (48)
3	Non Scheduled districts	397 (100)	397 (100)	284 (71.53)	12118 (42.66)	3863 (14)
	G.Total	2691 (100)	2238 (83.16)	1337 (59.74)	85182 (63.71)	57292 (43)

Source: - SC & ST dept. Govt. of Odisha, August 2011

The data with respect to the settlement of community claims at SDLC level show that a total of 68.36 per cent cases have been settled by SDLC and send to DLC. Highest numbers of community claim cases have been settled in fully scheduled districts, which is followed by partially scheduled districts (63.49%), and non-scheduled districts (24.64%). The data also analysed on the average families and land areas settled per community claim which shows that on an average in Odisha 56 families have been provided with 78 acres of land which have been settled under one community claim at SDLC level (Table No-6). Settlement of community claims at DLC shows that around 91.46 per cent community claims have been approved of which 89.71 per cent cases have been provided with land titles. When one compared the gap between the title distributed by DLC and such cases approved by the Gram Sabhas, one finds a gap of 43.91 per cent community claims covering 30,856 acres of land between the two stages of land settlement.

Table No-6. Implementation of Community Claims under FRA 2006 at SDLC level in Odisha (Area in Ac)

Sl	Districts	Community Claims					
No		Received by SDLC	Approved by SDLC and sent to DLC	No. of Families *	Total Land Area **		
1	Fully Scheduled districts	326 (100)	237 (72.69)	15540 (66)	28266 (119)		
2	Partially Scheduled districts	727 (100)	607 (63.49)	33,846 (56)	42701 (70)		
3	Non Scheduled districts	284 (100)	70 (24.64)	1521 (22)	658 (94)		
	G.Total	1337 (100)	914 (68.36)	50907 (56)	71625 (78)		

Source:- SC & ST dept. Govt. of Odisha, August 2011

<sup>\*</sup> percentage of approval by Gramsabha is taken out of the claims received by them from FRC

<sup>\*\*</sup> Figures in the bracket refers to the average extent of lan allotted per community claim settlement

<sup>\*\*\*</sup> Figures in the bracket refers to the average number of families per community claim

<sup>\*</sup>Figures in the bracket refers to the average number of families per community claim

<sup>\*\*</sup>Figures in the bracket refers to the average extent of land allotted per community claim

The paper also analysed the types of land settled under community claim settlement. The data in this regard shows that around 71.73 per cent land settled under community land was reported Revenue Forest type, while only 10.70 per cent were Reserve Forest type. In fully scheduled areas revenue forest accounted 54.72 per cent, while in partially scheduled areas revenue forest accounted 83.84 per cent and in non-scheduled areas revenue forest shared 79.23 per cent. Reserve forest shared only 10.70 per cent of the total settled community land in Odisha till August 2011. This shows that revenue forest as a major source for settling land under FRA is very important. The status of individual claims settlement among different Particularly Vulnerable Tribal Groups (PTGs) of Odisha shows that maximum extent of land have been settled is reported to the extent of 2.95 acres per family belonging to the Chuktia Bhunjia tribe, followed by the Kandhas (2.53%), and the Bondos (2.48%). Paudi Bhuiyans of Pallahara region (0.41 acres) and Barkote region have been settled with lowest of land, followed by the Lodhas of Suliapada (0.75 acres).

## MAJOR CHALLENGES FACED BY DIFFERENT STAKEHOLDERS WHILE IMPLEMENTING FRA IN THE STATE

The state has organized awareness programmes by translating the FRA in 10 adivasi languages and distributed them among different stakeholders. The state has approved over 2 lakh titles (for individual land rights); paid special attention to the rights of PTGs (related to individual land claims); 'demanded' (sending back for re-examination) rather than rejecting claims not found tenable in the first round; issued timely circulars to clarify various points of confusion or differential interpretations of the Act. In order to facilitate these processes the state has conducted fortnightly video teleconferencing with all districts to assess progress under the Act. In Odisha the state machinery engaged in the implementation of FRA was found more progressive than in most other states of India. Some of the practices would be good to document as 'best practices' or innovations that other states could benefit from. Some of the key issues encountered by different stakeholders at various levels are as follow.

Settlement of Individual Forest Rights (IFR): Odisha has done much more than most other states in recognizing and titling individual forest land rights (with over 2 lakh having been accepted or titled). However, there are also widespread complaints. Some of them are as follows: (i) Vaguely worded titles, without clear or any boundaries, size, etc, which could lead to conflicts or exclusions later; (ii) Land to thr extent of less than 4 acres had been claimed (in some cases less than a tenth of a acre), being recognized without any explanation; (iii) Rejection of claims without any explanation or notice to the claimants, denying them the right of appeal; (iv) Non-acceptance of claims submitted by women.

**Settlement of Community Forest Rights (CFR):** Odisha is ahead of most other states in encouraging and accepting community rights of various types been accepted or titled, but Section 3(2) being passed off as CFRs, is not popularly encouraged. However, compared to IFRs, and in an absolute sense, there is widespread neglect, delays, or denial of CFRs. The following problems are commonly cited by communities or officials while settling the community claims: (i) Lack of clarity on the concept of CFRs can be claimed;

(ii) confusion on to whom CFRs are to be given to in the case of villages that have mixed population of both eligible claimants and ineligible residents; (iii) Titles for CFRs being given in the names of some individuals (at times, only the FRC members); (iv) Imposition of JFM/VSS boundaries on the CFR claims, which may or may not match the boundaries claimed by the community; (v) Confusion on the extent to which a customary boundary could be claimed in the case of grazing grounds that may be very far from the village.

Other Traditional Forest Dwellers (OTFD): As in other states, OTFDs in Odisha are facing a serious problem to get evidence of their occupation/dependence on the land for 75 years (especially given that the state itself was formed in 1936). There is little proactive move by the district administration to find such evidence, even where it may exist in old working plans, gazetteers, settlement records, princely state or zamindari records, etc. Additionally there are many claimants that are not three generations old and are requesting that the time limit be reduced.

Particularly Vulnerable Tribal Groups: The state government has given special focus to make the FRA available to PTGs, and has issued titles to 14,000 against 18.000 claims filed (of the total 19,000 PTG households in Odisha). However, it is observed that not much has been done for the CFR and 'habitat' rights of PTGs. In some cases where CFRs have been given, they are determined by government agencies rather than by the community itself. In several geographical locations (e.g. Similipal) where PTGs have been resettled and in some cases they are nomadic they are forcibly settled into permanent villages. In such situations their traditional territories may no longer be accessible to them. Role of civil society particularly Vasundhara a NGOs in Odisha helped few PTGs to begin the process of claiming their customary/traditional 'habitat' boundary to settle the community claims. This is evident in case of Juang and the Bhuiyan PTGs in Keonjhar district and the Chuktia-Bhunjias of Nuapada district. Still confusion persists with respect to the meaning and scope of 'habitat rights', especially in situations where the tribe is no longer actually using the entire traditional territory, or where other communities have settled in it or 'development' projects have come up inside such territories.

Joint Forest Management (JFM) and FRA: Across the state there seems to be an imposition of the JFM model on the FRA process. Communities are being told, or being given, boundaries that have been fixed under JFM. These may or may not match the boundaries that the community may be claiming or the boundary of the self-initiated community forest protection process that is widespread in Odisha. Secondly, it is told that the Van Suraksha Samitis, formed under government programmes, would continue to operate to manage the CFRs. This denies the chance of the Gram Sabha (in Odisha's case, the Palli Sabha) to make its own institution under Section 5 and Rule 4e. Till recently a readymade format (in place of Form B attached to the FR Rules) was being given to people to fill in, who made communities accept conditions that are not in the FR Act/Rules, and accept the JFM/VSS model. Officials also have pointed out that Palli Sabhas are at times dominated by people who are not truly dependent on the forests and may not take into account the needs of hamlets where the VSS have been formed because only those hamlets are dependent on the forest. This was confirmed by NGOs working on community forestry in Odisha as being a genuine problem.

**Forest Rights Committee (FRCs) and Gram Sabhas:** FRCs were formed without due process, and many time the members representing in FRC were not necessarily representative of those most dependent on the forest. There was also a doubt on whether the required Gram Sabha (Palli Sabha) process, e.g. of 2/3rds quorum have been followed in all the places. Officials have alleged that many claims were collected by NGOs and passed onto the SDLC. The co-ordination between the NGO and the villagers some time were not based on ground realities. The villagers are not involved in various stages of FRC formation.

**Sub-Division Level Committee (SDLCs) and District Level Committee (DLCs):** Agencies set up for implementing the FRA are functioning across the state. However, arbitrariness in accepting claims, delays in verification, lack of transparency (with decisions and records not being publicly available), access to villagers, poor coordination amongst various departments (e.g. in carrying out field verifications or harmonizing records), and severe shortage of staff and their capacity to deliver the services to carry out the mammoth exercise under FRA is being questioned many time.

Role of Civil Society: NGOs help in sensitization, and have been a means to facilitate evidence gathering and also in monitoring the processes in some places without much administrative recognition. However, the role of Civil Society in various stages of implementation of FRA in Odisha is not visible much. It is even less when one compares their role in implementing the PESA in Odisha. Inadequate financial support to CBOs in this respect has restricted their role and involvement in the implementation of FRA in Odisha.

## PLANTATIONS AND MINING LEASES ON LANDS HAVING CLAIMS/RIGHTS

It is a very widespread complaint in Koraput district that lands that was under occupation or being used for community needs, have been planted under JBIC, CAMPA, or other development projects. Again some of these lands have also been allocated for mining (e.g. Mahanagar Coal Ltd in Sundergarh district), resettlement of jawans (e.g. Deogarh district), etc. Therefore, in some villages the villagers have been denied the opportunity to claim community rights.

#### STATUS OF FOREST AND UNSURVEYED VILLAGES

State officials were not able to give the status of unsurveyed villages' with respect to number of forest villages, who justify by saying that the process of their conversion was underway through procedures under the state's revenue laws. Therefore, the issue of providing land under FRA for ineligible residents in such villages is non-materialised. As per the Act the households who have settled in the period of pre-1980 will be regularized under Forest Conservation Act. The unsurveyed villages in Odisha are also quite many in which land records and maps do not exist. In such situations the process of claims by the villagers under FRA is taking longer.

**Declaration of Critical Wildlife Habitats (CWHs):** Odisha is apparently the first state to send CWH proposals to the Central Government. So far three CHCs like Bhitarkanika, Nalabana, and Chandaka have been proposed. The process of identification has been initiated in all other Protected Areas (PAs). There is however confusion on whether CWHs have to be notified over Critical Tribal Habitat (CTHs) also. Declaration of CWHs has minismised the scope of implementing FRA and appropriating the benefits of the Act.

**Undulating and hill type land structure:** An issue peculiar to Odisha is that of 'pahar kisam', or 'hill type', lands that have forest on them are revenue lands by nature. Claims over these lands by the villagers under FRA have been turned down as these lands are not legally forest land (the state government has indicated however that these claims should be treated under revenue law procedures). However, if the interpretation of the term 'forest' under FRA includes area that is physically/biologically forest, such lands should be eligible for claims under FRA.

The problem of Inter-state claims: An interesting question that came in the context of a case in Sundergarh district is that some of the households cultivate forest land across the state boundary in Jharkhand have made a claim over the land in Jharkjhand. In such cases the FRA is silent to settle such interstate land settlement. Since Odisha is bordering to many states like Jharkhand, Chhatishgarh, West Bengal and Andhra Pradesh having large areas of inter-state border region, this issue is to be taken seriously.

FRA and development projects: The problem of displacement is a chronic issue in Odisha. Many displaced have not been resettled properly. A number of cases of previous displacement were brought up, where those displaced have had to resettle on forest land (e.g. in the case of Rourkela steel plant, Sundergarh district). In the case of non-STs who have resettled themselves in the forest areas of Sundargarh are not eligible to get the benefit under FRA since this is all less than 75 years ago, which recognizes for Other Traditional Forest Dwellers. Recently Odisha has issued a circular requiring the completion of FRA procedures and Gram Sabha consent for diversion of forest land for development projects, following up on MoEF's July 2009 circular to this effect. There is clearly a major clash between the state's 'development' programmes in the form of widespread mining, industries, ports, etc and the continuation of forests and forest rights of the people.

#### Conclusion

From the above discussion one can say that the ethno-ecologies of the natives are being challenged, transformed, and replaced. Over the time migration, media and industry spread people, institutions, values, and technologies. This is also observed that imported values with respect to natural resources management often conflict with native values. In the context of population growth, migration, commercial expansion, national and international incentives, ethno-ecological systems that have preserved local and regional environments for centuries in many contexts are adversely affected.

With the changing approaches to development anthropologists are to make use of various modern methodologies like satellites and other remote sensing devices, including Geographic Information Systems (GIS) and a host of new possibilities for anthropological and ecological research particularly in the areas of land use patterns and changes. Anthropologists with the changing nature of global-local equations have to think globally and act locally. As new environments emerge and grow in importance, new types of ecological analysis will be needed to understand the interrelations that human groups maintain with nature and natural resources.

The establishment of new environmental problems that arises out of such situations result in new problem of environment that can and are to be studied ethnographically popularly dealt by anthropology of environmentalism. Anthropologist's study of ecology raises various problems faced by the natives. The combination of ecological and ethnographic approaches has expanded anthropological research resulting in new possibilities of contributing to solve the larger problems of the natives. This is an important issue with regards to the indigenous people since the paradigm shift in ecological anthropology incorporates new trends, priorities and audiences from both applied and advocacy anthropological point of view.

#### References

Behura.

Banarjee, U. 1989. Participatory Forest Management in West Bengal in forest regeneration through community protection: The West Bengal Experience, ed by K.C.Malhotra and Mark Poffenberger, West Bengal Forest Department.

N.K and Nayak, P.K. 1993. Involuntary Displacement and Changing Frontiers of Kinship: S study of Settlement in Odisha. In Anthropological Approaches to

Resettlement,ed. Michel M. Cernea and Scott E. Guggenheim.

Behura, N. and Panigrahi, N. 2001. Functioning of the Fifth Schedule in the Constitution of the State of Odisha. Report Submitted to ICSSR New Delhi by NCDS Bhubaneswar.

Bennett JW.1976. The Ecological Transition: Cultural Anthropology and Human Adaptation. New York: Pergamon. Pp-365.

Crumley, C. L. 1994.. Historical ecology: a multidimensional ecological orientation. In Historical Ecology: Cultural knowledge and Changing Landscapes, ed. CL Crumley, pp.1-16. Santa Fe, NM:Sch Am.Res.

Dasmann, R.F.1988. National Parks, nature conservation, and "Future Primitives" In Tribal People and Development Issues: A Global overview, ed JH Bodely, pp.301-10. Mountain view, CA:Mayfield.

Ghosh, A.K. 1981. Forest and Forest Policy in India, Environment and Monitoring Wing, Zoological Survey of India, Ministry of Environment and Forest, Govt of Odisha, Calcutta. Gupta, T. and Guleria, A.1982. Non-Wood Forest Products in India, Oxford and IBH Publishing Co, New Delhi.

Greenberg, J.B, Park, T.K.1994. Political Ecology. J Political Ecology, 1:1-12.

Mallick, R.M. and Panigrahi, N, 1998 NTFP Collection: Benefits and Management in Odisha Submitted to The Ford Foundation, New Delhi, NCDS, Bhubaneswar.

Malhotra, K.C. et al. 1992. Role of Non-Timber Forest Produces in village economy, IBRAD, Calcutta.

Mohapatra, L.K. 1998. Participatory Approach in Resettlement and Rehabilitation Implementation,
Paper Presented at Gopabandhu Academy of Administration, in the seminar on
Resettlement and Rehabilitation.

Orlove, B.1980. Ecological Anthropology, Annual Review Anthropology, 9:235-73.

Panda,
 P and Panigrahi, N. 1989. The problem of Displaced People: A study in the Coal
 Mines of Brajraj Nagar, Sambalpur Odisha. ed Tribal Development in India, by
 R.N Pati and B. Jena. Ashish Publication House.

Panigrahi, N.2006. Role of Indigenous Institutions in Tribal Livelihood: An Empirical Study in a Tribal district of Odisha, Fellowships awarded under Sir Ratan Tata Trust (SRTT) Visiting Fellowship to ISEC, Bangalore, India.

Rappaport, Roy. A. 1971a. Nature, Culture and Ecological Anthropology. In Man, Culture and Society. H.Sapiro, ed.Pp-237-268 New York: Oxford University Press.

Stern PC, You OR, Druckman D, eds. 1992. Global Environmental Change: Understanding the Human Dimensions, Washington, DC: Natl, Acad.Press

Vayda, AP, Walters, B.B.1999. Against Political Ecology, Human Ecology, 27(1):167

Worster, D.1988a. Appendix doing environmental history. See Worster 1988b, Pp.288-307.