

Shifting Cultivation Among the Tribes of Orissa

Balaram Dash

Shifting cultivation is considered to be the most ancient system of agriculture dating back to the lower Neolithic period. It is also known as "*Field Forest Rotation*" or slash and burn agriculture. Shifting cultivation is practiced in some form or other in almost all the tribal areas of Orissa.

A number of tribes inhabiting different areas of the state are practicing shifting cultivation. These tribes are Bondo, Didayi, Koya, Gadaba, Paroja, Soura, Kutia Kondha, dongaria Kondha, Kandha, Parenga, Jatapur, Juang, Paudi Bhuyan, Erenga Kolha etc. Majority of these communities have been identified as Primitive Tribal Groups (PTGs). The following statement reveals information on the tribes with reference to the area where shifting cultivation is practiced.

Statement showing a list of tribes practicing shifting cultivation in different areas of the state;

Tribe	District (undivided)	Area
Bondo	Koraput	Khairput area of Malkangiri Sub-Division
Didayi	-do-	Kudumulgumma area of Malkangiri Sub-division

Koya	-do-	Malkangiri sub-Division
Gadaba	-do-	Similiguda & Pottangi area of Koraput Sub-Division
Paroja	-do-	Dasamantapur area of Koraput Sub-division
Lanjia Soura	-do-	Puttasingi area of Gunupur Sub-Division
	Ganjam	Parlakhemundi Sub-division
(a) Kondh	Koraput	Koraput Sub-Division, Rayagada Sub-division
	Phulbani	Kandhamal Sub-division
	Kalahandi	Th. Rampur and Lanjigarh of K a l a h a n d i Sub-division
	Sambalpur	Bamara area of Deogarh Sub-Division, Rairakhol Sub-Division

(b) Kutia Kondh	Koraput	Gudari, Ramanguda Muniguda, Chandrapur area of Gunupur Sub-Division.
	Phulbani	Balliguda Sub-Division
(c) Dongria Kondh	Koraput	Bisamcuttack area of Gunupur Sub-Division.
Juang	Keonjhar	Telkoi, Harichandrapur area of Keonjhar Sub-division
Paudi Bhuyan	Keonjhar	Telkoi, Banspal area of Keonjhar Sub-division
	Sundargarh	Bonai Sub-division
	Dhenkanal	Pallahara Sub-Division
	Sambalpur	Bamara area of Deogarh sub-Division
Erenga Kolha	Sundargarh	Bonai Sub-division
Parenga	Koraput	Puttasingi area of Koraput Sub-Division

Cultivation

Different tribes of Orissa practicing shifting cultivation have different names for this kind of subsistence activity. These are usually expressed by the names given to their swiddens among different categories of land under cultivation. The Juang of Keonjhar call it Toila chasa and their brother tribe, the Paudi Bhiyan identify it by Toila, Biringa or Kaman, Bagada,

Saraba or Baru is the term used by the Saora of Ganjam to distinguish their swiddens. The Dongria Kondh of Rayagada district call it Haru and the Desia Kondh of Rairakhol and Bamra sub-division, 'Rama'. The Kondh of Kalahandi district use different term, '*Dongar Chasa*' and livang or Kunda Chasa is the term prevalent among the Bonda of Malkangiri district. Shifting cultivation practiced by the Koya of Malkangiri district in the foot hills is called Lanka podesanad. It is more or less like Dahi cultivation which is extensively practiced in Sambalpur, Bolangir, Kalahandi, Koraput and Ganjam hill areas.

Area Under Shifting Cultivation :

The problem of shifting cultivation is perhaps most acute in Orissa than any other State in the country. Although at present an accurate data on the areas under shifting cultivation is not available, yet some rough estimates have been made. Before 1936 when the new State of Orissa was formed, this was not a matter of much concern to the administration for the only locality where it was practiced was in the Kandhamals and the tribes involved were the Kondh, the Soura of Ganjam and Koraput districts. At that time certain tribal belts where shifting cultivation was being practiced were under princely states and those states were annexed to the State of Orissa later.

The areas affected by Podu cultivation was about 300 sq. miles approximately prior to 1936. It became nearly 12,000 sq.miles in 1948 after annexation of princely States. The population of tribes engaged in this type of cultivation was about 10 lakhs. In the pre-plan periods, attempts were made to make an estimate of the area under shifting cultivation in the State. Dr. H.F. Mooney had made an

estimation about the area under shifting cultivation in 1951 as 12,770 sq.miles or about one-fifth of the tribal land surface in the state was affected by shifting cultivation and nearly one million tribal people depended upon this method of raising crops for their living.

The best source of information now available regarding coverage under shifting cultivation are the vegetation map of India, prepared by institute, Francis, Pondicherry, India.

The following statement gives the area under shifting cultivation as available from different sources :

by all the villagers in common. Every year in the month of Magha (January-February) the village headman and the priest select the land for cultivation. Generally the patch which has completed its rotation cycle and is sufficiently covered with trees and bushes is considered suitable to be cleared for shifting cultivation. After the patch is selected, the headman demarcates the boundary lines by putting mark on trees by axe and the land is sub-divided into several plots which are allotted to the households. The ownership of land after allotment is transferred to the head of the household for a period of 2 to 3 years till he cultivates it actively.

Sl. No.	Source	Year	Pop.Size	Area affected	
				Sq.Km.	Hectors
1.	H.F. Mooney	1951	9,35,700	32681.2	32,68,120
2.	ICAR	1958	10,00,000	8000.0	8,60,000
3.	Dhebor Comm.	1960-61	9,35,700	8333.35	8,33,335
4.	French Inst. Pondichery & ICAR	1967	7,06,412	30233.0	30,23,358
5.	FAO/UNFPA	1980	7,06,400	26490.0	26,49,000
6.	Task Force	1983	-	26490.0	26,49,000
7.	F.R.T.S.-I Imaginary	1984	-	9200.92	920092.30

Ownership Right :

The type of ownership of swiddens varies among the tribes from individual ownership to communal ownership which is governed by tribal customary rules.

Among the Juang and Pauri Bhuiyan of Keonjhar district the land under shifting cultivation is the communal property owned

In Koraput and Ganjam areas the communal ownership of the village over Podu land is completely absent. Each household owns a number of sites on hill slopes and uses these in rotation. In course of time Podu land has become private property which can be owned and inherited by customary right. There is no legal sanction behind it. A Bonda even sells his plots under shifting cultivation to

another and mortgages it whenever he is in need. Among the Koya the unreserved forest land, is treated as private property and is also inherited by the legal heirs.

Techniques of Shifting Cultivation : Few Case Studies Lanjia Saora :

The Lanjia Saora constitute a primitive section of the Saora tribe. The main concentration of the Lanjia Saora is in the districts of Ganjam and Koraput. According to 1981 census the total population of the Saora was 3,70,061.

The Lanjia Saora is distinguished among other tribes for absence of clan system. The main exogamous unit is the extended family called Birinda descended from a common ancestor, which is based on patrilineage. Each Lanjia Saora village, politically speaking is autonomous, locally self-supporting and self contained.

The economic life of the Saora centers around two types of agriculture, shifting cultivation in the hill slopes and terrace cultivation in the gentle slope at the foot-hill. They supplement their income by forest collections.

Most of the agricultural activities particularly the works relating to shifting cultivation is done on a cooperative basis, on the principles of reciprocity. The shifting cultivation of the Lanjia Saora is known by the term Bagada Chasa or Barun and every family, irrespective of economic status has a few patches of swiddens in the hill-slopes yielding mainly minor millets and pulses.

The Saora carry out shifting cultivation in the hill-slopes. Due to the impact of growing population the period of Podu cycle has shrunk from 12-18 years to 4-6 years.

Among the Saora the swiddens are owned individually and are mortgaged whenever needed shifting cultivation starts with the work of tree-felling and bush clearing in the month of November-December. After the trees are felled, these are allowed to dry up in situ for three months. The Saora do not cut useful fruit bearing trees and creepers. In the month of March they are set on fire. In the month of April the Saora sow Kandula by dropping the seeds in the dibbled holes made in rows. After the germination of red grams they sow all other seeds such as, small and large millets like kangu, Jena, ganga ghanthia and pulses like jhudunga and burubudi mixed together. As soon as the seeds are sown they do the hoeing so that the soil get mixed up with the ash covering seeds.

The task of weeding is taken up in the month of June by women only. For six months from August to January both men and women guard the crops grown in the swiddens against the ravage of wild animals by raising temporary huts. In August crops like Kangu, small ganga, in November ganga ghanthia, burubudi and Jhudunga, in December Jena, in January Kandula is harvested. Every two years the Saora plant turmeric in part of the swiddens.

Paudi Bhuyan

The Paudi Bhuyan, a primitive section of the Bhuyan tribe inhabit a contiguous mountainous pocket called Bhuyan pirh in Keonjhar district, and also found in Bonai and Pallahara sub-divisions of Sundargarh and Dhenkanal districts respectively. The total Bhuyan population according 1981 census was 2,07,792.

The economic life of the Paudi Bhuyan mainly revolve round shifting cultivation. It is supplemented by collection of minor forest

produce and to some extent by wet and dry cultivation, hunting and fishing.

Among the Paudi Bhuyan shifting cultivation in general is known by the name Taila chasa, the field under first year of cultivation is known as Biringa, the second year as Kaman and the third year as Guda. The Podu land are located on the hill slopes, hill-tops and at foot hills between 5 to 12 degree slope.

After cultivating a patch for three years the fallow period is observed for 5 to 7 years for recuperation. The reduction in recuperative cycle is chiefly on account of increase of population and shortage of land. The swiddens are owned communally and distributed among individual families according to their need and capacity.

The first year shifting cultivation (Biringa) involves several stages such as selection of hill slopes in the month of December-January, tree felling and bush clearing (Guchakata) February-April, drying up of felled trees and firing in April-May, sowing in July, ploughing & Hoeing in July, weeding and debushing in September-October, guarding the crops grown in the first year are Kulthi, Biri, Rasi and various types of vegetables, pulses and creepers.

During the second year (Kaman) the main crops grown are short duration paddy and Jawar, the former sown in the middle of the plot and the latter on the borders. Besides they cultivate Kada, Mandia, Kangu and various types of vegetables in the second year. If a crop fetches good harvest in the second year then it is continued for the third year (Guda), and only niger is cultivated. The same patch can be brought under cultivation for the fourth year in case there is a good harvest in the third year.

Kutia Kondh :

The Kutia Kondh constitute a primitive section of the great Kondh tribe of Orissa. They are found in a contiguous pocket comprising the Belghar area of Balliguda sub-division in Kandhamal district and Lanjigarh area of Kalahandi district.

The Kutia's derive their livelihood primarily from shifting cultivation. A particular patch of forest or hill slope land is used for shifting cultivation for three years consecutively and then it is left fallow for more than five years to recuperate. After selection of site and allotment of plots, each family takes care of its respective plot in giving boundary mark and cleaning the area.

Forest clearing takes place in the month of March-April. They do not cut the trees from ground level and also the fruit bearing trees. After the felled trees dry up they set fire on it in the month of April-May. Then they work the soil with digging sticks to mix the ashes in the soil. After first shower a mixture of seeds such as kandul, jhudang, black gram, kating are sown by dibbling. When the soil get sufficiently wet they sow a mixture of seeds of ragi, kosla, gonga and kangu by broad cast. Both men and women take part in the operation. Then weeding is done in the month of June-July and the weeds are left in the site to be decomposed. The crops are then guarded round the clock to protect these from destruction by wild animals. The crops are harvested in succession one after another. Kosla and ragi are harvested in the month of October-November and Kandula in the month of February-March. Threshing is done in the Podu fields and grains are stored in bamboo baskets and earthen pots.

Juang :

The Juang are found in the district of Keonjhar and Dhenkanal. As per 1981 census their population was 30,871. Shifting cultivation is the mainstay of Juang subsistence economy. In addition, they resort to hunting and food gathering. The swidden plots are called Toila. A patch of swidden is cultivated for two or three consecutive years and there after it is left fallow for 5-6 years. The first year cultivation is called Toila, second year, 'Ekan' and third year and fourth year 'Nata'.

The traditional village council traditionally owns the toila lands located on hills within the village territory. During puspunei festival, under the leadership of the village priest, the village elders and family heads select and distribute plots among themselves after performing rituals. Then cleaning and felling of trees begins by the respective allottees. The next phase involves firing the dried vegetations. The rain water helps in spreading the ashes all over the field which serves as manure. The toila field is then ploughed with the help of bullocks and where ploughing is not possible they work the soil with the help of hand axe.

They sow rasi (niger), Biri, Koltha and dibble seeds of beans near the standing dried trees. When the crops ripe, they watch their fields to ward off wild animals. After harvesting, the food grains are stored in bamboo baskets for future use.

In the second year the site is called 'ekan'. Along with Paddy, in Ekan, a variety of other crops and vegetables including Kalort, Akoyang Jinjani, Kasalak, Pumpkin gourd, Saru Khangra Juani and Khude are also grown. Besides gourd and cucumber seeds are also planted near the dried trees which provide support.

The Podu land under third year of cultivation is known as Nala, where they sow paddy or Rasi. After the third year cultivation, if the land still have some fertility left, it is again brought under the fourth year cultivation.

Didayi :

The Didayi are a small primitive hill tribe inhabiting forest clad hill-tract hidden inside the inaccessible 4,000' plateau of Kondakamberu range of Eastern ghats which stretches along the eastern border of Malkangiri district. Living far away from the mainstream of civilization, this little community is almost unknown to outside world. The name Didayi meaning the "wild people" has been bestowed upon them by their Oriya neighbours, which they have accepted unhesitatingly.

They are shifting cultivators and so used to shift their houses from one site to another in tune with the rotation of their shifting cultivation. As a result, the houses in hill ranges are found lying almost scattered. The houses in hill villages are more isolated than the houses in plains. Formerly, the Didayi used to live more in the tiny mountain settlements. Today only a small percentage of households are found to live in their traditionally favoured mountain habitat, the majority having comedown and settled on a permanent basis on the bank of Machkund river or in the valley of Kondakamberu range.

The population of the tribe was 1984 as per 1981 census.

Shifting cultivation on hill slope is the principal means of subsistence to a large majority. It is described as 'bri' a term which is synonymous with the term Podu. The Didayi follow their traditional method of practicing shifting cultivation. The crops cultivated are

Red gram, Jawar, Black-gram, Brinjal, Niger, Ragi, Suan, etc.

Generally the steep hill slope with rich vegetations located close to the village is selected for practicing shifting cultivation. The operation starts from winter (January-February) when the patch is cleared off. The Didayi use axe and sickle to cut trees and shrubs respectively. The felled materials are allowed to dry up for a month or so after which the fire is set on it. Then the ashes are distributed all over the plot. The sowing of seeds starts from June after the onset of monsoon, followed by hoeing and weeding after one and half months, small iron sickles are used for reaping the crop. Threshing is done on a clean field specially prepared for this purpose. The grain and seeds are stored in storing baskets. Alternatively the plot at one site is cultivated in cyclic rotation for three consecutive years and then abandoned for 10 to 12 years.

Economic Aspect :

In Orissa there are 11 tribal communities who are partly or wholly dependent on shifting cultivation. All these tribes have a very low economic status. It is estimated that the approximate yield of corn per acre including the creeper grains is 4 puttis (240 kgs.) whereas it comes to 8 to 10 puttis (480 to 600 kgs.) in case of low land on the plains. (Ref : H.K. Ghosh, Economic Condition of the Tribals in the district of Ganjam). One of the main reasons of economic backwardness of the primitive tribes in Orissa is their practice of shifting cultivation. They are still at the subsistence level that is at the level where each family can only produce the bare requirements for its direct consumption. It is also found that the per capita income of some of the tribes

practicing shifting cultivation in Orissa was as low as Rs.158.40 in the year 1967-68 at current prices as against the State average of Rs.324.83 for the same year.

Evils of Shifting Cultivation :

The shifting cultivation is considered devastative and dis-advantageous as it not only causes harm to the eco system but also exerts negative impact on economy. Some of the evil effects of such cultivation are :

- i) helps the springs to dryup.
- ii) results in soil erosion
- iii) destroys valuable timber
- iv) responsible for causing very heavy floods, and
- v) silting of the tanks and fields and damage to crops.

Past attempts to check the practice :

In view of the extent of the area and population affected by shifting cultivation the State Government have attempted to tackle the problem by controlling or nationalizing the practice. The colonization programme was introduced during the sixties in the problem areas to divert the primitive tribes to settled agriculture by providing cultivable land, necessary inputs and residential accommodation. During the first four plans a number of colonies have been established in the tribal areas. However, in most of the areas the scheme has not achieved the desired results. In this connection a study conducted by THRTI in the year 1960 revealed that in certain colonies the tribals are engaged as agricultural and hired labourers although the purpose of the colonization scheme was to rehabilitate them as owner-cultivators.

Besides the colonization scheme, the programme of rational land use on watershed basis has been taken up by the State Government through Soil Conservation Department. The programmes included the following :

- (a) Providing land to the tribals who was willing to give up cultivation on steep slopes.
- (b) Plantation of economic species useful for tribal community.
- (c) Introduction of conservation farming to allow tribal people to obtain higher production from crop land.
- (d) Utilization of steep slopes for production of timber. Under the above scheme a suitable watershed in the shifting cultivation area is selected and rational land use programme is executed on the existing catchment. A schematic land classification of watershed management units together with land use programmes was recommended for watershed areas for rationalization of shifting cultivation.

The above programme was first started in selected catchments of Koraput district on pilot basis and then it was extended to other problem areas in Phulbani, Kalahandi and Keonjhar districts. However, these programmes were inadequate in view of the vast population and the area affected by shifting cultivation.

Recent Approach to the Problem :

In June 1987 Government of India, Ministry of Agriculture floated a pilot scheme for control of shifting cultivation. It has two fold objectives i.e. restoring ecological balance in the hill areas and improving socio-economic conditions of tribal podu practicing families by weaning them away from podu cultivation with 100% Central Assistance.

H.& T.W. Department took up the responsibility for implementing the pilot scheme. The schemes were actually grounded in 1988-89. Altogether 185 villages were identified in 7 ITDA areas covering six districts for rehabilitating 6181 podu practicing families.

The pilot scheme covered 11,000 ha of podu areas in Orissa. The scheme was implemented by multidisciplinary organization comprising of Agriculture, Horticulture, Soil Conservation, Forest, Animal Husbandry, Fishing, Irrigation, etc.

Strategy :

Keeping in view the recommendations of ICAR as well as World Bank in the proposed model, the following strategies have been included.

- (a) To promote forestry on upper reaches with silvipasture development.
- (b) To break middle slope length for annual or perennial fruit trees and inter-crop.
- (c) The lower slopes will be put under agricultural crops.

Under this scheme a number of programmes were proposed to be implemented during the 8th plan period for control of shifting cultivation with the assistance of Central Government.

The programmes are, Land/Jhola land Development, Development of Irrigation, Agriculture Development, Raising of orchards and Horticulture Plantations, Raising of plantation crops, Forest Plantation, Pasture development, Animal Husbandry, Development of Pisciculture, Owner's subsidiary occupation, construction of village path, soil conservation works, training programmes, other works.

References :

1. Guha, Uma & others (1968), The Didayi : A Forgotten Tribe of Orissa, Govt. of India Publication Branch, Delhi.
2. Govt. of Orissa, H & T.W. Deptt. (1991), Control of Shifting Cultivation scheme, Orissa, Annual Action Plan 1991-92 (unpublished), (1990) Tribes of Orissa, Bhubaneswar, THRTI, (1996) Development Hand Book for the Kutia Kandha of KKDA, Belghar, Phulbani District, SCSTRTI, Bhubaneswar
3. Mohanty, B. (1986), Shifting Cultivation in Orissa : A case study among the Juang, ADIBASI, Vol.XVI, No.4, pp.17-26.
4. Mohapatra, K. & K.B.Debi, (1972-73), Shifting Cultivation in Orissa, ADIBASI, Vol.XIV, No.4, pp.11-28.
5. Patnaik, N. (1977), Shifting Cultivation in Orissa, ADIBASI, Vol.XVI, No.4, pp.1-21.
6. Ibid, A note on Shifting Cultivation in Orissa (unpublished report).
7. Patnaik, N., & B. Chowdhury, et.al., Shifting Cultivation in Orissa, THRTI, Bhubaneswar (Unpublished reports).
8. Rout, S.P. (1969-70), Hand Book on the Juang, ADIBASI, Vol.XI, No.1-4.

Balaram Dash lives at Plot No.27(P) behind Maharshi College, Saheed Nagar, Bhubaneswar.

**PUBLIC HEARING FOR M/S JINDAL STAINLESS LTD. KALINGA NAGAR
HELD AT JAJPUR ROAD**

Public hearing for M/s Jindal Stainless Ltd. Kalinga Nagar Industrial complex for their expansion and modification was held on 30.6.2006 at Jajpur Road. On behalf of M/s Jindal Stainless Ltd their environmental consultant, M/s global Experts described briefly about the proposed expansion and modification project of 1.6 MTPY. The company has earlier obtained no objection certificate from State Pollution Control Board, Orissa and environmental clearance from Ministry of Environment and Forest for their earlier proposed projects.

The total plant area of 526.09 ha is acquired from IDCO. The plant is based on the Blast Furnance-EAP-AOD-LF-Continuous casting Rolling Mill (HRM & CRM) route to produce finished stainless steel product. It will have 65 MW WHRB power plant to meet the power requirement. The company will invest nearly Rs.5575 cr. where the capital investment towards pollution control environmental management and implementation and community development will be nearly Rs.353 cr. The total employment generation will be 1844. The company will give preference to local candidates during its employment process.

However considering the technological / economic viability of the previous project the management wanted modification / expansion in order to meet the present market scenario.