Traditional practice of Jhum agriculture in hilly terrain by the Wancho: A Study of Longding District, Arunachal Pradesh

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ABSTRACT

The present study attempts to bring traditional Jhum agriculture known as Zim-Zu by the Wancho in Longding district, Arunachal Pradesh. Agricultural practice stands for set of methods, procedure, process or rule which becomes habitual action or performance or custom in a given geographical location. The discussion is mainly based on primary source of information like observation and interaction with the local inhabitants over a considerable period of time and also substantiated by, wherever possible, with secondary sources of data. Traditionally the Economic mainstay of Wancho is shifting (Jhum) Cultivation. Through this study it is observed that Socio-cultural life of Wancho revolved around systematically arrange agricultures which are administered by village council headed by village chief called Wangham. Temporal and spatial aspect of shifting cultivation is performed under well-defined traditional rule and regulation. Wancho villages are arranged in such a way that each village has its position in the centre of their territory and divide their land into sector wise with settlement serve as a centre point. Every household will have one or more unit of plot in each Sector. Each of these sectors is being selected for cultivation each year base on local calendar. It is also observed that the duration of revisit depends upon Size of land and number of sectors of that village. Such arrangement is meant to ensure fertility and sustainability of land. Even today Jhum is dominant economic activities of Wancho with more than 90% engaged in it. However, People are now looking for diversification of agricultural field from traditional mode.

Key words : Wancho, Traditional, Spatial, Temporal, Systematically, Shifting- Agriculture

Introduction

The paper is in effort to comprehend and understand the traditional technique and processes of Jhum cultivation by Wancho community. And try to highlight present status. Shifting cultivation commonly known as Jhumming is one of the most ancient system of farming believed to have originated in the Neolithic period around 7000 B.C (Borthakur, 1992). This technique involves broadly clearing and burning of vegetation and then abandoned to regenerate after two to three year of cultivation. This process continue one after another with a revisit times ranges from seven to fourteen years, also called Jhum cycle. This type of agricultural practices of shifting of plot of field is the ultimate strategy made by men to obtain sustenance under the harsh environment. The shifting cultivation system persists due to its compatibility with the socio-physical environment characterised by a sparse population, specific forms of community land tenure system, undulating topography, poverty, meagre resources (Alam *et al.*, 2016). It is practiced across the globe with different terms as Ladang in Indonesia, Caingin in Philippines, Ray in Vietnam, Roca in Brazil, Podu in Orissa, Kumari in western Ghats and Jhum in Assam in particular and North East India in general. It was performed as the best ecological resilience methods to a given environment through indigenous knowledge acquired from generation of interaction with environment. Shifting cultivation, though a rudimentary technique of land and forest resource utilisation, represents an intricate relationship between ecology, economy and society (Kerkhoû et al., 2006). In recent time research have been widely encouraged to cultivate better alternative economic activities in these areas in wake of deforestation and subsistence nature of agriculture. Off farm activities such as sericulture, weaving, handicrafts out of the local materials and value addition to the farm product are needed to enhance income of tribal farmers (Swami, 2018).

The north-east India is mostly covered by geologically young and structurally fold Mountains of Eastern Himalayas. These loftiest and rugged terrain do not favour sedentary cultivation. As a result shifting cultivation, livestock rearing, frequent hunting and fishing become chief means of livelihood for these tribal people. In view of the mountainous terrain slash and burn, called as Jhum, is the main form of agriculture in the hills of the North East India (Tripathi *et al.*, 2003). Shifting cultivation (Jhum) is a major landuse that is practiced by almost all the tribal groups of North east India (Ramakrishnan, 1993). Over 86 per cent of the people living in hills are dependent on shifting cultivation (Layek *et al.*, 2018).

Wancho ethnicity with its highest concentration in Longding district, Arunachal Pradesh are also found in Tirap, Nagaland and Myammar. Wancho is believed to be the one of the backward tribe of the region. The reason is most probably the less and late interaction with outsider as Wancho practiced headhunting before the advent of Govt. administration at the area in which inflow of people from far away distance was not very easy. Still Wancho lives under rigid and strong chieftain system. The main sustenance of Wancho is derived from Agriculture and its allied sector.

Shifting Agriculture is mainly practiced for selfconsumption and its subsistence in nature and it is performed as per their lunar calendar (Ralongham, 2009). Wancho since time immemorial practiced systematic arrangement of agriculture under well-defined rule and regulation. The rules and functioning of such traditional institutions are based on locally acceptable cultural values and are functional within each community, including the management of natural resources (Tripathi *et al.*, 2003). Their sociocultural life revolved around farming, hunting, fishing and gathering. Shifting cultivation is a part and parcel of socio-cultural life of the tribal people in North-East India and as such all its operations are inseparably linked with their religious rites and festivals (Singh and Sharma, 1999).

Methodology

Study area

The present study is confined to the wancho tribe inhabited area of Longding district. Nevertheless, the inference drawn from study on traditional aspect of land management can be applied to all wancho regardless of location to which they belong because socio-cultural dimension of wancho is same. The district is located between 26° 39'31" N and 27°06'19" N latitude and 95°11'07" E and 95°30'55" E Longitude forming the south-eastern most district of the state. It has a total geographical area of 1192 Km². The total Population of the district stands at 52719 as per Census, 2011.



Fig. 1. Locational map of the study area *Sources* : Census of India 2011, Arunachal Pradesh

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Sample vinages	Sam	ple	Vil	lages
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1	Konsa	6	Niausa	11	Chopnu	16	Chanu
2	Pongchao	7	Pumao	12	Russa	17	Longshom
3	Bonia	8	Chop	13	Longkhaw	18	Senua Noksa
4	Niaunu	9	Wakka	14	Senua	19	Pongchao
5	Senua	10	Nginu	15	Zedua	20	Ozakho

Survey and Sampling

The discussion is mainly based on primary source of information like observation and interaction with the local inhabitants over a considerable period of time and also substantiated by, wherever possible, with secondary sources of data. Since the current study revolves around Agricultural practices of the Wancho tribe, which do not require much empirical data, a researcher visited 20 traditional villages accounting 40% of the original villages and made extensive interaction with Village head and elderly person. Hence the perceived research paper heavily depend more on quality observation and interaction through field visit by author. Finally, ArcGIS10.3 was used to generate location map from census of India 2011 and others topographic map have been prepared from SRTM-DEM.

Results and Discussion

From the study it is observed that a very infamous practice of head-hunting and hilly terrain have absolute controlled on settlement pattern and agriculture practice of Wancho. Villages are arranged in a hexagonal pattern having its village location at the peak of each hill and maintain fairly same area from all side of the settlement. The dot in hexagon represents settlement area of the village whereas area under each hexagon belong to respective villages.

Head-Hunting

Traditionally Wancho practised very infamous



Fig.2. Hexagonal Model showing Spread of villages

Head- Hunting Culture when inter villages fought for each other's head for pride and status. Thus, it is imperative for them to settle on hill-top which maintained good distance from all side. Such geographical location provides strategically advantageous position in both situations of attacking and defending.



Fig. 3. Settlement on top hill and preservation of Heads of the enemy

Source: Field Survey 2017-2021

Hilly Terrain

Physiographically, longding district fall under Patkai hills of purvanchal range with an average altitude of 860 meters. The whole areas are filled with chain of hills except narrow strip of featureless plain in the northern part of Kanubari circle which is an extended part of Brahmaputra plain of Assam.



Source: Generated from SRTM-DEM using ARcGIS10.3

Such geographic setup along with fierce headhunting set a unique pattern of landuse with settlement on middle most hill top and sectoral layout of agricultural field on its sorrounding. This is because of the fact that having centrally location of a village could maintained equidistant with all its outer boundary and also provide effective utilization of its whole areas for Shifting Cultivation and hunting without changing its settlement point.



Fig. 5. Sectoral division of agricultural field

Every year preferably an adjacent sector from either direction is selected unless their yearly ritual called **Ozok** shows bad indication. In case of such prophecy, propose site is superseded by other in line. The overall administration of Agricultural management from determining new site to abandon of that, vested with the Village council headed by village Chief. Although selection of new field is done each year, cultivation on the same field contitinue for almost two year. This basically implies that each calender year two sectors are cultivated. For example,



Every household will have one or more unit of plot in each Sector. It is also observed that the duration of revisit depends upon Size of land and number of sectors of that village. That means number of years taking for revisit is equal to number of division. During the first one year, this Jhum Kheti is called Zim and after that a phase of next year duration is said to be Kaap (Old field).

In the month of Septembr- October (**Ngaan**). **Ozok** ritual is performed to choose new site for cultivation. On the occasion of lauden festival after the harvest of the paddy crop, jungle clearing/cutting

starts. In the month of December-January (Hey), the jungle is burnt. Millet seeds is sown and cultivation starts. Other crops such Colocasia, tapioca and vegetable are also grown. During these activities a hut for rest in the field is constructed. Social norms are strictly followed in the construction of the **Hut** (Taap).

In the month of February-March (Zuu), Oriah festival, an occasion to offer thanks to the Almighty God (Jowan Zang) for the immense blessing in the preceeding season and to pray for abundant blessings in the days to come is celebrated. The almighty God is remembered, an offered agricultural products (Steamed millet, millet beer) at a Sacred alter called Zangvantong. Oriah is mainly an Agricultural festival celebrated after slashing and cleaning of new jhum-land when people can avail themselves of the leisure to pray to the almighty Jowan Rang for bumper crops in particular and good health in general (Loham, 2008).

In the month of April-May (Tsang), a ritual cum festival (Chahchavan) is performed for the healthy and speedy growth of the millet. In the month of June-July (Haan), the ritual called **Potak** marking first day of the millet's harvest is organised. When the harvesting get over another ritual is performeed called Pungzam. It is a thanks giving Puja to the God. When the harvesting is complete, now weeding is carried out for the growth of colocasia, Tapioca and other vegetable crops.

After the Harvest of the vegetable crops, again, remove weeds and the land is prepared for the paddy crops. In the month of March- April, sow paddy seed and is harvested in the month of August-September. Again Lauden Festival and Ozok ritual performs to choose/ select the Next Jhum Feld. As such socio-economic life of Wancho revolves around a systematic arrangement of Jhumcultivation.

Present Status

Such arrangement is meant to ensure fertility and sustainability of land. However, despite well organised form of practice, final output of the field could not meet the requirement of the people. People are now looking for diversification of agricultural field from traditional mode.

With the advent of modernity through education, change in religion and Govt. administration, the importance of ritual aspect is diminishing and the ethical value of it is hardly alive. Still agricultural practice of Wancho is purely traditional and subsis-

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ACTIVITY (Mottho)		Month	
Zimzan (New Field)	Kapp (Old field)		
Selection ritual (Ozok) for new on Launden Festival One day visit ceremony for New field (<i>Zanghu</i>). Cutting/ clearing of jungle (<i>Zangtu</i>) Cutting and Burning (<i>Tsanzok</i>)	Ploughing with iron Scrapper	SeptOct. (<i>Ngaan</i>) OctNov. (<i>Daah</i>) OctNov. (<i>Daah</i>) NovDecember (<i>Dik</i>)	
Clearing debris, sowing of millets and Colocaia (<i>Tsanmot, Bumoi, Tokai, Nyikha shat sai</i>)	usually by hand (<i>Konshoak</i>) Collecting Colocasia and removing debris (<i>Tolok Bumoi</i>)	DecJan. (Hey), Jan Feb. (<i>Taam</i>)	
Contruction of farm Hut (Tapzai)		FebMarch (Zuu)	
Sowing of Seed and other vegetable crops (<i>Nyipho- phyasa</i>)	Sowing paddy (Tsah Shit, Tsah Shei)	March–April (Tsang)	
Weeding (Hingo monu)		April-May (Namsaa)	
Weeding (Hingo phaichi)	Weeding, removing compact portion of paddy from paddy field (Konnu mot)	May-June (Namnu)	
Harvesting of Millet (Nyikhashik)	Careful removing of weeds from paddy field (konsa)	June-July (Hann).	
Cleaning of left over step of millet (Chawmot)		July-August (Vat)	
Weeding and accumulation of soil on colocasia (<i>Votsa phan</i>)	Cutting of Paddy (Tsah Tu)	Aug. –Sept. (Zan)	
Removing weed with tools (Votphan)	Left the field for next visit.	SepOct. (Ngaan)	
Enter into old phase (<i>kaap</i>)			

Fig. 6. Yearly activities (Mottham) *Source:* Field Survey 2019-2021



Fig. 7. Farmer perfoming various activities 05/02/2020 Sources: Field Survey

tence where villager change their field every year under the decision of village council but in recent time people resort to settle in pocket away from main settlement area where they adopt terrace cultivation and horticulture. This has brought about considerable change in age old land use pattern. Various factors attribute to this shift mainly; lack of economic viability in traditional jhum-cultivation, awareness about possible alternative through education and interaction with outsider; rise in income level help in diversification of agriculture; weakening rigid chieftaincy system in the wake of education empower people to choose own desire. However, major share of Wancho still rely on traditional way of shifting cultivation with low productivity and work intensive for their sustenance. Thus, it may be concluded that lack of funds is only reason why Wancho still depends so much on shifting cultivation. In due course of time Wancho may completely transform shifting field into others uses. From the study it is also observed that with rising population, urbanization and new settlements have impetus more pressure on environment than what used to be in shifting culture where patches of land were left untouched for decades. In fact, each year cultivated land of every villages account for nearly 15% of its total land areas.

Conclusion

On account of sloppy terrain Wancho has been practicing a well organise and systematic Jhum cultivation which also reflects their indigenous knowledge acquired through generation of interaction with prevailing environment. Still this traditional technique dominate their economic lives with no less than 85% households rely on Jhum farming. However, with increase interaction, new ideas and modernity, diversification of jhum land is also going on.

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