

**Livelihood Challenges and Survival Strategies of the
Hill-Kharia and Mankadia Tribes in Mayurbhanj
District of Odisha**

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Abstract: *This paper is based on a study on the survival and livelihood challenges of Hill-Kharia and Mankadia tribes (PVTGs) and the impact of welfare schemes in their life in Jashipur and Karanjia blocks of Mayurbhanj district of Odisha. The paper reveals that education beyond primary level among these PVTGs is almost absent and their health status is poor, which together, make them vulnerable. These two tribal groups lack basic infrastructural facilities such as schools, hospitals, roads, banks, electricity, proper drinking water, communication and transportation. Majority of them are in primitive stage of life, without having a proper house and largely depend upon forest produce and manual labour for their survival. They spend very less on education and health. Besides, alcohol addiction is the main reason for their poor health and economic condition. The tribal welfare programmers could not achieve the desired results in the life of the Hill-Kharia and Mankadia and many of them are at the bottom of the human development index.*

Keywords: PVTGs, socio-economic conditions, literacy, health, nutrition, micro credit.

Introduction

Tribals are the aboriginal inhabitants of India. Tribals are identified as different names. Scholar like Hutton (1933) had used the term 'aboriginal' to denote the term tribe. John Henry Hutton, Emile Durkheim and Taylor had referred the term 'primitive tribe' while Thakkar Bapa, a tribal leader who had called them 'Adi Praja'. Verrier Elwin and Virginius Xaxa denotes them as indigenous people. G. S. Ghurye, an eminent sociologist uses the

term 'backward Hindus' for tribal population in India. Various international forum such UN, depicts tribe as indigenous (Bruman 1980). The constitution of India refers tribe as 'scheduled tribe' but no definition of 'scheduled tribe' has been mentioned in the constitution. Further, tribal people are also denoted to other names, such as Vana Jati (forest caste), Adivasi, Vanavasi, Janajati or AnusuchitaJati. The tribal population of the country is 10.43 crore, constituting 8.6 per cent of the total population and traditionally concentrated in about 15 per cent of the country's geographical area (Census 2011). Odisha is one of the tribal heartlands in India. As per the census report 2001, Scheduled Tribe constitutes 22.1 percent of the total population of the state and 9.7 per cent of the total tribal population of India. Odisha ranked 3rd and 11th among the state and union territories in terms of tribal population of state, respectively (Census 2011). Highest numbers of scheduled tribe live in the state, that is 62. Tribals are one of the most marginalized social groups lives in the state acute deprivation, backwardness. In present time too, many tribes are in primitive stage of their development. Most of them lives nomadic life in the midst of forest and mountain and collect their livelihood from the forest. Tribal communities suffer major challenges in their survival and earn their livelihood (Vidyuta and Upadhyaya 2017). A sizeable numbers tribes pursue hunting and gathering as their occupation, few of them are in agriculture which is in rudimentary stage. Indian state has many legal measures and welfare programmes for socio-economic development of tribal communities. In spite of so much legal intervention, and welfare measures for tribal welfare, it has not equally benefitted to all tribal communities in the country. There are certain tribal communities who could not availed the welfare benefits and left behind to the condition of vulnerability. Indian state has attempted to provide special focus for the welfare of tribal communities who are who could not have availed the development benefits as other tribal communities did and still live primitive live and victims of deprivation, backwardness and vulnerable to many problems (S. B. and Thakur 2018). On the basis of degree of vulnerability, certain tribes are identified and characterized as Particularly Vulnerable Tribal Groups (PVTGs) who were earlier known as Primitive Tribal Groups. Out of 705 tribes, 75 are identified as Particularly Vulnerable Tribal Groups (PVTGs) who live in 18 states and 1 union territory of India (Census 2011). Out of 75 Particularly Vulnerable Tribal Groups (PVTGs) in India, Odisha has highest numbers of PVTGs, that is 15. The PVTGs population in Odisha constituted in 541 villages and distributed in 69 village panchayat under 20-part block in 20 districts of Odisha (Pattnaik 2017) According to the 2001 census, the PVTGs population is approximately

27,68,322 which is 2.6 per cent of total Scheduled Tribe population in India (Report of High Level Committee, 2014). With aiming a special focus for the development PVTGs, government of India have come up with numerous tribal welfare programmes, policy measures and developmental schemes and spending crores of rupees. In various Five-Year Plans, number of Micro projects have been launched by the Government to ameliorate the living conditions of PVTGs and bring them in the main stream of development. Particularly Vulnerable Tribal Groups (PVTGs). In the State of Odisha alone, 17 micro projects have been set up exclusively for 13 PVTGs, both in the demarcated Tribal Sub Plan and Non-Tribal Sub Plan areas with 100 per cent assistance from Government of India. Even after Six decades of planning, they are considered as the most vulnerable section of our society from the ecological, economic, social, political and educational point of view and are facing the problems of hunger, malnutrition, poverty, poor literacy, poor health facility and deprivation from natural resources. They have remained excluded from the fruits of Development. Despite the government's continued efforts for the development of PVTGs from the 5th Five Year Plan, no state government had proposed the deletion of any group from the list. Many studies have undertaken to understand the socio-economic conditions of tribal communities in India. These studies argue that Human Development Index of PVTGs reveals that overall status of PVTGs are worse than the Scheduled Tribes and other communities (S.B and Thakur 2018). The vulnerability of PVTGs are due to sudden change of economic system, restriction of forest entry had made them to loss their livelihood, establishment of industrial projects has cause them to lose their land and association with outsiders has increased their exploitation. PVTGs in Odisha suffers negative population growth, low literary, high dropouts, loss of traditional rights over forest and loss of livelihoods, degrading health status, bondage labor and exploitation from outsiders etc. (Pattnaik 2017). However, studies on PVTGs are very few. Odisha constitutes highest numbers of PVTGs, however less has been explored to understand their socio-economic conditions and challenges they face towards development. In this backdrop, the present study has empirically attempted comprehend the development of PVTGs with respect to socioeconomic indicators and livelihood issues of Particularly Vulnerable Tribal Groups of Odisha with a specific focus to the Hill-Kharia and Mankadia Tribe of Mayurbhanj district, Odisha. Along with major problems and challenges which affect their livelihood, the paper evaluated and examined the impacts of various welfare schemes towards the obliteration of vulnerability among Hill-Kharia and Mankadia tribes.

Materials and methods

The present study has been conducted on Hill-Kharia and Mankadia tribe in Jashipur and Karanjia blocks of Mayurbhanj district of Odisha. Both primary and secondary sources data have been used for this study. The primary data has been generated through field work conducted by using survey method with structured and semi-structured interview schedule. Simultaneously, group discussion and informal interview methods have been used. Observation has been conducted through semi-participant methods. The study conducted in villages which comes under the Hill-Kharia and Mankirdia Development Agency (HKMDA). Out of 12 Revenue villages under the Micro Project, 7 revenue villages were covered under the study, namely Durdura, Kendumundi, Khejuri, Podagarh, Palguda, Matiagarh and Astakuanr. A total of 240 populations has been surveyed from 77 households. Out of 240, 121 (50.42%) are male and 119 (49.58%) are female. The secondary sources of data used in the study from Census of India, Annual Reports of Ministry of Tribal Welfare; Government of India, Economic survey of Odisha; Government of Odisha, Selected Educational Statistics, reports of Planning commission, reports of Ministry of social justice and empowerment; Government of India. In addition to the documents, various books and journals are referred and used. The variables used in this paper are literacy rate, gross enrolment ratio, dropout rates, gender wise literacy etc. Different data presented in tabular form, which shows in percentage. An index has been calculated to show the gender parity among the tribal.

Hill-Kharia and Mankadia Tribe: Location and origin

Hill-Kharia and Mankadia are the primitive tribes largely constituted in Similipal hill and plain and fringe regions in Jashipur and Karanjia blocks of Mayurbhanj district, Odisha. Few of them also lives in Morada block of Mayurbhanj district and Sundargarh and Sambalpur district, respectively. Hill-Kharia speaks 'Kharia-Tar' language which belong to Indo-Aryan language family while Mankadias speaks 'Munda' language. They do conversation in Odia language with outsider. Hill-Kharia tribe is known by some other names that are Pahari Kharia, sabar, Kheria, Erenga, Pahar etc. Hill-Kharia tribe identify themselves as sabar but outsider calls them Hill-Kharia/ Pahari Kharia. They consider themselves as the descendant of VishwasuSabar who was the first worshiper of Lord Jagganath and proudly identify themselves as Sabar. The Mankadias are characterized by typical physical features including short stature, dark complexion with long head, thick lips, wavy hair, broad flat nose etc. They are called Mandakia

because they trap and relish monkey meat. Chotanagapur plateau is the place of origin of Mankadias. It is believed that ancestors of Hill-Kharia tribes were living in Patna but they were attacked by an Ahir Chief, as a result moved to Chotanagpur and other places. Now Hill-Kharia and Mankadias lives in different parts in India. Hill-Kaharia and Mankadias are semi-nomadic tribe, live in the midst of the forest and considered as hunting and food gathering tribal communities but some of them are in the rudimentary stage of agriculture and primitive cultivation (Tudu 2017:.60). In the present time, they live with other communities, agricultural tribe and castes Hindus in the same village. Hill-Kharia tribes have been identified as one of particularly vulnerable tribe due to their marginality, deprivation and backwardness.

Settlement pattern

Hill-Kharia and Mankadias live in the midst forest. Their houses are situated contiguous to water resources which are made of mud, wood with thatched roof made of mud clay having no window in the house and walls are plastered with mud. Their houses are constructed in rectangular shape comprises only one room which they use as kitchen, bad room, storeroom etc. The villages of Hill-Kharia and Mankadias comprises 10 to 30 families but there are villages which has less than even 10 families (Tudu 2017:10). The Hill-Kharia and Mankadia villages located in the midst of forest are generally homogeneous only Hill-Kharias and Mankadias lives in those villages. However, Hill-Kharia and Mankadias villages which situated in plain region, is heterogeneous in nature because other communities also live in those villages but their houses are situated separately from other communities. The Mankadia are nomadia tribe who move from place to place in different seasons but in rainy season they could not move and built a hut for temporary settlement called Tanda. In a tanda, besides a Kumbha (meant for individual families), there are two other huts called Dhughala and Kudi Ada. Dughala is meant for unmarried boys and Kudi Ada for unmarried girls. Kumbha is a hut made of twigs and leaves of Sal trees, where the Mankirdias live. It is dome shaped. The height of the Kumbhas is found to be 5 feet. It covers a circular area. They enter in to the hut by creeping. A portion inside it is used as kitchen and store.

Food and clothing

Rice is the staple food of Hill-Kharia and Mankadia tribe. They prefer to eat boiled water rice with cooked vegetables. Other supplementary foods

they consume are mandia, maize, green leaves of various plant, flowers, mushrooms, arrowroots, various types of fruits, nuts, flowers etc. Beside this, they consume meat and fish. Eating dry fish (Sukua) with boiled rice is common practices among them. The types of food they consume varies seasonally due to its availability. During rainy days, they suffer rice scarcity. Therefore, they consume maize, edible roots and tubers in rainy days. Drinking alcohol is a common practice among tribal (Ho and Mishra 2017) and the case is similar among Hill-Kharia and Mankadia. Alcohol is one essential item among them and they prepare it by themselves only. Consumption of alcohol is mostly preferred in ceremony and festivals but they drink it in other days according to their choice. Hill-Kharias and Mankadias tribes were water from river, stream and pond for drinking, cooking and bathing. However, these days they use tube well and well water for drinking and cooking and river, stream and pond water for other purpose. In every house they have a garden where they grow vegetables for their own consumption. Among Hill-Kharias and Mankadias, male wear short size short dhoti/lungi and women wear short cotton sari without blouse and their sari fall up to their knee. Wearing of blouse and undergarment was not common for women in the past, now women prefer to wear these garments. Their women wear ornaments are namely, brass necklace, armllet, earring, finger ring, and iron hair pin, ear ring, glass and metal bangles and ribbon for adoring their hair. With influence of outside communities, youths of their communities are wearing vest, shirt, pent, jeans, t-shirt and shoes. Male also wear ornaments such as neck-laces made of beads. Making tattoo is one the common practices among them and it is seen that mostly women are found to have tattoo on their forehead, eye corner, both hand and legs.

Social setup and practices

Family occupies central position amongst Hill-Kharia and Makadias and nuclear form of family is dominant among them. Family is patrilineal, patrilocal and patriarchal in nature where father is the head and takes final decisions in all matter. However, female also enjoy equal right with male in many aspects. The next major social unit is clan. The Hill-Kharias and Mankadias are classified into different clans. Marriage is another significant institution among them and monogamous forms of marriage is largely prevailed in their society. However, it is observed that polygamy also prevalent among them. They practice endogamy, marriage outside their tribe is strictly prohibited and punishable offence.

Bride pride is commonly prevalent among both tribes. They also prefer cross-cousin marriage. Marriage of Girl and boys takes place between the age 14 to 16 and 18 to 20 or 25, respectively. It is important to note that, child marriage is not preferred among Hill-Kharias and Mankadias. There is space for surrogate and widow remarriage among them but it is not common rather allowed in specific circumstance. Divorce is permitted on ground of infertility, adultery and incompatibility. The matter of divorce is adjudicated by their community council on the ground of validity claim for divorce. Divorce on the ground of adultery, wife's family is required to return the cash and kind received as bride price at the time of marriage. Among Hill-Kharias and Mankadias, if the deceased person is married then they are cremated whereas deceased person is buried if they are unmarried. In the case of cremation, the bones and ashes deceased person is thrown into the river by putting it in a new earthen vessel with parched rice. They observe death population rituals for ten days and performs mortuary rites at the end (Tudu, 2917:66). On last days, they host a feast by inviting their friends and relatives. A tall slab memorial stone is set up near the house of deceased person.

Economic life

The principal occupation of Hill-Kharias and Mankadias are hunting and gathering. They are expert in hunting and they use four major techniques for hunting that are cutting, digging, picking and climbing. The tool they use for hunting are bow, arrows, sticks, spears etc. Apart from hunting and gathering, rope and handbag making is one of the primary occupations of Mankadia tribe whereas making leaf plate, cup and basket, broom etc. in bamboo other occupations practiced by Hill-Kharia. Mankadias are expert in catching monkey, they eat the flesh and sell the skin to skin traders. Fishing is another important practice between Hill-Kharia and Mankadia, they do fish for their own consumption. Some of them also practices agriculture but it is in rudimentary stage. They also rear domestic animal and poultry to supplement their food and income. In the present time, wage labour is one of the major sources of their livelihood among Hill-Kharia and Mankadia and they work as labour in the agricultural field and construction sector in their locality. Similipal was declared as National Park in 1958 and Wild Life Sanctuary and Tiger Reserve since 1973. As a result, these areas have been declared as protected region and restrictions were imposed to enter the region, and cutting tree, hunting and collecting forest produce activities are banned. It has brought adverse effects in the economic life

of Hill-Kharias and Mankadias. Their self-sustained economy got misbalanced and they are now converted as informal labor force. However, food collecting and gathering is one of the main sources of livelihood among Hill-Kharias and Mankadias. Traditionally, they were hunting and collecting food for their own survival but now they exchange it for rice, other goods, and some time for money.

Political organization

Hill-Kharias and Mankadias have simple political organizations. Political organization of Kharias and Mankadias are constituted at village and inter-village level. Every village has a panchayat headed by a Pradhan or Mukhia. Among Mankadia tribe, 'tanda' is known as the autonomous socio-political unit for all purposes. The head of the tanda is called Mukhia whose post is hereditary. The Mukhia or headman of Hill-Kharia and Mankadias, acts as judge and suggests, advice and settles with the help of other functionaries of the village. The Mukhias of Hill-Kharia is assisted by Dehuri (Priest), Chhatia (Messenger), Gunia (Magician). The matters related to Tanda and its members are discussed in meeting of Tanda council. The male household heads of Tanda are the members of the council headed by Mukhiya. The headman of Mankadia acts as priest and worships the deities and officiate in all ritual performances. The headman does not demand any remuneration for his service but commands respect and allegiance of his fellowmen.

Religious and cultural life

Hill-Kharia and Mankadias are polytheists and nature worshipers. 'Thakurani', the earth goddess is the supreme deity of Hill-Kharia while 'Logobi' and 'Budhi Mai' are the supreme deity of Mankadias. Hill-Kharias also worships DharniDevta and sun god. They believe that sun god is the creator of earth and all living being. The other deities they worship are namely BadamBudhi, Ramaraja, Pabanbira, Mahabira, BhandarDebata, Thakurani, Bauli, Basuli, Basuki, Gramadebati etc. Among Hill-Kharias and Mankadias, every clan has their own deity and they have strong faith on their God and Goddess and strictly practice their religious rituals. None of them enters to the forest for hunting, food gathering or wax without propitiating the forest deities and it is followed after the observance of rituals and propitiation. The Hill-Kharia and Mankadias also worship their ancestors. The Mankadias construct a tiny Kumbha for their ancestral

deity called as 'Alabonga'. They also believe in super natural being and soul of the deceased persons. The headman of Mankadia is known as 'Mukhia' also works as priest and perform all the religious rituals of their community.

Hill-Kharia and Mankirdia Development Agency (HKMDA)

The headquarter at Jasipur, the HKMDA micro project has been working since 1987 with the aim to bring all round development by implementing development programmes to raise their standard of living and to ensure quality life to Hill-Kharia and Mankirdia tribes. The administrative zone of the Juang community lays on the Northern territories and they are distributed in 129.78 Sq.Km. geographical area in around 18 villages and 12 GPs which come under TSP area. The average size of land holding per household among the Hill-Kharia and Mankirdia is about 1.36 Acre. They speak Mundari language. The Hill-Kharia and Mankadia are conceived as the PVTGs during 1986-87 (Annual Plan Period, 1985-90). The average size of land holding per household among the Hill-Kharia and Mankirdia is about 1.36 Acre & (Micro Project Profile, SCSTRT).

Demography profile of Hill-Kharia and Mankadia

The total population of Hill-Kharia and Mankirdia community is 2111, among them 1060 are male 1051 are female. Growth rate of Hill-Kharia and Mankirdia population during 2007-2010 is about 1.29 per cent. Child population up to 5 years is about 308 and up to 6 to 14 years is 426. Population density of Hill-Kharias and Mankadias is 16. Sex ratio of Hill-Kharia and Mankadia tribes are relatively satisfactory but it is comparatively less than scheduled tribe sex ratio of Odisha which 1026 (Census 2011). However, compare to other social group/community, sex ratio of Hill-Kharia and Mankadia tribes is in good condition. This shows the importance of female population in their community.

Housing conditions and drinking water facilities

Owning a house provides significant socio-economic security to an individual or family. The study found that all Hill-Kharia and Mankadia tribes have their own house which are usually scattered and on sloppy edges or on foot hills adjacent to watercourses. The findings suggest that 40 (51.95%)

tribal houses are having fire proof (Mud with Straw Tiles Roof) whereas only 27(35.07%) and 10(12.98 %) of the total households have Pacca house and Kucha house (Mud with Straw Thatching), respectively. It is found that in most of the households, house construction was supported by HKMDA under Infrastructure Development Scheme (IDS) and Indira AwasYojna (IAY). However, majority of the houses in such condition which demand repairing. There is no separate kitchen, toilets, animal shed in these houses. All households use firewood for cooking obtaining from 3 to 4 km radius that takes about 4 hours to collect. About 30 per cent of the families use, solar lights for lighting and the rest are dependent on kerosene lamps.

Kharia and Mankadias always select their habitat near to the water sources in the hill slopes. Pure drinking water is one of vital needs of all living being. The Kharias and Mankadias have three major source of drinking water, those are tube wells, wells and stream water. Traditionally, stream water was the main source of drinking water for them. However, at present majority that is 52 (67.53 %) use tube well/well for drinking water. Still, significant numbers of Hill-Kharia and Mankadias that is 25(32.47%) consume drinking water from spring/river/stream. During the focus group discussion organized with the villagers in the study villages; the tube well water was not acceptable due to contaminants. Under this Micro Project, it is proposed to cover the maximum villages by the end of 12th Plan Period keeping in view the availability of stream water sources. The findings of the study suggest that 54.55 per cent of households have do not face scarcity of drinking water. However, a significant percent of them that is 35(45.45) households are facing drinking water scarcity for more than 3 months i.e. 3 months in summer. Due to the unavailability of pure drinking water facilities, Hill-Kharia and Mankadia tribe suffers many water-borne diseases and it degrade their health condition.

Literacy

One of the path breaking Act, the Right of Children to Free and Compulsory Education (RCFCE) Act of Aug, 2009 recognized education as Fundamental Right for every child in the age group between 6 to 14 years. It is the obligation of the Central and State Governments to ensure availability of a neighborhood school and also to ensure that children belonging to weaker sections and disadvantaged groups are not discriminated against providing school infrastructures, learning equipments, quality of elementary education, training for teachers and monitor the functioning of the schools to achieve

target of 80 per cent literacy by the end of 11th Plan Period. However, we are well aware that percentage of literacy among PVTGs is dismal.

The table 1 shows that bulk of the surveyed populations in the study villages are illiterate i.e. 56.77 per cent. The overall literacy rate of the sample population is 43.23 per cent. Findings suggests that literacy rate of male is 46.86 percent male and female is 35.41 percent. Female literacy among Hill-Kharias and Mankadias are very poor state compare to male. Similarly, overall literacy rate of Hill-Kharias and Mankadias are not satisfactory. Finding suggest that almost all Kharia children study at Special Residential Schools – ‘Angarpoda’ for girls and ‘Hatibari’ for boys which provide education up to matriculation. It is important note here that, among Hill-Kharias and Mankadias, more girls are admitted to schools and continuing their education than boys. There multiple reasons which hinder the female education are language efficacy, poor economic status of family and traditional mindset. Due to traditional mind set, girls are not allowed to continue their education after puberty and discontinue their education. Further, compare to boys, girls are engaged in looking after their siblings and manage other household works. As a result, girls leave school and discontinue their education.

Table 1: Literacy Rate the sample households

Literacy	Percentage
Male	46.86
Female	35.41
Total	43.23

Source: Field survey, 2015-16

The table 2 depicts that, among Hill-Kharia and Mankadia tribe who are educated, majority of them have studied up to primary level (72.63 percent). There are 19.33 percent and 6.26 per cent of them have studied middle school and high schools. Finding suggests that educational attainment of Hill-Kharia and Mankadia tribe beyond primary level is in very worse state. Very few of them have gone to middle schools but majority of them failed to reach high school and further. One of the major reasons of drop out after primary and middle school is that majority of children are considered as source of income and most of them are compel to participate in household work and productive activities to financially support their family.

Table 2: Education pattern of sample Households

Education	Percentage
Primary	72.63
Middle school	19.33
High School	6.26
Intermediate	1.22
Graduation	0.56
Total	100

Source: Field Survey, 2015-16

Occupational pattern

Hunting and gathering was the main source of livelihood among Hill-Kharia and Mankadia tribe. However, at present wage labour and collection of forest produce is their main occupation and principal source of survival. Besides these, they pursue small business and animal husbandry. The table 3 shows that even today, majority that is 63.64 per cent of the households in the sample villages pursue collection of forest product as their principal occupation for livelihood whereas 33.76% households work as wage labour as means of livelihood. Besides these, there are certain households who depend on small business, and animal husbandry, as part of occupation. However, only 2.60 per cent of the households in the study villages pursue other works as their principal occupation. The other occupations are such as preparation of Siali Rope products, Sal leaf plate making, and MGNREGA work etc. It is found that in some village, certain families have been provided land by the government under forest right act but most of the lands are not yet brought under cultivation. From the past few years, Hill Kharias have also begun cultivation in around their homes or on leased paddy lands. It is found that no one among the Hill-Kharias and Mankadias are in government services in the study villages.

Table 3: Major Occupations of the sample households

Occupation/Source	Households	% of Households
Wage labour	26	33.76
Collection of Forest products	49	63.64
Others	2	2.60
Total	77	100

Source: Field Survey, 2015-16

Major NTFPs collection and seasonal calendar for common NTFPs collection

Honey, bees wax, *kusum* seeds, *karanj* seeds, char seeds, *tasar* cocoons, *sal* resin, mahua fruits and flowers, arrowroot, *sal* leaves, *siali* leaves, and firewood are the main NTFPs collected by Hill-Kharia and Mankadias for the purpose of sale. The uses of Non-timber forest products are meant for only consumption goods, goods for marketing or both consumption and marketing. Findings suggest that there are 42 types of NTFPs is being collected by the Hill-Kharia and Mankadia in the study villages. These types include variety in terms of the plant parts and animal parts used for several purposes. These include almost all parts of the plant, including fruits, leaves, flower, bark, stem, seeds, root and tuber, gum, and others. They collect the forest products for two purpose, one if for self-use and another is for sale. The NTFPs collected for sale and own consumption are Amra, Dahu, Jamun, Mango, Dumar, Jackfruit, Wild Fibres, Broom grass, Mushroom, Ber, Fodder, Harra, Bahera, Drumstick, Fuller's Earth, Chew Sticks, Medicinal plants, Bamboo, Tamarind, Guava, Bel, Amla, Papaya, Fishes and Yams (*Dioscorea pentaphylla*, *Dioscorea pubera*, *Dioscorea alata*, *Dioscorea hispida*, *Dioscorea oppositifolia*, *Dioscorea excelsa*).

All the Non-timber forest products are not available in all seasons throughout the year but there are certain non-timber forest products are available throughout the year. Most of the products collected in the forest are available in particular months or seasons. The NTFPs products are harvested mostly in two seasons, winter (Nov-February) and early summer (March-April) when it is off-agricultural season. Few Non-timber forest products are available during the lean season that is July to October. In the rainy season, forest dwellers suffer food scarcity in the period of July to October because entering to forest become not feasible. The vegetables which are found

throughout the years are Sal leaves, Sal twigs and wild vegetables. Even fuelwood is also found throughout the year. However, most of the tree-based fruits such as Mahua flowers, Mahua seeds, *sal* seeds, Saialifibre, Tamarind, Sabai Grass, Jalfruit etc. are available in the months between January to June and non-tree-based products such as Mushrooms and Kanda are available between July and September and it is known as the food scarcity period. The tree-based seeds such as Sal seeds and Mahua seeds are available in the months of June and July whereas Kusum seed and Karanjaseeds are available in July and August and March and April, respectively.

Distribution pattern of household income

Household income is one of the most important indicators of economic status and livelihood standard. Among the Hill-Kharia and Mankadia, most of the households have multiple sources of income because no single source of income is sufficient to provide their means of survival. The finding suggests that, Hill-Kharia and Mankadia have three major sources of income and livelihood, those are wage labour, collection of forest products and incomes from other sources such as small business, rope making and livestock, etc.

Income from forest produce

Honey is one of the major forest products which provide livelihood necessities for Hill-Kharia and Mankadia. It is mostly available in the flowering season and collected primarily in the months of May and June from both Bara/Bhagua Mahu (*Apis dorsata*) and Sana Mahu (*Apis mellifera*). During the season a group of 3 to 4 persons collect 20 kg of Honey per week and sell for Rs 70 to Rs 120 per kg. This goes on for about a month. Sal resins are primarily collected from September to November although it is available round the year in smaller quantities. Usually the old trees shed resins when the bark cracks from strong winds and rain; observing this the Kharias climb such trees and cut out the exuded resin by making notches using an axe and collecting in bamboo baskets. The cleaned resin with larger portions of pellucid portions and particle sizes fetch higher price. Each tree can yield from 250 g to 2 kg of resin. Between Sep to Nov each family is about to collect about 3 kg of resin per week that sells for Rs 70/kg.

Morika root (probably *Rauwolfia serpentina*) is one of the ingredients of vegetative ferment tablets (called Ranu, Morika or Bakhar locally) used in

preparation of local drinks like Handia, Mahua etc is available 10 months in a year. Each family is able to collect 5-10 bundles every week that sells for Rs 20/bundle. Arrowroot (*Maranta Arundinacea*) rhizomes locally called *Padu* are collected from December to March though primarily in villages inside Simlipal Biosphere Reserve as compared to the villages in the fringe areas. Each household is able to dig out 2 to 5 kg of rhizomes every month for 2 months. A kg of finished arrowroot costs Rs 200 per kg. Sal leaves are collected from forests primarily by the women of all families. This activity is going on for quite some time at least 10 months in a year, and women are able to stitch 2 leaves plates making 200 to 300 leaves in an hour and working for 5 to 6 hours at home make about 1000 plates per day. These are sold at Rs 25 per 1000 plates in local haats. Apart from these primary produce families also collect Kusum, Karanj seeds, Tasar Cocoons (inside Simlipal Biosphere Reserve) and Mahua flowers, and Siali leaves

Wage and other source of income

Another source of income for Hill-Kharia and Mankadia is wage labour. As a wage labourer, they work in road construction, pond excavation etc. for around 15 to 20 days in the months of February and March in a year. The per household with wage rate varies from Rs 120 to Rs 140 per day. MGNREGA payments are usually delayed and they have to receive their wage from Jashipur which takes 2 days in a cycle from Simlipal Biosphere core area villages. It is interesting to note that majority that is 88% of the surveyed families had job cards. The Hill-Kharia and Mankadia also works as Farm labor in the agricultural land of neighboring agricultural communities and in return of their labor they receive for Paddy. Preparation of Siali rope products is also important source of income for the Households. They bring stripped Siali bark from the forests and make ropes and articles of different types like- Sika, ChheliPhaga, Phaga, Barjao. They sell these products in the local *haats*. It is found that each family approximately sale 5 to 6 pairs every week thus making Rs 300. Kharia and Mankardia families rear small animals like Goats and Poultry. There are no vet services available currently though 1 such Centre is being constructed for villages in the core areas. Every 5 families also own fruit or timber trees.

Annual Income and expenditure

The table 4 shows that average annual income per household is Rs.22985. The majority of households' income comes from forest products. Out of Rs. 22985 annual incomes, forest products contribute Rs. 12825 (55.80%) in yearly household income. Besides this, wage earning also contribute significant share in the annual family income that is Rs 8624 (37.52 %). In addition to this livestock provides Rs. 978 (4.2 %) and Others such as Patty business provides 558 (4.25 %) in the total yearly household income.

Table 4: Average annual income of Sample HHs from Different Sources

Source of Income	Value	Percentage
Forest Produces (NTFPs)	12825	55.80
Wages (including rope making)	8624	37.52
Livestock	978	4.25
Others (Patty business etc.)	558	2.43
Total	22985	

Source: *Field Survey, 2015-16*

The household expenditure consists of both on food and non-food items. The household expenditure on food items of the sample households covers their expenses on cereals, pulses, vegetables, oil, sugar and non-vegetarian food items. The data shows that the average annual expenditure of the households is Rs.19990. Out of Rs.19990 annual expenditures, Hill-Kharia and Mankadia spend more on non-food items than food items.

Table 5: Annual household expenditure (Rs.)

Expenditure	
Average annual expenditure /HH	19990
Average annual expenditure on food items/HH	9397 (46.76%)
Average annual expenditure on non-food items/HH	10643(53.24%)

Source: Field Survey, 2015-16

The expenditure on the non-food items includes dress and ornaments, repair and construction of houses, education on children, health, fuel/ lighting, transport, alcohol, social ceremonies etc. (Table-6) and in Non-food items,

they spend more on social ceremonies (12.53 per cent) followed by expenditure on alcohol (10.77 per cent), dress and ornaments (10.44 per cent). Surprisingly, health (6.45 per cent) and education (2.23 per cent) are two non-food items where they spend less which is around 9 per cent of total non-food item expenditure. The main source of health care among tribal is Traditional herbal and spiritual healer. Since long traditional herbal healer had taken care of many health problems including physiological problems. However, traditional herbal health treatment and medicine practices has been radically disappeared because of the active presence of modern form of allopathic medicine and Medicare. Although the rugged topographical features retard the adequate growth of infrastructural facilities in the study area, the forest dwellers still prefer to go to the health centers of modern medicine. Thus, expenditure on medicine has risen considerably in the study area.

Table 6: Annual Expenditures pattern

SI No	Heads of Expenditures	Total Expenditure in Percentage
1	Food items	46.76
2	Non Food	53.24
3	Dress and Ornaments	10.44
14	Repair and construction of house	4.33
5	Education of children	2.23
6	Health	6.45
7	Fuel/lighting	3.63
8	Transport	2.16
9	Alcohol/country liquor	10.77
10	Social ceremonies (Marriage/Death/Festivals/Others)	12.53
11	Others	0.7
	Total	100

Source: Field Survey, 2015-16

Construction of house is not a regular phenomenon. At an average, the local people build their house every 10 years. Materials for construction are collected from local forests. Apart from these, the required labor is gathered from the community; so that the cost of constructing houses is nominal as compared to the other components of total expenditure. Their spending on repair and construction of houses is about 4.33 per cent. Only

about .7 per cent of other expenditure also constitutes their non-food item expenditure.

Indebtedness

Credit is one of the most crucial inputs in the process of development. Loan and indebtedness is inherent to PVTGs as they have very limited access and control over resources. But through the government welfare measures PVTGs access to credit and volume of credit are also changing gradually.

Table 7: Volume of loan

Loan Volume	Details
No of HHs availed loan	12
Total loan amount	49500
Range	1000-20000
Outstanding	28068
Average loan amount/Indebt HH	4125

Source: Field survey, 2015-16

In the last 7 to 8 years, Self Help Groups have been initiated in most villages where Hill-Kharia and Mankadia tribe lives and findings suggests that they reported savings in Self Help Groups (SHGs). Traditionally, the major source of debt was money lenders. The other sources are friends, relatives and neighbors. However, SHGs is the new sources where they take debt. Table 6.14 depicts that the total number households taken loan are 12 and total loan amount is 49500 as revealed from field investigation. Average loan per indebted household is Rs 4125.

The following table depicts that major source of debt among Hill-Kharia and Mankdia is from SHGs. Half of the households have taken debt from SHGs. Relatives and community members are another major source of debt and finding suggest that 33.34 have taken debt from them. Taking loan from money lender has radically declined to 8.33 percent. However, Hill-Kharia and Mankdia very rarely prefers bank for debt. Only 1 (8.33) household have reported that they have received debt from bank. Loan incurred by Hill-Kharia and Mankadia is for the consumption and production purpose. Health care, purchase of livestock and social ceremonies/marriage are the major reason of debt/loan.

Table 8: Sources of loan

Source of Loan	Number of Households	Percentage
Bank	1	8.33
SHGs	6	50
Relatives/Community members	4	33.34
Money Lender	1	8.33
Total	12	100

Sources: Field survey, 2015-16

The SHGs exclusively comprises female members and it has played significant role in access to rural credit in general and female participation in particular which is highly appreciable. The micro credit has made a crucial contribution towards women empowerment and to bring dignity among women in Hill Kharia and Mankirdia community. Studies have revealed that women's position is perpetuated and reinforced by their limited access to and control over resources in relation to those on productive asset. In such circumstances, SHGs seem to be one productive tool for women empowerment.

Health

Health is one of the precious assets of human being and determinant of a person's quality of life. The finding reveals that poor health of PVTGs is one of the critical bottlenecks. Cold & Cough and Fever (including Malaria) and Chicken pox are the major diseases affected by Hill-Kharia and Mankadia tribe. There are some changes in health care practices among the Hil-Kharia and Mankadia. Now, most of them prefer to avail health care services from Government medical facilities which offers free services. However, the significance of traditional herbal/spiritual healer is still remaining and majority of them consults for cold & cough, jaundice and diarrhea. Treatment costs range from Rs 200 to Rs 300 for cold & cough and up to Rs 500 to Malaria. To find out the severity of different diseases a four-point (frequently, seasonally, seldom and never) indicator has been used by assigning score 4, 3, 2, and 1 respectively. Household responding against first 3 point are kept under the "Household Suffered from the Disease" (HSD). Mean of the diseases has been taken as the index of severity of the respective diseases.

Table 9: Intensity of diseases

Major Diseases	Mean Score
Malaria	3.97
Diarrhea	1.23
TB	0.22
Malnutrition	1.26
Skin Diseases	2.06
Sickle cell	0.21
Yaw	0.09
Mean of the Mean	1.29

Source: Field Survey 2015-16

Table 9 indicates that Malaria has been the most critical health problem among the Hill-Kharia and Mankadia in the study area. Mean score of Malaria (3.97), Skin diseases (2.06), Malnutrition (1.26) and Diarrhea (1.23) are found high, whereas Yaw (0.90), Tuberculosis (0.22) and sickle cell anemia (0.21) are found low. Facilities like Janani Express have been functioning well. ASHA is active in fringe villages helping pregnant women but not so much in core areas (since they reside outside the villages). Some families have received Rs 5000 under Mamta scheme for the first 2 children. Usually traditional birth attendants (Dais) and ICDS workers help during delivery. The ICDS is present in all villages and offers Flour packets irregularly to expected mothers. 57% of the eligible couples have adopted permanent methods of family planning (primarily tubectomy). 48% of the boys and 59% of the girls (in age 0 to 2 years) have been immunized. Out of the 16 villages, there are 13 differently abled and 5 chronically ill individuals. The mean BMI of sampled Kharia adults was 18.7 with 67% having BMI < 18.5.

Basic amenities in the villages

The social and economic infrastructure in the villages such as drinking water facilities, electricity, medical facilities, educational institutions, motorable roads, banking, communication networks etc are in very poor and vulnerable condition. Almost all villages are connected with Kutcha

roads i.e. link road from residential area in the village to the main road. Communication network is poor in the selected villages. The field data reveals that the average distance to Sub Center, PHC, Dispensary, Medicine store, and ANM is 5 Kms, 12 ms, 7Km, 10 Km, 6 Kms and 5 Kms respectively. They do not have access over any kind of banking and cooperative credit facilities inside the villages. The problem of drinking water has been a perennial problem in villages. The available well/tube well is insufficient for providing water for drinking, cooking and other uses. Even today, majority of them depend on stream water for drinking and they have to fetch water from long distance. The data reveal that the average distance to primary school from the selected villages is 1 K.m. which is the state norm of SSA to provide primary education within 1 Kilometer of every habitation. The average distance to ME school, High school and Special Girls Residential School of HKMDA is 2.5Kms, 4Km and 5 Km respectively. The schools not functioning properly, the teachers even do not come to schools regularly. They come to school late and leave before closing time. The quality of teaching in these schools is not up to the mark. They do not reside in the village. They leave the school almost one hour before its scheduled closing time every day. If at any time there is any damage in school building due to heavy wind, rainfall or cyclone schools remains unrepaired for years.

Conclusion

The study concluded that Hill-Kharia and Mankadia tribes faces numerous livelihood challenges. Sex ratio of Hill-Kharia and Mankadia is satisfactory but literacy rate is very worse. More than half of the population are illiterate and female literary is in vulnerable state among Hill-Kharia and Mankadia tribes. Compare to boys, enrollment rate of girls has increased in the past few years, due to traditional mindset, poor economic condition, lack sanitation facilities in schools, girls discontinue their education after puberty. Educational status beyond primary education is very worse among Hill-Kharia and Mankadia and responsibilities support financially to family from the childhood has created impediment to continue their study beyond primary school. Around half of the households studied pursue food gathering as their principal occupation and source of survival. Surprisingly, none of the Hill-Kharia and Mankadia are in government. This depicts that Hill-Kharia and Mankadia are still in the primitive state of their life. The second principal

occupation is labour. Food gathering and labour work could not provide regular employment throughout the year. Even today, forest is the main source of survival among Hill-Kharia and Mankadia tribes. They collect the forest produce for their own consumption and also sell in the market to earn some money. So, forest produce and labour is their main source of income and livelihood. The average annual income of Hill-Kharia and Mankadia is 19990. This depicts the worse economic condition of Hill-Kharia and Mankadia. They spend more on non-food items compare the food items. In non-food items, they spend more on social ceremonies, alcohol and ornaments. Drinking alcohol is a major problem among Hill-Kharia and Mankadia and it weaken their economic condition and condition of their health. Surprisingly, education and health are given less important among them, therefore, they spend less on these purposes.

Hill-Kharia and Mankadia now prefers to take loan from the modern source such as SHG, however, taking loan from money leader has been radically declined. But they prefer less taking loan from bank. Loan incurred by Hill-Kharia and Mankadia is for the consumption and production purpose. Health care, purchase of livestock and social ceremonies/marriage are the major reason of debt/loan. The micro credit system has empowered tribal women and given them opportunities to deal in the financial matter of family and economic independence. Cold & Cough and Fever (including Malaria) and Chicken pox, Diarrhea and Skin diseases are the major diseases affected by Hill-Kharia and Mankadia tribe. It is important to note that preference of receiving treatment from government hospitals has increased but still many of them prefers their traditional way of healing. The basic amenities such school, hospitals, road, electricity, drinking water facilities, banking, communication networks are in very worse condition. Still today, pond, stream and river are main source of water for them. Most of roads are kuccha and not connected to adjacent village. As a result, they suffer communication and transportation facilities. Schools and hospitals are located in very far distance and it create hindrances to easily avail these facilities. We conclude that socio-economic conditions Hill-Kharia and Mankadia are in very worse state. Their villages lacking essential human needs for their survival. The effort made by the state has not successfully empower them and improved their condition. Therefore, special policy measures must be taken urgently to save them from vulnerability, improve their living condition and bring them as per with other communities. The results of the study suggest that there is an urgent need to assess the livelihood pattern, education, occupation and infrastructure such as health, education, banking, transportation and communication facilities in the tribal

region. Besides this, awareness programs for health and education and availing banking facilities for tribal must be undertaken. Special care must be taken to generate employment opportunities in the tribal area and policy measures need to be taken to elimination exploitation of tribes in the region. More numbers of SHGs would be created and tribal must be motivated to be part of micro credit system which will reduce their traditional form of indebtedness and protect them from the exploitation from money lenders.

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