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Changing Pattern ofAvailability andAccessibilityofCommon Property ResourcesinTribal Villages ofOdisha

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Abstract:*Common Property Resources play an important role in the socio-economic life of indigenous communities living in Odisha State. The indigenous people number almost 250 million in 70 countries of the world. Though their resources have been exploited for the benefit of the other world, but they remain poor, rather loosing roots and controls over livelihood sources. The policies formulated at higher levels for the indigenous people are protective by nature, but in practice they end in assimilating them with the mainstream, which is not compatible to them.Odisha is a state where lots of development projects, mines and mineral based industries have been taken place over the last two decades. There is lots of influx of external people coming to set up their business and deal with the local people. This negatively affects the local resources through decreasing the availability of common property resources for the local indigenous people. Because of establishment of mines and mineral based industries, the CPRs which were available closely to the community before 20 years, are now far from the community. The present study tries to reflect the community perception towards the availability and accessibility of common property resources in their locality.*

Keywords: *Commons, CPR, Development,Indigenous, Mining*

I. Introduction

In general parlance it is understood that the Common Property Resources (thus known as CPRs) include all such resources which are available for common use. CPRs include all resources like village pastures andgrazing grounds, village forest and woodlots, protected and un-classed government forests,waste land, common threshing grounds, watershed drainage, ponds and tanks, rivers, rivulets,water reservoirs, canals and irrigation channels. In the pre British India, a substantially large part of country's natural resources were available for use by rural population and they were also controlled by the community. Gradually these resources wereidentified by the colonial administration as common property resources which can be used for generating large incomes much more than sustain and nurture lives and livelihoods of the rural and pastoral communities across the country. Till the onset of colonial rule these resources werelargely under the control of local communities. Gradually, the control over resources shifted to the state through legislation of various acts, decree and policies. It was this change of perspective which led to mismanagement of CPRs and gradually it led to substantial decline of resources available. The rural, primitive and pastoral community who depended on such resources for livelihood could not thrive and in post colonial state participatory management of resources was mandated. Various attempts made towards community management and regeneration of resources could not yield suitable outcomes. Across the country communities have been given selective rights for use and maintenance of resources of some specific categories of land and water resources. It is still a fact that sustenance of primitive indigenous community, majority of rural livelihoods and village economy is based on CPRs and CPR contributes significantly to the rural nonfarm sector also.

1.1. CPRs in Odisha

54th round survey of National Sample Survey Organisation (NSSO) on CPR has followed *de jure* approach to estimate the availability of CPR in the country and different states of India. Common property land resources, as per this approach, include the categories of land like community pasture and grazing grounds, village forests and woodlots andvillage sites, on which the villagers have legal usufructuary rights. As per this survey in India, common property land resources form a substantial part (15%) of the total geographical area. Odisha has 11 Percentage of total geographical area constitutes CPR land. Per household availability of CPR land in odisha is 0.28hectare out of average geographical land area of 0.58 hectares contrary to 0.31 hectares CPR land out of totalgeographical area of 0.84 hectares land in India. As per the survey, the ratio of value of collections from CPRs to consumption expenditure works out to 3.02 percent at the national level. The ratio is 5.59 percent in Odisha.

II. The study: Objectives and methodology

This paper is a result of primary investigation of the status of CPRs in the changing economic as well as social environmentof the community. The primary objective of this paper is to assess the perception of the community on the accessibility and availability of the CPRs at present in comparison to 20 years back. Perception has been analysed across different villages as well as different ethnic groups in the study villages. Three villages were purposively selected from Banspal block of Keonjhar district based on the criteria of proximity and far from the mining area.Total numbers of 420 households were taken for field survey. As the primary objective is to make a comparative analysis of the availability and accessibility of the CPR, the households were selected on the basis of their existence before 20 years i.e. the age of the heads of selected households is more than 45. Primary data was collected from all sample householdsthrough personal interview method using the pre-testedschedules.

1.2. Background of the study district and villages

The study tries to make a comparative assessment to see the impact of development intervention on the availability and accessibility of CPRs. To this end, three villages namely Suakathi, Kuanr and Tentuli were purposively selected from Keonjhar, one of the tribal dominated districts of the state of Odisha. The state has a significant proportion of tribal population in India. Out of 427 Scheduled Tribes of the country, the state has 63 tribal communities, which constitute 21.06 (2001) per cent of total population. Almost 44.21 per cent of the total land area of the State has been constitutionally declared as Scheduled Area, which covers 11 districts out of 30 in the state. Out of 314 Community Development Blocks of the state, 118 (37.3%) blocks are covered under Tribal Sub-Plan (TSP) area. The large number of development mega projects in tribal regions have encroached on tribal land and displaced them from their age-old land. They are Hydroelectric-cum-irrigation projects like Hirakud (1948), Balimela (1963), Machkund (1949), Upper Kolab (1978), Indravati (1978), Mandira, Rengali (1973) and Subarnarekha; Mineral based industries like Rourkela Steel Plant, National Alluminium Company at Angul (1985), Hindustan Aeronautics Limited (1962); Bauxite Mining Project at Koraput (1981) and projects on Cement, iron, Dolomite and lime stone, etc. A cursory calculation reflects that since independence Odisha has 190 nos. of such projects, which have deforested 24124.2004 hectares of forest land, the basic source of livelihood for the tribal people (PCCF Office, Govt. of Odisha, 1999).). All these projects have immense impact on the village economy, family life, and village power structure of the tribal people, which have been presented through various empirical studies in the State (Panda &Panigrahi, 1986; Behura and Nayak, 1993; Mohapatra 1998; Pattnaik, 2000; Swain and Panigrahi, 1999).The Study District ,Keonjhar is surrounded by Jharkhand on the north, and Mayurbhanja and Jajpue on east, Dhenkanal and Jajpur on the north and Sundargarh in west. The district is divided into distinct high land (northern and western part) and plane land tracts (Eastern parts). The Gandhamardan hill plateau popularly known as Juanga-BhuiyanPirha ranges wide which shelters many ethnic minorities, discharges water in the river Brahmani, Baitarani, Salandi and Karo. The district has a rich potential of reserve forest, demarcated protected forests, un-demarcated protected forest and unclassified forest, which influences the livelihood of the local inhabitants. The mineral potential of the district exploited by the state has immense impact on the bio-diversity, people and their socio-economic life. It has been observed that a number of mining projects are going on for the last 30 years. The study is conducted in three villages namely Suakati, Tentutli and Kuanr. The study villages were selected looking into the factors such as vicinity to the forest, national highway and other market facilities. The villages are dominated with the tribal communities these are Bhuyan and Munda. There are also other caste people such as Gopal and SC communities are living in these villages. These villages are close to the dense forest. National highway passes near these villages.

III. Concept and definition

A common property resource is a class of resource in which the control of access/exclusion is difficult and each user has the potential of subtracting from the welfare of all other users *(Berkes, et, al, 1989, Geheb, 1997*). Common property resources include *fisheries, grazing lands, forests and water.* Where common property resources are open access, the resource users cannot be trusted to exploit the resource in rational manner for long term sustainability (Hardin, 1968). The reason being lack of restrain on exploiters activities and the ignorance about the impact of their activities on the resource and future resource users. The terms common property resource (CPrR), common pool resource (CPR) and commons are often used synonymously and connote an economic resource / facility which is communally /collectively owned (Katar, 1994). Common Property subsumes a set of social conventions norms, legally enforceable rules and procedures for regulating its use (Katar, 1994). The three basic institutional designs recognized solutions to common property resources include the state property (State governance indicating rights to the resource controlled exclusively by government agencies on behalf of all citizens), communal property where by the resource are held by an identified user' group who can exclude others and regulate their own use. The third involves private property a situation in which an individual has the right to exclude others and regulate the resource use (Berkes, 1989). The

economic theory of ***open access resources*** has been familiar to economists since Gordon (1954), who noted that an asset that is everyone's property is in fact no one's property. Gordon showed that resources to which access is open are overused, in that it is in the common interest to restrict their use. His reasoning was simple: Given that resources are finite in size, they have positive social worth. But an open access resource is free to all who use it. Moreover, the cost a user incurs isn't merely less than what it ought ideally to be, entry drives the resource rents to zero. The biologist Garrett Hardin later called that overuse "the tragedy of the commons", insisting that "freedom in the commons brings ruin to all" (Hardin, 1968).

Commons represent all natural resources used for human welfare, which are not necessarily owned by any individual or group of individuals. These resources are accessible to and collectively owned\held\managed by an identifiable community and on which no individual has exclusive property rights are called common property resources (NSS, 54th Round, 1999). These include village pastures and grazing grounds, village forests and woodlots, protected and unclassed government forests, waste lands, common threshing grounds, watershed drainage, ponds and tanks, rivers, rivulets, water reservoirs, canals and irrigation channels. Of the three main categories of CPRs, viz. land, water and forests, the 54th round of NSSO in 1999 made an attempt to estimate the magnitude of CPR land in different states of India.

The present study primarily takes into consideration the common land, forest and Non-Timber Forest Produce as a major area of focus and further investigation. Thus, looking at the study area, five sub-categories of the common property resources are being taken into consideration. These are:

Cultivable forest land: This category is located in the forest area and is used for agriculture purpose by the community.

Un-cultivable forest land: These lands are located in difficult terrains in the forest and are not used for agriculture purpose by the community. Usually, community members get benefit through collection of forest produce from this category.

Cultivable Non-forest land: These lands are located in the periphery of the villages and usually used for agriculture purpose.

Uncultivable Non-forest land: These lands are located nearby the villages but not used for cultivation purpose. These are mostly waste lands.

Grazing land: These lands are used for grazing of livestock owned by the community.

Non Timber Forest Produce (NTFP): These include non-wood, minor, alternative and secondary forest products, are useful substances, materials and/or commodities obtained from forests which do not require harvesting (logging) trees.

IV. Findings from Field Study

4.1Cultivable Forest Land across villages

Table 1: Cultivable Forest Land of sample villages (Present)

Villages	Availability				Distance			
	Plenty	Moderate	Scarce	All	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	6	35	14	55	54	1	0	55
	10.91	63.64	25.45	100	98.18	1.82	0.00	100
Kuanar	3	74	118	195	195	0	0	195
	1.54	37.95	60.51	100	100.00	0.00	0.00	100
Suakathi	65	66	39	170	158	11	1	170
	38.24	38.82	22.94	100	92.94	6.47	0.59	100
Total	74	175	171	420	407	12	1	420
	17.62	41.67	40.71	100	96.90	2.86	0.24	100

Table.1 represents the availability and accessibility of cultivable forest land of three villages considered for study i.e.Suakathi, Tentuli and Kuanar at present. With regards to availability of cultivable forest land of sample villages it is found that 17.62% of respondents agreed that there are plenty of cultivable forest land, 41.67% are of the opinion that there is moderate availability of cultivable forest land and 41.67% view that there is scarce availability of cultivable forest land. Of the total respondents in Suakathi village 38.24% alleged that there are plenty of cultivable forest land, 38.82% of respondents shared that there are moderate land and 22.94% of respondents opined that there is scarce availability of cultivable forest land. In the Tentuli village 10.91% respondents feel that there is plenty of cultivable forest land and 63.64% respondents believe that there are moderate availability of cultivable forest land and 25.45% of respondents said there is scarcity of cultivable forest land.

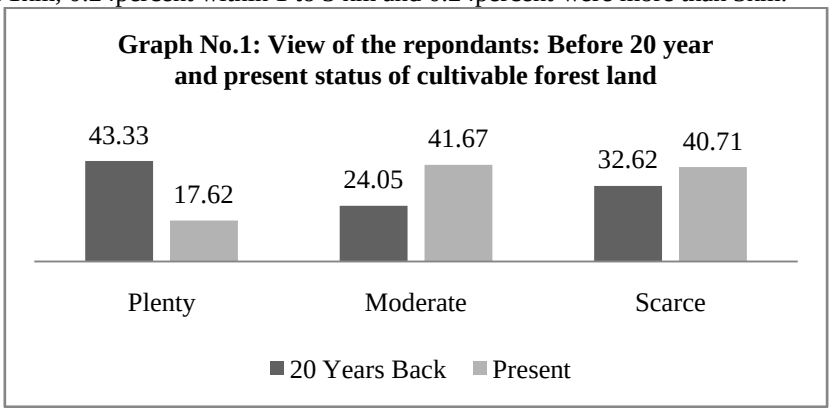
Only 1.54% of the respondents agreed that there is plenty of cultivable forest land, 37.95% alleged that there is moderate cultivable forest land and 60.51% of the respondents are of the opinion that there is scarcity of cultivable forest land. It can be concluded from the analysis of availability of cultivable forest land in different villages it is observed that Suakathi village is in better situation in terms of availability of cultivable forest land out of three study villages. Agriculture is the main occupation of the three villages. Rice, maize, munga and biri and vegetables are cultivated in cultivable forest land of these villages. Owing to better availability of cultivable forest land the villagers of Suakathiare in a better situation than other two villages. Due to least availability of cultivable forest land in Kuanarvillagepeople earn less compared to other two study villages.

An analysis of accessibility of cultivable forest land in sample villages it is found that 96.90% land are available in the villages, 2.86% of land are available within 1 km distance and 0.24% of land are available within 1 to 3 kms. It can be concluded that from the point of view of accessibility there is hardly any major difficulties faced the community.

Table 2: Cultivable Forest Land of sample villages (20 years back)

Villages	Availability			Distance				
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
Tentuli	28	12	15	55	0	0	0	55
	50.91	21.82	27.27	100	0	0	0	100
Kunar	31	72	92	195	0	0	0	195
	15.9	36.92	47.18	100	0	0	0	100
Suakathi	123	17	30	156	12	1	1	170
	72.35	10	17.65	91.76	7.06	0.59	0.59	100
Total	182	101	137	406	12	1	1	420
	43.33	24.05	32.62	96.67	2.86	0.24	0.24	100

Table.2 depicts the availability and accessibility of cultivatable forest land of three sample villages 20 years back. About 43.33% of respondents shared that there were plenty of cultivable forest land available 20 years back, and 24.05% of respondents opined that there was moderate cultivable forest land available in these villages 20 years back and 32.62% alleged that there was scare availability of cultivable forest land in these villages 20 years back. In Suakathi village 72.35% respondents said before 20 years back there were plenty of cultivable forest land, 10% said there was moderate land and 17.65% said there were scarce of cultivable forest land. Out of the total respondents of Tentuli village 50.91% of the respondents said there was plenty of cultivable land available in these villages 20 years back, 21.82% of the respondents agreed to moderate availability of cultivable forest land and 27.27% respondents shared that there was scarce availability of cultivable forest land. About 15.90% of respondents of village Kuanar were of the view that before 20 years back there were plenty of cultivable forest land, 36.92% respondents said 20 years back there were moderate cultivable forest land and 47.18% of the respondents agreed that there were scarce in cultivable forest land in 20 years back.It is observed that 20 years back Suakathi village has more of cultivable forest land as compared to other two villages. Agriculture was the prime occupation of these village communities. The villagers cultivated Paddy, Biri, Munga and vegetable etc.20 years back in the cultivable forest land and made good earning to meet most of the need of the families. If we look at the accessibility of cultivable forest land 20 years back it is found that all the cultivable forest lands of the villages Kuanar and Tentuli was located within the village but the village Suakathi had 96.67percent of cultivable land in the village and 2.86percentof cultivable land outside the village i.e. within 1km, 0.24percent within 1 to 3 km and 0.24percent were more than 3km.



In the above**Graph No.1**. It clearly depicts respondents' opinion about cultivable forest land status before 20 years and at present. If we look at the present status of cultivable forest land in the sample villages 17.62 percentopined that there exists plenty of cultivable forest land, 41.67 percent respondents shared that there is moderate cultivable forest land and 40.71% respondents shared that there is scarce cultivable forest land. However, the situation of availability of forestland for cultivation was entirely different and among the sample respondents 43.33% shared that plenty of forestland was available for cultivation, 24.05% respondents were for moderate availability of cultivable forest land and 32.62% respondents agreed that there was scarcity of cultivable forest land. Comparative analysis of availability of cultivable forestland at present and before 20 years it is found that there has been a declining trend due toincreased mining activities in the villages. It is found from analysis that before 20 years most of the people were dependent upon forest and cultivation remained the primary occupation. However at present due to increase in mining activities the availability of cultivable forest land has gone down and most of the people are working as industrial labourer instead of cultivator.

4.2. Un-Cultivable Forest Land across villages

Un-cultivable forest land refers to those lands which are difficult to cultivate but are source of many trees like Sal, Teaks, Mango, Jackfruit and medicinal plant which support the village economy to enhances their income.

Table 3: Un-Cultivable Forest Land of sample villages (Present)

Villages	Availability			Distance			
	Plenty	Moderate	All	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	25	30	55	55	0	0	55
	45.45	54.55	100	100	0	0	100
Kuanar	177	18	195	195	0	0	195
	90.77	9.23	100	100	0	0	100
Suakathi	106	64	170	156	13	1	170
	62.35	37.65	100	92	8	1	100
Total	308	112	420	406	13	1	420
	73.33	26.67	100	97	3	0	100

Table.3above depicts availability and accessibility of un-cultivated forest land status of sample three villages. Overall 73.3% of the respondents said there are plenty of un-cultivable forest land and 26.67% of the respondents were agreed for moderate un-cultivable land. Out of the total respondents of Kuanar village, 90.77% of respondents alleged that they have plenty of uncultivable forest land and 9.23% of the respondents are supposed for moderate uncultivable forest land. 62.35% of respondents of Suakathi village said they have plenty of un-cultivable forest land and 37.65% believed that they have moderate of un-cultivable forest land. Similarly in Tentuli village 45.45% respondents agreed that they have plenty of un-cultivable forest land and 54.55% respondents are for moderate of un-cultivable forest land. The existing of un-cultivable forest land in these villages, the women of the villagers collected Sal leaves and sale in near market and earn money for their substance. It is observed that the villagers of Kuanar more dependants on uncultivable forest land than other two villages.

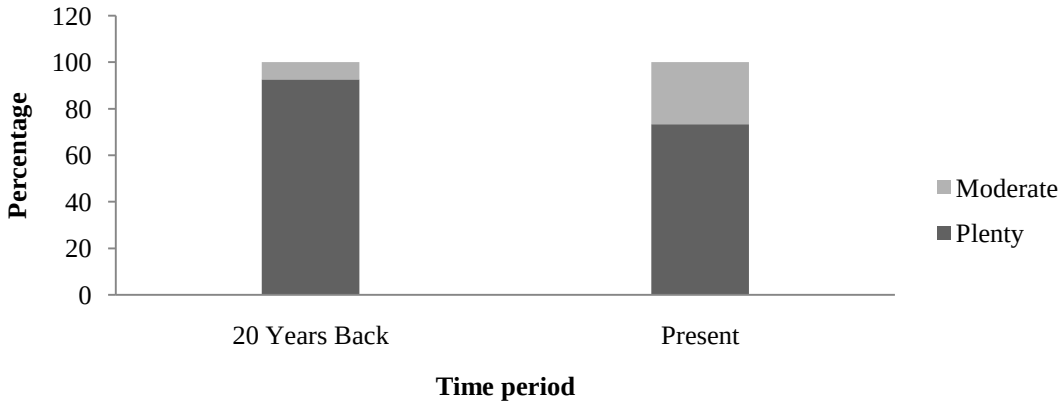
Table 4: Un-Cultivable Forest Land of sample villages (20 years back)

	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	51	4	0	55	0	0	55
	92.73	7.27	0.00	100.00	0.00	0.00	100.00
Kuanar	180	15	0	195	0	0	195
	92.31	7.69	0.00	100.00	0.00	0.00	100.00
Suakathi	158	11	1	157	12	1	170
	92.94	6.47	0.59	92.35	7.06	0.59	100.00
Total	389	30	1	407	12	1	420
	92.62	7.14	0.24	96.90	2.86	0.24	100.00

Table.4 presents the uncultivable forest land status 20 years back, 92.62% of the respondents agreed that they have plenty of uncultivable forest land, 7.14% respondents agreed that there is moderate availability of un-cultivable forest land in the village Suakathiand yet 92.64% of respondents opined that there exists plenty of uncultivable forest land in the village. The village Suakathi is followed closely by Tentuli. In Tentuli 92.73% respondent are of the opinion that 20 years back there were plenty of uncultivable forest land and 92.31% of the respondents in Kuanar village said there were plenty of forest land 20 years back.

In the context of accessibility of un- cultivable forest land, all uncultivable lands of village of Tentuli and Kuanarare confined within the village boundary. In Suakathi village 92.35% of land is within the village and 7.06% of lands were within 1 km and 0.24% of lands were within 1 to 3km.

Figure No.2: View of the Respondents:Non-Cultivable Forest Land Availability Status Before 20 years back and Present



From the **Figure2** it can be seen that availability of non- cultivable forest land has declined. It can be clearly articulated that 20 years back 92.62 % of sample households agreed that there was plenty of un- cultivable forest land however when asked about the present situationonly 73.33% agreed that there is plenty of uncultivable forest land. If the sample response is taken into consideration then it can be concluded that there is a significant decline in the availability of uncultivable forest land. The decline in the availability of un-cultivable forest land is attributable to the fact that there is a significant increase in the mining activities in this area. Owing to the establishment of mining industries in this area there is degradation of forest and a very steep decline in the availability of common property resources available for the indigenous communities. The non-cultivable forest land was mainly full of mango tree, Sal tree, Piasal tree, Jackfruit etc. but now the trees have reduced and income from non-cultivable forest land has gone down further over past 20 years.

4.3. Cultivable forest land across ethnic groups

The situation of availability and accessibility of cultivable forest land as depicted from the people's perception is summarised in **Table.5** below. It can be seen from the table below that 18.75 % of SC sample agreed that there exists plenty of cultivable forest lands, 12.50% respondents opined that there are moderate availability of cultivable forest land and 68.75% agreed that there are scarce availability of cultivable forest land in the study area.

Table 5: Cultivable Forest Land at Present

Social Category	Availability			Distance			All
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	
SC	3	2	11	16	0	0	16
	18.75	12.50	68.75	100.00	0.00	0.00	100
ST	47	148	142	335	2	0	337
	13.95	43.92	42.14	99.41	0.59	0.00	100
OBC	24	25	18	56	10	1	67
	35.82	37.31	26.87	83.58	14.93	1.49	100
Total	74	175	171	407	12	1	420
	17.62	41.67	40.71	96.90	2.86	0.24	100

About 13.95% of Schedule tribe respondents agreed that there are plenty of cultivable forest land, 43.92% of respondents' expressed that there are moderate availability of cultivable forest land and 42.14% of schedule tribe respondents supposed there is scarcity of cultivable forest land. Among the OBC community and their opinion about the cultivable forest land availability it came out clearly that only 35.82% of OBC respondents shared that there is plenty of cultivable forest land, 37.32% OBC said that there exists moderate availability of cultivable forest land and 26.87% of OBC expressed that there is scarce availability of cultivable forest land. If we look at the ethnic distribution and their opinion about availability of cultivable forest land maximum percentage of SC communities shared that there is scarcity of cultivable forest land closely followed by ST and lowest among the OBC communities.

Table 6: Cultivable Forest Land before 20 years back

	Availability			Distance				
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
SC	4	2	10	16	0	0	0	16
	25.00	12.50	62.50	100.00	0.00	0.00	0.00	100.00
ST	142	78	117	334	3	0	0	337
	42.14	23.15	34.72	99.11	0.89	0.00	0.00	100.00
OBC	36	21	10	56	9	1	1	67
	53.73	31.34	14.93	83.58	13.43	1.49	1.49	100.00
Total	182	101	137	406	12	1	1	420
	43.33	24.05	32.62	96.67	2.86	0.24	0.24	100.00

Table.6 shows the view of different ethnic groups about the status of cultivable forest land 20 years back. Of the total Schedule caste respondents 25% said that 20 years back there were plenty of cultivable forest land, 12.50% schedule caste respondents opined that there were moderate availability of cultivable forest land 20 years back and maximum percentage of respondents 62.50% shared that there existed scarce cultivable forest land 20 years back. Among the Schedule Tribes 42.14% expressed that there is plenty of cultivable forest land available 20 years back, 23.15% believed that there is moderate availability of cultivable forest land 20 years back and 34.72% opined that there is scare availability of cultivable forest land 20 years back. Out of the total OBC respondents 53.73% are of the opinion that 20 years back there were plenty of cultivable forest land and 31.34% are of the views that there were moderate availability of cultivable forest land and 14.93% opined that there were scare availability of cultivable forest land 20 years back. It can be concluded that OBC category of people have higher access to cultivable forest land against other two ethnic groups.

After careful consideration of the views of different ethnic groups it is found that availability and accessibility of cultivable forest land has declined over last 20 years. It is observed that due to industrialisation specially mining industry the availability of cultivable forest land has reduced, though it has differential impact across the ethnic groups.

4.4. Uncultivable forest land across ethnic groups

Table 7: Un-Cultivable Forest Land at Present

	Availability		**Distance**			
	Plenty	**Moderate**	**In the village**	**Within 1K.M**	**Within 1-3K.M**	**All**
SC	13	3	16	0	0	16
	81.25	18.75	100	0.00	0.00	100
ST	249	88	336	1	0	337
	73.89	26.11	99.70	0.30	0.00	100
OBC	46	21	54	12	1	67
	68.66	31.34	80.60	17.91	1.49	100
Total	308	112	406	13	1	420
	73.33	26.67	96.67	3.10	0.23	100

It can be seen from the **Table.7** above there is a difference in opinion expressed by sample ethnic groups. In case of SC community 81.25% of respondents said there is plenty of un-cultivable forest land and 18.75% schedule caste respondents expressed that there is moderate availability of uncultivable forest land. 73.89% of

schedule tribe respondents opined that there is plenty of uncultivable forest land and 26.11% of schedule tribe expressed that there is moderate availability of uncultivable forest land. Similarly 68.66% of OBC expressed that there is plenty of uncultivable forest land and 31.34% are believed that there are moderate of uncultivable forest land. From the three ethnic groups more percentage of schedule caste respondents is for plenty of non cultivable forest land against other two ethnic groups. Owing to plenty of non cultivable forest land the peoples of this area earn more from Sal, mango, Piasal, and Jackfruit etc.

With regard to the accessibility of un-cultivable forest land Schedule Caste respondents expressed that entire non-cultivable forestland is within the village and is accessible. If we analyser the response of scheduled tribe respondents 99.70% of sample shared that non cultivable forest land is within the village and only 0.30% shared that it is within 1 Km. from the village. The OBC communities pointed out that 80.60% of non cultivable forest land is within the village, 3.10% of non cultivable forest land is also within 1km and small fraction of just 0.23% is in the range of 1Km to 3Km of distance only.

Table 8: Un-Cultivable Forest Land 20 years back

	Availability			Distance			
	Plenty	**Moderate**	**Scarce**	**In the village**	**Within 1K.M**	**Within 1-3K.M**	**All**
SC	14	2	0	16	0	0	16
	87.50	12.50	0.00	100.00	0.00	0.00	100.00
ST	321	15	1	334	3	0	337
	95.25	4.45	0.30	99.11	0.89	0.00	100.00
OBC	54	13	0	57	9	1	67
	80.60	19.40	0.00	85.07	13.43	1.49	100.00
Total	389	30	1	407	12	1	420
	92.62	7.14	0.24	96.90	2.86	0.24	100.00

The status of uncultivated forest land 20 years back is presented in **Table.8**. It presents the availability and accessibility of forest land situation 20 years back vis-à-vis different ethnic communities. Out of the total schedule caste respondents 87.50% are of the view that uncultivable forest land is available in plenty, and remaining 12.50% are of the opinion that there existed moderate availability of uncultivable forest land. In case of Scheduled tribe community 95.25% respondent are of the opinion that availability of uncultivable forest was plenty 20 years back and 4.75% expressed that there were moderate availability of uncultivated forest land. Among the OBC communities 80.60% of respondents shared that there was plenty of cultivable forest land available 20 years back and 19.40% expressed that there was moderate availability of uncultivable forest land in sample study villages.

4.5. Cultivable Non-forest land across villages

Table 9: Cultivable Non-Forest Land at present

Villages	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	4	47	4	55	0	0	55
	7.27	85.45	7.27	100	0	0	100
Kuanar	0	138	57	195	0	0	195
	0	70.77	29.23	100	0	0	100
Suakathi	71	84	15	159	10	1	170
	41.76	49.41	8.82	93.53	5.88	0.59	100
Total	75	269	76	409	10	1	420
	17.86	64.05	18.1	97.38	2.38	0.24	100

The situation of cultivable non forest land is clearly presented in the **Table.9.**Cultivable non-forest lands can be identified as revenue land which are cultivation and are in the possession of the local community. In these lands cereals, pulses, vegetables, oilseeds, fibres and sugarcane crops are grown according to the suitability of the climate. It can be seen from the table that across all the villages about 17.14% of respondents' shared that there is plentiful availability of cultivable non-forest land, 45.48% respondents expressed that there is moderate availability of cultivable non-forest land and 37.38% of the respondents expressed their opinion that availability of cultivable non-forest land is scarce. Respondents of village Kuanardeclined that the availability of cultivable

non forest land is plentiful. Out of the total sample respondents surveyed 42.05% opined that there is moderate availability of cultivable non-forest land and 57.95% respondents of this village expressed that there is sacristy of availability of cultivable non-forest land. Out of the total respondents of Suakathi village, 40% of the respondents were in favour of availability of cultivable forest land, 41.18% supposed that there is moderate cultivable non-forest land and 18.82% of the respondents agreed that there is scarcity of cultivable non-forest land. If we analyse the situation of Tentuli village 7.27% of the respondents expressed that there is plenty of cultivable non-forest land, 70.91% respondents of the village agreed for moderate availability of cultivable non-forest land and 21.82% of the respondents are of the opinion that there is scarcity of cultivable non-forest land. An analysis of overall situation in the different villages it is observed that the village Kuanarhas plenty of cultivable forest land and the village Suakathi has more cultivable non- forest land than other two villages.

The situation of availability and accessibility of cultivable non forestland across villages 20 years back is presented in the **Table.10.**After the analysis of situation it is found that 97.62% of cultivable non-forest land is within the village periphery, 2.86% of cultivable non-forest land is within 1km radius and 0.24% of cultivable non-forest land is within 1 km to 3km range of radius.

Table 10: Cultivable Non-Forest Land before 20 years back

	Availability			Distance				
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
Tentuli	31	23	1	54	1	0	0	55
	56.36	41.82	1.82	98.18	1.82	0.00	0.00	100.00
Kunar	3	150	42	195	0	0	0	195
	1.54	76.92	21.54	100.00	0.00	0.00	0.00	100.00
Suakathi	120	41	9	157	11	1	1	170
	70.59	24.12	5.29	92.35	6.47	0.59	0.59	100.00
Total	154	214	52	406	12	1	1	420
	36.67	50.95	12.38	96.67	2.86	0.24	0.24	100.00

If we look at the overall situation of availability and accessibility of cultivable non forest land 20 years it comes out that 36.67% of the respondents' are of the opinion that there is plenty of cultivable non-forest land available, 50.95% of the respondents expressed that there is moderate availability of cultivable non-forest land and 12.38% of respondents are of the opinion that there is scarce availability of cultivable non-forest land. Looking at the village Suakathi, 70.59% of respondents expressed that there is plenty of cultivable non- forest land, 24.14% opined for moderate non-forest cultivable land availability and 5.29% of respondents expressed that there is scare availability of cultivable non-forest land. On availability of cultivable non-forest land, 56.36% of respondents of village Tentuli responded that there was plenty of cultivable non-forest land 20 years back, 41.82% respondents agreed that there was moderate availability of non-forest cultivable land and 1.82% of respondents revealed that there was scarce availability of cultivable non-forest land 20 years back. The a small fraction of respondents 1.54% of village Kuanar said that there was plenty of cultivable non-forest land, 76.29% of the respondents of this village pointed out that there was moderate availability of cultivable non-forest land and 21.54% of respondents of the same village expressed that there were scare availability of cultivable land 20 years back.Looking at table above it is found that the village Kuanar has lesser cultivable non-forest land than other two villages.

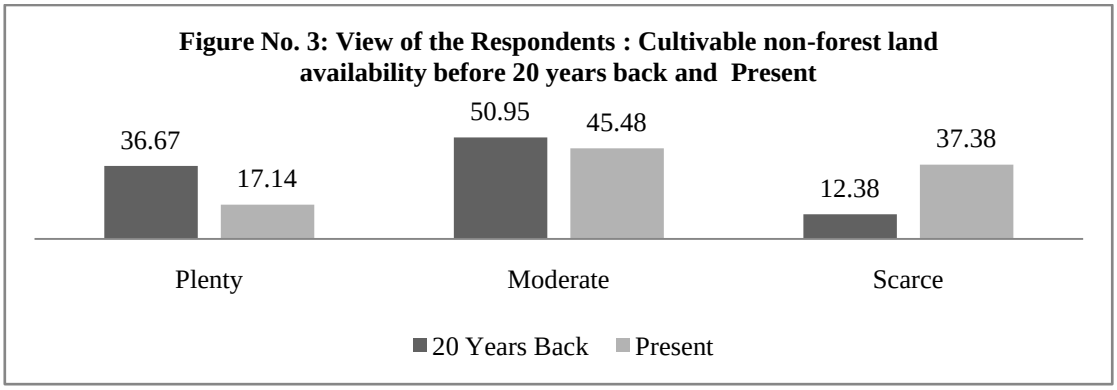


Figure No. 3: View of the Respondents : Cultivable non-forest land availability before 20 years back and Present

Above **Figure No.3** explains the view of respondents (in Percentage) 20 years back about availability and accessibility of cultivable non-forest land status and at present. It can be clearly explained from the representation of the views of respondents that the availability and accessibility of cultivable non- forest land has decreased over last 20 years. Due to decrease in the cultivable non forest land area the income from said sources has also reduced.

4.6. Cultivable Non-Forest Land across ethnic category

The study undertook analysis of cultivable non forest land at present across ethnic category in sample villages. It came out very clearly that the availability and accessibility of cultivable non forest land across ethnic category has gone decreased.

Table 11: Cultivable Non-Forest Land at present

	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
SC	2	12	2	16	0	0	16
	12.50	75.00	12.50	100.00	0.00	0.00	100
ST	48	231	58	337	0	0	337
	14.24	68.55	17.21	100.00	0.00	0.00	100
OBC	25	26	16	56	10	1	67
	37.31	38.81	23.88	83.58	14.93	1.49	100
Total	75	269	76	409	10	1	420
	17.86	64.05	18.10	97.38	2.38	0.24	100

An analysis of **Table.11** above shows that 12.50% of SC community, 14.24% of ST community and 37.31% of OBC community expressed that there is plenty of land on the other hand 75% of SC community, 68.55% ST community and 38.81% of OBC category respondents are for moderate availability of cultivable non- forest land however 12.50% of SC community, 17.21% of ST community and 23.88% of OBC communities opined that there is scarce availability of cultivable non- forest land.

If we take into consideration the accessibility factor all the SC and ST communities expressed that all of their land is in the villages but OBC communities pointed out that 83.58% land are with the radius of the village, 14.93% of land is within1km radius of village and 0.24% land is in the range of 1Km to 3 Km radius. Overall it can be said that the accessibility is not a major concern at present as well.

Table 12: Cultivable Non-Forest Land 20 years back

	Availability			Distance				
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
SC	3	12	1	16	0	0	0	16
	18.75	75.00	6.25	100.00	0.00	0.00	0.00	100.00
ST	117	179	41	334	3	0	0	337
	34.72	53.12	12.17	99.11	0.89	0.00	0.00	100.00
OBC	34	23	10	56	9	1	1	67
	50.75	34.33	14.93	83.58	13.43	1.49	1.49	100.00
Total	154	214	52	406	12	1	1	420
	36.67	50.95	12.38	96.67	2.86	0.24	0.24	100.00

Table.12 above presents the availability and accessibility of cultivable non-forest land 20 years back across different ethnic group. Out of the total SC respondents 18.75% of respondents admitted that there was plenty of land available, 75% of respondents pointed out that there was moderate availability of land and 6.25% expressed that there was scarce availability of cultivable non forest land 20 years back. About 34.72% of ST respondents are of the opinion that there was plenty of cultivable non-forest land, 53.12% of respondentspointed out that there was moderate availability of cultivable non forest land and 12.17% respondentsagreed that there were scarce availability of cultivable non-forest land 20 years back. Overall it can be concluded that across the ethnic groups the plenty availability of cultivable non- forest land availability has decreased.

Accessibility of cultivable non forest land is better for SC and ST communities as compared to the OBC communities even 20 years before as well. In case of SC and ST community 100 percentage of land was

available within the village of but in case of OBC communities 83.58% of land was only present within the villages, 14.93% of land was within 1km and 1.49% of land was within the radius of 1Km to 3Km only. The declining availability and accessibility of cultivable non forest is attributable to the rapid industrialization in the district mainly mining business promoted across the villages and compensatory forestation on revenue forest land. Deprivation of village communities and declining income from agriculture is the obvious impact on families in villages.

4.7. Uncultivable non-forest land across villages

The status of uncultivable non- forest land is depicted in the **Table.13**. In the study un cultivable forest land means all that land which are difficult to cultivate but are source of many construction materials such as gravel, stones, soil, etc. these minerals are used in the construction industry. There exists substantial scope for transforming the same in to a cottage industry for generating extra rural employment during non agriculture season.

Table 13: Status of un-cultivable Non-Forest Land at Present

Villages	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	4	39	12	55	0	0	55
	7.27	70.91	21.82	100	0	0	100
Kunar	0	82	113	195	0	0	195
	0	42.05	57.95	100	0	0	100
Suakathi	68	70	32	160	9	1	170
	40	41.18	18.82	94.12	5.29	0.59	100
Total	72	191	157	410	9	1	420
	17.14	45.48	37.38	97.62	2.14	0.24	100

It can be clearly observed that the availability of uncultivable non-forest land is divided into three section by the respondents i.e. plenty, moderate and scarce. Overall it can be concluded that 17.14% of the respondents opined that the availability of uncultivable non-forest land is in plenty, 45.58% respondentsexpressed that there is moderate availability of uncultivable non-forest land and 37.38% respondents pointed out that there is scarce availability of uncultivable non-forest land. Further examination of accessibility of uncultivable non forest land revealed that 97.62% of respondents have non cultivable non-forest land within the village, 2.86% of sample respondents revealed that it is within 1km and 0.24% of sample revealed that uncultivable non- forest land is within 1km to 3km of range.

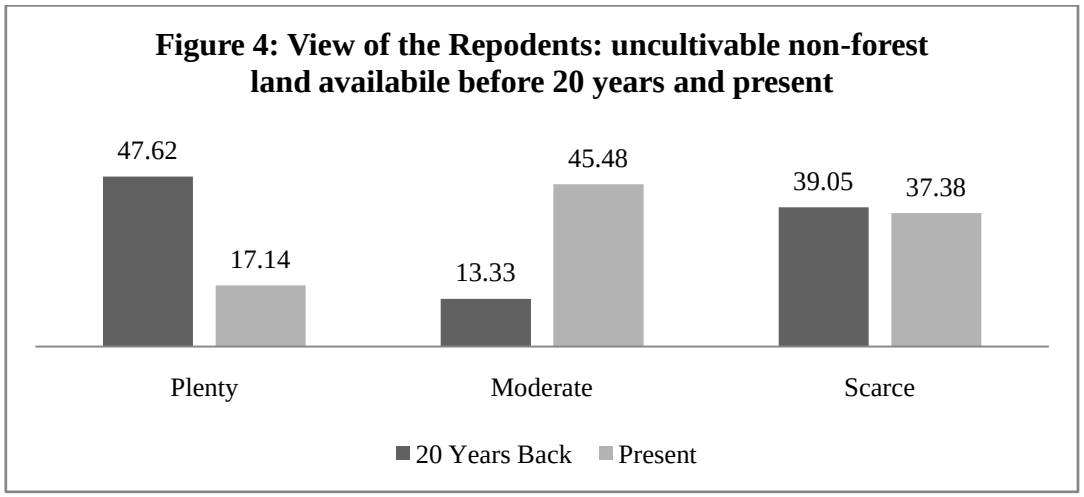
In the village Tentuli 7.27% of respondents said that there is plenty of uncultivable forest land, 70.91% of respondents admitted that there is moderate availability of un-cultivable non-forest land and 21.82% of respondents expressed that there is scarce availability of uncultivable non-forest land. In the village Suakathi 40% of respondents opined that there is plenty of uncultivable non-forest land available, 41.18% expressed that there is moderate availability of cultivable non-forest land and 18.82% of respondents agreed that there is scarce availability of uncultivable non-forest land. It can be clearly made out of the analysis of findings of the study that that Kuanar village has no uncultivable non-forest land.

Table 14: Un-Cultivable Non-Forest Land 20 years back

	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	33	7	15	55	0	0	55
	60.00	12.73	27.27	100.00	0.00	0.00	100.00
Kunar	47	29	119	195	0	0	195
	24.10	14.87	61.03	100.00	0.00	0.00	100.00
Suakathi	120	20	30	158	10	2	170
	70.59	11.76	17.65	92.94	5.88	1.18	100.00
Total	200	56	164	408	10	2	420
	47.62	13.33	39.05	97.14	2.38	0.48	100.00

The situation of uncultivable non forest land 20 years back is represented in the **Table.14** above. An analysis of availability and accessibility of uncultivable forest land 20 years back, 47.62% of respondents said that there was plenty of uncultivable non-forest land, 13.33% of respondents opined that there is moderate availability of uncultivable non-forest land and 39.05% of respondents shared that there was scarce availability of uncultivable non-forest land. For the purpose of analysis the availability of cultivable non-forest land was divided into plenty, moderate and scarce. In the village Tentuli, Kuanar and Suakathi 60%, 24.10% and 70.59% of respondents respectively opined that there was plenty of availability of uncultivable non forestland. The moderate availability of uncultivable non forest land is pointed out by 12.73%, 14.87% and 11.76% of the sample respondents and 27.27%, 61.03% and 17.65% of the sample respondents opined for scarce availability of uncultivable non-forest land in village Tentuli, Kuanar and Suakathirespectively.

A comparative analysis of uncultivable non forest land over two decades in the sample villages is presented in the **Figure.4**. It can be concluded from this analysis that in sample villages there is a substantial decrease in availability and accessibility of uncultivable non-forest land area over last two decades. There is clear increase in percentage of sample response for moderate availability of uncultivable non forest land. There is slight decrease in number of respondents in favour of scarce availability of land, whereas there is a major change recorded in terms of plenty availability of land.



It can be observed that the 47.62% of respondents opined that there was plenty of uncultivable non-forest land 20 years back against present period, in case of 17.14% of respondents agreed that there is plenty of uncultivable non-forest land availability as of now. In connection with uncultivable non-forest land before 20 years back 13.33% of respondents expressed that there is moderate availability of uncultivable land and 39.05% of respondents expressed that there is scarce availability of land. In the present scenario of uncultivable non-forest land 45.48% respondents are of the opinion that there is moderate availability of land and 37.38% respondents are of the view that there is scarce availability of uncultivable non-forest land.

4.8. Uncultivable Non-Forest Land across ethnic category

Table 15: Un-Cultivable Non-Forest Land at present

Distance	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
SC	2	3	11	16	0	0	16
	12.50	18.75	68.75	100.00	0.00	0.00	100
ST	49	153	135	336	1	0	337
	14.54	45.40	40.06	99.70	0.30	0.00	100
OBC	21	35	11	58	8	1	67
	31.34	52.24	16.42	86.57	11.94	1.49	100
Total	72	191	157	410	9	1	420
	17.14	45.48	37.38	97.62	2.14	0.24	100

The distribution of uncultivable non forest land at present across the ethnic groups is recorded in the **Table.15**. Different social category respondents have different opinion about availability and accessibility of uncultivable non-forest land at present. Among the SC respondents 12.50%, out of ST respondents 14.54% and 31.34% of OBC respondents admitted that there is plenty of uncultivable non-forest land which helps to generate employment and gives additional income to the peoples of these areas. It can be seen from above table that a small fraction of the respondents from OBC community agreed that there is scarce availability of uncultivable non- forest land, most of the SC community opined that there is scarce availability of uncultivable non-forest land. If we look at the situation of accessibility of land in the sample area it was found that OBC category are having lesser access to land than ST and SC category in the sample district.

Table 16: Un-Cultivable Non-Forest Land before 20 years back

Distance	**Availability**			**Distance**			
	Plenty	**Moderate**	**Scarce**	**In the village**	**Within 1K.M**	**Within 1-3K.M**	**All**
SC	3	2	11	16	0	0	16
	18.75	12.50	68.75	100.00	0.00	0.00	100.00
ST	161	33	143	335	2	0	337
	47.77	9.79	42.43	99.41	0.59	0.00	100.00
OBC	36	21	10	57	8	2	67
	53.73	31.34	14.93	85.07	11.94	2.99	100.00
Total	200	56	164	408	10	2	420
	47.62	13.33	39.05	97.14	2.38	0.48	100.00

The situation of un cultivable non forest land 20 years back is presented in **Table.16.**It can be seen that 18.75% of SC, 47.77%of ST and 53.73% of OBC respondents agreed that there is plenty of uncultivable non-forest land. About 12.50% of SC, 9.79% of ST and 31.34% of OBC respondents shared that there is moderate availability of uncultivable non-forest land. 68.75% of SC and 42.43% of ST and 14.93% of OBC are of the opinion that there is scarce uncultivable non-forest land 20 years back. Analysis of situation for different ethnic groups it can be pointed out that 20 years back OBC categories have more uncultivable non-forest land than other two categories. We have seen in Table 67 and 68 it is found that uncultivable non-forest land has declined.

5.8. Grazing Land across villages

A field covered with grass or herbs and suitable for grazing by livestock is called grazing land. Situation of availability such grazing land in present scenario is captured in **Table.17** below. Study revealed that 76.36% of respondents of Tentuli village said that plenty of grazing is available and 23.64% respondents admitted that there is moderate availability of grazing land. The highest percentages of respondents' (91.79%) of village Kuanar are of the opinion that there is plenty of grazing land and only 8.21% shared that there is moderate availability of grazing land.

Table 17: Grazing land at present

Village	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	42	13	0	55	0	0	55
	76.36	23.64	0.00	100.00	0.00	0.00	100
Kuanar	179	16	0	195	0	0	195
	91.79	8.21	0.00	100.00	0.00	0.00	100
Suakathi	151	18	1	165	4	1	170
	88.82	10.59	0.59	97.06	2.35	0.59	100
Total	372	47	1	415	4	1	420
	88.57	11.19	0.24	98.81	0.95	0.24	100

The 88.82% of respondents of village Suakathi shared that there is plenty of grazing land available and 10.59% of respondents shared that there is moderate availability of grazing land and 0.59% of respondents revealed that there is scarce availability of grazing land in villages. Considering the view of the respondents it is found that 88.57% of respondents said that there is plenty of grazing ground, 11.19% respondents shared that there is moderate availability of grazing land in sample villages. It is observed that availability of grazing land is helpful

for indigenous people in terms of rearing of cow, buffalo and sheep etc which will help sustained livelihood of community.

Table 18: Grazing land 20 years back

	Availability			Distance			
	Plenty	**Moderate**	**Scarce**	**In the village**	**Within 1K.M**	**Within 1-3K.M**	**All**
Tentuli	54	1	0	55	0	0	55
	98.18	1.82	0.00	100.00	0.00	0.00	100.00
Kunar	173	22	0	195	0	0	195
	88.72	11.28	0.00	100.00	0.00	0.00	100.00
Suakathi	159	9	2	159	8	3	170
	93.53	5.29	1.18	93.53	4.71	1.76	100.00
Total	386	32	2	409	8	3	420
	91.90	7.62	0.48	97.38	1.90	0.71	100.00

The situation of grazing land 20 years back is presented in the **Table.18.** This represents the view of the respondents about availability and accessibility of grazing ground status 20 years back. It was found that in case of 98.18% of respondents of village Tentuli there is plenty of grazing land availability and 1.82%respondants from same village shared that there was moderate availability of grazing land. In the village Kuanar 88.72% of respondent's view that there was plenty of grazing land 20 years back and 11.28% of respondents admitted that there was moderate availability of grazing ground land 20 years back. In the village Suakathi, 93.53% of respondents shared that there was plenty of grazing land, 5.29% of respondents expressed that there was moderate availability of grazing ground and meagre 1.18 percentage respondents shared that there was scarce availability of grazing land 20 years back.

Comparative analysis of situation of grazing land 20 years back and at present, it is found that grazing land availability has gone down over the years. In spite of decline in availability of grazing land there is now enough grazing land for sustaining livestock in these villages. It is observed that there is easy accessibility of grazing land because all the lands are within the village periphery.

4.10. Grazing Land across ethnic category

Table 19: Grazing ground at present

	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
SC	16	0	0	16	0	0	16
	100.00	0.00	0.00	100.00	0.00	0.00	100
ST	301	36	0	337	0	0	337
	89.32	10.68	0.00	100.00	0.00	0.00	100
OBC	55	11	1	62	4	1	67
	82.09	16.42	1.49	92.54	5.97	1.49	100
Total	372	47	1	415	4	1	420
	88.57	11.19	0.24	98.81	0.95	0.24	100

If we look at the situation of accessibility and availability of grazing land across ethnic groups it appears that there exists differential access and availability within the village. An analysis of distribution of grazing land across different ethnic composition it is found that 100% of SC shared that there is plenty of grazing land available. Among the STs 89.32% of them said that there is plenty of grazing land available and 10.68% of ST respondents opined that there is moderate availability of grazing land. Among the OBC communities 82.09% of them revealed that there is plenty of grazing land, 16.42% of them shared that there is moderate availability of grazing land and 1.49% of respondents opined that there is scarce availability of grazing land in study villages.

An analysis if situation of grazing land availability and accessibility in same study villages 20 years back is presented in **Table.20** below.

Table 20: Grazing ground before 20 years back

	Availability			Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	All
SC	15	1	0	16	0	0	16
	93.75	6.25	0.00	100.00	0.00	0.00	100.00
ST	313	22	2	335	0	2	337
	92.88	6.53	0.59	99.41	0.00	0.59	100.00
OBC	58	9	0	58	8	1	67
	86.57	13.43	0.00	86.57	11.94	1.49	100.00
Total	386	32	2	409	8	3	420
	91.90	7.62	0.48	97.38	1.90	0.71	100.00

Looking at the grazing land status before 20 years back, the different ethnic groups had different opinion as reflected in table. Among the SC respondents 93.75% of them shared that there was plenty of grazing land, 6.25% of SC expressed that there is moderate availability of grazing land. About 92.88% of ST admitted that there was plenty of grazing land and 6.53% are of the opinion that there was moderate availability of grazing land and 0.59% respondents said that there was scarce availability of grazing land in villages.

4.11. Forest produces across villages

Non-timber forest products (NTFP)are considered as commodity from the forest that does not necessitate harvesting trees. It includes forest animals, fur-bearers, nuts and berries, mushrooms, oil, foliage, medicinal plants, peat and fuel wood etc. NTFP play important parts in household incomes they can be raise the perspective value of forest and thus provide incentives for more sustainable use of the forest estate. NTFPs serve as raw materials for industries ranging from large-scale floral greens suppliers and pharmaceutical companies to micro-enterprises focussed on basket-making, woodcarving, medicinal plant harvesting and processing, and a variety of other activities.

Table 21: Forest (NTFP) Present

	Availability				Distance			
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
Tentuli	7	44	4	54	1	0	0	55
	12.73	80.00	7.27	98.18	1.82	0.00	0.00	100
Kuanar	31	164	0	187	8	0	0	195
	15.90	84.10	0.00	95.90	4.10	0.00	0.00	100
Suakathi	51	104	15	158	3	3	6	170
	30.00	61.18	8.82	92.94	1.76	1.76	3.53	100
Total	89	312	19	399	12	3	6	420
	21.19	74.29	4.52	95.00	2.86	0.71	1.43	100

The complete picture of NTFP availability and accessibility is presented in the **Table.21.** It represents the view of respondents about the availability and accessibility of NTFP. About 12.73% of respondents of Tentuli village said that there is plenty of Non-Timber Forest Product forest available, 80% respondents observed that there is moderate availability of NTFP and 7.27% shared that there is scarce availability of NTFP in study villages. The 15.90% respondents of village Kuanar said that there is plenty of NTFP available and 84.10% of respondents supposed that there is moderate availability of NTFP. Out of the total respondent from the village Suakathi30% of them shared that there is plenty of NTFP land, 61.18% of respondents said that there is moderate availability of NTFP land and 8.82% of respondents agreed that there is scarce availability of NTFP.

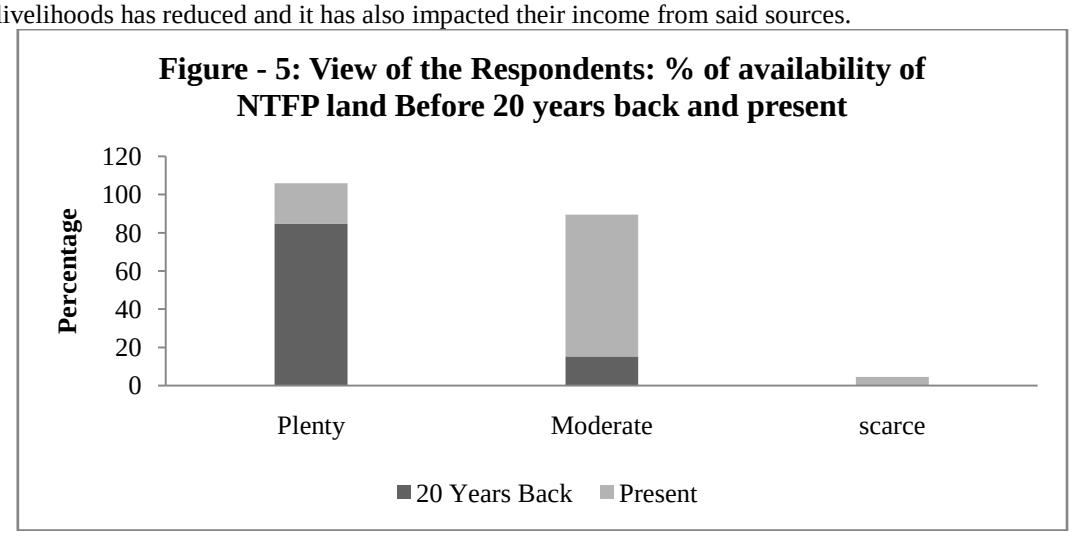
Out of the total respondents of sample villages, 21.19% of respondents said that there is plenty of NTFP land, 74.29% agreed that there is moderate land and 4.52% shared that there is scarce availability of NTFP. In case of accessibility of NTFP it is observed that 95% of NTFP resources are available within the villages, 2.86% are within 1 km radius, and 0.71% of NTFP is within 1km to 3km radius and 1.43% of NTFP is only available beyond 3 km of radius.

Table 22: Availability and accessibility of forest (NTFP) 20 years back

	Availability			Distance		
	Plenty	Moderate	In the village	Within 1K.M	Within 1-3K.M	All
Tentuli	52	3	55	0	0	55
	94.55	5.45	100.00	0.00	0.00	100.00
Kunar	147	48	195	0	0	195
	75.38	24.62	100.00	0.00	0.00	100.00
Suakathi	157	13	156	10	4	170
	92.35	7.65	91.76	5.88	2.35	100.00
Total	356	64	406	10	4	420
	84.76	15.24	96.67	2.38	0.95	100.00

An analysis of situation of availability and accessibility of NTFP 20 years back was presented through the views of different respondents in **Table.22**. Out of the total respondents 86.76% of them said that there was plenty of NTFP available 20 years back. Only 21.19% of respondents shared that there was plenty of NTFP available.

As reflected from the **Figure.5** below in village Tentuli 94.55% of respondents said there was plenty of availability of NTFP 20 years back but in present situation only 12.53% of respondents agreed that there is plenty of NTFP available. In the village Kuanar 75.38% of respondents said that there was plenty of NTFP land but in present condition only 15.90% are admitted that there is plenty of land. 20 years back there was plenty of NTFP land as mentioned by 92.35% of respondent of Suakathi village against 30% of respondents said that there is plenty of availability of NTFP. Considering the view of the respondents it is observed that there has been declining NTFP base in the villages. Collection of NTFP by indigenous people and sustainable use for their livelihoods has reduced and it has also impacted their income from said sources.



4.12. Forest produce across ethnic category

Table 23: Forest (NTFP) Present

	Availability			Distance				
	Plenty	Moderate	Scarce	In the village	Within 1K.M	Within 1-3K.M	More than 3K.M	All
SC	1	14	1	16	0	0	0	16
	6.25	87.50	6.25	100.00	0.00	0.00	0.00	100.00
ST	72	253	12	328	9	0	0	337
	21.36	75.07	3.56	97.33	2.67	0.00	0.00	100.00
OBC	16	45	6	55	3	3	6	67
	23.88	67.16	8.96	82.09	4.48	4.48	8.96	100.00
Total	89	312	19	399	12	3	6	420
	21.19	74.29	4.52	95.00	2.86	0.71	1.43	100.00

The view about availability of NTFP forest land by different ethnic groups has been given in the **Table.23**and **Table.24**. It can be seen that 20 years back there was plenty of NTFP available as agreed by 87.50% of Schedule Caste against at present only 6.25% said there is plenty of NTFP available. Similarly 85.46% of respondent said that there was plenty of NTFP available but at Present 21.36% respondents only agreed that there is plenty of NTFP land.

Table 24: Forest (NTFP) before 20 years back

	Availability		Distance			
	Plenty	Moderate	In the village	Within 1K.M	Within 1-3K.M	All
SC	14	2	16	0	0	16
	87.50	12.50	100.00	0.00	0.00	100.00
ST	288	49	335	0	2	337
	85.46	14.54	99.41	0.00	0.59	100.00
OBC	54	13	55	10	2	67
	80.60	19.40	82.09	14.93	2.99	100.00
Total	356	64	406	10	4	420
	84.76	15.24	96.67	2.38	0.95	100.00

Out of the total number of respondent across various ethnic groups 80.66% of them shared that 20 years back there was plenty of NTFP resources available but at present only 23.88% of respondents of OBC communities said that there is plenty of NTFP availability. In connection with the accessibility82.09% of NTFP is accessible within the village, 14.93% of NTFP was within 1km to 3km and 2.99% of land was within 1km to 3km as shared by OBC communities but at present 82.09% of NTFP resources is only within the village, 4.48% of land within 1km radius, 4.48% of land within 1km to 3km radius and 8.96 Kms of NTFP resources is available beyond three Kms of radius.

V. Conclusion

To conclude, it is seen that there is significant difference in terms of availability and accessibility of common property resources at present n comparison to 20 years back. However, it is observed that the village like suakati where massive mining operation started during late 70's, it became very difficult for the inhabitants to access the natural resources at present. The difference with regard to availability is relatively less in the villages located in distance place from the mining area. Further, it is also observed that the difference is more significant in for the tribal group where as the SCs and OBCs have not responded towards much difference with regard to the accessibility of Common Property Resources in the area. Though the difference in availability has been presented by all the caste groups, but the accessibility to these resources has been lessened due to current development interventions which shows that the tribal groups has not been able to accrue the benefits from the development agenda of the state, rather they are slowly losing accessibility to the resources.

References

[1]. Panigrahi, N (2001), 'Impact of State Policies on management of Land Resources in Tribal Areas of Orissa', Journal of *Man and Development*, Vol. XXIII, No. 1, March, 2001.

[2]. Berkes, F. (ed.) (1989), Common Property Resources: Ecology and Community-Based Sustainable Development. Belhaven, London.

[3]. Garrett Hardin (1968), The Tragedy of the Commons *Science*, New Series, Vol. 162, No. 3859. (Dec. 13, 1968), pp. 1243-1248

[4]. Behura, N.K and Nayak, P.K. (1993), 'Involuntary Displacement and changing frontiers of kinship: A study of settlement in Orissa', in *Anthropological Approach to Resettlement*, Cerena, M. Michael and Scott E., Giggenheim.

[5]. Behura, N. and Panigrahi, N. (2001), Functioning of the fifth schedule of the constitution of India: The Role of Welfare Agencies in the State of Orissa, report submitted to ICSSR, New Delhi, NKC Center for Development Studies, Bhubaneswar.

[6]. National Sample Survey Organisation, Department of Statistics and Programme Implementation, Government of India(1999), *'Common Property Resources in India'.*

[7]. Panda, P and Panigrahi, N (1989), 'The problems of displacement of displaced people: A study in the coal mines of Brajarajnagar Orissa" in *Tribal Development in India*, Pati, R.N and Jena, B (ed.), New Delhi, Ashish Publishing House.

[8]. *Singh, Katar(1994, Managing Common Pool Resources; Principles and Case Studies, New Delhi, Oxford University Press,*

[9]. Geheb K. 1997. The regulation and the regulated: Fisheries management options and dynamics in Kenya's Lake Victoria Fisheries. University of Sussex, UK. PhD. Thesis.