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Exploitation of Yangngoupokpi - Lokchao Wildlife Sanctuary and the Concerns for Sustainable Community Development

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Abstract

Yangoupokpi-Lokchao Wildlife sanctuary is located in the Tengnoupal district of Manipur. The sanctuary covers an area of 184.8 sq. Km. The whole area has been classified into five zones as Khudengthabi, Leibi, Laiching, Kwatha, and Yangngoupokpi villages. Shifting cultivation is the main livelihood activity of the people in the area. Besides this, many people in the region hunt wild animals and birds in their leisure time. The present study explores the level of human exploitation of the sanctuary in terms of timber extraction, hunting of wild animals and birds by taking five sample villages Viz. Nungkam/Satang, Kwatha, Khudengthabi, Govajang and Leibi. It was found that within the studied period (2017-2020) a total number 373000 cubic feet (in average) timbers were logged, 515 wild animals and 1631 birds were killed. The exploitation of the wildlife within such a short span of time was found was to be alarming and based on it the paper further raises concerns about sustainable community development.

Keywords*: Livelihood Activities, Wildlife Exploitation, Sustainable Community Development.*

Introduction

The growth of the human population has necessitated the exploration and use of resources available in its surrounding for survival. Livelihood activities such as jhum cultivation, wild food gathering, hunting and fishing, and the use of wood, timber, bamboos, and other natural resources for their basic needs were part and parcel of traditional society. As long as they are used sustainably, it serves the purpose of fulfilling the needs of human beings without much harm to the environment. However, the advancement in modern inventions of machines, equipment, and tools enable them to explore and reach far-flung

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areas, gather the required materials, and transport to whichever places they want with the modern transport system. This advancement harms the environment as human beings begin to exploit natural resources for commercial purposes in addition to their basic needs. Excessive use and over-exploitation of natural resources result in disturbance of biogeochemical cycles, atmospheric pollution, global warming, soil erosion, extinction of wildlife, etc. It also raises the issue of sustainable community development. Sustainable development as given by the World Commission on Environment and Development (1987) means "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Batie (1989) put forward the idea of sustainable development by stating that "...the current generation must not compromise the ability of future generations to meet their material needs and enjoy a healthy environment." A sustainable community addresses and cares for the current multiple needs of the community by carefully managing the resources available to them while ensuring that the future generations also shall have adequate resources at their disposal. These resources are in the form of human resources, natural resources, and financial resources. Natural or environmental resources such as natural resources, weather, and recreational opportunities form one of the four main forms of community capital (Phillips & Pittman, 2009). The socio-cultural and economic life and welfare of the traditional society, the forest dwellers (villagers), heavily depend on the forest and its resources. According to the changes in season, the social and economic activities of the people also change. This is to adapt to the changing season and also to harvest the maximum out of the resources and opportunities available in different seasons.

Methodology

The Yangoupokpi-Lokchao Wildlife Sanctuary is located in Tengnoupal district along the Indo- Myanmar border about 110 km from Imphal. It has an area of 185 sq. km and lies between 24°13'51''N to 24°26'N latitude and 94°13'51''E to 94°23'51''E longitude. It has been classified into five zones - Khudengthabi, Leibi, Laiching, Kwatha, and Yangngoupokpi. The temperature of the sanctuary ranges from 4°C in January to 40°C in June with humidity ranging from 35% (during winter) to 80% (during the monsoon season).

The present study is quantitative in nature and is based on the primary data collected from the sample villages viz. Khudengthabi, Leibi, Laiching, Kwatha, and Yangngoupokpi. The primary data are collected from the field through key informant interviews during the field visits. For the collection of primary data five villages Viz. Nungkam/Satang, Kwatha, Khudengthabi, Govajang and Leibi were selected. These villages lie within the said sanctuary. A total number of 20 known timber loggers/extractors were interviewed for the data on timber extraction and 60 hunters for collection of data on number of wild animals and birds killed. The data collected was processed and analyzed manually using simple calculations. Results from the collected data are presented in tables. Based on the findings the issues and concerns on sustainable community development are discussed as the alarming rate of exploitation is seen to have a great impact on the overall sustainable development of the community.

Results and Discussions

The results of the analysis from the collected data are presented in tables followed by a brief explanation. The exploitation is studied under two sub-themes: exploitation of forest resources in the form of timber logging, and the exploitation of wildlife in the form of wild animals hunted and birds hunted in the sanctuary. The analyses are followed by discussions of the issues which further raises the concerns on sustainable community development.

Exploitation of Forest in the Sanctuary Area

Forest is a natural self-sustaining ecosystem consisting mainly of trees and other species. Trees are large, generally single-stemmed, woody plants. Forest being natural communities it is not static. It responds according to outside influences. Depending upon the systems and angle of the steepness of topography, rainfall, fire wind, glaciations, seismic activity, flooding, animal activity, insulation, and so on results in a diverse response in the growing system. In some places thick forest could be seen, and in others, bushes dominate the region. This is because of the diverse factors influence by the human activities in different parts of the forest areas in terms of continuous cultivation, logging, and hunting of animals and birds. Till the late 1980s, the Yangoupokpi-Lokchao wildlife sanctuary region maintained a thick and dense forest. The sanctuary was endowed with good vegetation and Choukiker (2016) had classified it into four distinct types – 1) teak forest along the foothills, 2) dipterocarpus spp. forest in the mid-range, 3) the mixed broadleaf upper forest and 4) the riverine bamboo forest. Numerous high commercial value timber trees in the state like teak, dipterocarpus-turbinatus *(khangara)* dipterocarpus-turberculatus *(yangngou)*, michelia champaca *(Leihao)* phoebe-Hainesiana *(Uningthou),* etc. were grown abundantly in this forest. On the other hand, countless species of shrubs and bushes were grown with a considerable amount under the shed of the timber trees in this region. It is in this vegetation that wildlife exists. Till the late 1980s except for *jhum* cultivation, which is the traditional means of livelihood for the people in the area, there was not much disturbance on the sanctuary. But from the 1990s people started logging timber in this region thereby increasing its exploitation for the commercial purpose each year. The trend of timber extraction from the selected villages for the last four years (2017-2020) is presented in Table 1.

Table 1: Extraction of timber from the forest (in cubic feet)

Name of Vill.	2017 (Cubic ft. in avgs.) n=20	2018 (Cubic ft. in avgs.) n=20	2019 (Cubic ft. in avgs.) n=20	2020 (Cubic ft. in avgs.) n=20	Total
Nungkam /Satang	40,000	35,000	34,000	10,000	119000
Kwatha	30,000	27,000	30,000	7,000	94000
Khudengthabi	25,000	20,000	10,000	2,000	57000
Govajang	20,000	15,000	5,000	3,000	43000
Leibi	3,0000	22,000	6,000	2,000	60000
Total	145,000	119,000	85,000	24,000	373000

Source: Computed from Primary Data

Table 1 presents the approximate amount of timber extraction from the forest in cubic feet for the last four years (2017-2020) in the studied villages. In 2017, the volume of logging

forest was found to be 145,000 cubic feet on average from these villages. This has declined to 119,000 cubic feet in the following year. In 2019, it has again abruptly changed the logging volume which constitutes to be 85,000 cubic feet and in 2020 the commercialized timber quantity went down to only 24,000 cubic feet. There is a constant decline in the volume of timber logging the reason for which could not be specifically tabled. However, information from the informants reveals that it is partly due to the decreasing availability of timber in the easy to access places and also the lockdown that happened in 2020.

In the village-wise breakup, Nungkam/Satang village constitute the largest extraction within the studied years amounting to 119000 cubic ft. in avgs. This is followed by Kwatha village with 94000 cubic ft. in avgs. The third-largest extraction comes from Leibi villages with 60000 cubic ft. in avgs followed by Khudengthabi and Govajang villages with 57000 and 43000 cubic ft. in avgs. The logging or extraction is done by different groups/individuals and they may not be necessarily inhabitants of the said villages.

According to the information given by the key informants, in the initial stage of timber were extracted manually using axe, saw, and *daos.* After some time, automatic handsaw machines came to be used and the extracted rate grew numerously. The logged trees were initially transported in rounds to the nearest town and cities for further processing using four-wheelers like shaktiman and trucks. However, with the coming of portable sawmills, sawmills were set up in different places in the forest itself and the logged timbers were cut into pieces in the shape of rectangle or any other sizes as required. This eased the transportation struggles and also become more profitable as they transport only what could be sold. Though the extraction and selling of timber gave some financial benefits to the extractors and the villagers the negative consequences of this massive extraction are far more devastating. The local people are physically felt the consequences. They complain of increasing temperature, less availability of wild foods and animals, etc. Other consequences are points in which a large scale of deforestation makes far-reaching consequences are habitat destruction of wild animals (tree-using animals are deprived of food and shelter), increased soil erosion due to reduction of vegetation cover, reduction in the oxygen liberated by plants through photosynthesis, decrease in the availability of forest products, loss of cultural diversity, loss of biodiversity, scarcity of wood for fuel, lowering of the water table due to more run-off, etc. The sudden gushing of water of the *Lailok* river during heavy rainfall days is witnessed by the people annually. This phenomenon is not yet even a decade old, it's a recent happening the cause of which can be link to the destruction of the forest.

Exploitation of Wildlife in the Sanctuary Area

Though wildlife can have complex composition and understanding wildlife in this study is understood as the undomesticated animal species which includes wild animals and birds. The age-old livelihood strategies of human beings include hunting, trapping, fishing, and gathering wild foods. In most tribal communities hunting of bigger wild animals are considered as honour and a sign of valour or manliness for men. Till this day the tribal communities in the hilly regions continue these occupations for their sustenance as well as for commercial purposes. Professional hunters and trappers know the season and place to hunt or

trap different varieties of animals. The exploitation of wildlife in this paper is studied under two sub-themes – animals killed and birds killed during the studied years. The number (approximate) of animals killed from 2017-2020 from the selected villages is presented in Table 2.

Table 2: Number of wild animals killed in the sample villages from 2017-2020

Name of animals	2017 n=60	2018 n=60	2019 n=60	2020 n=60	Total
Tiger	2	-	-	-	2
Bear	3	4	1	-	8
Leopard	1	-	-	-	1
Deer	28	98	32	12	170
Wild pig	60	35	34	59	188
Snake	3	2	-	-	5
Fox	1	-	-	-	1
Porcupine	25	30	20	-	75
Wild elephant	2	-	-	-	2
Monkeys	13	24	3	9	49
Hoolock Gibbon	2	1	-	-	3
Red deer	5	4	-	2	11
Total	145	198	90	82	515

Source: Computed from Primary Data

The types of animals mostly hunted in the study are tiger, bear, leopard, deer, wild pig, snake, fox, porcupine, wild elephant, monkeys, hoolock gibbon, red deer. The table shows that throughout the studied year wild pig with 188 numbers is the most killed animal followed by deer with 170. Porcupine with 75 numbers is the third largest animal killed followed by monkeys with 49 in numbers. Red deer (11), bear (8) snakes (5) are other animals killed in the area. During the studied year three hoolock gibbons, two wild elephants, two tigers, and one fox were also killed. The year 2018 witnessed the highest number of animals killed and the least in 2020. The volume of animals killed peak in 2018 and decrease subsequently in 2020.

Table 3: Number of birds killed in the sample villages from 2017-2020

Name of birds	2017 n=60	2018 n=60	2019 n=60	2020 n=60	Total
Dove	49	38	10	5	102
Owl	1	2	-	-	3
Parrot	20	15	30	80	145
hornbill	7	6	4	21	38
Swan (gam vatot)	2	-	1	-	3
Red jungle fowl (ahpa)	200	70	97	121	488
Woodpecker	3	4	-	-	7
Spruce Grouse (Vagih)	150	200	275	220	845
Total	432	335	417	447	1631

Source: Computed from Primary Data

Table 3 presents the volume of birds killed among the many birds that exist in the sanctuary and killed by the people nine main species of birds are chosen as they are the bigger ones and approximate records could be obtained. These birds are either hunted with a gun, shot with slings, or are trapped using different methods of trapping strategies. As seen in the table the year 2020 shows the highest number of birds killed with 447 birds. This is followed by the year 2018 with 432 birds and the year 2019 witnessed the killing of 417 birds. The year 2018 shows the lowest number of birds killed. With regards to the different types of birds killed, spruce grouse *(Vagih)* stood the highest with a huge number of 845. This is followed by the red jungle fowl *(ahpa)* with 488 in numbers. Parrot with 145 and dove with 102 are other species of birds that are widely killed. Hornbill, which is a very attractive and highly valued bird is also largely killed with 38 in numbers. Woodpecker, swam and the owl is also killed in small numbers.

Concerns on Sustainable Community Development

The concept of community development is a complex one. It is an interdisciplinary field of study and no one subject or field of study has a cent percent expertise or authority on it. In addition to this complexity, the addition of sustainability had made the concept all the more complex. However, attempts have been made by different scholars in different fields of studies to simplify this complex concept. For the present study to understand the concept of community development the definition is given by Green and Haines (2002 is taken into account. According to them, "Community development is a planned effort to produce assets that increase the capacity of residents to improve their quality of life. These assets may include several forms of community capital: physical, human, social, financial and environmental." The definition speaks about the creation of assets so that from those assets the residents, members of the community, can improve their quality of life. Further, among the various forms of capital mentioned in the definition environmental capital is directly linked with natural and cultural resources. Yap (2013) gives three important functions of the environment which are essential in maintaining a particular quality of life - 1) as a supplier of resources, renewable and non-renewable; 2) a sink for the waste of human activities; and 3) as a source of life support system especially air, water, soil and assimilative capacities provided by various ecological processes. The concern here is, by making use of the natural resources - timber, animals, and birds have the residents improved their quality of life? At the face value, the answer may be positive especially from the financial gain they accumulated through timber logging. However, on interactions with key informant interviews and deeper analysis it was revealed that a large chunk of benefits accrue from timbers logging goes to the agents and *mahajons* (wealthy people who own/controls the means of production, transportation and sale of the goods). These people are mostly non-residents of the villages. In most cases the village communities only provide labor force and earn some meagre amount from it.

Community development is also inevitably characterized by power struggles and conflict, this too is a potential barrier to sustainability (Bridger & Luloff, 1999). The struggle or conflict according to them is between those who seek to maximize growth and profits

generated through economic development activities, here mainly timber logging and wildlife hunting, and those who are attempting to create reasonably self-sufficient communities by balancing the growth with the local ecosystem or the environment. The same types of struggles and conflicts were revealed by the key informants. The struggle is between the direct beneficiaries, the exploiters, and the residents who are more aware of the ill effects of exploitation and the issue of sustainability. Concern residents care about the future generations who will be deprived of the rich natural resources that this generation enjoys while most of the exploiters and direct financial beneficiaries talk about instant economic improvement to improve the quality of life.

There is also great concern on the sustainability of the resources, the natural resources. The idea of sustainability is simple yet significant. The simple idea is that if forest and its resources have supported life and the human need for the past centuries without much human disturbance then it should also serve the same in the coming generations. If human beings cut trees they should replace them by reseeding the land. The natural process of environmental changes in itself is not a serious concern because it has a certain degree of resilience. However, when the environmental disturbance is caused by human activities at a speed with which the natural system cannot balance human demands and environmental capacity the concern for sustainability arises. 'The caring capacity and the assimilative capacity of the ecosystem are put at risk. The caring capacity of the ecosystem means the amount of life it can support and the assimilative capacity means the ability to heal itself (Yap, 2013)'. To be a sustainable community is to use the resources to meet the present needs at the same time ensure that the future generations also will have the same resource to meet their needs. The sustainability of the resources exploited in the studied areas is a big concern. With this rate of timber logging and hunting of wild animals and birds, it will be unfortunate that the future generations will be deprived of the rich forest resources.

Conclusion

With the current rate of exploitation, be it timber, animals, or birds, there is a great possibility of destruction of the wildlife sanctuary and also the sustainable livelihood practices of the villagers. It also puts the concept of sustainable community development at stake. Checks and balances on the use of natural resources are the need of the hour. Strong and sustainable community development requires the cooperation and participation of the residents, members of the community, in the development process. The issue of the power structure in the community also plays an important role. In traditional villages where power is concentrated among the few, especially the chiefs/chairmen of the village, it is imperative to convince them and make them part of the process. The exploitation of the forest and the wildlife in the said sanctuary are mostly done with the permission or knowledge of the chiefs/chairmen. They are often the direct beneficiaries of the profits that come especially from timber logging. Wise use of the environmental resources for the development of the community is highly advisable.

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