

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

An Insight to the Socio Economic Development around the Fringe Villages of Kaziranga National Park

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Abstract:

The present study is an attempt to see the pattern of overall development around the fringe villages of Kaziranga National Park, which is located in the Golaghat and Nagaon District of Assam. In recent years, there has been much hue and cry about the economic and social status of the people living in those fringe villages. Kaziranga National Park is one of the celebrated national parks in the world and has been facing the pressure of habitat and wild life destruction. But issues are not always environmental; rather there is a visible socio economic stress across the region. This confirms the problems faced by nearby settlements, which leads to their long stretched conflict with the wild life and heavy dependency. The heavy resource dependency by the local communities of the fringe villages on Kaziranga leads to the habitat degradation. On the other hand, the flood of mighty Brahmaputra River destroys the rural economy at a massive scale, leaving the local communities with narrow means of survival.

The study mainly by using primary data confirms that intensity of economic struggle in the fringe villages is very much strong. Daily survival becomes quite grim while facing challenges from habitat and flood. There has been effort provided by the government to strengthen the life and economic status of those people. Keeping eye on their success rate, thesis reaches the conclusion that the impacts of government policies are not as strong as it should have been.

1. Introduction

Assam is a land of diversity which spread the smell of a different India. This Indian state opens a new gateway to the eastern world of opportunities, prosper and new hopes. The land gives a diverse taste of culture, biodiversity, flora and obviously, the food habit. The wide diversity somehow makes the state a wonder itself. The state is a frontier province of India and is the gateway to North East India with full of natural and synthetic growth. The all-embracing forest area of Assam is an abode of different species and strains of natural flora and fauna as well as affluent with valuable forest products and medicinal plants.

A huge chunk of India's bio diversity is protected and conserved through reserve forests which are commonly known as Wild Life Sanctuaries and National Parks. Realizing the importance of species extension and habitat degradation international community has declared many of such protected areas as World Heritage Site. Especially in case of developing and underdeveloped countries such declaration of World Heritage Site cannot even protect the areas from being the centre of wild life and human conflict and further habitat degradation. Because in most of the developing or underdeveloped countries there are several million people who live in and around these areas and continue to be dependent (in small or large measure) on these areas to meet their livelihood needs and to run the household economy. Legally, extraction of any kind natural product or grazing domestic animal in the periphery from national parks is banned, because mixing of these domestic animals with wild animals would degrade the quality of wild animals. Despite this, most of the local communities living around the fringe areas of any protected areas continue to derive monetary or non-monetary benefit from those protects areas.

The visible struggle by the local communities around the protected reflects a clear socio economic stress across the region. This confirms the problems faced by nearby settlements, which leads to their long stretched conflict with the wild life and heavy dependency. The intensity of such struggle is more prominent in South and South East Asian countries. The heavy resource dependency of the local communities of the fringe villages on the nearby habitat leads to the habitat degradation. Unless there is any sort of government intervention is made such kind of conflicts takes more serious shape. When the case of government intervention comes then obviously case of government supporting alternative source of livelihood for people of fringe area comes. The only way to reduce resource dependency of people living in fringe area is to divert them from forest dependency to other livelihood options. So here comes the role of education and other skill development which would prepare them for labour market and alternative livelihood options. This aspect brings the role of government in supporting the forest people.

The present study tries to look at this major research problem in context of Indian state, Assam. It mainly focuses on Kaziranga National Park, which is situated in Golaghat and Nagaon districts of Assam. The National Park is also well known in the international platform as one of the esteemed World Heritage Site. Kaziranga National Park is world one of the celebrated and

renowned national parks located in the Golaghat district of Assam. The park which is also a world heritage site hosts two-thirds of the world's Great One horn Rhinoceros. Kaziranga National Park bestows with the highest density of tigers among protected areas in the world and was declared a Tiger Reserve in 2006. The park is abode to gargantuan breeding populations of elephants, wild water buffalo, and swamp deer etc. The Park has achieved outstanding accomplishment in wildlife conservation compared to other protected areas of India, positioned on the verge of the Great Eastern Himalaya Bio Diversity Hotspot. The park mixes up well high species diversity and visibility. Kaziranga is an enormous expanse of tall elephant grass, marshland, and dense tropical broadleaf forest overlapped by the four river systems, out of which mighty Brahmaputra covers the south border of the Park. In extensive term, Park hosts the largest grassland area left in the region. It stretches about 50 km along the south bank of the Brahmaputra River. The annual river floods replenish the wetlands and allow the grassland areas to flourish.

Kaziranga National Park is located between latitudes 26°30' N and 26°45' N, and longitudes 93°08' E to 93°36' E within two districts in the Indian state of Assam—the Koliabor subdivision of Nagaon District and the Bokakhat Subdivision of Golaghat District of the state, and the National Highway 37 passes by the side of the parks. The park is approximately 40 km (25 mi) in length from east to west, and 13 km (8 mi) in breadth from north to south. Kaziranga covers an area of 378 km² (146 square mi), with approximately 51.14 km² (20 square mi) lost to erosion in recent years. A total addition of 429 km² (166 square mi) along the present boundary of the park has been made and designated with separate national park status to provide extended habitat for increasing the population of wildlife or, as a corridor for safe movement of animals to Karbi Anglong Hills. Elevation ranges from 40 m (131 ft) to 80 m (262 ft). The park area is circumscribed by the Brahmaputra River, which forms the northern and eastern boundaries, and the Mora Dipholu, which forms the southern boundary.

Kaziranga has long flat stretches of fertile, alluvial soil shaped by erosion and silt fixation by the River Brahmaputra. The landscape comprises of visible sandbars, *beels*¹, (which make up 5% of the surface area), and raised regions known as *Chaporis*² which arrange for the retreats and shelters for animals during flood. Many non-natural chaporis have been built. Leaving the National park aside, actually Kaziranga is one of the three *Mouzas*³ of Bokakhat subdivision and largest Mouza of Bokakhat Subdivision. The Mouza has currently covered almost 41 revenue villages as listed by the District authority. But in real sense a revenue village may cover up more than one village under it. Rather combination of two or more villages of that area may represent the actual revenue villages. In this analysis we are covering almost 40 fringe villages of Kaziranga. When we single out those villages they may not represent single revenue village under the Boakhat Subdivision. The area that we are considering under this rural empowerment scheme covers almost 5 Gaon Panchayats⁴, under which 40 fringe villages are covered.

Name of Panchayats under Kaziranga Mouza	Total numbers of villages
Moridhanshri Pub Kaziranga Uttar Pub Kaziranga Madhya Kaziranga PaschimKaziranga	40 villages are covered under all of Mouzas

The park is also not free from the problems that most of the wild life sanctuaries face. Resource dependency by local communities, conflicts with the wild life, less involvement in the tourism sector by the local communities are one of the prime problems faced by the area. Most importantly the plight caused by the flood of mighty Brahmaputra River which destroys the rural economy at a massive scale, leaving the local communities with narrow means of survival. Not only that, even the development of massive tourism industry opens any hope of employment for those people. Mainly most of them are involved in unskilled low paid manual labour; whereas most of the skilled high paid works are assigned to the educated city people. So the development of tourism industry has not proved to be helpful for their upliftment mainly the subsistence rural economy.

The study focus on all of the above aspects and the role of the state government in improving the economic conditions of the poor people, which would up to some extent take care of their dependence on the habitat and conflict with the wild life.

1: is a term for a pond (wetland) with static water (as opposed to moving water in rivers and canals), in the Brahmaputra flood plains of the Eastern Indian states of West Bengal, and Assam and in the country of Bangladesh

2: riverine islands and tracts found in the Brahmaputra and Ganga River.

3: In Bangladesh and Pakistan, a mouza is a type of administrative district, corresponding to a specific land area within which there may be one or more settlements. The term has a similar meaning in the Assam, where a mouza refers to a locality in a district or within a large Assamese city. In Assam, several villages typically form a single mouza

4: is a local self-government institution at the village or small town level in India and has a Sarpanch as its elected head.

2. Importance and Objective of the Study

In the contemporary world of economic integration and fast paced development, increasing the pie of rural areas in the development process has been becoming increasingly vital, especially for developing country like India who's more than 70% of the people reside in the rural areas. Encouraging the participation in economic activities not only leads to increasing wellbeing but also prosperity. But penetrating the fruit of economic development to the backward villages has become increasingly challenging. As our country is climbing up on the ladder of development, there are still several areas which have not even seen any light of development. Rich are becoming richer day by day but what about the poor backward village people. Are those poor villagers are catching up with the rich or just decaying in the gutter of underdevelopment.

There is obviously no doubt that some rural parts of the country are showing immense progress in achieving sustains rural development and prosperity. Technological innovation, development and spread of higher education have abetted them to guzzle enormous amount of income from the agriculture and other allied activities. But there are still many areas in the country which are yet to see the small glimpse of technological progress and better education. This undoubtedly points to the persistent sticky inequality and more shockingly rural to rural area inequality. When one looks at the level of development that rural areas of North east India has achieved undoubtedly it will spread huge cloud of pessimism. Hard infrastructural investments in the agricultural sector in particular, have played a key role in improving agricultural production, and have facilitated the growth of 'soft' infrastructure in developing countries (Wanmali, 1983a, 1987a, 1992; Ahmed and Donovan, 1992). But do rural areas of North east stands anywhere near to this? Leaving the part of hard infrastructure which barely exists in the villages, do other infrastructure mainly institutional and soft infrastructure making any progress that is also a big question.

Picture looks gloomier when the villages that are settling nearby the or around the boundary of any protected habitat are considered. Presence of sign of any economic and social development appears quite rare there. In the complex trap environmental issues, habitat degradation, issues of conservation, the actual issues i.e. the root cause of such issues primarily strengthening the economic conditions of forest people remains unaddressed. It is their economic underdevelopment and backwardness which forces them to rely heavily on the nearby habitat for livelihood option and other day to day activities. Which would ultimately leads to conflict of human and habitat.

On the same token, fringe villages around the Kaziranga National Park (KNP) are not different. Underdevelopment is spread throughout the whole area which intensifies the pain of the natives. Even in many places where government policies are design to discriminate in favour of the forest people, as in India and China, where right to traditional land and control over other economic and social issues are denied. In both these countries, the government embraces the attitude that it has a duty to develop the minorities out of their 'backward' state (Anon, 1984; Cannon, 1989, 1990). But there is huge doubt about such steps whether are turning in to reality or not. Rather grim reality of discrimination prevails. Considering the standard of living and economic development of those villages, their condition is far worse than those villages of Western India.

In this case, fringe villages of Kaziranga National Park (KNP) also follow the same trend of under development and struggle for daily survival. Being a world heritage site and a national park gets more attention for its environmental and habitat destruction problem. But issues are not always environmental or degradation, rather there is visible socio economic stress across the region. So this confirms the problems faced by nearby settlements, which leads to their long stretched conflict with the wild life and heavy dependency. With presence of the National Park, the World heritage site, sometime it might sound quite reasonable to assume that villages in the Kaziranga Area are well developed and prosperous enough. But reality favours opposite picture of the story for those villages. One would reasonably expect that their position near the National Park of Kaziranga (World Heritage site) helps achieving not only economic freedom and independence but also a sense of self dependence and social security. But in reality opposite picture would favour them with most disadvantageous situation not only economically but also socially. Considering the situation of women in those villages, they are not only lagging in economic aspect of life but also in the social scenario of usual life. As a whole it is not only about women, rather their society a as whole is lagging.

It is somehow easy to address the problems of the habitat than minutely addressing the socio economic problems faced by most of the fringe villages. As it is the underdevelopment around the fringe villages that give rise to the heavy dependence of the local communities on the habitat. Economic underdevelopment, backward infrastructure, inaccessibility and most importantly dependence on the habitat adds more pressure on the poor people living in those fringe villages. Even though those villages are located near the World Heritage Site, an advantageous position, but their condition would depict the deprived and underprivileged picture of rural development and empower. Some times this sounds quite unreal that how can areas nearby a world heritage site be underdeveloped, when there can be numerous sources of income generation around them. But this is the real truth that Kaziranga area is facing. The unbalance pattern of development, slow growth, low level education and deprivation among rural areas of Assam somehow points to the burning problem that these villages near by the habitat are facing.

Poverty seems to be the main enemy of those people. It is acute poverty which leads to the problem poaching in the park. The most serious problem ever identified is that poacher use the web of network engaging poor people of the fringe villages. Somehow due to low level of educational attainment, these poor villagers are ignorant about the ecological service of the biodiversity or importance of Kaziranga as a world heritage site. So awareness cannot solely play the role of saviour of the biodiversity rather importance should be diverted to finding a source to bring the self-sustenance and sense of economic freedom. So that these poor villagers never need to take the resort of vital information provider to the poachers in order to earn some money. So providing a means of self-sustenance is the most important part of any government programs that aims at developing the region. In this case in order to eradicate the deprivation from the fringe villages of Kaziranga, The Kaziranga Landscaping program was under taken by the Planning and Developing Department, government of Assam under the shelter of Chief Minister's JeevanJyoti scheme, in the year 2010 and is expected to continue till 2015, so that it can cover up all of the 40 villages lying near or around the National Park. Therefore in the view of complex pattern of development and constant conflict of human and wild, aggravated by the flood from Mighty Brahmaputra River, objectives of this study can be summarized as follows.

- To examine the challenges faced by the rural economy in its livelihood options in the context of recurring conflict with the wild life and flood from the River Mighty Brahmaputra, which tends to limit their livelihood options.
- To examine the living conditions of the inhabitants of the rural villages in terms of income and consumption pattern as well as the demographic, labour force and occupation structure.
- To examine the impact of different government policies and other safeguard mechanism that aims transformation of the existing subsistence economy into a self-sustaining economy capable of further growth based on traditional eco-friendly activities and occupations.

- To understand the possibly of alternate livelihood options in the in the context of higher growth of tourism industry harnessing the untapped sources of local and natural traits in the study area.

3. Methodology

3.1. Study Area

The study area is concentrated mainly around the fringe villages of Kaziranga National Park, which is located in the Golaghat district of Assam. If the main population frame is considered villages around the national park comes under the Kaziranga Mouza (In Assam, several villages typically form a single mouza). Which is further divided in to 4 Gram Panchayats. They are East, West, Central, North East and Moridhanshiri gram panchayat. Out of which Moridhanshiri is mainly dominated by the Mishing tribe and it is located in the eastern boundary of the park. In rest of the panchayats there is no case of predominance by a single caste or tribe, they show a mix combination of different caste and tribe. There are almost 41 revenue villages listed under the Kazirangamouza, out of which most of them situated in the fringe area of the Park.

3.2. Sample Frame

For the purpose of assessing the overall development and impact of recent government policies, a sample frame of two microsites are taken out of the whole area. They are namely West Kaziranga and MoridhansiriMouza. Of which MoridhansiriMouza is mainly tribal dominated, whereas, West Kaziranga is dominated by a mix of all communities and caste. Most of the selected villages are located in or around the fringe area of the national park.

3.3. Sampling

A sample of 110 households was selected from the sample areas West Kaziranga and Moridhanshiri. Only those households were selected who were either involved in SHG or JLG under the shelter of Chief Minister's Jeevan Jyoti scheme. A direct interview of the selected people is done using a selected questionnaire. Only those households were questioned who are part of Chief Minister's JeevanJyoti scheme and have already formed SHG or JLG to undertake different income generating activities under the shelter of the of the scheme. Mainly the survey focuses on the average monthly income and changes in income after the recipient of government in kind subsidy. Therefore samples will be mainly collected from those areas where government assistances are provided in kind basis for their economic upliftment. Apart from government's role and income, questions on current occupation structure, performance of MGNREGA and IAY, dependence on habitat and cause of such dependence, conflict with the wild life and losses from the wild life. Most importantly role of bank in supporting the self-help groups and their performance will be assessed, since formation of self-help group of 10 or 5 members and opening of bank account on the name of self -group is necessary.

3.4. Analysis

In order to analyse the socio economic scenario around the fringe villages of Kaziranga National Park, all of the primary and secondary data are used extensively. Most part of the study deals with the qualitative aspects. In order to see the impact of government policies and other in kind subsidy schemes, all of the primary data are used extensively. To judge the impact a simple dummy variable econometric model is used, which tries to see whether government schemes could have an effect on the income of those people living around the fringe area.

4. Government Policies and its Objective

The main aim of the program is to bring the prosperity and economic freedom to the village people and to all those living below poverty line. Under this project different Self Help Groups (SHG) are formed throughout the all Panchayats of KazirangaMouza. Especially all these self-help groups formed till now aims the empowerment of women and providing a sense of economic freedom for women in those fringe and areas. The support is extended to those self-help groups either with full subsidy component or with loan component of 50%. During the first stage of action, under the full subsidy component the, self-help groups are assisted by providing either Ducks (Ducklings) or Goats. Every self -help groups contains 10 members from different families of the villages. So keeping in mind about the total numbers of members in the self-help groups and the help that they would extend support their families, each member of those formed self-help groups are provided 10 Ducklings. So this would make the total numbers of ducks or duckling to 100per self-help groups. Even though the numbers of groups taking the ducklings are quite more butthere are also some groups that receive goats. While in case of goat rearing the help is extended by providing each member of the self-help groups 3 or 4 baby goats. Same option can be also available for pig rearing.Options are not limited to ducks or goats, there can be n numbers of options available to those groups but till now duck and goat rearing seems more popular among self-help groups. But all options are not fully subsidized. Therefore other activities have loan component. So there is scope formation for the Joint Liability Groups (JLG) where members will receive 50% grant for their activities and have to bear rest of the 50% as loan among the each member of the particular groups. Activities that can be undertaken under the shelter of joint liability groups are weaving with machine looms, cow firm and poultry farm etc. Even though these activities can be well undertaken by men also but many SHG and JLG consisting of women arecoming forward to undertake it willingly. The activity that is undertaken solely for enhancing the economic strength of men is the distribution of power tillers. In order to get such help it requires forming an JLG of 4 men, where they will be assisted by proving the 50% subsidy for the power tillers. And rest will counted under the loan component which they have to repay in near future. Considering the agricultural background of our economy this intervention and tendency to the modern technology will help not only enhancing the agricultural productivity and

capacity but also will improve the condition of rural existing subsistence economy into the self-sustaining economy with a sense of economic freedom. Till now four power tillers are distributed among different aspiring groups who dream of enriched agricultural productivity and a secure future with economic independence. Apart from the duck and goat rearing, piggery is one of the most prominent activities that SHG would undertake. Even though, their popularity seems quite low among general caste Hindus and Muslims. But this mode of activity (or rather we can say livelihood) is fairly widespread among schedule tribes and some of schedule castes, in spite of following Hinduism. Since the fringe villages of Kaziranga and villages under different gram panchayat of Kazirangamouza are mainly bestowed with either Mishing tribe or Karbi tribe, for whom piggery is of the sources of earning livelihood. Even though, they also show admirable skills in rearing ducks and goats or even in poultry farming.

Matters are not always easy or smooth as the way they appear to us. Especially for Kaziranga matter of earning a source of livelihood remains complicated. Sometimes it is like taking a chance on the luck. This seems quite reasonable for those people living in the low line areas. Nature and strategic location of Mighty Brahmaputra River and Dhanshiri River takes another toll on the poor villagers. Considering the soil, agriculture appears to be the prime activities of those poor villagers. But unfortunately flood by these two mighty rivers really takes a toll on the poor villagers during the summer season. So it is not always possible for them to undertake summer paddy. Luck does not always favour them when they try their hand at winter paddy. During the month of April or May which is the harvesting season of winter paddy, flood of the first summer or monsoon will just ruin their diligence, their effort, most importantly their dough invested for this purpose. It is like snatching away the bread from your mouth. Every season these poor villagers drenched themselves in the flood of tears of blood of thousand eyes and a war of survival and needs. During the flood season when villagers themselves can't assure their security of their needs, property and themselves, at that time giving way the safety net to their life stock seems like a herculean task. Scarcity of food and spread of water borne diseases add more weightage to their plight.

After the flood the land becomes more fertile and becomes suitable for mustard seed farming. Even though this option appear as a relief to those poor farmers, but this option again does not favour them for long. The location of those fringe villages makes the crops vulnerable as these mustard seed farms fall in to the easy prey of wild elephants. The wild elephants not only destroy the crops but also sometimes ravage their homes. So choosing an option for livelihood does not always so much easy for those poor villagers. If they try their hand on one option that would be either destroyed by the flood or sometimes by the wildlife and adds more plight to their sufferings. This sometimes makes us feel that nature has always stood as obstrucater to those poor villagers. Since the Kaziranga is a World Heritage site and adobe to the wildlife, especially the great Indian one horn rhino, so blaming those protected wildlife for all destruction and ravage would not solve the real problem. The aim should be to realize the actual situation and suggest one or more source of livelihood which not only helps them achieving a decent standard of living but also solve their never ending clashes with the wild life. But one thing that should be kept in the mind is that, the means that we would aim to provide should be highly eco-friendly and should maintain the balance in the ecological service of the biodiversity. So the community participation is must require in the effort of conservation of habitat and maintains the balance between men and nature. This can be only way through which different burning problems of the fringe villages can be solved for quite a long term. Controlling the natural disaster mainly the flood is not an easy task. Therefore, all activities undertaken for strengthening the socio economy of the area should also overcome the problems of flood. This would require some of the steps to follow. Those can be stated as...

- To evaluate the socio-economic condition of selected fringe areas of Kaziranga landscape.
- Resource mapping of the area on GIS and RS platform. Soil survey and geo-morphological analysis so as to take up suitable activities.
- To conduct awareness program in fringe areas/ PRA exercises
- To develop eco-friendly livelihood in the selected villages with the help of local Gaon Panchayats and other facilitators, social workers active in the area. Target beneficiaries are the ones who are socially and economically backward with special emphasis to assist the women and youth. Activities are also to benefit those who are prone to get attracted to illegal activities for their livelihood.

Here in this case it is important to mention the effectiveness of linking GIS and RS (Remote Sensing) and soil survey to the Kaziranga area. As this would help to determine the quality of soil and help to decide which crop can be undertaken at any season. Especially this would help those poor villagers who are unable to use their land properly mainly aftermath of flood. Since the rural economy is agricultural and its allied activities based, so without proper development of agriculture and its productivity would not help those poor villagers to achieve self-sufficiency.

Keeping all of the matter and its complexity Government of Assam has decided on the following objectives as the core of the plan that is undertaken for developing the region.

4.1. Ultimate Objectives

- To transform the existing subsistence economy into a self-sustaining economy capable of further growth based on traditional eco-friendly activities and occupations.
- To develop and give further impetus to the existing tourism potential by harnessing the untapped sources of local human and natural traits.
- To showcase the rich and diversified cultural legacy of the local tribes' viz. Mishing, Karbis and Ex tea/tea garden communities keeping in view the tourism prospects and potential.
- Creation of a resource centre for skill development and capacity building.

In order to materialize the action plan undertaken by the Assam government, following work plan is developed, so that the full impact of different safeguard mechanism becomes evident.

5. Socio Economic Situation of Fringe Villages

Current scenario in the fringe villages of Kaziranga National Park is voluminously wretched. Scenario of economic development and livelihood options are growing at a snail paced rate. Question of self-sustenance in all of the 40 villages are seems a limited one. Even though those villages that are residing on the side of National Highway 37 and near the National Park are somehow better than the those villages which are lying in the core fringe area or on the eastern border. This mainly points to the steep diversion of economic development in the area. Taking the case of West KazirangaMouza, under which most of the villages are lying in the core fringe area and some of the villages are lying near the extension areas of the park, which almost accounts for 4 to 5 Kilometres from the National Park. In this case Haldhibari of West Kaziranga can be mentioned, which follows a steep trend of underdevelopment, compared to the villages locating at the entrance gate of the National Park, on the side of the NH 37. On the other hand, situation in the eastern border is much more deprived than the Haldhibari area or any other villages of the Mouza. Those areas are still untouched by the ray of modern development. Mainly most of the villages of the eastern boarder are covered under the Moridhanshiri Panchayat, which is predominantly inhabited by the Tribal people i.e. The Mishing Tribe. River Dhanshri, one of the major tributaries of The Mighty Brahmaputra River, passes near by the Panchayat. Apart from the flood of Bramaputa, flood from the river Dhanshiri adds to the plight of the people living in the panchayat. Mainly those villages like BamunGaon, BohikhuwaGaon which are located on the bank of the river suffers most. Sign of modern development is fully absent. Modern method of transportation, electricity, educational facilities, better road condition, housing facility etc. are like a fairy tale for the inhabitants.

But the case of livelihood and occupational structure is almost similar throughout the KazirangaMouza. Trend in agriculture follows universal dependency throughout the state making it predominantly an agrarian based state. Even though agriculture trends to follow universal predominance in the fringe villages but in real terms there is hardly any insignia of agricultural activities, mainly rice crops. Medium amount of the people holds their own cultivating land but the incidence of any farming activities is scare. But leaving the mainstream agricultural activities, there is medium prevalence of allied agricultural activities like duck, pig rearing etc. but it is not significant. Only those well to do families can afford this. Rather there is widespread prevalence of low skilled casual wage labour in nearby town Bokakhat. Apart from this other sources of livelihood are involvement as casual labour in tourism sector, nearby tea gardens, tea factories and very few proportion of villagers own business or in government services.

Moving to the other socio economic indicators like education, it is seem that education is less prevalent in the tribal area like villages in the MoridhanshiriGaon Panchayat compared to other areas where mixture all caste can be seen. Even though educational attainment is quite decent in the Mishing tribe dominated Agoratoli village (Under MoridhanshiriGaon Panchayat) which lies near the Bokakhat Town but other Mishing tribe dominated villages like BamunGaon, BohikhuwaGaon etc. where education is a luxury. The level of educational attainment in those villages is near to null compared to the other fringe villages. There are hardly two or three people in those villages that have crossed educational attainment beyond 10th grade. But this does not confines that condition is improved around the other fringe villages, like those lying near the NH 37 or near the core areas of the park. There is also hardly any people with the higher education. Only a few people in the rest of the mouzas Kazairanga who holds a bachelor degree. But there is a trend observed where more people aspire for high education. There is no college in the whole Kaziranga area, people have to travel 22 to 23 kilometres to the nearby town Bokakhat for college education. Even though recently there is one private college that has come up near the national park but still it has to travel a mile to reach well reputation and good infrastructure.

5.1. Some Graph and Statistics

Before proceeding to the final analysis it would be justifiable to look at some of the basic graphs and cross tabulation of the area based the survey. Through this the effort will be made to see basic statistics related to basic socio economic indicators like education, immigration, monthly income etc. Since the surveyed areas are taken as the fringe villages of Kaziranga National Park, there is a high incidence of forest grazing which affects the quality of the habitat. Generally blame is forced up on the migrants of the area, here effort will be made to see whether such kind of phenomenon is true or not, on basis of sample survey.

Name of Village	Sex	
	male	female
1 no Kohora	35	65
2 no Kohora	10	90
Agoratoli	50	50
Bokakhat	0	100
Haldibari	5	95
Sildubi	14.3	85.7
Total	20.9	79.1

Table 1: Distribution of the respondents according to sex

The table 1.shows the involvement of male and female in the government programme to the total population. The table clearly shows that there is high involvement of females compared to males in each and every surveyed village. Incidence of male involvement in JeevanJyoti Scheme in found to be lowest in Bokakhat, with no male participant found for the JeevanJyoti Scheme. Only their high involvement is found in Agoratoli village which is mainly tribal dominated. Only in this area equal involvement among men and women is found, otherwise all of the surveyed area shows women dominance.

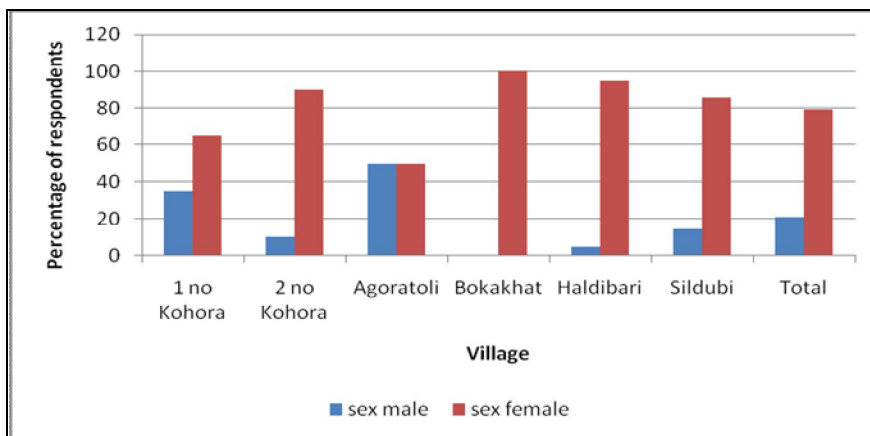


Figure 1: villages surveyed on the basis of sex of the respondents

Now, considering the monthly income among the surveyed household, it was found that monthly income varies within the very broad range, with the lowest value of 300 rupees per month to 25000 thousand per month. Most of income level clustered in the range of 300 rupees to 900 rupees per month. The average monthly income (mean income) among the surveyed villages is found to be 2182.73 rupees.

	monthly income	changes in income	live stock
Mean	2182.73	125.45	2.86
Median	700.00	.00	3.00

Table 2: Frequencies of monthly and changes in monthly income and livestock

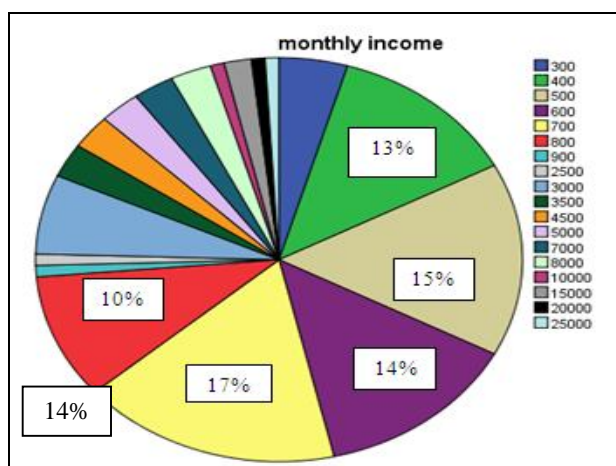


Figure 2: Percentages of people with different monthly income

It is important to note here is that, these income levels signifies the surveyed households monthly income after the formation of SHG/JLG and the recipient of in kind subsidy under the shelter of JeevanJyotiYojna. Therefore it is also important to consider their absolute changes in the income level after the recipient of in kind subsidy and undertaking respective income generating activities under the shelter of JeevanJyotiYjona. The programme of distributing in kind subsidy for helping the poor people of the fringe area in generating income for owns sustainability seems to have lesser impacts when we consider the absolute changes in the income level after the subsidy. Most of the in kind subsidies like duck, pig, goat etc. take a gestation period to generate certain income. Therefore, income of the surveyed households is observed before the subsidy distribution and income after the subsidy considering the gestation period of 9 moths. But for goats such period is quite longer, therefore surveyed household records no

change in income. But surprisingly many households have to undertake expenditures on the ducks, goats, pigs, waving materials etc. excess of their monthly income. Either the live stocks suffer different diseases or the equipment of waving machines break, due to which people have to undertake expenditures from their own pockets. As a result of which, their spending in certain time exceeds their monthly income line. It was recorded that after the subsidy (including 9 month gestation period), surveyed household absolute change in income varies from -400 rupees to 3000 rupees per month. Almost 50 percent of the surveyed households recorded no change in income.

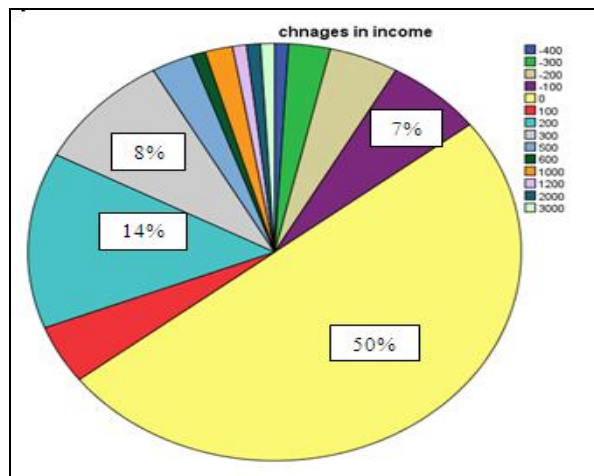


Figure 3: percentages of people having different changes in income

Therefore average change in income was observed as only 125.45 rupees. For most of the people coming under BPL category showed either no change in income or a negative change in income, signifying excess of their expenditure over income. This typically points to the failure of government schemes and inefficiencies involved in them.

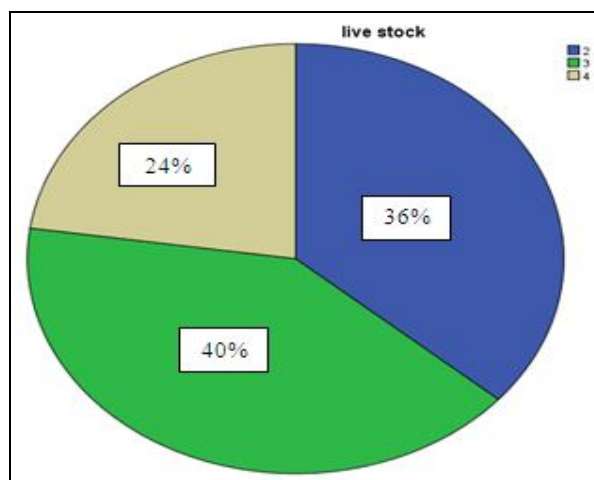


Figure 4: percentages of livestock holding

Considering the livestock holding among the surveyed household, all of the households hold livestock. The number varies from 2 livestock to 4 livestock, including the livestock obtained under the JeevanJyotiYojna. But it was more evident from the survey that as the with the higher income bracket numbers of livestock holding also increases. Most of the BPL households hold only 2 or rarely 3 livestock, but most of the households above the BPL line hold either 3 or majorly 4 livestock

Considering migrants and their income count, it was observed that most of the migrant category people, their income level is clustered at the lower level. Out of the total 110 household, 25 household recognized themselves as migrants whereas rest 85 as local or non-migrant. Out of these 25 migrant households, 80 percent i.e. 20 households monthly income level lies between 400 rupees to 800 rupees per month. So it is evident that most of migrant people to the area lie under the BPL category. All of these income data undertakes general monthly income i.e. income before the in kind subsidy grant. Following graph would reflect the same count.

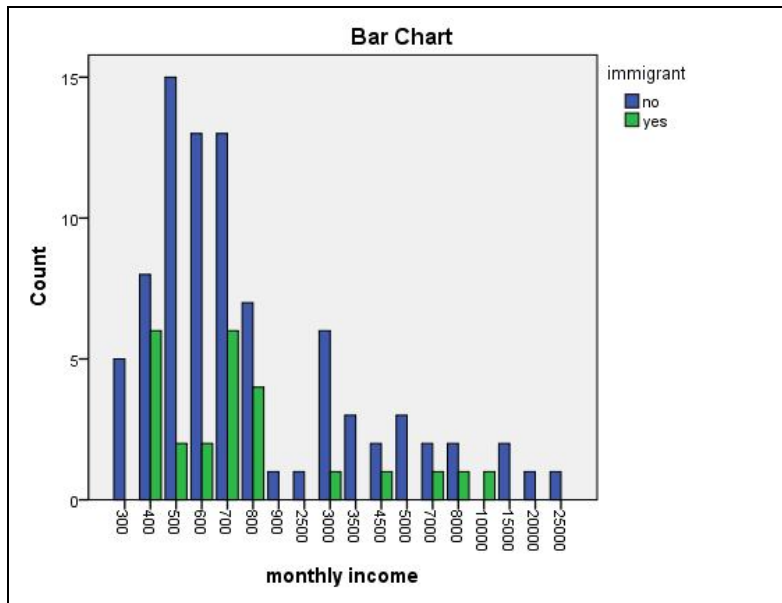


Figure 5: Distribution of income on the basis of migrants

Forrest grazing was one of the most important and discussed issues when the topic of clashes between human and habitat like Kaziranga are brought in to the light. Generally it is assumed that at the lower level of income people generally have very low access to the resources to sustain themselves and their livestock. So in order to sustain their livestock they have to resort to the forest grazing and considering the scenario of Kaziranga, forest grazing becomes quite obvious. On the basis of survey undertaken, most of the people i.e. 78 household i.e. 70.9 percent says no to the forest grazing, whereas only 29.1 percent households i.e. 32 households agree undertaking forest grazing. Majority of those who undertakes forest grazing have average income in the range of 300 rupees per month to 800 rupees per month. But surprisingly incidence of such forest grazing is also observed at the higher income groups. In the above diagram it is evident that people with the income range of 3000 to 8000 rupees per month also undertakes forest grazing. Even though the number is less but such would point to the ignorance on their part to protect the degradation of National Park and its wild life. But compared to this, higher incidence of avoiding forest grazing, even among the BPL household can be regarded as a good sign. Increasing such awareness among the people of fringe area would protect the habitat from degrading further.

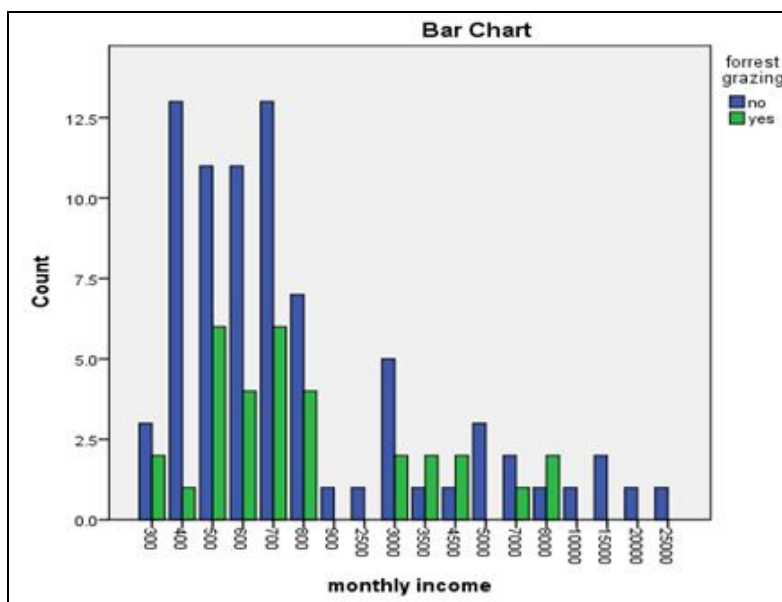


Figure 6: Distribution of income on the basis of forest grazing

Use of land in the fringe area is again one of the most sensitive issues. There are many households who hold land but are unable to use it either due to the flood of the mighty Brahmaputra river or due to the conflict with wild life. But there is a huge chunk of people who even do not own any land at all. From the data collected it is found that only 39.1 percent of households use land for

farming purpose, these people are those who live far from the immediate boarder of the national park. Villages like 1no and 2no Kohora, Sildubi which shares boundary with park has highest intensity of landlessness people. On the hand, 31.8percent people hold land but have not utilized it in recent years. Such kind of situation is happening because of the flood or conflict with the wild life of the park. On the other hand a sizable amount of people i.e. 29.1 percent of the households holds recognized themselves as landless.

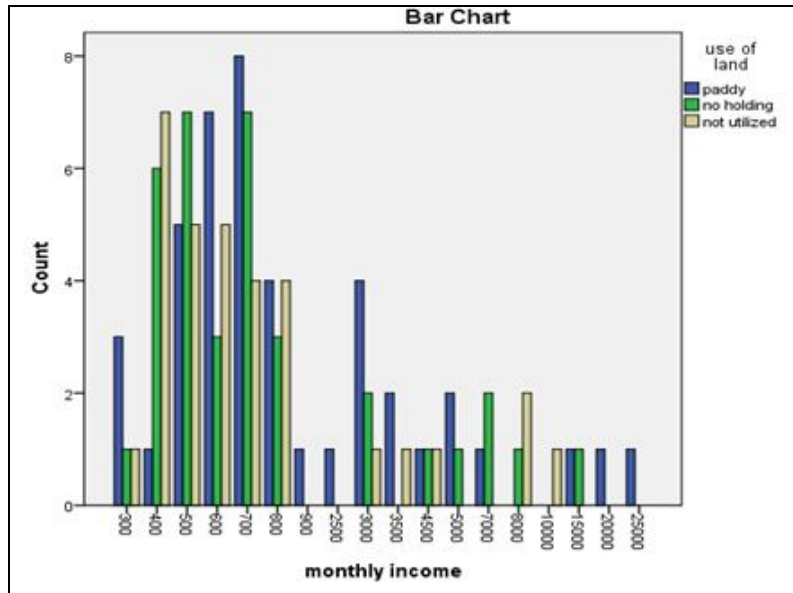


Figure 7: Distribution of income on the basis of land utilization

Most of the landless people are clustered in the income range of 300 rupees to 800 rupees per month. But surprisingly from the above graph it can be found that, there are some households who have high income but classify themselves as landlessness. These are mainly those people who are involved in tourism sector or government job and have come from different districts. So for migrants working in service sector landlessness is quite common. But for local people it is seen that as their income increase they make an effort to undertake rice cultivation for those who owns some land.

Considering the education, this is regarded as one of the most important indicators for socio economic progress and equality in the society. The current scenario of underdevelopment in around the fringe area can be attributed to the fact of low level of educational attainment. Data collected through the survey shows that there is high incidence of illiteracy in the studied areas. It was found that 20 percent of the surveyed people have no formal training in education. Such a high figure would surely points to the low level of development in the fringe area. In Villages like 2no Kohora and Sildubi almost 90 percent of the people are found to be illiterate.

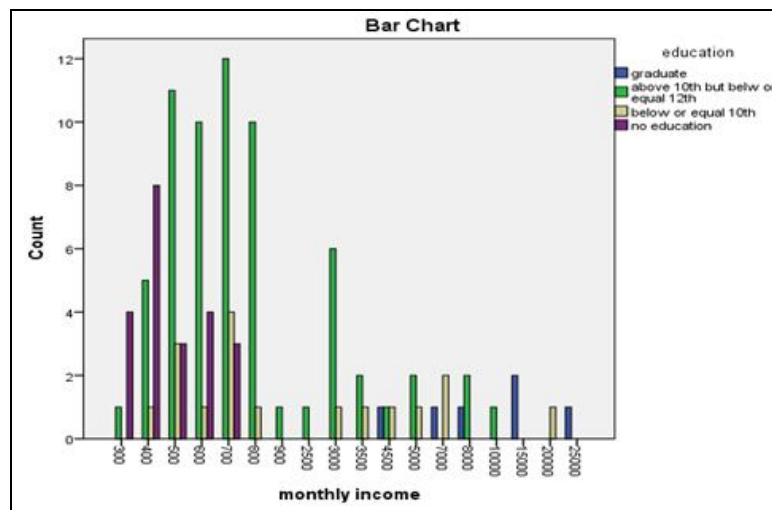


Figure 8: distribution of income on the basis of education level

On the other hand, 15.5 percent of people are found to be slightly educated i.e. they have either educational qualification either below high school or equal to high school. Whereas a major chunk of people i.e. 59.1 percent have educational training above high school but till the senior secondary school only. So considering poor level of education it is not surprising that only 5.5% people have educational qualification above senior secondary or up to the graduation level. The graph shows poor level of educational attainment in the fringe area. From the graph it is evident that most of the uneducated people are clustered at lower level income, mainly between 300 rupees to 700 rupees per month, whereas all of the graduate people lie in the higher range of income scale. So in this scenario promoting education, mainly government funded education would help the local unskilled people to acquire skills that would prepare them for the labour market.

For area like Kaziranga conflict of human and wildlife remains major issue suppressing all other socio economic issues. This is almost universal for most of protected habitat in the developing countries. The problem of forest grazing seems quite serious in Kaziranga. In the fringe area, there is always a taken notion that most of forest grazing is done by the migrants rather than the local communities. But in the survey an opposite result shows up.

Category	Forest Grazing	No Forest Grazing
Non Immigrant	36.5	63.5
Immigrant	4.0	96.0
Total	29.1	70.9

Table 3: Forest grazing practices of respondents

The above table shows that, there is a high incidence of forest grazing among the non-migrants; the number is recorded as high as 36.5 percent among the non-migrants. On the other hand among the migrants the incidence of forest grazing is as low as 4 percent only. So this would somehow nullify the aspect of doubting migrants for undertaking forest grazing which is degrading the quality of habitat and creating conflicts among the human and wild life. This figure rather blames the local or non-migrants for incidence of forest grazing.

Considering forest grazing according to the household occupation structure, it was found that there is high incidence of forest grazing among the households who considers agriculture and wage labour as their source of living. On the other there is no incidence of forest grazing among those who consider agriculture as their primary source of income generation. Most of reasons given by them for low incidence of forest grazing among them is that they have their own land, which they use for framing and domestic animal grazing. Surprisingly people involved in government services also often resort to forest grazing.

Occupation Category	Forest Grazing	No Forest Grazing
Small business	44.4	55.6
Wage Labour	17.1	82.9
Agri/wage Labour	54.1	45.9
Government Services	25.0	75
Agriculture	0.0	100
Others	6.3	93.8
Total	29.1	70.9

Table 4: occupation status wise practices of forest grazing

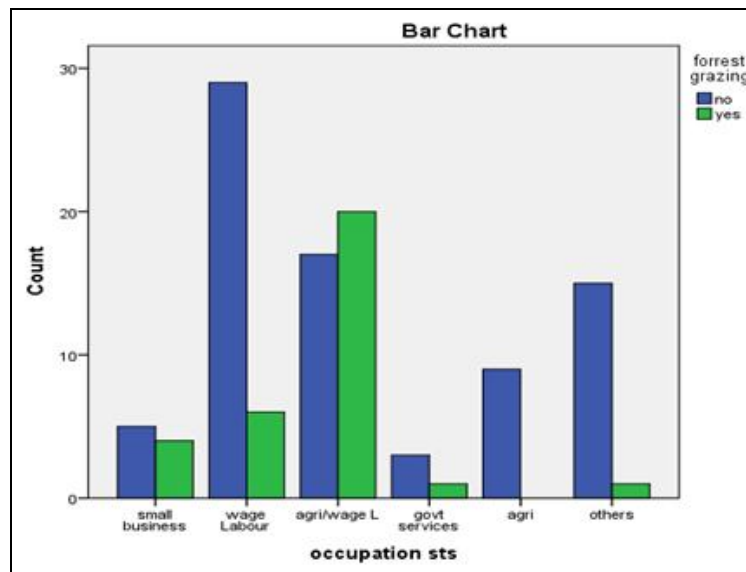


Figure 9: Distribution of forest grazing occupation wise

6. Finding and Analysis

6.1. Actual scenario: West Kaziranga and Moridhansiri

In order to grasp the picture of development around the villages (fringe area) of Kaziranga, especially obtaining the true socio economic picture of SHG (Self-help Group) and families they are supporting, a sample household survey of 110 households of which 80 household belongs to different or same SHG of West Kaziranga and 30 household belonging different or same JLG (Joint Liability Group) of Moridhansiri Panchayat and east Kaziranga are undertaken. Most of the SHG or household surveyed under West Kaziranga Panchayat are located mostly in the fringe areas of the National Park. Most of them either located near the boundary of the Park or quite a far distance from the park boundary i.e. near the National Highway 37, but still comes under the fringe area. In this case, most of the members of SHG of Sildubi village hail from the area sharing boarder with the national park. While most of the members of SHG hailing from either 1 no Kohora or 2 no Kohora village reside mainly near the national highway 37 or reside far from the main national park boundary but still national park main entrance is not far from their villages. While the surveyed groups of the Panchayat Moridhansiri and East Kaziranga are JLG, undertaking weaving (machine) or pig rearing or government supported agricultural activities. Most of such JLG are situated either near the Bokakhat Town or in the villages that are few kilometres far from the town. In that case one group hails from the Agoratoli village that is predominantly a tribal village, dominated by the Mishings and is few miles far from the Bokakhat Town. But it is also important to mention that West Kaziranga has stretched its wings to Haldhibari and have included 20 of SHGs' in the West Kaziranga List. Mentioning about Haldhibari is important as the area is situated far from the Main Kaziranga Area beyond Bagori area. The area almost maintains 10 to 15 Kilometer distance from the main Kaziranga National Park Gateway at the National Highway 37.

Under the West Kaziranga Panchayat there are almost 32 Self Help Groups are formed mostly held by women in order to under the activities of Duck rearing and Goat rearing. Most of the SHG of West Kaziranga Panchayat has opted for Duck rearing whereas only a few i.e. 4 out of 32 groups have undertaken Goat rearing. Considering the structures of the each group, each group should contain dot 10 members hailing from different families but may also have 2 or 3 member from the same family also. Keeping in mind about the social and economic enhancement of women, all members of each group must be female in order to undertake goat or duck rearing. In the survey 23 groups are selected out of the total number of 32. Where all SHG undertaking goat and duck rearing are surveyed and JLG under taking different rage of activities like waving, pig rearing and paddy production are surveyed.

In the first stage of action, all of the SHG formed need to select one President and Secretary. After the formation of SHG they must open their Joint account in Nationalized Banks, mainly State Bank of India (SBI), United Bank of India (UBI) and Assam GraminVikash Bank (AGVB) and deposit some of the nominal amount taking contribution of each of the members. After that they can deposit again some nominal amount in their bank account monthly so on. This would somehow foster the banking habit among those villagers and would also build up the bond of trust between the villagers and bank. Depositing money not only ensures their monetary and contingency security but also will ensure the benefit from the interest rate paid on the saving account. After fulfilling these formalities, selected groups will receive kind help of ducklings i.e. 10 ducklings (1 to 2 days old) per member per group. So, one SHG will receive 100 ducklings in total. In case of goat rearing each member will receive 4 baby goats (5 months old) per member so this would make total numbers of goat 40 per each SHG. But till the time of the survey Goats were not distributed among the some of the SHGs' and those groups who received goat are not able obtain any kind of monetary profit from them, whereas for 2 or 3 groups even ducks were distributed partially i.e. only some members within the groups have not received ducklings. So for them the monetary benefit derived out of the subsidy is zero. Even for some the groups they saw

unexpected death ducklings or baby goat at the start or death after few months due to diseases, so for them monetary stream of income derived from the will zero.

All of these kind assistances will be provided by the SIRD, under the shelter of Planning & Development Department. All members of each SHG are required to undertake a training program in the extension centre of SIRD in Amoni. This program would share the proper knowledge and skills that is required to rear ducks and goats. The program also educates the villagers about different disease, its syndromes and its treatments, homemade source of cure of ducks and goats and its food habit etc. in short this program makes them fully fit and prepared to rear ducks and goats or pigs etc. Similarly, same procedure would also for Machine loom waving. They grow ready to accept new challenges in the near future that would come in their way.

6.2. Findings: The Real Picture

Based on survey questionnaire the survey is undertaken for 110 households. Only those households were questioned who are part of Chief Minister's JeevanJyoti scheme and have already formed SHG or JLG to undertake different income generating activities under the shelter of the of the scheme. Each member of different SHG or households seemed very enthusiastic and interested to the questions asked. They cooperated at their best providing all of the required information. One can confirm their economic backwardness and underdevelopment just at the first glance. The gentle touch of modernity is still not felt there. Poor electricity, water and sanitary condition in those villages show the actual picture of rural development. Lack of higher education and awareness among most of the villagers' act as an easy way for poachers to use innocent villagers in the web of networks that would degrade the heritage site and the service of the bio diversity.

6.2.1. West Kaziranga

One of most important part of most the socio economic study pertaining to the structure of the Indian society is the categories or the caste structure of the societies of a specific area. The population structure of West Kazirangapanchayat is more diverse and complex. It is quite difficult to find any specific community there, whereas in Dhanshrimukh most of people are Mishing. But West Kaziranga shows a wide variety. Ahom, Karbi, Bengali, Tea garden, General cast Assamese, Nepali, Muslims etc. makes the region a small wonder and place of assimilation. That wide diversity is well reflected in those surveyed households also. Considering the fact that at least one member of each surveyed household is registered under SHG (SHG for West Kaziranga), most of the members of such groups belong to different categories. But it can be observed that most of the surveyed households belong to OBC categories. While most of the Bengali members belong to OBC category but still some are found in the general category. The second most found category is the Tea garden labour, mainly residing in 2no Kohora village and near The NH 37 opposite of The Hatikhuli Tea Garden. But looking things religiously almost 30 % of Tea garden Labours follows Christianity, mainly found in 2no Kohora village. While Schedule Tribe and Schedule Cast are 3rd and 4th most found categories among the surveyed samples. While considering the Hadhibari area, picture is slightly different. Even though most of the people residing in that are found to be mixed, but numbers of households belonging to the general category is slightly lower than the others. Still the households belonging to OBC and Tea Garden labour is found as the first and second most observed categories. Even though SC and ST are also found in large numbers among the surveyed households but that figure is quite less than the figures observed in 1no and 2no Kohora villages.

Considering the family member structure of surveyed households, most of households are supporting lowest 5 member to highest 15 members in total. Since all of the surveyed households are actively a part of SHGs and each SHG can accommodate 10 members at a time, so the average family members that each SHG are supporting are found at 42. So this means that one SHG would represent 42 people. So in simple word each of 10 women from each of SHG is supporting 42 people in total through their activities (for West Kaziranga mainly through duck or goat rearing). As a whole these 21 groups surveyed under west Kaziranga Panchayat are hopeful to support 420 people on average through their activities.

Considering the numbers of children in each surveyed household (i.e. permember of SHG), it was found that each household has on an average almost 2 to 3 children in their families. Brining this figure to the SHG level, this would count average number of children per SHG at 17. But in this case it also important to mention that some of the SHG also have a few women who are single. This would reduce the numbers of children count per SHG. Since most of the women surveyed under the household survey involved in different SHG activities are mothers, they hope to support the need of their children basically the supporting their education through the activities undertaken by them. This is more important for those women are widow and have the burden to support needs of their children. But in this case it also important to mention that some of the SHG also have a few women who are single. This would reduce the numbers of children count per SHG.

Owing to the fact of rural development, the most important point that comes is the level of education, the back bone of social development and equity. Educational attainment not only shows the level of development of society but also the increasing knowledge base, which would help the people to secure the smooth future and leaving a legacy to the future generation. So a sample estimation of school going children per household and SHG is also made. It was found that most of children of each household are attending either schools or college (post 10th). The figures are quite similar to total numbers of children per SHG. The numbers of school going children (college going post 10th) varied from the highest number of 21 in one SHG named Lakhimi SHG to lowest number of 8 in three groups, namely Prabhati, Birina and Bijoyashree SHG. Out of these figures most of the children are attending schools but only a few are attending post 10th in colleges and 3 are attending graduation degrees in nearby Bokakhat College.

When the educational attainment of adult members of the family is considered, the picture emerges with a very poor result. Adult member of the surveyed households seems to have very less educational attainment. Even there are 14 households found out of the sample who recorded no educational attainment at all among the adult members of the family. But more interestingly all of the

members know to sign, especially in case of dealing with the banks. But otherwise, most of the members of surveyed households are either 8th to 10th grade pass or 12th grade pass. But in every household there was found some members who were slightly educated viz. educated to class 4th grade or less than that. So it was perceived College education or a graduation degree is rare among the adult members of the surveyed households. Even though there are 4 household who claim to pursue the bachelor degree but they could not complete it due to some personal reasons. Considering these figures SHG wise only 3 groups are found to have members that are educated to the graduation level and they are highest educated even in their families also. In the group named Surjyamukhi (Goat rearing) recorded a member with a bachelor degree and that household seemed wealthy enough as the head of the family was a government servant. In the household survey it was the only evidence of any higher degree. Even though the prevalence of full illiteracy is not wide in the West Kaziranga but simultaneously prevalence of higher education beyond the class 10th or 12th is also very rare. According to the surveyed people lack of a permanent source of income and required fund force them to leave their education after 12th. Not only the lack of fund always acts as a barrier but lack of graduation colleges in the Kaziranga area also acts as another impetus. Students willing to study post class 12th has to go the Bokakhat College, which is situated at almost 25 KM distance from the core Kaziranga area.

Occupational structure is one of the main and important sources of social and economic development. That phrase is fully applicable to the fringe Kaziranga and mainly to the Moridhanshri. The poor level of educational attainment in those villages leads to the discouraging structure of occupation. But in this case taking any kind of occupation would be always tested by the natural calamities i.e. flood and wildlife. Knowing the agricultural based economy of the state one can easily perceive the suitability of agriculture and its related activities in West Kaziranga. But in reality the opposite picture is seen in that area. According to the people surveyed prevalence of agricultural activities are irregular, mainly for the villages like Sildubi, 2no Kohora and Haldhibari. Surprisingly most of the members from the Sildubi village do not even have any agricultural land holding. Even same picture favoured in the 1 no and 2 no Kohora villages. This situation is mainly applicable to the poorest people in the villages. Even almost near to 50 per cent of surveyed household under West Kaziranga have some of land holding but still they do not undertake any agricultural activities in those agricultural lands rather they prefer to resort to the wage labour in nearest cities or in nearest hotels. Due to the unstoppable flood from the Mighty Brahmaputra River during the summer season destroys the summer paddy grown. When after the flood people try their hand at mustered crops that would be again destroyed by the wild life especially wild elephants. Considering the endless problems in undertaking agricultural activities in summer season, many suggestions are made to undertake the winter paddy which is also known as Boro⁴ Rice. Cultivating Boro rice one has to undertake an ample amount of expenditure. Specially making the irrigation facility available in the dry season is another herculean task and involve substantial amount of expenditure. Even if they cultivate and clear all of the hurdles but still one natural hurdle remains i.e. the sudden risk of flood. Many times they experience flood in harvesting season, which leads to a huge loss for them. It's not only a loss of money for them but also a loss of their faith in nature.

Due to the less prevalence of agricultural activities, there is high prevalence of other occupational activities among the surveyed households. Most of the households hailing from Sildubi village resort to Daily Wage Labour. Even scenario is almost much similar in 1no and 2no Kohora villages also. There is high prevalence of such daily wage labour, almost 80% of people surveyed in West Kaziranga area. Apart from the head earner of families, most of the women involved in SHGs' also resort to Daily wage labour in order to cope up with the day to expenses and to support their families. But families resorting to wage labour occupationally and owning permanent agricultural land also agreed that they do undertake agricultural activities time to time considering the feasible weather and other conditions. Only a few numbers of families own small grocery shops or similar one. Only 9 households out of 80 surveyed in West Kaziranga provides the information of owning such small scale business and earning decent income to place them above the BPL level. Mainly they are those families who live either on the side of National Highway 37 or at a few distances from the main Daily Market of Kaziranga. Most of such shops opened on the side of NH 37, are situated in the front yard of their house. Lack of economic stability thwarts the others to rent shops and run business.

But apart from these occupation options, there also information found about some household earning their livelihood by serving government. But the number is very scanty compared to the wage labour and agriculture. There are total 4 households in West Kaziranga who earn their living by serving government. Two of them are from 1no Kohora village and other two are from Haldhibari. That is the only evidence of government job earners among the people and SHGs' surveyed in west Kaziranga. While the Tea garden labour shows some cyclical pattern of occupation. During the season of tea leaves plucking they worked in those Tea gardens, especially The Hatikhuli Tea Estate. Other forms of occupation include mainly Tailoring shops, Garage. Most remarkably one wealthy household from 1 no Kohora whose female head of the family is also part of the group Provati SHG has opened Resort for tourist. Keeping these exceptional cases apart overall conclusion for the occupational structure of the area can be drawn in favour of either wage labour or agriculture.

4: The boro rice is commonly known as winter rice. The term boro is Bengali originated from the Sanskrit word "Boro" which refers to a cultivation from Nov.-May under irrigated condition

But situation in Haldhibari of West Kaziranga is quite different from the other villages. Almost none of the members from that area hold agricultural land. Even though the area rarely sees flood and problems from wild life but prevalence agricultural activities are almost nil there. Most of the people earn their living by Daily Wage Labour and some of the members own grocery shops near by the NH 37. But there also found one household whose head earner head is involved in Government service and female head is part of one of SHG's.

6.2.2. Moridhansiri

In Moridhansiri Gaon Panchayat total of 20 households are surveyed. Most of the households surveyed hails from Agoratoli Village, which predominantly a Schedule Tribe village, mainly Mishing tribe. In the Moridhansiri Panchayat, most of the groups and people surveyed are involved in Joint Liability Groups. Some of the members hail from the area near by the Bokakhat town and Under the JLG they have undertaken pig rearing, machine weaving activities, and rice production with power tillers (given from the state government) with the help of materials provided by the SIRD and funded by the Planning Department, Govt. of Assam. Under the JLGs' members will have to take the 50% as loan and rest of the 50% will be subsidy and must have 5 members.

Comparing to the situation of Moridhansiri to West Kaziranga, it does not show any drastic difference between the two. Conditions of most of the people are almost similar to the conditions prevailing in the West Kaziranga. Only difference is that some of the people are staying near by the town area of Bokakhat Town. Easy accessibility to the Bokakhat Town helps them not only in baking matters but also in the day to day matters and other official works. But for people staying in the Agoratoli village or in BamunGaon connectivity to the main town becomes a problematic matter, mainly for the people staying in the BamunGaon. Most of the outcomes of the survey, in Moridhansiri show a similar kind of result, mainly for the total persons in the family, numbers of children and school going children. Whereas in the areas nearby the Bokakhat Town sees mix categories of people living in the villages. Dominance of General and OBC category is seen more than other categories. But in Agoratoli Village, most of the people living belong to the Mishing Community or Schedule Tribe Category. Other villages like BamunGaon etc are also predominantly inhabited by the Mishing community.

Moving to the educational attainment and occupational structure, they are also quite similar to the West Kaziranga Panchayat. Among the members from each of the households surveyed highest education qualification is found as either 9th class pass or 10th class pass. Even there are many households whose educational attainment level is nil. So such a low level of educational attainment points to the lower level of social development.

Considering the occupational structure, a variation from the West Kaziranga is observed. In the areas lying near by the Bokakhat Town area, most of the people resort to business to earn their living. But BPL families of those areas mainly resort to Daily Wage Labour. But like the West Kaziranga area prevalence of Government jobs are quite rare. Even like the West Kaziranga area, in those areas nearby the Bokakhat town very people surveyed use agriculture as a mode of livelihood. Hardly 2 or 3 families resort to agriculture as the source of livelihood, but still keep the option open for other source of livelihood. That happens due to the uncertainty of income from the rice paddy and obviously the flood from Dhansiri River obstructs them to resort to the agriculture as a means of livelihood. But the scenario in Agoratoli Village is quite different from the above and even from the West Kaziranga. In the Agoratoli village most of the people earns their livelihood from agriculture only, basically from the rice paddy. Situated on the bank of serene Dhansiri River, the village sees treacherous flood every year. But still those people still believe in agricultural activities as their source of living. Almost every people in that village are well endowed with farm lands. Concentration of daily wage labour is less in the Agoratoli Village. Apart from these activities they are also involved in the allied activities, mainly like Pig rearing, Poultry, Goat rearing and handloom activities etc. But these activities are not undertaken at a massive scale as undertaken under the different Self Help Groups.

6.3. Expectations of Poor Villagers and Role of Government Bodies

Any society cannot fully grow and develop by itself. Without the proper intervention of government and its approved bodies it is not possible to have foster the socio economic development of any society. But effort should not be limited to only side i.e. the government, but cooperation and response from the people are also important element of the development process. Today's world developed world follows the similar process. But in case of Kaziranga and its fringe villages' stories unfolds in a different manner. In West Kaziranga most of the Self Help Groups formed to undertake activities Duck and Goat rearing, mainly for the women. In Moridhansiri similar kind of SHGs' are formed along with the Joint Liability groups for machine weaving. Whereas, for JLG of 4 or 5 members are formed to undertake agricultural activities with power tillers, weaving and other business opportunities. In order to help the poor villagers, SIRD (State Institute of Rural Development), a body of Assam government provides required materials like Ducklings and Baby goats for Duck and Goat rearing purpose. For machine JLG weaving, SIRD provides frame of the loom, bobbins, yarn etc. Similarly for the agricultural purpose SIRD provides power tillers. Here all of activities by the SIRD are funded by the Planning and Development Department of Assam under the scheme of Chief Minister's JeevanJyoti Scheme. In case of Joint Liability Groups, the arrangement of 50% subsidy is provided by the Planning and Development Department to SIRD under the scheme of Chief Minister's JeevanJyoti Scheme. Even SIRD is also responsible for the training that will be given to the beneficiaries before undertaking the activities in their SHGs or JLGs.

Most of the groups undertaking Duck rearing faced countless problems in rearing ducklings. The main problem in rearing was the predators like snakes, wild cats that would eat the few days old ducklings. Apart from the predators, the main enemy of small ducklings was some unforeseen diseases. Most of the people were unable to recognize the diseases and even the visit of veterinary doctor was hard to obtain, especially for the Haldhibari area. In Haldhibari, President of SHG Junaki herself was not able to keep all of the 10 Duckling. Diseases and easy of predators have end the life of all of the 10 Ducks given. But in Sildubi, 1no and 2no Kohora villages a few incidence of losing 10 Ducklings are found. Even after losing some of the ducks most of the people have average 6 to 7 Ducklings matured to adults. Even some of the members have all of 10 or 9 ducks alive.

Even after seeing troubles most of the people surveyed in West Kaziranga are very much optimistic and hopeful about their future. Most of the members rearing duck are hopeful to support their family in future by selling more eggs or selling the extra male ducks in the markets. Since there is huge demand for the duck eggs and meat in the market, becoming optimistic about the future for the Duck rearing members and their family seems quite reasonable. Most of the group in West Kaziranga seems satisfied with

the assistance provided. But still most of the people have some expectation to receive further help and assistance. When the members involved in different SHG were asked about the alternative to duck rearing what they would prefer, most of them favoured the Goat rearing.

In Moridhanshiri, people's expectations towards government body changes drastically to a pessimistic view. Different JLGs' formed under the panchayat are not only happy with the role played by the banks mainly the Assam GraminVikash Bank but also with the Government Bodies i.e. SIRD. In this case changing the expectation from one panchayat to other seems baffling. Most of the members' first dissatisfaction lies with quality of the machine loom given. According to the members of the most of the JLG, the frames of the waving sets are shaped uneven and the qualities of the wood required to construct the frames are very poor. Most of the members also complain about the qualities of bobbins and looms. Due to which they have to undertake the expenditures from their personal side, in order to repair them. Almost above 80% of women from different JLG's also complain about the about the quality of yarn. Yarn provided to those members are not fit to make Gamochas or Mekhelas or Chadars. Due to these kinds of inconveniences most of members are not able to commercialize their product. Those who are undertaking the commercial activities have undertaken an enormous amount of expenditures from their own pockets. In order to make their products commercial, the members have undertaken expenditures from their own pockets, rather than waiting for the assistances from SIRD or other government bodies. They have brought yarn and other required materials from the market in order to continue with their activities. It's like they have almost given up the hope of getting any kind of assistances from the government. Most of the JLGs see their future prospect optimistic only with the expenditures from their own pockets. It is only because that they have the burden to repay the 50% of the loan taken as a part of establishing JLG. So without making their products commercialize it will not be possible to repay the loans on time.

Taking the name of loan brings up the responsibilities of State owned and other nationalize banks in the process of social change and economic progress. It was observed that after the formation of different SHGs' and JLGs', the banking habit of the poor villagers have increased. It has fostered the habit of savings among the members and in their families. Even those groups who have not undertaken any kind of commercial activities till now in their SHGs' and JLGs', they also have started depositing some amount monthly from each members. Most of the groups takes the contribution of either 100 RS or 50 RS from each member and would deposit the amount in the banks. In West Kaziranga, most of the SHGs' have their account in either SBI Kohora or in Assam GraminVikash Bank (AGVB). Those who have their account in SBI are satisfied with the behaviour and role played by the bank. But in case of ACVB scenario is quite opposite. People are not satisfied with that bank, mainly the lazy response; inactiveness and the behaviour of banks disappoint the people. Even the scenario in Moridhanshiri is also quite similar. Most of the members from JLG surveyed, have their account in AGVB, Bokakhat. In this case the bank creates not only many issues regarding sanctioning the loan to the poor people. Some of the members also raised the issue of bank's behaviour to them. Many complained that AGVB mistreat them when they come to inquiry about the loan and other banking matters. So those who are suffering shows willingness to open new bank account in other nationalize banks like State Bank of India and United Bank of India. AGVB, being the bank of the state itself, the role played by it in the development process is depressing. But people still hope for a better future with the bank.

6.4. Penetration of Indira AwasYojna (IAY) and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

In the survey questions about the assistance from the Government for providing employment and housing facility are asked. But the outcome seems more disappointing. Only a few members from each have received work under MGNREGA, figures are easily countable on figures. On the other hand, the scenario under IAY is far more discouraging than the NREGA. Not more than 12 families out of all 110 household surveyed have received work under the NREGA scheme. But the fulfilment of promise for 100 days of works by the remains only a myth for them. In this case the possession of job card and BPL (Below Poverty Line) plays an important role. According to the survey most of the households have BPL status. There are only 30 families which are not registered as BPL out of the 110 households surveyed. According to the guideline set by the scheme NREGA all of the BPL families should get job cards under which they will be assured work for 100 days.

In West Kaziranga including Haldhibari, scenario is quite opposite. Implementation and penetration of NREGA is at its lowest level. Even poorest to the poorest households are deprived of their NREGA rights. Most of the family members even after having BPL status they still have not got the Job card yet and the political spiral makes the situation more complicated to obtain the Job card. Bringing the same to SHG level it was observed that the average numbers of job card holders among the members of SHG are estimated at very low level i.e. at 3 people. Only 2 SHG from West Kaziranga have highest numbers of members getting work under NREGA and figure is recorded at 5 members. But looking at each household, it was found that their husbands and other family relative also possess job cards. But still average figure of such possession is as less as 2 people. It was observed that only getting simply a job card will not offer them work under NREGA. Many members have job cards but they have not get the chance to work NREGA. Getting work under the NREGA seems to be a herculean task for them. Even if some people managed to get the work under NREGA but fulfilment of promise of assured 100 days of work remains a myth for them. Most of the people getting work under NREGA, had worked only for maximum 3 months under NREGA.

The situation under Indira AwasYojna (IAY) is far more discouraging than the situation under MGNREGA. Percentage of BPL people getting assistance under IAY seems rare in whole West Kaziranga. Under IAY government builds two rooms set concrete house for those people having BPL status. But that assistance is almost an allegory in West Kazirang including Haldhibari. Only 4 household out of surveyed villages of West Kaziranga reported to receive assistance under IAY. Only 2 households from Ino Kohora Village have received assistance under IAY scheme. In Sildubiand 2no Kohora Village of West Kaziranga evidence of recipient of assistance under IAY is nil. None of the household surveyed there reported to receive any assistance under IAY. Whereas figure is also discouraging for Haldhibari where only 2 households have received help under IAY. The average figure is

more discouraging than the other villages. On an average family receiving assistance under IAY in Haldhibari stood at below 1. Even such help is more required to families run by the Widows. But many widows and their children does not even get to see the shadow of help under IAY and MGNREGA. Such incidences are more common in Haldhibari groups. Even though the most of BPL people have applied for such assistance under IAY, but that application remains limited to the official paper only. It never has taken the concrete shape. 4

On the other hand condition of MGNERGA and IAY in tribal dominated Moridhansiri panchayat is considered then West Kaziranga like a similar poor picture emerges. Rather MGNERGA and IAY come up with far more discouraging result. In Moridhansiri 20 households are surveyed and all of them belong to the Mishing tribe. Out of the all 20 respondents no one in that area are able to find assistance in either of the so called successful government schemes. For the villages like Agoratoli and BamunGaon of Moridhansiri panchayat, which are mostly inhabited by the poor mainly BPL lacks minimum requirement to lead a decent standard of living, have not seen any kind of assistance under NREGA. Considering the decent standard of living, decent housing is one of the most important elements that these people lack. If such is considered then, government promise to build concrete house for BPL families completely fails in Moridhansiri area. The case of IAY is far more depressing than the NREGA and the scenario in West Kaziranga. At least some of the BPL families have received assistance under IAY in West Kaziranga. But in Moridhansiri, IAY seems like an alien concept among those families surveyed. Among the families surveyed no one has received any kind of assistances under IAY. Even after having BPL status, non-recipient of any kind of help under IAY makes the scenario more unbalance. All of the surveyed households in that area never received any assistance under the IAY schemes. If the location of the villages considered mainly like Agoratoli, BamunGaon etc. which lies on the bank of bank of Dhansiri River, they need assistance under IAY most, mainly to escape the destruction caused by the flood of the river. Zero implementation of MGNERGA and IAY in Agoratoli village which situate at a few kilometres distance from the Bokakhat town, seems shocking.

. In each and every years government is spending millions of rupees in MGNERGA and IAY, but in spite of such villages around the Kaziranga National has received minimal help under both of the schemes. This low level of implementation and failure of central government schemes shows not only the disregard of the state government for improving the standard of living of the poor's and also the high level of corruption in bureaucratic process. So in majority of part blame is to fallen on state government and other local implementing body who fails to implement these schemes and eats major chunk of the money allocated for the purpose of implementation.

6.5. Socio Economic Analysis of Data: Model Specification and Estimation

One of the main purposes of the study was to see the impact of different government policies and their contribution in determining the monthly income of the people in the fringe area. Form the year of 2010 state government has undertaken in kind distribution policy among the selected poor households of the fringe area, under the shelter of Chief Minister's JeevanJyoti scheme. As noted in initial part of the study, under the scheme government would distribute in kind subsidy among the selected people in form of duck, goat, pig, machine loom, power tiller etc. in order to avail the benefit selected people have to form a Self Help Group of 10 or Joint Liability Group of 4 or 5 and have to open a joint bank account in nationalized or regional bank, so that they can deposit their profit or government can deposit loan amount from time to time.

In order to analyse determinates of income for this poor people and impact of government subsidy on their income, a sample survey of 110 households were undertaken in the fringe area of Kaziranga National Park. The survey was undertaken twice on the same set of sample. The first round of survey was undertaken before the distribution of government in kind subsidy which notes their situation on many socio economic parameters like monthly income, education, occupation, forest grazing etc. The survey specifically noted general average monthly income before the distribution of government subsidies. On the other hand second round of survey was undertaken after 9 months of receiving in kind subsidy. This was mainly done to see the absolute change in monthly income of those people who received in kind grant from government. Because most of the surveyed people received livestock under the scheme, mainly duck, goat and pig and very few received machine loom and power tiller. For those who received livestock, the livestock needs at least 7 to 8 months gestation period to enable to generate income for the people. For goat and pigs it needs more than 9 months to get mature. So for most of people receiving goats and pig recorded no change in their monthly income. Some of the people holding pigs had some changes in income as they sold them at the time of second round of survey. As the incomes from these were almost zero, rather people had to bear other miscellaneous expenditures related to raising livestock and protecting them from diseases. On the other hand, those who have received duck or machine loom and power tiller recorded uninform trend in the absolute change of monthly income. Some of the surveyed households saw increase in monthly income but some recorded negative change in income. That happened mainly because of the excess of the expenditure they have to incur on the daylily care of livestock. In many event livestock were attacked by diseases, due to which people have to undertake a massive amount of money from their pocket. This expenditure seems unambiguously huge for BPL and other poor people. Many BPL could not afford the amount so end up losing their livestock. Therefore due to all of these factors there was a variation observed in the monthly income, which is collected after the 9 months of subsidy distribution.

In order to form the regression model, we have taken a simple dummy variable linear regression model with 110 observations. In order form the model we have taken monthly income as the independent variable. On the dependent variable front, we have taken change in income due to government subsidy, age of the head earner, numbers of livestock holding and dummy variables are formed on job card holding which guarantees BPL people 100 days of work, level of education, government in-kind subsidy and recipient of government schemes like MGNERGA and IAY.

The analysis is done using econometrics application software; SPSS 20 along with the help of enter method. Main reason for setting the above stated dummy variables is that it is generally assumed that education has a positive impact in the future earnings. Higher the education level higher will be the chance of earning more income. On the other hand government polies and subsidies

tend to have expansionary impact in income level of poor people, mainly in developing countries. The main reason to set dummy against Job card holder is that in Kaziranga there are many BPL households found who holds job card which would promises 100 days of work to BPL families under MGNERGA. But even after holding job card, many did not get any kind work under any of the govern schemes. More surprisingly there also a large chunk of households found who comes under the BPL category but never received any job card assuring work to them. On the other hand some of the surveyed people do receive work under MGNERGA. Therefore holding or non-holding a job card impacts the income of the poor people of the fringe area.

We specify the simple linear dummy variable model as follows with the regression equation as:

$$\text{Income} = b_0 + b_1 \text{chinincome} + b_2 \text{age} + b_3 \text{livestock} + d_1 \text{jobcard} + d_2 \text{edu} + d_3 \text{govsc} + d_4 \text{govsub} + u$$

Here in this model, dummy variables can be explained as follows,

$d_1 = 1$ if the respondent is job card holder
 = 0 otherwise

$d_2 = 1$ if the respondent is educated
 = 0 otherwise

$d_3 = 1$ if the respondent receives any of government schemes like MGNERGA
 = 0 otherwise

$d_4 = 1$ if received livestock under JeevanJyoti Scheme
 = 0 otherwise

Using the above dummies and other numeric independent variables we have arrived at the following result, which is explained by the following table.

	Mean	Std. Deviation	N
monthly income	2182.73	3903.864	110
changes in income	125.45	407.146	110
age	36.28	8.065	110
live stock	2.86	.760	110

Table 5: Descriptive Statistics

The model with its predicted values can be shown by the following table,

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1007.07	1938.767		-.519	.605
changes in income	2.595	.851	.271	3.051	.003
Age	108.426	44.826	.224	2.419	.017
live stock	-348.898	448.596	-.068	-.778	.439
dummy jobcrd	272.295	1555.370	.024	.175	.861
dummy edu	2258.210	858.585	.232	2.630	.010
dummy of govtsc	-1939.66	1486.067	-.180	-1.31	.195
dummy of govt sub	-1973.32	936.488	-.196	-2.11	.038

Table 6: Regression coefficients
 a. Dependent Variable: monthly income

The table 6 shows the values of coefficients that plays important role in determining the monthly income for the people living in the fringe area of Kaziranga National Park. Table show that changes in income due to the government in kind subsidy, age, education and government in-kind subsidy scheme are significant at 5% level of significance. Age and changes in income due to government in kind subsidies have significantly positive impact in determining the monthly income of the people living in the fringe area. From the descriptive statistics table we found that mean value of changes in monthly income due to the government subsidy is positive but is very less and found to be 125.45 rupees. So a significant and positive value of change in income due to subsidy says that if the monthly income changes by 1 rupee due to government subsidy it will lead to increase in average monthly income by 2.595 rupees.

On the other hand considering the significant dummies of education and government subsidy, it shows that those with at least some level of education are able to earn more income than those having no education. Education leading to income differential is

significant. So it points to the need for fast spread of education and inclusion of all of the poor people under the shed of education. As with education people will be able acquire skills that would make them suitable for the labour market. This significant education differential indicates that, people with some level of education in the fringe area will have a higher income than those with no educational background by amount of 858.585 rupees on an average. On the other hand, surprisingly differential in government subsidies is found to be negatively significant at 5% level of significance. This shows that those who have received subsidy from the government in form of livestock, their average monthly income is significantly lower than those receiving other in kind subsidies like machine loom or power tiller. This differential would probably points to the fact that people those who received livestock often have to undertake expenditures in their maintenances and other related activities. Sometimes as claimed by the people, their expenditure on livestock would exceed their monthly income. The regression table shows that those who received livestock, their income will be significantly less than from those who received other subsidies like power tiller and machine loom etc. by the amount of 1973.32 rupees.

7. Conclusion

Development is not a one sided process. There are many elements that foster the process of development. It is not possible to bring development with just the effort of one element. All of the elements have to be complement of each other. If government is providing some help then in order to continue the cycle of development then in that case, active participation of the society is the most needed element. Without the proper response, participation and feedback progress will be incomplete. Even in the Kaziranga and its fringe villages, community participation is need at the first place, keeping in mind the protection and service of the bio diversity. Most of the people living in the backward of Kaziranga present an actual picture of backwardness and poverty. So focusing those people, at first will bring us closer to the relation they share with the National Park. How they are dependent on the Park for livelihood will be the first question. In this case reducing the dependence on firewood in order to prevent the degradation of habitat would be first aim. So any mean of livelihood they select should keep in mind the problem of the habitat. Forming different SHGs' in order to bring a sense of economic freedom and self-sufficiency would be a great initiative for those poor villagers who do not have any permanent source of livelihood. Activities undertaken in the JLG and SHG would be eco-friendly and also has lesser threat to the habitat. But apart from these, main problem lies with the disasters that Mighty Brahmaputra River brings to the area during the summer. It brings havoc to the people of that area. Till date there is no permanent solution of this calamity.

Considering the results of the survey, it can be sensed that somehow government intention to help the poor people of the fringe area results in wastage of resources, time and effort and along with the corruption eating most of the desirable possible benefit that could have accrued to the people of the area. Many of the poor people have to undertake unnecessarily expenditures on the livestock distributed and for some of the people this amount of expenditure would exceed their income level. Therefore here considering this, suggestion for cash subsidy can be thought of rather than distributing livestock. Otherwise government can focus more on education development and other skill development and vocational training, which would make the poor people fit for the labour market. Considering the huge opportunities vested with the tourism sector of the area, government could have open more of vocational training centres, through which people can acquire skills that is required for the involvement in tourism sector and labour market. For those people who acquires skills in such centres but do not have required amount of wealth to undertake income generating activities in the tourism sector, government could help them by providing direct cash transfers or loan, which they have to repay after a certain limited period of time in near future.

Sitting down and crying will not help to improve the economic condition. If you want to survive you have to search for the alternatives. And somehow Kaziranga and its fringe villages are trying to reflect it in their war of survival. One day somehow this war of survival would bring the revolution of self-sufficiency and economic freedom.

8. Acknowledgement

It would not have been possible to write this study without the support and help of the people around me. This study would not have been possible without the help, support and patience of, Dr K.S Hari. The good advice and support has been invaluable on both an academic and a personal level, for which I am extremely grateful.

I am also highly grateful to Mr Mani JyotiBaruah, Senior Research Officer, Planning and Development Department, Government of Assam. It would not be possible to garner all of the data required for the dissertation. I am also highly thankful to Mr Baruah for his kind and generous help in conducting the household surveys and other required ground works. I am also helpful to SIRD (State Institute of Rural Development), for handing me relevant documents and other materials related to JeevanJyoti Scheme.

I am highly tankful to the local people of fringe villages of Kaziranga National Park, whose cooperation, patience and well response to survey helped me in conducting the survey in organised manner.

For any errors or inadequacies that may remain in this work, of course, the responsibility is entirely my own.

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