

Joint Forest Management and Their Impact on the Livelihood: A Case Study of Some Selected Villages Situated At Different Infrastructure Condition in the District of Birbhum in West Bengal

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Abstract

Forest resources directly meet the needs of the requirement of food, fuel, fodder etc. Sometimes it also increases the family income indirectly. The study establishes that the villagers near the forests earn a significant portion of their livelihood from forest resources. Practice of Joint forest management in case of areas far from market provides higher incomes than joint forest management for areas close to market. The market factor plays an important role for getting forest resources and reduction of poverty and income inequality among the villagers. The forest, far from market, is superior to forest which is situated close to market in terms of reduction of poverty and income inequality.

Keywords: Forest Resources, Poverty, Income inequality, Market.

Introduction

Since the beginning of human civilisation forest resources have been playing a very important role in the life process of mankind. Also forests have played a vital role as an important renewable resource in the economic development of developing countries like India. About 23.41 per cent of India's geographical area constitutes recorded forest area ('ISFR' 2009). The term 'Forest Area' (or recorded forest area) refers to all the geographical areas recorded as 'forest' in government records. But as per canopy measurement, only about 21.67 (FSI, 2019) per cent of India's geographical area has as forests cover. Forest Cover is defined as all lands, more than one hectare in area, which are with tree canopy density of more than 10 per cent. (Such lands may or may not be statutorily notified as forest area). Forests are rich sources of energy, housing material, firewood, timber and fodder and they provide employment to a large section of the rural population. They also play a critical role in maintaining the ecological balance. It is observed that forests are not spread evenly in India; rather they are concentrated more in the poorer regions of the country. Interestingly these regions are characterised by low agricultural productivity and having inferior quality of soils.

In India we find that resources are scarce. The vast forest resources are used as a source of revenue for the state. The governments are also not capable of restricting the use of forest resources by the poor people. Thus degradation of the forest has started. This has affected primarily local poor communities. Then the Government accepted a more responsive approach, which came in the form of the Forest Policy of 1988. In 1988 forest policy emphasis was accorded to the ecology and satisfying minimum needs of the people, providing fuel wood and fodder, and strengthening the tribal –forest linkages. In the Forest Policy of 1988, the Joint Forest Management (JFM) program of the Government of India is considered as an attempt to build a partnership between the forest department and the local community. This partnership is based on joint management objectives in which communities are expected to share in both the responsibilities as well as the benefits that would be produced.



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Statement of the problem

British rulers believed that the forests were the national property and the forest communities were attached accidentally with forest. So they have no right over any forest resources for their needs. But it is hard to accept this view. Historically the forest communities have been attached to forest; they lived on forest products and in return, instinctively as well, they have protected the forest over time. After Independence from forest policies 1988, joint forest management was introduced. In joint forest management system, local community people have some right to participate in the process of forest management system along with government officials. Local people also enjoy rights to get some benefits from these forests as a percentage of net income of selling trees and some non-timber forest product. Here we take the view for examination that commercialisation of forest economy leads to more degradation of forest, lower benefit sharing among the forest dwellers and more unequal sharing of forest product among the forest dwellers. The question that is discussed in literature is: does greater access to private property income or wage income or marketability of forest resources lead to greater inequality in the extraction of forest resources and degradation of forest resources. There are some forests which are near to the market or urban places that are associated with high infrastructural conditions. On the other hand, some forests are situated at a remote place where of having market access is low. Generally, we have seen that if the forests are situated close to the market, then resource extraction is higher because the natural resources can be easily marketed. On the contrary one may argue that if forests are situated close to market forest dwellers get more scope of employment and personal income which creates less dependence on forest.

Historically it is observed that a section of distressed rural people depend on the forest. They meet up their basic needs by collecting fuel wood, fodder and some non-timber forest products from these forests and survive on it. According to some researchers, poverty is the main cause of degradation of forestry. They viewed that the distressed people extract forest resources indiscriminately for their survival which leads to their degradation. We are against this view because of the poor tribal communities whose cultural, social and economic existence depends on forests. They not only use forest resources but preserve them for their own sake i.e. existence.

Objectives of the study

The objective of the study is to make a comparison between the two forests same management systems with different infrastructure conditions, namely joint forest management with closed to market and joint forest management with far from market in respect of collection of forest resources, reduction of poverty and inequality.

Methodology

Two forest villages are selected for the study

from the district of Birbhum in west Bengal, where the villagers are involved in the joint forest management system. The villages are Banavila and Sundarkhele. Banavila village is situated close to market and Sundarkhele village is situated far from market. I have selected two types of forest for same management system of forest one is placed 'closed to market' where commercialisation of forest products are more easy and other is placed 'far from the market' where commercialisation of forest product is hardly possible. From each village I have selected 50 households through two way stratified random sampling on the basis of caste and land holding size. Then I have collected the primary data on the economic condition of the villagers and collection of different types of forest resources from forest. Villagers collect different forest resources such as fuel, fodder, forest food and some leaves. Most of the forest's resources are used for own consumption purposes but some resources are used for selling purposes also. Then we valued all the resources in market price for those resources which are sold in the market. But for some resources market price does not exist and hence, prices of substitute goods are being considered as imputed prices. In this way I converted the entire forest products into monetary units.

Hypothesis

1. The forest which is situated far from market is superior to forest which is situated close to market in terms of reduction of poverty and inequalities, getting forest resources and maintenance of qualities of the forests.

Description of Two Forests**Illambazar Forest—Forest under JFM and situated at closed to market**

Illambazar forest is controlled under the joint forest management (JFM) system. Joint forest management act was passed in 1991. After 1991 the Illambazar forest came under the rule of the joint forest management system. Before 1991 the Illambazar forest was controlled totally by the government. The forest is situated 15 km. away from Bolpur town... Among the 1720.89 hectares area of Illambazar bit, the Illambazar forest consists of 1350 Hectors. In Illambazar forest the principal tree is Shal. Near about 1200 hectares is covered with Shal trees and the other trees existing in the forest are mainly Pial, Mahua, Sonajhuri. Near about four to five thousand Shal trees are found in every hector of land. The people in the adjacent area collect the Shal leaves from the forest and make plates from these leaves. After that they sell it to earn their livelihoods. They also collect fuel wood, fodder and some fruits like Pial, Mahua, Kaju and vegetables like 'Bonpotato', 'Mass' and some medicinal plants like Satamul, Kalmeg, Basak etc.

Sundarkhele— Forest under JFM and situated at far from market

The Sundarkhele forest is situated 15 km. away from Rajnagar market and In Sundarkhele forest the principal trees are sonajhuri (60%). Other important trees are Shal, Mohua, piyal, Kendu etc.

The people in the adjacent area collect the Shal leaves from the forest and make plates from these leaves. After that they sell it to earn their livelihoods. They also collect fuel wood, fodder and some fruits like Pial, Mahua, Kajju, some vegetables and some medicinal plants like Satamul, Kalmeg, Basak etc.

Here most of the households are poor. There are 140 households among them 60 households are belonging to ST communities, 30 households are belonging to SC communities and rest of the households belong to general category. Basically the SC and ST communities' people are poor and they depend very much on forest resources. The main occupations of villagers are agriculture but the condition of agriculture is not good because land is not fertile and irrigation is not available.

Sundarkhele forest is controlled under the joint forest management (JFM) system from 1991. Mostly the poor people and forest dependent people are members of this JFM committee.

From sample survey we get (in case of joint forest management closed to market) forest villagers, average family size is 4.08, average land holding size is 1.09 acre and average monthly family private

income is Rs 9455 whereas average family size is 5.34, average land holding size is 1.10 acre and average monthly private income is Rs 4161 for villagers of joint forest management far from market. In the above figure it is seen that the average land holding size of both household groups are approx. same. On the other hand, average private monthly income is higher for forest villagers of close to market from villagers of far from market but figure of average family size is just opposite. So we can say that villagers of joint forest management close to market are richer compared to villagers of joint forest management far from market.

From table-1 we can see that the forest dwellers are collecting a large amount of forest resources like fuel, fodder, food and different types of leaves from both forests. It is also seen that money value of all collected items is higher from forest which situated at far from market compared to close to market. It is further seen that the percentage of money value of all collected items to total income including forest income of a family is higher for JFM far from market compared to JFM closed to market.

Table-1
Total collected items from forest (fodder, fuel, food & all leaves)

Income Group (Rs/month)	Average earning from all collected items from forest (Rs/month)	Average private Households income(Rs/month)	Total average income including all collected items from forest(Rs/month)	% of earning forest income as total private income including forest earning income (%)
Closed to market	628.23	9455.08	10083.31	6.23
Far from market	998.01	4161.17	5159.18	23.98

Here table-2 shows that percentage of BPL households has decreased for villagers under JFM far from market after including the total forest income. The comparison between the percentage decreases in the BPL households of two forest villages, due to the inclusion of forest income in the households' total income, shows that the percentage decrease is more

in case of JFM situated far from market compared to JFM situated at closed to market. This has been shown in the table-12.

In table 12 we see that 73.91 percentages of HHs develop from BPL to APL in JFM far from market but in case JFM closed to market the decrease in BPL HHs is only 65 percentage.

Table-2
Role of Forest in Reducing Poverty

	No of HHs	No of BPL HH without adding forest income	No of BPL HH with adding forest income	% decrease in number of BPL HHs with adding forest income
Joint forest management (far from market)	50	23	6	73.91
Joint forest management (closed to forest)	50	0	0	0
Total	100	23	6	73.91

Now in this section we have tried to find out the impact of forest income on the per capita income of households for both forest villagers.

As table -3 shows that due to the addition of forest income with the households' total income, the per capita income of households had increased for both groups of households. It is seen that due to the inclusion of forest income in household's total income, the percentage increase in the per capita income of a

household is more in case of villagers of community managed forest far from market than that for the villagers of community managed forest closed to market. It is seen that while for CMF with FM this percentage is 45.56 %, for CMF with CM is 16.22 %.

Table-3
Dependence on Forest Resources (Monthly Per Capita Income)

	No. of households	Avg. per capita income without forest income	Avg. per capita income with forest income	% of per capita income increases with adding forest income
Joint forest management (far from market)	50	897.63	1109.23	23.57
Joint forest management (closed to forest)	50	2404.02	2583.82	7.48
Total	100	1650.83	1841.52	11.55

We know the inequality of income and resources is a major problem in India and the state of west Bengal. We also know that the income inequality among people is due to the ownership inequality of private property or resources among the people of India as well as West Bengal. Generally, private property generates inequality whereas common property reduces inequality. Here we can use forest resources as a common property to reduce the income inequality among the rural poor in India as well as West Bengal. Gini Coefficient is an important measurement of inequality in income and resources

among people. The value of the Gini coefficient varies from zero to one. Zero means perfect equality and one means perfect inequality. Here we calculate the value of Gini Coefficient of households for both the forest villagers. Interestingly it has shown that the income inequality is higher at the village of far from market than close to market. Though the reduction in income inequality among the villagers after including the money value of all collected items from forest is larger for villagers for far from market compared to close to market.

Table-4
Calculate per capita income inequality without forest income and with forest income (Gini coefficient)

	Monthly private per capita income	Monthly total per capita income (including forest value)
Joint forest management with closed to market(value of Gini coefficient)	0.652937	0.637148
joint forest management with far from market(value of Gini coefficient)	0.904173	0.87974

Conclusion

The money value of collected forest resources is important for villagers of both forests. The villagers under joint forest management system of far from market get more forest resources compared to villagers under joint forest management of close to market. Forest resources play an important role to reduce the income inequality within the villagers of both forests. Here the market factor plays an important role for getting forest resources and reduction of income inequality and poverty within the villagers. The forest which is situated far from market is superior to forest which is situated close to market in terms of reduction of poverty and income inequality and getting forest resources.

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