

Forests of Cooperation and Conflict: A Study on Joint Forest Management in Jungle Mahals, India

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ABSTRACT Joint Forest Management (JFM) is a programme that aims to manage the forests of India and to socio-economically develop the forest-fringe communities. A study on JFM was conducted in some forest-fringe villages of Jungle Mahals region of West Bengal. The main objective of the study was to see how JFM is functioning at present in those villages. It is revealed that the local forest department encourages the villagers to use, manage, protect and regulate the forest and its products. However, the villagers have some unfulfilled demands with the forest department. Furthermore, they cooperate with each other within the village but also are engaged in conflict with neighbouring villagers on the matter of the protection of forest and to access its resources. The paper suggests that the local forest department should negotiate with the local communities to resolve such conflicts and to make the JFM programme work more efficiently.

INTRODUCTION

For the past few decades, socio-economic development of the forest-fringe communities has been a global concern besides the protection and management of forests (Singh and Khare 1993; Pattnaik and Dutta 1997). Leading funding agencies such as the World Bank dispense funding to encourage social forestry programmes such as the Joint Forest Management (JFM) in developing countries including India (Sohn 1973). In JFM, the Government of India involves the state forest departments and forest-dwelling people to protect and manage forests and its resources (Guha et al. 2000). The experiment of the programme began in 1972 at the Arabari Forest Range of West Bengal where the local forest department motivated its neighbouring villagers and finally collaborated with 618 families to protect their surrounding forests (Ravindranath and Sudha 2004). Before the experiment, the protection and management of forest was consid-

ered as an enterprise of the government. The Government of India issued JFM guidelines in 1990 and the programme came into its official existence. At present, about 14.5 million families in India are part of JFM. They are managing nearly 24.6 million hectares of forest, which is about thirty percent of the total forest area of the country (Government of West Bengal 2016; Kisku and Raul 2017).

In JFM, a state forest department monitors the programme through its sub-departments, that is, the Divisional Forest Offices, Range Offices, and Beat Offices arranged from upper to lower strata. A general body of Forest Protection Committee (FPC) committee is formed in every forest-fringe village. The FPC will have an executive committee of 10 members. Both the husband and wife of a family of the village are members of the FPC. Memberships of half of the general body and one-third of the executive committee are reserved for women. The FPC is assigned to protect a demarcated area of forest and to regenerate degraded parts when required. In return, it will receive twenty-five percent of the revenue earned from the final felling of the protected trees, which is divided equally among the FPC members (Government of West Bengal 2016).

FPC is formed in a village with ten executive members chosen by the villagers. After approval of the Divisional Forest Officer, the FPC is

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registered under the forest department till the next selection process. FPC is reformed every year when addition and deletion of membership is done. Thus, the timespan of membership of any FPC is one year. In general, FPC members are not changed and the same members remain in the FPC year after years. The names of those registered members are deleted who have died during this one-year span. In their place, anyone from the same household who has attained the age of eighteen years is added. Furthermore, if anyone is willing to be a member of the FPC then addition is done. If the villagers or the FPC members want to replace new members with former members, then also addition and deletion is done. If the villagers and forest officials agree with his or her proposal and have no objections, his or her name is registered as an FPC member (Government of West Bengal 2016).

Beyond these ideas on paper, a vast literature suggests that at the ground level, the JFM is not functioning as it should. It also has not yet been able to reach to its target as envisioned by the government during the initiation of the programme.

Literature Review

Researches on tribes suggest that they are the communities who are mainly concentrated closest to the forests of India. Living in forest ecology for centuries, they are not only dependent on the forest and its resources but their cultural practices are also woven around it (Rivers 1906; Roy 1912). Despite this fact, the tribes have always been considered by policymakers as the encroachers and destructors of the forests (Tripathi 2016). A good number of studies have been conducted illuminating the success and failure stories of JFM involving tribal communities (Guha et al. 2000; Sarin 2001; Ravindranath and Sudha 2004; Kisku 2008; Kisku 2009; Kisku and Raul 2017).

The JFM came into its formal existence since 1988, when the Odisha state passed the first resolution and was followed by West Bengal in 1989. The Government of India passed its first resolution on JFM in 1990 (Sundar and Jeffery 1999). At the national level, now 27 states have implemented the JFM programme and are protecting 17,331,995.12 hectares of forest cover with 84,632 JFM groups (Murali et al. 2002; Ravindranath and

Sudha 2004). The programme has been a successful institutional arrangement in regenerating degraded Sal forests as well as in attracting outstanding funding from the international donors (Ravindranath and Sudha 2004). According to the FAO (2010) assessment, the forested land in India is expanding rapidly. Furthermore, about fifty countries all across the world have adopted the policies that are paralleled to JFM (Agrawal 2005). Undoubtedly, the nationwide spread of JFM soothes the global concern for the past few decades on environmental degradation, deforestation and encroachment.

In his study on the regional political and social history of the environmental change in Bengal, Sivaramakrishnan asserts that the patterns of change in environments influence the socio-political outcomes of human endeavour and even of the powerful agents such as governments, scientists, and elites. Massive degradation of forest in both pre and post-independence periods compelled the government to manage and protect it to ensure future supply of forest resources. The government initiated collaborative participatory programmes such as JFM by involving the people who have been living in and around forest (Sivaramakrishnan 1999a, 1999b). By engaging local communities through JFM, government made a transformation in forest protection and management, which earlier was a full-fledged state endeavour. Poffenberger and McGean (1998) describe such shifting histories of forest management from the control of forest department to the local communities through JFM in other states of India. Ravindranath and Sudha (2004) also present case studies on the spread, performance, and impact of JFM in six states of India, namely, Andhra Pradesh, Gujarat, Karnataka, Rajasthan, Tripura, and West Bengal. In a similar study, Springate-Baginski and Blaike (2007) show the quantitative impact of JFM on the livelihood of rural people in Andhra Pradesh, Odisha and West Bengal. A group of scholars also has focussed on the problems of people's participation and representation in JFM (Ghosh et al. 2007; Kisku 2008, 2009). A vast literature also should be included here, which considers people's participation in JFM from the materialist and economic point of view (Balooni 2002; Barbier 2005; Palmer and Engel 2009; Behera et al. 2011; Kumar et al. 2011; Vira et al. 2011).

The meaning of the term 'Jungle Mahals' is 'Estates of Forests' and it refers to the south-western part of the West Bengal state (Kisku 2016). From 1805 to 1833, there was a separate district with the name 'Jungle Mahals' and comprised the forest tracts of the present day Bankura, Birbhum, Burdwan, Jhargram, Paschim Medinipur, and Purulia districts. The core of the Jungle Mahals region undoubtedly has been the present day Jhargram district because of its 'wild forests'. The district is dominantly inhabited by a number of tribal groups such as Santals, Mundas, Oraons, and Lodhas. The non-tribal other peasant communities live in this region are *Mahatos* (agriculturists), *Tantis* (weavers), *Kamars* (blacksmiths), *Kumors* (potters), and *Doms* (basket makers) (Kisku 2016). It is thus an interesting question for researchers, 'How the tribal and non-tribal communities living in this region are protecting their wild forests?'

The Particularly Vulnerable Tribal Groups (PVTGs) of India are those who are not only numerically endangered but also are vulnerable in terms of the cultural, economic, political, and social aspects. The two PVTGs that inhabit the Jungle Mahals region are Lodhas and Birhors. This study and thus the present paper however focus on the Lodhas. The community subsists on forest-based economy. For their livelihood, they collect edible forest products and earn money by collecting dry fuel wood from forests and selling them in the market or in neighbouring villages (Kisku and Raul 2017). Thus, 'How the community participates in government initiated JFM programme?' is an interesting as well as important facet of the study. No in-depth ethnographic account has particularly focused on the functioning of the JFM programme involving the PVTGs. How inter-communal relationships affect the functioning of the JFM programme or how the JFM programme has affected or if altered the inter-communal relationship at the ground level have hardly been focused in any study.

Under the above background, this study attempted to fill up the research gap. Based on the study, the paper argues that in question to the protection and management of forests under JFM programme, the people living in forest-fringe villages cooperate, collaborate, and are engaged in mild conflicts amongst themselves as well as with the local forest department.

Objectives of the Study

The study was conducted in a village named Patharnala and its neighbouring villages of the Jhargram district of West Bengal. The study had the following objectives.

1. To enquire about the history of initiation of JFM in the study village as well as its neighbouring forest-fringe villages.
2. To know the socio-economic condition of the villagers under which the JFM programme is functioning in those villages.
3. To know the structure and function in reality of the JFM programme in those study villages.
4. To find out how the people living in these villages are collaborating with the forest department and also amongst themselves with regard to protection and management of forests.

METHODOLOGY

To fulfil the aforesaid objectives of the study, a fieldwork was conducted throughout March 2019 by the authors of this paper along with seven masters' students. Besides observing the relationship of the villagers amongst each other as well as with the local forest department, several anthropological methods and techniques were used for the collection of data. The researchers drew a layout of the village to understand the settlement pattern of the villagers and also to locate forest and cultivable lands around the village. To know the socio-economic condition of the villagers, a household survey was conducted. To understand the forest related actions of the villagers, data were collected through questionnaires. The authors visited the studied villages several times after the fieldwork to recheck the collected data. Furthermore, the second author of this paper is a native resident of the locality and the villages under study are his neighbouring villages. The researchers thus were comfortably able to establish a good rapport with the villagers of the studied villages, to find key informants, and also to gather a good amount of varied information.

RESULTS

In this section, the researchers will provide the data and information that was gathered from

the Patharnala village and its neighbouring villages with regard to the protection and management of forests through JFM. The section is divided in five sub-sections. In the first sub-section, the researchers will present a brief physical description of the village, its location and connectivity with the neighbouring areas, and the floral and faunal features of the village as a part of the Jungle Mahals region. The researchers will also provide information regarding the communities living in the village and around it, their forest related actions and the level of dependency on it. In the second sub-section, the researchers narrate how JFM was initiated in the village and the area and how the local people were motivated to participate in the programme. In the third sub-section, the researchers describe the structure of the FPC existing in the village and how it is functioning at present. The fourth sub-section is about the nature of cooperation and collaboration existing amongst the villagers and with the local forest department with regard to forest resource management. The final sub-section narrates the nature of conflicts that exist amongst these groups.

The Village, Villagers, and Dependency on Forests

The village Patharnala (J. L. No. 764) is located in Jhargram District of West Bengal. After being bifurcated from the larger Paschim Medinipur district, the Jhargram subdivision was transformed into a district in the year 2017 consisting of 8 Community Development Blocks and 79 Gram Panchayats. The village comes under the Sapdhara Gram Panchayat of the Jhargram Community Development Block and is situated 11 km southwest from the Jhargram town, which is the headquarter of Jhargram district. It is connected to the nearby small towns of the district such as Jhargram, Silda, Belpahari, and Gopiballavpur through concrete road. Buses and trekkers, though very few in number, are available for public transportation. The concrete road is about 5 km away and is accessible by bicycles, motorbikes, or walking. The Jhargram Railway Station is about 12 km away from the village and can be accessed through the concrete roads. The Patharnala village is located in a close proximity to a forest that comes under the jurisdic-

tion of Pukuria Beat Office, Jhargram Forest Range of Jhargram Forest Division. The beat office and the range office are situated respectively 8 km and 11 km away from the village.

Two communities namely, Lodhas and Mahatos, populate the village. They live in separate hamlets respectively called Sabarpara and Mahatopara. Lodha people are 163 in number and living in 35 households in Sabarpara. Mahato people in the village are 240 in number and are living in 56 households in Mahatopara. Kashia, Jaralata, Nakat, Dhaba Dhabin, Tengia and Baghuadam are the neighbouring villages that are populated by Santal, Mahato, Tanti, Dom, and Lodha communities. All these villages are located within a 3 km to 4 km radius of the village.

A canal is located on the north of the village, both sides of which are cultivable lands of fertile soil. Paddy and vegetables such as cucumber, pumpkin, and bitter-melon are cultivated in those lands. Paddy is cultivated twice in a year, that is, in summer and in monsoon. In between these two seasons, vegetables are grown on the same lands. The Mahato people of the village own all of these lands. The Lodhas, except one person named Nirmal Mallick, do not have their own cultivable lands. Some of them however cultivate on the lands of the Mahatos as sharecroppers and only grow vegetables. In return, during the paddy cultivation season, they give free labour service to the Mahatos and on the same pieces of lands. Besides agriculture, people from both the communities are engaged as daily labourers, shop helpers, and van-pullers in the Jhargram town. The Mahatos rear cattle such as goats, sheep, and hens and occasionally sell them in the market to earn money.

The forest closest to the Patharnala village is stretched from the northwest to the southwestern side. Sal (*Shorea robusta*), *Akashmoni* or *Sonarjhuri* (*Acacia auriculiformis*), eucalyptus (*Eucalyptus globulus*), and *Mahua* (*Madhuca longifolia*) are the dominant trees in the forest. People of both the communities collect forest resources from the respective forests closest to them. However, the types as well as the nature of collecting forest resources differ amongst these two communities. The Lodhas mostly collect edible objects such as mushrooms, fruits, and flowers from the forest. They also collect bamboos and dry branches of trees to

sell them in the nearby villages or in the market. The Mahatos also collect the aforesaid edible objects but hardly collect bamboos. They do not at all collect dry branches of tress for selling and only use them as fuel wood at home. Instead, they mostly collect branches of Sal trees to feed their cattle and Sal leaves to make leaf-plates out of them. They sell Sal leaf-plates in bundles to the contractors who further sell them in the nearby towns, even out of the district. It is thus observable that in terms of collection of forest resources, the Mahatos are more money enterprising compared to the Lodhas. However, the life of Lodhas is more dependent on the forest compared to that of the Mahatos.

Initiation of JFM

Mohini Mahato is considered as the spokesperson of the *Patharnala Ban Sangrakshan Samittie* (Patharnala FPC). The researcher came to know that for any information regarding the FPC, she is the person who needs to be asked first. She informed the researcher that in the year 1990, the then forest officer in this beat organised campaigns and meetings to build awareness in the villagers about the JFM programme. Initially the villagers were afraid to attend the meetings and were frightened of the forest officials. With their khaki dresses, the forest officials were nothing but police to the villagers and the villagers thought that they might be arrested and tortured. Thus, whenever the forest officials came to the village to conduct meetings, the villagers escaped and emptied the village. The forest officials then only became able to discuss with the local leaders of the area who were known to the villagers. The local leaders were convinced first to participate in the JFM programme. Later both the forest officials and the local leaders together organised campaigns and meetings in the villages. Padmalachan Mahato, a homeopathic doctor by profession and a resident of Patharnala village, informed the researchers that at that time he visited almost door to door with the forest officials in Patharnala and in neighbouring villages. Some other local leaders, namely Poran Mahato, Umesh Mahato and Bharat Mallick participated in the campaigns and the meetings at that time. They finally were able to motivate the other villagers to partici-

pate in the JFM programme, who once were afraid of the forest officials.

Padmalachan informed the researchers that in 1992, the local leaders and the forest officials organised several meetings in the villages under Pukuria beat. The forest officials, Gram Pradhans, local leaders, and the people of neighbouring villages attended those meetings. The forest officials narrated to the local villagers the benefits of participating in the JFM programme such as the villagers will have their own respective demarcated forest areas from where only they are entitled to collect the non-timber forest products (NTFPs). They are also entitled to get twenty-five percent share from the revenue of timber selling. The officials persuaded the villagers to join the JFM programme and formed FPCs in each of the village. By 1996, FPCs were formed in each of the forest-fringe villages under Pukuria Beat. Initially, two or more villages altogether protected a particular forest. For example, the villagers of Patharnala and Nakat protected the same forest area under a single FPC until 2009. During that time, Pintu Mahato, a villager of Nakat, looked after the functioning of the FPC and maintained the communication with the local forest department.

In January 2009, a monthly meeting the joint Nakat FPC was held in Patharnala village where 6 forest officials and the villagers of both the villages were present. Patharnala villagers demanded in the meeting for a separate FPC and aspired to protect the forest adjacent to their village. Thus, once the larger Nakat FPC was bifurcated, the Patharnala FPC came out as a separate entity with the approval of the forest officials and the villagers of both the villages. The villagers of Patharnala referred the name of Mohini Mahato as the president of the FPC and the forest officials approved her name. Later in the same year, the forest department registered the Patharnala FPC in the official documents and allotted a demarcated area of forest for the FPC. The Patharnala FPC was reformed in July 2018 when six new members were added.

The Structure and Function of FPC in the Village

Mohini Mahato informed the researchers that all the villagers are part of Patharnala FPC but only one member from each household of

the village is an officially registered member. There is an executive committee of ten villagers to perform the major activities of the FPC such as organising meetings, to keep in touch with the forest department officials, to monitor forest patrolling, and also to keep eyes on illegal felling. All the members of this executive committee are women. Eight members of this committee, namely Mohini Mahato, Sefali Mahato, Binapani Mahato, Kalpana Mahato, Jayanti Mahato, Bimala Mahato, Usharani Mahato, and Malati Mahato have been elected from *Mahatopara* and belong to the Mahato community. Other two members, namely Fulmoni Mallick and Bimala Mallick are from *Sabarpara* and belong to the Lodha community. It is thus observable that the Patharnala FPC is represented by representatives from both the hamlets and also from both the communities living in the village.

Considering the formal education of these executive committee members, five are non-literate. Three of these non-literate members, namely Bimala Mahato, Usharani Mahato, and Malati Mahato belong to the Mahato community. The other two non-literate executive committee members Fulmoni Mallick and Bimala Mallick belong to the Lodha community. One FPC member named Jayanti Mahato has studied up to the primary standard. Two members named Mohini Mahato and Kalpana Mahato have studied up to the upper primary standard. Only the rest two members of them, namely Sefali Mahato and Binapani Mahato have completed secondary standard of formal education.

Such formal educational scenarios of the executive committee members where half of them are non-literates do not surprise the researchers. Because, in the village 28.35 percent of total female population is non-literate and 2.58 percent can only sign their names. During the fieldwork the researchers observed that Lodha women were hesitant and shy to talk to them, as they were outsiders and even with female members in the fieldwork team. Comparatively, Mahato women of the village were more comfortable talking to the researchers. The researchers found that the executive committee members are outspoken women in the village and it is not surprising why they have been elected as members of the committee. Mohini informed the researchers that all FPC members attend the month-

ly meetings regularly and also participate in FPC activities.

Fulmoni Mallick informed the researchers that as an FPC member one only needs to attend monthly meetings, to go for forest patrolling according to the schedule, and to be engaged in other activities such as plantation. The men of the village are engaged throughout the year in varied economic activities such as agricultural labouring, daily labouring, shop helpers, and van pullers. Some of them also cut bamboos from the forest and sell them to earn money. They thus hardly can manage the time to regularly participate in the activities of the FPC or to look after the committee affairs. However, they do not restrict their wives and daughters to attend FPC meetings. As Mohini informed the researchers, her husband is a daily labourer but he encourages and supports her to be the headperson of the FPC and her acts in this connection. When he manages time, he along with other men of the village goes for forest patrolling and also looks after the saplings that are planted in the deforested areas.

Before the formation of the Patharnala FPC, when Nakat and Patharnala villagers had a common FPC, Mohini went with other women of the village for planting tree saplings in the deforested areas. She also went for forest patrolling and was a known face to the local forest beat officials. It is perhaps because of these reasons the Patharnala villagers referred her name as the president of the Patharnala FPC executive committee. In 2009, when the FPC received its official registration, her name was registered as the president of the executive committee of the Patharnala FPC.

Mohini further informed the researchers that the FPC organises a meeting every month. It takes place at the primary school building or in its premises of the village and is attended by the Patharnala FPC members and local forest beat officials. Various agenda are discussed in the meetings, which are related to the protection and management of forest. The agenda include the incidences of illegal felling, to prepare duty chart for forest patrolling, to initiate plantation work in the deforested areas, to resolve the conflicts among the villagers or with neighbouring villagers regarding access to forest resources, to initiate final felling, addition and deletion of FPC

members and so on. The president of the FPC first chooses the date and time for the monthly meeting, preferably on the Saturday or Sunday of the last week of every month. The other FPC members are informed about it and are given two or three days to inform whether they have any problem with attending the meeting on the specified date and time. Once it is finalised, the local forest beat officials are informed and the meeting takes place. Convening a meeting also happens in the reverse way. If the local forest beat officials want to discuss a relevant issue with the villagers in a meeting, they inform the president of the FPC who later informs the FPC members about the schedule of the meeting.

The above sections merely introduced the village, the communities living there, their livelihood and dependency of forest, and also the structure and function of the FPC at present. In the succeeding sections the researchers will critically analyse how the villagers are responding to the JFM programme when on one side they are to some extent dependent on the forest resources, and on the other side the government is insisting them to protect the same forest. The researchers submit here that the government initiated JFM programme has affected inter as well as intra communal relationships and also their relationship with the local forest department.

Cooperation and Collaborations on Forest Resource Management

It is revealed from the study that the forest-fringe villagers cooperate as well as collaborate among each other and also with the local forest department as a part of their participation in JFM. As per the office record, 31 FPCs are protecting and managing 1,810.7 hectares of forest under Pukuria Beat. Out of that, 40 hectares of forest comes under the protection of Patharnala FPC. The researchers have already mentioned, both Mahatos and Lodhas of the village access the respective forest areas, which are closest to them.

The women of the village collaborate with each other while making plates with Sal leaves. Five to seven Sal leaves collected from the forest are stitched in a circular form with the help of date palm or *neem* leafstalk. The plates are finally stitched using stitching machines. They have received the stitching machines from the local

gram panchayat under the Self Help Group (SHG) programme. A contractor from the town buys the finally stitched plates. A bundle consists of 10 smaller packets of 100 pieces each that means a total of 1,000 plates. Each bundle is sold at the price of INR 150-160/-. They take the unsold plates to sell in the weekly markets in Jhargram, Silda, Tenga and Jamboni.

Occasionally, training is given to the SHG members to stitch Sal leaf plates. Stitching machines are installed in a house provided by the local gram panchayat and is located adjacent to the panchayat office. Women of the village go to that place for the training. Women of Sabarpara know how to make plates using the machines. But because of the distance and also because of the lack of time, they are reluctant to go to the place to use the machines. They stitch the plates by their hands and sell those plates in bundles to Bhim Mahato, a villager of Patharnala. They sell those plates individually even in smaller numbers. Bhim Mahato takes those hand-stitched plates to someone in the town who further makes plates using the machine and sells them in the market.

Intra and inter communal collaborations are observed also in terms of *Mahua* flower collection from the forest. During March-April, the *Mahua* trees are full of flowers. Generally women and children belonging to both the Mahato and Lodha communities collect *Mahua* flowers. With the flower, the Santals make an alcoholic drink, which is very popular throughout the region. Rashid Mallick, a resident of Sabarpara, told the researchers that in the year 2018, he earned about INR 5,000/- by selling *Mahua* flowers. He further informed that each family in the village earns about INR 4000-6000/- per year selling these. Some Santals from a neighbouring village come and buy the flower from the villagers. They also occasionally sell it in the local weekly markets.

Bamboo forests are abundant in the region but almost all of them are privately owned. Wild bamboos are also available in the forest. Mostly the Lodha men cut and sell them to the businessmen. A fully-grown piece of bamboo is priced at INR 70-90 depending on its length and diameter. The Lodhas also cut dry branches of big trees such as eucalyptus (*Eucalyptus globulus*), *Akashmoni* (*Acacia auriculiformis*), and

Sal from the forest. The dry branches are then cut into small pieces of around 1.5-2 feet. A bundle is made consisting of 6-7 pieces of those branches. Each of these bundles costs INR 200-220/-. The cost of the bundle depends on the quality of the woods, mainly according to their suitability as fuel wood. The bundles are then sold in neighbouring villages and also in the weekly markets. The act of cutting a bamboo tree and taking it out from its bush or the act of cutting dry branches of trees, cutting them into pieces, and then carrying them for selling are laborious works. In fact, Lodha men are hired by people in the area to cut bamboos from their own bamboo forests. Lodhas are considered to be the experts on these affairs.

Besides the access to forest resources, a sort of mutual understanding is observed in terms of the protection of forest. Mohini told the researchers that the villagers are not allowed to hunt or harm wild animals such as elephants, squirrels, hares, and monkeys, which are often seen in the forest. Villagers are also prohibited from cutting big trees. FPC members patrol at various times of a day or night to look after the forest areas under their protection. Two FPC members are assigned for patrolling every day. Sometimes forest guards from the local beat office join them. The forest guards though told the researchers that they go for forest patrolling on their own as a part of their duty. The local forest beat office has given some umbrellas, torches, and 3 feet long wooden rods to the FPC so that they can patrol the forest at different times and in different seasons.

Further, as informed by the FPC members, during the patrolling they catch the persons illegally cutting big trees or hunting forest animals. They take these persons to the local forest beat office. The researchers came to know from the forest officials that the punishments depend on the types of crimes committed by the person(s). Sometimes monetary fines ranging from INR 500 to 5,000/- are levied on persons who are found guilty. In some cases the accused persons are arrested and are put into lockup for a few days up to six-twelve months. In some cases both monetary fine and arrest orders are levied.

Final felling is perhaps the most important aspect of the JFM programme. Through this the villagers receive their share of revenue. Basanta

Mahato, a villager, commented that they protect the forest for years and wait for this time to come. Final felling is done in a forest when the Sal trees are grown to be able to produce timber. It generally takes 10-12 years for this. Once the trees are grown, the FPC members insist the beat office to initiate the final felling. The forest officials then involve the FPC members to mark the trees to be cut and to be left to grow more. The marked trees are then cut on wage basis. The wage is given based on the number of trees cut and the amount of timber prepared by each member. From this work, the FPC members can earn some money. Regarding the final felling, the beat officer informed the researchers that the local forest department transports the timbers of final felling to a town named Chadrakona Road of Paschim Medinipur, West Bengal. From there, the timbers are auctioned and sold to the contractors. The blogs of Sal tree could cost between INR 1,700 and 1,900/- per cubic feet. The cost of *Akashmoni* tree-blog is INR 900-1,200/- per cubic feet. The FPC receives twenty-five percent share from the revenue and is divided equally amongst its members. The non-timber woods, which generally are used as fuel wood, are dumped in several places in the forest. The FPC members sell these non-timber woods and the buyers carry them away in tractors or bullock carts. The money received from these selling is further distributed amongst the FPC members. Umesh Mahato, a villager of Patharnala told the researcher that from the previous final felling done in 2017, the Patharnal FPC received a sum total of INR 75,000/-. This was divided among the FPC members and each member received an amount of INR 1,154/-.

As mentioned earlier, villagers are not allowed to cut the big trees without the permission from the forest department. Often, villagers need large woods to build canopy for events such as a name-giving ceremony, ritual of first feeding of food to a child, marriage, rites of honour to ancestors, and so on. The villagers inform their requirements to the executive members of the FPC. If the purpose is found valid, the president writes an application to the forest beat officer. The beat officer forwards the application to the Divisional Forest Officer (DFO). After the permission from the DFO, the local forest beat officer hires contractors and some

other villagers to cut the dry trees from the forest. In this case, the DFO charges a small amount of money to the concerned villager.

Besides these, Mohini also told the researchers that every year the forest department donates 100 saplings of big trees such as Sal, *Akashmoni*, eucalyptus, and *Mahua* to the FPCs to plant it in their forest areas. The president does the paperwork such as to keep records of the numbers and names of villagers involved in the plantation work, days taken to plant the saplings, and payment made. A villager gets INR 218/- per day for the plantation work. Uprooting or destruction of the planted sapling is a punishable offence. The accused person(s) may be punished by levying fine of INR 300-500/-.

The villagers help each other to face and to chase away the wild animals. On the southern part of the Sabarpara there is a cashew garden. Some of the trees of the garden were uprooted when the researchers saw them. Ekalabya Mallick, a villager, told the researcher that there was a herd of seven elephants in the forest adjacent to the village. Just the day before the first visit to the village, an elephant entered the village and uprooted those trees to eat fruits. The herd also had entered the village several times, ate cashew fruit from the garden, and also ate paddy from the farmyards of the villagers. Ekalabya took the researchers to the house of Fulmoni Mallick. Her paddy was stored in her farmyard located adjacent to her house. When the elephant broke the gate of the farmyard and was eating the paddy, the villagers started to make noise. Some of them came with torches and flambeaus. The elephant was frightened and returned in the forest. The same incident was repeated though two days later.

The researchers heard from Basanta Mahato that a hyena had injured four people in the area. The beat officer informed the researchers that the injured persons are admitted in the Jhargram Hospital. The forest department has paid their hospital bills and will give each of them INR 20,000-30,000/- as compensation. If any of them dies, the family of the person will be compensated with INR 2 lakhs.

Above are the areas in which people of the forest-fringe villages cooperate as well as collaborate with each other and also with the local forest department. They protect demarcated for-

ests together, work in a group in Sal leaf-plate making activities, work together during final felling so that the share from the revenue reaches to all the members of the FPC, arrange tree woods for the people in need, get involved in plantation in deforested areas and protect the plants, chase away wild elephants, and the forest department arranges compensation for the people harmed by the attack of wild animals.

Conflicts on Accessing and Protecting Forest

Besides the cooperation and collaborations mentioned above, a form of mild conflicts is also observed amongst the villagers themselves, with neighbouring villagers, and with the local forest department. The villagers have some complaints as well as allegations against the forest department at large. The forest department is a part of the larger governance system. Thus, some of complaints and complexities are in existence even before the introduction of the JFM in the village. These are beyond the objectives of enquiry. Undoubtedly, and as observed, the initiation, existence, and functioning of JFM has given rise to a new set of relationships amongst the villagers in the forest-fringe villages. The researchers will only focus on these aspects in the present sub-section.

Wild animals especially of elephants frequently enter the Patharnala village because of its location adjacent to a forest. They enter the village at night and attempt to enter houses in search of food. Most of the houses are made of mud and are small in size. The houses are very often demolished by the elephants and injure the persons sleeping inside. Sometimes people also directly come across the wild elephants causing the death of the persons concerned. Monetary compensation is given from the forest department to the family of the person who has been injured or died by such incidences. A villager Binoy Mallick informed the researchers that compensation money ranges from INR 20,000/- to 30,000/- depending upon the severity of the injury. But he complained that the amount of money is not sufficient for daily expenses of the family of an injured person, as the injured person will not be able to work until he or she recovers fully. He suggested that the compensation money for both injured and died persons

should be increased. He further suggested that the forest officials should discuss with the villagers first and then decide the amount of compensation, which never happens.

Another villager Pradeep Mallick informed the researchers that in previous cases in the village, it has been observed that the payment of compensation is delayed for a long time. On this issue, the beat officer said that the delay was because of the required paperwork. Clarifying the process, she informed that a villager in such cases submits a written application with all necessary documents to the local beat office addressing the incidence. The application is then forwarded to the Divisional Forest Office for necessary processing and disbursement of compensation money. This process actually takes time. She further informed that the beat office has a huge workload and thus processing of individual applications definitely takes some time.

Some Lodhas of the village alleged that they often do not get permission from the forest department to cut trees for their personal purposes. When asked about this matter to Mohini, she replied that she and other executive body members help villagers to write applications and to submit them to the beat office. After that, the executive members have nothing to do with the application or permission. If the forest department permits, they supervise the concerned villager to cut trees. If the forest department rejects the application, they cannot do anything and the concerned villager has to buy the required wood from the market. On this issue, the local forest officials also clarified that they do not favour a particular community in this aspect. Rather they only act according to the permission on paper. The forest officials further informed that the villagers often individually write letters to the beat officer or directly come to the beat office with diverse issues. They hardly attend meetings and wait for their issues to be addressed there so that similar issues of other people are also resolved there.

The villagers also told the researchers that they had written application to the forest department to increase their percentage of share from the revenue of the final felling. To them, the money they receive from final felling is merely about INR 2000/- as in the previous case they received INR 1154/- each. They allege that they

do not get enough money from final felling compared to the labour they give for forest protection as FPC members. When the researchers talked to the beat officer regarding this matter, she said that to increase the percentage of revenue share is not in her hands at the local level. She clarified that the Government of West Bengal issued the JFM guidelines in 1990 where it is clearly mentioned about the twenty-five percent share from the revenue of the final felling. She and other forest officials have informed the villagers several times regarding the government guidelines related to final felling. Despite this, the villagers keep writing applications to increase their revenue share.

There is no clear demarcation of forest areas allotted for a particular FPC, which creates perplexity amongst the villagers to access the forest resources. As the researchers have mentioned earlier, Lodhas and Mahatos access the forests closest to their respective hamlets. However, the Lodhas assert that the forest closest to their hamlet is not sufficient to meet their subsistence requirements, as they are mostly dependent on it. They thus enter the forest accessed by Mahato people and are stopped often. This situation creates conflict within the village.

The lack of clear demarcation of the boundaries of the protected areas of forest also leads to conflicts with the neighbouring villagers. The Patharnala FPC executive members allege that neighbour villagers often enter their protected forest areas, cut trees without permission, and hunt forest animals. Mohini informed the researchers that the FPC members often chase them away during patrolling, and sometimes catch them and take them to the beat office. As mentioned earlier, the beat office either levies monetary fines on them or arrests them and puts them in lockup for a few days or even weeks. But when released, these people repeat the same activity. The forest department has failed to find a permanent solution to this problem. Contrarily, the local forest officials claim that they are very strict to stop such illegal felling. To them, they do their best to punish the persons who are caught red handed by FPCs while illegally cutting trees. According to them, the intra-village as well as inter-village conflicts in regards to forest protection has decreased or exists minimally.

It is evident from the narration given in this sub-section that the villagers are not satisfied with the amount of compensation money given for the damage made by wild animals and the times it takes to get the money. They are also not satisfied with the percentage of share from the revenue of the final felling. They point towards the local forest department to be responsible for these. A particular community also accuses the forest department for depriving them from some benefits. Contrarily, the local forest department gives clarification for all these. Furthermore, the villagers are engaged in conflicts with each other and also with the neighbouring villagers. They accuse each other of trespassing one another's demarcated areas of forest. Though, these accusations and conflicts exist at a mild level, they are related to the protection and management of forests under the JFM programme.

DISCUSSION

It is thus observed that the JFM has reached the remote corners of the country, to the forest-fringe villages. A number of studies (Correa 1999; Locke 1999; Saxena and Sarin 1999; Vasavada et al. 1999; Vira 1999; Ghosh et al. 2007; Kisku 2008, 2009) pointed out that the programme is still struggling to reach its target. However, it is revealed from the present study that the programme has not failed at all. In fact, villagers are seemed to be quite active in the affairs of protection and management of forests under the JFM programme. They prepare duty charts on their own and go for patrolling to stop the persons who cut trees or hunt wild animals illegally. They protect the forest for a certain period, initiate final felling, and distribute their share of revenue amongst all the FPC members of the village. They also plant saplings in the deforested areas and so on.

Citing Agrawal's (2005) concept of *environmentality*, it may be said in case of the present study that consistence and continuous effort of the forest department has turned the belief and actions of the forest-fringe people towards forest protection and management. As observed here in Patharnala and neighbouring villages, the people who once used to run away in fear from the officials of the forest department have now transformed to be active environmental ac-

tors. They now place a number of demands before the same department. As theorised, it has become possible because the forest department strategically transformed those reluctant forest-fringe villagers by organising a series of meetings, sometimes with the help of the local leaders.

However, the limitation of Agrawal's concept of *environmentality* is that it fails to capture the conflicts and tensions that are in operation under these participatory forest management programmes such as JFM. Such a limitation is observed in other notable researches also. The reality is that the participatory forest management programmes operate in such conditions of the participants who are socio-economically different from each other. As observed in the present case, the mode of livelihood and relationship with forest of the Mahatos is completely different from that of the Lodhas, though they both live in the same village. They differ from each other also in terms of inter-communal relationship with their neighbouring communities. Their actions towards the forest and the level of participation in JFM thus differ.

CONCLUSION

After three decades of its implementation, the JFM programme has reached to the very ground level and is functioning well to some extent. The forest-fringe villagers, once reluctant participants, now have shown interest in the protection and management of forests. However, the forest and its protection have been found to be a non-profit as well as non-subsistence venture. Villagers prefer to use the forest as it is and perhaps never calculate the price of mushrooms, fuel wood, fruits, flowers, and other resources they collect from the forest. They also perhaps never have understood the scientific importance of forests and trees on human lives. They participate in JFM and protect forests keeping in mind the individual share each of them will receive from the revenue of the final felling. Because of this reason, they cooperate and collaborate with the local forest department to manage and protect the forest and regulate the forest products. They become engaged in intra-village and inter-village conflicts also because of this reason.

RECOMMENDATIONS

One of the main objectives of the JFM programme was to socio-economically develop the forest-fringe communities. The government thus should make it more money enterprising so that the programme becomes attractive to the villagers. The forest department should initiate discussion with the local communities for the better implementation of the programme rather than overlooking the problems. Restructuring of the forest department is also needed in that sense. Awareness about the importance of forest protection needs to be increased amongst the communities. Furthermore, the dependency of the communities over forest should be lessened. The development through forest protection needs to be supplemented with or replaced by other kinds of development programmes.

LIMITATIONS OF THE STUDY

Because of the limitation of budget, the time allotted for this particular research, and the accessibility of the villagers, the researchers could not study all the villages of the region, not even all the Lodha and Mahato villages even under the Sapdhara Gram Panchayat to see how JFM is functioning in those villages. Thus the findings and interpretations of this study may not be applicable to other Lodha and Mahato people living in Jungle Mahals or in other regions.

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ABBREVIATIONS

DFO: Divisional Forest Officer
 DRS: Departmental Research Support
 FPC: Forest Protection Committee
 JFM: Joint Forest Management
 NTFP: Non-Timber Forest Product
 PVTG: Particularly Vulnerable Tribal Group
 SAP: Special Assistance Programme
 SHG: Self-Help Group
 SVMCM: Swami Vivekananda Merit Cum Means
 UGC: University Grant Commission

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