

COMMUNITY PARTICIPATION IN FOREST MANAGEMENT: A CASE STUDY FROM DOON VALLEY, DEHRADUN DISTRICT UTTARNCHAL

ABSTRACT

Community participation has occupied central stage in all the development strategies outlined since 1990s. In case of forests, the Joint Forest Management (JFM) policy has been adopted for protection and regeneration by involving local communities. In case of Doon Valley where the forests are facing lot of biotic pressure, JFM project was initiated in 1998-99. The project has been able to make some impact. It has succeeded in mainly in plantation and soil conservation efforts. But the noticeable failures have been with regard to awareness creation about sustainable forest management, developing mutual trust between community and forest department, and in any significant reduction of dependence of community on forests. There is a need to adopt JFM with appropriate community-centered modifications as a permanent strategy rather than a short-term project. All the stake holders-the forest department, community and civil sector organizations have to contribute in developing suitable management mechanism.

KEY WORDS: Community participation, stakeholders, forest policy, joint forest management

BACKGROUND

Forests play crucial role in providing livelihood opportunities to a large human population all over the world. They provide productive as well as protective functions to human society and other organisms of the global ecosystem. They are source areas of fuel, fodder, timber and numerous minor products (e.g. medicinal herbs, gums, resins, food items). They also perform important protective functions such as storing atmospheric moisture, regulating water flows, reducing soil erosion and conserving biological diversity etc. Forests play crucial role in sustainable development of mountain region that are home to about one tenth of human population (Mountain Forum, 2000). It is in fact their important economic and ecological roles that have made forests highly contested spaces, the arena of struggles and conflicts. The high visibility of these unresolved conflicts have spurred theoretical debates, policy interventions and institutional changes in forest management strategies. (Doornbas, M. et al., 2000).

Forests are significant part of the land use in India as they occupy 20.64 % of the total geographical area of the country. The latest available information shows that only 11.88 % of forests are in the category of moderately to very dense (> 40 per cent canopy cover) and the rest are open forest (The Hindu, Delhi edition, 18th July, 2005). Forests continues to be very important for Indian society because more than 100 million people are actually forest dwellers and another 275 million are dependent on them for their livelihood and means of survival (Lynch, O.J. 1992). As far as the mountain areas are concerned, 123 districts have been classified as hill districts having 38.34 % of their geographical area under forest cover (Forest Survey of India, 2002).

FORESTS AND COMMUNITY IN UTTARANCHAL

In the newly created state of Uttarakhand, forests occupy center-stage because they cover more than 64% of the state's geographical area. The undulating Himalayan topography provides limited scope for agriculture and other land-based economic activities. Forests are therefore considered sustainer of rural-livelihood and in fact rural development of Uttarakhand is sought to be forest-centered (Govt. of Uttarakhand a, n.d.).

The relationship between forest and community is very close in Uttarakhand. The forests play the central role in the economy and ecology of this fragile mountain state. The forests of the region have to meet various demands. The first and foremost are the local demands of fuel, fodder, timber and other products. As majority of the people lives in rural areas and practice agriculture that is heavily forest-dependent, its demand on nearby forests is the first charge on Uttarakhand forests. The second demand is of commercial timber and soft wood for industrial purposes. Thirdly there are demands of ecological nature to maintain forest cover for preventing soil erosion and land degradation and to ensure the stability of fragile ecosystem (Govt. of India, 1999).

The varieties of demands also bring in variety of stakeholders in the arena of forest use and management. Among the interested parties, there are local communities who depend on forests for their sustenance, there are commercial and industrial interests who find forest resources immensely useful and there is state or its concrete form – government- that presumably is interested in the welfare of all citizens (Nadkarni, M.V.,1989). As far as local community is concerned, it has been viewed as a unified, organic whole but this vision fails to attend to differences within community and ignores how these differences affect resource management outcomes, local politics and strategic interaction with in communities (Agrawal, A. and Gibson, C.C., 1999). As the term 'community' has multiple meanings, it can divert attention from issues created by class or gender. Even within community certain section of people may gain less than others (Jeffery, R. and Sunder, N., 1999).

As in case of community, the state's role in the forests of Garhwal and Kumaon appears monolithic at first glance but closer examination reveals its exercise of control as an ensemble of diversified access and management regimes (Rangan, H. 1997) It is this new perspective about multi-layered and differentiated community and different government supported and self evolved management regimes that should be critically analysed to evolve a meaningful role of community in sustainable and equitable management of forest resources in Uttarakhand.

Uttarakhand is a state that has a unique tradition of forest management by local communities in the form of *Van Panchayats*. The *Van Panchayats* were introduced in 1920s by the civil administration that acted as a buffer between forest department and villagers after a period of intense agitation against major expansion of British control over forest resources in Uttar Pradesh hills [which forms major part of present Uttarakhand] (Arnold, J.E.M. and Stewart, W.C., 1991). The system of *Van Panchayats* has remain restricted to less than 14 % of total forest area and mostly to Kumaon region of the state. The remaining forest has remained under the direct control of state government either through forest department (Reserved forest) or revenue department (Civil-Soyam forest) where local communities had no role to play in their management.

There have been debates over the efficacy of the role of local community in forest management of the region. While some scholars have argued for the increased participation of local communities (Arnold, J.E.M., 1997; Ballabh, V. and Singh, K., 1988; Chambers, R. et al 1991; Somanathan, E, 1991, HARC, 2002) others have argued for cautious approach (Agrawal, A. and Gibson, C.C., 1999; Blair, H.W., 1996 Das, J, 2000, Kaul, R. N. et al, 2003). Local population perceives the inclusion of community institutions in forest management as the result of protests. In last decade, as the forestry debate has intensified, state has increasingly responded to the claims of forest dwellers (Saxena, N.C., 1999).

FOREST MANAGEMENT POLICY IN UTTARANCHAL

Forest management in India said to have started in the colonial period particularly in 1870s when Indian Forest Act 1878 came in to existence. Prior to that forests used to be considered common property of all inhabitants and by and large the rural communities enjoyed untrammled use of forest and wasteland in their vicinity (Guha, R.C., 1983). According to 1878 Act, all the land that did not fall under 'continuous' cultivation or 'permanent' settlement was classified as forest-land with the State being recognized as the sole proprietor (Forest and Communities.org). On arrival of railways, the exploitation of forest particularly hill forests intensified as millions of wooden sleepers for rail track and fuel for workers and timber for building meant heavy charge upon forest. The forests of Uttarakhand Himalaya were extensively exploited for this purpose.

Commercial exploitation and degradation of India's forest, including forest to Himalayan region increased dramatically after in post-independent period. National Forest Policy 1952 indeed accelerated this process as the guidelines were mostly directed toward supply of cheap timber and non-timber forest products for state-sponsored industrialization and modernization. The new forest policy announced in 1988 is radically different from the previous policies. According to this, forests are not to be commercially exploited for industries, but they are to conserve soil and environment, and meet subsistence requirements of local people. The policy also talks of safe guarding the customary rights and interests of such people and emphasises that forestry programmes should pay special attention to undertake integrated area development programmes (Saxena, N.C. 1999). This policy therefore is highly significant for Uttaranchal as the region faces the crucial questions of economic development and ecological conservation.

In the present day Uttaranchal [then part of Uttar Pradesh], the British policy of declaring all *benap* land (land other than private and cultivated), as Protected forest in 1897 evoked massive protest movements resulting in providing some rights and privileges to local villagers. In 1970s the famous *Chipko Andolan* was also a movement by local people against resource exploitation by out side agencies. There are various other informal institutions like *Mahila Mangal Dals* and *Lath Pachyats* involved in forest protection and management

The current phase of emphasis on community participation in planning, exploitation and conservation of forests began in 1980s when the concept of Joint Forest Management (JFM) was initiated in few states in India. This became a policy of the Government of India in 1990 and currently all most all of the states including Uttaranchal are following this policy. In Uttaranchal World bank has funded JFM under the name of Uttaranchal Forestry Project, however, this has been implemented largely in the areas outside *Van Panchyats*. Where as a total of 6777 Van Panchyats were manage 5241 sq. km. forest area, there were 1217 Joint Forest Management

Committees managing 2118 sq. km. area as on 1st July, 2001. (Forest Deptt. Uttarakhand, n.d.) Another project-Watershed Management Project has also focused on forest regeneration among other things. While both these projects have come to an end, yet another project entitled National Afforestation Programme is to be implemented by *Van Panchayats* (Hindustan Times, 22 Jan 2004).

All these projects and programmes have a common theme of involving community in forest management but people remain unsatisfied. There are declining incentives for community management in the changing macro context and policy environment (Sarin, M. 2001). There has been constant shift in the policy regarding the nature and modus operandi of involving local community in the forest management. Therefore the forest use and management policy in Uttarakhand, of which Doon Valley is a part, continues to remain constant subject of debate and discussion.

In case of Doon valley with approximately 50 per cent of the area is under forest, increased urban industrial growth after 1980s and its acceleration after formation of Uttarakhand state, the forests have come under tremendous pressure. At the same time village communities have not been involved in forest management because in this part of the region, forests are in Reserved Forest category and the institution of *forest panchayat* does not exist. However, the forest department implemented JFM in 16 villages of the valley in 1998-2002. The results have been a mix of success and failures. Recently under National Afforestation Plan another programme of forest regeneration has been initiated by Forest Development Agency in 46 villages. Incidentally 6 of the villages are the same as covered under JFM earlier.

In this context, this study has tried to assess the community participation and impact of joint forest management (JFM) in 3 villages with varying degree of success. The analysis of the participatory process and reasons of success and failures of JFM will be of immense value in understanding the utility of community participatory approach in sustainable management of forest in the study area.

OBJECTIVES

Given the above background, this study has primarily focused on the relationship of village community with the forests. The relationship has been studied with reference to forest resource utilization and participation in the management. The objectives of the study have been framed to assess the main parameters of JFM and their actual implementation. Since the focus of the whole JFM project was the involvement of local community, the objectives the perspective and perception of local community vis-a-vis JFM. The following are the broad objectives of the study:

1. To analyse the present status of Joint Forest Management in Doon Valley
2. To discuss the nature of forest resource utilization by rural communities in study area
3. To analyse community participation in management of forest resources with particular reference to Joint Forest Management
4. To highlight policy issues for participatory sustainable forest management in Doon valley

DATA BASE AND METHODOLOGY

The present project was envisaged as an exercise in understanding the community participation and impact of JFM in Doon valley with the case study of 3 villages where the programme is said to have succeeded in varying degrees. The research design basically consisted of three components:

- Literature survey
- Data collection-primary and secondary
- Data analysis and conclusion

To begin with a review of the available literature on the theme was undertaken. The literature was scanned at the libraries of Rural Litigation and Entitlement Kendra (RLEK), Forest Research Institute, Dehradun and Indian Institute of Remote Sensing, Dehradun. Internet and newspapers were also scanned to see the current material on the subject. This was followed by the interaction with the scholars and practitioners working in the field. I also interacted with forest department officials and NGOs working on issues of JFM to draw on their experience.

The data for the present study have been collected through an intensive process at primary as well as secondary level. In the initial stage secondary data was collected from the District Information Centre, Dehradun, Divisional Forest Office, Dehradun, Forest Range Offices at Jhajra and Malhan. The information was collected with regard to natural and human resources of the villages and surrounding forests as well as the data about JFM activities. Another exercise undertaken was pre-survey visits to the area and discussion with key informants like Gram-Pradhans (Head of Village Council), Head of Village Joint Forest Management Committee, elderly persons and Panchyat Raj Institution functionaries.

After initial feed back, two survey schedules were developed to collect quantitative as well as qualitative information from sample villages. As proposed, 3 villages were selected for in depth information collection. These villages are Aamwala, Malhan and Sekhowala. This schedule large number of issues connected with the strategy and practice of JFM in the villages. In the selected villages, apart from village level information, the household level information was collected from 20 % of the representative households. This exercise involved intensive discussion with all section of villagers individually and sometimes in a group. Deliberate efforts were also made to involve women in these discussions to help in identification of problems and their likely solutions.

After the data collection, careful analysis was undertaken to bring out salient features from the information provided by the respondents. The perception regarding the problems of sustainable development and role of local community as emerged through the exercise has been presented here. Therefore the results presented in this report are the outcome of an intensive participatory process supported by the field data and firsthand observation.

LIMITATIONS

During the information gathering process, it was realized that there have been various government and NGOs sponsored programmes like Watershed Management Project, Swajal project, Jagriti (an NGO) initiated activities and line department programmes in the villages and the respondents are sometimes confused as to which activity was carried under which project. Since Doon Valley

Watershed Management Project has been forerunner with main objective of weaning away the villagers from forest dependency, it has created confusion in almost all the villages. Secondly repeated data collection exercise by various agencies has also made villagers reluctant to spare time and share the information. Thirdly they are also upset by the fact that despite repeated mention of problems they still suffer from lot of inconveniences. Another limitation was non-availability of quantitative information particularly with regard to forest use and economic benefits.

DESCRIPTION OF THE STUDY AREA

GEOGRAPHICAL CHARACTERISTICS OF THE STUDY AREA

The study area is the valley portion of the district of Dehradun which is located in the south-western part of the state of Uttaranchal, India. Popularly known as Doon Valley, this tectonic synclinal valley lies between $29^{\circ} 55'$ and $30^{\circ} 30'$ north latitudes and $77^{\circ} 35'$ and $78^{\circ} 20'$ east longitudes with an area of about 2002 sq. km. Ranging from 315 meters to 2000 meters in altitude above mean sea level, this inter-montane valley, forming a parallelogram, has a maximum length of 72 km from North West to South East and maximum width of 35 kilometers from north to south (Ananthraman, M.S. 1985). The area is bounded by the river Ganga in the east and river Yamuna in the west (See Map). The northern boundary is formed by Mussoorie hills where as the Siwalik mountains form the southern boundary of the valley. In order to understand broad geographical characteristics of the study area, various physical and socio-economic attributes have been briefly discussed below.

Physical Characteristics:

The physical formation of a region provides the basis for its natural landscape. The physiography, drainage, climate, soil and natural vegetation are some of the important components of the natural landscape. The word Doon represents the bouldery Valley that runs parallel to and between lesser Himalayan and Shiwalik range of Himalaya. The valley is covered by poorly consolidated and un-assorted pebbles and boulders called Doon gravels. They are covered by a thin mental of soil but in riverbeds of Suswa, Song, Jakhan, Kansaru, the gravels lack any soil cover. These gravels in the valley are generally loose and highly pervious with little or no clay and form a poor water reservoir. The permanent water table is generally deep in Doon valley.

The drainage of Doon valley is mainly through two stream systems. One of them named Song-Suswa system carries water towards southeast into the Ganga and the other, Asan flowing southwest carries water to Yamuna. There are numerous seasonal small streams that join these east and west flowing rivers. Absence of water on the surface is the main features of the most *nalas* (rivulets) and streams that generally remain dry during the greater parts of the year except during the rainy season.

Dehradun valley has moderate climate because of nearness of Himalaya and due to average elevation of 700 meters above sea level. The climate of the study area exhibits the character of sub-temperate climate of mountain areas because of the combined effect of plain-like warm climate and cool lesser Himalayan climate. The mean minimum and maximum annual temperature varies from 2.7°C in December and January to about 26.9°C in May and June. Only

the months of May and June are hot though they are seldom oppressive. Like all other parts of India, Doon valley is also greatly affected by the Monsoons that generally break in the middle of June and remains active till the middle of the September. The months of July and August have heaviest rainfall. From October to December, the climate remains dry. In the end of December, January and early February the valley receives winter rains. The months of March and April are generally without rains. Normally the rainfall in Doon valley is sufficient and averages around 2000mm.

There is a great variation in the soils of Doon valley due to variation in topography, intensity of erosion, parent materials and other factors. The soils in the area vary in texture, depth, stoniness, colour, drainage, moisture status, organic matter etc. Based on the textural characteristics, three soil belts have been identified in the valley, namely, the Himalayan belt, the Siwalik belt and the boulder belt occupying the middle part of the valley.

Doon valley has a rich vegetation cover. Although the major portion of Doon is occupied by the Sal (*shorea robusta*) but miscellaneous forest are also found here. The hydro-geological and meteorological conditions of the valley are responsible for the condition for the different types of forest cover. Sal and its associates can be classified in Northern tropical moist and dry deciduous communities. They are found throughout the Shivaliks across large tracts of the valley and also along the lower foothills of the Himalayas. A presence of large proportion of clay soil and better drainage act as favourable conditions for the growth of *sal* trees. One can easily visualize Doon valley as it must have been in past, covered by dense forests interspersed within swampy grasslands, a situation that must have prevailed several centuries ago (Palanidurai, K.V., 1992)

Demographic Characteristics:

Doon valley has been a popular settlement area since British period. Its moderated climate, availability of fertile soils, scenic beauty has helped in its early peopling. The establishment of important national level institutions and offices e.g. Survey of India, Forest Research Institute and Indian Military Academy further helped in influx of population from all over India. This trend accelerated in post-independence period with new institutes and offices being set up here. As a result of partition, large number of refugees came and settled here. The creation of Uttaranchal with its capital has added to new wave of settlers from hills as well as plains. Presently the density of population of Doon Valley is 572 person per sq.km. with the growth rate of 33.2 per decade.

Doon valley has performed well in the matter of education since early days. The presence of many well-known schools and institutions and the availability of educational infrastructure are the main causes of educated human population and composite culture. The total literacy rate in the valley is 71.14% (2001 Census). The valley also boasts of high female literacy of 66 %. The scheduled castes comprise of 12.14 % of the population where as 2.16 % of the population is Scheduled tribe. The population of Doon valley is ethnically diverse due to inward migration. The people of different castes, religions and geographical region live here. According to Census of India (1991), of the total population, Hindus were 85.29%, Muslims, 2.97%, Sikhs 0.87%, Christians 0.81% and others 0.44% (District Economic and Statistical Office, Dehradun, 2001).

Economic characteristics:

The favourable climate and rich biodiversity of the valley has helped in attracting the people from different parts of India resulting in the diverse occupational structure. The rural population of the valley has agricultural as their main occupation and it is supplemented by off-farm incomes from dairy, wage employment in both rural and urban areas and skilled jobs in government and private sectors. The process of urban and industrial growth has been continuing but agriculture remains the main occupation of rural people.

Land use of the valley is dominated by forest and cultivated area as they respectively cover about 66.13% and 17.12% of the total area. In villages, forest biomass support is crucial in agricultural and animal-husbandry. Farm sizes are small and fragmented. Some 75% of holdings are less than 1.0 hectare. But the slope has been advantageously used for the expansion of canal system that is main source of irrigation. Irrigated land account for more than 57 % of the cultivated area. The main crops of valley are Wheat, Rice, Maize, Paddy, lentil, peas, Sugar-cane and variety of coarse rice(sanva, manduva) and gram.

Livestock Resources:

Animals are a necessary component of small-scale agricultural activity. Apart from providing draught-power, they are important source of manure. Added to this is the milk-sale that provides the much-needed cash income. The area has generally seen a decline in cattle population due to shortage of fodder. The agricultural land is primarily used to grow cereals. Fodder crops are grown in limited area in kharif season. The division in families has also been cited as one of the reasons of reduction in animals as there is limited manpower to organize agriculture and animal husbandry along with daily-wage activity or service outside the village. The decline is mostly in case of sheep, goats and cows.

DESCRIPTION OF STUDY VILLAGES

The villages selected for the present study are located in Western Dun valley. The village Aamwala is located 5 km north of Dehradun–Chakarata road toward Mussoorie hills where as Malhan and Sekhowala are adjacent to Siwalik sal forest in the south (See Map). Administratively the former falls in Sahaspur development block and the later two in Vikasnagar block of Dehradun district. Some of the broad characteristics of the study villages are summarized in the following table:

| Name of the village | Characteristics | Agricultural Land (hectares) | Forest land (Hectares) | Community Land (hectares) |
|----------------------------|--|-------------------------------------|-------------------------------|----------------------------------|
| Aamwala | Sorrounded by Sal forest, scattered houses | 62.16 | 200.00 | 7.00 |
| Malhan | On the forest boundary, Small linear patterned compact village | 12.60 | 295.30 | 0.00 |
| Sekhonwala | Checker board pattern, | 13.67 | 267.10 | 0.00 |

| | | | | |
|--|-----------------|--|--|--|
| | compact village | | | |
|--|-----------------|--|--|--|

Source: Afforestation Project under National Afforestation Programme of District Forestry Development Agency, Dehradun, Uttarakhand

Human Characteristics:

The population of these villages is typically representing the characteristics of the population of the valley. The villages are of medium size having population in the range of 500 people. In terms of Scheduled caste population, Aamwala and Malhan have around 13 % of their population in this category where as Sekhonwala has more 75 % population in this category. The literacy rate ranges between 60 and 70 %. However the literacy level is low in old generation and muslim women as reflected in Aamwala.

Half of the working population is engaged in agriculture as small and marginal farmers and another quarter is classified as agricultural labourers. The field survey, however reveals that majority of persons categorized as agricultural labourers find casual employment in other than agriculture as the land holdings are small and except for limited period the cultivator-farmers do not require any additional help. The agricultural production is moderate as all the land is not irrigated. In case of cultivators also there are good number of households supplementing their income either through selling milk (animal husbandry), sericulture, small shop keeping etc or a member of the family has to be engaged in other activities generally in tertiary sector. It is therefore a typical rural population representative of rural setting of Doon Valley.

Forest Resources:

Forests occupy fairly significant area in the vicinity of these villages. All the forest area, except 7 hectare in Aamwal is under Reserved Forest category where traditionally villagers had no role in their management and are also not legally entitled to any benefits. The forests are dominated by Sal (*shorea robusta*) but other variety of trees such as *Rohini*, *Sandan*, *Sirus*, *Sulla*, *Surain*, *Jhingan* are also found in mixed forest areas. In terms of canopy cover, the forests have been categorized as fairly mixed jungle and dense mixed jungle mainly sal. However there are tracks that are really blank in Reserve Forest area. The assessment regarding fodder and fuel wood availability and the demand reveals that a huge gap exists regarding fodder. It has been estimated that in just three case-study villages fodder shortage is as much as 1255.54 Metric Tons/year. However in case of fuel wood the situation is comfortable only if the local villagers use the material available in Reserve forest and agricultural fields. But there are instance in Sekhonwala of fuel wood being extracted for sale. The major reason of forest degradation mentioned by villagers is fire in summer season and non-involvement of villagers in fire control leads to massive damage.

THE KEY ACTORS AND THEIR ROLE

The Government of India, Ministry of Environment and Forest guidelines on Joint Forest Management to States and Union Territories primarily emphasized involving village communities and voluntary agencies for regeneration of degraded forest lands (Letter No. 6-21/89-FP dated 1st June, 1990). These guidelines were drawn on the basis of National Forest Policy, 1988 that

envisaged people's involvement in the development and protection of forests. The reading of the guidelines makes it clear that JFM is an attempt to involve local village communities in management of nearby forests with the incentives of equitable distribution in income and stake in forest benefits. Therefore the primary stakeholders in JFM are the State Forest Departments, the local village communities and the voluntary Agencies/NGOs working as the interface between the two (MoEF, 1999).

STATE FOREST DEPARTMENT/STATE GOVERNMENT AS STAKEHOLDER

The State of Uttaranchal inherited Joint Forest management project from the parent State of Uttar Pradesh in 2000. The state government concretized the Government of India guidelines in three objectives:

- To give bona fide users a direct stake in the forest benefits and role in planning and management of forest to improve the conditions and productivity of forest;
- To support increased and equitable distribution of income to users and managers of forests
- To develop sustainable forest management in JFM areas supported by the project after the end of first five year micro-plan (Kaul, R.N. et al, 2003)

Uttaranchal already had community participation in forest management through *Van Panchyat* (Forest Councils). However it decided to implement JFM in those Van Panchyat villages that opted for it and in non-Van Panchyat villages. In total the project has been implemented in 1217 villages including 16 villages of Doon Valley. The state government amended and notified "The Uttaranchal Panchyati Forest Rules-2001" in order to strengthen community participation especially of women in natural resource management (Government of Uttaranchal b, n.d.) It also notified "Uttaranchal Gram Van Sanyukt Prabandhan Niyamawali-2001" on 26th December 2001 to define functions of Joint Forest Management Committee (Forest Department, Uttaranchal, 2004).

According to Dr. Dukhdev Singh, the Divisional Forest Officer, Dehradun at the time of JFM implementation –

The department carried out JFM in Doon Valley with the objectives of reviving the forest area in and around the villages by involving villagers, creating local employment through regeneration of resources and to reduce the villagers' dependence on the forests. The project was conceived on the principles of resource sharing-fuel wood, fodder, medicinal plants etc but not the timber because that can prompt villagers to hasten the drying of good mature trees.

The project has been successful because people in the villages could be made aware of JFM benefits. However it could bring still better results if it was taken up as a continuous activity and not as a scheme. Because of discontinuation, the project activities have ended and Village Forest Committees (VFCs) are not being monitored. There is also some reservations among forest staff regarding JFM as many officials and lower staff feels reduction in their powers due to VFCs.

In order to meet the objectives of JFM, there is need of continuity, revival of traditional relationship between community and forrest, promotion of alternative sources of energy and

proper share of VFCs in forest products. However all this can be insured only when Van Panchyat remain separate from regular Gram Sabha because that institution is highly politicized.

According to lower level staff,

The role of forest department has been reduced to secondary position as the village chief or the Head of VFC decides about the activities. The success rate could be as low as one-fourth because village headman or President, VFC is interested in money rather than the actual activities. There has been lot of political interference and NGO involvement was a formality. NGO motivators were not trained and they could not create proper awareness. The lower wage rates (Rs. 58/day as against Rs.80/day in general) discouraged people to work in JFM activities. According to some staff members, the money has been wasted. Instead the lower level staff should be strengthened to protect the forest.

The role of Forest Department/State Government can also be assessed through various announcements made in conferences/workshops and reported in local newspapers. It was reported on 4th August 2000 that administration has decided to constitute 358 Van Panchyat in Chakarata a tehsil of Dehradun. This was to be done to provide villagers with the opportunity to manage the forest of their panchyat area (Amar Ujala, 4th August 2000). Forest department also initiated the heading over the forest area planted during JFM to the village committees. In more than 1200 villages covered by JFM, the villagers were to be made responsible for protection and regeneration of forest area developed during project period (Amar Ujala, 20th May, 2003). There have been repeated announcements by the government to enhance the rights of Van Panchyat and the approval of the panchyat will be necessary in various forest related matters (Amar Ujala, 29th May 2003). In a major move towards restoring the badly disturbed ecological balance, the Uttaranchal Government also decided to implement National Afforestation Programme aimed at conserving forest belt in the state with the active assistance of community (Hindustan Times, 22nd January, 2004). The similar reports in the media underlines the role of forest department as the the stakeholders (See Annexure 3 containing Newspaper Cuttings).

The major impact of JFM with regard to forest department is the sensitization of departmental functionaries. Though there are contradictory views about JFM with in the forest department, yet the project has been able to provide an alternative mechanism of forest management. The forest staff on the one hand feels somewhat relieved by shifting of responsibility to villagers, on the other the people's involvement is considered as unnecessary and non-productive. Secondly JFM has initiated a process of formation of Van Panchyat in Doon valley that was bereft of this institutional arrangement. Thirdly since the villagers neither have technological expertise nor the complete administrative control, the improvement in forest conditions also remain the responsibility of Forest Department. The village community in rural areas of Doon Valley looks at the forest as the source areas of fuel and fodder, their commitment to protection and regeneration of forests is limited to satisfactory fulfillment of their demands. Therefore the JFM has provided a wonderful opportunity to forest department to manage the forest with people involvement and move towards a sustainable forest management.

THE LOCAL COMMUNITY AS STAKEHOLDER

The primary focus of this study is the village community having gone through the experience of JFM in Doon Valley. In all, the JFM was implemented in 16 villages of the valley but the results are said to be mixed. Therefore the study has considered 3 villages with varying degree of success to draw appropriate lessons. As mentioned earlier, the three villages namely Amwala, Malhan and Sekhonwala, selected for this study represent the categories of highly successful, moderately successful and less successful JFM villages respectively. The field study conducted with the help of Village Schedule (Annexure 1) that was used to collect village level information mainly representing the views of the President of Joint Forest Management Committee (JFMC) of these three villages brings out the following features:

- All the villages were initially covered under Doon Valley Watershed Management Project (DVWMP) that was being implemented by the personnel mainly drawn from forest department.
- Because of DVWMP, there was a background of government sponsored forest related participatory activities where a separate body other the elected Gram Panchayat (village council), was constituted to plan and execute watershed management programmes.
- Invariably the Village Watershed Management Committee with some modifications were renamed as (JFMC)
- All the villagers are well connected with meteled road and have other basic facilities such as drinking water, electricity, and Primary/middle School.
- Majority of the households have small land holdings where as about 25 % of the total households are landless.
- The JFM activities have mainly concentrated in Reserve forest area as common/panchayat land is not available for plantation
- The tree cover has been described as moderately thick because of the degradation taken place in pre-JFM period.
- The villagers had no rights/privileges and had no role in the management of forest in pre-JFM period.
- There was no specific identification of forest users as all the villagers are considered forest dependent for one need or the other.
- The exercises of formation of JFMC also called Village Forest Committee and preparation of Micro-Plan were participatory and transparent according to the President of the committee.
- The primary objectives of the JFM were- protection of forest, plantations in the forest area, soil conservation, reduction of pressure on the forest
- Instead of all the village community, only the JFMC members have been involved in planning and decision making
- The community involvement has remain restricted to wage employment in activities such as pit digging, wire-protection and civil construction
- The programme has been successful in forest plantation and soil conservation segments because of employment opportunities, security through watchmen/watchwomen and constant monitoring during the project period

- The failures has been in awareness creation and plants survival as the Chowkidars (Watch staff) was discontinued after the project
- Involvement of women has not been satisfactory in planning and decision making exercise as they were mainly involved as daily wage workers
- A major cause of concern is the discontinuation of project leading to pre-JFM scenario where no protection is being provided to new plantations, forest department is not doing enough monitoring and the villagers are using the forest as open-access.

According to Mr. K.S.Rana, a vocal President of Village Forest Committee, Malhan-

The objectives of the project were protection and improvement of forest, fire protection, plantation and to reduction of pressure of fuel wood and fodder on the forest area. But the local forest department was not very clear about he objectives and all the plans were made from above. Moreover higher-level officials were not very interested and lower level staff was apprehensive. While the project was targeted at Malhan village population, the forests of the area are under pressure from the residents of many nearby villages. Instead of proposed Rs. 23,48,568 only Rs 13 lakh has been spent. All the project details were not shared with the villagers, as even the JFM Niamawali 2001 was made available in 2004. The villagers of course have benefited through wage earning but they have not received any share from forest products. The plantation has succeeded only where soil is good and sufficient moisture was available. The villagers' awareness has increased and the success though only limited, can be attributed to villagers' involvement. The project cannot be described as successful mainly because forest department do not want people to be part of management.

COMMUNITY'S RESPONSE

Apart from the overall response from the JFMC President and members, 20 % of the households were visited during the fieldwork to get individual information and perception regarding JFM. The response of villagers varies from "Very Successful" to "Absolute Failure" depending on the knowledge of the programme, the benefits received and degree of involvement. After enquiring about the information on land holding, livestock, occupation, income, educational status etc, the respondents were asked about the forest use to assess their dependency on the forests. Then there were questions related to forest resource assessment in the vicinity of the village and the issues related to joint forest management. Having obtained their opinion about JFM and its implementation, the respondents were also asked about suggestions for participatory sustainable management (the household scheduled is enclosed as Annexure 2). Here is the summary of the information collected:

Use of Forest:

The forest continues to be a major resource for the rural community in the villages of Doon Valley. Despite being connected with road and having all the basic facilitates, people are using forest as source areas for fodder and fuel. As much as 30% of fodder requirement is met from the surrounding forests. As the land holding is small, fodder from agricultural residue is not sufficient to meet the demand throughout the year. Therefore the women of the household have to arrange fodder from nearby forest during the lean agricultural season of winter months between November

and February. The average distance covered in each trip is about 6-7 kilometers for which 4-5 hrs are spent for 3-4 days in a week.

In case of fuel, the dependency is much higher. All those households who do not have liquefied petroleum gas (LPG) connection, all most 100 % of energy requirement is fulfilled from forest. In Aamwala, biogas plants installed during Watershed Project and LPG connections have reduced some pressure on the forest but in case of Malhan and Sekhonwala, the pressure is intense. In Malhan there is another pressure of fuel wood extraction for sale by poor landless households from the village as well as nearby villages. Since the village is more than 30 kms away from the city of Dehradun and is inhabited by relatively poor population who cannot afford the LPG, there is intensive use of nearby forests. Here both men and women go to the forests particularly in winter months to bring and store fuelwood for whole year. However the household engaged in fuelwood selling visit the forest throughout the year. The distance covered is longer and can take up to 6 hrs to bring about 40 kg of wood in each trip. There has been no major change in this scenario in the post-JFM period. As the new plantation is still young, the pressure continuous on the old trees. But occasionally the people damage the smaller trees also to collect the material with less effort.

Assessment of Forest Resources:

All the respondents were aware of this fact that the forests are under Reserved category and they have no rights/privileges, as is the case in the hill region of the state. Some respondents, however mentioned of some kind of grant system existing up to 1970s where by the villagers could get some forest products like poles for thatching of roof. The villagers feel that they should be allowed to collect dry fuel wood and tree braches for their use with out any legal hindrance. Though they bring these materials but used to have fear of forest guard. But JFM has changed the situation. Due to continuous interaction, villagers have developed friendly relations with forest personnel.

ISSUES IN JOINT FOREST MANAGEMENT:

The World Bank funded JFM project was initiated in 1998-99 in Amwala and Sekhonwala and in 1999-2000 in Malhan. Most of the villagers could almost correctly remember the initiation year but there were many who were confused. The reason advanced by them was their non-involvement in JFM activities. The project in the case-study villages did not go through the exercise of identification of forest users and all the villagers have been taken as users. While the attempts were made to involve all the villagers in formation of Joint Forest Management Committee (JFMC), the results were not always encouraging. Many times villagers mentioned about lack of information and sometimes even deliberate avoidance of large community participation. In fact it has been alleged by large number of villagers in Malhan and Sekhonwala that they were not being informed about the meetings. As far as participation in micro-plan is concerned, the situation seems dismal. People, except some VFC members, were not aware of any such document. It seems that the forest department official and few VFC members prepared the plan. The arguments advanced for this lack of participation by VFC members were that people at large were interested in getting employment rather than spending time in meetings and also they did not have much to contribute.

Objectives and Main Activities:

The majority of villagers were not very clear about the objectives. They did mention plantation, construction of check dams and barbed wire protection of forest as the main activities and the creation of employment opportunities through these activities was the main objective of this programme as perceived by the villagers.

Involvement of Local Community:

The purpose of JFM project was the protection and regeneration of forest with the involvement of local community. The results of the present study show that the project has not succeeded in this broad objective to any great extent. The respondents were specifically asked about their involvement in planning, decision-making, implementation and monitoring and in all the stages there has been very limited involvement of the community at large. Of course there are people among the community who have said yes about their involvement but on deeper questioning it was revealed that they participated in the monthly meetings to know about the wage-works to be undertaken in future. Therefore for the majority of local population, JFM project provided some opportunities of daily-wage employment.

The results:

The result of JFM is difficult to be described as success or failure. For those community members who received some benefits it was a successful programme but for others it was a failure. The main success of the programme is seen in plantation and soil conservation component where as the failures could be noted in awareness creation, grazing area and nursery development.

Benefit Sharing:

In case of benefit sharing, the local community has mixed response. The villagers feel the definite improvement in forest condition but its benefits are not accruing to all the members of the community. Some people feel that soil conservation, grass and fodder availability, and forest quality has improved but on the other hand majority does not recognize these benefits. For them there is no visible impact of JFM. They have no idea of the long term benefits.

Involvement of Women:

Involvement of women in JFM has been restricted to some wage employment. There were hardly any evidence of their participation in planning and decision-making. Despite being Vice-Presidents and executive committee members they were not aware of the activities and the budget details. In fact the project can be categorized as a failure as far as women involvement is concerned.

The reasons for this failure are inherent in the work-load distribution in the community. In case of families who have come from Garhwal the hills, all the house jobs and agricultural activities are to be primarily taken care by the women and thus leaving them with very little time for meetings and community activities. This therefore resulted in poor involvement of women in any decision-making. They of course participated in wage-work activities but just as any daily-wage worker rather than as a stakeholder in the nearby forest.

Suggestion for Participatory Sustainable Forest management:

The community at large feels concerned about the forest situation but feel that the continued forest protection arrangement through watchmen supported by forest department is the only way of forest protection. The villagers feel that as long as there were watchmen, the forests were satisfactorily protected. Second suggestion was about the span of project that should have been for at least 10 years till the planted trees could attain proper girth and their survival thereafter was assured.

On the issue of participatory management, the villagers feel the necessity of continuous interaction with forest department but with transparency in financial and other decisions. There were suggestions like villagers jointly deciding about the use and management of nearby forests, fulfillment of their demand of fuel and fodder, assured long term benefits and awareness creation.

IMPACTS OF JOINT FOREST MANAGEMENT:

The Social Impact:

The Joint Forest Management in Doon Valley has made definite impacts-social, ecological and economic but not to the extent envisaged in the project documents. As far as social impacts are concerned, the major noticeable change is the “forests” becoming the issue of discussion among the village community. In the pre-project period, forests were considered as the sole property of government and the villagers’ interests were restricted to meeting their own demands of fuel, fodder and small timber. But due to constant discussion and increased interaction between forest department and the community, there is discernable change in the outlook. Though the community feels that the department has not done all that it was expected to do and the department makes community accountable for the failures wherever these have occurred, yet the discussion about the problems and solutions regarding the forest management between both the stakeholders is a positive impact.

The second important social impact is the involvement and participation of women, though not up to the desired level. In fact women have been worst sufferers of the degradation in the forest and exclusion from any community participation in management of forests. They desire to be part of all the development activities taking place in their vicinity.

The Ecological Impact:

In terms of ecological impacts, there are conflicting opinions about the plantation area and its success. Similarly the opinions are divided about other measures impacting local ecology like soil conservation and protection of forest from fire etc. On the basis of available information, it can be said that the project has been able to help in increasing regeneration and growing stock in reserve forest area. However it cannot be said with certainty that JFM has made any impact on biodiversity. No doubt the bamboo plantation and medicinal cultivation are effort in that direction but their impact can be judged in future only.

The following table gives the summary of activities of ecological nature carried out in three villages:

| Village Name | Forest Protection and Fire Protection Area (hectares) | Afforestation and Grazing area Development (hectares) | Soil Conservation Structures-Vegetative/ Engineering (Numbers) | Nursery Raising (number of plants) | Natural Regeneration Conservation (hectares) |
|--------------|---|---|--|------------------------------------|--|
| Amwala | 200 | 10 | 76 | 25,000 | 5 |
| Malhan | 295.3 | 45 | 74 | 54,000 | - |
| Sekhonwala | 267.10 | 40 | 109 | 72,000 | - |

Ref: Siwalik Circle, Uttaranchal, Dehradun, Short Note on World Bank Forestry Project supported Joint Forest Management Plan, Dehradun Forest Division, Dehradun

The Economic Impact:

The economic impact of the JFM is the most prominent among the impacts discussed here. This can be particularly noticed in the wage employment created during the implementation of the project. A large number of local villagers, particularly women received cash income. Some entry point activities like road construction also provided wage-earning opportunities apart from plantation and civil construction. The total expenditure under JFM activities was Rs 9.50 lakh in Amwala, Rs. 13.75 lakh in Malhan and Rs. 15.50 lakh in Sekhonwala. The major share of this money was spent on wage labour thus resulting in some economic benefit to village population. Though efforts were made to train local villagers in cottage industries but these have not been successful. Infact the plantation of some trees, including fruit trees in the village of Sekhonwala during the project, may bring economic gains to the villagers in future.

THE NGOS/VOLUNTARY AGENCIES AS STAKEHOLDERS

The Government of India guidelines have outlined the role of voluntary agencies in JFM as an interface between the forest department and the village communities. This was particularly done in the background of hostilities between the two primary stakeholders in the forests and the campaign carried out by NGOs for participatory forest management. In Uttaranchal there is a long tradition of voluntary agencies advocating the community importance in decision-making particularly in forest use and management. The existence of *Van Pnachyast* provides strong support for arguing local community's involvement. The presence of NGO motivators in JFM implementation has not been very fruitful due to large area coverage required by each individual, the absence of continuous training of and inexperience NGO personnel.

In general, NGOs have argued for real transfer of forest to villagers for community forest management. A workshop on Natural Resource Management attended by over 40 NGO representatives discussed the problems related to the forests. It was underlined that forest management policy is not based on local aspirations and need of the people, the sense of belongingness among villagers for forest is missing and local experienced organizations are not

being given due importance. The workshop suggested complete overhaul of forest policy, people especially women centric planning and management of any development activity, change in the policy on minor forest produce and nation parks and sanctuaries (Sambandh Network, 2001). Given the importance and variety of administrative control of forest in Uttaranchal (Reserved Forest, Civil/Soyam Forest/Panchayat Van), it has been argued that there is need for integrated forest policy. The objectives of such a policy should be- Maintenance of ecological balance, to fulfill the basic demands of fuel, fodder and timber, of local people, to make raw material available for small scale industries, to develop social organizations for forest protection and to train the women in technology and forest management (Shah, S.L.,2001)

In yet another workshop, various issues regarding community forest management were discussed and it was concluded that unless the local community is not involved in forest management, the forest couldn't be conserved only by forest department (Amar Ujala, 18th December, 2002). Even after the implementation of programmes like JFM, the involvement of community and NGOs has been considered a must for the forest conservation and management (Amar Ujala, 18th January, 2006 and 31st January, 2006). Since Doon Valley forests are under pressure from increasing urbanization, population in-migration and infrastructure expansion, the stake of NGOs present in large number in the area become very crucial.

POLICY RECOMMENDATIONS

In India, a major policy shift with regard to forest conservation and management was initiated with 1st June 1990 letter of Ministry of Environment and Forest. The central principle of the policy, called JFM policy, revolved around the participation of the village community in the management of forests. This was to be ensured by providing community with powers of making forest related plans for nearby forests and ensuring their share in the usufructory benefits. Thus, the policy addressed the problems of villagers requirement and at the same time local community's involvement in conservation and management. The policy also suggested close supervision of Forest Department with the benefits of people's participation going to village communities (GOI, 1999). An attempt was made in this case study to analyse the actualization of policy prescriptions with reference to 3 villages in Doon Valley.

The JFM project has tried to implement the above stated policy but it has remained far from successful. As described earlier in greater detail, the community involvement has been less than satisfactory in the planning and management process. As far the usufructory benefits are concerned, the villagers are fulfilling their traditional demands from the forest in the usual style without any clear understanding about future benefits from other forest products. The major concern of sharing timber sale still remains. No doubt Uttaranchal Village Forest Joint Management Rules-2001 provides 50 % of the income to Forest User Group (i.e. the VFC) from forest felling, sal seed, bamboo extraction etc. but all this can only be verified in future. Presently the village community has looked at JFM as a source of employment with little realization of long-term involvement in forest management.

Therefore there is a definite and urgent need to educate the village community about all the aspects of JFM. The awareness creation has to be enlarged from the present forest protection/conservation paradigm to all encompassing issues concerning forests. The worldwide experience has shown that

the confidence and involvement is the only mechanism through which the sustainable management of resources can be ensured. Thus it is not the policy that needs to be altered. It is rather the honest implementation of the policy that has to be ensured. The case study brings out very clearly that the field situation does not support the government claims. However, it is also very apparent that there are no easy ways to actualize any policy. The real implementation depends on the people who are involved in this process. This applies to Forest Department, the community as well and the NGOs, the principal stakeholders in Joint Forest Management.

KEY LEARNINGS

The case study brings out the shortcomings of the JFM approach as it has been implemented in the region of Doon Valley. Despite rich tradition and the tremendous scope of community participation in forest management of Uttarakhand, JFM has not succeeded to the expected levels. In fact there is still apprehensions with regard to efficacy of the approach mainly because the whole concept has neither been understood properly by the forest field staff nor by the community. Therefore the study brings out clearly the need of not only awareness creation but internalization of the concept of JFM by all the stakeholders. The study also informs us the continuous dependence of local community on surrounding forest and the need to address this issue in any forest management strategy. A project related to forest conservation and regeneration has to be of long gestation period to deliver the results of plantations and related activities.

CONCLUSIONS

The issues discussed in the study are broadly related to sustainable forest management. The study has tried to analyse the key issue of community participation in forest management with reference to Doon Valley of Uttarakhand. The study provides the background with brief analysis of forest policy as applied and impacting the community of Uttarakhand. Having described the key characteristics of the study area and study villages, it has focused on the opinions and perceptions of various stakeholders.

The study clearly brings out the fact that Joint Forest Management despite being addressing the question of bringing forest department and community together in the name of “Joint” has not really succeeded so far in that objective. There are many a mis-understandings and a lot of communication gap with regard to the actual parameters of JFM. The local village community has to fulfill its demand of fuel and fodder from the forests. But the long history of without any stake in forest management creates doubt in the minds of villagers about the real purpose of JFM. On the other hand the forest officials are also used to unhindered powers in the forest under their jurisdiction. Thus a gap of perception and mistrust continues.

The study highlights the need of transparency and larger community involvement not only in plantations and civil work but also in the planning as well as in decision-making. The community is to be convinced of short and long term benefits of “Joint Management”. The rights, the responsibilities and the economic and ecological benefits have to be clearly spelled out in the management strategy. The forest staff is also to be convinced about the over all benefits to the society. The JFM should become a permanent policy of the government with addressing the relevant community concerns being addressed.

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PUBLICATIONS AND WEBSITES

List of publications, newspaper clippings, map and photographs are being included in the hardcopy of report.

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Brief Description of association

The author has been associated with the issue of case study since 1984 as research scholar. The topic of the author's Ph.D. research was "Forest Resource Utilization and Some Ecological Consequences in Uttar Pradesh Himalaya". The author is based in the study area since 1981 and has closely watched various development related to the policy of forest management and people's response. The close association with local NGOs has also helped me to understand the role of forest in local economy and society. I have also undertaken few rural development oriented action research project in last decade in Doon Valley.

**Winrock Study
Village Schedule - Section I**

1. GENERAL INFORMATION

- A. Name of the Village: _____ Block: _____ Tehsil: _____
- B. Location of Village: Valley/slope/hill D. Distance from metal road: _____
- E. Drinking water: Source _____ Supply Status (e.g.) Hrs/day _____
- F. Educational facilities: Primary School _____ Middle School _____ High School: _____
- G. Electricity: Yes/No HH Electrified (%): _____ Average Supply (Hrs/day): _____
- H. Any Other Marked Feature: _____

2. INFORMATION ON SOCIAL CHARACTERISTICS:

- A. Total Population (2001): _____ Males: _____ Females: _____
- B. No. of Households: _____ SC Households: _____ ST H.Holds _____
- C. Literacy (%): Total _____ Males: _____ Females: _____

3. INFORMATION ON ECONOMIC CHARACTERISTICS:**A. Information on land use:**

- i. Total area of village: _____ ii. Area under forest: (Reserved/Civil) _____
- iii. Agricultural Area: _____ (a) Irrigated area: _____ (b). Double Crop _____
- iv. Culturable Waste (incl. Gaucher): _____ v. Orchards: _____
- vi. Area not available for cultivation (Settlement, road etc): _____
- vii. Other Common Land (eg. Gram Sabha): _____ viii. Any other type of land: _____

B. Occupational Structure:

- i. Cultivators: _____ ii. Agricultural workers: _____ iii. Other primary activities: _____
- iv. Household industry: _____ v. Non-Household industry: _____
- vi. Construction: _____ viii. Transport: _____ ix. Services: _____

C. Land Ownership:

- i. Landless: _____ ii. < 5 Bigha: _____ iii. 5 – 12.5 Bigha: _____ v. > 12.5 Bigha: _____

Section II Forest Management

I. ASSESSMENT OF FOREST RESOURCES:

- A. Legal status of forest: Reserved forest Area _____ Panchyat forest Area: _____
- B. Quality of Tree cover: (Thick/Thin/Shrub) Reserved: _____ Panchyat: _____
- C. Changes in forest cover in Pre-JFM period: (say last 20 years) _____
- D. Rights in earlier period: _____
- E. Privileges in earlier period: _____
- F. Role of villagers in forest management in Pre-JFM period: _____

II. JOINT FOREST MANAGEMENT:

- (i) Year of starting: _____
- (ii) Identification of forest users: Was it participatory: Yes/No Satisfactory: Yes/no
Comments: _____
- (iii) Formation of JFMC/Village Forest Committee: Was it participatory: Yes/No
Satisfactory: Yes/no Comments: _____
- (iv) Preparation of Micro-plan: Was it participatory: Yes/No, Satisfactory: Yes/No
Comments: _____
- (v) Objectives: _____
- (vi) Mainactivities: _____
- (vii) The benefits envisaged by the community: _____
- (viii) The benefits promised by forest dept.: _____
- (ix) Benefits accrued to villagers: _____
- (x) Benefits to forest dept: _____
- (xi) Involvement of local community:
- In planning: _____
- In decision making: _____
- In implementation: _____
- In monitoring: _____

(xii) Result: Success/ Failure/Mixed

Success in what components: _____

Indicators of success: _____

Reasons of success: _____

Failures in what components: _____

Indicators of failure: _____

Reasons of failure: _____

(xiii) Involvement of women:

I Was it satisfactory: _____

II How far successful: _____

III Reasons for success: _____

IV Reasons for failures: _____

(xii) Are you satisfied with JFM programme: Yes/No

If yes, why _____

If Not, why not _____

(xiii) Are you aware of the current FDA project; yes/no Its objectives: _____

III. OTHER COMMUNITY ORGANIZATION FOR FOREST MANAGEMENT

| Type of Organization | Year of Formation | Membership | Details of Work | Success/fFailure | Reasons |
|----------------------|-------------------|------------|-----------------|------------------|---------|
| Mahila Mangal Dal | | | | | |
| Yuvak Mangal Dal | | | | | |
| NGO/Any other | | | | | |

VII. SUGGESTIONS FOR PARTICIPATORY SUSTAINABLE FOREST MANAGEMENT

1. _____

2. _____

3. _____

Winrock Case Study: Household Schedule

Village: _____

I. BASIC INFORMATION

1. Name of the respondent: _____ Male/Female (Self/Relation with head): _____
2. SC/ST/Other ____ 3. Member of any village-body: _____ 3. Educational status: _____
4. Land holding: _____ Irrigated: _____ Orchard: _____
5. Livestock: Draught: _____ Milch: _____ Others(mules/goat/pigs) _____
7. Occupation: Primary: _____ Secondary: _____
8. Annual Income: From Primary Source: _____ Secondary: _____

II. USE OF FOREST

| PURPOSE | CONTRIBUTION FROM FOREST (in %) | | HOW IT IS ARRANGED Who brings | TIME SPENT | | | | DISTANCE COVERED | |
|---------------|-------------------------------------|--------|---|------------|-----------------|--------|--------|---------------------|--------|
| | BF-JFM | AF-JFM | | Hrs/day | How many months | | BF-JFM | AF-JFM | |
| <u>Fodder</u> | | | | BF-JFM | AF-JFM | BF-JFM | AF-JFM | BF-JFM | AF-JFM |

The Problems related to fodder availability before JFM : _____
 What impact did JFM made _____

| PURPOSE | CONTRIBUTION FROM FOREST (in %) | | HOW IT IS ARRANGED WHO BRINGS | TIME SPENT Hrs/day/month | | DISTANCE COVERED | |
|---------------------------------|------------------------------------|--------|---|-----------------------------|--------|------------------|--------|
| | BF-JFM | AF-JFM | | BF-JFM | AF-JFM | BF-JFM | AF-JFM |
| <u>Fuel</u> | | | | | | | |
| LPG/Kerosene Bio-gas wood | | | | | | | |

Problems Related to fuel before JFM: Non-availability/long distance/forest regulations / others
 What impact did JFM made _____

OTHER USES OF THE FORESTS: Situation before and after JFM

- (i) Timber: _____
- (ii) Fuelwood for selling: _____
- (iii) As source of employment: _____
- (iv) Any other: _____

III. ASSESSMENT OF FOREST RESOURCES:

- (i) Legal status of forest: Reserved/ Panchyat _____
- (ii) Quality of Tree cover: (Thick/Thin/Shrub)_____
- (iii) Changes in forest cover in Pre-JFM period: (say between 1980-95)_____
- (iv) Rights in earlier period: _____
- (v) Privileges in earlier period: _____
- (vi) Role of villagers in forest management in Pre-JFM period:_____

IV. JOINT FOREST MANAGEMENT:

- (i) Year of starting: _____
- (ii) Identification of forest users: Do you have any idea: Yes/No Was it participatory: Yes/No
Satisfactory: Yes/no Comments: _____
- (iii) Formation of JFM/Village Forest Committee: Was it participatory: Yes/No
Satisfactory: Yes/no Comments:_____
- (iv) Preparation of Micro-plan: Was it participatory: Yes/No, Satisfactory: Yes/No
Comments:_____
- (v) Objectives: _____
- (vi) Do you Know about the benefits that will accrue to local community post-JFM success:

- (vii) Mainactivities:_____
- (viii) Involvement of local community:
In planning:_____
- In decision making:_____
- In implementation:_____
- In monitoring: _____
- (ix) Result: Success/ Failure/Mixed
Success in what components:_____
- Reasons of success: _____
- Failures in what components: _____
- Reasons of failure: _____
- (x) Benefits Sharing: I What benefits did villagers get? _____

II Were these the same as promised/envisaged during project planning: _____

III If not, what were the variations? _____

IV What benefits did forest dept get? _____

(xi) Involvement of women: Satisfactory /Non satisfactory

I. What process was adopted: _____

II. How far successful: _____

III. Reasons for success: _____

IV Reasons for failures: _____

V. COMMUNITY ORGANIZATION FOR FOREST MANAGEMENT

| Type of Organization | Year of Formation | Membership | Details of Work | Success/failure | Reasons |
|----------------------|-------------------|------------|-----------------|-----------------|---------|
| Mahila Mangal Dal | | | | | |
| Yuvak Mangal Dal | | | | | |
| NGO/Any Other | | | | | |

VII. SUGGESTIONS FOR PARTICIPATORY SUSTAINABLE FOREST MANAGEMENT

1. _____

2. _____

3. _____

4. _____