

# **MECHANISMS, SYSTEMS, AND ARRANGEMENTS IN JFM VILLAGES OF GUJARAT**

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**THIS STUDY IS DEDICATED TO THE RURAL USERS OF  
FOREST, VILLAGE LEVEL FOREST OFFICIALS AND NGO  
WORKERS, WHO ARE THE PROMINENT PROMOTERS OF  
JOINT FOREST MANAGEMENT**

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## **PREFACE**

Gujarat is a state of India, which has only about 7 percent of forest cover, but accords a high priority towards social and development work. The Joint Forest Management (JFM) is a development programme of the Government of India, which is designed to provide economic and environmental benefits to the rural people in terms of increase in availability of fodder, fuel, timber and minor forest products and improve the quality of the land and water resources. JFM was introduced in Gujarat with great enthusiasm and has yielded some positive results. However there are some problems related to social, cultural and administrative factors which are obstacles to achievement of the expected results from JFM. These problems can be eliminated through some important changes in the policies of the Department of Forest of the Government of Gujarat and through proper training to the participants of the programme.

The present study highlights the existing pattern of working of the Joint Forest Management programme in the eastern belt of Gujarat. The study investigates the various systems developed for protection, plantation and sharing of benefits in JFM villages. The study also looks into the arrangements made by the villagers wherever JFM systems were unable to function. An attempt has been made to get in-depth information about the mechanisms developed in the programme to make sure that the systems work properly. The reasons for the successful working of the JFM programme, in some villages were examined with special focus on the participation of people. The positive attitude of village level forest officials is one the important reasons for the success of the JFM programme. In some villages, people were reluctant to accept the JFM as a participatory development programme. They felt it is Forest Department's programme and that once the forests are regenerated, the JFM plots would be taken back by the department. The people also had doubts about their share of the final harvest. The study tried to investigate the factors influencing the low participation of people. NGOs participatory approach to development plays an important role in developing confidence among rural people.

The study has made some practical recommendations for implementation of JFM and for improving the overall impact of the programme.

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**MECHANISMS, SYSTEMS AND ARRANGEMENTS**  
IN  
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**JOINT FOREST MANAGEMENT - A CONCEPT**

According to the Forest Survey of India, 1999, the actual forest cover of India has been estimated to be 637,293 sq. km. Which is 19.39% of the geographical area of the country. The forest department controls 23% of the India's area. As a result of series of laws and policies evolved for forest protection, the rights and concessions of surrounding forest communities eroded drastically. Forest departments of the state governments of India, now own 95 percent of India's forest land. Less than half of forest land of India is under closed canopy of forests and the remaining forest lands are in various stages of degradation (SPWD, 1992). over the past century The Forest policy of 1952 had set a national target of bringing at least one-third of India's land area under forest cover. However the forestation programme could not be attempted on the scale that deforestation is taking place. From 1951 to 1972, the country lost 3,402 thousand hectares of forest land, for river valley projects, agriculture, roads and communication, industrial establishments and other development projects (Forest resources of Tropical Asia, FAO, 1981). Besides this there is constant degradation of forests due to increasing use of forest products to meet urban-industrial needs, overgrazing and increasing demand of fodder and fuel due to increasing pressure of population.

According census 1991 of India, there are about 50 million forest dwellers in India living around forest areas, for whom forests have been the basis of livelihood and survival. They are dependent on forest for food, fuel, fodder and fiber. The forests also provide, other minor products like leaves, seeds, gums, waxes, dyes, resins, bamboo, canes, *bhabhar* grass etc. which are collected by the rural poor and provide them support under difficult economic conditions.

Apart from the economic and social value, forests have high environmental value, such as production of oxygen, holding rain water, enrichment of soil, checking soil erosion, control of wind and atmospheric temperature. Since Indian forests are facing serious problem of degradation, many efforts are being made to revive the forest resource.

As the rural people in India are dependent on forests for livelihood, it is important to involve them in the regeneration and protection of forests. It was taken for granted until recently that the forest department alone should look after the forests. Over a period of time this became a difficult task owing to increasing illegal tree felling as well as fast degradation of forests. As Indian forests are in danger forest department officials have become strict with the people in terms of utilization of forests.

This has made people to stay away from them, which is not a very healthy social situation. This has resulted in losing interest of rural people for protection of their surrounding forests which traditionally they were doing. Since people know their environment very well, they can contribute positively in improving forests. By increasing the villagers' sensitivity towards protection of forest one can save forests from further damage.

In 1988, for the first time since Independence, the Government declared the state that forests were not to be commercially exploited for industries but must contribute to the conservation of soil and environment and the subsistence needs of the local people. The revised policy also advocated the role of the local people's participation in the protection and development of forests from which they derived benefits like fuel wood, fodder and small timber.

Orissa took the lead and issued the order promoting Joint Forest Management in 1988. This was followed closely by West Bengal. In 1990 the central ministry of Environment and Forests set out the new policy on involvement of rural

communities and voluntary agencies in regeneration of degraded forest lands. Voluntary agencies and NGOs were to be associated as interface between state forest departments and the local village communities for revival, restoration and development of degraded forests.

The village communities would have access to forest land and benefits (grasses, lops and tops of branches and minor forest produce). Joint Forest Management Regulations have attempted to persuade people's participation in the protection of the forest. The benefit through sharing of the forest products, has made it an economically rewarding activity from the people's point of view.

Involvement of the people in protection can help in reducing the expenditure of the forest department on protection and plantation, as the department does not have to appoint a large number of forest guards for protection and also does not have to spend a large amount on labour for plantation. JFM could be the most cost effective method of forest management. The Government proposed that, these benefits should be provided to those who get organised into a village institution, specially for forest regeneration and protection. If they were successful, a portion of proceeds from the sale of trees when they mature could also be offered to them,

Since the circular of central government, 19 states: Andhra Pradesh, Arunachal Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnatakam, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal have facilitated the implementation of Joint Forest Management (JFM) involving the state forest department and village communities.

At present about 35,000 village forest protection and management groups are currently protecting over 3.5 million hectare of forest land. The nature of agreement with the village communities is not the same in all the states. There

are important differences regarding the extent of power retained by the forest department or that which is delegated or given back to the people. The common feature is the provision of benefits to those involved in protection of forests.

**The JFM policy must be assessed in terms of its capacity to :**

1. Lead towards the empowerment of people so that they can participate genuinely and effectively.
2. Facilitate a greater utilization of the traditional and time-tested skills and knowledge of the local people
3. Ensure implementation and further expansion without being redefined by vested interest to the disadvantaged poor.

**JOINT FOREST MANAGEMENT IN GUJARAT**

Gujarat has an area of 12965 square km. under forest which is 6.61% of the total geographical area of Gujarat. The Joint Forest Management (JFM) programme was introduced in Gujarat in 1987. Since then the JFM has been introduced in 1021 villages. Most JFM villages in Gujarat are located in the tribal pockets of eastern Gujarat. About one lakh hectare area is covered under JFM, through Village Forest committees, which are village level organizations.

NGOs have played an important role in promotion of JFM in Gujarat. A total of 167 Village Forest Committees are promoted by NGOs. There is an emphasis on institutional development in Gujarat. The NGOs support for mobilising and motivating communities is solicited.

The programme works through a village institution called *Van mandali*. *Van mandali* is a village level institution for protecting the forest. The members of the *Van mandali* are supposed to select the committee for forest protection,

which would be responsible for successfully running of the *Van mandali* by formulating rules for protection, sharing of benefit sharing and implementation of these rules. The committee is also responsible for keeping records, registration of the *Van mandali* in the district registrar's office and acquiring the *Adhikar patra*, which is a certificate, for land rights for the purpose of JFM.

### **Resolution of Gujarat Government:**

Each participant state had developed its own resolution, according to its status of forest and the social culture. Below salient features of the resolution of the Government of Gujarat for JFM are given:

1. Under JFM, *Van mandali* (village level forest protection institution) is formed consisting those villagers who are interested in the programme. This institution can be '*Village Panchayat*' or any Cooperative society. A *van mandali* has to be registered under societies registration act, within two years of its formation.
2. Anyone can become member of the *van mandali*, but a minimum 60% of the households of the village should have membership in the *mandali*. It is mandatory to keep membership register, consisting full details of members.
3. The *Van mandali*, should form a management committee of twelve members. The management committee should have minimum of two women members and one representative from the *gram Panchayat*.
4. NGOs having necessary skills and interest in forest protection can participate in the JFM in terms of helping villagers in forming *van mandali*s and in its operations.
5. The members of the *van mandali* have the right to cut grass and collect dry fallen wood and minor forest products from the JFM plot.

6. The fuel wood available from the cut back, will be equally divided among the members of *van mandali* and the timber is sold for half the scheduled market price to the members if they wish so, otherwise the timber would be sold in the market. This money would be deposited in the forest department.
7. Members who are involved in thinning of trees will get 25% of total available fuel wood free of cost.
8. At the end of the final harvest a *van mandali* gets 50 % of the total production, after deduction of the overhead expenditures.
9. The concerned forest officials and office bearers of the *van mandali* are required to sign an agreement regarding the terms and conditions of the JFM.

Different villages have adopted different processes for formation of the *Van mandali* and the committee. They have adopted different methods of protecting and regenerating forests and have developed regulations for the *Van mandalis* according to their understanding and convenience. They have developed their own systems and methods for protection from damage done to the forests by people and the animals, resolving conflicts with non - members and neighboring villagers, punishing defaulters, benefit sharing, and plantation. The *Van mandalis* have been successful in creating some impact in their village as well as neighboring villages. There is a range of JFM villages from ones which are very successful to ones which are miserable failures. It is important to learn from their experiences. Therefore this study shall look into the mechanism, systems, and arrangements adopted by different JFM villages for different operations and activities.

## **OBJECTIVES**

The overall objective is to study the socio-managerial mechanism, systems and arrangements for operationalizing the JFM programme in villages of eastern Gujarat, through following indicators:

1. Deliberation within acceptance of the JFM programme on *van mandali*
2. Formation of the committee its election, nomination and selection.
3. Nomination or election qualitative norms may be different.
4. Decision in self regulations in protecting mostly punitive, i.e. social and financial, protection: watchman, community or both
5. Varying norms of contribution conducting business (democratic, authoritative etc.)
6. Getting involved in planning (not matured hence varying)
7. Decision and norms of benefit sharing (by household, by member or by couple )
8. Sensitizing future generation(youth and children)

## **STUDY AREA**

This study has been carried out in eastern part of Gujarat. This region is mainly hilly with height ranges from 300 to 1100 metres. The rainfall of the area varies from 500 mm in the north to 2000 mm in the south. Average temperature in January is about 30 degree centigrade and in May is about 43 degree centigrade in the area. This region has comparatively dense forest than the rest of the Gujarat. The majority of the population, more than 60% is tribal in the area. Major crops of the area are: maze, jowar (Sorghum), bajara (pearl millet), nagali, paddy, wheat, pigeon pea, urad (black gram) and gram. Where ever irrigation is available people grow cotton and sugarcane.

In general yield rate of agriculture crop is very low. More than 80 percent of food crop is consumed by the producer. On an average a household keeps five cattle and three goats. Per year per family fodder requirement is about 580

quintals of which about 20 percent requirement is met from the forest , 40 percent from agricultural residue and remaining 40 percent is purchased from the market. Per year per family fuel wood requirement is about 30 quintals, of which about 40 percent is collected from forest , 20 percent from the fields and remaining 40 percent requirement is fulfilled by agricultural waste. Per family per year average income is about Rs.10,500, of which 68 percent is earned from cultivation, 16 percent from animal husbandry and remaining 16 percent from labour work. Over all the area is rich in natural resources but poor in resource management. Forest is one of the important source of livelihood of people.

## **RESEARCH METHODOLOGY**

The sample villages are selected on the basis of 1999 information given by the forest department. All the 11 forest divisions from hilly eastern belt of Gujarat were selected for the purpose of the study. From the each division about 6 percent villages, based on availability of JFM villages supported by forest department and NGOs were selected. Till December 1999 JFM was introduced in 706 villages of which 6 percent or 42 sample villages were selected. A total of 33 sample villages are predominantly tribal villages where more than 50 percent population is tribal. In 11 sample villages the NGOs helped in the formation of the *van mandalis* (village Level Forest Protection Organization). In the remaining 31 sample villages forest officials provided the support. In each village, two types of questionnaires were used. One questionnaire was at the village level to elicit information from the secretary and chairman of the *van mandali* and the other was household level, used for getting information from individual household for cross checking the village information. From each village 10 member households were studied. For qualitative information interviews with village leaders, forest officials, and NGOs workers were held.

Table A: Stratification of the Sample Villages

Sl. No.	Forest Division	NO. OF SAMPLE JFM VILLAGES		
		Total	Forest Department	NGOs
1	Sabarkantha (N)	2	2	0
2	Sabarkantha (S)	4	2	2
3	Gandhinagar	1	1	0
4	Godra	3	3	0
5	Bariya	8	4	4
6	Chhotaudaipur	7	4	3
7	Rajpipala(W)	5	4	1
8	Rajpipala(E)	4	3	1
9	Vyara	3	3	0
10	Valsad(N)	2	2	0
11	Valsad(S)	3	3	0
	Total Sample	42	31	11

## MAJOR OBSERVATIONS FROM FIELD EXPERIENCE

### SOCIAL GROUPS AND COMMUNITIES

In this study area, there are a total of 93 types of castes (social groups) found. The north-eastern part of Gujarat (Sabarkantha, Dahod and Panchmahal districts) has a heterogeneous society. In these districts more than 30 types of castes are found. South-eastern Gujarat (Vadodara, Narmada, Bharuch, Surat and Valsad districts) has a homogeneous society. In this area maximum five castes are found. Usually in homogeneous societies, village institutions operate successfully. In the present study this hypothesis could not be established, since both the regions have active and inactive *Van mandalis*.

Table 1: Districts And Taluka Wise Major Castes

<b>District/ Division</b>	<b>Taluka/Range</b>	<b>No. of castes</b>	<b>Name of major castes*</b>
Sabarkanta	Bhiloda, Khedbrahma, Mekharaj, Wadali	29	Gomit, Parmar, Damor, Bhagora
Mehsana	Satlasan	4	Thakor, Memon, Waghari, Chauhan
Dahod	Jhalod, Fatepura, Baria	35	Garasia, Kolipatel, Bhuria, Paradhi, Patel
Panchmahal	Santrampur, Khanpur, Halol, Sehra	38	Pateliya, Rathava, Bara,
Vadodara	Kawat Naswadi	4	Rathawa, Bhil, Nayak
Narmada	Sagbara, Dediapada	1	Vasava
Bharuch	Walia	2	Vasava
Surat	Mandavi, Mangrol, Mhua, Vyara, Songarh	4	Chaudhari, Gamit, vasava
Valsad	Dharampur, Kaprada, Dharampur	5	Kukana, Varli, Ghodiya

**\*Only those castes which consist more than 10 % population of the total population**

The success of any policy on people's participation will depend on the scope it provides to the people to innovate, experiment or effectively utilize their traditional heritage and local knowledge base. There is an increasing realization of the immense wealth of traditional knowledge and skills inherited by the people in the form of numerous customary laws, rules and forest management practices.

All the major castes have their own caste leaders and caste panchayat, where decisions conflicts within castes are taken. In 20(48%) sample villages social conflicts are solved through traditional caste panchayat method, while in remaining 22(52%) villages panchayats are involved in such conflicts. In traditional system for social offence sometimes the offender is excommunicated by the caste people. In some cases of social offence the accused has to apologize for his/her fault and give some penalty in terms of money or feeding caste people. In the case of economic offence, first the case is tried to be solved in the village panchayat, then in case of disagreement, people go to the court. For economic offence in traditional system, penalty from

RS. 200 to 1000 is charged. In some cases the offender has to provide food or sweets to the whole village. For criminal cases almost all villagers launch complain in police station. The trend is towards dependence on Government sources of judgement.

### **DELIBERATIONS FOR ACCEPTANCE OF PROGRAMM**

The first step is taken with forest guards talking about JFM to villagers. He invites higher forest officials like RFO or DFO for giving an introduction about the concept of JFM. In the present study in 57 percent of the sample villages, JFM was introduced to the villagers by the forest officials.

In some villages, forest guards and foresters have done remarkable work on the JFM. They speak local language and are able to explain the villagers with clarity. Forest development is one of the programmes of NGOs which have adopted an integrated development approach. Therefore in many villages NGOs took keen interest to make people aware of JFM concept. In 31 percent of sample villages the JFM was promoted by NGOs. In the study area VIKSAT, Satguru Foundation, NTCGF, SARATHI, Rangpur Ashram and AKRSP are predominant NGOs. In 13(310%) sample villages these NGOs are working. Only in 5(12%) sample villages the JFM initiated by village leaders such as sarpanch, school teacher, MLA, or the gram patel). Overall outside agencies played an important role in generating awareness.

Table 2: Agency Spreading Awareness About JFM

Name of agency	Numbers	percentage
Forest officials	24	57%
NGOs	13	31%
Village leaders	5	12%
Total	42	100%

Though the concept was initiated by forest officials or NGO workers but the talk was forwarded by the village leaders. Village leaders organized the village meetings to promote JFM in their villages. In 32 (76%) sample villages talk

was initiated by the village leaders while in 5(12 %) villages each by forest officials and NGO workers. Initiated the talk. It has been observed that wherever NGOs are not working, village leaders always look for support from the village level forest officials like: watchman, beat guard and forester.

Table 3: Agency Who Initiating Talk With Villagers

Talk was initiated by	Numbers	percentage
Forest officials	5	12%
NGOs	5	12%
Village leaders	32	76%
Total	42	100%

The talk was initiated in different ways in different villages. In 17(40%) sample villages regular gram sabhas (village meetings) were organized to communicate the message to the village. The frequency of the meeting varies from weekly to monthly. In 12(29 %) sample villages regular meetings were held with representatives of prominent castes. Similarly in 11( 26 %) sample villages meetings were held with representatives of each village hamlet. In two sample villages who are staying near forest areas were convinced for protection. In these meetings people were made aware of continuous deterioration of forests and how JFM can help them regenerate their forests and at the same time share the benefits such as getting fodder and fuel regularly. They were also told about procedure for introducing JFM in their village.

Table 4: Method Of Initial Communication In JFM Villages

Method of initial communication	No. of villages	percentage
Gram sabha(Village meeting )	17	40%
Meeting with caste leaders	12	29%
Meetings with hamlets representatives	11	26%
Meeting with people staying near forest	2	5%
Total	42	100%

The concept of JFM came to be accepted owing to the following reasons:

1. Regular meetings with villagers by forest officials and NGO workers
2. Assured benefits for every one
3. Increase in grass production owing to protection measures
4. Benefits of increased production given to non-members to motivate them for protection measures.
5. Office bearers from other JFM villages holding meeting in new villages and explaining benefits of JFM.

Constant contacts with villagers and explanation of state of degeneration of forests and possibilities of reviving them through JFM, helped sensitize people in many villages. Information shared by other JFM villagers also helped people to be assured of availing benefits. Other than forest guards, higher level forest officials like: RFO and DFO gave talks about JFM.

Usually the beat guard briefed about JFM but visits of higher officials had a better impact. Often forester or beat guard invite their higher officials to interact with villagers, as a result their commitments get weightage. In 55% of the sample villages the higher level forest officials visited as an outside person to give elaborate information about JFM. In 22% sample villages the chairman or secretary of neighbouring *Van mandalis* came to share their experiences with the JFM programme.

In Amba village of Valsad district, women from Bhiloda taluka of Sabarkanta came on an exposure visit and shared their experiences with the local women. In 19 % of the sample villages the NGO workers from other centres came to give information about JFM and shared experiences of their adopted villages located in other areas.

In one village instead of inviting some body from outside, village leaders went to collect information in neighbouring JFM villages. In another village there is no interaction with outsiders regarding JFM. On the whole the forest department

played a major role for disseminating information about JFM. Higher officials from the headquarters made frequent visits to motivate the villagers to adopt JFM.

An important aspect is to notice that the people from other JFM villages shared their experiences. It is a general tendency of the people that they believe those people most who have similar background like them. Other JFM villagers were facing similar problems of fodder and fuel and through the JFM programme the problem was partly solved.

Table 5: Outside Sources Of Information In JFM Villages

Outside sources of information	No. of villages	Percentage
Higher level forest officials	23	55%
People from other JFM villages	9	22%
NGO workers from other centres	8	19%
Village leaders collected information from other villages	1	2%
No outsider came	1	2%
Total	42	100%

Major impacts of the visits of outside persons was formation of *Van mandalis* and protect of JFM plots. After the visit of the outside persons 24 % of the sample villages started protecting their plots, while 33 % actually formed *Van mandalis* and 24 % started the process for formation of *Van mandalis*. In one village membership was increased in an already formed *Van mandali*. Interestingly in Seven sample villages people stopped sending their cattle for grazing in the JFM plot area.

Table 6: Effect Of Outsiders' Presentation On *Van Mandalis*

Effect of outside person	No. of villages	Percentage
Started protecting the JFM plot	10	24%

<i>Van mandali</i> were formed	14	33%
Process for formation of <i>Van mandali</i> started	10	24%
Reduced cattle grazing	7	17%
Increased membership in <i>Van mandali</i>	1	2%
Total	42	100%

In 23 (55%) sample villages, nobody opposed the formation of the *Van mandali*. In 9 (21%) sample villages, encroachers opposed the formation of *van mandali*. They felt threatened because, if JFM was introduced in their village the encroached land would be taken away. In four villages opposition came from those who had monopoly over forest products such as grass and fuel. They were aware of the fact that if JFM was introduced in their village they would have to share the produce with other villagers and would not be able to earn income through sale of fodder and fuel.

In three villages people who stay far from the JMF plot did not become members of the *Van mandali* because of distance. It was difficult for them to participate in the protection of the plot. In one village migration was the major reason for non participation and in two villages those people did not want to associate with the *Van mandali* who were capable of buying fodder and fuel from outside.

Table 7: Reasons For Non Association With *Van Mandali*

Reasons for unwillingness or opposition	No. of villages	Percentage
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for associating with <i>Van mandali</i>		
No opposition	23	55%
Encroachment	9	21%
Losing monopoly on forest produce	4	10%
Distance of JFM plot from Res.	3	7%
Migration	1	2%
Better economic situation	2	5%
Total	42	100%

In seven (17%) villages those who initially opposed the idea of the JFM, later became members when community members and village leader persuaded them and explained the benefits of JFM. In five (12%) villages, after realizing the benefits of JFM and also receiving part of benefits, non-members started cooperating. In three (7%) villages non-members want to become members but were denied due to late membership as members do not want to share the benefits since non members did not do their share of work in developing a JFM plot. In four villages there is no change in the attitude of non-members.

Table 8: Reasons For Late Cooperation By Non-Members

Reasons for late cooperation	No. of villages	percentage
Pressure from community members and leaders	7	17%
Realization of benefits	5	12%
People want to become member but denied	3	7%
No change in attitude	4	9%
No opposition	23	55%
Total	42	100%

### **FORMATION OF VAN MANDALI**

Wherever NGOs are working, they took the responsibility of formation of a *Van mandali*, from organizing regular meetings for selection of members and to

filling of the format, selection of committee members and applying for registration of the *Van mandali*. They also helped the mandali apply for *Adhikar patrakto* the forest department. In other villages the village level forest officials gave support to the *van mandalis* to carry out the whole process.

In some villages the forest officials have developed good human resource by helping people to improve their skills. For becoming a member of the *Van mandali* a person has to pay RS. 11 as membership fee. Only in 19 (42%) sample villages Rs.11 membership fee is paid by the members. In remaining villages although on paper membership fee is paid, members are not aware of it. Informal talks with villagers, revealed that owing to pressure from higher level officials for formation of the *Van mandali*, village level forest officials paid membership fee on behalf of villagers and then recovered it from their wages by indicating work for more numbers of days. The concern of forest officials for attaining high targets has resulted in the formation of a large number of people's committees. However these exist merely on paper and do not suggest of effective participation by the people.

No definite pattern emerges regarding of memberships in *Van mandalis*. There is no relationship between time of formation of the *Van mandali* and number of members. Initial membership ranges from 10 to 365 and present membership ranges from 15 to 300. Standard deviation of initial membership is 0.85 and present membership is 0.77, which is quite high. It is difficult to give reasons for such a large variation in membership in different villages. Average membership increased from 100 to 131 from the formation of the *Van mandali* to present. In general the trend is towards an increase in membership over a period of time (table:9).

Table 9: Change In Membership Of *Van Mandalis*

Year of formation	No. of villages	Avg. initial membership	Range of initial	Avg. present membership	Range of present
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of Van mandali			membership p		Membership
1985-'90	7	65	11-150	142	56-214
1991-'95	15	98	13-276	126	15-276
1996-'00	19	117	10-365	131	25-300
Mandali not formed	1	0	0	0	0
Total	42	101	10-365	131	15-300

Wide variations are is found in the rate of increase in membership over a period of time. In 20(48%) sample villages membership has increased over a period of time. In 13(31%) sample villages membership has increased above 50% and in 7(17%) sample villages membership has increased below 50%.

The reasons for significant increase in membership in these villages are as follows: People realized the benefits of JFM and took advantage of entry point activities introduced by the forest department. In four villages membership has decreased. The reasons are as follows : membership could not continue owing to long distance they had to travel to the JFM plot, Migration, and not experiencing the benefits of JFM. In 17 villages there is no change in membership. New membership is not allowed in these villages and in some villages people do not feel the need of becoming member (table:10).

Table 10: Change of Membership in Percentage

Change of membership (in %)	No. of village
Above 100% increase	9

51-100% increase	4
16-50% increase	2
1-15% increase	5
No change	17
1-15% Decrease	4
Mandali is not formed	1
Total	42

Forests are very important source of livelihood for the rural folks. They want to keep close association with the forest department. At any cost they do not want to lose their right on forest products, mainly fodder and fuel. Becoming member of a *Van mandali* is an assurance for them for access to forest.

According to the Government Resolution(GR), minimum 60% households should be the member of *Van mandali*. In the present study, 26(62%) sample villages fulfill the norms of GR. In 9 (21%) sample villages, membership coverage is between 30% to 59%. In 7(17%) sample villages below 30% households are covered under membership of *Van mandali*.

In some villages from one household there are more than one person are member in *Van mandali*. Therefore percentage coverage shows more than hundred. In eight villages all households have become member.

Table 11: Percentage Of Members Of *Van Mandali* To Total Households

Percentage of members to total HH.	No. of villages
Below 30%	7

33-59%	9
60-100%	16
Above100%	10
Total	42

Harijans in Moti Panduli in Sabarkanta and other backward castes in Venkhadi of Panchmahal, Zagola in Dahod and Veljhar in Surat are not members of the *van mandalis*. These castes were not welcomed by the rest of the village in the *Van mandali*. They said that if people from backward castes become members in the *Van mandali*, they will not participate in the activities of the *Van mandali*.

In three villages economically better off groups did not become the members of *Van mandali* as they are not directly dependent on the forest for fodder and fuel. They purchase those products from other villagers. In five villages people from far-off hamlets did not become members, because it was difficult for them to participate in the activities of the *van mandalis*.

Table 12: Left Out Social Groups In *Van Mandalis*

Left out social groups	No. of villages	percentage to total sample villages
Harijan	1	2%
Other backward castes	3	7%
Economically better of groups	3	7%
Hamlets, located far from JFM plot	5	12%
<i>Van mandali</i> is not formed	1	2%
Members represent all groups	29	70%
Total	42	100%

Empowerment of women has not been aimed in Joint Forest Management In many villages membership is given to one person from each family. In this situation, men get the priority and in effect deprive the women of their rights to

participate in decisions. On an average women membership is about 10 percent in *Van mandalis*.

In four villages there is no representation of women in *Van mandalis*. In 16(38%) villages, the proportion of women members is below 5 % and in 9 (21%) sample villages it is between 5 and 10 percent. Only in 7(17%) sample villages, membership of women is more than 30 %.

In Kosmipada village of Dharmpur taluka of Valsad district and Kakadiamba village of Walia taluka of Bharuch district, women membership is about 50 percent. This is because of the involvement of NGOs like AKRSP, NTCGF, VIKSAT and SARTHI.

Usually women are the major users, as they collect fodder, fuel and minor products from the forest. Improvement in forest resource leads to improvement in the quality of life of women. Availability of fodder and fuel near village results in reduction in drudgery for women. Therefore it is very important to involve women in activities related to development of forest resources like the JFM. Since it is mandatory to have minimum two women as members in the committee, two women are members in all committees.

In most villages these women do not participate in the activities of the committee, since they hesitate to attend the meetings along with a large number of men. Attitude of male members is not very supportive towards women members. In a few villages where male members and forest officials are supportive, often women members attend committee meetings, afterwards they explain the importance of JFM to other women in the village. They also lend support in protection measures by compelling other women not to cut branches for fuel. They encourage children to protect small sapling from animals and not uproot them.

Table 13: Percentage Of Women Membership In The *Van Mandali*

<b>Women membership in <i>Van mandali</i></b>	<b>No. of villages</b>	<b>Percentage</b>
No of women members	4	10%
Below 5% women members	16	38%
5% to 10% women membership	9	21%
10.1% to 20% women membership	4	10%
20.1% to 30% women membership	1	2%
30.1% to 52% women membership	7	17%
<i>Van mandali</i> not formed	1	2%
Total	42	100%

#### **ACQUISITION OF ADHIKAR PATRAK (AGREEMENT)**

*Adhikar patrak* a written agreement between the forest department and the *Van mandali*, gives certain rights to the latter for protecting the JFM plot. Table 14 shows that, 29 (69%) sample villages have received the *Adhikar patrak*. In four sample villages it is not kept with the office bearers. It is either kept with the NGO or people do not know where it is. Out of 13 sample villages, which do not have the *Adhikar patrak*, one village did not apply for the *Adhikar patrak* and 12(29%) sample villages have applied for it but not yet received. Non availability of *Adhikar patrak* is a potential future problem, as the *van mandalis* feel insecure in their commitment without clear agreement and time horizons. The forest department may also be inclined to take the JFM plots once they are regenerated and can be protected.

Table 14: Possession Of *Adhikar Patrak* By JFM Villages

Status of <i>Adhikar patrak</i>	No. of villages	Percentage
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<i>Adhikar patrak</i> received	29	69%
<i>Adhikar patrak</i> not received	13	31%
Total	42	100%

In 26(62%) sample villages, people could tell the area of the JFM plot, according to the *Adhikar patrak*. Table 15 shows that, the size of the JFM plot ranges from 10 hectare to 405 hectares. Average size of a JFM plot is about 50 hectare. Standard Deviation of the area of *Adhikar patrak* in 26 villages is 0.83, which is quite high.

Table 15: Ranges Of Size of JFM Plots By Village No.

Area of JFM plot(in Ha.)	No. of villages
10-25	6
25.1-50	4
50.1-75	6
75.1-100	0
100.1-150	8
Above 150 (upto 405 Ha.)	2
Total	26

### **NOMINATION OR ELECTION:**

The formation of a committee is an important step in setting up a *Van mandali*. The committee members have the responsibility of implementing the programme. They are supposed to be representatives of members and work for their benefits. Often success or failure of the *Van mandali* is dependent on the type of committee.

During the field study it was observed that the concept of village institution is not clear to the people. They felt that the formation of a *Van mandali* and

committee is a formality to take advantage of schemes of the forest department. Even committee members were not aware of their status.

In none of the villages elections were held for selecting committee members. In 18 (42.9%) villages committee members of *Van mandali* were selected in the gram sabha by consensus. In 14(33.3%) sample villages, village leaders decided the committee members, while in 9(21.4%) villages, village leaders selected the committee members either with the help of forest officials or NGO workers. In one village, the *Van mandali* is yet to be formed. In general the criteria for selection of committee members were as follows:

1. capability for verbal expression,
2. capability to convince people about crucial issues
3. educational level (preference was given to high level of education, so that their writing, reading, and communication skills could be used)
4. be in a position to provide time for activities of the *Van mandali*.

Table 16: Methods Of Appointment Of Committee Members Of *Van Mandalis*

<b>Selection of committee memb. By</b>	<b>No. of villages</b>	<b>percentage</b>
Gram Sabha	18	42.9%
Village leaders	14	33.3%
Village leaders & forest officials	6	14.3%
Village leaders & NGO workers	3	7.1%
<i>Van mandali</i> is not formed	1	2.4%
Total	42	100%

it is a prerequisite to form a committee by election before registration of the mandali. According to the rules and regulations of the Registration office, members of mandali have the right to change the committee members, if they

are not satisfied with their services. During the study it was observed that members were not aware of their rights.

In 15(36%) villages *Van mandalis* have provided for changing committee members and only in four(10%) villages committee members were changed. Major criterion for change is as follows:

1. The committee member is inactive and does not take interest in mandali's work
2. The committee member does not continuously attend three meetings
3. The committee members changed every three to five years

In 22 villages there is no provision for changing committee members. In these villages people are not very much interested in the working system of the van mandli and therefore they are not serious about forming proper rules and regulations.

Table 17: Provision for changing committee members

Provisions for change	No. of villages	percentage
Have provision for change	15	36
Actually changed	4	10
No provision for change	22	52
Mandali is not formed	1	2
Total	42	100

Ideally all social groups who are members of the *Van mandali* should have representation in the committee of *Van mandali*. Some times this is difficult

because of the presence of a large number of social groups. But sometimes justice is not done to certain underprivileged groups and they remain deprived of many benefits. For keeping the interest alive for underprivileged groups, it is important that they should have enough representation in the decision making process, which is only possible through their representation in the committee. In 27(64%) villages, all social groups are represented in the *Van mandalis*. In 14 (33%) sample villages not all social groups represented for the following reasons:

1. Harijans (scheduled castes) keep themselves away from the mainstream
2. Members of lower castes are not accepted by the rest of the village
3. Number are not enough to be selected as committee member
4. Economically better off social groups are not interested in becoming members

Usually there is close relationship between the *Van mandali* and the gram panch. In most cases the sarpanch is represented in the committee of the *Van mandali*. In many villages sarpanchs have taken the initiative to introduce the JFM.

Only in 5 (12%) sample villages the *Van mandali* and the sarpanch do not have any relationship and the sarpanchs are not aware of the activities of the *Van mandali*. Can the people's committees function in areas where panchayats or other formal organizations are already exercising rights in the management of forests or do not have good relationship with the committees?

## **SELF REGULATION**

The legal position of people's committees has already been questioned in some areas. In Gujarat, formally no powers have been given to the committees. According to the GR of Gujarat state, the Committee should stop the damage of forest and for taking action against the offender, inform concerned forest officials. There have been suggestions that the Committees be empowered to deal with village offenders to be able to protect the forests effectively.

The *van mandalis* are not clear about their status. Majority of participants of JFM(villagers, NGO workers and Government officials) do not have clear idea about The Government Resolution (GR). There is a lack of common understanding about GR.

During the study it was observed that neither the van mandlis nor the forest department officials and the NGO workers who give support to the *van mandalis* had a copy of GR. They are not clear about the importance of record keeping. Many of them do not have expertise in keeping records. The committees are supposed to keep records of membership, meetings, accounts and benefit sharing.

In the study villages, membership records are maintained very well in most of the villages. Forest officials and NGO workers have helped the mandalis to prepare their record registers. In 31(74%) villages membership registers were found in good condition.

In three villages record registers were kept at NGO field offices. Only in seven villages records of minutes of the meetings were found. In almost all villages there is no formal system for regular meetings of the management committee and of members. Most of the time, important issues are discussed informally during social celebrations or meetings at village tea or pan shops and decisions are taken on behalf of all committee members by the chairman and secretary and a few members. The need for a quorum is not felt necessary for these

meetings. There is no system to write minutes of the meetings. Record registers are maintained but minutes are written according to the desire of the chairperson and secretary in many villages. Many a time signatures of the committee members are taken in advance and minutes written afterwards. Members are not aware of the place, agenda, discussion, and agreements made in the meeting. Committee members never question about these procedures owing to low literacy level and ignorance.

In 17(40%) villages accounts were maintained and records found in reasonably good condition. In 25(60%) villages records of accounts were not maintained. As far as account keeping is concerned, committee members are nervous about it.

During the field survey the secretary and chairperson of some villages confessed that they had spent the membership money on themselves. Records, about benefit sharing and development activities are kept in only 12(29%) villages.

In 11(26%) sample villages record of development work in terms of entry point activities for promotion of JFM is kept. Majority villagers have accepted JFM to take advantage of entry point activities. They are not looking for any special benefit from JFM plots, but they are happy to get extra benefits. When asked what is JFM ? People are either not aware of it or give confused replies.

Table 18: Quality Of Records In Sample JFM Villages

Quality of record	Number of Villages				
	Membership	Minutes of meetings	Account	Benefits sharing	Development work
Good	34	22	17	12	3
Fair	0	4	1	0	9
Bad	0	0	0	0	0
No record	8	16	25	30	31

In 29 (69%) sample villages *Van mandalis* have an account in a bank. In remaining 12(28%) villages the chairperson and secretary handle the accounts. They keep the money with them. Informally they told that they have used the money for their own purpose. Whenever the money is required they will return it to the *Van mandali*. In one village *Van mandali* is not yet formed.

### **PROTECTION OF JFM PLOT**

Usually forest plots or pasture land are open for constant grazing in, results in deterioration of the land. For regeneration of variety of grasses and indigenous species of trees, protection is an important component of forest resource management. Under JFM, *Van mandalis* are responsible for protection of the plot. They are given freedom to adopt their own methods of protection.

In 13 villages, villagers protect the JFM plot by rotation. In four villages a watchman has been appointed on regular basis who gets regular salary and sometimes grass. In two villages a watchman is appointed only during agricultural season otherwise, members of the *van mandalis* take care of the plot. In three villages earlier protection was done by groups, but now these villages have become inactive. In some villages rules for protection of the JFM plot have been formed but are not followed strictly. In 24 (26%) villages no formal system has developed, but protection is done informally as follows:

1. If someone sees any cattle grazing in the plot, either he/she removes it or informs the forest guard.
2. People decided not to cut grass and fuel wood from the plot without obtaining permission from the *Van mandali*
3. People staying near forests, keep an eye on the plot and if someone is damaging the plot, they immediately inform the forest guard or committee members of the *Van mandali*.

In some villages a forest guard protects the plot but villagers help him in difficult situations. Forest guards of those villages have reported that their workload has decreased as villagers have started supporting them.

Table 19: Arrangements For Protection In JFM Villages

<b>Arrangements for protection</b>	<b>No. of villages</b>	<b>percentage</b>
Protection by groups	13	26.2%
Protection by watchman	3	9.5%
No formal system	20	57.1%
Inactive villages	3	7.1%
Total	42	100%

Out of 42 sample villages, 31(74%) sample villages have made their own rules for protection. In 21 of these villages, rules are not followed strictly. In 11 villages either *Van mandali* is inactive or rules have not been formed as rules clash with interest of some people. Rules made by different *Van mandalis* for protecting the JFM plot are as follows:

1. Do not cut green branches for fuel, collect only twigs.
2. Do not cut timber wood. If somebody caught, she/he has to pay penalty ranging from Rs.51 to Rs.1000, depending on the quantity and quality of wood. If somebody is not able to pay the penalty his/her axe would be taken away by the mandali.
3. Not to take cattle for grazing in the protected plot, nor allow the people from other villages to do so. All cases of violation would be reported to the forest officials.
4. Grass cutting from the plot is allowed only in winter

5. Quarrying is not allowed in the JFM plot area .
6. In case of cattle grazing, the owner has to pay Rs.25 per cattle, In case of fuel cutting the penalty is Rs. 50 and in case of timber cutting the penalty is Rs. 200
7. If a member is caught breaking rules , he /she will not get a share in benefits

*Van mandalis* are expected to assist the forest department in preventing trespass, encroachment, grazing, fire, poaching, theft or damage but hardly enjoy the power to punish or decide the nature of punishment for those caught indulging in any of these prohibited activities. Since the *Van mandalis* are not given formal rights for punishing offenders, they are not able to work effectively.

Only in three villages *Van mandalis* rules for protection were applied and some people were penalized accordingly. During the field work it was told that rules could not be strictly followed because of fear of spoiling relationship with friends and relatives also non-assurance of protection from the forest department of committee members from those who were penalized. Committee members cannot work independently therefore they often take the help of forest officials to apply rules and penalize the defaulters.

In 9(21%) villages forest officials penalized defaulters. It is important to notice that in 40 percent sample villages rules have been formed but follow up is not done. In 12 villages rules were broken by several people, but none was penalized. In Zagola village of Dahod, most of the forest land is encroached; therefore JFM could not be introduced. In three villages penalty was used for mandali's expenses , such as purchasing stationary, and travel of office bearers.

Table 20: Application Of Rules By *Van Mandalis*

<b>Application of rules</b>	<b>No. of villages</b>	<b>percentage</b>
Defaulters are penalized by mandali	3	7%
Penalized by forest officials	9	21%
No case of rule breaking	2	5%
No follow up of Rules	17	40%
Rules are not formed	8	19%
Inactive villages	3	7%
Total	42	100%

In 30(71%) villages, *Van mandalis'* and forest department's rules are same. Only in 12(29%) villages *Van mandalis* have formed their own rules. For penalizing defaulters, majority villages are dependent on the forest department. Usually people disobey the rules for grazing and fuel wood collection.

In 32 (76%) sample villages, people have done unauthorized grazing and cut fuel wood. In some villages grazing is not treated as offence. People are more concerned about fuel wood and timber, which are scarce resources. Only 10(24%) mandalis are capable of socially penalizing people, if they do not follow mandali's rules. In another 10(24%) sample villages, mandlis are not very confident and defaulters are handed over to forest guards. In 22 mandalis rules have not been formed, but informally following rules are followed in some villages:

1. If someone is caught cutting wood, that person has to pay double the price of the cut wood as penalty
2. The accused has to pay Rs 50 if caught cutting wood and Rs.10 in the case of cattle grazing and Rs 5 in case of goat grazing.
3. A penalty of Rs. 50 to Rs. 300 is levied depending on the offence.
4. RS 10 is charged for a cattle and R.1 is charged for a goat, if found grazing in the forest area.

5. In the case of offence by a member, his/her membership would be terminated and in the case of a non-member the person will be handed over to the forest official for decision about penalty.

In 39(93%) sample villages, people are not aware of the rules framed by the forest department. Only in three villages people are partly acquainted with the rules. In 29(69%) sample villages only forest department rules are followed, while in 9 (21%) villages, rules formed by the van mandali and the forest department are followed. In four villages, mandalis have their own rules.

This indicates higher dependency of villagers on either the forest department or NGOs. In 22(52%) sample villages, people informed that neighbouring villagers damage the forest. In 12 villages, defaulters from neighboring villages were penalized, while in 10 villages no action was taken. In 18(43%) villages no harm was done by neighbouring villagers, as they too had a JFM programme operation in their village.

Table:21: Damage By Neighboring Villagers To JFM Plot

<b>Attitude of neighboring villagers</b>	<b>No. of villages</b>	<b>percentage</b>
Damaged the forest	22	52%
Not damaged the forest	18	43%
Not aware of damages	2	5%
Total	42	100%

### **SHARING OF BENEFITS**

In 19(45%) sample villages, for sharing of production of grass, following rules have been formed:

1. Hamlet wise equal distribution of grass on a particular day
2. Equal distribution of grass to all members

3. Draw system is adopted for cutting grass. Under this system time and a part of plot are decided for each group
4. On particular day all members cut grass according to their capacity
5. Only members can cut grass as per their requirements

In 21(55%) sample villages people are allowed to cut grass as per their requirement. No specific rules have been formed for sharing grass. In two villages grass is not available in the JFM plot. In four sample villages only members are allowed to take minor forest produce. In 23(55%) sample villages any one can take minor forest produce, with permission of committee members of *Van mandali*. In 15 (36%) villages there is no control on collection of minor forest produce.

Usually people collect leaves for preparing bajpadia (leaf plates). In 11(26%) sample villages, there is prohibition on grazing in plantation area. In 20 (48%) villages grazing is allowed in some portion of the plot with permission of the mandali. In another 11 sample villages, there is no control on grazing. In 16(38%) sample villages, following rules applied for collection of fuel wood :

1. Cut back system
2. Collective collection of fuel wood, usually twice a year, and equal distribution to members
3. Draw system for deciding turn and location of cutting wood
4. Non members not allowed to cut fuel wood

In two sample villages, anyone can collect fuel wood, but the only restriction is that people can collect wood but cannot cut any type of wood. In 23(55%) sample villages, there are no rules anyone can collect fuel wood as per requirement. In 38(90%) sample villages, timber wood is not yet harvested, and

therefore no rules are formed. In one sample village there is no control and people cut timber as per their wish. Only in three villages rules for controlled cutting of timber wood have been framed. In these villages, people can take restricted quantity of timber for house construction or making agriculture implements with permission of the *Van mandali*.

In 20(48%) villages, rules for benefit sharing have been framed. In 7(17%) villages *Van mandalis* framed their own rules, in 9(21%) villages, rules have been framed by the forest department officials and in 4(10%) sample villages, NGOs have drafted the rules. In remaining 22(52%) villages rules for benefit sharing have not yet been framed.

Table 22: Formation Of Rules For Benefit Sharing

<b>Formation of rules for benefit sharing</b>	<b>No. of villages</b>	<b>Percentage</b>
Rules by mandali	7	17
Rules by forest department	9	21
Rules by NGO	4	10
Rules not framed	22	52
<b>Total</b>	<b>42</b>	<b>100</b>

Only in seven villages a part of benefit is deposited with the *Van mandali*. The share of the benefit is used for the mandali's work, such as purchase of stationary, travel expenses of office bearers for mandali's work and provision of tea to the official guests etc.

In Ranbanda and Velzer of south Gujarat, the mandalis sent fodder to earthquake hit areas. In 35(83%) villages, there is no system of depositing the share of benefits in the *Van mandalis* account. In 28(67%) villages only grass was harvested during the last five years(1996-2000), while in 16(38%) sample villages grass and fuel wood were harvested. In eight(19%) sample villages grass, fuel wood and bamboo were harvested during the last five years. In five(12%) villages all forest products(grass, fuel wood, bamboo and minor

products) were harvested. In 14(33%) sample villages till now none of the forest products were harvested.

Table 23: Harvesting Of Benefits From JFM Plots (1996-2000)

<b>Availability of forest products</b>	<b>No. of villages</b>	<b>Percentage</b>
Grass	13	31
Grass,fuel wood	10	24
Grass,fuel wood,bamboo	2	5
Grass,fuel wood,bamboo, leaves	3	7
No harvest is done	14	33
Total	42	100

A total of 420 *van mandali* member households were studied for getting in depth information about the JFM benefits. Table 24 indicates that during the last five years(1996-2000) number of households receiving benefits from the JFM has increased. Increase in availability of forest produce led to 15 to 20 percent per year increase in income of each beneficiary house hold.

It is observed that the maximum number of households have received benefit of fodder. In 1996, 33 percent of sample households received fodder from the JFM, which increased to 45 percent in 1999. In 2000 there was a slight decrease in number of fodder beneficiaries. Number of beneficiaries of fuel wood are lesser than the number of fodder beneficiaries. In 1996, 21 percent of sample households availed benefits of fuel wood, which increased to 35 percent in 1999, again there was a slight decrease in 2000.

Bamboo and timber wood are precious forest products, therefore less number of households could have access to them. In last five years, only in Kunber, Umarvav Najik, Vaghplur and Ladkua bamboo crop was harvested. In 1996 only 11 percent of sample households received bamboo under the JFM programme, which decrease to 7 percent in 2000. During last five years only in vaghpur village timber was harvested. only 2 percent of sample households had benefit of getting timber from the JFM plot.

Though there is a trend towards increase in member beneficiaries but still it is questionable that why all members of *van mandali* do not have access to the benefits of JFM.

Table 24 : Year Wise Number Of Beneficiaries Of Fodder, Fuel , Bamboo And Timber

Type of Forest Product	year wise number of beneficiaries									
	1996		1997		1998		1999		2000	
	NO. of HH	%	NO. of HH	%	NO. of HH	%	NO. of HH	%	NO. of HH	%
Fodder	137	33	139	33	162	39	186	45	179	43
Fuel wood	87	21	108	26	148	35	147	35	136	32
Bamboo	45	11	43	10	42	10	40	10	30	7
Timber	10	2	10	2	10	2	10	2	10	2

During last five years per household, on an average availability of fodder was 183 quintals. There is not much change in share of per household quantity of fodder. There is significant increase in average share of per household during last five years. In 1996, on an average per household share of fuel wood was only 11 quintals, which increased to 24 quintals in 2000. There is not much change in per household share of bamboo. On an average per year per household received about 22 bamboo poles. (table 25)

Table 25 : Average benefit family per year

Type of forest product	Year wise per family average benefit				
	1996	1997	1998	1999	2000
Fodder (in qts)	183	179	157	183	182
Fuel wood (in qts)	11	15	18	20	24
Bamboo ( in no.)	20	22	22	24	22

## **PEOPLE'S PARTICIPATION**

In 32(76%) sample villages, people are interested in participating in plantation activities, of which in 27(64%) sample villages, people actually participated in plantation. In some villages, saplings of choice of people could not be planted, due to non-availability of these saplings in the forest nursery.

In 10 sample villages, only the chairperson and secretary participated in selection of saplings and plantation. In 17 villages people did not participate in plantation activities. In four villages, species of trees were selected by forest officials and in three villages by NGOs. In eight villages e.g. : Mahudi, Golanpur, Asayadi, Wakadi, Kaljhar, Umaria Moti Panduli and Mamapipla , people are not either aware of location of the JFM plot or have not been given the plot. In two villages, plantation activity has not yet been carried out.

## **SENSITIZATION OF SPECIAL GROUPS**

It is very important to sensitize children for protecting their forest resources, so that when they grow, unlike their elders, they will take proper care of their forest resources and preserve the ecosystem.

Only in six villages, some efforts have been made to sensitize children in protecting forests through organized training programmes and environment camps. In three villages regular meetings for women and youths were organized to increase their awareness about JFM and sensitize them for preservation of their forests.

## CONCLUSION

Although there are many potentially productive and sustainable technologies available for regeneration of forests, the sustainable forest development will not take place without the full participation and collective action of rural people. The sustainable regeneration of forests depends on the motivation of individuals as well as action by groups or communities as a whole. For a long time, local groups and institutions have been ignored in the process of the forest management. This has led both to increased degradation of forests and to a decrease in the capacity of local people to cope with the changing environment. People, who are already well organized or who are encouraged to form new groups, are more likely to continue activities after the completion of a project.

The Joint Forest Management is one of the important programmes of the Forest Department which involve people in protection activities. Wherever protection is successful, the production of grass and fuel wood have increased, which led to a 15 to 20 percent increase in the annual income of participant families. To some extent the JFM helped to bridge the gap between the villagers and the forest officials. Old attitudes are changing, as forest officials have come to appreciate the regeneration of degraded lands which follows community protection and have appreciated the growing satisfaction of working with, rather than against the local people.

If one looks at the number of JFM villages and their membership, the programme looks successful. In some villages, people from **lower castes** could not become members of the *van mandali* as upper caste-people did not want them. **Women's representation** is insignificant in the *van mandalis*, in fact, they are the main users of the forests. In some *van mandalis* women have shown that they are not sub-standard, if opportunities are given to them, they can carry out the management task successfully.

The Forest Department plays a very important role in the formation of the *van mandalis*. They initiate the introduction of the JFM in the villages and help the villagers to carry out the whole process of formation of *van mandalis*. Wherever forest officials have a positive attitude for the JFM, the *van mandalis* are working very well. Working with people is enjoyable but a difficult process. It takes a lot of energy and time for gathering people, holding regular meetings with them and convincing them of the concept. The forest officials with a higher literacy level have difficulty in coming down to the level of illiterate villagers. All **forest officials** do not have the aptitude for working through people's participation, and compelling them to work on the JFM is not correct. There is a possibility that the JFM might get misinterpreted.

Due to their lower educational level and lack of training on the JFM procedures, the *van mandalis* are not able to maintain records properly and in fact they do not realize the **importance of keeping proper records**. In most villages only membership record registers are maintained either with the help of NGO workers or the forest officials. Without proper records it is difficult to differentiate between successful and unsuccessful *van mandalis* and learn about the process of their development.

There are **traditional control systems** existing in the villages. Different castes have their own rules for penalizing offenders for their social, economic and criminal misdemeanors. Earlier these systems were very effective, but now with increasing exposure to the outside world, these systems are deteriorating. Earlier, both the parties had to agree to the decisions of the caste panchayat. Now if one of the parties does not agree with the decision of the caste panchayat, he/she goes to the government's local court. Often, for criminal offenses the report is lodged in the police station. Owing to the changing political scenario, increasing access to information and knowledge, increasing literacy levels and improving economic conditions, the **role of traditional**

**leaders has eroded.** Many new types of leaderships are emerging. Traditional systems of decision making are not as powerful as earlier, any longer.

Some *van mandalis* have not yet received **Adhikar patrak** and the villagers have a sense of insecurity . They feel that once the forest is regenerated , the JFM plot will be taken back by the Forest Department, without providing them with any benefits. In some villages, people do not know even the **location of the JFM plot**. In the case of non-clarity of location or non-availability of the JFM plot, it is difficult for the *van mandali* to start the work of protection.

The *van mandalis* are not very successful in protecting forest, since they do not have the **formal power to punish defaulters**. People accept the power of the forest guard but not of committee members of the *van mandali*. The *van mandalis* have formed their own rules for protection but do not follow them strictly. Most of the time they do not follow up with the defaulters as they can not punish them. Often the defaulter is handed over to the forest guard, and if he/she happens to be friend of the forest guard or a powerful person of the village, he/she gets away without being penalized.

Since the *van mandalis* are not very clear about their **rights and duties**, they do not take much interest in the JFM activities. When people go for protection of the JFM plot, they are not able to go for work and therefore lose their wages. If people are sure about the benefits of the JFM they do not mind losing their wages for higher benefits. There is a lack of clarity about the status of members of the *van mandalis* about the additional benefits they would get over the non-members. At present, in many villages anyone can collect grass and fuel from the JFM plot and there is no difference between members and non-members. Until now none of the *van mandali* has had a final harvest.

There are doubts among the villagers about their share in the final harvest. The proportion of their share of the final harvest indicated to them by the local forest

officials varies from 50 to 75 percent. None of the *van mandalis* has seen the Government Resolution on JFM. Even the village level forest officials are not clear about it.

In the majority of the JFM villages, people participated in the actual plantation, but they could not participate in selection of plant species. Whichever species were available in the forest nurseries were planted in the JFM plot.

Special and sincere efforts have yet to be made to sensitize children, youth and women towards the protection and regeneration of the precious forest resources.

The study concludes that the participants of JFM programme in Gujarat: the people, the NGOs and the forest officials, have a positive attitude towards the regeneration forest lands of Gujarat. The programme will have a bright future in the state provided there are minor changes in policies and attitude of all participants are made.

## RECOMMENDATIONS

The present in-depth study of Mechanisms, Systems and Arrangements in the JFM villages of Gujarat helped to suggest some of the recommendations which might eliminate some of the major problems which were coming in the way to achieve greater success in the JFM programmes. Following are the recommendations of the present study:

1. Training programmes may be organized to sensitize the villagers in their approach towards the lower castes and women. Policies may be formulated to incorporate the active participation of the underprivileged section of the society.
2. Membership of women and underprivileged sections in the *van mandalis* should be increased
3. The forest officials who have an interest in the JFM work and have received **training on working with people**, should be associated with the programme. Exposure visits of other forest officials should be organized in those villages, where forest officials have acquired the skill of working with people and have formed very good *van mandalis*. The village level forest officials, who have achieved significant success in JFM, should be used as resource persons to share their process of implementation with their colleagues.
4. Workshops should be organized in the course of which the committee members of the *mandalis* are made aware of the benefits of record-keeping and trained to keep systematic records. Along with this, frequent refresher courses should also be conducted. Training organizations with specialization in grass roots level training programmes should be involved in training of committee members.

5. There is a need to give formal power and training to the village leaders, so that they can be effective in the emerging pattern of village institutions.
6. A proper system for the signing of agreements and handing over *Adhikar patrak* to the *van mandalis* should be developed and followed strictly. The forest officials should be given the responsibility to follow all the terms and conditions of the JFM. In the Government Resolution, it should be made mandatory to issue the *Adhikar patrak* immediately after registration of a *van mandali*.
7. Frequent visits of higher level forest officials are desired to develop confidence among people about JFM and Particularly to ensure them that the JFM plots will not be taken back from them, once they are regenerated. They will get all the due benefits for their sincere efforts for regenerating and protecting the forest plots.
8. The powers of the members of the *van mandali* committee should be legalized through a Government Resolution.
9. Village level forest officials may be given comprehensive information about JFM through training programmes as well as through documents; written in the Gujarati or local languages.
10. There is a need to formulate uniform rules and regulations throughout the state and these should percolate down to the grass-roots levels. There is a need to ensure that amendments should reach the *van mandali* and the village level forest officials within a stipulated time.
11. An advanced plan should be prepared for raising nurseries of the Forest Department. Selection of plant species should be made, according to the

- need of the people. Separate PRA with village men and women can be organized for collecting information about their preferences.
12. Frequent training programmes may be organized for children and youth for increasing their sensitivity towards their environment. Besides this, they should be given proper training in group building and organization development, so that when they grow they would be able to form good village institutions. Their capacity for management of a project should also be developed for sustainability of the project.
  13. Children and youth environment clubs at the village level can be formed to develop community feelings among them.
  14. Women should be provided a separate platform for their active participation in the JFM programme. Separate women's groups can be formed and can be given separate JFM plots for protection and regeneration of forest.
  15. Separate training programmes regarding JFM should be organized for women. In such training programmes, preference should be given to female resource persons.

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