PARTICIPATORY PLANNING FOR WASTELAND DEVELOPMENT

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CONTENTS

CHAPTER 1

INTRODUCTION

Degradation of India's land mass has been continuing for the last several decades because of deforestation and inappropriate land use. Removal of trees on a vast scale, both from forest and non-forest areas has increased soil erosion, upset water regimes, and reduced the supply of fuelwood, fodder, and small timber on which the vast majority of India's rural population has been dependent for centuries. Extension of cultivation on marginal lands has further exacerbated the ecological crisis, resulting in greater frequency of droughts and floods, depletion of soil and shortage of -drinking water in semi-arid areas. According to one estimate, 1 to *2%* of currently productive lands may be deteriorating into wastelands status annually (NWDB, 1985).

As rural women are involved in meeting dally survival needs of their families by collecting forest produce, decline in the country's natural vegetation has directly affected poor rural women. In semi-arid areas of Sabarkaantha women spend up to 6 hours in collecting dead branches of trees (Nagbrahman and Sambrani, 1983). In a recent study of Orissa and Chattisgarh areas, which were heavily forested a few years back, time required to collect forest produce has increased from 1.7 and 1.6 hours to 7.0 and 4.1 hours respectively (Fernandas and Menon, 1987).

It was estimated by the National Commission on Agriculture that by the year 2000 for a population of 1000 million, India would require a*n* additional 40 million hectares of land under wood for various purposes including fuel, and 10 million ha. each for production of crops and fodder. To this an additional area needed for non-agriculture use has to be added. Although these figures are more than 10 years old, and did not perhaps take into account new fuelwood resources generated by widespread availability of prosopis, yet the gap between

demand and present supply is a cause of concern. From where is this additionality of land going to be created?

In order to meet these demands the only option is to make India's wastelands, estimated in the next chapter to be around 92 million ha, more productive, and put a halt on those forces which create such lands. The Government of India has set up a Wastelands Development Board with a mandate of bringing 5 million ha. of land every year under fuelwood and fodder plantations. The experience of the last three years of the Board shows that technical solutions alone are not enough for tackling this staggering problem. Does the key element in ensuring success of wasteland development lie in active participation of rural people in all stages of planning, implementation, monitoring and evaluation of the programmes of wasteland regeneration, and harvesting, utilisation and marketing of its produce, or are there other policy options?

Some efforts were made in the past to reclaim culturable wastelands and improve productivity of marginal lands through soil conservation, and watershed management. These programmes were departmental, biased in favour of agriculture, which led to intensive use of land after treatment, and did not take an integrated view of sustainable production and peoples' requirement. In fact framework for land policy is well developed for agricultural lands only; its various components being ownership. land records, cropping policy, marketing infrastructure etc. The same cannot be said about the uncultivated half of India (Romm, 81). There are no precise estimates, no knowledge about ownership, degree of degradation, present use, or future potential of the wastelands. Because of the lack of essential information it is difficult to do scientific planning about their regeneration. Historically the state followed a policy of laissez faire in respect of such lands. Privatisation through encroachment was encouraged or at least tolerated in the past. As its produce like grass or fuelwood was not marketed, and was subject to regulations meant to protect government forest lands, it

further insulated these lands from market forces. This in the long run affected investment and efficient utilisation of such lands. It is only in recent years that a programme of rejuvenation of village degraded lands has been taken up to create community assets, and to meet fuelwood/ fodder needs of the people.

The present paper documents village level experiences from Indian states in achieving participatory management of village lands, identifies institutional and social constraints, and attempts to suggest some practical policy changes which could result in better utilisation of wastelands. Should this participation be on a group or family basis is one of the key questions which has been discussed here. While focus on assisting individual households to engage in tree planting has great merit, it has been suggested in the paper that making common and public lands productive will have pronounced societal linkages, and hence deserves higher priority. Forest lands have been excluded from discussion except in the last chapter, as these lands raise several policy and legal issues which were outside the perview of terms and reference of this paper. The focus of this paper is on village level activities, and therefore on village lands and family farms.

The paper is divided into six chapters. The next chapter discusses the extent and categories of wastelands in the country. Thereafter the findings of various evaluation studies regarding village level participation in social forestry programmes have been summarised. In chapter 4 four villages from different ecological zones (hills, alkaline lands, ravines, and degraded undulating plains) have been taken up for detailed study. An attempt has been made to identify wastelands in these villages, their location, uses, control and management. Government plans for implementation, and the reasons for success or failure have been analysed. Chapter 5

presents a conceptual framework of social forestry programmes, of which development of common lands is an important component. The last chapter closely follows the institutional and societal constraints discussed in chapter 5, and makes some recommendations for the future.

CHAPTER 2

ESTIMATES AND OWNERSHIP OF WASTELANDS

Historical Background

The precise area of wastelands in the country has been a subject of controversy between Agriculture and Forest departments of the Government of India. Whereas the Ministry for Agriculture maintains that only culturable wastes and unculturable lands out of the nine-fold classiciscation of land (see Table No. 1) should be included in the category of wastelands, the total of which comes to 36.9 mh, the Minister for Environment & Forests in answer to a Lok Sabha question in March 1986 stated that the area of wastelands in the country was 175 mh. Which figure shall then we take, 36.9 or 175 mh? This is not all. There have been other estimates too, 200 mh by Vohra, and 53 mh by the National Remote Sensing Agency. The wide variation of course is because of the different meanings adduced, to the word wastelands by various researchers. We will first begin with the historical evolution of this term, before attempting to reconcile the difference in various estimates. This would also throw light on issue of ownership of wastes, for instance, why in the northern states wastes are vested in the panchayats, where as in the south these are part of government lands.

During the colonial period the term wasteland applied to such lands which were not under cultivation, and therefore were not yielding any revenue. As the settlement pattern varied from state to state, legal and ownership status also differed. In the zamindari states of the north like U.P. and Bengal uncultivated lands were included in the estates owned by the zamindars, and were not retained by the Government. The revenue of the entire estate was fixed irrespective of the area under cultivation, but the zamindar could charge rent from the cultivator only on the basis of actual cultivated

area. There was, thus, an incentive to both, landlord and the cultivator, to extend actual area under cultivation.

In the western and southern states where ryotwari settlement was practiced, all uncultivated lands belonged to the Government, and waste was not included in the holdings of the cultivators. In Madras, for instance, there was no extension of cultivation during the first half of the 19th century. But as the pressure of population increased, rural settlements started advancing into wastelands. In the 30 years preceding 1870, large areas of wastes came under cultivation in the Bombay Deccan (Farmer,1974).

When landlordism was abolished in the mid-fifties, uncultivated wastelands in the north were transferred from landlords to either the forest department (where available in large chunks spread over a number of villages), or to the village councils. In the south, these continued to be largely with the government, and are known by different names; paramboke in T.N., C & D lands in Karnataka and Maharashtra etc. The claim of some environmentalists that during the colonial period village communities had a sense of ownership and belonging to the uncultivated lands is historically untrue. In fact it may be erroneous to call them common lands. The case studies from Lohgarh, M.P. and Ralga, Maharashtra discussed in chapter 4 and 3 respectively show that uncultivated lands were Jealously guarded by the jagirdars, and not by the villagers, and strong punishment was meted out to those who illicitly felled trees from such lands. With some exceptions, there was no tradition of the village community protecting, managing, or distributing the produce from such lands. Social forestry in the last ten years has further alienated the people from community lands, as these are now actively being managed departmentally.

After independence many states adopted a conscious policy of encouraging or tolerating encroachments on uncultivated lands. These were perhaps done by all classes of rural communities,

and not exclusively by the rich. Since the late sixties the states started allotting wastes only to the poor. In U. P. alone more than one million ha. of land was distributed to the poor under various schemes. The result of these developments has been to increase the net cultivated area from 119 mh in 1950-51 to 140 mh at the beginning of the present decade.

Changes in the land-use pattern in the last 30 years (GOI, 1985) may be seen from the following table:-

Table No. 1
Estimates of Land Use in India

Category	Use	Possible Ownership	Area in million ha. 1950-51	1980-81
Net sown area	agriculture	private	118.7	140.3
Forests	government community	govt.	40.5	67.4
Non-agr. use	towns& rivers etc.	mostly private	9.4	19.5
Unculturable	deserts, mountains etc.	govt.	38.2	20.2
Pastures	grazing	community	6.7	12.0
Culturable waste	-do-	private, govt. & community	22.9	16.7
Groves	trees	private	19.8	3.5
Fallows	agr.	private	28.1	24.6
TOTAL			284.3	304.2
Record not available			44.5	24.6
GRAND TOTAL			328.8	328.8

Estimates of wastelands

The estimates of wastelands in India have varied according to the definition adopted. The National Commission on Agriculture took a diagnostic view of land and estimated that 175 million ha. of land was affected by the problem of soil erosion and degradation, and was in need of attention. This included 85 million ha. of cultivated land too. According to the Commission, all non-irrigated and non-paddy lands in the country were subject to water and wind erosion, and were therefore included in 175 million ha. Obviously it would be difficult to classify the entire 175 mh as wastelands, nor would it be available for fuelwood/ fodder plantations.

Another possibility is to link wastelands with productivity and define them as lands which are below its potential productivity with reference to its available soil and water nutrients. This definition is also beset with problems. First, as productivity is a function of technology, the definition would render estimation and location of wastelands a dyanamic and ongoing exercise. Second, to establish the cut-off point with regard to productivity-should it be 10 or 15 %-would be adhoc and would introduce an element of subjectivity. This definition therefore bristles with location specific constraints as well as having practical problems of making uniform and reliable estimates of wastelands an impossible task.

The Society for Promotion of Wasteland Development suggested the following characteristics of wastelands (SPWD.1984); lands which are, (a) ecologically unstable, (b) whose top soil has been nearly completely lost, and (c) which have developed toxicity in the root zones for growth of most plants, both annual crops and trees. It reached a figure of 93.7 mh for non-forest wastelands, atleast a third of which will be under cultivation.

The National Remote Sensing Agency (NRSA, 1986) save an estimate of 53 mh based on aerial photographs. These figures are on the low side, as area of less than 100 ha. was not picked up by the satellite imagery. The area under different categories was estimated as follows:-

Table no. 2
Estimation of wastelands by NRSA

Category	Area in mh
1. Salt affected	3.90
2. Gullied or ravinous	4.33
3. Waterlogged or marshy	0.88
4. Undulating upland with or without scrub	10.80
5. Jhum or forest blank	2.40
6. Sandy area (Coastal or desert)	10.53
7. Barren hill-ridge or rock outcrop	2.75
8. Snow covered or glaciers	17.70
TOTAL	**53.30**

In view of the conflicting estimates as also the absence of an agreed definition, a Technical Task Group was set up by the Planning Commission in 1986 which defined wasteland (NWDB, 1986) as "that land which is degraded and is lying unutilised (except as current fallows) due to different constraints."

There are problems with this definition too. If the purpose of identification is to improve the productivity of degraded lands, the above definition will ignore partially utilised lands, like pasture lands and scrub forest lands, which produce some biomass but far below their potential. Strip

lands like canal bunds, roadsides, fieldbunds etc. will also set left out from the scope of the above definition. It is interesting that the Technical Task Group seemed to be aware of this dilemma as in a foot note it commented that "it is recognised that wastelands per se could be considered as those lands which are unutilised, partially utilised or mismanaged." It however did not elaborate the reasons for excluding the partially degraded lands from the ambit of its definition. Another operational problem in respect of identification of such areas through satellite imagery will be that it will pick up larger areas like deserts and mountains, which cannot be reclaimed, and smaller patches of potentially more useful land are likely to be ignored rendering the whole exercise of identification meaningless.

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Because of these problems another interministerial group was constituted in 1987 and the following definition was adopted:-

"Wastelands mean degraded land which can be brought under vegetative cover, with reasonable effort, and which is currently underutilised and land which is deteriorating for lack of appropriate water and soil management or on account of natural causes. Wasteland can result from inherent/imposed disabilities such as by location. environment, chemical and physical properties of the soil or financial or management constraints."

The above definition has corrected some of the deficiencies discussed above, although it is now prone to subjective interpretation by the investigators. It would be interesting to watch how various scientific organisations under the Department of Science and Technology engaged in collecting data on wastelands through satellite imagery grapple with the problem of subjectivity inherent under the changed, although more appropriate definition.

It would appear from the above discussion that any attempt to have & precise definition and estimate of wastelands is likely

to be frustrating. Lands which are important from the point of regeneration are the semi-utilised ones which would render estimation a subjective exercise. It may be more rewarding to locate reasons for degradation, and understand present use and ownership without which active participation of the people cannot be secured.

Ownership of Wastelands

One of the most critical information about wastelands, which cannot be picked up by photographs, pertains to ownership. There are three obvious categories; private, forest, and community. As regards the first, historically large holdings, especially in the dry areas, included substantial uncultivated patches, whereas smaller holdings were more intensively cultivated. This picture has changed in the last two decades, as due to the policy of leasing of culturable wastes, even resource poor farmers are in possession of some unutilised lands, although their rights on newly acquired lands are far from secure. Several states have recently introduced the Tree Patta Scheme, which may further improve the land base of the poor. In addition, farmers in the dry areas owning medium size holdings, say between 2 to 4 ha., are as poor (Blair, 1985) as the landless in the green revolution belt. Improving their productivity through agro-forestry should be an important component of anti-poverty programmes. Engaging such individual households in tree planting has therefore great merit. Farm forestry, so long it is on unproductive lands increases both production and social benefits.

As. regards forest wastelands, the Forest Survey of India has estimated that almost half of the forest area has a density of less than 40%. There has also been increase in the area under scrub forests in the last decade, although its extent is disputed.

Non-private and non-forest lands in India are of three types; lands which are under the ownership and use of the Government,

like roadsides, canal banks etc., second, government wastes like poromboke, C & D lands, where ownership is with Government and use by Community; and thirdly, lands which are vested in the panchayats like gomal and gaon sabha lands. The distinction between the second and the third type is often blurred at the field level. Both have the character of being open access resources, accessible to all, but in practice not managed by either government or community. These have depended upon natural processes for regeneration. These are more degraded than the forest or private lands, because of neglect and lack of investment. The importance of such lands shows considerable variation over the villages. The CPR dependent villages are generally dry villages, while the wet and irrigated villages have less area of common land. The main source of fodder here is agricultural waste, and not wayside grazing.

It is a pity that ownership data on wastelands is not compiled at the national or state level, although it can be obtained from the village revenue officials in many states. Some rough idea can be obtained from the nine-fold land use data, which is available for all the states, by assuming that all fallow and grove lands are private, pastures are with community, half of culturable wastes have either been allotted or encroached, and the other half is still non-private. We shall leave out unculturable wastes from computation of wastes, as these may be too degraded to be reclaimed. It may be mentioned that in several states even these lands have been allotted, but in the absence of firm data we would not count them towards land suitable for tree plantation. We shall similarly count forest encroachments (estimated to be 2.1 mh by the FSI, which may be conservative) not as private wastes, but as forest wastes.

With these assumptions, area under the three category of reclaimable wastelands in the major states would be as follows:

Table No. 3

Ownership status of Reclaimable Wastelands in India and the States

Figures in mh

Name of the state	Reporting area	area of reclaimable wastelands			
		Public	Private	Forests	Total
A.P.	27.44	1.36	4.62	3.73	9.71
Assam	7.85	0.25	0.53	0.80	1.58
Bihar	17.33	0.37	3.09	1.56	5.02
Gujarat	18.83	1.84	1.87	0.68	4.39
Karnataka	19.05	1.60	2.61	2.04	6.25
M.P.	44.21	3.79	3.13	7.19	14.11
Maharashtra	30.76	2.09	2.34	2.86	7.29
Rajasthan	34.23	5.04	7.41	1.93	14.38
Tamilnadu	13.00	0.33	2.97	1.01	4.31
U.P.	29.71	0.87	3.10	1.43	5.30
W.B.	8.85	0.19	0.50	0.36	1.05
Others	53.02	2.63	4.31	12.30	72.26
All India	304.28	20.36	36.48	35.89	92.73

It may be noted that the above figure of 92.73 mh does not include either unculturable wastelands, like rocks, mountains or highly saline lands, or low productivity cultivated lands. The latter category is important for administration as its production can be increased through afforestation and proper water management. But as both current and old fallows have been counted in the above calculation, potentially productive but uncultivated lands have been included to a large extent in the category of private wastelands.

Due to confusion about the definition the states have not been able to physically locate wastelands for its development. Thus, Gujarat and U.P. have so far identified only 0.16 and 0.87 mh as wastes in their states respectively (this includes unculturable waste too), which is far below the area computed above. Exclusion of degraded forests, private uncultivated and partially utilised lands, such as groves and pastures is the reason for under reporting of the area of the wastelands by the states. District administration in India conceives wastelands as those lands which are neither too degraded, nor in the possession or use of any body, and thus can be transferred to the NWDB without any hassles. Such lands are difficult to discover, as even uncultivated lands are being put to some use or the other in villages, and hence low reporting. As would be argued in the 5th chapter, it is not necessary to take over land from the people or the village for the purpose of its development. Indeed such a step would be retrogade. Peoples' participation requires creating secure land rights in favour of the people, and therefore such lands which are already vested in the village or individuals should be given highest priority for reclamation.

CHAPTER 3

LITERATURE REVIEW

It is only recently that a massive programme for wasteland development through afforestation has been launched in India. Till then, improvement in land productivity or prevention of soil and water erosion was considered to be only one of the several objectives of social forestry pragrammes. Whether there has been a qualitative shift towards regeneration of wastes through soil conservation measures, or away from farm forestry on crop lands is too early to judge. In any case that is not the subject matter of this study. Suffice it to say that reforestation of degraded community and private lands, through peoples' involvement, especially of women and the poor, for production of fuelwood, fodder and email timber, has been in India's policy documents for over a decade, and has been the most important objective in the various social forestry projects being implemented in the states through donor assistance. Community involvement has several advantages. Government departments have limited reach and their capacity for sustained local action is constrained by the way bureaucracy functions. Centralised management does not encourage flexibility required for effective implementation. These obstacles would be reduced if local participation is forthcoming. Hence the emphasis on seeking peoples' support in social forestry projects.

For instance, social forestry in the Tamil Nadu project (GOTN, 1982) was defined as creation of sustainable forest resources for the people, and by the people with government, support. It implies full involvement of the people, as individuals and as members of the local' communities. The Karnataka Implementation Manual enjoins upon the Range Forest Officers to closely associate themselves with the local population. They are to organise local meetings, farmers camps, and seminars etc. The beneficiaries needs and its timing should be uppermost in their minds.

These are also the basic objectives for which the NWDB has been set up. It would therefore be relevant from the point of view of designing future development plans for different categories of wastelands, to describe and evaluate Indian experience of participatory planning in social forestry and rural resource management. As similar programmes are being implemented or planned in other Asian countries too, an analysis of the problems faced by India in achieving community participation will help other countries in deciding their future strategies for the development of degraded lands. We are therefore attempting here a literature review of micro experience on "who gained and who lost" from the social forestry projects in India so far.

Evaluation Studies

The Tamil Nadu project began in 1981-82 with the primary objective of meeting the fuelwood and fodder needs of the poor. A recent evaluation (SIDA, 1987) indicated that output from tankshore plantation is not being used to meet local demands for fuelwood, but is being sold to urban areas. The panchayats utilised the proceeds for repair of roads, schools and drains, but there were also instances of questionable utilisation, like payment of telephone bills, travel of the Sarpanch etc. Providing tree cover to common lands meant depriving access of the poor to grazing land®. The Government did not issue clear instructions as how to tackle such conflicts, it advised consultation of all departments and panchayats. Women's involvement in decision making was negligible. The study concluded that too much faith in village community structure, that it will manage village resources in the interest of the poor is not Justified.

As regards farm forestry, F.D. discouraged fruit and fodder plantation, although because of early returns the poor preferred it. An important highlight of the farm forestry scheme was to offer cash incentive to the poor if plants

survived. A recent study (Vardan, 87) observed that offering cash under the TCIP (Tree Cultivation Incentive Programme) is no substitute for extension, publicity, effective administration and other critical inputs like land availability. It is also noticed that the more enterprising of the large farmers take advantage of the scheme. The actual quantum of money received under the scheme is insufficient to serve as an incentive to the poor. A departmental survey shows that in two years average money received by various classes of beneficiaries was as follows:

Table No. 4

Money Received under TCIP by category of Farmers

category of beneficiaries	money recieved in two years (Rs.)
landless labourers	5.00
marginal farmers	77.50
small farmers	100.00

The present TCIP scheme gives cash after 2 years, from the point of view of the poor it is a long period. Credibility of the government being low, the poor do not feel certain of getting the incentive amount despite survival. Thus the purpose of the scheme is defeated. The poor would prefer if payment is made for planting/fencing. It is also important to have an incentive system which discourages trees on agricultural lands, unless of course an acceptable model of agroforestry is used. On the other hand survival incentive should be paid to the motivators, which would be in addition to a fixed monthly honorarium. Similar bonus could be paid to the village panchayat/local body concerned.

Another study of district Chengalpattu (MIDS, 1984) calculated survival percentage of village woodlot scheme under which 4350 ha. of acacia and 1607 ha. of eucalyptus was planted between 1961-80. The results were as follows:-

Table No. 5

Survival % of village woodlot plantation in Chengalpattu (T.N.)

Year of Plantation	S U R V I V A L	
	As per F.D. records	As observed by MIDS
1970 & below	28.5	25.3
1971-73	43.7	35.1
1974-78	60.3	44.9
1979-81	82.1	64.4

The above table provides respectability to figures of survival maintained by the forest department, as actual survival was not too much at variance with the records. As regards farm forestry, when farmers were asked, in the same study, the reasons for not planting trees, 61% had no surplus land, 25% had land but could not plant trees for fear of land being taken away by the F.D., and the rest pointed to delayed returns and land being in joint names. 93% had not approached the F.D. for help, and of the rest half received a poor response from the department.

The West Bengal model of group farm forestry involved motivating groups of poor families to plant trees on contiguous plots of 20 ha. or sore. The department provided free seedlings and extension,the rest of the input was to come from the beneficiaries themselves. Most families planted eucalyptus. The price the poor got for their trees was far less than the market value, as in many cases their produce was bought by the rich of the village. The sale generated

sufficient cash for the poor with which they could buy more arable land- The project has therefore replicable value.

In a study of district Midnapur (Shah, 1987), it was found that the influential villagers sot about 7 times more than the poor farmers, because of better access to market, more awareness and higher holding capacity. They also bought the produce from the poor farmers, thus increasing their incomes. The study recommended that the poor farmers should be provided help in marketing by the Government.

Community forestry programme of a few villages in M.P. was studied by an independent agency, CENDIT in 1985. It was observed that there was factionalism in the village on caste and political lines and the poor were hardly consulted about social forestry activities. The interests of villages other than the main village of the Panchayat were ignored, the tradition of democratic decision making was absent, government officers were more interested in fulfilling the targets and often adopted the line of least resistance. Also the panchayats were not keen to take over plantations, and often community land was handed over to the Forest Department to avoid encroachment by the poor, or its allotment to the scheduled castes by the Government. The practice of the panchayat auctioning grass from such plantations reduced the availability of fodder for the poor.

The mid term review of M.P. social forestry project (World Bank,1984) commented that the principal aim of social forestry of building up institutional capacity of panchayats had fallen by the wayside because of the existing political economy of the panchayats. It concluded that short term political motivation of the leaders and cattle pressure will not allow community managed plantations to last very long.

The interim review of Andhra Pradesh Social Forestry Project (CIDA.1985) summarised its findings as follows, "the idea of social forestry has yet to catch the imagination of the

people. The vital element of peoples' participation is largely lacking except in private plantings of trees as a cash crop. The social objective of the project to assist the weaker sections of society has hardly been approached."

In a study of Ganjam district in Orissa (SIDA.1982) it was noticed that only one-seventh farmers are willing to plant trees *on* their lands. Financial constraint and shortage of land were the two reasons. They preferred crops to trees. Only 4% respondents referred to long gestation periods as the main constraint. *BOX* of the people were ignorant of non-government forests. To them forestry is a government programme which is possible only on government lands.

Forest Farming for the Rural Poor, although not a significant component of the social forestry programme in Orissa, enables the rural poor to practise both forestry and agriculture on degraded government lands on a usufruct basis. The poor are assisted with seedlings, fertilisers, and wages. All capital expenditure is borne by the Govt. but assets are to be used by the person.

An evaluation (Niswass, 1986) done by a voluntary organisation revealed that the scheme had & good response, and could be tried on a larger scale. The biggest drawback of the scheme was that it did not give any secure title over land to the poor,and therefore their interest in the scheme was short term, limited to immediate benefits. Whereever the staff took interest in keeping the beneficiary's motivation high the scheme succeeded, elsewhere success was modest. Thus, the absence of tenurial security increased the dependence of the scheme on a*n* already overburdened bureaucracy. Even where the staff tried to educate them about long term benefits, they remained unconvinced and their commitment to the scheme suffered. Other problems were, selection of land was done without consulting the person, wages were paid, irregularly, land selected was of bad Quality, and there was lack of coordination between the forest and revenue departments.

A report in 1985 by Dr. S. Conlin of ODA, London on Karnataka Social Forestry Project observed that there was no evidence of small farmers being reached in the farm forestry project. The raid term review for the same state in 1986 was more forthright, "The project has failed to achieve the intended priority to the landless, and to develop a policy for the distribution of benefits."

Several plantations in Maharashtra are now due for handing over to the panchayats. The mid term review for the state in 1985 went into the question of their reluctance to take over the responsibility for management. It noted that their hesitation is because self-help attitude is lacking in the people, sarpanches are worried about theft and encroachment, legal recourse for taking action against encroachees is time consuming, and income generation was not apparent for meeting protection costs.

Distribution of Produce

The issue of local participation in development of common lands is linked with the certainty of benefits, which are to accrue to the community from such efforts. Terms and conditions for the distribution of produce from community lands vary from state to state. Described below are the government orders on this subject in some of the states.

In West Bengal, according to G.O. no. 2379-FOr./D/6M-29/85 dated 11th June 1986, only 25% of the total produce is to be given to the panchayats, provided they organise the local people in assisting in protection, maintenance and raising of such plantations. This share of 25% will be given to the economically backward people to be selected by the panchayat. It is not clear from the order whether the poor would get it free or at a subsidised price. Similarly the mode of disposal of the balance 75% by the department is not clarified.

Prior to 1986 the Karnataka Government made a distinction between produce from the Gomal lands and C&D lands, the former were vested in the panchayats and the latter were regarded as government lands. But Government Order no. FFD 75 FAP 83, dated 23rd January, 1986 has removed this distinction, as it is recognised that "there is hardly any difference between the nature of Gomal land and Wastelands and both are used for grazing purposes by the villagers." Therefore for all categories of lands, gomal, C&D, and tank foreshores *50%* of the produce would be given to the Mandal Panchayats and Gram Samities provided they undertake the responsibility to maintain and protect plantations after the first three years. Of this amount, half will be given at a concessional rate to the small and marginal farmers, and landless labourers. For the balance the local body has the choice of either selling it themselves or entrusting the sale to the Forest Department. The remaining 50% will be disposed of by the Forest Department at a rate not less than a minimum rate fixed by the Government, which will not be less than 300 Rs. per ton on an average.

The Andhra Pradesh scheme provides for *50%* share from the final output to the panchayats from tankforeshores if they owned them. For tanks belonging to the Minor Irrigation department or other communal lands there is no such stipulation.

The scheme of the Maharashtra Government gives the highest share to the panchayats among all the states. From plantations on community and non- forest government lands the Forest Department will retain only *10%,* and the rest will belong to the locals. From its share, the Panchayat will sell half to the weaker sections at *50%* of the market price and the rest will be sold by public auction to the people of the same village. It is also expected that the panchayat shall spend at least 25% of its income on watch and ward, maintenance, and proper replacement of community plantations.

In U.P., expenses incurred by the F.D. in raisins plantations will be deducted from the auction proceeds, and of the balance 80% will so to the panchayat. Thus it is difficult for the panchayat to anticipate and quantify the benefits from participation right in the beginning of the scheme. Moreover the amount spent is known only to the Accountant General, that too after several years. Hence the actual accrual of funds to the panchayat coffers is likely to be delayed.

A. recent evaluation of Orissa Project (GOO,1987) indicated that 82% of the villages did not know how the produce from village woodlots would be distributed. Most of the people did not expect any share from the final output. They looked upon such woodlots as another category of reserved forests.

During field visits it was noted that even the Government staff had little knowledge about these orders. The villagers, of course, considered social forestry trees as government property, and were generally reluctant to get involved in their maintenance. Uncertainty of benefits is one of the important factors which explains poor response from the people. Village experiences described in the following paras would bring out more complex social factors behind non-participation in the programme.

Village Studies

In a study of three villages in district Bhandara, Maharashtra by CENDIT it was observed that the office of the Sarpanch in Pahela village has been monopolised by a small group of persons, possessing large holdings and agricultural assets. They also control the farmers cooperative society. This monopoly has gone hand in hand with decline in popular participation, as the village meetings are held once in several years. Of the 17091 seedlings given to the village for free distribution, 10000 were planted by the family *of* the ex-Sarpanch, who has been the main contact person between the

F.D. and the village. The landless got only 12 seedlings to plant in their homesteads, and the poor farmers owning up to 2 ha. got 2756, which is only 16% of the total. Even the social forestry plantations on common lands show this bias against the poor, as earlier every body had equal access to the grazing lands,and now the right to cut grass is being auctioned.

The other village studied in the same district was Satona. It had 150 families belonging to Ponvar, an agricultural caste, 100 were SCs. 40 to 50 STs and 30 were from the backward caste. The Ponvars seem to have accepted social forestry as a sound investment, and have planted thousands of trees *on* their farmbunds. They continuously met the social forestry people once every three or four days. Outside this community there was little awareness of panchayat plantations. A low caste person did not even know who the block plantation on village land belonged to.

This was the headquarter village of the panchayat. A neighbouring village of the same panchayat, Nawargaon, felt ignored as several development schemes were cornered by the Satona village. The poor low caste families of this village were even more bitter about the programme. The plantation site was very close to their houses, which meant that they felt deprived of grazing facilities that they enjoyed earlier. They are so bitter against Ponvars and Satona that they would like to have their own panchayat.

Why are the poor not motivated? To answer this question one has to look at the way social forestry staff operates in the village. The paid motivator is supposed to participate in social functions, pay house calls,and distribute seedlings. Unfortunately, such interaction in a village setting is possible only within similar caste status families. Thus extension gets limited to the caste of the motivator, who ±*a* more likely to be from the higher castes.

A sharp contrast to the above two villages of Bhandara district was provided by Borkanhar village of the same district where the village community has on its own initiative adopted community forestry to the satisfaction of all families. Of the total 1650 acres of village land only 750 acres is under cultivation, and the rest 900 acres constitutes the village commons. The population of the village is about 2000 now, spread over two hamlets. Water table is quite favourable, there are several wells, old malguzari tanks irrigate 60% of the total cultivated land, and rabi cultivation is quite common.

A few decades back back the village common was stocked with useful trees like mahua, terminalia, and others. After the abolition of malguzari rights there was unchecked and indiscriminate felling, as a result of which the land became waste very soon. Even the poor were forced to buy fuel from the market.

There was a widespread concern about the crisis. The panchayat decided to appoint a committee of ten members from all communities in 1977. It was decided to ban all cuttings from the common till 1981. After that half a cart of firewood from the village common was given to each rationing unit of the village for one rupee. The timing and method of felling **was** decided in consultation with every one. Those who were found stealing from the common were fined, and these funds were used to pay for protection.

In order to improve its finances the village decided to approach the social forestry department to undertake plantations with NREP funds, which was done in 1983 and 1985 on 10 and 20 hectares respectively. The panchayat is quite happy with the department and would like it to continue looking after the plantations so that the expenses of watchman's wages are not borne by the panchayat.

The village commons are now full of trees and the villagers claim that there is plenty of wild life. Unlike in other villages there is no uncertainty in the minds of the people as to how the produce from the forests would be distributed. The entire village assembly is involved in the formulation and implementation of all policies, every household has a say, and there is no cornering of the benefits by a few. Whereas firewood is distributed equally to each family, non-wood produce can be collected by any one, provided half is given to the panchayat, and the other half is retained by the individual as wages.

The village Ralga in district Latur, Maharashtra has 100 households. There is considerable amount of caste tension, lower castes are not allowed to draw water from the village well. The village economy is totally dependent on agriculture, and *50%* of the households live below the poverty line. There is considerable migration in the winter months. Acute shortage of water and fodder has limited the development of animal husbandry.

Because of poor soil structure the village never had many trees even in the past. It is reported that in the days of the Nizam, severe punishment was meted out to those who cut trees. With relaxation in supervision after independence the remaining trees too disappeared.

Eucalyptus, Sub&bul, Kashigand, and Neem have been planted in social forestry plantations. Villagers would have preferred some fruit trees also. Most villagers are ignorant of the aims and objectives of social forestry. They regarded these as government trees. No public meeting was held to explain the importance of the programme. People's contact with the department was limited to the watchman. Women were even more ignorant about the project. Although the NREP plantation had promised that they would be given free fodder, the forest guard allowed access to only those who paid him. Overall survival was **30%.**

People were sceptical about the ability of the panchayat to protect and ensure equitable distribution from the trees. They would prefer government involvement to continue even after 5 years. The panchayat, is held in low esteem and commands little authority.

Tulasani, a village in Ratnagiri district in the same state, has a population of 2100. A large no. of people work in Bombay. Total village land is 1125 ha. A single rainfed crop is grown. Most of the land is on hill slopes. There is negligible market surplus. Many people have developed mango and cashew orchards. A govt. nursery has been established which raises 70000 plants of over 15 species, of which teak is in great demand. .As plots are widely dispersed high cost of survival encourages plants of high value, like teak and fruit trees.

Although the low caste Dalits are well represented in the village panchayat, yet the poor feel that their own caste members often side with the rich and do not look after their interests. They have no confidence in the Panchayat.

Social Forestry programme is considered to be a great success in this village because of high survival percentage. In two years trees have gained considerable height. One reason is that as the village has considerable private fallow land, grazing pressure is not acute. Private trees are still being sold to contractors for as low as 30 to 40 Rs. a ton. The merchants seem to manage to get permits for transporting wood fairly easily.

There is little evidence of popular participation in the programme. It is seen as another government programme. The Sarpanch and other members were not aware of the terms of the contract, or that after 5 years it would become their property. As regards the Government staff, the emphasis is on fulfilling targets.

CHAPTER 4

STUDY OF SELECTED VILLAGES

In order to study the impact of wasteland development activities at the village level, four villages from different ecological zones were selected for detailed study. In Shakruri (H.P.), a hilly village, governmental efforts have had no impact so far. Community wasteland is yet to be transferred to the F.D. There is no scheme of giving funds directly to the village paanchayat, although it seemed capable of executing plantation works. Seedlings distributed to the farmers showed poor response, as species desired by the farmers have not been raised at the government nursery. Despite this, private uncultivated lands had a lot of vegetation. These were being used for grasses, fodder and fruit trees.

Kharot (U.P.) has a lot of degraded saline lands. Farmers have not planted trees in this village in the last two years, although before that they were enthusiastic tree planters. How did this change come about? Trees were tried on community lands, but these were then allotted to the poor, who uprooted them in order to establish their claims on the land. Thus a conflict situation arose pitting private rights against community interests.

Lohgarh, in the ravines of M.P., has been luckier, as prosopis and acacia planted on about 250 ha. of community land by the F.D. is definitely going to survive, yet this success has had no demonstration effect on the farmers, as there is little evidence of trees on private lands. The poor do not seem to enjoy security of land tenure, besides extension services were also weak. A good opportunity of involving the poor and the tribals in planting trees on their own private lands is thus being lost.

In Kovilur (T.N.), both farm and community forestry have succeeded, although as trees have been planted on agriculture lands its lone term impact on employment, especially of women, seems to be adverse. Crop lands which were used for groundnut cultivation in the past have now been converted into tree farms, both by the rich and the poor. Plantation on village lands, as usual, has been done by the forest department, although several community leaders worked hard to persuade people to keep their cattle away from the planted area.

A quick note about selection of these four villages will perhaps be in order. Three factors influenced the decision in favour of these villages. First, of the various types of wastelands (Table No. 2) sands and snow covered glaciers are incapable of generating any vegetation. This leaves us with four major categories, salt affected, ravines, barren hills and undulating uplands. The villages selected represent these four types. Second, since not all villages have be*en* covered under the social forestry programme, it was considered relevant to select only such villages where some government effort towards wasteland development or distribution of seedlings had taken place, so that its evaluation became meaningful. Villages covered by the voluntary agencies were excluded, as their presence is in less than *1%* of the villages. Third, the experience of agriculture innovation shows that road side villages, specially those which are close to markets are more likely to adopt the new technology. This may be more true of dissemination of forestry because of long gestation period involved. Hence there has been a deliberate bias in favour of market dominated villages, where cash transactions are more important, hence leaving out the tribal and remote villages. Help was taken from studies conducted earlier to ascertain the names of two villages (Lohgarh and Kovilur) where social forestry had been successful, although as discussed in sections (iii) and (iv) of this chapter there are notable gaps here too.

It is not being claimed that these villages are typical of their ecological zones, much less of the 0.6 million villages in the country. Indian villages are known for their diversity, and often villages in the same block show remarkable difference in their approach to adoption of new technology. It is also just a coincidence that in none of these villages fuelwood shortages were found to be acute. These studies therefore should best be read as isolated case studies and not as samples of the regions of their location,

We shall now describe the experience of wasteland development in these villages in detail.

(i) Shakruri. H.P.

The village Shakruri in district Shimla is about 6 kms. from the tahsil town Sunni, is connected by road, is quite prosperous, has a good number of private trees and has also been occasionally planting fodder and fruit trees on their lands.

The village has 70 households with a total population of about 640 people. No family is without land, there is only one family of the Pradhan with more than 4 hectares of land, about 13 own between 2 to 4 ha., and the rest are small/marginal farmers. There are 10 scheduled caste families, 22 are Brahmins, and 38 Thakurs. The villages own about 530 animals,mostly cows, bullocks and buffaloes the distribution of which is similar to that of land. All families own radios and sewing machines, and 8 of them own television sets too. Almost in all families there is at least one youngster who has studied upto class 10th, and there are 20 women in the village with that qualification. All houses are electrified. There are three threshers and one pumping set in the village.

The total area of the village is 2134 bighas, equivalent to 171 ha (12,5 bighas-l ha.). Only 67 ha. is under cultivation. The villagers own another 48 *ha.* which is under fodder trees

and grasses. A high percentage of uncultivated land being private is a distinguishing feature of rural H.P., as distinct from the hilly regions of U.P., where the farmers were permitted private rights over cultivated lands only. Most of the state, before independence, was under princely kingdoms who encouraged privatisation of uncultivated lands. The fact that fuelwood and fodder shortages are not as acute here as in the villages of the U.P. hills could perhaps be partly due to better control and access of the farmers in H. P. to uncultivated lands.

Of the 48 ha. of private uncultivated land, roughly half has been inherited by the owners and the other half has been acquired by them from the Government under its various schemes of regularising encroachments, and of distributing barren land to the landless- In addition there is another 57 ha. still with the Govt. which is at present lying barren. About 24 ha. is proposed to be given to the Forest Deptt. for the social forestry programme. A small part of it, about 4 ha. is under encroachments. Non-private wastelands are being used for grazing cattle during the monsoons, although because of the extent of degradation it hardly generates 20% of its potential. It could become productive if adequate protection arrangements are made.

66% of the cultivated land is under double cropping, thanks to an irrigation channel which is capable of irrigating the entire arable land of the village. The main crops are, paddy, maize, wheat, barley, peas and potato. Agriculture productivity has significantly increase in the village leading to better standards of living of all households. The present labour rate in the village is Rs. 15 a day.

50% of the total feed requirement of the village livestock is met from agriculture residues, and the rest from grazing and cut grass. As there is hardly any month when the fields are without & crop, graziers always accompany cattle. One saw (late August 1987. when the fear of drought was looming large)

a number of women bringing cut grass from government forests. The market being close by, 15-20 families sell about 50 litres of milk daily in the Sunni town.

There are occasions when the entire village cooperates to further their economic interests- Once in six months the cleaning of the canal has to be done. Every family contributes one labour for this purpose. Paddy transplantation is also collectively done as each farmer has a number of scattered parcels of land, and since irrigation from the canal has to be organised Jointly for all the contiguous fields belonging to different farmers, it is economical to every one to pool their labour resources. Like other villages of the hills, labour is rarely imported and even high caste farmers participate in labour operations.

This is not to suggest that there are no groups in the village. As usual, there are factions, though not on caste lines. The present Pradhan is a Brahmin who does not get along with the ex-Pradhan who is a Thakur. The Pradhan by virtue of his position gets a number of building contracts from the block office which is the main source of Jealousy against him. In the village Panchayat meetings, which are not well-attended otherwise,discussion on government contracts takes up a lot of time. The villagers were not enthusiastic to adopt the U. P. pattern of Forest Panchayats for management of uncultivated non-private lands, and preferred individual or Forest Department's control, which is the present system. Collective management of a productive resource depends on the traditions of the community and it is difficult to initiate a new tradition unless the very survival of the group is threatened. In this prosperous village people seemed more keen on getting opportunities for individual enterprise.

The privately owned non-cultivated lands were full of trees and vegetation. The contrast with the government lands, which had little tree cover, was obvious. The DFO confirmed that this was the general pattern throughout H.P. Most of the

private trees were due to self- generation and had not been planted by the farmers. These were fodder trees and a significant area was devoted to grasses. In a drought year farmers have to buy grass, the present rate was Rs. 70 a quintal. Wood is the main fuel for cooking which is neither bought nor sold by the villagers. They either collect it from government lands or depend on their own private trees.

Between timber and fruit trees, they would prefer fruit trees, because of the comparative advantage of control over marketing operations in case of fruit trees. They complained that fruit saplings were not available at the Government nursery. Guava, mango and lichi were the preferred varieties. Many farmers were, however, not averse to timber trees, they infact wanted to learn about new trees, especially the ones which could enhance their incomes, like poplar. They were also keen to learn about mixed cropping and agro-forestry. They were very impressed by the enterprise shown by one Mohan Lal who reclaimed 8 bighas of barren hilly land by planting Shisham around the high slopes. Now he is able to take a wheat crop of 3 quintals a bigha. Besides, the shisham trees would become worth several thousands after ten years.

Only 3-4 farmers had been lifting seedlings from the nursery. These were fodder varieties, and Khair, the main commercial specie of the area. The survival on private farms was about 40%. Last year school children had planted 310 trees in the school compound, but on a physical count only 45 were found surviving after 14 months.

According to the H. P. Land Preservation Act, 1978 no individual can harvest trees on his private holding without obtaining permission from the F.D. Such permission is given only once in ten years. There is restriction on sale too, as the H.P. Forest Produce (Regulation of Trade) Act, 1982 has nationalised 16 important commercial species, including Khair. Farmers, or their agent, must sell such trees only to the H.P. Forest Corporation.

This village was selected for felling of trees in the year 1983-84. A contractor on behalf of the farmers cot permission for felling from the Forest Department, and moved an application in January, 1984 to the Revenue and Forest Departments for joint demarcation of the trees. This took a lot of time, and ultimately the contractor could get export permit only on 15.7.86. Thus the whole process took about three years to complete. For several months,between the felling and setting: permission to transport the trees, deterioration of wood must also have taken place. The farmers were paid at the time of felling, in April 1986, almost two years after the settlement of sale.

The crucial question of the gap between the potential market price and what the farmers got needs to be discussed now. Before giving the felling permission the Forest Department, estimated the cost of the trees by assessing the quality, age, girth of the tree and market worth of that type of tree at the site, without taking into account the felling and transport costs. The price is generally based on the realisations in the auctions organised by the Forest Department. It can be argued that a farmer should get more than this price, as government departments often get lower than the prevailing market price when they sell their goods. However, in the absence of any other indicator we shall use the Forest Department's price as a basis for comparison.

In all 16 farmers sold 583 Khair trees ranging from 8 to 123. According to the Department's assessment these trees mostly belonged to categories 4&5 and were worth Rs. 144934 . Thus the average value of a tree comes to Rs. 248 . During the village study, it was observed that farmers were reluctant to divulge any information regarding sale of trees for fear of reprisals. Only in three cases was reliable information collected, which is reproduced below:-

Table No. 6

Value of Trees in Village Shakruri

Name of the seller	No. of trees sold	Value as per Forest Deptt.	Amount actually obtained	Av. price
Ghanshyam Dass	29	4436 Rs.	1300 Rs.	45
Jiwan Singh	28	9331 ,,	1500 ,,	53
Permanand	15	3363 ,,	500 ,,	33

Thus, if the above small sample is any indication, the farmers got somewhere between 15 to 30% of the real value of their trees. The rest was lost because of long delays, uncertainty in payment by the Forest Corporation, farmers kept in the dark about laws and procedures, poor publicity of market information, lack of competition leading to oligopolic conditions, and bureaucratic rents at various levels. It could be argued that the only way to improve the system is to remove all restrictions on felling, removal and sale of timber. Since the controls have been recently introduced, especially laws regarding the ten year felling cycle and monopoly purchase by the Corporation, the Government may find it embarassing to scrap them. Even if a radical over-hauling of laws is not attempted, it is feasible within the framework of present philosophy to ensure a better price to the producers by examining the entire procedure minutely, and eliminating delays, simplifying procedures, and educating the farmers about market conditions and their rights.

(ii) Kharot, P.P.

The village Kharot in district Mathura (U.P.) ia situated on Kosi-Shahpur road at a distance of about 8 kms. from Kosi, a municipal town with a population of about 30,000. Kharot is a large village with about 800 families and 1340 ha. of land, out of which 1000 ha. is cultivated. Although 90% of the cultivated land is irrigated through canals and private tubewells, yet two-third of this land is capable of giving only a single crop in a year as soil is highly saline. What is worse, the salinity of soil has been increasing due to bad drainage, seepage of water from uncemented irrigation canal minor, and flooding in years of good rainfall. Productivity of wheat and paddy, the two main crops of the village, is about 70% of the district average.

Ten years back the area of co*mmon* land was 240 ha. which has now been reduced to 124 ha., the rest has been distributed to about 150 landless poor families. The remaining community land includes tanks, graveyards etc., and therefore the area physically available for tree plantation or distribution is not more than *HO* ha. It is highly alkaline and at present not a blade of grass grows on it. In addition, 13 ha. of ceiling surplus land was expropriated from large farmers and half of it was given to the landless. The other half was given to the Sericulture Department for tussar cultivation, not more than 50 trees stand today on this land because of neglect. Despite land distribution programmes there are still 150 landless families left in the village. Half of the distributed land was lying unutilised because of salinity. There were many examples where the poor tried to make patta land cultivable through investment, but they did not succeed. Many exhausted their savings from urban occupations, while some borrowed from within the village. Rate of interest on credit within the village was *2%* per month.

Distribution of land among the families is as follows:

Table No. 7
Land Holding in village Kharot

category	No. of farmers	total land ownership in ha.	average per family
Landless	150	nil	nil
up to 1 ha.	257	167	0.65
1-2 ha.	102	180	1.78
more than 2 ha.	284	753	2.65
Total	793	1100	1.38

Like other villages of north India, Kharot is also multi-caste, with Brahmins, Jats, and Chamare each having about 120 families, and the rest are divided among 12 other miscellaneous backward castes. Political power has been with the Jats because of superior land control. Patron-client relationships are still in existence; for instance the sweepers set daily bread and annual grain from large land owners, who are addressed as zamindars, meaning literally landlords, although the system of landlordship has lone been abolished in the state. Yet, there were no dearth of complaints in the village, the poor and the rich were both bitter against each other. The rich and the powerful in the village exhibited strong prejudicial views against the poor. "They should not be given loans for raising trees, they will eat up the cash". "Trees raised on common lands should be auctioned, and the panchayat should take up development works with the money. It would be a criminal waste to distribute wood within the village," etc. The distribution of common land to the poor also divided the poor among themselves, as only a few of them could get cultivable land. The village seemed to be a melting pot of several identities, caste, class and factions all had their relavance.

Almost every one in the village complained against development officials who were considered corrupt and insensitive to their needs. The Block, according: to them, had received funds for drought relief funds but no work was being executed.

Decision making in the local committees, like the land management committee and the village panchayat, was hardly democratic. In many cases, meetings were not called and the proceedings were drawn up with help from the revenue officials, to which every one signed. It was amusing that the pradhan could not tell the date or the month of the last meeting of the panchayat, which was obviously not called and papers completed later. Land records of the village were in bad shape, village property was not properly entered, and physical location of fallow lands did not tally with what was shown in the records.

There is no shortage of biomass for cooking in the village. The rich generally use cowdung, and the poor depend on prosopis duliflora which is widely available. There would be atleast 15000 bushes of this tree in the village and many more on the road side, which seem to give an inexhaustible supply of fuelwood. As this has been the position in the past too, destruction of trees has not been due to shortage of fuelwood. The villagers attribute disappearance of traditional Chokar and Faraash trees from private and common lands due to floods and soil erosion. Due to easy availability of fuelwood, dung, and agriculture wastes, farmers would prefer such trees which either bring cash incomes, like fruit trees or enhance agriculture production.

Due to distribution of common land, village pasture lands are almost non-existent now. This has resulted in replacement of cows by buffaloes as the main milch animal, as the latter is stall-fed and does not depend on grazing. Even the poor possess one or two buffaloes, and sell milk in the neighbouring town. Large farmers did not sell milk and consumed it within the family.

Half of the families in the village, including many possessing land. are dependent on wages from unskilled labour as their main source of income. About 200 males from the village work in Delhi as stone cutters, and 100 work in various towns of Mathura. Agriculture operations on the fields of large cultivators are done by women from poor households. Wages in the village seem to be at par with the minimum 11.50 Rs. fixed by the Govt. and those working outside the village get more.

As the poor families too possess degraded land, but their present incomes are not dependent on such lands, there is an ideal possibility of introducing tree farming in the village. Farm forestry was very popular in Kharot four years back. Large farmers with their contacts in the neighbouring state *of* Haryana, where eucalyptus had caught farmers' fancy 8-9 years back, Jumped on the eucalyptus wagon in a big way and today more than 10000, 3-4 years old such trees can be seen on farm bunds. Only a few did block plantation of eucalyptus on fallow lands and none on previously cultivated lands. A few small and medium farmers followed the suit, but farmers owning less than 1 ha- did not risk this venture.

It is interesting that almost no farmer has planted this tree in the last two years. They are convinced that it absorbs moisture from the neighbouring top soil with the result that on ten feet of either side of eucalyptus plantation almost nothing grows. Its plantation on field bunds would also be today opposed by the farmer possessing the adjacent plot. Forest officials confirmed that lifting of eucalyptus seedlings in the district has vastly declined because of apprehension that it degrades soil and reduces agriculture production. Three years back there was a premium on its seedlings, and now there are more than 2 lakh eucalyptus seedlings rotting at Kosi nursery itself, despite the fact that the department has decided to give it free, although other seedlings are priced at 35 paise. According to the DFO

only absentee landlords were lifting eucalyptus saplings as it reduced supervision headaches.

According to a retired CCF of U.P., eucalyptus was totally unsuitable for brackish water of Mathura and the neighbouring districts of Haryana. He blamed the Forest Officials for inappropriate species selection, and for not warning the farmers in time. There was no evidence, however, that the F.D. had taken a serious note of this development, or tried to raise seedlings of fruit species which are being demanded by the people. Apathy of the people to trees has come at a time when physical targets have been raised several times. The latter, of course, are always overachieved, notwithstanding drought or floods! The Block staff,during an informal discussion, confirmed that actual planting and survival was not more than 10% of what was being reported. Forestry on panchayat lands was an equally unpopular programme, and it was difficult to convince the village pradhans to give land to the F.D.

Having rejected eucalyptus, farmers are at a loss to decide what trees to plant in their fallow lands or on farm bunds. They do not like acacia nilotica or prosopis as it produces thorns which hurt their barefooted children. Since prosopis is freely available all around, they consider it a waste of time to plant it on their lands. Besides,they felt that these trees too degrade lands and do not enhance agriculture production. Tree growing has so far been an impediment rather than a complement to agriculture. They would prefer traditional trees like Chokar and farash, which conserve soil and moisture, but do not know enough about them, neither its seedlings are available from forest nursery. The salt affected fallow lands would require more elaborate treatment, drainage would have to be improved first, canal bed should be cemented, and after that technical gypsum-pyrite solution will have to be tried.

As regards common lands, in 1935 it was decided by the pradhan to transfer 10 ha. of village commons to the forest department

for plantation. Pits were due the same year, and acacia nilotica and eucalyptus were planted in 1986. An interesting development took place the next year. Due to emphasis from the state government on family planning programme, the district administration decided to give land pattas to those who got operated. This land on which community plantation had been done was also allotted to individuals, who in order to establish their rights on land, uprooted the plants, and ploughed the entire plot. At the time of inspection (Dec. 1987) there was neither any crop nor plants in the fields. The beneficiaries from land deeds however alleged that plantation was not done through seedlings, but by sowing seeds, which had not germinated when they ploughed the plot. This allegation was denied by the department. It appeared that most of the villagers were indifferent to the dispute. It mattered little to them whether the poor got land or the F.D. In any case, land was too degraded to merit attention. The matter of double allotment is under investigation by the district administration.

In addition, the F.D. planted 5000 babul and an equal no. of jamun trees on the canal bund. The babul did not survive at all, and 503% of the jamun trees have survived.

About 2 ha. of panchayat land was developed through the initiative of one Ghanshyam, a. saintly person, who settled down in the village & decade back. Due to his unselfish nature many people did voluntary labour for him and helped in planting useful trees on the panchayat land *5-6* years back. Although all villagers are entitled to collect dead wood from this plot, it appeared that Ghanshyam's rights were generally respected, as he protects the plot. It was a strange case of privatisation through consensus, although the pradhan and several others insisted that the plot belonged to every one.

After & few years eucalyptus would be ripe for felling. No one has given a thought to problems of marketing. Under the U.P. Transit Rules each forest product, before it is transported.

must be accompanied with a transit permit. While checking the records of the forest office it transpired that during 1984-85 and 1985-86 only 8 and 3 permits were issued and only Rs. 136 and 36 respectively were recovered for illegal transport of wood. This would represent not even 1% of total wood transported, as at one sawmill itself we saw wood worth 50 trees. As there are 25 saw mills plus many retail depots for selling firewood in Kosi town itself, one can imagine the task involved if each consignment is to be given a permit after due enquiry. The U.P. govt. has already exempted 27 popular species from the perview of harvesting laws, and it would be logical to extend the exemption to transport too. It would even be better if in districts like Mathura, which do not have substantial areas under government forests, the Transit Rules are not applicable at all for all species. Such an exemption would benefit both, the consumers and poor women who collect prosopis from roadside trees and bring it to the saw mills for sale. As an alternative, truck transport may still require a permit, but other means like headloads and bullockcarts may be exempted. The F.D. would argue that although it may be Illegal to transport wood through headloads, they do not check them seriously. In fact the philosophy of most forest laws is "strict laws but lax and selective implementation. This remedy is worse than the disease, as it leaves the poor to the mercy of low level officials. In Kosi too, it was tragic to hear of reports of harasament at the hands of the police and forest guards of poor women who toil the whole day and collect firewood from roadside plantations of prosopis. Even if on *a* particular day they can avoid paying bribes to the lower officials, they get only 20 Rs. per quintal from saw mills, who inturn sell it for 60 Rs. per quintal. Despite these hassles prosopis generated self- employment for the poorest. Therefore if any restriction i« to be imposed, it should be on the saw mills, and not on the poor collectors and transporters of wood. At present the system of renewing licenses for the sawmills was so complicated that 24 out *of* 25 mills in the town have not be*en* able to get their licenses renewed for the last two years. Such a state of uncertainty is hardly

conducive to healthy administration, or to growing of trees by the farmers. Saw mills need to be recognised as a processing industry, and not as villians aiding tree felling from government lands.

(iii)Lohgarh , H.P.

The village Lohgarh in District Gwalior (M.P.) was first studied by CENDIT in 19S5. The study had noted that about 200 hectares of degraded ravinous village land was planted with trees by the F.D. between 1983 and 1985. This village was taken up for study in order to see what has been the survival of plants, to what extent have the people participated in its protection and management, and what impact would afforestation on such a large scale is likely to make on the village life.

The village was in the dacoity infested area, where people have traditionally identified forests with hide-outs for bandits. Lohgarh village panchayat consists of three revenue villages. The present study is only about Lohgarh revenue village which consists of the main Lohgarh village and its hamlet Khodan. As is typical of other village panchayats, the headquarter village in this case also dominated the panchayat and out of 16 members, 6 are from Lohgarh and two from Khodan. although the total population of these villages was only 30% of the panchayat. The area of the revenue village Lohgarh is 1176 hectares, out of which 876 hectares is privately owned but only 581 hectares was under cultivation. Thus there is *a* substantial area of private wasteland in the -village. About 100 hectares out of this is in the name of a neighbouring Sugar factory, which now owns about a total of 1000 hectares in several villages, but at least 25% of this land was under encroachment, though not all of it ±*e* recorded with the revenue authorities. The rest is too degraded for agriculture but can support trees and grasses if adequate protection arrangements are made.

It is a road side village at a distance of about 6 km. from a prosperous town Dabra which has a population of about 40,000. Half of the families in Lohgarh are aujars, a nomadic tribe which has traditionally been keeping herds of cattle. Now they have all taken to settled agriculture and. call themselves Gujjar Thakurs, implying higher landed caste status. 35X of the families are chamars, a backward caste, who call themselves jatavs now, and the rest consist of several small groups. The village has done well in agricultural production and is well integrated with the market economy because of proximity to the two towns, Dabra and Bhitarwar. Yet social life is quite traditional and people still identify themselves as members of a caste group. The village settlement also follows the caste system. Half of the families in village Khodan
are tribals. As quality of land is not as good in this village, it is not as prosperous as Lohgarh.

The area of common land has declined from 412 to 309 hectares in the last 10 years, the rest has been allotted to the landless families for cultivation. Abour 40% of the allotted land was under cultivation, the rest was either too degraded, or under adverse possession of the non-poor, or clear demarcation of plots had not been done. Both in Lohgarh and Khodan villages we heard a large number of complaints against revenue authorities in matters of patta allotment. A summary of complaints from the tribals in village Khodan is being given below.

Tedua was promised that he would be given 8 bighas (5 bighas 1 hec.) but he has been given a patta for only 2 bighas. Jalwan, Shankar and Shripat have each been given a patta for 4 bighas, but possession has not been given, as the relevant plots are under adverse possession of someone else. Lachhi, Chakra and Jiwan Lal have been given pattas for 4, 4, and 10 bighas respectively, but the plot numbers mentioned in their pattas do not tally with the plot numbers of which they have been given possession. In *any* case,, land is too degraded to permit

cultivation. Pajna and Krishna (s/o Shakri) have been given patt&s for 4 and 7 bighas but possession has not been given. Kamla and Kallu have each been given a patta for 10 bighas but possession of only 7 and 6 bighas respectively have been given to them. There are some tribal families like Bhamra who have still not been given any patta and though they showed me a lot of land which is lying uncultivated. There are some other families who, despite cultivating the plots for which they have been given pattas, still do not feel confident of their tenurial rights, as in the past tribals have often been shunted around, pattas cancelled, or given to people who are not legally eligible for getting land. One learnt that recently in Khodan 15 such people have managed to get pattas because they had. helped administration towards family planning programme. The villagers feared that these people, being not resident of the village, will not cultivate their plots but informally sell their rights to others.

On the whole it appeared that the poor and the tribals do not enjoy secure tenurial conditions. There appears to be an excellent potential for developing their degraded lands through agro-forestry, for which funds from NREP/RLEGP can be obtained but extension and financial help will be relevant only after secure land rights have been given to the poor. The forest staff was not aware that according to the guidelines issued by the Department of Rural Development, Govt. of India, (GOI,1986) employment funds can be used to promote farm forestry for the poor. Thus up to 100% subsidy is available for tree plantation for certain category of farmers, which includes %-

(i) Scheduled castes and Scheduled Tribes
(ii) Freed bonded labour
(iii) All allottees of land, including tree patta holders
(iv) All identified individuals below the poverty line.

The village has a tradition of electing Sarpanch unanimously. It takes pride in resolving village disputes with consensus,

yet class and caste antagonism was apparent. The Jatavs complained that the gujjars do not allow them a fair share in canal irrigation and they are permitted to irrigate their fields only after the gujjars have done so. The village being at the tail end of the canal system, uncertainty in availability of water affects production and social relations. It was interesting that the rich gudjar families claim that they paid 15 Rs. as wages to male labourers and 12 Rs. to women, charge only 2 or 3% as rate of interest on loans. The poor, on the other hand, complained that their wages in the village are only 10 Rs. for men and 7 Rs. per day for women, whereas the rate of interest was as high as 4-5% per month. About 10% of the total cultivated land was under share cropping arrangements, which strengthened landed gentry's hold over the poor. 20% of the families were still landless, although some of them leased-in land.

Before independence uncultivated land belonged to the Jagirdars who exercised strict control over the felling of trees of those lands. When the jaglrdari system was abolished in 1950s the jagirdars felled most of the trees before the government takeover. These lands then degenerated into the category of being open access property, and were mercilessly exploited by *the* villagers. Thus, neither in the distant nor immediate past there has been any association or identification of the villagers as a community with panchayat land or with trees on it.

Social forestry in the village has had a mixed record of success. About 200,000 seeds in packets were distributed since 1982, not a single tree survived. One wonders how many villagers actually took the trouble of sowing them! This year the village road was planted with trees on the sides with great fan fare, the local MLA came for inauguration, and speeches were delivered eulogising trees. Six months later not a single tree was alive. The DFO blamed the villagers for not looking after the trees, whereas the people pointed out to the lack of barbed wire fencing, due to which seedlings could not

be saved from cattle pressure. Any suggestion to the villagers to do "social fencing" and look after the trees without a watchman would have sounded too theoretical and hollow.

Under the Madhya Pradesh Social Forestry Project there is a post of Forest Extension Officer in each subdivision, but it is not considered a glamorous post. The government also uses these posts as a dumping around for punishing officers who are not wanted in the territorial divisions. The present incumbent for Dabra Subdivision had only three months left before retirement. According to him, another officer used political pressure to grab the post that he had. with the consequence that he got saddled as Extension Officer!

The 250 hectares of panchayat land, which falls in two revenue villages, on which forest department has raised plantation between 1983 and 1985 always had deep gullies. There were better pasture lands close to the village in the past. Still enclosing 250 hectares meant a direct loss of grazing pastures which resulted in a steep fall in the number of livestock maintained by the villagers. Although according to official data the number of cattle has declined from 543 to 454 during the period 1982-87. the villagers feel that the number now was only one-fourth of what it was 5 years back. Several gujjar families sold their stock and either bought land or agricultural machinery. Many non-descript cattle were allowed to die. The poor families perhaps sold less as they did not own many. The gujjars now own more buffalows than cows. The sub-divisional officer (revenue) of the area confirmed that this was the pattern in the entire sub-division. and the number of livestock was declining every where, which is a symptom of declining availability and productivity of grazing lands. Another adverse effect of reduction in grazing area was the loss of income to grazier boys who used to get Rs.10 per cattle per month for taking the cows of the landed for grazing and exercise.

Despite this, it was remarkable that none of the families expressed hostility against forest department's continued control over the area. They were also generally in favour of effective protection arrangements, although some felt that while the ban on cutting of trees should continue but the area now be opened for grazing. Even the poor families were hopeful that they would get benefit after trees are mature. The degree of participation can at best be described as passive, which did not go beyond wishing it well, or letting the F.D. do what it wanted to.

According to official record a little over 4 lakh of rupees was spent in planting on 250 ha. of land. The survival rate was *50—60%.* Trees, mostly acacia and prosopis, have been raised through seeds, while some of them have come up on their own. There were more bushes than trees, yet the combined number would be more than 100,000. Growth of trees was not good as soil conditions were poor, but if the present protection and supervision continues the stock would yield sustained fuelwood to the villagers and income to the panchayat.

The Sarpanch and the villagers were totally opposed to taking over of 5-year old plantation by the panchayat, as was originally planned. They would like Government management and supervision to continue. Many feared that the system of seeking votes from the people inhibits the panchayat in taking effective action against illicit felling. Lack of funds in meeting the cost of supervision was another factor.

It was surprising that despite the success of departmental forestry in the village and establishment of a nursery, very few people had planted trees on their private lands. This was in sharp contrast to the hamlet Nawgaon of village Lidhaura, about 8 km. from Lohgarh where almost all families had planted 50-100 trees on their homestead lands, as a result of establishment of a government nursery close to their village for the purpose of planting trees on the panchayat lands of

village Lidhoura and Salvai. How does one explain the variation in the response of the people of these two neighbouring villages?

The village Nawgaon consists of only about 15 houses, all belonging to a backward casts, Dhimar. They were settled on open vacant land about 15 years back under the 20-Point programme and were also given land pattas. Today all of them have secure land deeds and no one expressed any apprehension or feeling of insecurity on this account. The homestead plots consist of 3600 sq. ft. of land and therefore each family had a lot of surplus land in his courtyard on which trees could be planted. *60%* of the species were fruit varieties and the rest consisted of Euclyptus, sirus, and sissoo. In Lohgarh nursery only acacia and prosopis seedlings were available which are not popular for private forestry on homestead lands, as these are thorny trees. The Lidhaura nursery had a variety of both fruit and fuelwood species which were demanded by the people. Another factor could be that Naogaon habitation is close to a canal and therefore, presence of moisture in the top soil ensured better growth. On the other hand, many families in Lohgarh complained that trees do not survive after two years as they get attacked by pests. Unfortunately, the social forestry staff was not aware of this problem nor they had taken any step for controlling pests. It is likely that after a few years tree roots meet a hard rock surface and, when the tree starts dying, it is attacked by pests.

In both the villages arrangement for distribution of intermediate products like grass and dead branches for fuelwood was not satisfactory. Protection was poor in Lidhaura where people complained that four to six thousand euclyptus trees had been illegally felled. Also, vacant area in these plantations could have been utilised by growing stylo grass as was done in some years for Lidhoura plantation.

(iv) Kovilur, Tamil Nadu

One of the best successes of social forestry programme in Tamil Nadu is in village Kovilur in Tiruchirapalli district (SIDA, 1987). Where 400 hectares of dry private land has been brought under cashew and eucalyptus plantations, and an equal area of tank bed has come under babul for community use. The main reason for diversion of dry lands from groundnut to tree crops seems to be uncertain returns from groundnut. The crop failed after every two or three years, and price fluctuation also affected the farmers. Secondly, major source of income of both, rich and poor farmers, was not groundnut. While the rich depended on returns from paddy on wet lands, the main source of the poor farmers' income was wage labour, and therefore they too could afford to divert dry lands to long gestation tree crops.

Kovilur is a large village, with 1057 families in the main village, and 297 in its hamlet, Chettikuli. Of the total, about 1000 families. Including all from the hamlet, belong to moopanar, an agriculture caste. 120 families are from the scheduled castes, and the rest are from miscellaneous castes. Numerical dominance of one caste facilitates social interaction and cooperation among all, although intra-caste rivalry is not uncommon. Social discrimination against the scheduled castes is still prevalent, although not in an acute form.

The average land holding in the village is better as compared to the state. More farmers in the village belong to small and medium category of land holders, as would be seen from the following table:-

Table No. 8

Category of farmers in Kovilur and Tamil Nadu

category	percentage in Kovilur	Tamil Nadu
marginal	48	70
small	36	17
medium/others	16	13

36% of the total in the village are landless. As there is not sufficient work in the village, they along with other poor farmers migrate to the neighbouring district, Tanjavour where wages are at least *50%* higher than prevailing in the village.

Only 4% of the total cultivated land is irrigated, which yields two paddy crops in a year. Groundnut is the most prevalent crop on dry lands, and on lower regions even two crops can be taken. However in the last three years almost 50% of the 825 ha. of the dry land has now been covered with trees.

The village was not always without trees. In the common tank there were naturally growing babul trees 30 years back, but these were gradually cut down by the villagers for charcoal making. Some farmers did plant cashew trees in their backyards, but systematic plantation began only after the village was selected under social forestry programme. A retired forester, who settled down in the hamlet was instrumental in persuading a number of farmers to shift from ground nut, which gave uncertain returns. A nursery was established in the hamlet, which accelerated the pace of tree growing. A social forestry committee was formed with those people who were pioneers in tree plantation.

The committee had to work hard to overcome peoples' initial hostility. as their cattle could not freely graze in the newly planted area. Their access to bushes for fuel sot also curtailed. Rather than punishing the people who did not respect the rules, the committee discussed the matter with the rule-breaker. and tried to convince him. In extreme cases their cattle were impounded and fines were imposed.

Of the 38 families who were interviewed, 28 had planted trees on family holdings. Not all poor got free seedlines, as envisaged in the scheme, while some non-poor managed to get this facility, as may be seen from the following table:-

Table No. 9

Distribution of seedlings from government nursery to farmers

Distribution of Seedlings	NO OF FARMERS				
	Landless	Marginal	Small	Others	Total
Free	2	4	1	-	7
Full Price	-	1	5	4	10
Partly free	-	1	1	4	6
Raised it themselves	-	3	-	2	5
Not planted any trees	4	2	3	1	10
Total	6	11	10	11	38

Until 1983 all farmers used to get free seedlings. Even after that many large farmers have managed to get free seedlings as they have in their possession small farmer cards which enables them to get free seedlings. This causes bickering and gives a

bad name to the programme, As already stated, substantial proportion *of* rich farmers income was from paddy cultivation, and of the poor from selling labour. and hence diversion of dry lands from groundnut to trees did not hurt them financially in the short run. Adoption of farm forestry on a large scale is primarily due to search for a safe source of income. However the poor find that work possibilities in Tanjavour are now shrinking as a result of mechanisation on larste farms, and therefore further tree plantation on degraded lands has slowed down. The village nursery is now not able to sell its plants as saturation point seems to have been reached.

As regards the impact of tree plantation on wage employment, replacement of groundnut by trees has meant fewer job oportunities, and what is more striking, women are being thrown out of employment. Assuming only 50% of land now under trees was being cultivated before, the effect on employment of such a chance in land use on 8 hectares would be as follows:-

Table No. 10

Effect of change in land use on employment

Stage	Landuse	womandays	mandays	total employment
Before trees	4 ha. under groundnut	400	50	450
	4 ha. barren	-	-	-
After trees	6 ha. under eucalyptus	-	270	270
	2 ha. under cashew	-	125	125
Total after trees		-	395	395
change in employment if 8 ha. under trees		(-)400	(+)345	(-)55

The above calculation is based on the assumptions that one ha. of groundnut cultivation on dry land generates 100 woman and 12.5 mandays of work, whereas total employment for eucalyptus and cashew on one ha. is taken as follows:-

Table No. 11

Employment potential of tree crops

Crop	Operation	m a n d a y s over a felling cycle	per year
Eucalyptus (felling cycle- 10 years)	establishment	125	12.5
	maintenance	50	5.0
	harvesting	275	27.5
Cashew (felling cycle- 30 years)	establishment	375	12.5
	maintenance	1500	50.0

Thus planting trees on lands previously being used for agriculture is likely to hurt both, female and overall employment. It will also postpone present employment to a future date. A positive aspect is that employment would be well spread throughout the year. For example. cashew is harvested from March to May, which is otherwise a slack period for agriculture. It may be noted that cashew, although a long rotation crop, generates more employment per year than eucalyptus, besides improving: nutrition standard of the family, and hence should be preferred over eucalyptus for private degraded lands.

As regards fuelwood, the poor have been collecting it from common lands and from old fences belonging to better off farmers. They require about 2 to 3 hrs. every day to collect prosopis, which grows commonly on private lands. A new source of fuel is by pruning eucalyptus, although its leaves give a lot of smoke, which is harmful for eyes. The poor look at wood as too valuable a resource to use as fuelwood, they would

prefer to sell it. About 15 cartloads of firewood is sold from the village every week at a price between Rs. 300-400 a ton.

There are still many poor families who have not planted trees on dry lands. Some have lands in the lower part of the village where land is fertile, and is capable of giving a good crop without much uncertainty. Some, specially the scheduled castes, reported problems in setting seedlings. Many do not have adequate Knowledge of trees, and feel hesitant to make investment. Some fear action by Govt. in case of poor survival.

To what extent are people aware of marketing problems, that they are likely to face after a few years? Many tree growers were under the impression that Govt. will buy their produce, and hence had not bothered to study market conditions. Many poor farmers had to mortgage family jewellery in order to raise capital for plantation, and it would be very unfortunate if they do not get an adequate price for their produce.

As far as trees on common lands are concerned, although there are still two years to go before the panchayat plantation would mature, people are not sure that the panchayat would use the money in the best interest of the village. The inhabitants of the hamlet do not perceive any benefit accruing to them as they fear that the entire money would be spent in the main village. Similar fears were expressed by the poor. Even the well-off farmers do not feel confident of the panchayat's capability of maintaining the plantation on their own, without help from the forest department. They fear infighting, and irresponsible felling. Many were not satisfied with the arrangements made for distribution of intermediate products obtained from pruning of trees. The time given for the families to come and prune the trees was not sufficient, and not enough publicity was made.

Facts gathered from the above four villages can be summarised in the following table:-

Table No. 12
Wasteland Development in the Four Villages

Category	Name of the Village			
	Shakruri	Kharot	Lohgarh	Kovilur
State	H.P.	U.P.	M.P.	T.N.
Type of wasteland	hilly	saline	ravinous	undulating
Approximate area of uncultivated land				
Private	48	216	295	780
Non-private	56	124	309	830
Total	104	340	604	1610
Present status of uncultivated land				
Private	grasses & fodder trees	saline & unutilised	fallow	50% under trees
n-private	degraded	saline & degraded	1/3rd under trees	50% under trees
Farmers willingness to plant trees	yes	on farm bunds & degraded lands only	yes	yes
Species demanded fruit	fruit & fodder	local, fodder & fruit	fruit & commercial	cashew, commmercial
Species available	commercial	eucalyptus	acacia & prosopis	-do-
Present status of forestry extension	neg.	neg.	ineffective	limited
Willingness take over government plantation	n.a.	n.a. ~~funds are~~	not willing	willing if funds are provided

ANALYSIS OF INSTITUTIONAL CONSTRAINTS

Evidence from the above villages, as also from other studies quoted in chapter 3, is not very complimentary to community management of rural resources. It appears that village organisations are weak. not trusted, have no experience of forestry programmes, and are dominated by the rich. However it would be hazardous to generalise and apply insights gained from these road side villages to the entire half a million villages of India. There are regions in India where community organisations have a lot of untapped potential for managing land resource. For instance, in a study of forest panchayats of U.P. hills (Saxena, 1987). it was observed that panchayat lands are better protected than civil or reserve forest lands, which are under the control of the government. The same would be true of a number of tribal villages.

Community vs. Family Approach

Why does collective action succeed in some cases and does not take off in others? Some tentative hypotheses may be arrived at by comparing the U.P. hill villages with the type of villages discussed in this paper. The U.P. hill settlements are small, between 50 to 100 families, as contrasted to 500 to 1000 families in plain villages. If the entire population of the official panchayat is included, the no. may well become 2 to 3000 families. As a panchayat in the plains controls several villages, common land belonging to one village may be under the control of the Sarpanch who is not from the same village. This breeds distrust. The forest panchayat in the hills is truly an actual user association, managing a small area, with clearly defined boundaries. Due to topography the hill common lands are visible from most of the dwellings, and any unauthorised felling cannot escape notice. On the other hand, area of a flat village in Central- South India may well be spread over 5-10 kms. in one direction, and it is difficult to catch "free riders". Even in the hills, it is seen that

villages where resource is in a better condition attracts better attention from the people,as its protection is vital for their survival needs. *On* the other hand, overuse leads to degradation which makes people indifferent to protection. In district Kheda (Gujarat), grazing lands have degraded far too rapidly and dairying has developed equally fast, so that the dependence of an average milk producer on the grazing lands- and hence his stake in their preservation -has been low (Shah,1987). Thus a two way causation is established. Remoteness from roads and markets further helps in retaining mutual obligations in the hills. Fear of reprisals from village elders prevents too frequent abuse of the resource. State penetration of rural areas in the plain villages has undermined old system of authority without establishing new ones, resulting in a hiatus of confidence (Wade, 1986). Lastly, the hill settlements are more homogeneous in caste, with Thakurs domination both in land and number, whereas villages in the plains often tend to be multi-caste in character, which makes social interaction difficult.

The above comparison may be put in a tabular form as follows:-

Table No. 13

Panchayats in U.P. Hills and Central-South India- Comparative Chart

Characteristic	U.P. Hills	Central-South India
Population	50-100 families	500-1000 families
Size of non-private wastelands	25-75 ha.	100-500 ha.
Used by	one village	several villages
Dependence on wastelands for fodder	very high	agr. waste available
Source of fuelwood	trees only	cow dung & agr. waste
Authority of village elders	still intact	only within caste group
Market & state peneteration	weak	fairly strong
Caste homogenity	one caste dominant	multi-caste

Despite what has been said above, it is not rare to find instances of even a market dominated village to develop collective action if it is in the interest of the powerful people of the village. In a study of 41 villages in district Kurnool, A.P. (Wade,1985) it was observed that many showed

common purposefulness and ability to provide public services. Four common institutions were seen at work in these villages; an informal village council (distinct from the statury panchayat), a standing fund for paying wages for protection, a work group of field guards, and common irrigators to regulate supply and distribution of canal irrigation-
Field guards patrol the village area and make sure that no animal is grazing a standing crop. After a crop is harvested, the stubble is put to common use. The cost of privatising and protecting stubbles would be prohibitive, as land is divided in a number of scattered parcels. As most of the village's animals consist of bullocks and buffaloes, which are stall fed, the stubble is surplus to the village needs. It is let out to people with sheep and goats, who want grazing and farmers want their fields cleared of stubble and manured. The graziers pay to the village fund, about Rs. 5000 in a space of six weeks. With this money village guards are appointed who protect fields which still have a crop.

The study noted that corporate villages tend to be located in black cottton soil,rather than red soil areas. Black soils are more water retentive and permit a wider range and higher yields of rain fed crops. This produces surplus stubble, which is profitably used through common institutions.

Similar instances of cooperation have been noticed in village Deuli, W.B. (Agrawal,1985) where almost all farmers have put their wastelands under eucalyptus and acacia auriculiformis trees. In order to prevent illegal felling, it is decided *that* any one found in the plantation area on a day other than Sunday would be fined one male goat. The fallen leaves are turned into a community resource, where as twigs, branches and grass belongs to the land owner.

Tragedy of the Commons?

Notwithstanding these positive examples of community initiative, which in most cases are autonomous of government efforts, it is difficult to assert that peoples' participation has been achieved in Indian village forestry projects. On the other hand it appears that the community woodlot programme, which should aim at raising tree plantation on community/Government lands by the community, has not been tried in India at all! Instead, departmental plantations have been raised on common lands resulting in governmentisation of common lands. The communities, specially the poor, have not accepted these plantations as their own. People's involvement is limited to either handing over of common lands to the department, or to wage employment. They remain otherwise passive spectators to the raising of trees. The liaision of the Forest Department with the people is confined to a few meetings with the leaders of the community, often arranged at block headquarters. Species selection is based on site suitability alone, rather than on the needs of the people. Nonbrowsable species are preferred which can grow fast and require little management. Possible use of other species either in overhead mixture or as underplant has not been seriously considered. Often spacing is reduced to avoid intermediate management operations, to reduce plantation cost, and to cut down on staff supervision time. As a consequence, management tools of spacing, thinning and pruning which could have produced intermediate yields of grass and tree products for the people have not been made use of (Banerji,1986). Coppicing or clear felling after 7-10 years may produce income to the Panchayat or to Government but the village consumption would remain at the previous level. Technology which is suited to large scale plantations for markets within the forest area should not have been applied to small scale village woodlots, where the need is more for fodder and fuelwood, rather than for timber.

It may be noted that the additional funds to the tune of Rs.2000 million made available for the social forestry programme in 1985-86 over the 84-85 level from NREP and RLEGP budgets were almost entirely reserved for the community woodlot programme. This underscores the importance of community forestry as compared to farm forestry in the eyes of the Government. There are several reasons for allocating high priority to this component of the social forestry programme. Unanimous action from community alone can prevent cattle from grazing the new plants, specially during the dry hot months when even private holdings turn into free grazing lands for the cattle, as there is no crop at that time. Second, common lands have from times immemorial been under community use and therefore leasing of such lands to create private vested interests for a few, even of the poor, may not always be seen as legitimate by the village community. It is desirable that common lands are, by and large, regenerated through community efforts. Third, community action is likely to give higher priority to consumption within the village, where as private forestry is prone to be more biased in favour of sale in the urban markets. Fourth, bulk of degraded common lands in India cannot support economic exploitation, which is the basis for attracting private enterprise, these are best suited to produce a thin vegetative cover with some bushes and scrub. And lastly there may be economies of scale in land levelling, protection costs and marketing in retaining collective character of land.

The important issue for consideration is why despite of high priority by the government and its desirability community initiative and management seems to be absent in the so called village woodlots, which are poor extensions of departmental forests outside the forest area. We have considered some of the technical and administrative failures which may partly explain this. But are there structural barriers to community action?

Some tentative hypotheses may be advanced here. Communal forestry requires collective orientation towards resources and property, it also requires effective institutions for managing common resources. Unfortunately, participative institutions at the village level lack necessary clout to enforce individual discipline. Villagers seem to have more faith in coercive institutions of the state rather than in their own capacity to manage resources. Economic activity in Indian villages has always been family oriented, as opposed to cultural activity which is community based. Heterogenity of Indian villages also impedes common action as a croup.

From a study of a number of villages from peninsular India over a period of two decades Jodha (1986) concluded that common property resources tended to get more degraded without state assistance, and its privatisation, even when done in the name of the poor, helped the rich. He therefore suggested that CPRs should be developed by the Government through technological intervention, but he cautions that increase in its productivity may attract richer farmers to use it or they may illegally appropriate it, or even the Government/Panchayat may hand it over to contractors for lure of revenue and not let the poor use it. In all such cases, the poor will hardly get any advantage from the enhanced production of the CPR.

Jodha's articles, in a way. confirm Hardin's thesis (1971) regarding the tragedy of the commons -individual's concern for self and neglect of his collective responsibility to CPRs as the main factor for degradation of CPRs. For instance, in many semi-arid tracts, it is common for people to shift top soil from the common grazing land to their own farms and keep scooping until the CPR is reduced to rocks (Shah,1987). Is indifference to Joint responsibility of looking after the CPR also a result of rigid stratification of Indian village society? Erik Eckholm writes, "Perhaps the greatest impediment of all to community forestry are the local social, and economic institutions that in many poor countries, perpetuate the rigid stratification of social classes and the severe exploitation

of those at the bottom. Community forestry is not a technology, it is a process of social change that requires the continuous participation of whole communities in planning and problem solving. It requires people to shift from an individualistic to a cooperative state of mind in spheres of life where communal ism has not been the norm, at least in recent history. People must willingly give up land use practices and privileges to which they have long been accustomed. Such a process of cooperative behavioural change, never easy to bring about any way is especially unlikely where grossly unequal land tenure and marketing systems ensure that a powerful minority will capture nearly all the benefits of any economic gains."

J. Bandyopadhyay (1987), however, disputes that social and economic inequalities have in any way hindered the possibility of community ownership, participation and control in India. Village commons have been a historical reality for two reasons. Firstly, whereas private resources in India were governed by individualistic and class dominated norms, there have been communally shared norms when it came to community resources. Secondly, the self-sufficient nature of the traditional village economy guided the exploitation of common resources through a system of self control. He concludes by stating that "Cooperation rather than competition has been a driving force in human societies"

Empirical data collected by Jodha and also the village case studies discussed in this paper do not support Bandyopadhyay's optimism, at least as far as post-independence India is concerned. Apart from monetisation of the economy and development of markets which have destroyed the self-sufficiency of villages and thus eroded the cooperative norms guiding the use of CPRs, Government policy has also prompted faster privatisation of the common resources. With the decline in the area and increase in demand because of demographic pressures, common lands can no longer support the basic needs of the population. Even if CPRs are regenerated through social

forestry programmes, it is doubtful whether the poor, as , a community, will have a major say in management of or distribution from village woodlots. Serious issues pertaining to the nature of village communities, interpretation of changes in socio-economic conditions, confidence & control which the poor have in shaping village institutions and village bureaucracy and linkages between agrarian class structure and the poor need to be raised and answered.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

While it is good to be aware of limitations of community institutions, a policy maker would also like to be enlightened about the potential of such bodies and the role that they can play in social forestry programmes. Panchayats may not always represent the interests of the poor, yet in many villages they can be trusted to raise and look after trees, if financial help is given by the Government. Thus these local bodies can be looked upon as substitutes for forest department, which can then concentrate on extension, supply of inputs and technology- At present the F.D. has a huge target for direct plantation, and therefore does not find time to contact farmers or to provide extension help to them. It is only by reducing their target for departmental plantations that their energies would be available for helping the poor.

A study of fodder farms on common lands in Gujarat (Shah, 1987) indicated that some panchyat leaders take a great deal of. personal interest in setting up and running such farms. They seem to work for non-economic rewards, power, reputation, social status etc. Once established, the successful farms run on business line: the interaction between a farmer and the fodder farm is similar to between a buyer and a private seller. An average farmer does not show any interest in running the farm, infact its success is due more to the initiative of the leader than to community spirit. This makes

such enterprises precariously dependent upon quality and integrity of leadership, not easy to find in a free market situation to work for extra-economic rewards. Therefore in some carefully selected villages one could hand over funds to the Panchayat and expect the leader to run the show in the best interest of the people, who would even in this model remain passive spectators.

The only other option of developing community lands, besides governmentisation the shortcomings of which have been reiterated in this paper several times, is creating private rights in common lands of the poor or others through leasing policy. This too is beset with problems. Privatisation encourages intensive use of land for agriculture, where as wastelands are capable of producing only a thin vegetative cover which is not profit generating. Therefore it is difficult to be sanguine about degraded forest or community lands being used for tree growing after allotment. The poor may be tempted to take a quick agriculture crop on these lands. If common lands are to be used for commercial exploitation, both ecological and welfare needs might be ignored by the allottees. Meeting fuelwood and fodder needs of the poor and conserving soil and water are not economic activities which can be undertaken with private or bank funds. These basic needs require Govt. support just as construction of a hospital or school does.

Private management may have proved successful in developed countries, but the evidence from developing countries regarding privatisation of developing countries is less than encouraging (Odell,1982). The transfer of communal land rights to individual and commercial interests across Africa has exacerbated rural landlessness, poverty and unemployment. The issue, therefore, is one of determining the system most suitable to the historical, political, social and ecological needs of the people and area concerned.

It is not being suggested here that private forestry should be discouraged. A careful study of the ownership pattern of India's wastelands shows that of the 92 million hectares of land (see Table no.3) which need to be afforested, roughly 36 million hectares each is with the Forest Department and individuals, and the rest 20 mh is under the control and use of the communities. Thus there is ample scope for trying all the three models-Govt. forestry, community ownership and private enterprise- rather than susgestins changing the ownership of either Government or community lands. It is simplistic to locate the reasons for the failure of the afforestation projects in the ownership structure of land. A radical change in tenure should wait till we gather more empirical data about the relative efficiency of the three models in forestry.

Social vs. Production Forestry

Social forestry has so far remained confined to non-forest lands, under a belief that forest lands are needed for production of timber for the market. Experience has shown that individuals like to produce for the markets, and not for meeting the fuelwood and fodder requirements of the poor. We may soon reach a situation where, on the one hand there would be over production of timber (which will harm the poor who as late entrants to the market will get a low price), and on the other, ecological and welfare needs will continue to remain neglected. The only practical way to get out of this impasse is to change the objectives of government forestry! Rather than producing timber it should aim at satisfying the welfare and ecological needs of communities.

This would mean that fast growing timber species like eucalyptus, poplar and casuarina would have a legitimate place in farm forestry, as individuals like to increase their incomes, whereas government plantations will be dominated by welfare considerations of ecology and consumption support to the poor. It is interesting that the objectives of social

forestry, as defined by the National Commission on Agriculture, did not include improving the incomes of the poor. (Government of India, 1973, p 6 & 22). The Commission was not very hopeful that farmers, because of their small holdings, will take to large scale plantations on their lands. The experience of the last ten years shows that farmers look upon trees from several angles, including income generation. Given suitable market conditions, they can be trusted to produce timber and poles for commercial and industrial needs.

As regards forest lands, specially those which are remote from habitations, it is recommended that these should continue to grow long gestation crops which are likely to be neglected by the farmers and Panchayats. Here priority should be given to socially useful trees, like sal, mahua and tendu, in place of teak. But bulk of forest lands must be geared to meet non-market demand for fuelwood and fodder of the poor. Rather than raise plantation crops these lands should be used for afforestation through protection, so that natural forests develop, the produce of which is not marketed.

Rather than divide the afforestation programmes into social and production forestry it is more logical to compartmentalise forestry into a welfare and an economic sector. Although trees satisfy multiple needs, yet the welfare demands should be largely met from government lands and the markets should depend upon private lands. The reverse is being tried today, which results in total neglect of the environmental needs of the nation and energy requirements of the poor. To put it differently, private lands should maximise income and production, whereas government lands should maximise welfare.

Peoples' Participation

The term "peoples' participation" has almost become a rhetoric in India today. Different actors interpret it differently. According to some, participation would have a meaning only the basis of secure private land rights (Chowdhry, 1985).

Implementation staff have a different approach, "I manage, you participate". has been the dominant underlying principle behind bureaucracy dominated government project. (Shinsi, 1986) . The important question is, participation for whose benefit, under whose management, and under what terms?

As discussed in this paper, what people set out of social forestry plantations sets decided by several factors; the most important being who owns the land and what species are planted. Thus there would be a world of difference between plantation of eucalyptus and of prosopis on roadsides. In the former, benefit will so to urban markets and industry, whereas prosopis would not only solve the fuelwood problem of the poor families, but would generate a lot of self employment for the poor, as was observed in the case study of village Kharot. U.P.

The FAO (1982) defines peoples' participation as " the process by which the rural poor are able to organise themselves and, through their own organisation, are able to identify their own needs, share in the design, implementation and evaluation of the participatory action." Thus various elements of participation are decision making at various stages, control and management of funds, share *in* usufruct and final produce, and ownership. For different models of social forestry these are shown in the table below:-

Table No. 14
Elements of Peoples Participation

Element	Type of land Forest	Public under F.D. management	Public under community	Private
1. Ownership of land	Govt.	Govt.	Govt.	Farmer
2. Ownership of produce	Govt.	Govt.	Community	Farmer
3. Source of funds	Govt.	Govt.	Govt.	Private Banks Govt. subsidy
4. Control/ management	Govt.	Govt.	Panchayat thro' president	Farmer
5. Who gets intermediate products	People (These would be higher if socially useful trees, rather than market oriented trees are planted)	People	People	Farmer
6. Use of final produce	Disposal thro' auction (This may be avoided if fruit, fodder, and fuelwood species, as opposed to eucalyptus, pine & teak are planted)		meets peoples needs	Income, consumption
7. Responsibility for maintenance	Govt.	Govt.	Panchayat thro' President	Farmer

It would appear that where forest lands are managed by the F.D., there is little peoples participation, as according' to the definition suggested by the FAO, people have little decisive role in the design and implementation of such projects. However, even these projects may be of immense value to the people if the produce is not auctioned, but builds up community's consumption and income levels through MFPs, grasses and fruits. It may sound paternalistic and even reactionary, but given a choice the poor would prefer sustained usufructuary benefits from forest lands under F.D.'s management, rather than attempt to secure their management on community lands.

Several other conclusions follow from the village studies of Chapter 3 and 4. First, social forestry and wasteland development has generally been understood to mean direct plantation by the F.D., the objective of building up of community's capability to manage its own resource has not been tried. Second, the participation of the poor families in the programme has been lukewarm for want of extension, security of land and tree tenure, and marketing support. Even where governments have decided the share of the community in final and intermediate produce, awareness of these among the staff and the people was wanting. Third, tree plantation on agricultural lands may not be in the interest of poor and women. Fourth, species selection for public and private lands should follow different objectives. Whereas farmers, both small and big, would prefer to convert their labour into high value crops, forestry on public lands should be seared to produce low value timber but substantial intermediate products like grasses, dead branches, mulch and low value fruits (so as to escape the attention of the rich and the contractors). Lastly, while certain category of wastelands, like saline lands of U.P. and Gujarat, would require technological solutions and financial investment, there are many others where policy reforms may yield positive results. These are; using forest lands primarily for fuelwood, fodder and long

gestation crops which yield a lot of minor forest produce, letting panchayats handle common lands and F.D. concentrate on extension, and encouraging farmers to produce commercial plantation crops and exotics for industries.

Divided Administration

The debate "who loses and who gains" from an economic activity is often couched in conspiratorial terms; the neglect and the harm done to the poor is explained in terms of the hold that the rich have over policy mechanism and delivery machinery. While explanatory power of social structure is not to be depreciated, other important factors are sometimes lost sight of while analysing the impact of a scheme on the poor. For instance, administrative failures do not always stem from class bias, they have their own autonomy. If social forestry has not been able to help the poor, part of the blame must be sought in the administrative structures and organisational weaknesses.

Since 1985 the task of policy formulation in social forestry has been shifted from the Ministry of Environment and Forests to the National Wastelands Development Board, a semi-autonomous body, where as other traditional functions and control over the state Forest Departments are still being exercised by the Ministry. Although clear division of responsibility between the two organisations does not exist, it is generally believed that the policy regarding forest lands is within the domain of the Ministry, whereas afforestation of non-forest and private lands is to be supervised by the NWDB. Similarly, revenue generation y from Govt. Forests is to be coordinated by the Ministry, and fuelwood and fodder plantations are to be raised by the NWDB.

With dual control over forestry functions it is difficult for government organisations to swap responsibilities, as has been suggested in this paper. To legitimise market orientation of the farmers and to make Govt. forests responsible for fuelwood

and fodder needs of the poor would require a great deal of objectivity and understanding of each others' role by those who are at the helm of affairs in the two organisations. This may not be easily forthcoming. On the other hand, it may be more tempting to blame each other for failures rather than put their heads together and work for the common good of the people. (As this paper was being completed the situation started changing, and renewed efforts were made to integrate the two organisations, full impact of these changes would be known only after some time).

In addition to these two organisations there is a third one, the Ministry of Rural Department, which controls almost half of the funds for the programme. This is a part of employment generation budget, which by its very nature is biased in favour of creating government and community assets in which benefits to the poor are through wage employment only. Although recently the Ministry of Rural Development has agreed to the utilisation of such funds for self employment of the poorest, yet successful implementation requires a high degree of coordination between the Forest, Rural Development and Revenue Departments at the field level,which is often wanting. Non-utilisation of the total budgeted amount and poor survival is a direct result of such lack of coordination.

The experiment of conceiving trees as poor peoples' assets and buffers requires a great deal of imagination and sympathy. In the ultimate analysis it appears that structural and political constraints are not as formidable as institutional and administrative ones are.

Table Current and Potential Production *of* and Employment in Collection of Non-wood Forest Products in India (excluding processing)

(Paroduction : Tonnes)
(Employment : Man years)

Description	Collection periods	Production		Employment	
		Current	Potential	Current	Potential
Grasses	October-March	350,000	525,000	1,200,000	1,800,000
Bamboo	All year round	1,932,000	4,309,000	48,300	110,000
Pine	All year round	NA	100,000	N.A.	100,000
Mahua	April-June (Northern) Oct.-nNov. (Southern)	85,000	490,000	28,600	163,000
Neem	May-June	6,000	418,000	1,000	70,000
Karanj	June-October (Different parts of country)	56,000	111,000	19,000	37,000
Kusum	June-July	30,000	90,000	6,700	30,000
Sal	April-June	240,000	5,504,000	53,000	1,123,000
Karaya Gum	April-June	15,000	22,500	50,000	75,000
Resins	March-June	74,200	150,000	30,000	60,200
Tendu Leaves	April-June	210,000	300,000	74,900	107,000
Sarpa-gandha	Not available	600	1,600	16,000	42,670
Kuth	October	600	1,000	16,000	26.,670
Cinchona	Not availaable	1,420	2,000	23,635	33,335
Others					
Total		3,235,918	12,482,847	1,603,062	3,995,805

Source: Tirath Gupta & Amar Guleria, Non-wood Forest Produce in India 1982 p. 133 (based on NCA Report Vol. IX and XIII)

Supply & Demand of Forest Products

	Supply in 1979-80	Demand in 1985	Gap	Area Required
Industrial wood in million cum	13.5	35.2	21.7	3.25 mh
Fuelwood (in cum)	32.0	202.0	170.0	25.5 mh

As regards future requirement of paper and newsprint by AD 2000, it is estimated that on the basis of an expected consumption of 4.5 kg. of paper per capita, by AD 2000, the quantity of paper required **will be** 4-25 million tonnes. Since, atleast 2.5 tonnes of forest raw-material is required for providing one tonne of paper, the raw material required by AD 2000 will be 11.4 million tonnes. In addition, forest raw-material will also be. required for newsprint, the demand for which is expected to be of the order of 1 million tonnes by AD 2000. The forest raw-material for this would be 2.5 million tonnes- Thus the total quantity of raw material for paper and news print only required by AD 2000 will be 13-9 million tonnes or 14.0 million tonnes in round figures. The present availability is about 4.5 million tonnes. It will, therefore, be necessary to plan for raising plantations which will provide additional raw-material to the extent of 9.5 million tonnes.

On the basis of yield of 4 tonnes per hectare on sustained basis, it would be necessary to have pulpwood plantations to the extent of 2.4 million hectares during the next 3 Five Year Plans. (Govt. of India, 1984)

Note regarding difficulties experienced by farmers in obtaining permission under the UP Protection of Trees Act, 1976.
(Based on Field work supervised by the District Magistrate, Basti and Chief Development Officer, Moradabad)

The methodology of selection of sellers in Basti was as follows. From the register of sale maintained in the Forest Office, a list of 17 names was prepared, care being taken to see that they were in a contiguous region, so as to facilitate verification. At the time of field check it was discovered that the list contained 3 names who were either-fictitious *or* had not applied for permits. Clearly these were cases where permits had been obtained fraudulently by the contractors. Out of the remaining 14, 2 were marginal farmers who had obtained the permits on their own, without involving a contractor. But when they took their permits to the local police station, they were asked to pay illegal gratification, and on their inability to do so their permits were confiscated, and so far they have not been able to fell their trees.

The rest 12 declared that they obtained the permit through the services of a middleman who dealt with the forest and police bureaucracy. The District Magistrate's report says, "The consideration for these services rendered was adjusted in the sale price-" He also adds, "It will not be an exaggeration to say that the marginal farmers and the poor tree patta holders will never be able to obtain a permit on their own from the forest department. Even if they do, they might not be able to 'convince' the local police. They will have to seek the protection of the local contractors."

In addition to getting names from government files, a local timber merchant was also contacted to obtain such names who may not have approached the forest department at all. Through this process 6 addresses were collected. When they were contacted, they denied having sold timber in the market, but admitted to felling of trees for private use only- Not surprising, they were all large farmers, with the exception of one who had to pay a share of his timber to the local police. The rest did not complain of harassment.

It is interesting that in almost all cases farmers themselves did not apply for permission. In one case of Moradabad, where a big farmer tried to do it himself, it took him 14 months as against a normal period of 2-3 months for contractors to get permission, and he complained of harassment from forest department as he had to spend more than 600 Rs. in transport only. Secondly, in all cases trees are sold on as—is where is basis, and expenditure on felling and transport is borne by the middleman. Thirdly, as regards the price farmers got, there was no difference between small and large farmers.

LAND TENURE & WASTELANDS DEVELOPMENT IN SOUTH MIRZAPUR (U.P.)

The southern part of Mirzapur has a substantial population of tribals living below the poverty line. The tract is dry, drought-prone, rocky, undulating with poor tree cover, and highly susceptible to soil erosion. The existing vegetation is not sufficient to prevent run~off of the earth during the monsoons, which further depletes the soil and exposes the bare rock underneath- Any programme to improve the economic lot of the people in this *area* should, therefore, try to check the flow of water and conserve soil. This could be done if a massive programme of tree plantation is undertaken in this *area.* This would help in conservation of moisture which would improve productivity of land too. The local people have realised this and are very keen on undertaking tree plantation.

Unfortunately, no such programme can be successful in this *area* unless tenurial problems *are* sorted out and people have a sense of certainty about their ownership rights on lands which *are* under their possession at the present. This note describes, in brief, the background of tenurial problems which have remained unresolved so far-

During the pre-independence period no settlement or record operation was ever done in this *area.* Land Records were also not maintained. As soil was of inferior nature and pressure on land was very low, people used to practice shifting cultivation without ever bothering about getting their rights recorded. Therefore, when the Zamindari abolition took place in Uttar Pradesh in 1952, the people in this *area* got no rights, and the entire land of the two tehsils in South Mirzaapur got recorded as Government land.

The settlement operations were started during 1964-65 in some villages but could be completed only in 37 out of roughly 450 villages in the area- The State Government since then has tried to complete record opoerations but without any success. During the annual field to "field surveys, the tribals and other have been recorded as having adverse possession on Govt. land.

In the last 20 years the problem of absence of land records has become more complex because of a number of developments in this area. Firstly, a number of thermal and hydro—el electric plants and other industries have been set up in the area- For these undertakings, land has been taken from the tribals and the local poeple, but since their names were often not recorded, they did not get any compensation. There are many cases in which a tribal family has been evicted two or three times because of acquisition of land by the Government but he has not been able to get any compensation. Secondly, many rich landlords and outsiders have, in collusion with the revenue staff, been able to get their names recorded in Government records and have claimed compensation from the Government without ever being dispossessed. They have also succeeded in getting better quality of land entered against their names. Some of them have never been in possession and land continues to be cultivated by the tribals and other people of backward castes.

The third problem is most serious. Sometime in 1953, the State Government decided that land which is not in the ownership of any private individual or Gaon Sabha should be transferred to the Forest Department. Accordingly, 7.89 lakh acres land in the two tehsils of Robertsganj and Dudhi was notified under Section 4 of the Indian Forest Act- When compared with the total *area,* 9.23 lakh acres of these tehsils, it is obvious that almost the entire area of the two tehsils has been declared under Section 4 of the Indian Forest Act, totally ignoring the existing land interest *of* the people. The maps of each village of the tehsil show that land proposed to be declared as reserve forest under Section 4 of the Forest Act is interspersed with lands owned or occupied by the people in such a manner that contiguous plots of forest land over a large *area* cannot be formed.

In brief, therefore, the problem is that the tribals have been evicted from their lands a number of times but got no compensation, powerful outsiders and rich landlords have got their names recorded as having adverse possession with a view to get ownership whenever settlement would take place, and most of the lands under the occupation of the locals has now been declared as reserve forests under Section 4, although it was not Government land and, therefore, did not satisfy the requirements of Section 3 of the Forest Act.

The State Government appointed a high—powered commitee which submitted its report in 1983- Its recommendations have not been implemented. Having failed to get justice from the State Government, the people moved the Supreme Court and have obtained a stay order against their eviction. The Supreme Court also directed the State Government to complete record operations by September 1985 but, unfortunately, even officers have not been appointed to begin the operation.

Insecurity of tenure and pendency of thousands of criminal cases and eviction notices filed by the Forest Department against the local people is coming in the way of promoting people's movement in afforestation- Other development works like soil conservation, minor irrigation, construction of bunds etc. can also not be undertaken unless land records are set in order.

Govt. Forests

Forest Department controls 22% of the total geographical area of the country but contributes only 2% to national income. Per hectare productivity is less than a ton a year as against 5-10 tonnes in developed countries-

The poor have been affected because of

1. Deforestation,
2. Changing species from mixed to commercial,
3. Reduced access,
4. Techniques of exploitation have changed,
5. Social Forestry projects do not include forest areas, hence deprived of funds,
6. Legistative measures like Forest Conservation Act and nationalisation of MFPs has alienated people from forests
7. Vast areas under the possession and cultivation of tribals were declared as forests- Mirzapur
8. Tree Patta Scheme does not apply to the forest areas
9. Some states keen to promote agro forestry on tribal lands, which are entered in the land records as forest land, but Forest Conservation Act does not permit this.

Instances of Forest-People Collaboration

Arabari, Midnapur, W.B.

Vast areas of forests of southern lateritic tracts of West Bengal have been virtually unproductive on account of unregulated fuelwood collection by the poverty stricken people and grazing village cattle. I; the year 1972, Divisional Forest Officer Silviculture Dn. of Midnapore, West Bengal, took over a block of 1272 ha of denuded forest for rehabilitation. The *area* was spread over eleven *movzas* and was surrounded by eleven villages. The area had about 800 ha of *Sharea robusta.* stumps while the balance *area* was blank. The stumps threw up vegetative shoots every year which local poor people used to cut down, sell in the nearby market for subsistance. The value of the forest in 1972 was nil. The forest area did not yield any product except for the annual regrowth which was eventually cut down by the local people.

The program for rehabilitation was to remedy the difficulties which led people to damage the forest. These major causes were (a) poverty: poor-people damage the trees to collect fuelwood to sell in the urban market for subsistence; (b) lack of fuelwood: damage the forest to collect fue1wood—for own use? (c) lack of fodder: the cattle have little fodder and hardly any common land to graze, hence people send their cattle to forest for unregulated grazing; (d) the lack of small timber: no provision of small timber for their need of plough, house construction etc. hence they will cut down whatever trees were available.

The rehabilitation scheme focussed on generating sustained productive employment in forest area so that people do not have to sell fuelwood in market, growing the fuelwood so that people can get it on a token fee, providing plough,etc. at cost price and arranging cattle grazing on a rotational basis- It was also promised that people will get 25% of all produce if the scheme succeeded. The scheme was drawn up in consultation with people. In the period 1972-1985, people's cooperation was nearly complete. Productive employment related to maintenance of shoots that grew on stumps over 700 ha, and plantation of *Acacia, auriculiformis, Eucalyptus* hybrid, cashew nut, Sabai grass and sisal over about 560 ha. People received their fuelwood, plough pieces at cost price and rotational cattle grazing areas. Govt. of West Bengal approved in their order No.11/8/D/GN-76 dated 7-3-1987, distribution of 25% of the usufruct to 618 beneficiary families in lieu of their exceptional cooperation in the maintenance and protection of these forests. The degree of cooperation can be realised if it is mentioned that the area was not fenced and that there were hardly any guards and the supervision was by one ranger only.

The project started in 1972 and still continues. Erstwhile totally degraded government forest have become the most luxuriant forest better than any found in the area. The value of the standing crop, what was nil in 1972, has been calculated at Rs. 90 million. The beneficiary share thus stands at around Rs. 22 million. With proper management and continuing cooperation of the people, each family is likely to earn about Rs. 4195 annuallly at present value in perpetuity.

Minor Forest Produce

It is widely recognised that forest dwellers are amongst the poorest section of Indian society. Their income is derived from collection of minor forest produce from trees,both from their own lands and from from forests land. The nationalisation of these commodities, done presumeably with the intention of helping the poor, has affected their interests adversely. Earlier, the tribals could sell the produce of their own trees to anybody, but under the new system produce from trees on private land has to be sold to the forest department. In almost all cases the forest deparatment has appointed agents formally or informally. This means that the tribals are at the mercy of two different sets of people, the contractor as well as the government department, and any payment which tribal would get has to be routed through both of them which result* in delay, and makes the tribal indifferent to trees on his own private land.

Many new restrictions have recently been imposed on tribal rights to collection of minor forest produce from forest lands. For instance no tribal can collect and sell more than 25 kilogram of Mahua at a time in Madhya Pradesh. Since markets *are* far away, going to the market with only 25 kilograms to sell is not a viable proposition. But, there is restriction of storage of dry Mahua and no family is allowed to store more than two quintals.

Some MFP items have recently become important for industrialists, like Mahua. This results in the neglect of MFP as a staple food and medicine in the life of the tribal. Sometimes industries, in order to maximise the collection of MFP, use methods which are destructive to these plants. An obvious example is extraction of resin from pine trees. In Tendu tree areas, contractors slash all undergrowth to promote a better growth of tendu leaves. Thus, many fruits, roots and medicinal plants get destroyed. Besides, it causes soil erosion (Dasgupta, 1986 PIDT). Hamimdorf, in **his** book "Tribes in India, the Struggle for Survival" (Oxford 1985) describes how a particular paper mill exploited bamboo in a tribal region by bringing in hundreds of labourers from different states through methods which endanger future regeneration. The tribals depend on bamboo not only for the construction of their huts and for making utensils but also baskets and mats which they sell to generate cash.

It is also noticed that whereas paper mills get forest raw material at a throwaway price, the poor have to pay a heavy price. In Karnataka the price paid by industry and common man are Rs.15 and Rs.1200 respectively.

There a*re* 5000 forest villages in the country in which two lakh tribal families live. They do not possess any right to the land that they cultivate. They have no access to get extension or any other development programme. Although it was recommended by the Government of India way back in 1972 that these villages should be converted into revenue villages, no progress has been made.

WHO GAINS?

A study of U.P. shows that farm forestry has been more popular with relatively large land owners and operators, absentee owners including urban dwellers, and businessmen. Not only their orientation towards cash incomes is higher and their capacity to respond to new enterprises is better, but also that tree crops offer the advantages of ease in labour management. Market oriented farm forestry also enables the rich to save taxes on the unaccounted portion of income from other economic activities. The long term social implications of this can well be imagined.

The FAQ/SIDA study on Gujarat also confirms that the programme is still biased towards larger farmers. Farmers with more than 5 hectares of land planted on average roughly twice as many trees as those with under 5 hectares. Even when the small and marginal farmers planted trees the survival percentage was rather low. Many non—participating farmers counted lack of land, shortage of capital and non-availability of water as the main factors for their not planting trees. Obviously, they would be largely poor farmers.

The FAO study showed that of the total farmers participating in farm policy programme 13% were marginal farmers. This finding has been chalalenged by another study by Margaret M. Skutsch. When she interviewed large farmers they could not name any poor who planted trees. Only in one village small farmers planted euclyptus under the influence of one particular Range officer who was popular among the people. In other villages like Khanpur, Jotalpur and Nanisarsen very few, sometimes no, participating marginal and small farmers could be found. However, in several places large farmers got classified as small farmers for convenience. She also noticed that most of the farm forestry is taking up land previously devoted to other crops -both food and cash crops. This is having efect on employment for the poor. The poorest have no access to wood or crop residues, for them the only source of fuel wood is a long journey to some unguarded forest.

Mid term review of many social forestry projects laments the fact that although production targets were being met, or even overachieved, social goals of ensuring easy availability of fuelwood and securing participation of the poor were lagging behind.

A report by Dr. Conlin about Karnataka social forestry lamented that there was no evidence of small farmers being reached in the farm policy project- Tribal rights on bamboo raised under the project were found to be weak and non-enforceable. Another review of the same project done in 1986 admitted that the project has failed so far to achieve the intended priority to the landless and to develop a policy for the distribution of benefit.

Comparative Price of Forest Prroduce Obtained by the Farmer and Prevailing in the Market

Village/ district 1	Species 2	Value obtained by Farmer 3	market value 4	3 as % of 4 5	Remarks 6
Shakruri,HP (a)	Khair	Rs.46 per tree	248	18%	
Hyderabad A.P. (b)	Firewood	N.A.	5.7 to 6.4 times the producer price	16 to 18%	
Moradabad U.P. (c)	Local Mango age 60 years	Rs.860 Per Tree (av.of 255 trees)	Rs.2000 per tree	43%	
Raigad, Maharashtra (d)	Teak	Rs.15-20 per tree of 70-90 cm. girth			
Allahabad, U.P. (e)	Mahua	Rs.600 per tree			
West U.P. (f)	Fuelwood from euclyptus	Rs.300 per ton	Rs.800 per ton	37.5%	
Betul,M.P. (g)	Chiranji seeds	Rs. 3-5 per kg.	Rs.50 perkg.	6 to 10%	
Chotanagpur, Bihar (h)	Tendu leaves	Rs.15 per qtl.	Rs.200 to 600 per qtl.	2.5 to 7.5%	
Kharot, Mathura, U.P.(i)	Prosopis	Rs.20 per qtl.	Rs.60 per qtl.	33%	
Suleswar, Phulbani, Orissaa (j)	Mahua Flower	Rs.0.40	Rs.2.50	16%	

Shankargarh, Tendu Sarguja, M.P. (k)	Rs. 4.50 per 100 leaves bundles	Rs. 40 per 100 bundles	12.5%

Source :

(a) Saxena, 1988, Who Owns the Trees <Typescript)

(b) Alam & Dunkerley, 1983, Fuelwood Survey of Hyderabad, Osmania University, Hyderabad, Resources for the Future, Washington, D.C.

(c) Personal Communication from Chief Development Officer, Moradabad,U.P.

(d) Personal communication from Academy of Development Science, Raigad, Maharashtra, 1987.

(e) Shanker, 1987, Pant Institute of Social Sciences, Allahabad

(*f)* SIDA, 1987, Typescript

(g),(h) Ram Chandra Guha, EPW, Oct.29, 1983

(i) Saxena, 1988, Participatory Planning for Wasteland Development, (Typescript)

(j) Bhattacharjee, 1987, Towards a Conscious Mew Society, PIDT

(k) Dasgupta, 1986, Forest, Ecology and the Oppressed, PIDT

Prem Shankar Jha Times of India, *Feb.* 26 *&* 27, 1982

"In Maharashtra, a truck of timber <teak> costs Rs. 30,000 in the market- The thieves pay tribals Rs. 500 to fell trees and chop it up. Then they pay Rs. 5000 to 7000 in bribe to the forest officials and local politicians. This still leaves them with a margin of Rs. 15000 to Rs-19000 *per* truck, a return on investment of over 1003. in a single deal, that is consummated within days-"

Chart showing statewise no. of people below the poverty one and area under cultural wastelands.

State	% of rural Pop. below pov. line in 77-78	below pov.line Rural Pop. at the end ofl980-81 in milliond	Area under culture-able wastelands in mh
A.P.	43-89	18-0	9.71
Bihar	58.91	36.0	5.02
Gujarat	43.20	10.0	4.39
Karnataka	49.88	13-1	6.25
Kerala	46-00	9.4	0.43
M.P.	59.82	24.8	14.11
Mah.	55.35	22-8	7.29
Orissa	68.97	16.0	5.10
Raj•	33.75	9-1	14.38
T.N.	55.68	18.0	14.31
u.p.	50.23	45.6	5.30
W.B.	58.94	23.6	1.05
Others	—	—	—
	50.82	254-9	92.73

Notes. (A) The area under culturable wastelands has been obtained by adding up the area of the following:-1.

1. Degraded Forest lands (35.9 mh)
2. Culturable waste (16.7 mh)
3. Pastures (12.0 mh)
4. Groves (3.5 mh)
5. Current Old Fallows (24.6 mh)

(B) Data regarding poverty has been taken from Govt. of India, Department of Rural Development, publication, 1986, "Rural Development Statistics."

1. Examples of Forest People Collaboration
   - With leasing (BAIF, Orissa)
   - Without leasing (Arabari, U.P. Hills)
2. Land use data of 10 Poorest districts in 1951 and 1985 - which ©ay show that these districts have recorded highest increase in Forest *area3.*
3. Species planted in forest area - which may show that commercial species are being planted, despite the changed emphasis- Fruit, fuelwood and socially useful species (Sal, Mahua etc) are not being encouraged-
4. Study on tribal migration & deforestation (contact PIDT, ISI etc.)
5. Micro level studies on markets, intermediary margins, bureaucratic delays, pricing, artisan requirement
6. Data on fodder, potential, microlevel experiements
7. Chart showing 1897, 1952 and 1988 Forest Policy
8. State level data on *Tree* Patta Schemes, leasing of land etc. showing that in dry pockets, those who have upto 10 acres of land *are* quite poor.
9. Extension as a critical input
10. Administrative coordination
11. Forest Conservation Act and its impact on people's participation