

JOINT FOREST MANAGEMENT IN NORTH-EAST INDIA

A Trainers' Resource Book



EDITORS
K. C. Malhotra
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B. K. Tiwari
R. S. Tripathi



Regional Centre
NATIONAL AFFORESTATION AND ECO-DEVELOPMENT BOARD

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PREFACE

The Joint Forest Management (JFM) has come a long way since it was first experimented in Arabari in 1972. Following its formalisation vide June 1, 1990 circular of Government of India, JFM has proved to be a successful management strategy for managing and protecting the forests of the country. So far, 28 states have notified their respective JFM enabling resolutions and about 50% of the country's primarily degraded forests are now under JFM. Change of perception of forest personnel towards the role of village communities in forest management and building of confidence between the village communities and the state forest departments are two most important achievements of JFM during over one-decade of experimentation. Consequent upon the adoption of JFM, large area of forests in 28 states are being managed through JFM committees where the local village communities and the forest department officials work as partners for regeneration, management and protection of the forests. Local NGOs have been playing a significant role in organizing the villagers and in facilitating JFM implementation.

In north-eastern India, all seven states viz., Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura have successfully implemented JFM programme. However, the rate of success varies amongst the states. One of the most important factors that contributes to the success of JFM is the development of human resources through training of the key persons involved in the implementation of JFM. Realizing the importance of training in successful implementation of JFM in the region, the Regional Centre, National Afforestation and Eco-Development Board at the North-Eastern Hill University, Shillong has been organizing training programmes for the forestry personnel. During such training programmes, the Regional Centre has, time and again, felt the need of a Trainers' Resource Book covering various aspects of JFM. Besides, the state forest departments of the region also felt the need of such a resource material, as they have to conduct such training programmes frequently for the stakeholders involved in JFM. The importance of such training programmes was further enhanced when the National Afforestation and Eco-Development Board (NAEB) made it mandatory that all the NAEB funded afforestation schemes have to be implemented through JFM.

Considering the typical land tenure system and forest ownership pattern, the approach to JFM in north-east India has to be different from the rest of the country. Most forestlands are owned by the individuals and communities, and therefore, forest officials need to motivate the forest owners for working within the framework of JFM. This implies that the Forest Departments and concerned academic institutions could provide technical assistance to forest land owners. This would further require capacity-building of forest officials, communities and NGOs in various aspects of JFM. Therefore, a well-planned programme of training for all the stakeholders of JFM on a regular basis needs to be in place.

Any training manual for imparting training on JFM in the north-eastern region has to focus on the issues pertaining to the region, which are much different from the rest of the country. Keeping this in view, the Regional Centre undertook the task of developing this training manual for JFM that could be more appropriate for the north-eastern states. The Resource Book has been authored by a committee of experts, viz., Professor K. C. Malhotra, Professor R. S. Tripathi, Professor B. K. Tiwari, Dr. S. K. Barik, Shri S. Palit, IFS (Rtd.), Dr. G. Raju, Dr. V. T. Darlong, Dr. P. Bhattacharya, Dr. Rekha Singhal and Dr. N. K. Krishna Kumar. The preparation and publication of this manual was sponsored jointly by the Ford Foundation, New Delhi and the NAEB, Ministry of Environment and Forests, Government of India, New Delhi.

The manual has 26 units dealing with different aspects of JFM including a unit that presents a model microplan. Since preparation of microplan is central to the success of any project being implemented through JFM, the unit should work as a valuable reference material for microplan preparation by the project implementing agencies. Besides, a unit dealing with the guidelines for NAP (National Afforestation Programme) and the progress made under the NAP in the region has also been included. It is envisaged that the Resource Book would be quite useful for the trainers' involved in imparting JFM training and also to the Instructors of the Forest Schools and Colleges of the region.

The authors and editors have taken all care to include topics to cover as many facets of JFM as possible. Also effort has been made to make the text lucid, crisp and region-specific. However, it is likely that some important areas might have been left out and some mistakes might have also remained unnoticed. The editors solicit comments and suggestions from the users of this manual for inclusion in the next edition.

The Regional Centre and the editors gratefully acknowledge the active support of Dr. Doris Capistrano, the then Deputy Chief of Ford Foundation, Delhi for her interest in the work and for readily agreeing to provide the financial support. We also acknowledge the financial assistance received from the Ministry of Environment and Forests, Govt. of India.

K. C. Malhotra, S. K. Barik, B. K. Tiwari and R. S. Tripathi
Editors



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ABBREVIATIONS

ANR	Assisted Natural Regeneration
BDO	Block Development Officer
BO	Beat Officer
CAP	Community Action Plan
CBO	Cut Back Operation
CF	Conservator of Forests
CFC	Community Forest Committee
CSWI	Committee on the Status of Women in India
DBH	Diameter at Breast Height
DFO	Divisional Forest Officer
DRDA	District Rural Development Agency
FPC	Forest Protection Committee
GO	Government Order
ICDS	Integrated Child Development Schemes
IRDP	Integrated Rural Development Programme
ITK	Indigenous Technological Knowledge
JFM	Joint Forest Management
MoEF	Ministry of Environment and Forest
MSC	Multiple Shoot Cutting
NGO	Non Governmental Organisation
NR	Natural Regeneration
NTFP	Non Timber Forest Product
PIA	Project Implementing Agency
PRA	Participatory Rural Appraisal
RDF	Rehabilitated Degraded Forest
RO	Range Officer
RRA	Rapid Rural Appraisal
SSI	Small Scale Industries
SSQ	Semi-Structured Questionnaire
VAP	Village Action Plan
WPO	Working Plan Officer

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UNIT 1

CONCEPT AND EVOLUTION OF JOINT FOREST MANAGEMENT

R. S. Tripathi and S. K. Barik

1.0 INTRODUCTION

1.1 HISTORY

1.2 EVOLUTION OF JFM

1.3 CONCEPT OF JFM

1.3.1 Government Resolutions on JFM

1.3.2 Implementation of JFM

1.4 JFM IN NORTH-EAST

1.5 REFERENCES

1.0 INTRODUCTION

More than 23% of India's geographical area (329 million ha) is recorded as forest lands and is mostly under the government control. Until 1988, these lands were used primarily for commercial forestry and revenue generation was the main objective. Forests were managed by the State Forest Department and the traditional usage rights of the people living in and surrounding the forests were generally denied. This led often to confrontations between vested commercial interests and local communities. As a result, today most of the designated forest areas are degraded in spite of the best protection efforts made by the State Forest Departments. Further, degradation of forests is directly linked to the intensification of poverty and affects at least 56 million tribals, mostly living in mountains, uplands and other ecologically fragile areas whose livelihood support system is based on forest resources (SPWD, 1992). Organised timber smugglers sometimes hand in glove with forest officials, take away forest resources generated in the name of commercial forestry and the control of such smuggling is beyond the government capacity, resulting in huge loss of revenue to the public exchequer. Due to lack of trust between forest officials and village communities, such operations have virtually gone beyond control. Thus, neither the objective of revenue generation from the forest for welfare of the public nor meeting the subsistence need of the forest-dependent people is achieved.

This has been the dismal story of forest management in the country for the last fifty years. Many perceptive foresters realised that the old strict custodial policies were counter-productive and needed to be radically changed. In 1970 West Bengal foresters resolved in a conference that, "unless people's participation is ensured the future of sal coppice forests in South Bengal is bleak." First the needs of the local communities are to be met and only the surplus is to be auctioned (Malhotra, 1995).

A major breakthrough was achieved in 1972 with the initiation of the Arabari pilot project in West Bengal, where Dr. A. K. Banerjee, the then DFO, involved village

communities in the protection and management of degraded sal forests. Since then a number of Forest Protection Committees (FPCs) throughout South West Bengal have been established through the joint effort of forest department and village communities. These FPCs have been looking after a large tract of regenerating sal forests of the region.

This process was facilitated further when the 1988 forest policy was introduced. According to this policy, conserving soil and environment and meeting the subsistence requirements of the local people were made the prime objectives of forest management. Unlike in the earlier forest policies, commercial forestry was given low priority. The focus was shifted from 'commerce' to 'conservation' and satisfying the basic needs of the people and strengthening the tribal-forest linkages.

In pursuance of the above policy, the Government of India issued guidelines on 1st June, 1990 to all the states and Union Territories for adopting Joint Forest Management (JFM), in which people were encouraged to protect government forest lands and help in their natural regeneration. The guidelines ensured the people to enjoy usufructs and a share in the final harvest(s).

Two factors primarily responsible for adopting JFM are : (i) inability of forest departments to protect the forests from encroachers and illegal felling, and (ii) the pressure put by community and voluntary organisations on policy makers emphasizing the necessity of involving them in forest protection and management.

In fact, the second factor was in force since 1865 when the forests were brought under the state control. The movements for democratising the forest administration and providing people a say in the forest management were reflected through several movements during pre- and post-British era, the most popular being the Chipko movement. However, the JFM was not possible unless the forest departments realised that without the cooperation of the local people neither commercial forestry nor conservation forestry is possible. Besides, the fulfilment of interests of the two principal actors in JFM viz., forest department and village communities were seen as the key to success of JFM. The forest department's objective was to achieve certain ecological and economic benefits from the forest, and the village community looked upon the forest resources as a source of livelihood earning from government land. These realisations which were based on give and take principle led the State Forest Departments and Village Communities to come together and jointly manage the degraded forests of the country.

1.1 HISTORY

The scientific management of forest in British-ruled India started with the establishment of Imperial Forest Department in 1864 and Dr. Dietrich Brandis, a German Botanist was appointed as the first Inspector General of Forests.

In 1865, the Indian Forest Act was drafted, which for the first time brought almost all forest areas of the country under the state control. The draft regarded "any land covered with trees, brushwood, or jungle as Government Forest by notification." However, the Act did not encroach, affect or alter the existing rights of individuals or communities. The colonial government, however, found the 1865 Act inadequate, as the prevalence of customary rights hindered the imposition of total state control over forests. After a long debate, a new version of the Act was drafted in 1878, which after undergoing several amendments in 1890, 1901, 1918 and 1919 assumed its final and present form in 1927. The Indian Forest Act of 1927 embodies the basic structure and spirit of the 1878 Act and till today is the seminal forest law of India.

Three contending views were in the forefront in the forest laws debate. Two extreme positions were advocated by B. H. Baden-Powell, a civil servant and the Madras Revenue Board, and a moderate stand taken by Dr. Brandis, which tried to bridge the two polarities. Baden-Powell's position was that of total state control over the forests of India with the extinction of existing customary rights, norms and practices and the denial of access to the land and resources of the forest. In sharp contrast, the Madras Revenue Board rejected state intervention and argued that tribals and peasants must exercise sovereign rights over the forest land. However, Dr. Brandis opted for state ownership of forest lands duly recognising the customary rights and advocated for the need of a space whereby degraded forest situated at the periphery of villages could be managed and controlled by the local communities (Gadgil and Guha, 1992).

In addition to Dr. Brandis, several non-official bodies and individuals opposed most of the provisions of 1865 draft, and Acts of 1878 and 1927. Poona Sarvajanik Sabha, a nationalist organisation fighting for the rights of cultivators, opposed the Act in its draft stage, which laid excessive emphasis on state control of forests, and favoured a more democratic structure of forest management and a management strategy where the Indian villagers are taken into confidence by the Government. Jotiba Phule, the great social reformer, pioneer of the Non-Brahmin movement in western India and founder of Satya Shodak Samaj observed the impact of state forest management on village communities of the Deccan plateau and strongly wrote against the state control of forest in 1881 : "... livestock of poor farmers even do not have a place to breathe anywhere on the surface of the earth." These are the two examples out of numerous popular movements against state forestry in colonial India. Thus the history of forest management in India from 1878 Act to Chipko movement in 1973 is marked on one hand by an increasing tightening of the state control and commercialisation of forest produce by the government, and on the other, by a persistent endemic resistance by farmers, tribals and non-official bodies for whom the forest department was an unwelcome superstructure (Guha, 1993).

The 1878 Act was finally a Baden-Powellian model tempered by Brandis's moderation. It categorised three types of state ownership of forests as reserved, village and protected forests, incorporated a complicated method of settlement of rights and introduced penalties for violations against the Act. It did not speak of conservation except for prohibiting hunting and essentially perceived forests as the state's huge private property for extracting timber and generating revenue. In a single stroke the colonial government obliterated centuries-old customs and culture and erased the traditional livelihood patterns of millions of rural Indians (IGNOU, 1998a). In this way, the Act asserted state control over forests, dispossessed local communities and enabled the forest departments to commence its programme of commercial forestry.

1.2 EVOLUTION OF JFM

In recent years a growing movement for the democratisation of forest management in India is seen, which aims at maximising people's involvement and ensuring their participation in decision-making process. It also aims to make forest managers more accountable to the public. Critiques of commercial forestry gathered momentum with the debate around the draft forest bill of 1982 and as a result, significant changes have been noticed in both policies and practices of forest management in India.

People had realised that their economic and food security depends on their ability to regenerate and restore the degraded land and forests to their earlier condition.

In many cases, the initiative from the local communities was spontaneous and voluntary. In the process, several pockets of forests came up well. This grassroots level revolution was later transformed into JFM movement.

Recent experiences have shown that community participation in protection, improvement and sustainable use of forests is a better and more cost-effective method than policing. Community forestry, therefore, adds a human dimension to the whole range of planning, management and development of degraded forests.

In early 1970s, West Bengal foresters and people jointly evolved the plan for the participatory edifice. The Ministry of Environment and Forests, Government of India on June 1, 1990 issued a circular giving concrete shape to the concept of JFM and formalising the implementation of JFM in the country. This was in the form of guidelines for involving village communities in the rehabilitation of degraded forests and later, in protecting and managing the assets created and finally in equitably sharing the usufructs. So far 28 State Governments have adopted JFM and presently, (as of 1998) an estimated 63,000 Forest Protection Committees are managing over 16 million ha of forests. The credit for this achievement in a rather short time-span goes to the efforts of the village communities, non-governmental organisations and local forest officials.

1.3 CONCEPT OF JFM

The concept of JFM is of recent origin and it makes a significant departure from earlier thinking about forest management (see Box 1.1). It reflects the desire of the Government to seek people's involvement in protection, development and management of forests. It recognises that subsistence need of fuelwood, fodder, other non-timber forest produce and small timber required by people living in the vicinity of forests should be the first charge on forests. It also seeks to ensure environmental stability and maintenance of ecological balance which are vital for the sustenance of all life forms. JFM is the sharing of products, responsibilities, control and decision-making authority over forest lands and forest produce, between forest department and local communities, based on a formal agreement. The salient features of JFM are active participation and collaboration between communities and the forest officials in protecting and managing the forests.

JFM involves the sharing of three basic things :

- (i) sharing the concerns;
- (ii) sharing the responsibilities; and
- (iii) sharing the usufructs.

A clear understanding of JFM concept and techniques is mandatory for proper implementation and overall coordination of forestry activities. The willingness and participation of both the front-line staff of the forest department as well as the village communities cannot be meaningful till they understand, appreciate and internalise the new participatory approach of forest protection and management. It is with this background that a detailed knowledge about procedures of this collaborative mechanism of forest management is necessary for any agency involved in implementing JFM. Following are a few indicators where JFM has high potential (SPWD, 1992) :

- strong community forest management group
- high degree of social homogeneity within the community

- high degree of effective leadership
- easy access to rules and regulations
- relatively high degree of environmental concern
- high level of importance to economic and social/religious role of forests given by the community
- shared perception of acute resource scarcity
- presence of grassroots level government/forest officials as facilitators/initiators

Enabling JFM resolutions of different state governments have made an attempt to specify the kind of forest land where JFM initiatives would be applicable. In most of the cases it is the degraded forest land which has been brought under JFM.

Box 1.1 Fundamental shifts in forest management through JFM	
JFM envisages fundamental shifts :	
From	To
Centralised management	Decentralised management
Revenue orientation	Resource orientation
Enriching government exchequer	Benefits to forest-dependent people
Production motive	Sustainability
Single product management	Multiple product management
Target orientation	Process orientation
Government department	People's institution
Conflict	Collaboration
Large area management	Site-specific management
Large rigid working plans	Flexible microplans
Unilateral decision-making	Participatory decision-making
Controlling people	Facilitating people
Vegetation-based planning	Community-based planning
Indifference	Active participation

(after IGNOU, 1998b)

1.3.1 Government Resolutions on JFM

In order to provide a well-defined structure to JFM initiatives, the Government of India took a policy decision on 1st June, 1990 (No. 6-21/89-F.P.) favouring involvement of village communities and voluntary agencies for regeneration of degraded forest lands. This decision was based on the National Forest Policy, 1988, which envisages people's involvement in development and protection of forests. This was followed by release of JFM resolutions by different state governments (Box 1.2). These JFM resolutions provide the state-specific basic framework for people's participation in forest management. The types of JFM committees, their *modus operandi* and the benefits to the communities are explained in these resolutions. Such resolutions also provide a concrete basis for detailed executive instructions to the implementing staff of the forest department.

1. Andhra Pradesh	2. Arunachal Pradesh	3. Assam
4. Bihar	5. Chhatisgarh	6. Gujarat
7. Goa	8. Haryana	9. Himachal Pradesh
10. Jammu and Kashmir	11. Jharkhand	12. Karnataka
13. Kerala	14. Madhya Pradesh	15. Maharashtra
16. Manipur	17. Meghalaya	18. Mizoram
19. Nagaland	20. Orissa	21. Punjab
22. Rajasthan	23. Sikkim	24. Tamilnadu
25. Tripura	26. Uttaranchal	27. Uttar Pradesh
28. West Bengal		

1.3.2 Implementation of JFM

Following are the important steps for implementing JFM, which are listed under two broad phases viz., preparatory phase and implementation phase (after IGNOU, 1998b) :

Preparatory Phase

- environment creation
- team building
- vision sharing
- JFM-oriented Human Resource Development

Implementation Phase

- village level institution building
- microplanning
- resource mobilisation

- field operations
 - forestry activities
 - village asset creation activities
- usufruct sharing
- identification of JFM priority areas
- administrative arrangements to address the needs of JFM
- human resource development for JFM
- resource mobilisation for JFM
- conflict resolution mechanism for JFM
- mechanism of ensuring participation of women, landless and assetless
- association with NGOs
- arrangement for creation of income generating opportunities
- linkages of JFM with Panchayati Raj institutions.

1.4 JFM IN NORTH-EAST

In north-east India, except in Tripura and Assam plains, all other State Forest Departments have very little forest land under their control. Depending upon the state, 68–90% of the forest lands are owned by various communities, individual families and other traditional institutions like Syiemships, Village Durbars, Village Development Councils etc. Thus, one of the most important factors essential for JFM, i.e., bringing the forest lands under the people's control does not have any relevance in the context of most north-eastern states. However, effective management and sustainable development of these community-owned forests have not been possible in the past and therefore, most of such forests are now degraded and need immediate external management intervention. In order to manage such forests for the ecological and economic benefits of the region, it is essential that the scientific forestry should be brought into these non-government forests with the help of the local forest departments. This necessitates the implementation of JFM in a modified way where the forest land owners would seek the scientific assistance from the forest department and work under suitable JFM framework.

Fortunately, partnership-based forest management systems involving government and traditional village chiefs, tried earlier in the north-eastern region have been successful. Namsang-Borduria trust fund, village forest reserves and anchal forest reserves in Arunachal Pradesh, and industry – forest department – farmer linkages in many north-eastern states are successful examples of such partnership-based forest management systems (Box 1.3). Considering the success rate of above experiments, it can be expected that the region has high potential for JFM if the framework and the models are worked out properly taking various local and tribe-specific socio-economic factors into consideration.

Box 1.3 Successful partnership-based forest management system in Arunachal Pradesh

Long before JFM concept as per Arabari model was advocated, a system of partnership in forest management was conceived, developed and practised in Arunachal Pradesh. The chiefs of Nocte tribe were unable to manage their forests due to lack of skill and requisite resources. The chiefs of Borduria and Namsang villages approached the government to manage their forests on a partnership basis and accordingly, agreement deeds were signed between the government and the respective chiefs in 1948. Some of the important provisions of the agreement were : (i) the forests were to be declared as village forests under the provisions of chapter III of Assam Forests Regulation 1891; (ii) 25% of the net revenue after deduction of all expenses would be retained by the government and the balance 75% would be payable to the land owners; (iii) capital expenses incurred by the government would be recovered at the rate of 10% per annum; (iv) by mutual consultation, it was decided later that the maximum amount payable to the chiefs will be restricted to $\frac{1}{3}$ rd of the original share of the chiefs limited to Rs. 1 lakh and the balance would go to a trust fund constituted for the development and welfare of the subjects (people). Rules were framed by the government for administration and management of the trust fund. Development Committees constituted under the rules include people's representatives as well as representatives from various government departments. Welfare activities undertaken include construction of buildings for schools and hospitals and their management and providing drinking water facilities. Namsang village forests (108.88 sq. km) and Borduria village forests (38.5 sq. km) were declared as village reserved forests under Assam Forest Regulation in 1962. The forests have been scientifically managed as per the working plans prepared for such purpose. Estimated annual timber yield from these forests is about 9500 cubic m and generates a net revenue of about Rs. 2 crore per annum. The Namsang-Borduria trust fund is now supporting two educational institutions and providing quality education to boys and girls in Tirap district. A referral hospital and a nursing school are also under construction. The trust fund has a corpus of more than Rs. 10 crore.

(after Patnaik et al., 1997)

Tripura was the first state in north-eastern region to implement JFM to regenerate its degraded reserve forests (Tiwari et al., 2000). The enabling JFM resolution was notified on 20.12.91 and a number of successful sites are now found all over the state (Box 1.4). Nagaland, Arunachal Pradesh, Mizoram, and Assam are the other five states which have notified JFM resolutions and the implementation of JFM has already been started (Barik, 1999). Recently, Meghalaya has also notified the JFM resolution and is in the process of implementing JFM.

Box 1.4 JFM success stories from Tripura

In Tripura, till date, more than 15000 ha of forests that include both plantation as well as natural forest have been brought under JFM. At least 4701 beneficiaries, who are the members of 71 Forest Protection and Regeneration Committees (FPRC) are looking after these forest areas spread throughout the state. One of the pilot JFM project in Melaghar area of West Tripura district has been a tremendous success. The land was a completely degraded forest with sal stumps here and there before implementing JFM in 1992-93. The initiatives taken by the local villagers, an NGO and the local forest officials resulted in rejuvenation of sal forest within a period of 3-4 years only. Today, the forest has more than 40 species and provides shelter to a variety of wild animals including deers. A comparative study conducted by the authors reveals that the number of species in the JFM managed forest was 5 times greater than the adjacent unprotected forest stand. Besides fuel wood, important NTFPs being extracted from the JFM managed forests are, bamboo, medicinal plants, vegetables including tubers, mushrooms and ferns, broomgrass and fodder. The JFM has been institutionalised through formation of an FPRC, which has an Executive Council (EC) consisting of representatives from the Forest Department, an NGO and villagers including a representative of women. The EC regulates product extraction by issuing tickets to the beneficiaries and ensures equity by providing more opportunities to work and collect various forest products for their bonafide use to the poorer section of the society. The current level of product extraction is less than 10% of the mean annual increment and hence, can be considered as sustainable. Some other successful JFM sites in Tripura can be seen at Hiracherra in Kailashar forest division, Jirampara in Manu forest division, Kyla in Udaipur forest division and a number of plots adjoining Trishna wildlife sanctuary in South Tripura district.



A regenerating sal forest managed under JFM near Kathalia, South Tripura



Fencing provided by the DRDA to an old sal plantation plot managed under JFM at Kathalia, South Tripura

1.5 REFERENCES

- Barik, S. K. 1999. Joint Forest Management in North-East India. *Grassroots options*. 3 : 41-42.
- Gadgil, M. and Guha, R. 1992. *This Fissured land : An ecological history of India*. Oxford University Press, Delhi.
- Guha, R. 1993. *Early Environmentalists of India*. SPWD Foundation Day Lecture. Society for Promotion of Wastelands Development, New Delhi.
- IGNOU 1998a. *Participatory Forest Management:: Forester's View of Forest Management* (PFM-2). Indira Gandhi National Open University, New Delhi.
- IGNOU 1998b. *Participatory Forest Management : Implications of Joint Forest Management* (PFM-4). Indira Gandhi National Open University, New Delhi.
- Malhotra, K. C. 1995. Biodiversity conservation and community development in south West Bengal. In : *Community Development and Conservation of Forest Biodiversity through Community Forestry*. (eds. H. Wood, M. Melissa and K. Warner). RECOFTC Report # 12. Regional Community Forestry Training Centre, Kasetsart University, Bangkok. pp. 36--53.
- Patnaik, S. S., Barik, S. K. and Shukla, G. P. 1997. Arunachal Pradesh Anchal Forest Reserve Act 1975, Village Forest Reserve Act 1981 and JFM Resolution 1997 : A conceptual change from partnership management of high forests to participatory forest management. *5th Asia Forest Network Meeting*, Surajkund, India.
- SPWD 1992. *Joint Forest Management : Concepts and Opportunities. Proceedings of the National Workshop at Surajkund*. Society for Promotion of Wastelands Development, New Delhi.
- Tiwari, B. K., Tripathi, R. S. and Barik, S. K. 2000. Ecological and Economic Assessment of Joint Forest Management Programme in Tripura. In : *Joint Forest Management and Community Forestry in India : An Ecological and Institutional Assessment*. (eds. N. H. Ravindranath, K. S. Murali and K. C. Malhotra). Oxford IBH, New Delhi. pp. 233–248. ●

*A JFM plantation plot at
Boxanagar, Tripura.
Members of 'Green Brigade'
(JFM committee members)
are also seen in the picture.*



*A sal forest
(Natural Regeneration plot)
being protected by
the JFM committee
in South Tripura district.*

