

## IDENTIFYING INDICATORS FOR SUCCESSFUL IMPLEMENTATION OF JOINT FOREST MANAGEMENT IN ARUNACHAL PRADESH

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### Introduction

Arunachal Pradesh is the largest State in the North-Eastern part of the country both in terms of area and forest cover. The State has 81.90 % of its geographical area under forest cover. The actual forest area is 68,602 km<sup>2</sup>, out of which 54,155 km<sup>2</sup> is dense forest and 14,447 km<sup>2</sup> is open forest, respectively (Anon., 1997). The extent of reserved forest is 15,321 km<sup>2</sup> while the major area i.e. 36,211 km<sup>2</sup> is Unclassed State Forest (Anon., 1999). Substantial portion of this Unclassed State Forests (USFs) which account for 62% of the total forest area of the State have turned unproductive, characterised by open and degraded forests. Considerable deforestation has taken place in these areas due to little control of the Forest Department on one hand and the unclear and unsettled ownership rights of the village communities over such land on the other. There is no demarcation of these areas as no cadastral survey has been done so far in the State. The people have customary, usufructury and proprietary rights over the resources in USFs and this may lead into conflicts while implementing JFM in these area (Pant, 1998).

### Status of JFM

The State Government passed JFM Resolution in the year 1997 with a view to improve the condition of USF areas with people's participation. The resolution differs from other States in that it is applicable only on USF lands which are close to habitations and are liable to degradation due to heavy biotic pressure. The resolution also provides that the beneficiaries acting as the members of the Forest Protection Committee shall be allowed as a measure of incentive, 25 per cent of the benefits. Besides this, 50% of the gross revenues shall go to Government as revenue and remaining 25% shall be utilised as development fund. The Department has already made a beginning with few projects supported by National Afforestation and Ecodevelopment Board under its IAEP and AOFF schemes. The details of these projects are mentioned in Table 1.

The areas as shown against these projects indicate the area covered under afforestation by artificial plantation or by assisted natural regeneration. The confidence of local people is won by various entry point activities for example in Dadang

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Table 1

*Status of Joint Forest Management Programmes in Arunachal Pradesh*

Scheme	District	Village	Population	Altitude (m)	No. of registered members	Area under VFMC (ha)
CSS-IAEP <sup>1</sup> Towang Project	Towang	Yusum	215	2,750	40	500
CSS-IAEP Sange-Sella Project	West Kameng	Birpur Rupa	451	1,500	124	1,280
CSS-IAEP Topo-Tarek Project	Lower Subansiri	Toon	65	1,400	10	250
-do-	-do-	Loko and Lumri	346	1,400	61	750
CSS-IAEP Yanman Project	Changlang	Yanman		1,050	92	690
CSS-IAEP Pankhaw Project	Lohit	Pankhaw		200	22	355
CSS-AOFF <sup>2</sup> Kicho-Pipi Project	Lower Subansiri	Kicho	130	1,500	20	200
CSS-AOFF Dadang Project	Papum Pare	Sango Apop-Sango & Sangrina		900		820
CSS-AOFF	West Kameng	Rupa		1,500		280

1 = Integrated Afforestation and Eco-development Project (IAEP)

2 = Area-Oriented Fuelwood and Fodder (AOFF) Project

Project, Department constructed porter track, water tanks, repaired school building and also undertook some soil conservation works to win the people's confidence.

#### Problems and constraints in implementing JFM

Some of the problems which are being

faced during the implementation of these projects are mentioned below :

- *Large area / low population* : There are plenty of resources i.e. vast forest area but very low human population to implement the scheme effectively. For example, in Tapo an area of 250 ha is being managed by a 10 member-

VFMC. The total population of the village is 65 persons only, which may also include a good number of children as well as old people. As a contrast in West Bengal which evolved the concept of JFM in India an area of 5,21,118 ha has been covered under JFM by a total of 3,74,322 families (Palit, 1997). If we consider 5 persons per family, it means 18,71,610 people are involved in JFM for the protection of 5,21,118 ha. Therefore, a concrete decision is to be taken about the extent of area vis-a-vis the number of VFMC members and their capability of effective management.

- *Peoples' perceptions* : It is very difficult to convince the people about sustainable management and sharing of usufructuary benefits under JFM schemes. Due to unsettled ownership, people consider Unclassed forests as their own property and due to the easy availability of fuelwood, small timber and other forest produce they do not consider it as a benefit of the scheme and demand direct benefits in terms of cash. The common question is that why or whom are we maintaining these resources for?
- *Irregular flow of funds* : The flow of fund is improper. The funds are released by the Government in installments and due to untimely release of funds it is not possible to undertake various activities of the project in scheduled time. Due to this, the people also question the credibility of the Department. It may be mentioned here that due to the heavy rainfall in North-Eastern States, weed growth is very fast and a minimum of 4 weedings are required in the first year itself for the successful establishment of seedlings. It was a general observation during a training programme that the plantation norms have been prepared as per the climatic conditions of less rainfall bearing States such as Rajasthan, which are not suitable to North-Eastern States.
- *Lack of incentives to executive committee chairman* : This is also a major problem. The chairman always threatens to resign from the committee because he feels that in spite of being the chairman he is not getting any direct benefit from the scheme. It is very difficult to convince him and if he resigns, it may give a wrong signal to other members, therefore, some sort of honorarium must be kept for him.
- *Animal damage* : Mithun (*Bos frontalis*), a semi-domestic animal, is the main culprit for the failure of plantations. It is the most important animal for local people, which remains in the wild only. The people catch it for sacrifice at the time of festivals, ceremonies or sell it when they need money. It is a voracious eater and causes extensive damage by browsing and trampling of seedlings. The people are yet to adopt the practice of stall feeding cattle, therefore, there is a strong demand for the fencing of JFM sites strong enough to resist Mithun and other animals.
- *Fear of land grabbing* : The legal status of USF lands is not clear. The Government as well as people both consider it as their land. Practically, the land is under the control of community only. There is a common fear in the people that if the area is

taken under JFM project, the government may take the land.

- *Fire incidence* : Since most of the JFM sites were previously under jhum-cultivation, fire causes lot of damage.
- *Nature of JFM areas* : As per the JFM resolution the scheme is to be implemented in degraded USF areas. However, there are instances that despite the presence of the villages the forests are not degraded because the villagers are conservation minded, therefore, the benefits of JFM should go to them also.
- *Role of NGOs* : Currently there is no NGO working in the field of JFM which can act as an interface between people and government and create an awareness among people for its effective extension.

Some of the constraints, which are being faced in the implementation of JFM, are mentioned in Table 2.

### Positive indicators of JFM

Forests constitute an integral part of the life and culture of people in Arunachal. Since aeons people have been living in close harmony with nature. With the first ray of the sun they can be seen in forests busy in their jhum lands and while coming back they collect all sorts of forest produce to fulfil their day to day requirements. However, the degraded forests near the habitations are now unable to meet up people's needs and they are facing the problem of drinking water, fuelwood, small timber and Bamboo for house construction and repair. Moreover, they have to travel long distances and spend more time to

collect these items. This has led to realising the need of sustainable management of forests and many instances are available now where local people have formed native committees to control the illegal extraction of forest produce and showed keen interest in plantation of trees like Toko, Agar, Hollock and fruit trees.

The village institutions are very strong and most of the disputes are settled at village-level itself. It has also happened many times that the courts have referred back the criminal cases to these institutions for settlement, therefore, this institution can be effectively utilized for the success of JFM in North-Eastern States.

### Conclusion

According to Luthra (1996) the thrust of JFM should be in the zone peripheral to the forest within 5 to 10 km where people are still dependent on the resource but find it difficult to obtain. The collection of fuelwood by unemployed or under-employed is a socio-economic problem which cannot be sorted out in isolation. Providing alternative employment and new skills should form a part of any such programme.

JFM cannot be implemented in isolation. Since it is a developmental activity, success depends on a number of factors other than forestry; an integrated development approach is necessary. For example, in most of the areas people are more interested in giving priorities to roads, bridges, schools, medicines, education and drinking water and if the Department is able to take initiative in getting these items sanctioned from district administration or concerned department, the confidence of the people can be won to ensure their active participation. The State economy revolves

**Table 2***Probable constraints for implementing JFM in Arunachal Pradesh*

Constraints	Status	Issues
Legal	<ul style="list-style-type: none"> <li>- Major forest area underunclassified State forest whose ownership is unsettled</li> <li>- Lack of clear land use policy</li> <li>- Effective customary laws</li> </ul>	<ul style="list-style-type: none"> <li>- Land ownership issues may result in greater conflict between government and villagers</li> </ul>
Socio-cultural	<ul style="list-style-type: none"> <li>- High dependency of people on forest resources for fire-wood fodder, shelter, small scale industries, agriculture (shifting cultivation), festivals, rituals, hunting, medicines, vegetables, bamboo, cane and other NTFPs,</li> <li>- High faith in own customs</li> <li>- Strong village institutions</li> </ul>	<ul style="list-style-type: none"> <li>- Poverty and illiteracy</li> <li>- Absence of proper marketing infrastructure</li> <li>- Forest fires due to shifting cultivation</li> <li>- Degradation due to uncontrolled exploitation,</li> <li>- Loss of biodiversity.</li> <li>- Communication gap,</li> <li>- Difficult to convince</li> </ul>
Economic	<ul style="list-style-type: none"> <li>- Indirect benefits for self-use of forest resources</li> <li>- Direct benefits through selling of timber, firewood, bamboo shoots, insects, semi-domestic animal local products (Mithun), silk worm, fruits, medicines, handicrafts, etc. from forest resources</li> </ul>	<ul style="list-style-type: none"> <li>- Labour intensive</li> <li>- Low economic status</li> <li>- Low market demand at local level</li> <li>- Lack of value addition to</li> </ul>
Ecological/ Environmental	<ul style="list-style-type: none"> <li>- Inaccessibility of the areas due to hilly terrain and heavy rainfall,</li> <li>- Lack of transportation specially during rainy season,</li> <li>- Deforestation,</li> <li>- Landslides,</li> <li>- Soil erosion and floods</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental instability</li> <li>- Loss of forest area, loss of wildlife and biodiversity,</li> <li>- Loss of top soil and degradation of watershed</li> <li>- Recurrence of flood.</li> </ul>

### GANGA VILLAGE : PRA CASE STUDY

The result of a PRA done in a village near the State capital Itanagar indicates that the top priority of the people from the surrounding forest is food, shelter and fuelwood. The positive indicator is that the people have now started realising the importance of forests and most of them are coming forward for planting of all sorts of trees in a planned manner such as timber and fuelwood species, NTFPs (Toko, Cane, Bamboo) and medicinal plants. The details of PRA are mentioned below :

Location	:	Five km away from the State capital, Itanagar
Tribe	:	Nyishi
Area	:	2.60 km <sup>2</sup>
Population	:	500 (approximately)
Topography	:	Gentle slope
Religion	:	Christian; Donyi-Polo
Household	:	100 (approx.)
School	:	1 (Middle school)
Health Center	:	not available
Post Office	:	not available
Telephone/Electricity	:	Available
Occupation	:	Agriculture, Govt. services, contracts and private jobs
Land use	:	10% wet rice cultivation (single crop) 40% jhum-cultivation area 20% horticulture (Pineapple, Banana) 10% forests 10% village area (community land) 10% other area, houses, school, playgrounds
Soil	:	Sandy loam or clayey with boulders
Vegetation	:	Mostly planted trees in homestead gardens such as coconut, Agar, Banana, Mangium, Gora Neem, Guava, Bamboo, Papaya.
Resource/land use map	:	Cent per cent dependency on forests for Bamboo, Canes and other forest produce
Seasonal calendar	:	Resource supply is affected due to extreme Environmental conditions.
Wealth ranking	:	20 families very rich have pucca houses, vehicles, telephone, 42 families have motor-cycles, CGI sheet houses, wet-rice cultivation area 138 families poor with kuccha house, few have jhum-land and some are even landless.
Matrix ranking	:	Vegetables, rice, bamboo, maize, firewood, timber, Cane and vegetables (in descending order)
Major problems	:	Drinking water, bamboo for house construction/repair, of the houses, fencing of agricultural fields, shortage of fuelwood.

around forest and forest-based products. It is, therefore, essential that forests be managed in such a way that they fulfil the aspirations and bonafide needs of people without jeopardizing the environmental consideration. The constitution of District Forest Development Agencies (like DRDA) in forest rich areas can go a long way in the upliftment of people as well as in the sustainable management and conservation of the remaining few patches of pristine tropical forests in this part of the country.

The need of the hour is to introduce land tenure system and preparation of land records. However, this is not an easy task and would require great political will and efforts but at the same time this is the main reason of continuous degradation of forests in the State. It may be mentioned here that in town areas the people themselves are coming forward for issuing of land possession certificates for getting loans and subsidies from banks and government, respectively, and at the same time they have a fear of encroachment of their land due to high influx of people to the State

capital. The poor are the great sufferers as due to requirement of money they are forced to sell their land to the neorich and move further inside forests and the cycle goes on leading to the degradation of forests.

Simultaneously there is an immediate need for proper education and awareness of people through extension programme, expansion of irrigation, communication and marketing facilities, sensitization of jhumias to adopt improved agricultural practices, conservation measures and crop pattern developed by ICAR as well as agroforestry and horticultural programme wherever necessary and possible to uplift their economic status and thereby reducing their dependence on forests. The people are not against conservation and protection of forests but have no other means of survival. The Department can play a major role by developing suitable models of sustainable collection, cultivation, value addition and marketing of various NTFPs. There is also a need for dedicated NGOs who can influence local people in the implementation of JFM as seen in Tripura.

### SUMMARY

Arunachal Pradesh joined the JFM stream in October, 1997 by a resolution being passed by the State Government. At present about 10 projects are being implemented under this scheme in different parts of the State. However, looking at the vast geographical area, unsettled status of land, low human population, community ownership and customary laws, the whole concept requires a review specially in North-Eastern States. In the present paper an effort has been made to analyse the problems and prospects of JFM implementation in Arunachal Pradesh.

अरुणाचल प्रदेश में संयुक्त वन प्रबन्ध के क्रियान्वयन की सफलता के निर्देशकों को पहचानना

उमा मेल्कानिया व एन.एस. बिष्ट

सारांश

अरुणाचल प्रदेश 1997 में राज्य सरकार द्वारा पारित किए गए एक प्रस्ताव से संयुक्त वन प्रबन्ध की धारा में जुड़ा। इस समय राज्य के विभिन्न भागों में लगभग 10 परियोजनाएँ इस योजना में क्रियान्वित की जा रही हैं। तथापि इस राज्य के विस्तृत क्षेत्र, भूमि की अनिर्धारित स्थिति, कम जनसंख्या, सामुदायिक भूस्वामित्व और पारम्परिक कानूनों को देखते हुए इस पूरे विचार की ही विशेषतः उत्तर पूर्वी राज्यों में समीक्षा किए जाने की आवश्यकता है। प्रस्तुत अभिपत्र में अरुणाचल प्रदेश में संयुक्त वन प्रबन्ध को क्रियान्वित करने से संबंधित समस्याओं और संभावनाओं का विश्लेषण करने का प्रयास किया गया है।

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### Snippets

The twenty-first century challenge is to facilitate a devolution of greater authority to forest-based communities while minimizing conflicts, and to support new partnerships among communities, government and the private sector to ensure the meeting of community needs, forest resource conservation and sustainable use. Clarifying forest use rights and responsibilities and creating adaptive policies and programs that allow for intensified access controls can lead to more sustainable forest management. This requires appropriate institutional arrangements.

**- M. Poffenberger**  
**"Communities and Forest Management"**  
**A Report of the IUCN Working Group, 1996**