

Joint Forest Management and Tribal Development in Andhra Pradesh : A Strategy in Paradigm Shift

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KEY WORDS Strategy. Paradigm. Symbiotic Relations. Totemism. Alienation. Participatory Development.

ABSTRACT The forest have played a prominent role in the development of Indian Civilisation, in general and tribal culture in particular. The symbiotic relationship is inter-twined so intricately that existence and development of one depends on the other. The tribals have been mostly inhabiting the forest clad hills and mountains and degree of dependency on forests resources is largely determined as per the economic stage and skills achieved by individual tribal communities living in that particular area. Before introduction of the Forest Conservation Acts, the tribal communities have been protecting the forest as a common property resources. But the gradual alienation of the tribals from the forest and its management, resulting in degradation and disappearance of the forests. In order to arrest the large scale deterioration of the forest and to improve the ecological security, a movement towards active participation of local tribals in preservation and regeneration has to be launched. Joint Forest Management is the right approach in protection and management of dwindling forest.

Out of total tribal population of 68.4 millions in India, Andhra Pradesh has 4.2 millions, constituting 6.14% total tribal population. The hills and forests of Eastern Ghats, Nallamalai and the Godavari gorges have been the traditional habitat of about 60% of the total tribal population in the state.

The traditional area of habitation of tribes which is called Scheduled Area spreads over 31,485 sq. km and this area constitute 11% to the total geographical area of the State. Of the rest, some are either living in small pockets of relatively less tribal concentration in the proximity of the forest tracts, the remaining are living in symbiosis with the other rural population in the villages of the state. The scheduled tribe communities numbering 33 in Andhra Pradesh present a spectacle of fascinating diversity, socially, culturally and

economically. A large section of Chenchus are in transition from food gathering and hunting stage. Even now a majority of tribes in the forest and hilly tracts mainly depend upon forests. The Khond, Konda Reddy, Porja, Gadaba are mainly engaged in *podu* (shifting) cultivation. Savaras practise shifting as well as terrace cultivation. Many among the Goudu and Lambada tribes are still engaged in cattle rearing. Yerukulas and Valmiki are engaged in a myriad of professions ranging from pig rearing, basket making to petty trade.

The tribes of Andhra Pradesh can be broadly classified into the following categories based on their pursuits of eking out their livelihood.

- 1) Hunter-gatherers, 2) Shifting Cultivators, 3) Pastoralists, 4) Settled Cultivators, 5) Artisans, 6) Industrial and mining workers

The hunter-gatherers and shifting cultivators mainly depend upon forest resources for their livelihood even though other hill tribes also fully or partly derive their sustenance from forests.

TRIBALS AND THEIR SYMBIOTIC RELATIONSHIP WITH FORESTS

The forests have played prominent role in development of Indian Civilization in general and tribal culture in particular. The forest clad mountains and hills are the original habitat of hundreds of tribal communities of our country. "To a vast number of tribal people, the forest is their well loved home, their livelihood, their very existence" (Dhebar Commission Report, 1961, p. 125). Generally, for-

ests and tribals are inseparable and existence and development of one depends on the other. They draw their sustenance largely from the forest which provides them with food, timber, medicinal plants, material for construction of houses etc., Their belief systems, social, economic and ritual activities are intricately interwoven around forests and hills. Tribals and forests are ecologically and economically inseparable. They have co-exist in a mutually reinforcing relationship. (Report of the Committee on Forestry Programmes for Alleviation of Poverty, 1984, p.12). This symbiotic relationship is held in great esteem by the tribals and they regard various species of forest as their kith and kin (Totemism). Stephen Fuchs mentioned about prevalence of 150 varieties of animals and 87 plant species as totems to Mundas of Chota Nagpur area of Bihar (Fuchs, S. 1973).

SOCIAL AND CULTURAL RELATIONSHIP

The social organisation of the tribals is based on certain totemic clans. The tribal society is divided into different clans and the

type of extension of kinship relation to flora and fauna of the nature is unique to the tribals. The following totemic clans are found among the tribes of Visakhapatnam District.

S. No.	Clan	Totemic animal
1.	Korra	Sun
2.	Ontala	Snake
3.	Killo	Tiger
4.	Gollori	Monkey
5.	Kimude	Bear
6.	Matya	Fish
7.	Chelli	Goat

The social organisation of Gond, Kolam, Pardhan and Thoti tribes of Adilabad district is divided into four exogamous phratries and each phratry is further divided into exogamous totemic clans. It is significant to note that each phratry / clan of Gond and Kolam tribe is having two totemic species i.e., one plant and one animal (Mohan Rao, 1990, p. 103). The details are as follows (see table):

Similar belief systems and practices are noticed among other tribal groups of Andhra Pradesh. This type of distinct and unique belief systems, activities and behaviour patterns not only contributed to preservation, protection of ecology, forest, but also facilitated for

S. No.	Phratry	Totemic tree	Totemic animal
1.	Yedu Dayyal Kher (Seven Divine brother group)	Maredu (Belfruit tree)	Porcupine
2.	Aru Dayyal Kher (Six Divine brother group)	Ippa Tree (Madhu-ka-Longifolia)	Tiger
3.	Idu Dayyal Kher (Five Divine Brother Group)	Andugu Tree (Strychnos potatorum)	A kind of fowl whose feathers are opposite in direction.
4.	Nali Dayyal Kher (Four Divine brother group)	Deevari teega (a kind of creeper), Jalli tree (<i>Archis fruticosa</i>)	Crocodile, Tortoise, Kavve (a kind of bird).

members of each clan claim mythical affinity with animate and inanimate objects and species available in forest. They claim their descent from animals, plants, birds etc., The killing or eating the flesh of totemic animals or birds and cutting trees is a taboo. This

harmonious relations with the habitat in which they are inhabiting. Generally human societies have kinship with other individuals or societies but tribal societies have another dimension of kinship i.e., relationship with animals and plant species.

ECONOMIC RELATIONSHIP WITH FORESTS

Since the tribal habitat is surrounded by forests, they are wholly or partly dependent on the forests to eke out their livelihood. Forests provide numerous edible roots, tubers, fruits, leaves etc., throughout the year besides various items of Non Timber Forest Produce (NTFP) like tamarind, honey, gum, myrobalam, mohwa flowers, beedi leaves, adda leaves, broomsticks, nuxvomica, sheekakai, soapnuts, marking nuts, cleaning nuts, etc., to cater to their consumption as well as commercial needs. At present nearly 40 items of NTFP are being collected by tribals and sold to Girijan Cooperative Corporation, a State Government undertaking of Andhra Pradesh. Availability of these items varies from area to area. All the tribals including men, women and children participate in the collection of varieties of forest produce to supplement their meagre income.

The Girijan Cooperative Corporation (GCC) was established with main objective to purchase Non Timber Forest Produce from tribals at reasonable prices and to supply essential domestic requirements at fair price in remote and interior tribal areas through its good network of Domestic Requirement Depots. This Corporation got monopoly rights to purchase nearly 40 items of NTFP, as per the provisions of A.P. (Andhra Pradesh) Scheduled Areas Minor Forest, Produce (Regulation of Trade) Regulation, 1979. This Corporation has taken up several activities to impart skills and knowledge to exploit various items to NTFP in scientific and sustainable way so as to improve the quality of product and to protect the plants from extinction. This organisation is making serious efforts through its R & D Unit not only to discover the multiple uses of various forest produce but also identifying various other items of NTFP and herbal medicines which are not collected and processed by local tribals earlier.

Recently GCC through its R & D effort achieved a scientific break through on isolation of a biological substance called Biofloculent from cleaning nut (*Strycharos potatorum* seeds) largely gathered by tribals from forest. This substance has flocculating nature with metal binding property. There is vast scope for further identification of large number of NTFP and diversification and commercialisation of their utility. GCC has increased the rates three to five times for most of the NTFP collected by tribals when compared to rates during the year 1988-89. The price of good quality gum increased from Rs. 20/- per kg in the year 1988-89 to Rs. 90/- during the year 1993-94. Similarly nuxvomica cleaning nut rates increased from Rs. 2/- per kg to Rs. 10/- and Rs. 8/- per kg, respectively during the year 1993-94. In view of growing importance of several NTFP in the economy of tribals, these plant species have to be mostly taken up in degraded forest lands allotted under Joint Forest Management.

While the tribal groups like Chenchus of Nallamalai Forest entirely depending on gathering of forest produce to eke out their livelihood, others are partially depending on the forest produce to whom Agriculture, either shifting or settled cultivation, is the main occupation. The tribals engaged in food gathering activity have devised a system of sharing the forest resources by demarcation of areas for collection of varieties of forest produce by acquiring village-wise and clan-wise traditional rights to avoid disputes among them. Another important thing is while exploiting the forest resources, they take care to ensure regeneration of the forest species. The tribal societies are egalitarian and this type of behaviour is found in a wide variety of social, economic and ecological settings.

Forests also provide varieties of medicinal plants, herbs etc., to cater to their health needs. The local medicine man identifies and

collects these medicinal plants and herbs and administers the herbal medicine. It is significant to note that not only local tribals have immense faith in efficacy of local herbal medicines but also non-tribals from different parts of the state go to tribal herbal medicine men and take the herbal medicines. There are hundreds of valuable medicinal plants which have to be identified and the herbal pharmacopoeia have to be further developed. Research and development have to be taken also on indigenous health practices in order to analyse the scientific value of various herbal medicines.

RELIGIOUS BELIEF

The tribals believe that their gods and goddesses take abode in forests and hence they consider hills and forests as their sacred complexes. They observe annual rituals and ceremonies in honour of these forest gods and goddesses. They believe that if they do not propitiate forest gods and goddesses properly, they will not be protected from wild animals or snakes while moving in the forests. The following trees are considered sacred to tribals in tribal areas of Andhra Pradesh.

1. Ippa (*Madhuka longifolia*)
2. Jammi (*Prosopis cinoraria*)
3. Konda Juvvi (*Ficus tuberculata*)
4. Marri (*Ficus bengholensis*)
5. Ravi (*Ficus religiosa*)
6. Dondera tree (*Butin frondosa*)
7. Limetree (*Melia azadirachta*)
8. Neem (*Margosa indica*)
9. Maredu (*Aeglemermetos*)
10. Neredu (*Myrtus cyneinum*)
11. Jalli (*Archis fucicosa*)
12. Andugugu (*Strychnos potatorum*)

Cutting of these trees and even using the wood of these trees other than religious purpose are considered to be taboo. The shrines of various deities are found under these trees.

Another unique tradition among the tribals

is that they do not eat new fruits, food grains etc., either cultivated or available in the forest unless they are ritually offered to their gods and goddesses. They believe that violation of this taboo results in health hazards or attacks of wild animals when they go to the forest. Due to this type of fear, even thieves do not venture to steal the produce or fruits unless they are ceremonially offered to the deities. This type of taboos connected with consumption of Agricultural or forest produce contribute for increased production and proper distribution. The rituals and the ceremonies connected with first eating of new good grains or fruits are organised in such a way when these crops/fruits attain the stage of maturity and ready for consumption. These taboos not only contribute for higher production but also sustainability and orderly utilisation and consumption.

It is revealing fact that out of the total forest area of 58,35,829 ha approximately 68.62% of the forest area is found in the Scheduled Districts and Nallamalai Hills mainly inhabited by Scheduled Tribes of Andhra Pradesh. This also indicates that tribals are protectors of the forests and active participation of the tribals in protection and regeneration of forests will further ensure greater augmentation of common property resources. The details of extent of forest area, district-wise are furnished in the Annexure - I.

FOREST POLICIES - PAST, PRESENT AND RECOMMENDATIONS

ALIENATION OF FOREST DWELLERS

The tribals have symbiotic relationship with the forest and any development activity should not disrupt this relationship and this concern was echoed in the reports of several committees, commissions and working groups constituted by Government of India. The traditional rights of tribals on forests are

abridged rapidly from one Forest Policy to another. "This progressive diminution of rights and the consequent loss of control over their natural resources evoked a sharp reaction from the forest communities. From the early days of Forest Administration, there have been revolts in different tribal areas centered around the question of forests. These revolts which attempted to restore the 'golden past' where the tribal roamed freely in his forest habitat were swiftly crushed by colonial state. Nevertheless they recurred through out the period in almost all tribal areas where forests have always been the citadel of social movements against successive Government' (Report of the Committee on Forestry Programmes for Alleviation of Poverty p. 6).

The First National Forest Policy dates back to 1894. In the 1894 forest policy statement, the rights of the tribals over forests were curtailed in favour of "Public Benefit." The forest policy was revised in 1952 since the pressure of population on forest had enormously increased. The 1952 forest policy changed character of the equation by converting the "rights" into "concessions".

The Scheduled Areas and the Scheduled Tribes Commission, (Dhebar Commission), 1961 commented that "the traditional rights of tribals were no longer recognised as rights. In 1894 they became "rights and privileges" and in 1952 they became "rights and concessions". Now they are being regarded as "Concessions". The said commission urged for basic change in the forest policy so that the tribal communities can regain the resource base and strengthen the earlier nexus between economy and forest.

The National Commission on Agriculture in their report in 1976 accepted the interrelationship of forest economy with the rural and tribal economy and urged for better rationality in the forest operations and their utilisation. The interrelationship between them had to be considered in terms of employ-

ment, traditional rights of native dwellers and involvement of local people.

A Conference of State Ministers of Forests and Tribal Welfare convened in 1978 recommended that forestry development should become an integral part of the comprehensive plan for that area in which the needs of the local economy should get highest priority.

The National Committee on Development of Backward areas, 1981 (Sivaraman Committee) recognised that over all national interest particularly ensuring ecological equilibrium must be paramount and within the national parameters, tribal interests should be taken care of.

The Committee on Forests and Tribals in India, 1982 (B.K. Roy Burman Committee) recommended the following three parameters for the new forest policy.

- a) Ecological security.
- b) Requirements of the rural and tribal population in respect of fuel, fruit, fodder, timber and other domestic needs.
- c) Requirements of the industry including defence and communication.

The Working Group of Tribal Development (1978 to 1983) recommended that tribal development and forestry development should become two co-equal goals and the basic needs of tribal economy should be provided on priority basis in all forest schemes.

The National Forest Policy Resolution, 1988 recognised that "the life of tribals living within and near forest revolves around forests" and enjoined that "the rights and concessions enjoyed by them should be fully protected. The domestic requirements of fuel wood, fodder, minor forest produce and construction timber should be the first charge on forest produce. These and substitute materials should be made available through conveniently located depots at reasonable prices." There is urgent need to codify all the traditional rights and concessions and other enlightenments of local tribals and incorporate the same in acts and execution of orders.

It is evident that "past Government policies based upon revenue training and regulatory approaches have endangered the tribal way of life by restricting access and have failed to protect the Reserve Forest (RF) areas from uncontrolled exploitation and degradation" (Staff Appraisal Report, 1994 - Annexure-10: p.1).

JOINT FOREST MANAGEMENT THROUGH PARTICIPATORY APPROACH

Out of the total geographical area of 2,75,068 sq. km in Andhra Pradesh, 63,726 sq. km is recorded (23.2%) as forest area but actual forest cover is only 47,290 sq. km constituting 17.2% of geographical area of the state (The State of Forest Report, 1991). This trend indicates that more than 25% of forest either disappeared or degraded.

In order to arrest the large scale deterioration of forests and to improve ecological security a movement towards active participation of local tribals in preservation and regeneration has to be launched. New institutional arrangements in management of forests are needed to stimulate local participation in identification, planning and implementation of strategies to ensure ecological equilibrium in the regions threatened with degradation. The Joint Forest Management is the right approach to the problem of dwindling forest and this type of local peoples active participation in protection and management proved successful.

During field studies in different regions of the tribal areas with regard to the attitude of tribals towards Joint Forest Management, the local tribal communities stated that they would extend their spontaneous cooperation for protecting the forest provided they are given full freedom in selection of forest species by tribals in Adilabad, Warangal, Visakhapatnam, Vijayanagaram districts to be raised under the Joint Forest Management.

The plant species selected by local tribals district wise are furnished in Annexure-II, III, IV and V, respectively.

The forest plant species preferred by local tribals through participatory resource appraisal alone have to be raised in the tribal satellite nurseries and planted in the area identified under the Joint Forest Management. Generally tribals give preference to Non-Forest Timber species, edible roots, wild fruit plants. The preference and selection of various forest species depend upon the following factors :

- 1) Predominant Non-Timber Forest Produce of the locality.
- 2) Availability of the Non-Timber Forest Produce for longer period especially during lean periods.
- 3) Timber and other plant material useful for their housing purpose.
- 4) Forest raw material useful to pursue their traditional occupation.
- 5) Edible tubers, roots, leaves wild fruits, for their domestic consumption.
- 6) Totemic plant species of local tribal communities.
- 7) Plant species useful for herbal medicines.
- 8) Aromatic plants, roots, leaves, flowers.

The following action points may be considered in addition to the instructions issued by Government from time to time for introduction of Joint Forest Management.

- 1) In order to create greater awareness among the tribal / rural people, series of Participatory Resource Appraisal programmes have to be organised in the villages proposed to be taken up under Joint Forest Management Scheme. Participant observation techniques may be followed by the respective forest officials in order to study indigenous practices of exploitation of forest resources along with them so as to identify the harmful or promotive methods.
- 2) The micro plan of the village selected for Joint Forest Management should be

- made comprehensive to include not only selection of the suitable plants species, raising of nurseries, plantation and management techniques, but also the various developmental activities which are essential for the development of tribal community in the village. The traditional totemic affiliations, ethos, mores, skills etc., have to be given due consideration while formulating the micro level village plans.
- 3) The post of President of the Managing Committee of the Vana Samrakshana Samithi may be reserved to the members belonging to Scheduled Tribe in the Joint Forest Management Villages situated in the Scheduled Areas. Further 75% of the membership of the Managing Committee should be reserved to the members belonging to Scheduled Tribes in the Scheduled Areas/Tribal Sub Plan areas.
 - 4) Arrangements may be made for raising the plant material by the local people only in the respective Joint Forest Management Villages. This task also may be entrusted to Tribal Mahila Thrift Societies (TMTS), which are taking deep roots in tribal societies.
 - 5) While selecting the hamlets/villages for Joint Forest Management, homogeneous ethnic groups/villages may be selected instead of multi-ethnic villages.
 - 6) The findings of the study of the Joint Forest Management in Jamboni Forest Range in Midnapur District of West Bengal reveal that "the greater the proportion of tribal composition in the forest protection committee, the greater its effectiveness". In view of the successful functioning of the Joint Forest Management in tribal areas, the Vana Samrakshana Samithi in Scheduled Areas may be formed with majority of the tribal members in Tribal Sub Plan area.
 - 7) Cluster Approach may be followed in identification of Joint Forest Management in order to develop specific area threatened with degradation.
 - 8) Treatment of the catchment area on the basis of Watershed Approach may also be adopted to ensure good moisture retention and water management.
 - 9) All kinds of construction works in the Tribal Sub-Plan Area under Andhra Pradesh Forestry Project may be entrusted to the local Village Development Committees (VDC), Tribal Mahila Thrift Societies (TMTS) and beneficiaries as per the provisions of G.O.Ms.No.30, Social Welfare (V2) Department, dated 17-2-1994. The empowerment of the local people, local institution should also be made guiding principle in implementation of the Joint Forest Management scheme.
 - 10) A joint account may be opened in the name of President of the Managing Committee and Official Incharge of the implementation of the scheme in order to facilitate total transparency of the financial transactions. The local tribals also may be trained in maintenance of accounts and preparation of minutes pertaining to Vana Samrakshana Samithies and Managing Committee meetings.
 - 11) In view of multiple utility of Non Timber Forest Produce (NTFP), 50% of the area proposed under afforestation schemes may be planted with Non Timber Forest Produce species. New plants of Non Timber Forest Produce may also be identified and propagated extensively as per the suitability of the area.
 - 12) Training programmes may be organised to the members of the Managing Committee and other members of Vana Samrakshana Samithi in techniques of raising nurseries, latest techniques of grafting, soil conservation, construction, management of modern harvesting structures etc. Educational tours may

also be organised to the members of Managing Committee and other active members of Vana Samrakshana Samithi to the places where Joint Forest Management has been successfully implemented. These tours may be organised even outside the state.

- 13) At present tribals are selling Non Timber Forest Produce (NTFP) to Girijan Cooperative Corporation without properly processing various items brought from the forest. Value addition to these important produce facilitate good income to the tribes. The appropriate and suitable equipment for processing various items of Non Timber Forest Produce (NTFP) and agricultural produce also may be supplied to the tribal families in the Joint Forest Management Villages. They may also be imparted skills connected with scientific method of exploitation of various items of forest produce and also processing and other value addition techniques.

ANNEXURE

Annexure I : District wise details of total geographical area and forest area (in hectares)

S. No.	District	Total geographical area	Forest area	% to the geographical area
1.	Srikakulam	5,84,290	70,391	12.0
2.	Vizianagaram	6,30,030	1,11,661	17.7
3.	Visakhapatnam	11,34,284	4,70,835	41.4
4.	East Godavari	10,81,843	3,23,143	29.9
5.	West Godavari	7,79,538	81,186	10.4
6.	Krishna	8,79,694	66,301	7.5
7.	Guntur	11,32,024	1,56,100	13.7
8.	Prakasam	17,14,062	2,12,066	12.3
9.	Nellore	13,16,042	98,852	7.5
Coastal Andhra region		92,52,615	15,90,540	17.3
10.	Kurnool	17,60,034	3,18,250	18.2
11.	Anantapur	19,13,492	1,96,797	10.3
12.	Cuddapah	15,37,838	5,05,405	32.8
13.	Chittoor	14,98,770	4,53,355	30.2
Rayalaseema region		67,10,134	14,73,897	20.2

Andhra region	1,59,62,749	30,64,437	19.2
14. Ranga Reddy	7,53,247	73,032	9.7
15. Hyderabad	23,002	—	—
16. Nizamabad	8,06,215	1,68,102	20.9
17. Medak	9,51,903	73,303	7.7
18. Mahboobnagar	18,47,241	3,03,189	16.4
19. Nalgonda	14,22,324	85,830	6.0
20. Warangal	12,83,552	3,70,280	28.8
21. Khannan	15,80,936	7,58,397	48.1
22. Karimnagar	11,88,499	2,51,675	21.2
23. Adilabad	16,20,381	6,87,584	42.4
Telangana region	1,14,77,300	27,71,392	24.1
Andhra Pradesh	2,74,40,049	58,35,829	21.3

1. Forest Area in Scheduled Districts : 31,76,671 hect. (54.45% of total forest Area)
2. Forest Area in Scheduled and P.T.G.
Districts : 40,21,949 hect.
3. Percentage : 68.62%

Source : Season and Crop Report (1987-88) published by Bureau of Economics of Statistics, Govt. of Andhra Pradesh, Hyderabad.

Annexure II : Selected species under J.F.M. by tribals at Adilabad district

S. No.	Local name of the species	Botanical name
1.	Medichettu	1. <i>Ficus race mosa</i>
2.	Tuniki	2. <i>Diospyros melanoxylon</i>
3.	Usiri	3. <i>Phyllanthus emblica</i>
4.	Lendi (Neredu)	4. <i>Syzygium cumini</i>
5.	Chirongi	5. <i>Buchanania axillaris</i>
6.	Mohwa	6. <i>Madhuca longifolia</i>
7.	Tapsi (Gum Tree)	7. <i>Sterculia urens</i>
8.	Cleaning nut tree	8. <i>Strychnos potatorum</i>
9.	Maredu	9. <i>Aegle mormelos</i>
10.	Mango (wild)	10. <i>Mangifera indica</i>
11.	Kohka (Cheedi)	11. <i>Semecarpus anacardium</i>
12.	Kanka (Bamboo)	12. <i>Bambusa arundinacea</i>
13.	Eliki	13. —
14.	Kanuga	14. <i>Galedupa arborea</i>
15.	Teak	15. <i>Tectone grandis</i>
16.	Barugu	16. <i>Bombox ceiba</i>
17.	Jitregi	17. <i>D. Latifolia</i>
18.	Sandra	18. <i>Acacia catechu</i>
19.	Peddegi	19. <i>Pterocarpus marsupium</i>
20.	Nallamaddi	20. <i>Terminalia alata</i>
21.	Thumma	21. <i>Acacia nilotica</i>
22.	Reni (Regu)	22. <i>Mauritiana lamk</i>
23.	Thirumanu	23. <i>Anogeissus latifolia</i>
24.	Kodisa	24. <i>Cleistanthus collings</i>
25.	Gotti	25. <i>Z. xylophlofa</i>

Annexure II : Contd....

26. Tella Thumma	26. <i>Acaia leucophloea</i>
27. Neem	27. <i>Azadirachta indica</i>
28. Thada	28. <i>Helicteres sora</i>
29. Billingu Tree	29. <i>Swietenia chloroxylon</i>
30. Seethaphal	30. <i>Annona squamosa</i>

Annexure III : Selected species under J.F.M. by tribals at Warangal distirct

S. No.	Local name of the species	Botanical name
1.	Thuniki	1. <i>D. melanoxylon</i>
2.	Velaga	2. <i>Limonia clephantum</i>
3.	Tamarind	3. <i>Tamarinus indica</i>
4.	Pala	4. <i>Manilkara heyandra</i>
5.	Moeri (Chironji) Sare Pappa	5. <i>Buchanania axillaris</i>
6.	Usiri	6. <i>Phyllanthus emblic</i>
7.	Coprigrass	7. —
8.	Mango	8. <i>Mangifera indica</i>
9.	Neredu	9. <i>Syzygium cumini</i>
10.	Moduga	10. <i>Butia monosperma</i>
11.	Kunkudu	11. <i>Sapindus emarginatus</i>
12.	Sandra	12. <i>Acacia catechu</i>
13.	Kanuga	13. <i>Galedupa arborea</i>
14.	Nallageedi	14. <i>Semecarpus anacardium</i>
15.	Panasa	15. <i>Artocarpus integrifolia</i>
16.	Seethaphal	16. <i>Annona squal mosa</i>
17.	Bamboo	17. <i>Bambusa arundi nacea</i>
18.	Thapsi	18. <i>Sterculia urens</i>
19.	Burugu	19. <i>Bombax ceiba</i>
20.	Kodisa	20. <i>Cleistanthus collinus</i>
21.	Regu	21. <i>Mauritiana lamk</i>
22.	Ippa	22. <i>Madhuca longifolia</i>
23.	Thati	23. <i>Borassus flabellifer</i>

Annexure IV : Selected species under J.F.M. by tribals at Visakhapatnam district

S. No.	Local name of the species	Botanical name
1.	Eucalyptus	1. <i>Eucalyptus camaldulensis</i>
2.	Silver oak	2. <i>Grevillia robusta</i>
3.	Wild Mango	3. <i>Mangifera indica</i>
4.	Jack Tree	4. <i>Artocarpus intertrifolia</i>
5.	Maddi	5. <i>Mentaptera arjuna</i>
6.	Teak	6. <i>Tectonia grandis</i>
7.	Usiri	7. <i>Phyllanthus emblica</i>
8.	Soapnut	8. <i>Sapindus emarginatus</i>
9.	Seekaya	9. <i>Acacia sinuata</i>
10.	Sampenga	10. <i>Artobatrys odoratissimus</i>
11.	Vegisa	11. <i>Pterocarpus bilous</i>
12.	Ganari	12. <i>Samanea saman</i>
13.	Adda	13. <i>Phanera vahli</i>

14. Neredu	14. <i>Syzygium cumini</i>
15. Pala	15. <i>Manilkara heyandra</i>
16. Myrobolans	16. <i>Strychnos nuxvomica</i>
17. Markingnuts	17. <i>Anacarius occidentale</i>
18. Naramamidi	18. <i>Polyalthia lon, ifolia</i>
19. Cleaningnuts	19. <i>D. spinosa</i>
20. Tamarind	20. <i>Tamanidus indica</i>
21. Bamboo	21. <i>Bambusa arundinacea</i>
22. Burugu	22. <i>Bobax ceiba</i>
23. Kanuga	23. <i>Galedupa arborea</i>
24. Jetropha	24. <i>Ricinus communis</i>

Annexure V : Selected species under J.F.M. by tribals at Vizianagaram district

S. No.	Local name of the species	Botanical name
1.	Marking nut trees	1. <i>Anacarium occidentale</i>
2.	Wild Mango	2. <i>Mangifera indica</i>
3.	Neredu	3. <i>Syzygium cumini</i>
4.	Mohwa	4. <i>Madhuca longifolia</i>
5.	Tamarind	5. <i>Tamanidus indica</i>
6.	Teak	6. <i>Tectonia grandis</i>
7.	Jack tree	7. <i>Artocarpus integrifolia</i>
8.	Eucalyptus	8. <i>Eucalyptus camaldulensis</i>
9.	Bamboo	9. <i>Bambusa arundinacea</i>
10.	Usiri	10. <i>Phyllanthus emblic</i>
11.	Seekakai	11. <i>Acacia sinuata</i>
12.	Soapnut tree	12. <i>Sapindus emarginatus</i>
13.	Sal	13. <i>Shorea robusta</i>
14.	Seethaphal	14. <i>Annona squamosa</i>
15.	Nalla Maddi	15. <i>Terminalia alata</i>
16.	Tella Maddi	16. <i>A. leucophloea</i>
17.	Rosewood	17. —

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