

ROLE OF MINOR FOREST PRODUCTS IN TRIBAL ECONOMY OF INDIA : A CASE STUDY

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SEKAR, C., VINAYARAI, R.S. & RAMASAMY, C. 1996. Role of minor forest products in tribal economy of India : a case study. A study was carried out to assess the extent of tribal involvement in the collection and marketing of minor forest products (MFPs) by the largest cooperative society operating in the province of Tamil Nadu, viz. the Sathyamangalam Hill Tribes LAMP Cooperative Society. Around 83% of the members were tribals who were actively involved in MFP collection. Non-tribals and Adi Dravidars comprised the remaining members. On an average, the tribals spent eight to ten hours a day for collection of MFPs. During the farming season, 20 % of the tribal households also worked as agricultural labourers. Through MFP collection, the tribals earned on an average Rs. 11 180 per annum per household of three earning members. Among the MFPs, amla topped the list yielding a revenue of Rs. 24.57 lakhs in a year followed by broom grasses, and stone and tree moss. In terms of quantity, broom grasses were the most followed by amla, and stone and tree moss. Two marketing channels were operating for the MFP trade, of which Channel I fetched higher producers' share. The existence of a monopsony in marketing of MFPs in tribal areas leads to inefficiency in their marketing. Remedial measures are discussed.

Keywords: Minor forest produce - tribal economy - Adi Dravidars - marketing channels

SEKAR, C., VINAYA RAI, R.S. & RAMASAMY, C. 1996. Peranan keluaran minor hutan suku kaum ekonomi di India : satu kajian kes. Satu kajian telah dijalankan untuk menilai penglibatan suku kaum di dalam pengumpulan dan pemasaran keluaran minor hutan (MFPs) oleh kesatuan koperasi terbesar yang beroperasi di Wilayah Tamil Nadu, iaitu Kesatuan Koperasi Sathyamangalam Hill Tribes LAMP. Lebih kurang 83% daripada ahli terdiri daripada suku kaum yang terlibat secara aktif di dalam pengumpulan MFP. Ahli selebihnya terdiri daripada bukan suku kaum dan Adi Dravidars. Secara purata, suku kaum tersebut mengambil masa lapan hingga sepuluh jam sehari untuk mengumpul MFP. Semasa musim menuai, 20% daripada isi rumah suku kaum tersebut bekerja sebagai buruh pertanian. Melalui pengumpulan MFP, suku kaum ini memperolehi pendapatan purata sebanyak Rs. 11 180 setahun setiap isi rumah daripada tiga ahli yang bekerja. Di kalangan MFP, amla menghasilkan pendapatan tertinggi iaitu sebanyak Rs. 24.57 lakhs dalam setahun diikuti dengan rumput "broom", lumut batu dan lumut pokok. Dari segi kuantiti,

rumpun "broom" adalah yang paling banyak diikuti dengan amla, lumut batu dan lumut pokok. Dua saluran pemasaran telah beroperasi untuk perdagangan MFP yang mana Channel I mendapat bahagian pengeluaran yang lebih banyak. Kewujudan monopsoni di dalam pemasaran MFP di kawasan-kawasan suku kaum membawa kepada ketidakberkesanan di dalam pemasaran. Langkah-langkah pemulihan juga dibincangkan.

Introduction

Several major and minor forest products make vital contribution to the national economy. The growing stock in the forests of India was estimated at 4196 million m³ with the net annual increment at 52 million m³ or 1.24 % of the growing stock. Of the sustainable production of 52 million m³, 40 million m³ is firewood and about 12 million m³ is timber or industrial wood (Lal *et al.* 1993). In terms of value contribution, the major forest produce accounts for about 70 % of the total value added by the forest sector in the country (Kalla 1988). The minor forest products (MFP), also called non-wood forest products (NWFP) or non-timber forest produce (NTFP), contribute about 50% of forest revenue and 70% of income through export (Campbell 1992). MFPs also provide 10 to 40% of income to the tribal households (Shiva 1993). The National Commission on Agriculture during 1976 (Government of India 1976) classified the MFPs as follows:

(i) Fibres and flosses, (ii) grasses, bamboos and canes, (iii) essential oils, (iv) oil seeds, (v) tans and dyes, (vi) gums, resins and oleoresins, (vii) drugs, spices and insecticides, (viii) leaves, (ix) edible products, (x) lac and its products, and (xi) miscellaneous products.

Though there are nearly 3000 plant species endowed with non-timber utility in India, only about 126 species are now being commercially exploited. For ages tribals and forests have led a symbiotic existence. But with increasing rates of deforestation the tribals are getting displaced from their natural habitat and are feeling insecure. They need to be rehabilitated through measures like increased involvement in forest activities. The present study is designed to elicit information on the extent of tribal involvement in the collection and marketing of MFPs by the largest cooperative society operating in the province of Tamil Nadu, India.

Design of the study

Among the 18 Large Area Multipurpose Cooperative Societies (LAMP) in the province of Tamil Nadu, the Sathyamangalam Hill Tribes LAMP Cooperative Society is the largest and was chosen for the study. The society has as its members tribals, non-tribals and scheduled castes. To assess the extent of tribal representation in the society, the relative membership of each category was assessed. The tribals, who as members are involved in MFP collection for the society were spread over thirteen villages (Table 2). But owing to limitation of time for detailed study on social and economic status of the tribals, only two tribal

villages, viz. Areyapalayam and Devanatham, were chosen. In each village, 20 households were sampled.

The various MFPs being dealt in by the society were assessed and the relative contribution of each in terms of quantity and volume of these MFPs was estimated. Price spread analysis in MFP trade was also done.

Table 1. Number of society members involved in MFP collection (1992 - 93)

Community	Number of persons involved	Active members	Time taken in a day (h)
Tribals	2829 (83.21)	2400 (92.30)	
Non -tribals	423 (12.44)	100 (3.85)	8 - 10
Adi Dravidars	147 (4.32)	100 (3.85)	
Government	1 (0.03)	-	
Total	3400 (100.00)	2600 (100.00)	

(Figures in parentheses indicate percentage of total)

Table 2. Details of tribals involved in MFP collection in the 13 villages (1993)

Name of village	No. of resident households	Community	No. of persons involved in MFP collection	Av.no. of earners/ household
Areyapalayam	60	Irulas	100	1.67
Gethasal	100	Irulas	300	3.00
Mavallam	20	Irulas	50	2.50
Ghermalam	60	Irulas	200	3.33
Puthukadu	30	Irulas	90	3.00
Guliada	30	Irulas	80	2.67
Ittarai & Thadachalatti	60	Irulas	110	1.83
Bejlatti	30	Irulas	60	2.00
Ramaranai	8	Kurumbas	20	2.50
Devanatham	46	Irulas	95	2.00
Mavanatham	30	Irulas	100	3.33
Kalithimbam	50	Irulas	120	2.40
Balapadugai	80	Irulas	200	2.50
Total	604		1010	32.74
Mean	47		78	3.00

Results and discussion

Representation of tribals in the society

Table 1 reveals the number of members involved in the collection and processing of MFPs. The society had 3400 members of which the active members were around 2600 accounting for 76.47% of the total. Among the members, tribals alone represented 83.2 %, followed by non-tribals (12.44 %) and Adi Dravidars (4.32 %). The tribals mostly belong to the Irular community. This underscores the active participation of tribals in the collection and processing of MFPs. This may be because they have feeble opportunities for employment in other sectors whereas others derive supplementary income from their agricultural holdings. The tribals are in a position to devote most of their time for collection of various MFPs. On average 8 - 10 hours were spent in a day for the purpose.

Socio-economic status of the tribals

The general characteristics of the sample households are given in Table 3. Of the total number of 40 households, tribals comprised 36. It may be seen that the literacy percentage among the tribals up to primary level was only 17.40 % followed by middle schooling which accounted for a poor 2.50%. All the tribal families had a house of their own. About 33 % of them owned radio but none possessed a television.

Table 3. General characteristics of the sample tribal households

Particulars	No / %
Households (nos.)	36
Size of the family	6
Earners per household	3
Literacy : primary (%)	17.40
middle school (%)	2.50
Owned house (%)	100.00
Consumer durables: radio (%)	33.33
television (%)	-

Table 4 reveals the income and employment pattern of the tribal households. The employment mainly consisted of MFP collection. During the farming season, they also work as agricultural labourers. Through MFP collection, the tribals earned on an average Rs. 11 180 per household. During off-season they went for MFP collection and generated 253 man-days in a year with an average earning capacity of three members in a household. From employment as agricultural labourers, they earned a small income of about Rs. 780 per annum from an average earning capacity of two tribals per household. On an average, the tribals could generate a cash income of Rs.11 960 per annum for 920 man-days.

Table 4. Annual income and employment pattern in tribal households (per household)

Source	Earners	Employment (man-days)	Income (Rs.)	Income (US \$)
MFP collection	3	860	11 180.00	349.38
Agricultural activities	2	60	780.00	24.38
Total		920	11 960.00	373.76

MFPs dealt in by the society

The MFPs dealt in by the society are listed in Table 5. Among these, stone and tree moss, broom grasses, amla, poochakai and chikakai are the important items capable of generating considerable cash income to the tribals as well as to the society. The rights of collecting the MFPs in the interior forests are obtained through periodic remittance of lease fees to the Forest Department of the Government of Tamil Nadu by the Sathyamangalam Hill Tribes LAMP Cooperative Society. The annual lease fees paid during 1988-93 for the MFP collection are as follows.

Year	Rs. (lakhs)	US \$ *
1987 - 88	6.98	21 812
1988 - 89	7.98	24 937
1989 - 90	12.60	39 375
1990 - 91	13.27	41 468
1991 - 92	22.92	71 625
1992 - 93	20.50	64 062

* 1 US \$ = Rs. 32

Among the MFPs, amla topped the list yielding a revenue of Rs. 24.57 lakhs followed by broom grasses, and stone and tree moss. In terms of quantity, broom grasses was the most, followed by amla, poochakai and stone and tree moss. These four MFPs accounted for 83% of the total revenue of Rs. 53.51 lakhs. The extraction of various MFPs in physical and value terms appears to be encouraging. This can be further enhanced if accessibility is improved through better logistic support. Even if adequate earnings are assured, it will serve as an incentive for better and more extraction, no matter how difficult the job is.

Table 5. Production of MFPs in Sathyamangalam Region (1992 - 93)

MFPs	Quantity (‘000 kgs)	Value	
		Rs. lakhs	US \$
Broom grasses* (<i>Thysanolaena maxima</i>)	1 211.20	12.65	39 531.25
Stone and tree moss	12.00	3.94	12 312.50
Amla (<i>Embluca officinalis</i>)	1 046.60	24.57	76 781.25
Poochakai (<i>Sapindus emarginatus</i>)	35.00	3.55	11 093.75
Tamarind (<i>Tamarindus indica</i>)	20.20	0.77	2 406.25
Kadukai (<i>Terminalia chebula</i>)	28.40	1.07	3 343.75
Pungam kernels (<i>Pongamia pinnata</i>)	9.00	0.52	1 625.00
Chikakai (<i>Acacia concinna</i>)	3.00	0.85	2 656.25
Ber fruit (dried) (<i>Ziziphus</i> sp.)	1.50	0.05	156.25
Wood apple (dried) (<i>Limonia acidissima</i>)	1.40	0.16	500.00
Others	84.90	5.44	17 000.00

* Broom grass in numbers

Price spread analysis

Table 6 presents the price spread analysis in MFP trade by the society. Before analysing the price spread, a preamble on the flow of commodities from the tribals to the ultimate consumers is warranted. There are two marketing channels in the MFP trade, i.e.

Channel I : producer (tribals) → Hill Tribes LAMP Cooperative
Society as retailer → ultimate consumers

Channel II: producer (tribals) → Society as wholesaler → retailer
(private traders) → ultimate consumers

Thus, the society is acting both as a retailer and wholesaler in effecting the sale of MFPs. The prices in respect of Channels I and II for each product were analysed and are presented in Table 6. Through Channel I, about 20 - 30 % of the total collection were marketed. But through Channel II, 70 - 80% commodities were marketed through auctioning or by inviting tender from the merchants. Considering broom grasses the producer gets 30% of the market price through

Channel I, whereas, for the same produce through Channel II, the producer gets only 7.20%. The difference between the two channels is around 23% and it seems to be too high emphasising the need for reorganisation of the sale through Channel II. Because of the profit motivation of the intermediaries, the market price of each and every product escalates which in turn reduces the percentage share of the producers.

Table 6. Price spread analysis of MFPs under different marketing channels (1992 - 93) (in rupees)

MFPs	Channel I		Channel II		
	Producers' price	Retail price	Producers' price	Societies' sale price	Retail price
Broom grasses	0.36 / No (30.00)	1.20	0.36 / No (7.20)	1.20	5.00
Stone & tree moss	11.00 / kg (34.54)	31.85	11.00 / kg (24.44)	31.85	45.00
Amla (dried)	1.50 / kg (50.00)	3.00	1.50 / kg (15.00)	3.00	10.00
Kadukai	2.00 / kg (72.73)	2.75	2.00 / kg (25.00)	2.75	8.00
Pungam kernels	2.00 / kg (50.00)	4.00	2.00 / kg (28.57)	4.00	7.00
Wood apple (dried)	4.00 / kg (57.14)	7.00	4.00 / kg (26.67)	7.00	15.00
Poochakai	3.60 / kg (36.00)	10.00	3.60 / kg (25.71)	10.00	14.00
Chikakai	6.00 / kg (40.00)	15.00	6.00 / kg (21.43)	15.00	28.00
N neem seeds	2.00 / kg (80.00)	2.50	2.00 / kg (50.00)	2.50	4.00

(Figures in parentheses indicates percentage share of producer's rupee in the consumer's price)

The existence of a monopsony in marketing MFPs in tribal areas leads to inefficiency in their marketing. Similar situations have been reported in a case study in Bihar. Tribals who depended on marketing MFPs as an important source of income suffered as a result (Gupta *et al.* 1981).

From the standpoint of other products also, Channel I was comparatively better than Channel II because of the absence of middlemen interference. The maximum share of the producers' price in Channel I was 70- 80% of market price and the minimum stood at 30 - 35 %. But, in Channel II, the maximum share was only around 50% and the minimum stood at 7.20% which is deplorably low. The society requires a large margin of price to meet its overhead charges in terms of lease fees, wages, staff salaries and other operational incidentals. The Government Order, Ms. No. 361, dated 14 December 1988, says that the lease fee fixed for a particular year for MFP collection shall hold good for two successive years. But the non-cooperation between the society and the department personnel invariably results in infringement of the legislation and periodic increase in the

lease fee necessitating increased overhead charges. This precludes any considerable increase in the unit retail price reducing the margin. However, the producers' actual share was not increased either in Channel I or in Channel II because of minimum unit price of various products which they produce. Hence, to increase the unit price of the produce, the society can start on its own as many retail outlets as possible in its jurisdiction as well as in important cities and towns.

Production and trade constraints

Based on the data collected and general survey made several constraints were observed in the production and trade of MFPs. These are:

- Most of the MFPs occur in widely scattered areas making economic exploitation difficult.
- Some of the products like amla are perishable and seasonal in supply, and their non-collection and non-utilisation mean a resource wasted. Their timely collection and storage assume great importance.
- Unscientific methods of collection and overexploitation may lead to scarcity of certain valuable MFPs like stone and tree moss.
- The tribals do not get sustained employment or reasonable remuneration in the existing systems.
- There is lack of technical knowledge and training regarding silviculture, cultivation techniques and other forest operations to be adopted for maintenance and proper exploitation of the growing stock and their replenishment in compact areas.
- Awareness on the utilisation and possibility of obtaining improved products is lacking among the tribals.
- Lack of adequate education is another constraint. The tribals are unaware of the potential economic returns associated with MFPs. Their knowledge in forest management programmes is also weak.

Conclusion and policy implications

The study reveals that the tribals belonging to the Irular community take an active participation in MFP collection and processing. Sathyamangalam Hill Tribes Lamp Cooperative Society, in which the tribals are members, purchases the MFPs from the tribals. The prices are determined mostly by the society, giving least care to involve the tribals in price determination. Price spread analysis reveals that for certain products, the society is paying poorly even as low as 7 to 15 % of consumer's price. Since the society is the agency which has close links with the tribal producers, it can periodically teach the producers the planting aspects of MFP species, maintenance, protection and the scientific way of extraction by employing technically qualified personnel. In addition, screening of video depicting various aspects of planting and harvesting can also be done to promote growing

stock, protection and the scientific management of MFP species for sustainable extraction. Replenishing the dwindling stock by proper methods of cultivation, and improving the harvesting, grading and processing to ensure better returns are critical to improve the living standard of tribals. The society may organise many retail outlets to overcome the disparity in price and to increase the producer's share in the consumer's rupee. Since the MFPs are available in the inaccessible interior forests, possible infrastructural facilities like frequent transport for the produce may in turn enhance the level of production and the trade of minor forest products.

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