

# The marketing of non-timber forest products in the western ghats region of Attappady, Kerala

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## ABSTRACT

The marketing of non-timber forest products (NTFP) are the main source of income to earn a livelihood for the indigenous communities residing to the fringe areas of the forest. The study analyzed the significance of different marketing agencies involved in the marketing of NTFP's to the livelihood of the indigenous communities of Attappady. Primary data and secondary data were used for the study. Among the marketed 23 NTFP's, nine products were exclusively marketed through the society and one product exclusively through the private shop, 10 products through society and private shops, one product marketed through the Eco Development Committee (EDC) and private shop and 2 products through all the 3 channels. Even though the procurement price given by the private shops and EDC for commercially important NTFP's were higher than that of the Kurumba society, the indigenous people were more benefited by the marketing through the society. Because the EDC and private shops do not share their profit with the collectors, where as the society gives certain percentage of their profit back to the primary collectors in addition to the procurement price. But the financial constraints during the lean seasons are forcing the indigenous communities to sell their products to the private shops. If the society and EDC can start the value addition units of the NTFP's with the involvement of indigenous communities, it ensures effective utilization of their free time and a better livelihood through enhancement of their income from NTFP's.

**Keywords:** Marketing agencies, NTFP's, indigenous communities, Kerala

Out of the 3000 NTFP species in India, only 126 have developed the marketability (FAO, 2005). These include

medicinal plants, edible plants, starches, gums and mucilages, oils & fats, resins and oleo-resins, essential oils, spices, drugs, tannins, insecticides, natural dyes, bamboos and canes, fibers and flosses, grasses, tendu leaves, animal products and edible products. According to FAO (2005) the commercial NTFPs are estimated to generate ₹ 3 billion (US\$ 100 million) annually in India and also have a 42 per cent share of total removals in the category of other plant products, such as tendu leaves and lac, followed by Brazil and Mexico. India

Access this article online	
Publisher	Website: <a href="http://www.ndpublisher.in">http://www.ndpublisher.in</a>
	DOI: 10.5958/0976-4666.2016.00046.2

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holds monopoly in world trade over some of the NTFPs such as Karaya gum (*Sterculia urens*), myrobalans (*Phyllanthus emblica*, *Terminalia chebula*), Sandalwood chips and dust (*Santalum album*) (Yadav and Basera, 2013). The marketing of NTFPs was regulated by different mechanisms in different states. Under the Forest Produce (Control and Trade) Act 1981, trading is largely controlled through public institutions, such as State Development Corporations, Federations, Co-operatives and tribal societies (Prasad *et al.*, 1996).

In Kerala, the NTFPs are marketed through different channels depending upon a variety of factors such as nature of the product, demand, distance of the market etc. (Muraleedharan *et al.*, 1999). The Kerala State SC/ST Federation, private traders and tribes are the three main marketing agents dealing with the marketing of NTFP in the state. About 36 Tribal Service Co-operative Societies (TSCS) are engaged in the NTFP collection, which cover about 398 tribal settlements. There are mainly three marketing channels for the trade of NTFPs in Kerala. In the first channel, the products are marketed through the federation. In the second channel, the products are marketed through private traders. In some part of the State, the Forest Department also undertakes marketing of some products (Shylajan and Mythili, 2007). The main activity of the Federation is the marketing of NTFP. There are two stages in the marketing of NTFPs in Kerala, sale of collected products by the tribes to federation through society and marketing of the collected products by the federation (Sasidharan *et al.*, 2008). The people living around the forest area depend heavily on the forest resources for sustaining their livelihood. The collection of NTFPs is the major occupation of more than 68 per cent of the tribals in Palakkad, Thrissur, Wayanad and Kannur districts of Kerala (Shanker, 1999). The tribes residing in the interior areas depend on the forest resources for food, medicine, construction, religious ceremonies, firewood purpose and commercial collection of NTFP. The studies have shown that the NTFP collection contributed 58 per cent of total income of the tribes in Kerala (Thomas, 1996). The tribals of Wayanad make use of 434 flowering plants for various purposes, of which 184 are used for food (Hema *et al.*, 2006), 244 for

medicinal use (Silja *et al.*, 2008) and 68 plants are used for other purposes (Pramod *et al.*, 2003). These studies point towards the dependence of the tribal people on NTFP species and highlight the contribution of NTFP sector to the livelihood of the tribes. This emphasizes the need for conserving the forest resources, especially the NTFP species. Through the conservation of NTFP species, we could sustain and enhance the livelihood opportunities of the tribes for a better life. Proper functioning of the various marketing institutions and mechanism are needed for ensuring a better livelihood to the indigenous people who are dependent on these forest resources. This study is an attempt to identify the role and significance of different marketing agencies involved in the marketing of NTFP's to the livelihood of the indigenous communities of Attappady.

## Materials and Methods

There are three tribal communities namely Irula, Muduga and Kurumba in Attappady. The Kurumbas settled in the hilly tracts, whereas Irulas and Mudugas in the lower valley. The study was conducted in the nine tribal settlements in Western Attappady namely Mukkali, Karuvara, Chindakki, Thadikundu, Anavayi and Thudukki during December 2013 to June 2014. The Irula hamlets are at Karuvara, Chindakki and Mukkali. The Mudugas occupied the Karuvara and Chindakki settlements. The Kurumba settlements are at Thadikundu, Anavayi, Palappada and Thudukki. A simple random sampling method was adopted for the selection of samples, the unit of study being the household. From the three tribal groups, fifty households ( $n = 50$ ) from each community were randomly selected for the study. In total one hundred and fifty households ( $N = 150$ ) were surveyed as part of the study. The primary data and secondary data were collected as part of the study. A pre-tested questionnaire survey and semi-structured interview was conducted with the help of local persons in the representative households of each tribal settlement. The secondary data was collected from the Kurumba cooperative society, Chindakki, private shops and Eco shop at Mukkali. The descriptive statistics such as percentage was used to analyze the price spread and collector's share. The price spread was

estimated to understand the share of final price going to the primary collectors. The difference between the price paid by the final consumer and price received by the primary collector is Price spread. It includes the costs and margins of different marketing agencies. The costs of transportation, storage, grading and handling comprise the marketing costs. The returns to the intermediaries for their functions were included in the margin.

Price spread = Price paid by the consumer – Price received by the primary collector

Or

Price spread = Marketing costs + Marketing margin

Collector's share on sale price is the price received by the primary collector expressed as a percentage of sales price of NTFP (i.e. the retail price paid by consumer) (Smith, 1992).

$$\text{Collector's share on sales price} = \frac{\text{Collectors prices}}{\text{Sales price of NTFP}} \times 100$$

## Results and Discussion

The right of NTFP collection is vested with the tribal communities in Kerala. The non timber forest products at Western Attappady were marketed mainly through three channels. The marketing agencies identified were Kurumba Cooperative society at Chindakki, Eco Development Committee (EDC) Vanasree Eco shop at Mukkali and Private traders (Table 1). The Kurumbas were marketing most of their NTFP's collected through the Kurumba cooperative society at Chindakki. The society marketed 18 commercialized NTFP's during 2013-14. Out of these; the Kurumba contributed 15 commercially important NTFP's. The remaining five products viz. *Rauvolfia serpentina*, *Holostemman adakodien*, *Piper longum*, *Entada rheedi* and *Phoenix loureiroi* were collected from elsewhere. EDC procured four NTFP's such as resin of *Canarium strictum*, fruits of *Phyllanthus emblica*, *Garcinia gummigatta* and honey. The medicinal plants marketed through society were sold to the pharmaceutical companies. Among the NTFP's marketed, majority were medicinal plants. The 15 medicinal plants were sold to the pharmaceutical companies. The 5 NTFP's used for industrial purpose

were sold to the industries mainly at Tamil Nadu. The products such as tuber of *Balanophora fungosa*, fruits of *Entada rheedi*, *Holostemman adakodien*, *Myristica dactyloides*, *Piper longum*, *Piper nigrum*, *Parmelia dilatata*, *Rauvolfia serpentina* and wax were marketed exclusively by Kurumba society. Ten NTFP's were marketed through the society and private shops. All the marketing channels were involved in the marketing of honey and resin of *Canarium strictum*. The fruit of *Phyllanthus emblica* was marketed through private shops and EDC, whereas fruit of *Mangifera indica* was marketed exclusively through private shops.

The marketing channels of NTFP's used for edible, industrial and medicinal purpose are shown below.

### Edible products

Channel 1: Primary collector → Kurumba society → Consumer

Channel 2: Primary collector → Private shops → Consumer

Channel 3: Primary collector → EDC → Consumer

### Industrial products

Channel 1: Primary collector → Kurumba society → Federation → Industries

Channel 2: Primary collector → Private shops → Industries/ Shops

Channel 3: Primary collector → EDC → Consumer

### Medicinal plants

Channel 1: Primary collector → Kurumba society → Pharmaceutical companies

Channel 2: Primary collector → Private traders → Medicinal shops

The Irula marketed their products mainly through the and 3, whereas Mudugas made use of channel 2 and 3. The Kurumba community used channel 1 as their major marketing channel, even though the other two channels (channel 2 and 3) were also involved. The EDC sold their products to the tourists who came to visit Silent Valley National Park. The NTFP's used for industrial purpose

**Table 1:** The marketing channels of various NTFP in Western Attappady

Sl.No.	NTFP	Purpose	Marketing agency	Consumer
1	<i>Acacia concinna</i>	Industrial	Society and Private	Industries at Coimbatore
2	<i>Canarium strictum</i>	Industrial	Society, private and EDC	Industries at Coimbatore and local use
3	<i>Parmelia dilatata</i>	Industrial	Society	Paint industries
4	<i>Phoenix loureiroi</i>	Industrial	Society and Private	Industries at Coimbatore
5	Wax	Industrial	Society	Industries
6	Honey	Edible	Society, private and EDC	Local people/and Tourist
7	<i>Phyllanthus embica</i>	Edible	Private and EDC	Local
8	<i>Mangifera indica</i>	Edible	Private	Local
9	<i>Balanophora fungosa</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
10	<i>Callicarpa tomentosa</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
11	<i>Cyclea peltata</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
12	<i>Desmodium gangeticum</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
13	<i>Entada rheedi</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
14	<i>Hemidesmus indicus</i>	Medicinal	Society and Private	Local market
15	<i>Holostemma adakodien</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
16	<i>Myristica dactyloides</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
17	<i>Piper longum</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
18	<i>Piper nigrum</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
19	<i>Pseudarthria viscida</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
20	<i>Rauvolfia serpentina</i>	Medicinal	Society	Kottakkal, Oushadhi, Nagarjuna
21	<i>Sida rhombifolia</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
22	<i>Solanum torvum</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna
23	<i>Strobilanthus ciliates</i>	Medicinal	Society and Private	Kottakkal, Oushadhi, Nagarjuna

were *Acacia concinna*, *Canarium strictum*, *Phoenix loureiroi* and wax. Among these products the Irulas marketed *Acacia concinna* through the private shops.

The Mudugas marketed *Acacia concinna* and *Phoenix loureiroi* through the channel 2, whereas *Canarium strictum* was marketed through channel 2 and 3. The Kurumbas marketed *Acacia concinna* and wax through the channel 1, whereas *Canarium strictum* was marketed through the channel 1, 2 and 3. The Irula and Muduga marketed the medicinal plants through channel 2, whereas Kurumbas marketed medicinal plants through channel 1. The Federation adopted direct negotiation with the pharmaceutical companies, practiced in case of a few products like *Sida rhombifolia*, *Desmodium gangeticum*, *Pseudarthria viscida*, and *Strobilanthus ciliates* mainly because these plants are needed in the raw form and cannot be stored for long periods (Muraleedharan

and Sreelakshmi, 2006). The pharmaceutical companies fixed the procurement price of various medicinal plants. It may be higher or lower than the price fixed by the Minor Forest Products Committee (MFPC) constituted under the Kerala Forest Department.

The Kurumba cooperative society had procured 259278.26 kg of NTFP during 2013-14. *Phoenix loureiroi* was the most procured and sold NTFP, followed by *Strobilanthus ciliates* and *Pseudarthria viscida*. The quantity of NTFP sold through the society was 261593kg. This shows that the society is not having sustainability in the procurement and sales of NTFP. This is ultimately going to affect the primary collectors.

Suppose in a year if the sale does not take place, the society reduces the quantity procured in the consecutive years. Thus it reduces the income opportunities of the primary collectors. The procurement price was highest



for the medicinal plant *Holostemman adakodien* (₹ 450/kg), followed by honey (₹ 240/kg) and *Cyclea peltata* (₹ 230/kg). Even though the procurement prices of important medicinal plants were low, the massive quantity collection ensured a better income to the collectors rather than the other products. *Holostemman adakodien* (₹ 620/kg) fetched the highest sales price followed by *Cyclea peltata* (₹ 345/kg) and honey (₹ 280/kg). The price spread has shown a positive trend for all the products except for *Acacia concinna*. The excess stock in the previous years forced the federation to sell these products at a lower price than the procurement price through auctions. This resulted in a negative price spread and higher percentage of collector's share which is doing nothing good to the primary collectors. The society does not have much storage space for storing these products for long time and their expenditure increases. These reasons forced the society to sell the products at low rates which resulted in the negative price spread. The products such as honey and *Holostemman adakodien* had the highest collector's share with 86 and 73 percentage

respectively, whereas *Strobilanthus ciliates* (48%) and *Callicarpa tomentosa* (52%) had the least.

According to the rules of the SC/ST Federation they would give 80 per cent of their sales price to the collectors. The societies are passing 80 per cent of the same to the tribals towards collection charges (Bhaskaran, 2006). But in the present study, analysis showed (Table 2) that in most of the NTFP's this target was not achieved. Considering the year wise contribution of the society to the collectors, in some years the collection price was higher than the sales price. It was also having a negative impact on the income of the tribes. Because when the sales price is low, the value of 80 per cent of the sales price also will be less which goes ultimately to the collectors. Thus the low price of the commodity also had a negative impact on the tribes income. The tribal cooperative societies in Kerala paid on an average 66 per cent of their sales value as collection charge to the tribes (Thomas, 1996). The Kurumba society in Attappady paid an average of 64 per cent of their sale price to the collectors during 2013-14.

**Table 2:** The marketing details of NTFPs marketed through Kurumba society in 2013-14

Sl. No.	NTFP	Quantity procured (kg)	Quantity sold (kg)	Collection rate (Rs)	Sales rate (Rs)	Price spread	Collector's share (%)
1	<i>Acacia concinna</i>	14719	14223	22	17	-5	129
2	<i>Canarium strictum</i>	2330	2311	77	135	58	57
3	<i>Phoenix loureiroi</i>	132250	132250	9.5	13.5	4	70
4	Wax	29.85	-	100	-	-	-
5	Honey	917	917	240	280	40	86
6	<i>Callicarpa tomentosa</i>	2681	6890	40	77	37	52
7	<i>Cyclea peltata</i>	1704	1164	230	345	115	67
8	<i>Desmodium gangeticum</i>	5349	5349	43	75	32	57
9	<i>Hemidesmus indicus</i>	233	-	200	-	-	-
10	<i>Holostemman adakodien</i>	5.5	5.5	450	620	170	73
11	<i>Myristica dactyloides</i>	2.250	-	175	-	-	-
12	<i>Piper nigrum</i>	105	0	37.5	-	-	-
13	<i>Pseudarthria viscida</i>	15122	15122	48	75	27	64
14	<i>Rauvolfia serpentina</i>	2.16	0	80	0	-	-
15	<i>Sida rhombifolia</i>	4906.5	4906.5	53	90	37	59
16	<i>Solanum torvum</i>	12191	12191	42	65	23	65
17	<i>Strobilanthus ciliates</i>	66731	66264	19	40	21	48
Total		259278.26	261593				

The society would provide an advance to the collection agent in each settlement before the start of collection season. They also announced the quantity of NTFP to be collected from each settlement along with the price. Based on the marketing cost involved, the society procured NTFP's at different prices from the various settlements. The societies are given interest free advance which is distributed to the commission agents to pay the collection charges to the tribals (Shanker and Muraleedharan, 1996). At the end of each day, the collected NTFP was quantified in the settlement itself and agent will pay the amount based on the quantity collected. The agent entered the quantity collected by each member of the society in the register and based on that the society provides its bonus to the members. The society distributed 25 per cent of their profit to the members as bonus.

The EDC marketed the major NTFP's such as honey, *Canarium strictum*, *Garcinia gummigatta*, *Phyllanthus emblica* through their ecoshop. Honey was the most procured and sold product, followed by *Canarium strictum* (Table 3). As compared to cooperative society the products were having better price spread, since the consumers were tourists. Eventhough the price spread was higher for EDC, the collector's share was less than that of the society.

In Attappady the private sector has a profound influence on the marketed NTFP's. Most of the sales through Muduga and Irula had gone through the private sector. During the off seasons the Kurumbas sold atleast 10 kg/ household of products such as black dammar (*Canarium strictum*), Cheevakkai (*Acacia concinna*) and honey to the private shops. During the lean season (monsoon season),

the Kurumbas were not having any job, so income would be very scarce. By the end of May, just before start of monsoon, the Kurumbas brought everything in bulk required for their consumption. The tribes won't be able to make the full payment of the products purchased. So in return, the tribes would give the NTFP items collected to the private shops. Thus they settled the balance amount of the commodities purchased. This always keeps the private channel opened for the marketing of major products such as black dammar, cheevakkai and honey. Shanker and Muraleedharan (1996) reported a similar situation in Kerala, where the private traders provide necessary provisions, clothes and financial assistance to the tribes. In return the tribes sold the collected NTFP to repay the loan. The Mudugas and Irulas sold the collected products to the private shops. They won't sell it in the society, because the procurement price of society was less than that of private shops. Since the Kurumba society was established for the upliftment of the Kurumba community, only the Kurumbas got membership in the society. The bonus (25% of profit) was given to the members of the society during onam festival. So Irulas and Mudugas preferred selling their products to the private shops. Eco Development Committee has under taken a lot of welfare activities for the tribes especially in the Karuvara settlements (Muduga). So few families who had membership in EDC sold black dammar, *Garcinia gummigatta* and honey to EDC. The scheme governance has transformed the EDC as centers of local development and has helped in the improvement of employment opportunities and food security to several tribal families (Chathukulam *et al.*, 2013).

**Table 3.** NTFP marketing done through EDC during 2013-14

Sl. No.	Item	Quantity procured (kg)	Unit price (₹)	Quantity sold (kg)	Selling Price/kg	Price spread	Collectors share (%)
1	Honey	2123	260	2111	340	80	76
2	<i>Canarium strictum</i>	391.5	100 (No grading)	337	200	100	50
3	<i>Garcinia gummigatta</i> (dried)	192.5	220	268	280	60	79
4	<i>Phyllanthus emblica</i>	155.5	20	155.5	30	10	50

**Table 4.** Marketing cost of various NTFPs, marketed through the society

Sl. No.	NTFP	Processing (₹/kg)	Transportation (₹/kg)	Total Marketing cost (₹/kg)
1	<i>Sida rhombifolia</i>	3	2	5
2	<i>Desmodium gangeticum</i>	2	2	4
3	<i>Solanum torvum</i>	2	2	4
4	<i>Callicarpa tomentosa</i>	2	2	4
5	<i>Cyclea peltata</i>	1.5	2	3.5
6	<i>Balanophora fungosa</i>	1.5	2	3.5
7	<i>Pseudarthria viscida</i>	1.5	2	3.5
8	<i>Piper nigrum</i>	1.5	2	3.5
9	<i>Strobilanthus ciliates</i>	1.5	2	3.5
10	<i>Acacia concinna</i>	-	2	2

**Table 5.** Comparison of price between various marketing channels in 2013-14

Sl. No	Item		Procurement Price/kg (₹)		
	Society		Society	Private	EDC
1	Honey		240	270	260
2	<i>Canarium strictum</i>	Grade 1	110	80 (No grading)	100 (No grading)
		Grade 2	65		
		Grade 3	55		
3	<i>Phyllanthus emblica</i>		—	20	20
5	<i>Solanum torvum</i>		42	12-15	—
6	<i>Desmodium gangeticum</i>		43	12-15	—
7	<i>Strobilanthus ciliates</i>		19	15	—
8	<i>Callicarpa tomentosa</i>		40	20	—

### Marketing cost

The marketing cost includes all the expenses incurred in organizing and carrying out the marketing process. The marketing cost incurred by the society for undertaking various activities such as processing and transportation are mentioned in Table 4. Highest processing price was given for *Sida rhombifolia* (₹ 3/kg), whereas ₹ 2/kg was spent for the processing of *Solanum torvum*, *Desmodium gangeticum*, *Callicarpa tomentosa* and *Hemidesmus indicus*.

There was difference in the procurement price of various NTFP's among the different channels. The procurement price of honey was highest for the private shops (₹ 270/kg), followed by EDC (₹ 260/kg) and society (₹ 240/kg)

(Table 5). The private shops and EDC are not doing grading for black dammar, they collected it for ₹ 80/kg and 100/kg respectively. This high price encouraged the collectors to sell these products to private shops and EDC. The society had higher procurement price for medicinal plants than private shops. *Acacia concinna* was procured by the society at (₹ 19-25/kg) whereas private shop procured it for ₹ 15/kg. So for those products which are having high demand among the local people, private shops procured it at a higher rate than that of society and for medicinal products the procurement price was less (Table 5). In Kodagu district of Karnataka the tribes fetched an amount of ₹ 52/kg in the co-operative society, whereas the same honey fetched higher price

(₹ 60-100) when it was sold locally. In the present study society's procurement price was ranging from 73-100 per cent of the private shops procurement price. The society's procurement price of honey was 89 per cent of the private shops procurement price. The procurement price of the major NTFP's had shown an increasing trend over the years, but not a steady one. Honey and root of *Cyclea peltata* had made a significant contribution to the tribal income through its higher price.

## Conclusion

All the three agents were involved in the marketing of NTFP's used for edible and industrial purposes. EDC was not involved in the procurement of medicinal plants. Even though the procurement price given by the private shops and EDC for commercially important NTFP's were higher than that of the Kurumba society, the indigenous people were more benefited by the marketing through the society. Because the EDC and private shops do not share their profit with the collectors, where as the society gives certain percentage of their profit back to the primary collectors in addition to the procurement price. This ensures a better livelihood and income to the indigenous communities. The societies should improve their performance through attaining stability in the quantity of NTFP's procured and sold in the respective years. This is ultimately affecting the tribal livelihood, because in the over stocked years the society will reduce the quantity procured and thus the tribal income is reduced. The help provided by the private shops during the lean seasons to the tribes ensures the private marketing channel to be always active. If societies can provide some help during the lean seasons and start the value addition units of certain valuable NTFP's, it would be a great opportunity for the tribes to enhance their livelihood and income. Thus society can come up as a better marketing agency with diversified products and marketing efficiency.

## Acknowledgements

We use this opportunity to thank the secretaries of Kurumba cooperative society, Chindakki and Eco Development Committee, Mukkali for providing the secondary data which was very essential for this study.

We are thankful to Kerala Agricultural University for providing the funding for this research work.

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