



Problems Faced by Tribals in Collection and Marketing of Non-timber Forest Products (NTFPs) in Kerala, India

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2022/v40i111708

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/92835>

Original Research Article

Received 08 August 2022

Accepted 13 October 2022

Published 20 October 2022

ABSTRACT

Aims: NTFPs play a key role in meeting the needs of tribal communities, especially in medicine, poverty reduction and livelihood improvement. For years tribals were involved in NTFPs collection, and it's the main occupation for Kattunayakan tribes. Considering the importance of NTFPs, the present study focuses on analysing the problems faced by the tribals in Kerala while collecting and marketing NTFPs.

Place and Duration of Study: The present study was conducted in the Wayanad district of Kerala State. A sample of 65 Kattunayakan tribes who have been involved in NTFPs collection for the last six years were selected randomly. The primary survey was conducted through a pre-tested structured questionnaire during February to April 2022.

Methodology: Garrett's ranking technique had been used to determine the most critical problem influencing the tribals in NTFPs collection and marketing. Garrett's Ranking Technique provides a clear picture of the orders of problems into numerical scores. The advantage of this technique is that the problems are arranged based on their severity from the point of view of Kattunayakan tribes. Seasonal calendar used for exhibiting the collection details of NTFPs collected by Kattunayakan tribe by each month.

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Results: The study highlighted that the low price availability of NTFPs, negative interactions with wild animals no guidance and support from government officials for marketing of NTFPs, no training for value addition of NTFPs, and long distances to travel to the marketplace were the major problems encountered by the tribals while collection and marketing of NTFPs

Conclusion: Low price availability of NTFPs, negative interactions with wild animals and inadequate availability of NTFPs in the forest were the major problems identified related to collection of NTFPs. Regarding marketing of NTFPs lack of guidance and support from government officials for marketing of NTFPs, no training for value addition of NTFPs, and long distances to travel to the marketplace were identified as the major problems by the tribals.

Keywords: NTFPs; tribes; collection; marketing.

1. INTRODUCTION

Non-Timber Forest Products (NTFPs) play an essential role in meeting the needs of tribal communities, especially in medicine, poverty reduction and livelihood improvement. It plays a crucial role in the development and livelihood of tribal people worldwide. NTFPs comprise medicinal plants, dyes, mushrooms, fruits, resins, bark, roots and tubers, leaves, flowers, seeds, honey and so on [1]. Center for International Forest Research defined NTFPs as any product or service other than timber that is produced in forests. They include fruits and nuts, vegetables, fish, medicinal plants, resins, essences and a range of barks and fibres such as bamboo, rattans, and a host of other palms and grasses". Global level, more than two billion people dwell in the forest, depending on NTFPs for subsistence, income and livelihood security [2]. NTFPs are essential for sustaining rural livelihoods, reducing rural poverty, biodiversity conservation, and facilitating rural economic growth [3]. More than three-fourths of the populations dependent on NTFPs to meet some of their health and nutritional needs [4]. It is an important source of income for the poor in many developing countries.

It is estimated that the 275 million rural poor in India depends on NTFPs to a certain extent as part of their subsistence or cash livelihoods. There are about 3000 NTFPs yielding plant species in the forest lands of India. Of these, 325 species are commercialized, 1500 species are used, and 1343 are lesser known [5]. The total quantity of NTFPs collected was 1022.146 tonnes with a value 435.86 lakh. Of 5000 plant species identified in the Kerala part of the Western Ghats, 549 are recognized as NTFPs [6].

The three main tribal districts in Kerala are Wayanad, Idukki and Palakkad. The Cholanaickans, Koraga, Kadar, Kattunaikkan and

Kurumbas are the primitive tribes in Kerala who leads a foraging way of life. These people living around the forest area depend heavily on forest resources to sustain their livelihood. The collection of NTFPs is the primary occupation of more than 68 per cent of the tribals in Palakkad, Thrissur and Wayanad districts. Some studies have shown that the NTFP collection contributed 58 per cent of the total income of the tribes. The tribals of Wayanad use 434 flowering plants for various purposes, of which 184 are used for food, 244 for medicinal use, and 68 for other purposes.

Government had established various institutions to help the tribals in collection and marketing of NTFPs. These institutions were Scheduled Tribes Development Department, Kerala State Development Corporation for Scheduled Caste and Scheduled Tribes Ltd, Kerala Forest and Wildlife Department, Tribal Cooperative Marketing Development Federation of India Limited, College of Forestry, Kerala Forest Research Institute, SC/ST Federation and about 24 Tribal Service Co-operative Societies (TSCS).

Various studies show that tribals are facing number of problems in the collection and marketing of NTFPs, low and fluctuating market price, over collection of NTFPs by outsiders, obstruction caused by forest rule and regulations in collection of NTFPs from restricted forest area, lack of transport facilities for marketing of NTFPs, lack of subsidy and bonus and lack of low cost storage facilities [7]. There is a growing market for NTFPs but its large potential is remains untapped by either by the collectors nor the institutions involved in it. Even though efforts have been going for quite a long time, and new agencies, institutions, programmes and schemes have been added year after year with the objective of developing tribal communities and promoting NTFPs. They are still facing lot of problems in collection and marketing of NTFPs.

2. MATERIAL AND METHODS

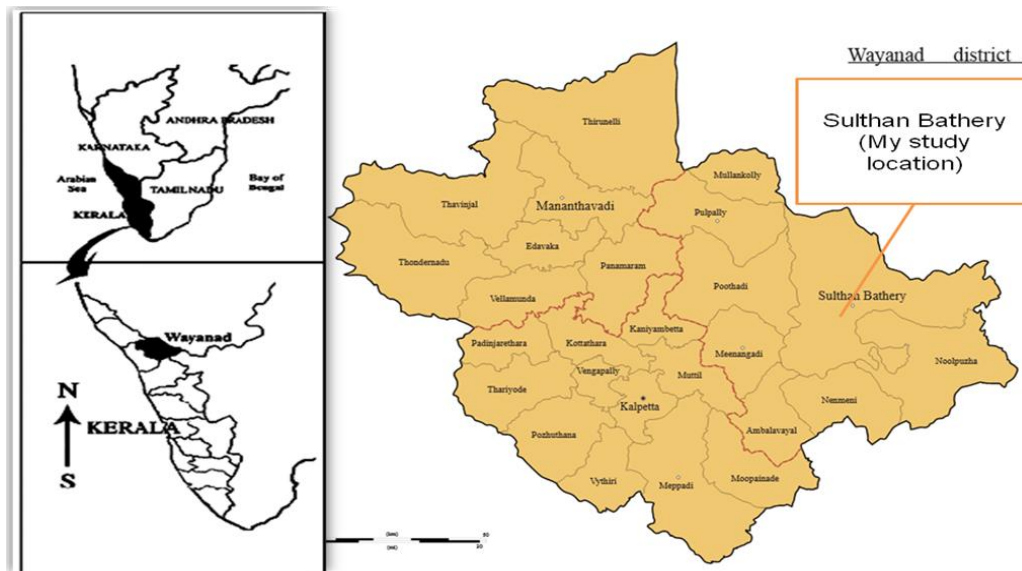


Fig. 1. The map showing the study areas in Wayanad

The study was conducted in Wayanad district. Sixty five Kattunayakan tribes who have been involved in NTFPs collection for the last six years were selected randomly. Primary data were collected individually from tribals using a pre-tested structured interview schedule. Garrett's Ranking technique was used to delineate the problems. The prime benefit of this technique over simple frequency distribution is that the constraints are arranged based on their severity from the respondents point of view [8].

2.1 Garrett's Formula for Converting Ranks into Per Cent is as Below

Percent position = $100 * (R_{ij} - 0.5) / N_j$ Where, R_{ij} = rank given for i th constraint by the j th individual; N_j = number of constraints ranked by j th individual. The per cent position of each rank will be converted into scores referring to the Table given by Garrett and Woodworth (1969) [1]. For each factor, the scores of individual respondents will be added together and divided by the total number of respondents for whom scores will be added. These mean scores for all the problems will be placed in descending order; the constraints will be accordingly ranked.

2.2 Seasonal Calendar of NTFPs

A seasonal calendar is a participatory tool to explore the seasonal collection. It helps to find the type of NTFPs and which month it's been collected.

3. RESULTS AND DISCUSSION

3.1 Socio-economic Profile of Kattunayakan Tribe

Socio-economic status is the measure of the economic and social prospects of the individuals. It indicates the social position of an individual concerning education and occupation. In order to examine the socio-economic characteristics of the respondents, six indicators, viz., age, education, family, type of family, occupation and year of experience in NTFPs collection were selected. The details of socio-economic characteristics of the respondents are represented in the Table 1.

Table 1 shows that majority of the NTFPs collectors were female (73 percent). Most respondents were in the age group of 41 to 50 years (33 percent), followed by 31 to 40 years age group (30 percent). While the age group of 21 to 30 years contained the least respondents (6 percent) (Table 1). Those who haven't gone to the school were considered as illiterates in this study. There was more (57 percent) number of illiterates among Kattunayakan tribe (Table 1). The NTFPs collection was the main occupation and daily wages was the subsidiary occupation. It is clear from Table 1 that NTFPs provide livelihood to Kattunayakan tribe as 85 percent of the tribals were involved in NTFPs collection for more than 20 years.

Table 1. Socio-economic profile of Kattunayakan tribe

Variables	Kattunayakan
	Frequency/ percentage
Gender	
Female	49(73)
Male	18(27)
Age of the respondents (years)	
21-30	4(6)
31-40	20(30)
41-50	22(33)
51-60	15(22)
Above 60	6(9)
Education Qualification	
Illiterate	38(57)
Below SSLC	22(33)
SSLC	7(10)
12 th standard	-
Graduate	-
Main occupation	
NTFPs collectors	67(100)
Subsidiary occupation	
Labour	67(100)
Tribals involved in NTFPs collections (years)	
Below 10	4(6)
11-20	11(16)
21-30	32(48)
31-40	10(15)
41-50	10(15)
Above 50	-
Type of family	
Joint family	67(100)

Source: primary data, Figures in parenthesis shows percentage

Table 2. Seasonal calendar of NTFPs of Kattunayakan tribe in Wayanad

January	February	March	April	May	June	July	August	September	October	November	December
			Honey (Vanthen) BeeWax (Meluku)	Honey (Vanthen) BeeWax (Meluku)	Honey (Vanthen) BeeWax (Meluku)	Honey (Vanthen) BeeWax (Meluku)			Solanum torvum (Chunda) sida rhombifolia (Kurunthotty)	Solanum torvum (Chunda) sida rhombifolia (Kurunthotty)	Solanum torvum (Chunda) sida rhombifolia (Kurunthotty)
Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)	Parmelia dilatata vainio (Kalpasam)

Source: primary data

3.2 Seasonal Calendar of NTFPs of Kattunayakan Tribe in Wayanad

Through PRA tool proposed for monthly collection details of types of NTFPs by Kattunayakan tribe in any year.

Kattunayakan had engaged in the collection of NTFPs throughout the year. They were collecting 5 NTFPs mainly honey (Vanthen), BeeWax (meluku), Solanum torvum (Chunda), sida rhombifolia (Kurunthotty) and Parmelia dilatata vainio (Kalpasam) from the forest. All the collected NTFPs were sold through Schedule Tribal Service Cooperative Society. There is a monthly variation in the number of NTFPs collected. The maximum number of NTFPs were collected in October (3), November (3), and December (3). Maximum, they were collecting three NTFPs in a month. Parmelia dilatata vainio (Kalpasam) is available throughout the year. BeeWax (meluku), a by-product of honey, was also during April - July. Similarly, Solanum torvum (Chunda), and sida rhombifolia (Kurunthotty) were collected during October – December.

Though the collection season is spread over a few months, the quantity collected does not varies. In terms of weight, honey was the primary product collected in large quantities, followed by Parmelia dilatata vainio (Kalpasam). There was no difference in the number of NTFPs collected during different months but its collection may vary. Kattunayakan tribe was mainly involved in the collection of honey (Vanthen), which was followed by Parmelia dilatata vainio (Kalpasam).

The least number was collecting Solanum torvum (Chunda), and sida rhombifolia (Kurunthotty), the quantity collected of these products was also lower.

3.3 Problems Related with Collection of NTFPs

Tribals were asked to express and rank their problems related to collection and marketing. Data were collected from Kattunayakan tribes during the period February to April 2022 and the data were analysed with the help of Garrett ranking. The problems related with collection and marketing is depicted in Tables 3 and Table 4.

Since immemorial, Kerala's tribal people have been involved in collecting NTFPs. Initially, NTFPs were collected for personal consumption. However, as communities faced financial hardships, they began collecting more NTFPs for commercial use. The tribal people had the right to collect NTFPs from the forest and sell them. The problems encountered by tribals in collecting NTFPs are presented in Table 3 with their ranks. The results exhibited that the top 5 problem faced by the Kattunayakan tribe in Wayanad district were the low price availability of NTFPs (1), negative interactions with wild animals (2), inadequate availability of NTFPs in the forest (3), lack of proper instruments for the extraction of NTFPs (4) and behaviour of forest officers (5). Besides this, other challenges like long distances for collecting NTFPs (6), scattered distribution of NTFPs in the forest area (6), flood (8) and lack of demand (9) were also faced by the tribals.

Table 3. Problems related with collection of NTFPs

Sl. No.	Factors	Average Score	Rank
	Low price availability of NTFPs	83	1
	Negative interactions with wild animals	72	2
	Inadequate availability of NTFPs in the forest	65	3
	Lack of proper instruments for extraction of NTFPs	60	4
	Behaviour of forest officers	55	5
	Long distance for collecting NTFPs	50	6
	Scattered distribution of NTFPs in the forest area	46	7
	Flood	41	8
	Lack of demand for NTFPs	36	9

Source: Primary data

Table 4. Problems related with marketing of NTFPs

Sl. No.	Factors	Average Score	Rank
1.	Lack of guidance and support from government officials	77	1
2.	No training for value addition of NTFPs	64	2
3.	Long distance to travel to market place	55	3
4.	Poor road facilities	46	4
5.	Poor transportation facilities	37	5
6.	High transportation cost	23	6

Source: Primary data

The low price received by tribes resulted in reduced quantity of NTFPs collection, low income, lack of interest in NTFPs collection and reluctant entry of youth collectors. It is observed that there is only one pharmaceutical company used to participate in the auction cum quotation of the SC/ST Federation. As a result, company becomes the price maker. It forced the society to procure NTFPs at a lower price from tribals and sell it to the pharmaceutical company. They faced negative interactions with wild animals like elephants, tigers, foxes, monkeys, and wild boars. Which prevented them from collection of NTFPs in deep forest areas. More over continuous decline in the NTFPs found in the forest was due to the absence of forest fire. Kattunayakan tribes were mainly engaged in collecting honey. Lack of proper instruments for honey extraction had affected their quantity of collection of honey and income. They must travel a long distance to collect NTFPs, but they do not have a vehicle for. Self-carriage is their only option.

3.4 Problems Related with Marketing of NTFPs

The tribals must go miles and miles into the deep forest to pick up forest products, dispose them, and purchase daily requirements. Here Kattunayakan tribes were selling the raw NTFPs, and there was no value addition being done by them. The respondents' problems in marketing NTFPs are presented in Table 4. The vital marketing problem faced by the Kattunayakan was lack of guidance and support from government officials for marketing of NTFPs (1), no training for value addition of NTFPs (2), and long distances to travel to the marketplace (3). The other problems faced by the tribals were poor road facilities(4), poor transportation facilities(5), and high transportation costs (6). No proper support from the government for marketing NTFPs had led them to sell NTFPs in raw. Value addition by the tribals will help them to increase their income. With proper training on the collection, marketing and value addition, they can effectively market the NTFPs. The tribals reside in the interior forests. Which were not properly connected with metal roads. The tribals had to travel with the collected NTFPs as a head load to the collection centers. They were forced to sell the NTFPs to the institutions at a lower price.

4. CONCLUSION

NTFPs play an essential role in the sustainable livelihood of the tribes living on forest fringes. NTFPs also serve as an essential source of food, nutrition, medicine, income and employment. However, tribals are facing many problems related to NTFPs. The problems like low price availability of NTFPs, negative interactions with wild animals and inadequate availability of NTFPs in the forest were ranked first, second and third respectively with respect to collection of NTFPs. Whereas problems like lack of guidance and support from government officials for marketing of NTFPs, no training for value addition of NTFPs, and long distances to travel to the marketplace are identified as the major related with marketing. The problem affected the quantity of NTFPs collection, entry of youth as NTFPs collectors and the income of tribals. Therefore it is suggested to have government intervention through institutional support, construction of roads connecting tribals to market place, providing market infrastructure etc. Which are very much necessary to support the tribals in collection and marketing of NTFPs and improving their lively hood.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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