



Perception of Tribals on Role of Institutions in Collection and Marketing of Non-Timber Forest Products (NTFPs)

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aims: Non-Timber Forest Products (NTFPs) form a significant source of livelihood for tribal communities living in the forest area. Various institutions have been established to help the forest-dependent communities (tribals) for collection and effective marketing of NTFPs collected by them. Study aimed to analyse the perception of tribals with respect to the role of various institutions in collection and marketing of NTFPs.

Place and Duration of Study: The present study was conducted in the Thrissur district of Kerala State. A sample of 50 tribals from Kadar tribe involved in NTFPs collection were selected randomly. The primary survey was conducted by administering a semi-structured interview schedule during the month of February 2022.

Methodology: Participatory technique was adopted in elucidating the information from tribals. Venn diagrams were used to determine the role of institutions supporting NTFPs collectors at Vellikulangara, Thrissur district. Venn diagram provides a clear picture of number of institutions, their

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importance, and the effectiveness of rendering services to them. Seasonal calendar used for exhibiting the monthly collection details of NTFPs collected by Kadar tribe.

Results: The study highlighted that the Kadar tribes considered Kerala Forest and Wild Life Department as most important institution. They play predominant role to improve in the livelihood of the Kadar tribe by procuring the NTFPs. They maintain good relationship with this department as they feel that service rendered by them is useful. The role of College of Forestry and Scheduled Tribes Development Department are limited to providing training and implementing various schemes of the government respectively.

Conclusion: Kerala Forest and Wild Life Department, College of Forestry, Scheduled Tribes Development Department and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes play various roles in collecting and marketing of NTFPs. However, timely and effective services of the institutions and effective implementation of the schemes will surely help to improve the livelihood of tribal communities.

Keywords: NTFPs; tribes; Kadar; marketing; collection.

1. INTRODUCTION

Non-Timber Forest Products (NTFPs) are biologically originated non-wood products derived from forests and constitute an essential source of livelihood. In developing nations, forest-based activities, which are primarily in the NTFPs sector, generate 17 million full-time jobs in the formal sector and another 30 million in the informal sector [1]. In several parts of the world, NTFPs in any form have their traditional methods of use and processing. In the year 2019-20, there are 1.6 billion NTFP collectors, consumers, and traders worldwide [2,3]. The Food and Agriculture Organization of the United Nations (FAO) in their report 2020 mention that about 80 per cent people across developing countries are observed to use plants for traditional medicine [4]. Research on the role of NTFPs in income generation has been reported to contribute to 20– 60 per cent of the rural household income of forest fringe communities globally during the year 2018-19 [5,6].

Among the forest products NTFPs play as a major source of income and livelihood of tribals. NTFPs collection and their varieties differ from season to season. In India, approximately 275 million tribals inhabiting harsh climatic conditions depend on NTFPs for their survival and cash livelihoods. In recent decades, much attention has been paid to NTFPs without addressing the ecological factors and environmental impact. In India during the 2019-20, approx 40 percent of total official forest revenues and 55 percent of forest-based employment is provided by NTFPs [7]. In the year 2020 FAO mention that one third of India's rural population is reported to derive substantial household incomes from NTFPs [4].

According to the report of Kerala Forest Statistics 2020, it is estimated that there are about 50 NTFPs, of which the majority of them are medicinal. *Sida rhombifolia* (Kurumthotti Pacha), *Strobilanthes ciliatus* (Karimkurinji) and *Acacia sinuata* (Cheevakai) were the most commonly collected NTFPs and the most valuable NTFPs were Honey (Cheruthen), *Cinnamomum verum* (Vayanapoo) and *Parmelia dilatata* Vainio (Kalpasam). The sales of NTFPs during 2019-20 was around Rs. 291.045 lakhs and the total quantity of NTFPs procured was 474.003 tonnes. There was a significant increase in the collection of NTFPs from 2009-10 to 2019-20. The value of the total quantity of NTFPs collected during 2009-10 was Rs 222 lakhs, which has increased by more than 130 percent to Rs. 291 lakhs in 2019-20 [8].

Before the advent of the Britishers, the tribals used to barter NTFPs to the plainsmen. With the formation of the Kerala Forest and Wild Life Department, they become the monopoly custodian of the NTFPs. The Kerala Forest and Wild Life Department leased out the forest ranges to private contractors to collect all NTFPs other than honey and bee wax for which the department retained its right to collection. To prevent the exploitation of the tribals by these contractors, the state government granted the right to collect NTFPs to the tribes in 1978. Tribal service cooperative societies were started to facilitate this. However, this was discontinued by establishing an apex body of societies, namely the Kerala State Federation of Scheduled Castes and Scheduled Tribes Development Cooperation Ltd (SC/ST Federation), in 1982. The Federation was entrusted with the monopoly for procurement and sales of NTFPs collected by the societies.

At present in Kerala various institutions have been established to support the forest-dependent communities (tribals) to collect and market NTFPs. The institutions are Kerala Forest and Wild Life Department(Forest department), College of Forestry, Scheduled Tribes Development Department, Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes, Tribal Cooperative Marketing Development Federation of India Limited, Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) and about 24 Tribal Service Co-operative Societies [9]. It is time to assess the institutions effectiveness of rendering services to the tribal community. At present, NTFPs is procured from tribals by TRIFED, Societies and the Forest department and marketing through Vanasree eco shops of the forest department, Tribes India retail outlets and e-portal, SC/ST Federation through auction cum quotation. The livelihood of tribal communities cannot be improved, unless they receive updated information and timely service from various institutions. The study was conducted to analyse the perception of the tribals on the role institution in collecting and marketing of NTFPs [10,11].

2. MATERIALS AND METHODS

The study was conducted in Thrissur district of Kerala. For the purpose of research, 50 tribals from Kadar tribe who have been involved in

NTFPs collection were selected randomly. Participatory rural appraisal (PRA) was conducted among tribals to collect primary data by administering semi-structured interview schedule. PRA tools like venn diagram and seasonal calendar were used for analysing the data.

2.1 Venn Diagram

The Venn diagram helps us to know the importance of various institutions and their role in the development of the community from the perspective of the tribals. This tool helps to determine the role of various institutions to the people in a locality and the level of communication with institutions. This exercise is extensively helpful in strengthening the linkages between the shareholders to address the community's needs. Tribals identify institutions and assign circles of different sizes based on their perceived importance, as larger circles mean more important the institution. The closer to the community circle indicates the greater effectiveness of rendering service.

2.2 Seasonal Calendar

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.

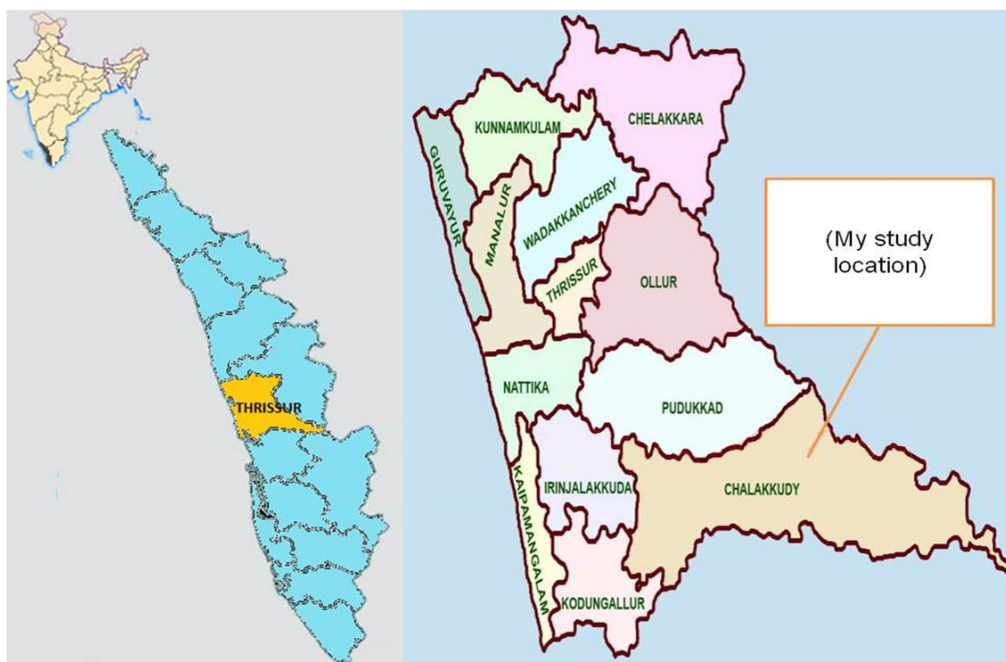


Fig. 1. The map showing the study areas in Thrissur

3. RESULTS AND DISCUSSION

3.1 Socio-economic Profile of Kadar 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 (60 percent). Most respondents were in the age group of 41 to 50 years (46 percent), followed by 31 to 40 years age group (38 percent). While the age group

above 60 contained the least respondents (2 percent). Those who haven't gone to the school were considered as illiterates in this study. There was more number of illiterates among Kadar tribe (60 percent). The NTFPs collection was the main occupation and all the selected respondent are also involved in subsidiary occupation. It is clear from Table 1 that NTFPs provide livelihood to Kadar tribe as 76 percent of the tribals were involved in NTFPs collection for more than 20 years.

3.2 Seasonal Calendar of NTFPs of Kadar Tribe in Thrissur

Monthly collection details of type of NTFPs by Kadar tribe were collected through PRA technique and a seasonal calendar was prepared and shown in Table 2.

Table 1. Socio-economic profile of Kadar tribe

Variables	Kadar Frequency / percentage
Gender	
Female	30(60)
Male	20(40)
Age of the respondents (years)	
21-30	2(4)
31-40	19(38)
41-50	23(46)
51-60	5(10)
Above 60	1(2)
Education Qualification	
Illiterate	30(60)
Below SSLC	5(10)
SSLC	15(30)
12 th standard	-
Graduate	-
Main occupation	
NTFPs collectors	50(100)
Subsidiary occupation	
Labour	50(100)
Tribals involved in NTFPs collections (years)	
Below 11	2(4)
11-20	10(20)
21-30	20(40)
31-40	15(30)
41-50	2(4)
Above 50	1(2)
Type of family	
Joint family	50(100)

Source: primary data

Figures in parenthesis shows percentage

Table 2. Seasonal calendar of NTFPs of Kadar tribe in Thrissur

January	February	March	April	May	June	July	August	September	October	November	December
Acacia sinuata (Cheevakai)	Acacia sinuata (Cheevakai)	Acacia sinuata (Cheevakai)									Acacia sinuata (Cheevakai)
Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)		Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)	Canarium strictum (Kunthirikkam)
Elettaria cardamomum (Yelakkaya)							Elettaria cardamomum (Yelakkaya)	Elettaria cardamomum (Yelakkaya)	Elettaria cardamomum (Yelakkaya)	Elettaria cardamomum (Yelakkaya)	Elettaria cardamomum (Yelakkaya)
						Curcuma aromatica Salisb (Kasthurimanjal)	Curcuma aromatica Salisb (Kasthurimanjal)		Curcuma aromatica Salisb (Kasthurimanjal)	Curcuma aromatica Salisb (Kasthurimanjal)	Curcuma aromatica Salisb (Kasthurimanjal)
						Strobilanthes ciliatus (Karimkurinji)			Strobilanthes ciliatus (Karimkurinji)	Strobilanthes ciliatus (Karimkurinji)	Strobilanthes ciliatus (Karimkurinji)
	Myristica dactyloides Gaertn (Pathirippovu)	Myristica dactyloides Gaertn (Pathirippovu)				Canarium strictum (Kunthirikkam)		Myristica dactyloides Gaertn (Pathirippovu)	Myristica dactyloides Gaertn (Pathirippovu)	Myristica dactyloides Gaertn (Pathirippovu)	Myristica dactyloides Gaertn (Pathirippovu)
Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)			Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)	Honey (Vanthen)
									Phyllanthus emblica (Nellikka)	Phyllanthus emblica (Nellikka)	Phyllanthus emblica (Nellikka)
Piper Spp (Kattukurumulaku Valli)											
Cyclea peltata (Padakkizhangu)											
Garcinia gummi-gutta (Kudampuli)						Garcinia gummi-gutta (Kudampuli)	Garcinia gummi-gutta (Kudampuli)	Garcinia gummi-gutta (Kudampuli)			

Source: PRA

Kadar had engaged in the collection of NTFPs throughout the year. Kadar was collecting 11 types of NTFPs from the forest. Since they depend on the Kerala Forest Wild Life Department, all the collected NTFPs were sold to the forest department. There was a monthly variation in the number of NTFPs collected. The maximum number of NTFPs was collected in December (9), followed by October (8).

Regarding the number of NTFPs collected, the month of October-December was the peak season. The lean season is April –June. For most of the products, the collection season lasts for more than two months, except for *Cyclea peltata* (Padakkizhangu) and *Piper Spp* (Kattukurumulaku Valli), which last for two months. *Canarium strictum* (Kunthirikkam) is available throughout the year, except in June. Honey (Vanthen), one of the high-value NTFPs, was collected for 10 months. The collection season is spread over a few months, but the quantity collected also varies. November was the peak month for the collection of *Canarium strictum* (Kunthirikkam), even though it was collected in other seasons.

Similarly, Honey (Vanthen) is collected from September to June, but the peak month is February. Likewise, the maximum quantity of *Acacia sinuata* (Cheevakai) was collected in February. In terms of weight, *Strobilanthes ciliatus* (Karimkuriinji) and *Acacia*

sinuata (Cheevakai) were the two significant products collected in large quantities, followed by Honey (Vanthen). Most of tribals were engaged in collecting Honey (Vanthen), followed by *Canarium strictum* (Kunthirikkam). During the peak season frequency of collection trips and the number of tribals engage in the collection also increase.

3.3 Venn Diagram

Tribals were requested to assign circles of different sizes based on their perceived importance and place the circle near or far from the community circle. As larger circles mean, the institution is important. The closer to the community circle indicates the greater effectiveness of rendering service. Fig. 2 will provide a clear picture of the important and effective service-rendering institutions for collection and marketing for the Kadar tribe in Thrissur district.

The Venn diagram reveals that Kerala Forest and Wild Life Department, College of Forestry, Scheduled Tribes Development Department, and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes were institutions the people of the Kadar community considered important. They considered Kerala Forest and Wild Life Department (forest department) as effective in rendering the service.

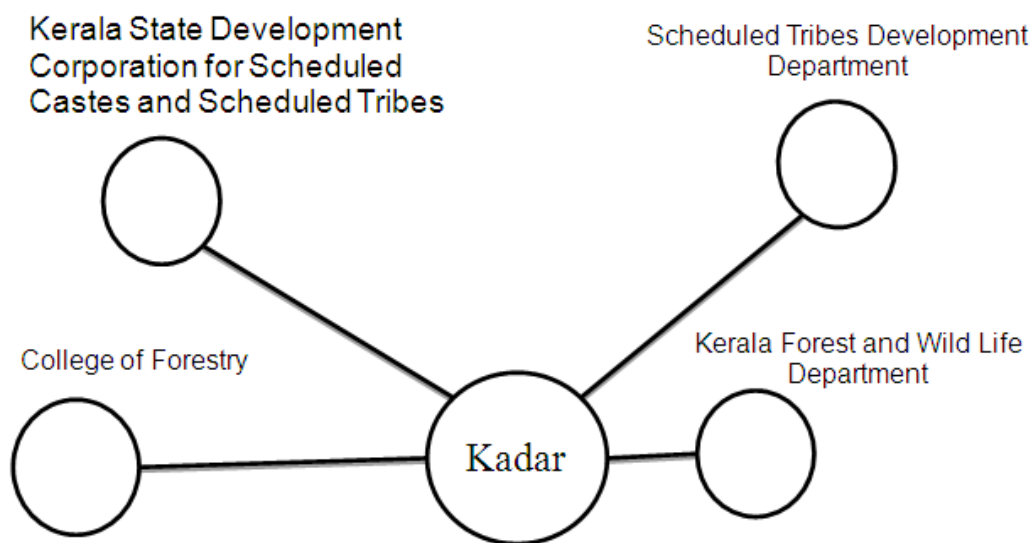


Fig. 2. Venn diagram indicating the role of institutions in the collection and marketing of NTFPs

Source: PRA

Note: Bigger circle- important, Small circle- less important
Circle close to the community indicates greater the effectiveness of rendering service

Kerala Forest and Wild Life Department play a predominant role in the livelihood of the Kadar tribe by regularly procuring and marketing NTFPs. Tribals maintain good relations with the department, as they feel that services rendered by the institution are helpful. The Forest department provides information on schemes and government policies and provides instruments for honey collection. It provides a depot for storing NTFPs, which helps them to extend the shelf life of NTFPs. There was no restriction on the collection of NTFPs by the forest department, which resulted in the increase of the quantity of NTFPs collected. The Kadar tribes were satisfied with the procurement price of the forest department. The debt of tribals has been reduced as the payment for the procurement was on the spot itself. Kadar had benefitted from the raw sales of NTFPs through the vanasree eco shop. None of the Kadar tribes was aware of the e-portal of Vana Samrakshana Samithi (VSS). Kadar had good contact with forest department officials, who regularly visited the colony. The Forest department had provided training for bag making, which helped them to generate additional income.

The College of Forestry has helped the Kadar tribe by providing training on sustainable harvesting and value addition of black dammar, including making black dammar incense sticks. They had received training on sustainable resin harvest by the 'Strip Cut' method and a detailed class about the importance of the Strip cut methods for the black dammar extractions. The institution had provided only one training programme. The Kadar community was satisfied with the training programme conducted by the College of Forestry of Kerala Agricultural University. They had a favourable opinion regarding training topic, content, instructor, venue, and physical infrastructure.

Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes Limited was important as they provide necessary capital assistance through schemes, to run their profitable self-employment ventures in suitable areas and earn income. However, the tribals opined that they had not received any loans from the institution so far. The main reason was that institution do not contact them directly or through phone calls for providing information. All information related to the schemes was published through newspaper. However, they do not have any access to a newspaper in their colony most of them were not aware about such

schemes and not received information so far. None of the officials from the institutions had visited the colony so far.

Scheduled Tribes Development Department were considered important, as they provide financial support through various schemes and shared information on schemes and government policy. So far, the institution has not provided financial support through schemes, and officials rarely visit the colony. Kadar tribe had expressed that they are not receiving updated information.

They need more institutional support from College of Forestry, Scheduled Tribes Development Department, and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes, by making follow up actions and conduct awareness programmes and by providing updated and necessary information to them. The Venn diagram proves that Kadar has little linkage with the institutions except for Kerala Forest and Wild Life Department since they were members of VSS. As NTFPs collection was the primary livelihood, the linkages with the College of Forestry, Scheduled Tribes Development Department, and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes to be strengthened.

4. CONCLUSION

NTFPs are very important to the tribes living in the forest area, which serve as their source of income. Realising the importance of NTFPs, the state and central governments established various institutions to implement various schemes and providing services for collection and marketing NTFPs. Kadar tribe had perceived that Kerala Forest and Wild Life Department, College of Forestry, and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes are the important institutions for them. However, the service provided by these institutions were not effective except Kerala Forest and Wild Life Department. Kadar tribe expressed that Forest Department is rendering effective service by collecting NTFPs at better price in time, spot payment for NTFPs, constructing depot for storage, frequently visiting the colony, and empowering them through various training programmes. These services resulted in increased NTFPs collection, increased income, reduction in dropouts of their children from schools, reduced debt of tribals and reduced migration of tribals. Each institution renders different services. Timely and effective

services of the institutions and effective implementation of the schemes will surely help them to improve the livelihood of tribal communities.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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