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**ANALYTICAL STUDY ON FOREST BASED LIVELIHOODS AND THE
STATUS OF MFPs IN KALAHANDI DISTRICT OF ODISHA**

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ABSTRACT

Odisha is very rich in natural resources and Minor Forest Produce (MFP)/Non-Timber Forest Produce (NTFP) which have been given key importance by the Government as Van Dhan. Similarly, Kalahandi district of Odisha State plays a vital role in the socio-economic, cultural and socio-political systems where the majority of tribal lives are dependent upon the Minor Forest Produce. According to the seasonality, the rural lives are not only dependent on the forest produce for their livelihood but also ensure food security and income generation for their families. Many major and minor Non – Timber Forest Produces are collected from various blocks of Kalahandi district such as Tamarind, Mahula, Saal seed, Hill brooms, Amla, Bahada, Harida, Forest honey, Kendu leaves etc. Through this study an attempt has been made towards a prospective livelihood plan on ‘Tamarind’ cultivation, its usage and its scope for value addition. The study is carried out through questionnaire survey, personal observations, personal interviews and Focused Group Discussions. The findings of the study reveal that the major income is generated through collection of Minor Forest Produce. The study also observed that the intervention of middle man is quite high in these areas as they do not have proper marketing strategy and storage facility. The study therefore, highly recommends for initiating proper storage facility and marketing strategy of Minor Forest Produce i.e., tamarind fruits. The study also brings out the success story of a Producer Group in Th. Rampur block and suggests on transforming the tribal economy through tribal entrepreneurship and recommends a Cluster based approach. It

suggests on identifying key producer groups and train them on making value added products so as to increase their income and sustain their livelihood.

Keywords: Minor Forest Produce, Livelihood, Tamarind cultivation, Value addition

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INTRODUCTION

Forests provide necessary social and economic advantages to all its inhabitants. Economy of the dwellers living in forest space has historically been dominated by subsistence agriculture and different activities. However, non-timber forest produces (NTFPs) play a crucial role among the tribal people and supply a financial gain and income generation. NTFPs like fuel-wood, medicinal plants, wild edible fruits and vegetables etc. are integral part of tribal people.

In Kalahandi District of Odisha, tamarind is available in several areas, mainly in the Tribal Sub Plan Areas i.e. Th. Rampur and Lanjigarh Blocks of the district. The raw tamarind is collected by the tribal people in an unorganized manner. Throughout mercantilism of tamarind the tribal people encounter several issues like handling of enormous quantity which require vital area and storage, client satisfaction for its quality, high transportation price, post-harvest losses and potentialities of blending unwanted materials like dirt, stones etc. that deteriorate its quality. Hence, some strategic policies are needed to make sure the property of NTFP resources and products remain sustainable.

The marketing of Minor Forest Produce(MFP) lies with Tribal Development Cooperative Corporation (TDCC). The tribal people who are unaware about the market price of the products still practice the primitive modes of weighing and usually do not get appropriate price. Sometimes there is deliberate delay for the purchase so as to pull down the price. The TDCC also utilizes middlemen in some cases who exploit the situation to their content. Can't a group of tribals or their associations be allowed or be raised with required license to deal with MFP directly is a big question. In order to

have an in-depth understanding of the issues and challenges let us first have a look at the previous research studies conducted.

RESEARCH STUDIES CONDUCTED

There have been several studies on tamarind cultivation in Odisha, India, which is one of the major tamarind-growing regions in the country. A study titled "Agronomic and economic performance of tamarind (*Tamarindus indica* L.) under different agroforestry systems in Odisha, India" (published in the Journal of Forestry Research in 2019) evaluated the agronomic and economic performance of tamarind under different agroforestry systems in Odisha. The study found that tamarind performed well under agroforestry systems and could generate significant economic returns for farmers. Another study titled "Promotion of Agroforestry Based Tamarind Cultivation: A Study on Challenges and Opportunities in Odisha" (published in the International Journal of Agriculture, Environment and Bioresearch in 2018) analysed the challenges and opportunities for promoting agroforestry-based tamarind cultivation in Odisha. The study identified issues related to land tenure insecurity, lack of technical knowledge, and limited market access as key challenges for tamarind cultivators in the region.

A study titled "Role of Non-timber Forest Products (NTFPs) in Livelihood Security of Tribal Communities in Odisha, India" (published in the Journal of Forest and Livelihood in 2014) examined the role of non-timber forest products (including tamarind) in the livelihoods of tribal communities in Odisha. The study found that NTFPs, including tamarind, played an important role in the livelihood security of tribal communities and contributed significantly to their income.

These studies highlight the importance of tamarind cultivation in Odisha and the need for policies and interventions that support the livelihoods of tamarind cultivators in the region. Moreover, there have been some studies conducted on tamarind cultivation in Kalahandi district of Odisha. "A Study on Tamarind Cultivation and its Marketing in Kalahandi District of Odisha" by S. Mishra and S. K. Sahu analyses the cultivation practices, marketing channels, and economic viability of tamarind cultivation in Kalahandi district. The study found that tamarind cultivation is a profitable enterprise

for small and marginal farmers, but there are various challenges in marketing and value addition."Socio-Economic Status of Tamarind Growers in Kalahandi District of Orissa" by R. K. Nayak et al. assesses the socio-economic status and livelihoods of tamarind cultivators in Kalahandi district. The study found that tamarind cultivation is an important source of income for small and marginal farmers, but there are various challenges in terms of market access, credit availability, and input supply.

The study entitled "Value Chain Analysis of Tamarind in Kalahandi District of Odisha" by A. K. Mohanty et al. examines the value chain of tamarind in Kalahandi district, including the production, processing, and marketing stages. The study found that there is potential for value addition and product diversification in tamarind cultivation, but there are various constraints such as lack of infrastructure, inadequate support services, and limited market linkages. Overall, these studies highlight the importance of tamarind cultivation for the livelihoods of small and marginal farmers in Kalahandi district of Odisha. However, there are various challenges in terms of marketing, value addition, and infrastructure that need to be addressed to enhance the economic viability and sustainability of tamarind cultivation.

Tamarind cultivation is an important source of income for many tribal communities in Odisha. In many parts of the state, tribal communities have traditionally been engaged in tamarind cultivation as a means of generating income and sustaining their livelihoods. For many tribal people in Kalahandi, tamarind cultivation serves as both a principal and supplementary source of income. Tamarind trees are typically grown as part of agroforestry systems, which means that they are often integrated with other crops and livestock to create a diverse and sustainable farming system. In this way, tamarind cultivation can provide a steady source of income throughout the year, even during periods when other crops may not be in season. Tamarind cultivation can also help tribal communities meet a range of livelihood concerns. For example, tamarind trees can provide shade for other crops, helping to mitigate the impact of heat and drought. They can also help improve soil fertility and reduce erosion, contributing to the overall health of the agroforestry system. However, tamarind cultivation alone may not be sufficient to meet all of the livelihood concerns of tribal people in Odisha. Many tribal communities also face challenges related to access to education, healthcare, and basic infrastructure

like roads and electricity. Addressing these broader concerns is essential to improving the overall well-being of tribal communities in the state. In order to have a broader outlook, let us take a look at the different government schemes and programmes which are implemented for NTFP cultivators in Odisha.

SCHEMES AND PROGRAMS ON MFPs

The government of Odisha has implemented several schemes and programs to support the cultivation and marketing of Non-Timber Forest Products (NTFPs) in the state. These programs are aimed at promoting sustainable livelihoods, improving forest conservation efforts, and supporting the growth of rural economies.

One of the flagship programs for NTFP cultivators in Odisha is the Odisha Forestry Sector Development Project (OFSDP), which is a World Bank-funded project aimed at promoting sustainable forest management and improving the livelihoods of forest-dependent communities. Under this program, the government has provided support for the development of NTFP-based value chains, including technical assistance, capacity building, and market linkages. The government has also implemented several other programs and schemes to support NTFP cultivators in Odisha, including: Van Dhan Vikas Yojana which aimed at supporting tribal communities engaged in the collection and processing of forest produce, including NTFPs. The program provides support for infrastructure development, capacity building, and market linkages.

Tribal Development Program which aimed at supporting the overall development of tribal communities in Odisha, including through the promotion of NTFP-based livelihoods. The program provides support for income-generating activities, such as NTFP cultivation and processing, and also supports the development of basic infrastructure like roads and healthcare facilities. National Bamboo Mission which aimed at promoting the cultivation and marketing of bamboo-based products, including NTFPs like bamboo shoots and leaves. The program provides support for bamboo cultivation, processing, and marketing, as well as research and development activities.

These schemes and programs provide various forms of support for tamarind cultivators, including financial assistance, technical support, market linkages, and capacity building. However,

the actual impact of these programs on tamarind cultivators may vary depending on factors such as the outreach of the programs, the level of implementation and coordination between different schemes, and the level of awareness and participation among tamarind cultivators.

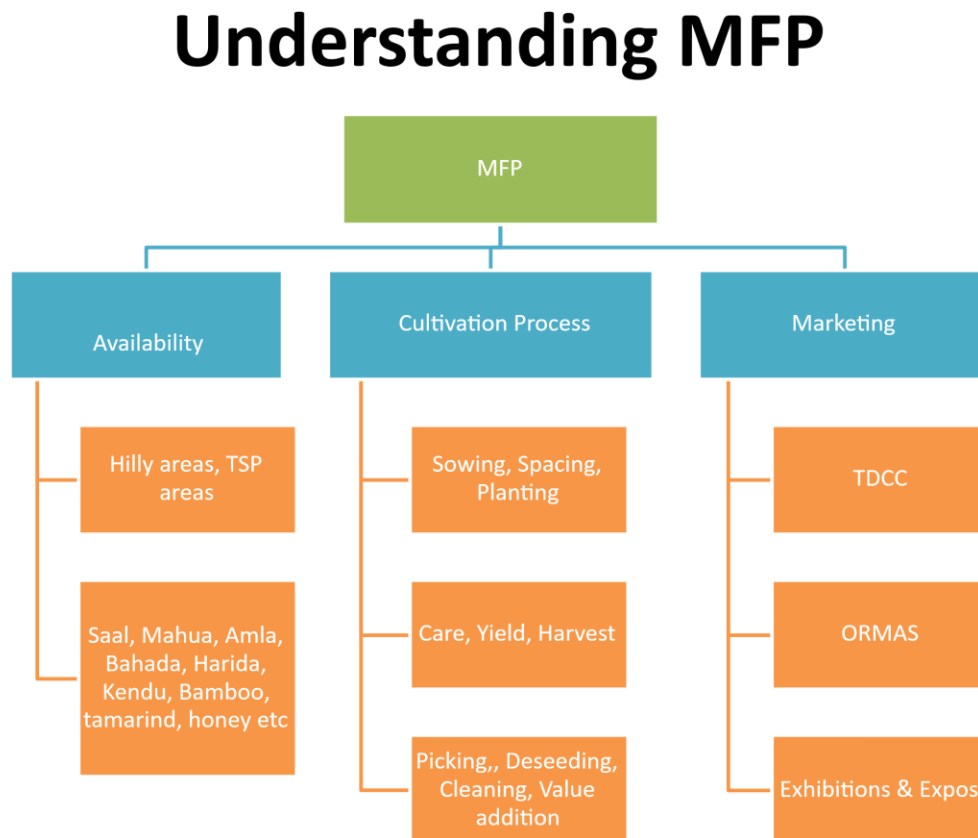
ISSUES & CHALLENGES OF MFP CULTIVATORS

While these programs and schemes are aimed at supporting NTFP cultivators in Odisha, there are several challenges and limitations in their implementation. Some of these include:

- **Limited outreach:** Despite the availability of several schemes and programs, many NTFP cultivators in Odisha are not aware of these programs, or do not have access to them due to limited outreach and awareness-building activities.
- **Limited funding:** While there are several programs and schemes aimed at supporting NTFP cultivators, the overall funding available for these programs is often limited. This can lead to challenges in scaling up and sustaining NTFP-based livelihoods over the long term.
- **Limited market linkages:** While some programs provide support for market linkages, many NTFP cultivators still face challenges in accessing markets and getting fair prices for their products. This can discourage them from investing in NTFP-based livelihoods.

Overall, while the government of Odisha has taken steps to support NTFP cultivators in the state, there is a need for greater coordination and collaboration between different programs and schemes, as well as more targeted outreach and capacity-building activities to ensure that NTFP cultivators can fully benefit from these initiatives. But still, we can see that the NTFP cultivators face several challenges and they are unable to sustain their livelihood, Thus, this study aims to address those challenges and suggest recommendations for a “Cluster based approach”.

The process of MFP cultivation, in particularly tamarind, which has been explained in the form of a simple figure given below. The figure explains the entire process of MFP availability, cultivation process and marketing.

Figure 1**Understanding MFP**

(Mishra.K,2025)

The district administration has taken bold steps during the pandemic by dictating higher prices keeping in view the economic upliftment of the tribals. The rate of Rs. 30 per kg for raw tamarind has been raised to Rs. 36 per kg. But the question is, are all the tribals of the remote areas aware of this? Have TDCC and other lease holding organizations taken steps to communicate the tribals properly about this revision of price? Have the agents served a catalytic role in providing right information, by leaving their personal interests which is closely connected with the ignorance of the tribals? Is it not the right time to give a way to healthy competition by nourishing the tribal groups to do their own

job? With all these questions in mind, this study tries to come out with some suggestions and possible solutions to transform the tribal economy through tribal entrepreneurship. The study also suggests on identifying key producer groups and train them on making value added products so as to increase the tribal income and sustain their livelihood.

OBJECTIVES OF THE STUDY

The current study is an effort to explore the involvement of rural tribals towards MSP (Minor Forest Produce) in Kalahandi district. The key objectives are:

- To understand the dynamics of forest resource and their contribution towards sustainable livelihood for the tribal people.
- To study the different livelihood opportunities in Kalahandi district.
- To know the Minimum Support Price (MSP) for MFPs, value chain process, and strategies of marketing of MFPs in Kalahandi
- To explore tamarind cultivation as a livelihood opportunity and its sustainability
- To examine the scope of value addition in tamarind cultivation in the district

APPROACH & METHODOLOGY

APPROACH

The research approach is divided into two aspects i.e. (i) Data Collection & (ii) Data Analysis. Collection of data was captured through primary and secondary sources whereas data analysis has been made by using qualitative and quantitative approach through tabular and graphical presentation. The study basically follows mixed-method approach where both open and close ended questionnaire was introduced; simple statistical and text analysis were made.

METHODOLOGY

For the present study, four villages namely Kaniguma of Th. Rampur Block, Mohingiri of M. Rampur Block, Trilochanpur of Lanjigarh Block & Sikerguda of Bhawanipatna Block were selected through purposive sampling method where tamarind is available in good quantity. The selection of village is mainly based on two criteria i.e. (i) Villages with a household of more than 100 and (ii) Make sure of

availability of tamarind trees and collection of MFPs is a major source of their livelihood. Within the four villages, 40 numbers of respondents were randomly selected. A semi-structured interview schedule was prepared to gather the information from the respondents. The study was made by using both qualitative and quantitative data both from primary and secondary sources including practical filed visits. The study was conducted and methods were used through questionnaire survey, personal observations, personal interviews and Focused Group Discussion as PRA (Participatory Rural Appraisal) tool. The data were analyzed by using simple statistical tools like numbers, averages and percentages.

STUDY AREA

Kalahandi is one of the tribal dominated districts of Western Odisha. The area is dominated by Scheduled Tribe and Scheduled Caste. People earn their living from forest products, agriculture and wage labor. As per 2011 census, 92.26 per cent of population of Kalahandi district lives in rural area. The district is not only known for its culture, tradition and socio –political systems but also endowed with vast natural resources and livelihood opportunities.

Currently a number of livelihood activities have been pursued by the people of the district, particularly through the Self-Help Groups and assisted through different schemes of the Government like Mission Shakti, Odisha Livelihood Mission, Integrated Tribal Development Agency, Horticulture, Fisheries and Animal Husbandry Development, Agriculture, Watersheds etc. The most prominent activities among the farm sector are paddy, Vegetable cultivation, Mushroom cultivation, Ragi/Millet cultivation, Goat rearing units, Backyard poultry, Pisciculture, Turmeric cultivation, groundnut cultivation, onion cultivation etc. Similarly in Non-farm sector few Self-Help Groups are engaged in Minor Forest Produce collection, Dokra casting, Terracotta and pottery activities as well as bamboo crafting. The Odisha Livelihood Mission, Odisha Rural Marketing and Supply Society (ORMAS) and Rural Self Employment Training Institute (RSETI) also support the different Women Self Help Groups (WSHG) members on micro entrepreneurship activities through skill development trainings and entrepreneurship development programs.

SWOT ANALYSIS

The district has a large cultivated area with forest cover and forest produce like Kendu leaves and other minor forest products are plentifully available. The strengths, weaknesses, opportunities and threats (SWOT) analysis (see Figure 1) in order to understand the importance of exploring MFPs, tamarind in particular as a sustainable livelihood opportunity for the tribal communities.

Figure 2

SWOT Analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Availability of raw materials. • Seasonal livelihood option for the rural poor. • Suitable climate for harvesting of tamarind fruits as it has high medicinal values & health benefits (https://www.webmd.com/diet/health-benefits-tamarind) • Availability of village level producer groups (SHGs & PGs) 	<ul style="list-style-type: none"> • Unavailability of Infrastructure (storage) • Lack of maintenance of good condition after collection and storage. • Lack of effective price system • Lack of institutional support
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Value addition at village level using local skill. • Large quantity demand in neighbouring States. • Availability of buyers and good demand. • Scope for value addition in the form of deseeding cake & packaging. • Export potential with higher income. • Plenty scope of plantation. 	<ul style="list-style-type: none"> • Price fluctuation • Traders' cartel • Predominance of middle man. • Advance sale of product before harvesting • Migration of local people to other State/Districts.

(Mishra.K,2025)

ECONOMIC ACTIVITIES AND AVAILABILITY OF RESOURCES IN KALAHANDI

The economic activities in the district can be mainly divided into two sectors i.e. The Primary sector and the Secondary sector. The main products of primary sector are– agriculture and allied activities, fishing, collection of minor forest produce such as Tamarind, Hill brooms, Mahula flower, Jhuna, Tola, Honey, Fire wood, Amla, Harida, Kendu Leaves etc. which generate livelihood and according to their seasonality the people are involved in collection of it.

In secondary sector activities, as there are no processing units, people have to go outside the district for secondary sector activities. This is one of the biggest reasons for migration in these areas. Most of the people are engaged in labour work and simultaneously they collect/harvest tamarind in bulk quantity every year but it's a matter of concern that due to lack of sensitization on value addition of the NTFP/MFP products, farmers usually sell them to the broker (middle men) every year.

EXPLORING LIVELIHOOD OPPORTUNITY - TAMARIND & ITS VALUE

Tamarind (*Tamarindus Indica*) is of huge food value especially in the southern districts of Odisha and other southern States of India. Besides, in some places, tamarind seed powder is also used as cattle feed as well as it is one of the major components for making canvas for world famous Pattachitra Paintings of Raghurajpur in Puri district of Odisha.

Tamarind fruit is a major source of livelihood for forest dwellers in the districts of Koraput, Malkangiri, Nabrangpur, Rayagada and Kalahandi in Odisha State. The people of Kalahandi have been traditionally involved in this activity from a very long time. Atmosphere for the tamarind trees are decent as it produces good quality of fruits every year and the tribals are well equipped as they are familiar with the process of plucking and harvesting. The collection of tamarind generally starts from February-March and continues up to June. From boosting our immunity to keeping our liver and heart safe from diseases, tamarind keeps our health good. Tamarind is rich in fiber, magnesium and calcium. It has no fat content. Studies suggest that eating tamarind daily might actually help in weight reduction since it contains medicinal values. However, keeping in view the huge availability of Tamarind in majorly five blocks of the district and its scope for value addition, the present study focuses on creating livelihood opportunities of tamarind cultivation. It also focuses on suggestions to transform the tribal people as entrepreneurs through MFPS.

SCOPE FOR VALUE ADDED PRODUCTS

Kalahandi district is known for its vast forest reservoir and non-timber forest products are major source of livelihood of rural people of this area and tamarind fruit is one among them. Tamarind is available in plenty in almost all the regions of this district. People are habitually engaged in this activity.

Collection of tamarind and its selling is a key livelihood activity for large number of tribals of Lanjigarh, Th. Rampur, M. Rampur and Bhawanipatna blocks. Tamarind is commonly used as cooking item of every household. There is also high demand on its value-added products in urban areas such as Pickle, Jam, Sauce, Candy, Juice, pulp, paste etc. If well managed, then it can be transported to various districts for marketing as it has excellent demand if marketed through Super Bazaars, Big bazaar, Reliance Fresh, Grocery Shops and other outlets. Raw tamarind can be peeled and deseeded. Later it can be converted to value added products. Moreover, the seed powder is used as cattle feed, Kernel powder for health benefits. The powder is also used in textile companies, plywood makers, pharmacy and herbal companies.

NEED FOR INVOLVEMENT OF PRODUCER GROUPS (PGS)

There are around 22 Women Self-help Groups (WSHGs) working on tamarind activities in village levels. The basic idea is to organize the poor of the poorest under one roof through forming WSHG's and build the institution as strong, effective and self-sustainable. In this activity though tribal women are meeting few of their basic daily needs but to sustain their livelihood, they still do not have access to big markets to sell their products. This is one of the major reasons which compels them to sell the raw tamarind fruits at a minimum price and thus it reduces their profit margins.

However, at some places like in Gunpur Village of Th. Rampur Block, efforts have been taken by the district administration to train the members of four WSHGs on value added products of tamarind. The women of Maa Saraswati Producer Group of Gunpur are reaching to local markets and local Haats and trying to sell their products. Where there is large quantity, the big whole sellers/traders need to be attached through the local WSHGs and Producer Groups. The villagers need to be trained up for extracting value-added products from tamarind.

Figure 3

Pictures taken during field visit of Maa Saraswati Producer Group on Tamarind Value addition



Unlike Maa Saraswati, Producer Groups (PGs) can be formed who can look after the operational of the process of tamarind collection and establishment of processing units. A cluster-based approach can also be initiated in the tamarind concentration areas. The members will be chosen from the vulnerable groups and the poor households. The president, secretary and treasurer can be the office bearers and involvement of each producers group for scale up of the plan. It can be followed up through record keeping and formation of the producer group for expansion.

DATA TABULATION & ANALYSIS

Table 1

Distribution of Respondents as per their Occupational Pattern

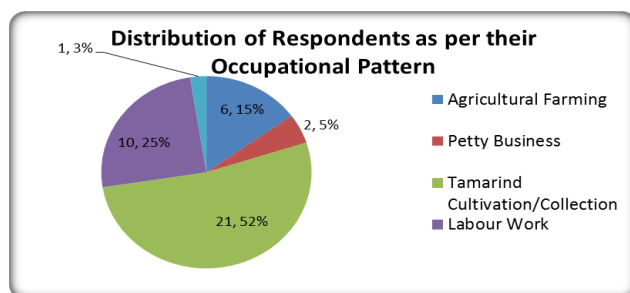
Sl No	Type of Occupation	No of Respondents	Percentage
1	Agricultural Farming	6	15.00
2	Petty Business	2	5.00
3	Tamarind Cultivation/Collection	21	52.50
4	Labour Work	10	25.00
5	Non-Farm Activities	1	2.50
6	TOTAL	40	100.00

Note: The table demonstrates the distribution of the respondents as per their occupational patter in the study area.

The table-No-01 shows the distribution of the respondents as per their occupational pattern. As per the table majority 21(52.50 %) number. of respondents are engaged in Tamarind cultivation/Collection, 10(25 %) number. of respondents are engaged in Labour Work, 06(15 %) number. of respondents are engaged in Agricultural Farming and 02(5 %) number of respondents are engaged petty business & 01 (2.50 %) of respondents are engaged in Non-Farm (Potter) activities.

Figure 4

Distribution of Respondents as per their Occupational Pattern



Note: The figure demonstrates the distribution of the respondents as per their occupational pattern in the study area.

It is clear from the above table that, it is a traditional way of cultivating/collecting tamarind fruits and they are getting benefit out of it. As replied, all respondents are involved in tamarind collecting and selling activity. However, in addition to it, for increasing the economic status, some of the family members are also engaged in other occupational works as listed in the table. (See the above figure) represented in the form of pie chart.

Table no – 2

Distribution of respondent as per their monthly income

Sl No	Monthly Income	No of Respondents	Percentage
1	Less than 2000	19	47.50
2	2000-4000	11	27.50
3	4000-6000	8	20.00
4	More than 6000	2	5.00
5	TOTAL	40	100.00

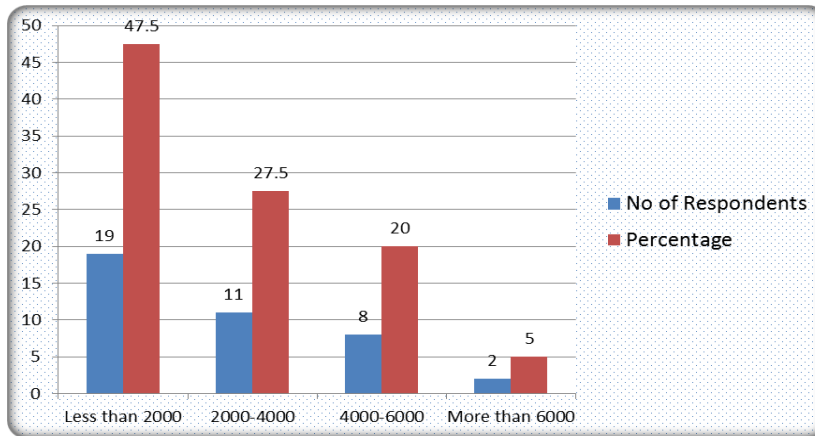
Note: The table demonstrates the distribution of the respondents as per income in the study area.

The table-No-02 shows the distribution of the respondents as per their monthly income. As per the table majority 19(47.50 %) number. of respondents are earning less than Rs. 2000 per month, 11(27.50 %) number. of respondents are earning Rs. 2000-4000 per month, whereas, 08 (20 %) number. of respondents are earning Rs. 4000-6000 per month, whereas, 02 (5 %) number. of respondents are earning more than Rs. 6000 per month.

number. of respondents are earning Rs. 4000-6000 per month and 02(5 %) number. of respondents are earning more than 6000 per month.

Figure 5

Distribution of respondent as per their monthly income



Note: The figure demonstrates the distribution of the respondents as per their income in the study area.

It is clear from the above table that, due to intervention of middle man, the local farmers/SHGs (Producer Groups) are not getting the actual price as per the market rate. However, it is recorded from the villagers that if there can be a storage unit (cold storage) especially for tamarind fruits and market linkages by the Government then not only they can keep the fruits safe but also, they can sell it in the urban areas with best price. The above table is represented in the form of column diagram.

Table 3

Distribution of respondent as per their seasonal MFP collection

SI No	Seasonal MFP	No of Respondents	Percentage
1	Kendu Leaves	7	17.50
2	Amla	4	10.00
3	Forest Honey	2	5.00
4	Tamarind &Mahula	24	60.00

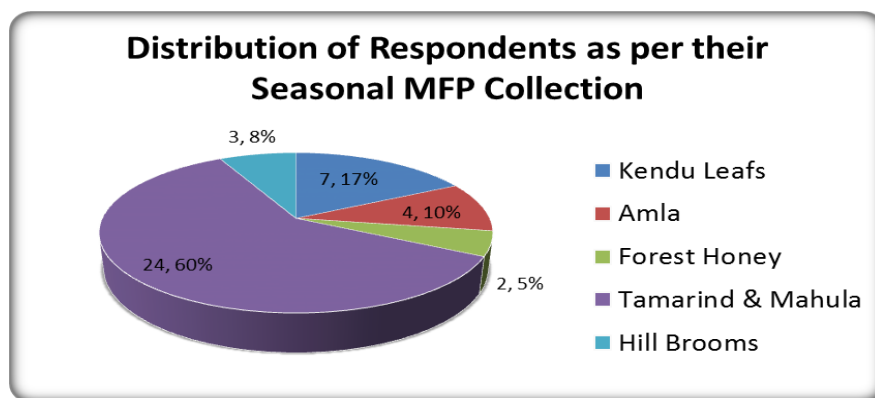
5	Hill Brooms	3	7.50
6	TOTAL	40	100.00

Note: The table demonstrates the distribution of the respondents as per their seasonal MFP collection

The table-No-03 shows the distribution of the respondents as per their seasonal Minor Forest Produce collection. As per table majority 24 (60 %) number of respondents are collecting Tamarind & Mahua, 07 (17.50 %) number. of respondents are collecting Kendu Leaves, 04 (10 %) number. of respondents are collecting Amla, 03 (7.50 %) number. of respondents are collecting Hill brooms, whereas 02 (5 %) number of respondents are collecting Hill Brooms.

Figure 6

Distribution of respondents as per their seasonal MFP collection



Note: The figure demonstrates the distribution of respondents as per their seasonal MFP collection

Out of the total respondents, all of them are collecting tamarind with other MFPs but majority of the respondents are collecting Tamarind & Mahua as per its seasonality. When asked, the villagers mentioned that none of them are aware of value-added products of tamarind fruit and its health benefits. And because of less concern, they are selling it to the middle man of Chhattisgarh & Andhra

Pradesh every year. Mrs. Mamata Majhi of Kaniguma Gram Panchayat of Th. Rampur Block mentioned that if proper training & exposure could be given to us then definitely livelihood & living of standard will increase. The above table is represented in the form of pie chart.

Table 4

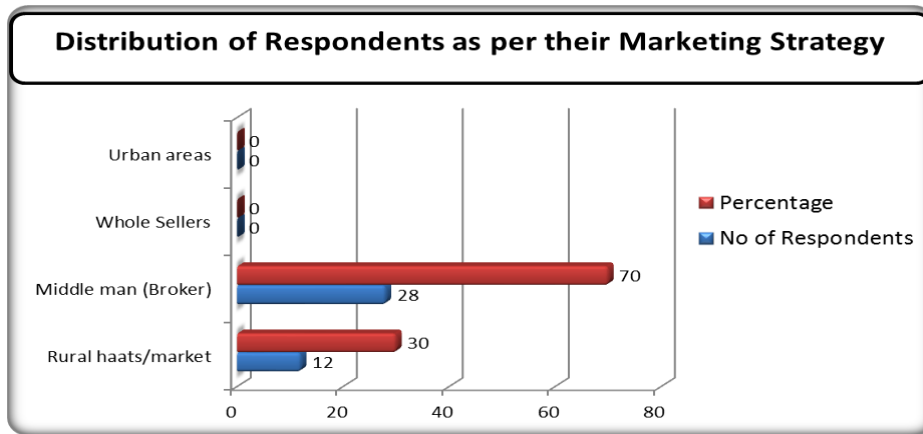
Distribution of respondent as per their marketing strategy

Sl. No	Strategy of Marketing	No of Respondents	Percentage
1	Rural haats/market	12	30.00
2	Middle man (Broker)	28	70.00
3	Whole Sellers	0	0.00
4	Urban areas	0	0.00
5	TOTAL	40	100.00

Note: The Table demonstrates the distribution of respondents as per their marketing strategy.

The table-No-04 shows the distribution of the respondents as per their strategy of marketing. As per table majority 28 (70 %) number. of respondents prefer for selling the tamarind fruits directly to the middle man whereas 12 (30 %) number. of respondents prefer to go to the rural/local market.

The above table indicates that none of the respondent sells tamarind fruits straight to big whole sellers because of scam in getting money properly in time as well as during weighting (measuring). Similarly due to distance & transporting cost, none of them are going to any of the town areas for selling tamarind. Some of the respondents mentioned that as soon as they sell it to the middle man, they can migrate to other state for labour work. Similarly, one of the village members mentioned that the villagers also borrow money from the brokers during emergency. The above table is represented in the form of bar diagram.

Figure 7***Distribution of respondents as per their marketing strategy***

Note: The figure demonstrates the distribution of respondents as per their marketing strategy.

MAJOR FINDINGS & SURVEY RESPONSE

During the survey, some of the key findings have been identified and the responses made by the respondents have been reduced to the following key findings of the study.

Lack of storage facilities-Almost all the family members of household are engaged in collecting and processing of tamarind. The main source of collecting tamarind is from forest as well as from their courtyard. Due to lack of proper storage facility, they are keeping tamarind fruits in bamboo baskets which got infected by maggots after few months.

Less scope for marketing the products- Initially the farmers are involved in preparing deseeded tamarind cake but no scope for making value added products. Linkages to the market and storage facility have become a big issue for the farmers and the villagers and they are getting no support from the Government in this regard.

Involvement of middlemen-Approximately 100 kgs of tamarind is being collected in Durbhata village of Lanjigarh block every year. Due to distress sell, most of the farmers are selling raw tamarind at the rate of Rs. 35/- per kg as well as processed (deseeded) tamarind at the rate of Rs. 50/-

per kg to the middle men of Chhattisgarh and Andhra Pradesh whole sellers and very less farmers are selling it in the local haat/market which is minimum 15-20 Kms away from their villages. It was noticed during the survey that none of the farmers are aware of value-added products of tamarind fruit. There is no scope of tamarind/tamarind seed processing in nearby places or towns. None of the farmers are aware of the benefits of tamarind seeds and they are selling to the same middle men at the rate of Rs. 10/- per kg.

Lack of training and exposure-None of the farmers or PG/SHG members have received training or exposure visit on value added products of tamarind so far but the six number of members of producer groups i.e., Maa Manikeswari SHG, Maa Mangala SHG, Maa Durga SHG, Maa Hira Nila SHG, Maa Chandi SHG &Maa Shakti SHG of Lanjigarh Block have showed their keen interest for exposure visit and training on making of value-added products to enlarge their business through establishing processing unit in the village.

Migration- One of the major issues in the villages is increasing migration. The villagers in the study areas are migrating to other States like Andhra Pradesh and Chhattisgarh for labour work. The younger generation is reluctant to take up any work in their own village as they are not getting better income throughout the year to sustain their livelihood.

SUGGESTIONS & RECOMMENDATIONS

The products are having various marketing scope. Raw tamarind can be sold directly to the bulk buyers directly. Deseeded pulp can be sold to bulk buyers and deseeded blocks/cakes can be sold in retail market. Sales through Exhibition: Consumer products like blocks/cake, sauce, powder, candy can be directly sold in local market, retail counters/mall as well as Exhibition. Sales through marketing tie-up to establish market in metros and other cities, sole distributors can be fixed for regular marketing. Seeds can be sold to different users.

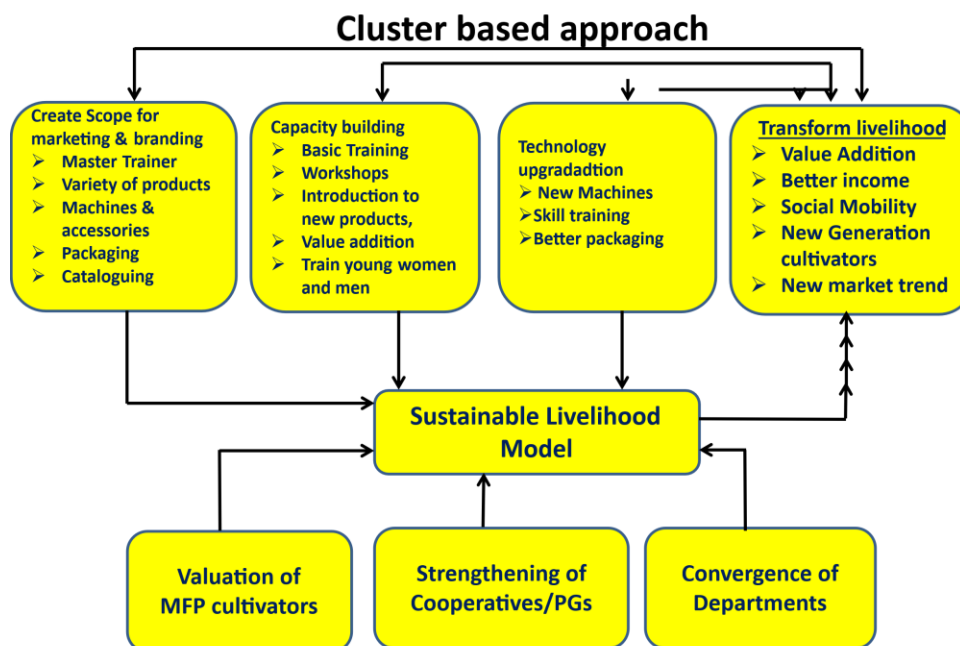
There is no availability of infrastructure buildings or storage units, which can be used as processing house. For operation of tamarind Processing Unit and storage, two numbers of Producer Groups can be formed i.e. in and around 200 households can be involved. These households will be the primary producer of the tamarind and they can operate this tamarind processing unit and take care of the storage. These Producer Groups can be the whole and soul owner of this processing unit from

operation to maintenance and care taking. Tamarind Processing Unit and storage expansion can be planned.

A Storage Godown/Building can be hired/constructed in their locality for initiate this activity. The godown will be managed by producer groups. Storage facility is also required for Tamarind as it would prevent the distress sell and will help in profit maximization. Primary processing shall be done at the SHG/Producer level; all 20 SHGs will purchase the cake preparation machine for processing and value addition. Provision for pulping technology, preservation technologies, and food processing technologies will be kept there for quality output. Packaging technologies along with packaging materials can also be procured by the Producers Group. Processing unit is also required for tamarind deseeding and tamarind cake, so that rural collector can gain more from the finished items.

Skill upgradation on grading, cake preparation, packaging & marketing etc. should be planned. Replication of the activity (in other areas), formation of more number of producer groups, and enhancement of the final product line through introduction of modern technologies with standardizing the product (packaging, branding etc.)

Value Addition strategies should be initiated like Brand Building, Proposal for setting up of a medium size processing facility (powder, paste). In order to provide maximum benefit to primary collectors through value addition, it is suggested that maximum raw material available in the area will be converted into seedless Tamarinds, cakes and concentration. Value addition will be made at WSHG level and this will ensure self-employment opportunities to individual beneficiaries. A sustainable livelihood model in the form of Cluster based approach is recommended which is given in the form of figure.

Figure 8**CLUSTER BASED APPROACH*****Convergence Activity***

In the above paragraphs, focus is towards value addition of the tamarind fruits for making pulp, candy, sauce, jam, pickle etc. to promote the livelihood of the tamarind farmers and make them entrepreneurs. Besides, the convergence activities like processing of seeds to powder for uses in Pharmacy & Herbal companies, textile manufacturers and cattle feed, plywood makers, health benefits etc. can be made with installation of seed processing plant which will ultimately link to the tamarind processing unit. This will not only generate the employment activity of the tribal areas but also strengthen their livelihood.

The tamarind farmers can also be given assistance/support under PMEGP (Prime Minister's Employment Generation Programme). Though some of the rural tribals are only collecting tamarind fruits in their courtyards, therefore other convergence activities like Goat/Sheep rearing unit, Country (desi) poultry can also be provided to them under Mission Shakti or OLM or ITDA or KKDA any other Departmental schemes

CONCLUSION

Thus, through this study it can be concluded that the tribal communities can transform their livelihoods and can be successful entrepreneurs. They can be examples for the other members of their communities and lead others too. The convergence of different departments would also help the MFP dependent communities to improve their socio-economic standards and earn better income. MFP is a major source of income and through value addition of MFP produce like tamarind; they can make variety of products and create a branding of locally available resources.

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