MAJOR NTFP ITEMS AND THEIR MARKETING POTENTIALS AT HAZARIBAGH FOREST AREA IN JHARKHAND - A CASE STUDY

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Introduction

The existing forest management system does not take into account sustainable Non-Timber Forest Products (NTFP) management. A good number of NTFPs are being collected traditionally by the villagers and tribal population for their domestic use. This age-old practice is under stress due to over-exploitation of the forest resources.

The existing forest Working Plans are not NTFP-oriented. Sustainable harvest of NTFP can outweigh the revenue realized from timber and timber produce, serve as a powerful tool for poverty alleviation and provide a unique way of integrating utilization and conservation of tropical forests.

A small group of traders are earning a lot from the unorganized trade by depriving the villagers and the national exchequer.

In the present study an attempt has been made to focus on the availability of the selected economically important NTFPs, their collection pattern along with the marketing status and impact on the JFM system at two separate Forest Ranges under Hazaribagh Forest Division in Jharkhand.

Methodology

The investigation has been carried out in two separate phases based on Pre-set Questionnaires. In the first phase, extensive field surevey was undertaken in collaboration with the Forest Department and local NGOs.

Forest areas under the jurisdiction of a VFPC/VFMPC unit were taken as the base units for the investigation. A pre-structured questionnaire format was used for the collection of the relevant field information.

Field survey was conducted in three different stages. Information was collected through Household Survey, Participatory Rural Appraisal (PRA) Techniques and from visits to the local markets. Information thus collected has been further cross-checked from official records wherever available.

Information collected has been analysed and presented in two separate Case studies.

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The study was been carried out in two different areas of Hazaribagh Forest Division in Jharkhand with coppice Sal forests on Chhotanagpur Plateau. The sketch map of the study area has been presented in Figure 1.

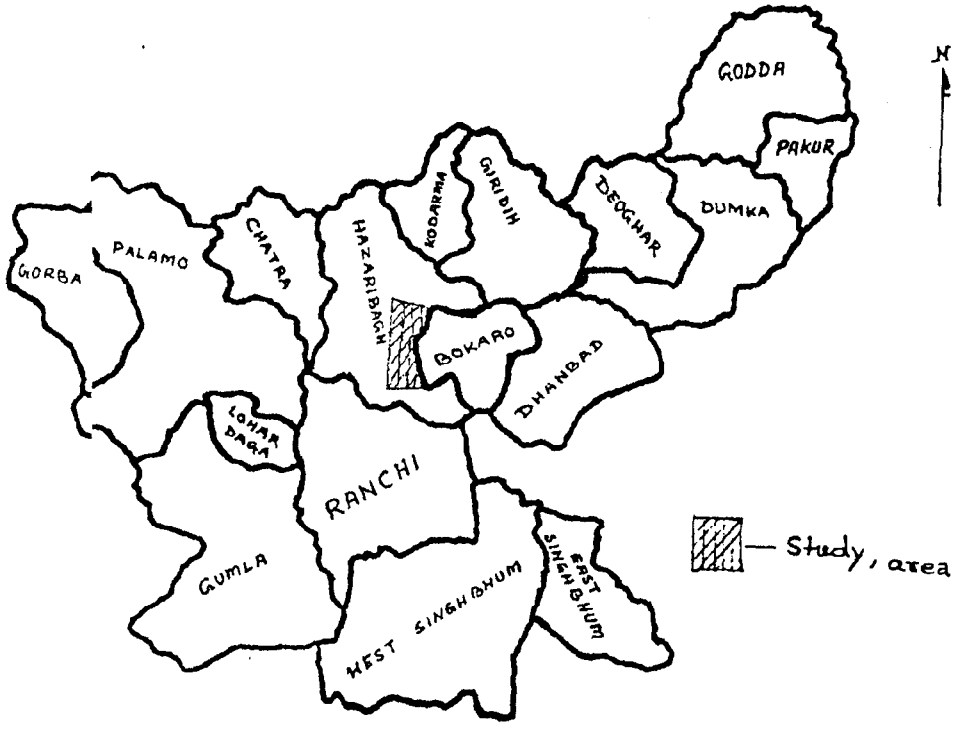
Results and Discussions

Ramgarh Forest Range, Site-1

General Information : Ramgarh Forests, a hilly terrain with Deciduous Sal Forest over an area of 21,576.64 ha. Due to high biotic pressure nearly 80% of the forest was degraded. Since 1987 with the intervention of 'SHADE' a local NGO, the villagers were motivated to form an informal committee for protecting their local forests that got formalised as Village Forest Management and Protection Committee (VFMPC) by the State Forest Department in 1990. It took one and half decades after committee formation to reduce illegal felling to 20 to 30%. Forests started rejuvenating with many upcoming local species in the areas.

For the present investigation three Forest Beats viz. Ramgarh, Gola and Bhurkunda are considered. The dominant trees found in the area are *Shorea robusta* (Sal), *Madhuca latifolia* (Mahua), *Lagerstoemea parviflora* (Sidha), *Diospyros melanoxylon* (Kendu),

Fig. 1



Jharkhand Administrative Map

Pterocarpus marsupium (Piar), *Aegle marmelos* (Bel) and *Dendrocalamus* spp. (Bamboo) along with the associate species of *Terminalia tomentosa* (Asan), *Schleichera trijuga* (Kusum), *Acacia catechu* (Khair), Pesar, *Semecarpus anacardium* (Bhelwa), *Acacia nilotica* (Keonzhar), *Emblica officinalis* (Amla) etc. (Table 4). Part of the forestland within Ramgarh Range is under coal mining operation. A number of wild animals viz. species of *Panthera tigris* (Tiger), *Panthera pardus* (Leopard), *Axis axis* (Spotted deer), *Cervus duvauceli* (Swamp Deer), *Melurus arsinus* (Bear), *Felis chaus* (Wild cat), *Macaca radiata* (Monkeys) and even the Tribal viz. Birhor, Pharia, Bediya, Munda, Uraon, in the forests have been forced to migrate to nearby West Bengal and adjoining areas due to gradual degradation of the forests and consequently non-availability of food.

Altogether 169 forest villages exist within the Ramgar Forest Range with a population of about 90,000 in 17,790 household. About 58% of the population belong to SC-ST category and the remaining 41% belong to extremely Backward Classes and meagre 1% population belong to General Caste. According to a conservative estimate about 85% people in the area are living below poverty line and lead a substandard life. The predominant Forest Tribes living in the area are: Munda, Bediya, Karmali, Uraon and Santhal. NTFP forms a major food and livelihood resource for tribal population apart from harvested crop over traditional marginal land farming and earning of wages as daily labour during the lean period. A good number of people occasionally migrate as labourers to the neighbouring States. The literacy rate among the male and female ranges between 30-35% and 10-15% respectively. The detail information about the study area has been presented in Table 1.

NTFP Availability and Collection pattern

The *Shorea robusta* (Sal) leaves, *Diospyros melanoxylon* (Kendu) leaves and Lac are the 3 major NTFP's collected by the forest villagers mainly for commercial gain while *Madhuca latifolia* (Mahua) is used both for commercial as well as domestic uses. The local Forest Department solely collects the *Diospyros melanoxylon* (Kendu) leaves while the *Shorea robusta* (Sal) seed although available in abundance are not collected due to absence of marketing facilities.

Many medicinal herbs and edible items are also collected by the local tribal and the members of the VFMPC Units for their domestic consumption. The monetary value of these items is not known. For example, the VFMPC members in the region for household uses regularly consume different types of vegetables, insects, tubers, fruits, seed, resins etc.

Out of the total 17,790 households present in 101 villages in the study area, about 9% of the representative families could be surveyed. These families are directly involved with regular collection and marketing of the NTFP items. In general, the women folk (about 53%) and children (29%) are the main NTFP collectors in Ramgarh. Others also collect NTFP for their domestic consumption only. Some villagers cultivate a few major NTFPs like *Madhuca latifolia* (Mahua) and Lac traditionally of their own.

Table 1

Forests, NTFP and the people of Ramgarh and Petarbar ranges, Hazaribagh Forest Division, Jharkhand.

Sl. No.	Item	Ramgarh	Petarbar
1.	Total Forest Area	53941.60	28,412.35
2.	Types of Forests	Protected Deciduous Sal Forest	Protected Deciduous Sal Forest
3.	No. & name of the Forest Beats	1. Ramgarh, 2. Bhuskunda, 3. Gola	1. Petarbar, 2. Bagiyari, 3. Bahadurpur
4.	No. of forest villages present within the study area	169	130
5.	Total No. of forest villages surveyed	101	102
6.	No. of Active VFPCs functioning in the area	77	120
7.	Total No. of Households	17790	34889
8.	Total No. of families involved in NTFP collection	1656	1970
9.	Ethnicity or caste composition	SC-20%, ST-38%, EBC-41%, FC-1%	ST-40%, SC-5%, EBC-50%, FC-5%
10	Main Tribal community involved in the NTFP collection	Munda, Bediya, Karmali, Uraon, Santhal	Manjhi, Munda, Karmali
11.	Other community involved in the NTFP collection	Rabidas, Ghasi, Kurmi, Teli, Koeri, Kumhar, Muslim etc.	Dom, Ghasi, Rabidas, Kurmi, Teli, Muslim etc.
12.	Literacy Rate/Percentage of VFPC members	Male: 30-35% Female: 10-15%	Male: 35-40% Female: 10-15%
13.	Main sources of livelihood of community	Forest Produce, Traditional Agriculture & Daily wages	Forest Produce, Traditional Agriculture & Daily wages
14.	Major NTFPs found in the Area	Mahua (*Madhuca latifolia*) flower & seed, Sal (*Shorea robusta*) leaves, Kendu (*Diospyros melanoxylon*) leaves	Mahua (*Madhuca latifolia*) flower & seed, Sal (*Shorea robusta*) & Kendu (*Diospyros melanoxylon*) leaves and Lac
15.	No. of village markets present in the study area	12	9
16.	No. of Traders/Brokers involved in NTFP Marketing	100 (approx.)	50 (approx.)

Among the major NTFPs considered at Ramgarh forest area, *Madhuca latifolia* (Mahua) flowers and *Shorea robusta* (Sal) leaves are collected by maximum number of people i.e. 1,264 and 1,426 respectively (Table 2) and in larger quantity of *Madhuca latifolia* (Mahua) (e.g. 2346 quinatals per annum) and processed *Shorea robusta* (Sal) leaves (15,839 bundles per annum, where each bundle consists of 1,000 numbers). Per capita collection rate is also high in case of *Madhuca latifolia* (Mahua). Other significant NTFP items found in Ramgarh are *Madhuca latifolia* (Mahua seed), *Lacifer lacca* (Stick lac), *Emblica officinalis* (Fruits), *Morus alba* (Tasar Silk cocoon) and *Agaricus* spp. (Mushroom) that are collected in lesser quantity. Average collection days are more in case of Sal leaves (270) and lowest for Lac and Silk (Tasar) cocoon. The peak period for major NTFP collection continues from January to March in these Tropical Dry Deciduous Forests.

Petarbar Forest Range, Site-II

Genral Information : The Forest Range petarbar comprised of 3 territorial Beats viz. Petarbar, Bagiyari and Bhadurpur under the Bokaro Forest Division has similar geomorphology, physiography and NTFP structure as that which exists in Ramgarh (Table 1). There is little

Table 2

Quantification of Annual Flow and the estimated Income from Selected NTFP at Ramgarh

Sl. No.	Major NTFP Item collected	No. of collectors	Percapita Collection Rate (qtls/yr)	Average Collection Period (days/yr)	Amt. sold in Local Market (qtls/yr)	Average Market Price (Rs./Unit)	Net Income (Rs./yr)
1.	Mahua flower (*Madhuca latifolia*)	1264	1.85	45.0	2346.50	6/kg	1407900.00
2.	Mahua seed (*Madhuca latifolia*)	820	0.85	40.0	697.16	7/kg	488012.00
3.	Lac (Stick)	414	0.24	30.0	99.73	70/kg	698110.00
4.	Sal leaves (*Shorea robusta*)	1426	11.10 bdls*	270.0	15839.00 bdls	12/bdl.	190068.00
5.	Mushroom (*Agaricus* spp.)	28	0.02	45.0	2.39	30/kg	8790.00
6.	Silk cocoon (*Morus* spp.)	27	98.14 (nos.)	30.0	2650.00 (nos.)	1.5/pc.	3975.00
7.	Fruits (*Emblica officinalis*)	108	0.52	45.0	56.36	6/kg	33816.00
						Total =	28,30,671.00

*bdls = bundles

difference in the socio-economic profile in Petarbar from that exists in Ramgarh. This is also true for the way of living, ethnic composition, literacy etc. Total Forest area at Petarbar is around 11,365 ha. Out of total 130 forest villages (total population about 3.49 lakhs) 102 villages (78%) have been surveyed. Of these only 18% or nearly 2,000 people are directly connected with the marketing of NTFP items.

Income Generation from NTFP

The net annual income from the sale of different items of the NTFP in this area estimated is more than Rs. 36,38,808 for 4,259 individual collectors. In other, the per capita income from direct sale of the NTFP items comes to around Rs. 854.38 at Petarbar whereas average monetary value of per ha NTFP production is only Rs. 320. There are altogether 9 village markets in the region and about 50 Traders/Agents/Brokers are directly involved in this trade. About 120 VFMPC Units have been formed since 1990 onwards in this area.

The average annual income in Petarbar from the sale of dried flower of *Madhuca latifolia* (Mahua), *Lacifer lacca* (Stick Lac), *Madhuca latifolia* (Mahua) seed and silk cocoon comes around Rs. 14,07,900, Rs. 6,98,110, Rs. 4,88,012 and Rs. 3,975 respectively. *Shorea robusta* (Sal) leaves are collected for maximum period of 270 days/year (approx.) while *Morus alba* (Silk cocoon) and Lac are collected only in 30 days. The average unit price for *Madhuca latifolia* (Mahua) flower is Rs. 6/kg, Lac Rs. 70/kg, *Agaricus* spp. (Mushroom) Rs. 30/kg, *Madhuca latifolia* (Mahua) seed Rs. 7/kg and processed Sal leaves Rs. 12/1,000 nos. The unit price is same as Ramgarh Forest Range. The details of the comparative analysis of annual flow of selected NTFPs and their estimated income for Ramgarh and Petarbar are presented in Tables 2 and 3 and also through Figs. 2 to 7.

NTFP Market and Marketing Process

As such no specific market exist for selling and buying of the different NTFP items collected under the present investigation. The villagers, who are also the collectors, sell the different NTFPs such as dried *Madhuca latifolia* (Mahua) flower, *Shorea robusta* (Sal) leaves, *Diospyros melanoxylon* (Kendu) leaves, *Eulalopsis binata* (Sabai) grass, *Agaricus* spp. (Mushroom) etc. in the villager market and/or weekly "Haats" in the region.

In general the process of marketing as prevails in the region could be grouped under 4 different stages/level on the basis of flow of materials.

Level-1 : Collector/FPC members ------> the village/Block level Local Agent/ Trader/Broker

Level-2 : Village/Block level Agent ------> Sub-Division/Wholesale Traders/ Stockists

Level-3 : Sub-Division/District Traders ---> State/ National level Market (i.e. Wholesellers)

Level-4 : Wholesellers --------> the Retailers or Importers (Foreign Country).

Besides some traders/agents/ brokers also buy these items directly from the collectors i.e. the villagers. In spite of collection of huge quantum of materials annually under different NTFPs,

Table 3

Quantification of Annual Flow and the estimated Income from Selected NTFP at Petarbar

Sl. No.	Major NTFP Item collected	No. of collectors	Per capita Collection Rate (qtls/yr)	Average Collection Period (days/yr)	Amt. sold in Local Market (qtls/yr)	Average Market Price (Rs./Unit)	Net Income (Rs./yr)
1.	Mahua flower (*Madhuca latifolia*)	1570	1.37	45	2156.15	6/kg	1293690.00
2.	Mahua seed (*Madhuca latifolia*)	922	0.71	40	655.44	7/kg	458808.00
3.	Lac (Stick)	465	0.51	30	238.95	70/kg	1672650.00
4.	Sal leaves (*Shorea robusta*)	1164	13.93 bdls.*	270	16220 bdls.	12/bdl.	194640.00
5.	Mushroom (*Agaricus* spp.)	44	0.02	45	1.00	30/kg	3000.00
6.	Silk cocoon (*Morus* spp.)	18	55.55 (nos.)	30	1000 (nos.)	1.5/pc	1500.00
7.	Fruits (*Emblica officinalis*)	29	0.86	45	2.50	6/kg	1500.00
8.	Kusum (*Schleichera trijuga*)	47	0.46	20	21.70	6/kg	13020.00
							Total = 36,38,808.00

*bdls = bundles

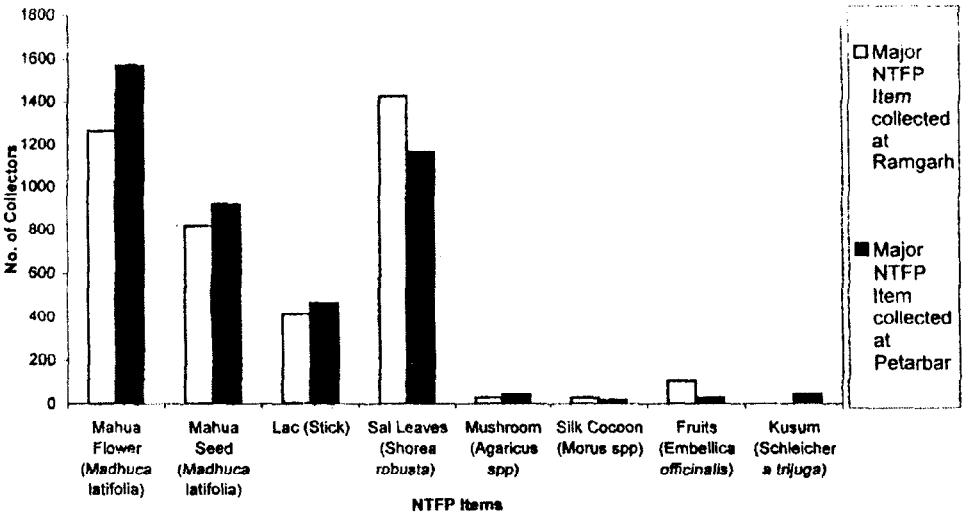
the villagers are unable to earn any reasonable income on regular basis and eventually remains as poor as ever. The general marketing process in most of the study area has been presented through a flow chart in Fig. 8.

On the other hand, the Middlemen (Wholesalers/Traders/Brokers) who are in a very small group are usually grabbing the major share of the gross income from the NTFP selling.

The purpose of the present study is to identify the villagers/FPC members, quantum and the return involved in the NTFP marketing process in the rural area. Interestingly we found the number of FPC members and quanta of NTFP are quite high but the return to the collectors/ FPC members is unfortunately very low. It still remains a mystery, how a limited group of Middlemen/Traders monopolises the whole system depriving all for a long period.

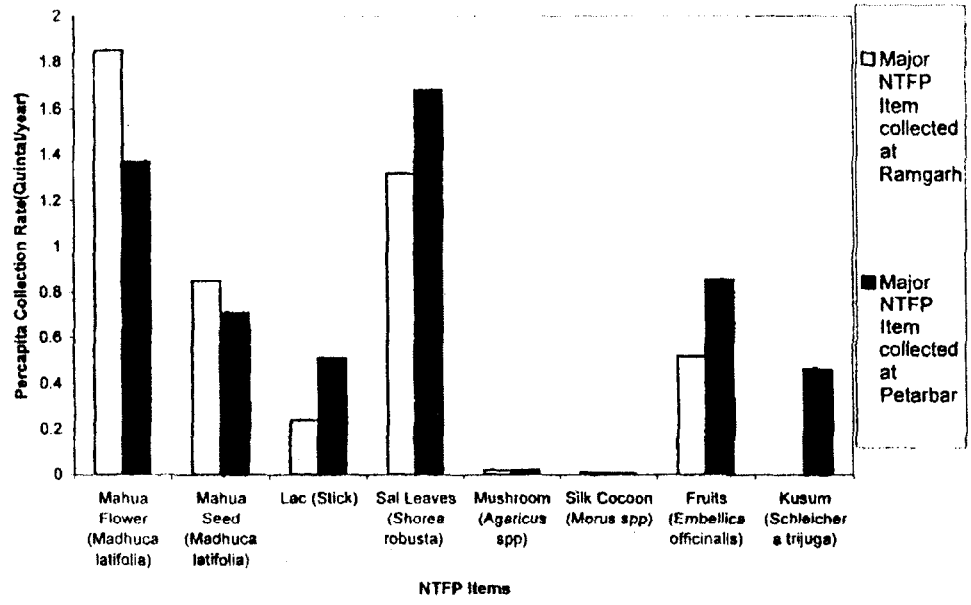
No effort/attempt from Government or Non-Governmental sources seems to provide any change or break to the vicious cycle.

Fig. 2



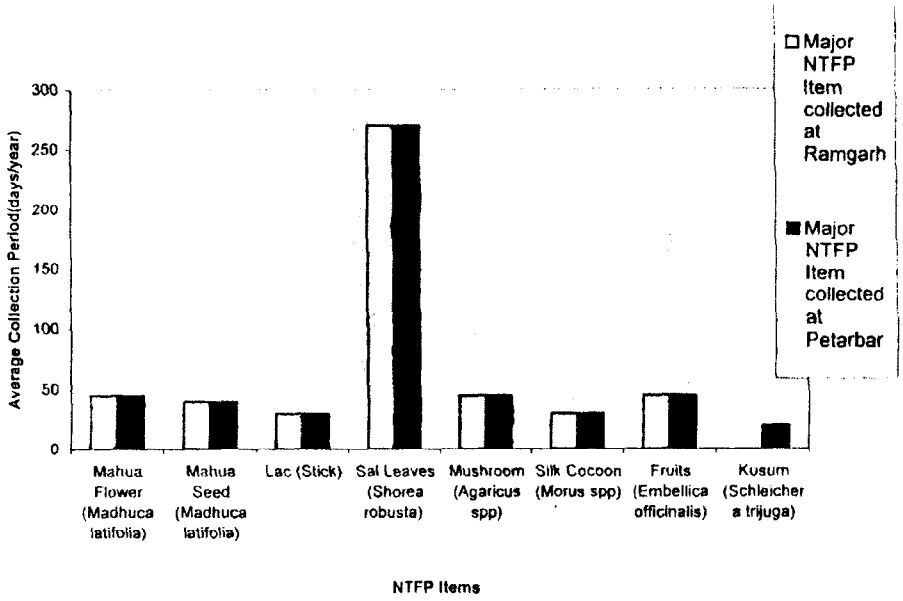
Comparative analysis of Annual Flows and the estimated income from selected *NTFPs*

Fig. 3



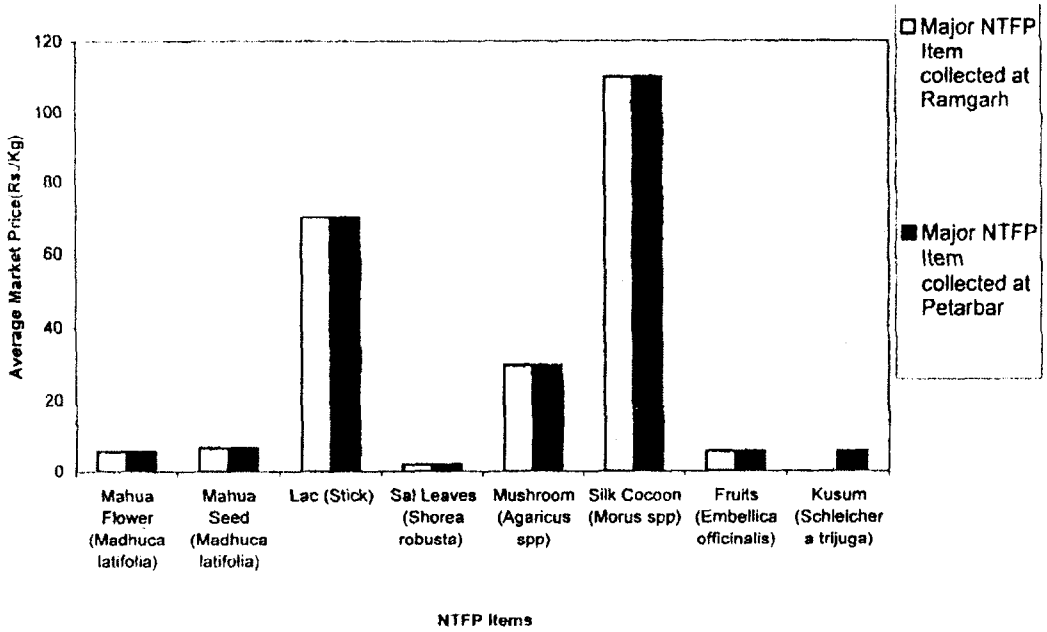
Comparative analysis of Annual Flows and the estimated income from selected NTFPs

Fig. 4



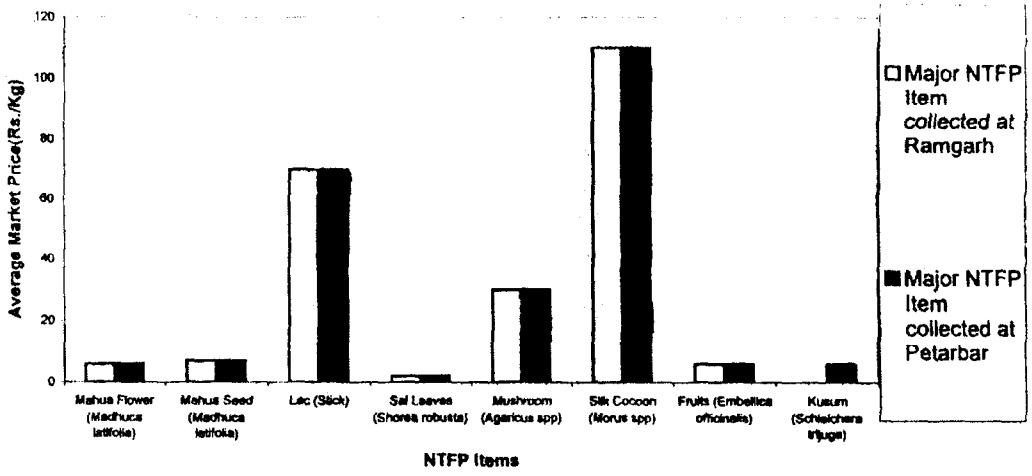
Comparative analysis of Annual Flows and the estimated income from selected NTFPs

Fig. 5



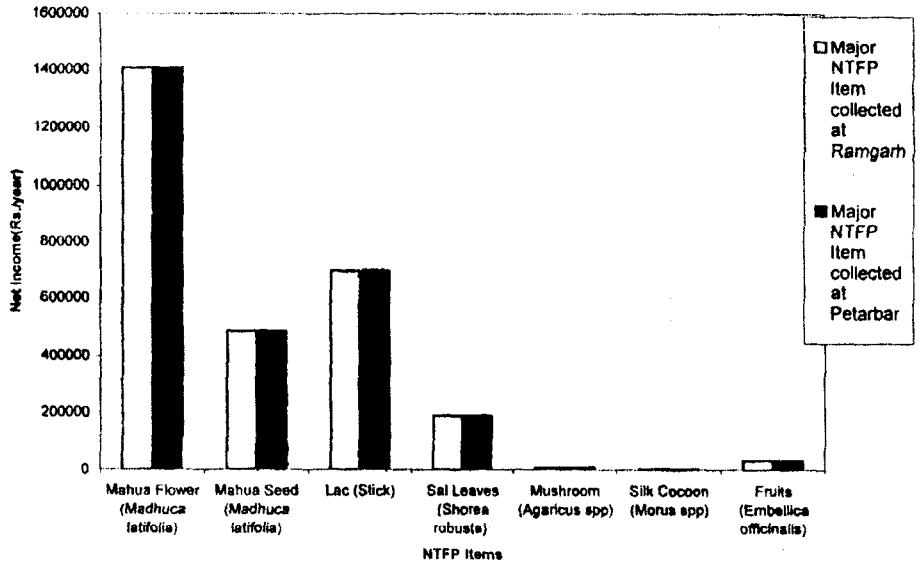
Comparative analysis of Annual Flows and the estimated income from selected NTFPs

Fig. 6



Comparative analysis of Annual Flows and the estimated income from selected NTFPs

Fig. 7



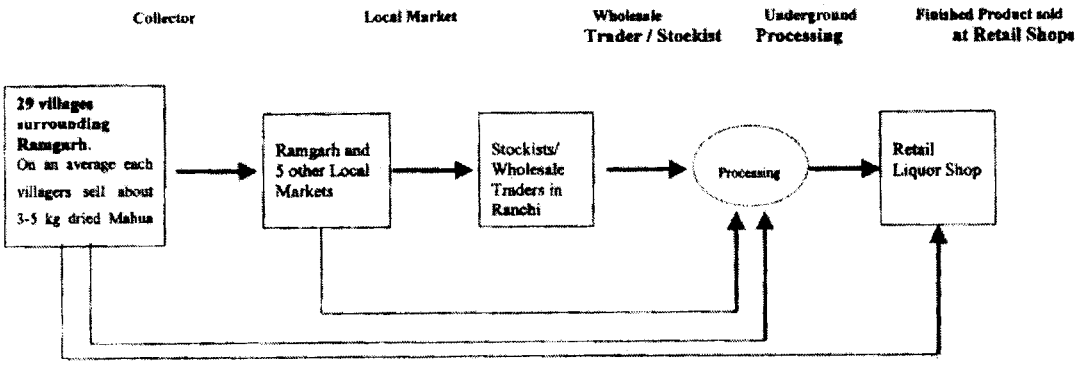
Comparative analysis of Annual Flows and the estimated income from selected NTFPs

Thus there is an urgent need for a clearly defined NTFP market policy by the Government taking all necessary aspects so that there exists a transparency in NTFP transaction and the genuine users/ beneficiaries are no more exploited.

Fig. 8

Sample Market Survey

NTFP : Dried Mahua (single crop), Season : 2 months (mid-March to mid-May)
Weekly market : Gola, Chitarpur, Petarbar



Processing units : Mostly un-organised by individual family. The products find their way to retails shops in and around Ranchi.

Note : In recent years due to presence and intervention by MCC Group, collection, marketing, processing and sale of the final product, i.e., liquor has been drastically reduced in comparison to the quantum being handled before the intervention by the MCC Group.

A typical route channel of the NTFP item

Conclusions

Despite of high potential of different NTFPs for the use of pharmaceutical and small-scale cottage industries it is unfortunate that NTFP is neglected in the prevailing forest management practices. Further information pertaining to status of NTFP availability in different forests is usually far from complete. The information about the NTFP grown/ available in different forests are usually obtained from the study of the village markets "haats", markets in Sub-Divisional towns, etc. adjoining the forest areas.

Limited attempts are made in the past by the respective State Forests Department to obtain information on items like-*Madhuca latifolia* (Mahua) flower, seeds, *Diospyros melanoxylon* (Kendu) leaves, *Shorea robusta* (Sal) seeds, *Eulalopsis binata* (Sabai) grass etc. in Jharkhand. All these attempts would be successful provided these are backed by proper administrative and legal supports of the Government.

The major commercial NTFP items for Jharkhand have been *Madhuca latifolia* (Mahua) flower, seed, *Schleichera trijuga* (Kusum), *Agaricus* spp. (Mushroom), *Shorea robusta* (Sal) leave, *Diospyros melanoxylon* (Kendu) leave, *Lacifer lacca* (Stick Lac), *Morus*

spp. (Tasar) cocoon, *Terminalia bellirica* (Bahera), *Andrgraphis paniculata* (Kalmegh). However, there are many more potential NTFP items which also could fetch good revenue, remain untapped mainly due to absence of market information system. Systematic study in this direction would hopefully strengthen the JFM System.

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SUMMARY

The present study focuses on marketing aspects of selected NTFPs of commercial importance. Emphasis has been given to NTFP items collected by the villagers/VFMPC members in and around the forests under the JFM system. The collector of NTFPs gets a small fraction of surplus generated by produce sold in the market. The middlemen (the agents, traders and wholesellers) receive the maximum benefit from marketing of surplus NTFPs. There is an urgent need for policy intervention to ensure maximum returns to local people.

झाड़खण्ड के हजारीबाग वन क्षेत्र में मुख्य प्रकाष्ठेतर वनोपज और उनके विपणन की संभावनाएं – एक अध्ययन

टी०के० गिरि, ए० मजूमदार व सी०एस० सांत्रा

सारांश

प्रस्तुत अध्ययन में व्यावसायिक महत्व की कुछ चुनी हुई प्रकाष्ठेतर वनोपजों के विपणन पक्षों पर बल दिया गया है । इसमें उन प्रकाष्ठेतर वनोपजों पर जोर दिया गया है जिन्हें संयुक्त वन प्रबन्ध प्रणाली के अन्तर्गत वनों अथवा उनके आसपास के क्षेत्रों से ग्रामीणों / ग्राम वनौषधी सहकारी समिति के सदस्यों द्वारा संग्रहीत किया जाता है । प्रकाष्ठेतर वनोपजों के संग्रहकर्ता को बाजार में बिक्री प्रकाष्ठेतर वनोपजों के लाभ का थोड़ा-सा भाग ही मिलता है । प्रकाष्ठेतर वनोपजों की बिकी के लाभ का अधिकतम फायदा बिचौलियों (अभिकर्ता, व्यापारी और थोक विक्रेताओं) को प्राप्त होता है । स्थानीय लोगों को अधिकतम प्रत्याय दिलाने के लिए इस व्यवसाय में नीतिगत हस्तक्षेप करने की बहुत शीघ्र आवश्यकता है ।

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