

ECONOMIC SUSTAINABILITY AND DEVELOPMENT THROUGH MONOPOLISTIC TERM OF TENDU LEAVES TRADE (*DIOSPYROUS MELANOXYLON*) IN MADHYA PRADESH

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Abstract: Present study is an outcome of the various NAEB sponsored project . This study is based on the primary and secondary data in the study area of Madhya Pradesh. This study was carried out in the Ten districts, covering 50 JFMCs to assess the impact of monopolistic Term of Tendu Leaves trade in Madhya Pradesh. The study is a field based one. The changing perception attitude and responses of the Phud Munshi is not desirable from people's point of view. The harmonious relation with the local people is sought. Government policy related to Insurance scheme is one of the important steps to safeguard the tendu leaves pluckers.

Key Words: Sustainability, Monopolistic term of Trade, Tendu leaves

INTRODUCTION

The attainment of economic sustainability from the collection of tendu leaves plays a vital role. This in turn depends upon the income of the forest dependent communities. The first NWFP brought under state control was tendu leaves, used to wrap (bidi). Tendu collection was monopolized by Madhya Pradesh in (1969), followed by Andhra Pradesh (1971), Bihar (1973), Gujarat (1979) and Orissa (1981). (Sowani *et al.*, 1969)¹ studied the state monopoly in Tendu trading in Madhya Pradesh. The monopolization of tendu was rapidly followed by similar procedures for other economically important NWFPs, including Sal seed (*Sohera Robusta*), gums and myrobalan (*terminalia Chebula and Terminalia bellerica*).

Singh, (2005,2006, 2008, 2012) found the affect of demand elasticity on supply elasticity of NTFPs in the tribal districts.

One of the major issues related to Nationalized and non-nationalized NTFP lies in the centre of Price policy. However, there is tendency of prices to fluctuate up and down the equilibrium level so far as the non nationalised NTFPs are concerned. This is mainly due to non existence of minimum support price policy, which results in low income generation by the tribal or people collecting and marketing it in the different market conditions. At macro level this is one of the reasons which affect the GNP at the State and national Level. The sustainable national income can only be increased by fixing up the Minimum support price

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policy system as what the prices for the collection of Nationalized NTFP like Tendu leaves has the significant impact in increasing sustainable gross and net national Income.

Thus, The following are the objectives of this study.

- to assess the decadal changes in the price policy of tendu trade.
- To find the economic sustainability and development through monopolistic term of trade on State GDP and contribution of Tendu trade in revenue generation of Madhya Pradesh.
- To find the status of Tendu leaves trade at Glance in M.P.
- To review government schemes and programmes related to tendu leaves trade.
- to find out the issues related to tendu leaves and to develop strategies to tackle them.

METHODOLOGY

Both primary and secondary was collected from the MP Forest Department during various projects of NAEB, IIFM, Sponsored through structured schedules.

Tabulation and analysis of the data was done through simple statistical techniques.

A case study carried out by Singh (2004, 2006, 2008, 2009,10 and 12) were used to substantiate the issue related to Tendu leaves trading in tribal areas of Madhya Pradesh.

This has been tested in more than 50 villages of Madhya Pradesh. These villages were selected from 10 districts.

(1) Balaghat (2) Mandla (3) Sheopur (4) Umaria (5) Betul, (6) Dewas (7) East Nimar (8) Gwalior (9) Sehore (10) Sagar.

Sampling Framework

First, with the help of Government records, pilot survey and discussion with appropriate authorities and agencies a list of villages covered under Project will be prepared for intensive study. As the study aims at analyzing both qualitative and quantitative aspects, the field work will be divided into the following three steps.

- (i) Recording the observation of the field staff,
- (ii) Organizing Focal group discussions with the JFMCs members in each of the selected villages.
- (iii) Vegetative assessment in the selected compartment adjoining to or nearby villages.
Number of quadrates to be laid, size of quadrate,
- (iv) Availability status of species – ranking order availability- High, Medium and Low.
- (v) Preferred species used as wood fuel by the villagers.

(vi) Interviewing 5-10% of households from each selected VFCs. Each household will be interviewed with the help of structured questionnaire through personal quarries. Random sampling technique will be used for the selection of household.

(vii) Total village profile would be 50

Form each selected villages 10 households were selected for in-depth study covering 500 households in the ten districts.

PROFILE OF THE STUDY AREA

To meet with the objectives of the study, the survey was carried out in the 10 districts of Madhya Pradesh namely, Betul, Sehore, Umaria, Balaghat, Sagar, Gwalior, Mandla, Sheopur, Dewas, and Khargone, form each district based on the discussion with the Divisional forest Officer and based on the random sample 50 forest villages were covered .

Table 1
Details of VFC and FPCs and Household

<i>Name of District</i>	<i>Name of villages</i>	<i>Household surveyed</i>	<i>Organised Group discussion</i>	<i>Documentation of perception</i>
Betul	Saludhana, Ratamati, Movad, Kookru, Majervani	50	5	5
Sehore	Ramdasi, Belkheda, Donolava, Lohapather, Babediakhar	50	5	5
Umaria	Nawgaja, Pali, Beli, Berbuspur, Rampur,	50	5	5
Balaghat	Ganeshpur, Bhadpani, Seerpar, Jagpur, Dhandutola	50	5	5
Sagar	Peparianerse, Kedta, Aamet, Chitoli, Belani	50	5	5
Gwalior	Durseni, Raikapura, Simaria, Jorasi, Bhadurpur	50	5	5
Mandla	Surpati, Besadha, Kamta, Pondi, Malpather	50	5	5
Sheopur	Cheksitaram, Beerpur, Panch colony, Bandapura Telipura	50	5	5
Dewas	Chandi, Siraliya, Ratatalae, Kishangrah, Dhoditalab	50	5	5
Khargone	Dharampuri Rajmali Pipaljhopa, Sirbal Khaprajhamali	50	5	5
Total	50 villages	500	50	50

Source: Survey 2012

It is evident from Table 1 that 50 villages were selected for in-depth study of production and consumption of fuel wood. From each village, 10 respondents were interviewed; one group discussion was organised to gather the information of village profile and from each

village the perception, changes in attitude of Tendu leaves collectors was also documented. It could be concluded from the table that 500 respondents were surveyed followed by 50 group discussions and documenting 50 formats for capturing perception and responses from the study area.

Table 2 Age Group of Respondents

Age group of respondents (Years)	Betul	Gwa-Mandla lior	Sagar	Balag-Umaria hat	Sehore	Sheo-pur	Dewas	Khar-gone	Total		
18-25	5	1	0	1	1	3	2	3	0	2	18
25-30	7	8	6	8	3	6	5	9	1	1	54
30-35	10	9	5	7	2	13	4	3	8	11	72
35-40	6	14	9	8	7	6	11	9	7	13	90
40-45	6	5	14	8	7	9	9	7	10	9	84
45-50	9	8	7	9	13	5	8	8	9	8	84
50 and above	7	5	9	9	17	8	11	11	15	6	98
Total	50	50	50	50	50	50	50	50	50	50	500

Source: Survey (2011-2012)

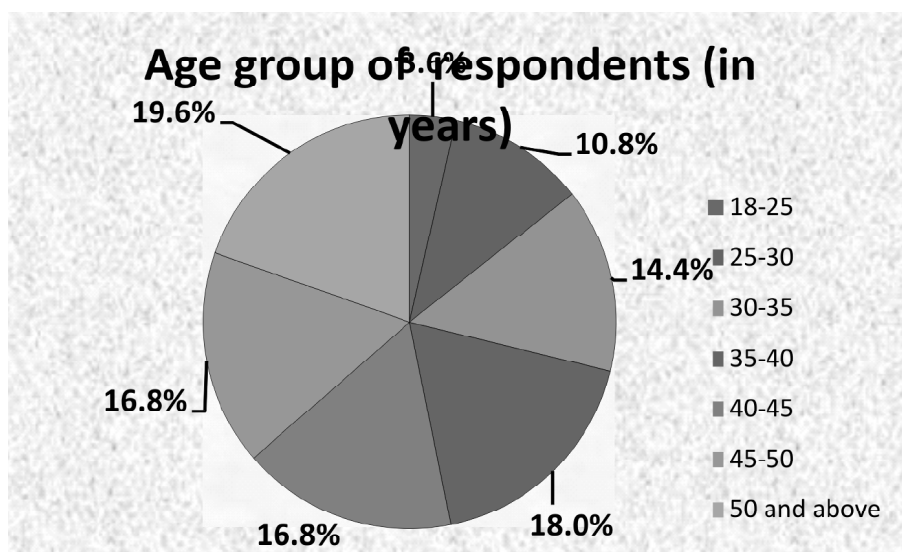


Chart 1: Percentage of Age Group of Respondent

It is clear from the table 2 and chart 1, given above that 19.6% of the respondents age was recorded in the age group of 50 and above years followed by 18% of the respondents in the age group of 35-40 years. While lowest 3.6% of the respondents age group was recorded in the category of 18-25. It could be concluded from the table that highest number of respondents was recorded in the age group of 50 and above followed by 35-40 years of age group. It means that respondents in old age and they have their opinion based on the future trend of Tendu leaves trade.

Table 3
Occupational Structure of the Respondents

Occupation of family members (age group)	Betul	Gwal-ior	Man-dla	Sagar	Bala-ghat	Uma-ria	Sehore	Sheo-pur	Dewas	Khar-gone
Agriculture	21	38	32	47	10	86	39	48	69	15
Labourer	50	48	50	50	50	50	50	50	50	35
Government service	0	1	1	0	0	0	0	0	0	2
Collection from forest	18	29	32	38	32	33	34	29	39	33
Selling wood fuel	9	5	10	15	8	12	3	5	6	2

Source: Survey 2011- 2012

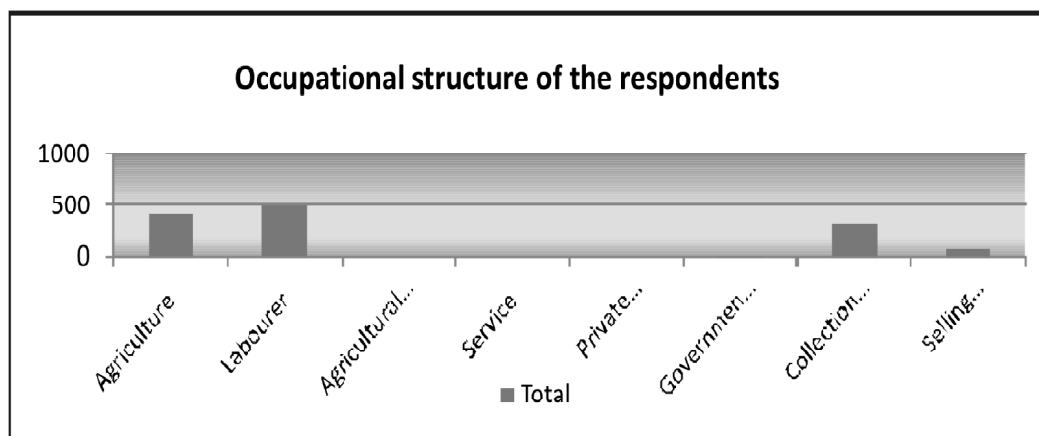


Chart 2: Occupational Structure

Table 3. and Chart 2 shows, the details of surveyed respondents in the study area. It could be concluded that all respondents are engaged in agriculture followed by labour, agri-labour and collection form the forest areas which includes Tendu patta collection, NTFP and Fuel wood collection.

Table 4
Ethnic Composition of the Respondents

Ethnic composition	Betul	Gwal-ior	Man-dla	Sagar	Bala-ghat	Uma-ria	Sehore	Sheo-pur	Dewas	Khar-gone	Total
SC	7	0	0	6	0	13	6	3	6	0	41
ST	27	43	42	27	25	23	29	35	28	50	329
obc	8	5	8	17	25	13	11	10	13	0	110
General	8	2	0	0	0	1	4	2	3	0	20
Total	50	50	50	50	50	50	50	50	50	50	500

Source: Survey 2011-2012

It could be concluded from table 4, that 65.8% of the respondents belongs to tribes followed by 22 % belongs to OBC community and 8.2% belongs to SC community. The highest composition of the ethnic group was documented under the tribe community. From the survey it was also clear that all respondents' houses are electrified with legal connection.

Table 5
Types of Houses

<i>Types of house</i>	<i>Betul</i>	<i>Gwal- ior</i>	<i>Man- dla</i>	<i>Sagar</i>	<i>Bala- Umaria ghat</i>	<i>Sehore</i>	<i>Sheo- pur</i>	<i>Dewas</i>	<i>Khar- gone</i>	<i>Total</i>	
Pucca	1	2	0	0	0	0	0	3	1	9	16
Kaccha	48	48	50	50	50	50	49	47	48	38	478
Semi kaccha pucca	1	0	0	0	0	0	1	0	1	3	6
Total	50	50	50	50	50	50	50	50	50	50	500

Survey: 2012

It could be concluded from table 4, that 95.6% of the houses were kaccha houses followed by 3.2% of the pucca houses while 1.2% of the houses were in the condition of semi - kaccha pucca. The condition of the houses also reflects the condition of the household to afford the alternative fuel energy. There is tendency that the elasticity of fuel wood consumption in the kaccha houses for fuel wood is very high as compared with the Pucca houses. The respondents those who are living in the pucca house itself proves that their socio- economic condition is higher as compared to the respondents living in the kaccha houses. Thus one of the important indicators for the collection of tendu patta collection also indirectly depends upon the condition of houses and quantity collected by the households.

It is evident from the table that the highest 23.6% population was recorded in the age group of 10-18 years followed by 18.96 % of population in the age group of 26-35 years. The lowest population of 12.06 % was recorded in the age group of 46 and above. It could be concluded from the table that the workforce population contributes in the economic activity was recorded 56.6% of the total population. From demographic point of the view rest of the population depend on the working population who carry out the sustainable livelihood of the remaining.

Besides these case studies, Table 7 shows the state trading regulations promulgated by state governments. (Prasad, 1999)².

The studies of tendu leaves related to economics, social benefit and collection and sharing of usufruct were dealt by (Joshi, 1990; Pethiya, 1993, Singh, 2008,2010, 2012)³.

Table 6
Size of Family Members

Size of family members (age group)	Betul		Gwalior		Mandla		Sagar		Balaghat		Umaria		Sehore		Shivpur		Dewas		Khargone											
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F										
	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T										
1-9 yr	18	22	40	26	19	45	23	12	35	21	20	41	14	8	22	18	17	35	29	16	45	30	32	62	29	12	41	34	44	78
10-18 yr	32	30	62	42	84	20	30	50	37	15	52	21	22	43	28	13	41	34	24	24	58	37	27	64	29	32	61	42	40	82
19-25 yr	17	16	33	24	15	39	21	23	44	21	19	40	21	7	28	18	17	35	30	16	46	9	16	25	17	9	26	20	14	34
26-35 yr	31	22	53	29	28	57	22	20	42	27	24	51	21	13	34	27	23	50	19	19	38	27	22	49	29	26	55	17	33	50
36-45 yr	11	16	27	19	13	32	22	19	41	12	16	28	17	25	42	16	16	32	17	21	38	19	22	41	15	16	31	23	17	40
46 and above	19	9	28	13	8	21	19	20	39	20	13	33	31	20	51	14	7	21	21	17	38	12	10	22	22	13	35	10	6	16
Total	128	115	243	153	125	278	127	124	251	138	107	245	125	95	220	121	93	214	150	113	263	134	129	263	141	108	249	146	154	
300																														

Source: Survey 2012

Table 7
State Trading Regulations Promulgated by State Governments

<i>State</i>	<i>Regulations</i>	<i>Implications</i>
Andhra Pradesh	Andhra Pradesh Minor Forest Produce (regulation of Trades Act. 1971 Andhra Pradesh scheduled areas.	Trade in NWFPs is declared state monopoly whether ownership is with government or not.
Bihar	Bihar kendu leaves (Control of Trade) Act 1973 Bihar Forest Produce (Regulation of Trade) Act 1984	Bihar State Forest Development Corporation operates as state government agent for collection and marketing of kendu leaves, Sal seed, Mahua (<i>madhuca latifolia</i>) and harra.
Gujarat	Gujarat Minor forest produce (Regulation of Trade) Act 1979	Minor Forest Products identified include timru leaves (tendu leaves), Mhua flowers, fruits seeds and gums.
Himachal Pradesh	Himachal Pradeh Resin and Resin Produce (Regulation of Trade) Act, 1981	Resin bamboo and accaia catechu (Khair) collection through Himachal Pradesh Forest Development Corporation Ltd.
Madhya Pradesh	Madhya Pradesh Vanopaj (Vyapar Viniyam) Adhiniyam, 1969	Items under monopoly include tendu leaves, sal seeds, harra and gums; Madhya Pradesh Minor Forest Produce (trade and Development) Federation acts as agent of State Government
Rajasthan	Rajasthan Tendu leaves act, 1974	Rajasthan Tribal Area Development Federation collects and markets NWFPs.
Orissa	Orissa Forest Produce (Control of Trade) Act, 1981 Orissa Kendu Leaves (Control of Trade) Act. 1981	Collection and sale of NWFPs are monopolized by Forest Department and leased to Tribal Development Cooperative society which in turns delegates to an individual; collection and trade of leaves are handled by Forest Corporation.

Source: MoEF 1998⁴

The tendu leaves trade in a Madhya Pradesh is a big venture (Lal, 1991)⁵. While (Dawar, 1989)⁶ assessed the socio-economic implication in the marketing of bidi leaves in context of Andhra Pradesh. Another study by (Dhar *et al.*, 1989)⁷ find out how the tendu leave trade is beneficial from rural people's point of view. The basic concepts of new policy related to tendu trade in Madhya Pradesh was highlighted by (Shrivastava, 1976)⁸

Table 8, shows the year wise net revenue earnings from Tendu leaves It is evident from the table that the net revenue in 1989 was recorded highest Rs 290.45 Crores, as compared with years till 2011, while the storage of collection of tendu leaves in std bags was 43.58 (in lakhs) in the same year. The highest std bags of tendu leaves was collected in the year of 1990 with 70.57 std bags (in Lakhs). The lowest collection of Tendu leaves was recorded 17.06 std (in Lakhs).

Table 8
Year Wise Net Revenue Earnings from Tendu Leaves Trade

<i>Year</i>	<i>Collection</i>	<i>Collection Rate per S.B</i>	<i>Collection Wages</i>	<i>Quantity Stored</i>	<i>Quantity disposed off</i>	<i>Sale Price</i>	<i>Expenditure</i>	<i>Net receipt</i>
1989	43.61	150	65.42	43.58	43.58	405.15	114.70	290.45
1990	61.15	250	152.88	60.57	60.57	248.47	209.12	39.35
1991	46.16	250	115.40	45.79	45.79	298.07	180.00	118.07
1992	45.06	250	112.65	44.64	44.64	285.99	201.47	84.52
1993	41.31	300	123.93	40.98	40.98	252.77	198.29	54.48
1994	42.38	300	127.14	42.08	42.08	299.40	210.95	88.45
1995	39.56	300	118.68	39.36	39.36	289.39	197.80	91.59
1996	44.60	350	156.10	44.43	44.43	338.85	269.38	69.47
1997	40.14	350	140.49	39.95	39.95	338.69	244.05	94.64
1998	45.47	400	181.84	45.23	45.23	407.66	280.39	127.27
1999	49.37	400	194.20	49.12	49.12	402.20	283.87	118.33
2000	29.59	400	114.78	29.49	29.49	176.31	160.08	16.23
2001	21.28	400	83.09	21.22	21.22	111.05	136.07	-
2002	22.74	400	89.04	22.65	22.65	165.77	143.83	21.94
2003	22.25	400	87.56	22.21	22.21	152.95	140.71	12.24
2004	25.77	400	101.61	25.72	25.72	167.71	145.86	21.85
2005	16.83	400	66.37	16.82	16.82	131.41	106.90	24.51
2006	17.97	400	71.88	17.97	17.97	151.33	100.56	50.77
2007	24.21	450	108.95	24.21	24.21	373.64	136.89	236.75
2008	18.25	550	100.35	18.25	18.25	211.26	136.57	74.69
2009	20.49	550	112.67	20.49	20.49	265.49	149.86	115.63
2010	21.24	650	138.11	21.24	21.24	332.89	179.71	153.18
2011*	17.06	650	110.80	17.06	17.06	310.06	143.51	166.55
2012*	23.13	750	-	23.13	23.13	565.31	-	-

Note: * Figures for 2011 and 2012 season are to be finalised

1) Quantity: In lakh Standard Bags (1 Standard Bag=50,000 leaves);

2) Amount: In Rs. Crores.

Table 9
Collection Rates in Different Seasons

<i>Season</i>	<i>Area</i>	<i>Collection Rate (Rs. per S.B.)</i>
1999, 2000 & 2001	5 D.U.- Shivpuri, Bhopal, Chhatarpur, Tikamgarh & N. Sagar	300/-
	All other D.U.	400/-
2002	4 D.U.- Bhopal, Chhatarpur, Tikamgarh & N. Sagar	300/-
	All other D.U.	400/-
2003, 2004, 2005	3 D.U.- Chhatarpur, Tikamgarh & N. Sagar	300/-
	All other D.U.	400/-
2006	All D.U.	400/-
2007	All D.U.	450/-
2008, 2009	All D.U.	550/-
2010, 2011	All D.U.	650/-
2012	All D.U.	750/-

From 2000 season, figures are for the new state of M.P.

Table 9 shows the collection rates in different seasons. It could be concluded from the table that the collection rate of Standard bag was recorded 300 and Rs 400 up to 2006 thereafter it has increased by Rs 150 in 2008 and 2009 while it has increased by Rs 350 as compared to 2006 .

Government Schemes : Group Insurance Scheme

A group insurance scheme for the Tendu leaves pluckers was launched in 1991. It is the biggest insurance scheme of its kind in the whole of Asia. All tendu leaves pluckers between 18 and 60 years of age (about 24 lakh) are insured free of cost under this scheme. The scheme is run by the Life Insurance Corporation of India. Following insurance amounts are paid under this scheme.

- (a) In case of death of any plucker covered under this scheme, his nominee is paid Rs. 3500/-.
- (b) In case of disability due to accident, the plucker is paid an amount of Rs. 12500/-
- (c) In case, the death or permanent disability caused is due to accident, the amount of insurance is Rs. 25000/-.

The nominees of the pluckers are provided all help and guidance in the submission of claims. The settlement of claims is also monitored regularly. Till now, **207445** claims have been settled and an amount of Rs. **82.07** Crores paid to the nominees of the deceased pluckers. Yearwise breakup of the settled claims is given in the table below

Table 10
Details of Settlement of Claims

<i>Year</i>	<i>No of claims Settled</i>	<i>Amount of insurance paid (In Rs. crores)</i>
1991-92	1194	0.36
1992-93	3235	0.99
1993-94	8238	2.48
1994-95	10699	3.37
1995-96	10361	3.54
1996-97	16522	5.75
1997-98	13249	4.69
1998-99	10215	3.76
1999-2000	15026	5.26
2000-01	18242	7.11
2001-02	16271	6.69
2002-03	10750	4.75
2003-04	11040	4.6
2004-05	10564	4.63
2005-06	4130	2.04
2006-07	13737	6.47
2007-08	8761	3.71
2008-09	10572	5.62
2009-10	6404	2.84
2010-11	8235	3.42
Total	207445	82.07

It is evident from Table 10 that the highest number of claims settled was recorded in the year of 2000-2001 with 18242 numbers and lowest number of claims settled was seen in the year of 1991-1992 with 1194. it could be concluded from the table that total number of 207445 claims were settled by the MPFD. and Rs 82.07 crore was disbursed as amount paid against insurance. The highest claims were disbursed in the year of 2000-2001 with the amount of Rs 7.11 Crores, while lowest amount was disbursed in the year 1991-1992.

Incentive Wages to Tendu Leaves Pluckers

Looking to the huge profit margin of 1989 season the State Govt. decided to distribute Rs. 150 crores as incentive wages to the Tendu leaves pluckers out of the profit of 1989 season. This amount was paid in 4 instalment through accounts of pluckers opened in local branches of Cooperative Banks or credit societies. This payment was discontinued from 1990 season and was again started from 1995 season. For 1995 to 1997 seasons, nearly 20% of net income was paid as incentive wages.

As a consequence of 73rd Amendment to the Constitution, the State Govt. decided to pass on all the net income from the trade of N.W.F.P. to the societies and the societies, in turn, distributed 50% of this net income to the Tendu leaves pluckers as incentive wages from 1998 season. From 2004 season the proportion of incentive wages has been enhanced to 60% of the net income.

The amount of incentive wages paid in various years is shown in the table below.

Table 11
Incentives Wages to Tendu Leaves Pluckers

<i>Collection Season</i>	<i>No of pluckers (in Lakhs)</i>	<i>Amount of Incentive wages paid (In Rs. crores)</i>
1989	21.31	150
1995	15.76	10.76
1996	18.02	12.29
1997	22.41	15.3
1998	18.84	57.27
1999	15.5	48.22
2000	4.5	7.3
2002	5.23	8.22
2003	4.64	5.51
2004	8.21	11.8
2005	9.78	13.23
2006	10.87	27.41
2007	12.31	118.58
2008	7.98	38.73
2009	-	62.11
2010	-	82.57

Source: MPFD 2013

Table 11 shows the incentives given to the Tendu leaves pluckers. It is evident from the table that Highest incentives was paid to the tendu leaves pluckers was recorded Rs 150 Crores to the 21.31 lakhs people. The lowest incentives was paid to tendu leave pluckers was 5.51 Crores. The incentives given to the workers also indicates the economic sustainability and development of the people through the monopolistic term of tendu leaves trade.

Table 12
Gender Participation in Collection of Tendu leaves (In numbers)

Gender participation in Tendu Leaves collection	Jhabua			Mandla			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Tendu Leaves Collectors Before JFM	24	60	84	37	53	90	61	113	174
Tendu Leaves Collectors After JFM	34	68	102	39	70	109	73	138	211

Source: (Singh, 2008, 2012)

From above table 12 it is evident that 84 and 113 people's were collecting tendu leaves before JFM programme. The women's participation in collection tendu leaves was recorded 71.4% and 57.8% in Jhabua and Mandla district respectively. While the total women's participation of JFM was recorded 61.9%. After JFM programme the male and female participation has increased in Jhabua and Mandla district respectively. The overall male and female participation has increased by 16.4% and 17.1% respectively in the study area of Madhya Pradesh. The women's participation after JFM programme, has been recorded highest in Jhabua district, 67.01% . The women's participation is higher by 5.5% as compared to Mandla district. It could be concluded from the table that gender participation has increased by 17.5% in the study area. (Singh, 2008, 2012).

Table 13, show tendu patta collection, per capita collection, price per bunch (*gaddy*) and per capita earning from the collection of tendu patta in the study area. Before and after JFM. Method of collection (Indukar, 1962)⁹ of tendu leaves has the effect on forests. A study related to collection of bidi leaves in Maharashtra was dealt by (Sathe, 1976)¹⁰.

It could be concluded from the table that before JFM, the tendu patta collection was recorded highest in Mandla district with 35600 bunch (*gaddies*) as compared to Jhabua district. While the per capita collection of Tendu leaves in *gaddies* was 286 and 396 in Jhabua and Mandla district respectively. The price per bunch was Rupee 0.40. The total income from the collection of tendu patta was recorded Rs 9600 and 14240 in Jhabua and Mandla district respectively. The income earned from tendu leaves was 32.5% higher than the income earned from tendu leaves in Jhabua district. While per capita income in Mandla district was recorded 27.8% higher than Jhabua district.

The maximization of collection of tendu leaves in Madhya Pradesh (Prasad *et al.* 1996)¹¹ not only increases the state revenue but also the earnings of forest dependent people's. After JFM the collection of Tendu leaves has increased by 26.3% and 22.27% in Jhabua and Mandla district respectively. While the overall increase has been increased by 23.97%. The per capita collection has increased to 10.6% and 5.9% in Jhabua and Mandla district respectively. The overall per capita collection has increased by 7.9%. The price per bunch has also increased by 20% after JFM. The total earning from the collection of tendu leaves has increased by Rs 6700 and 8650 in Jhabua and Mandla district respectively. In context of per capita income from tendu leaves has increased by 26.4 % while per household earning from tendu patta has increased by 39.2% in the study area of Jhabua and Mandla district of Madhya Pradesh. (Singh, 2012).

Table 13
Tendu Patta Collection, Per Capita Collection and Income Earned by the Peoples

<i>Attributes related to Tendu leaves.</i>	<i>Jhabua</i>			<i>Mandla</i>			<i>Total</i>		
	<i>Before JFM</i>	<i>After JFM</i>	<i>changes</i>	<i>Before JFM</i>	<i>After JFM</i>	<i>Changes</i>	<i>Before JFM</i>	<i>After JFM</i>	<i>changes</i>
Tendu Leaves collected (in Gaddies)	24000	32600	+8600	35600	45800	+10200	59600	78400	+18800 23.97
Per capita collection of Tendu Leaves (in Gaddies)	286	320	+34	396	421	+25	682	741	+59 7.9
Pricing of Tendu Leaves (Paise per bunch or gaddie)	0.40	0.50	+0.10	0.40	0.50	+0.10	0.40	0.50	+0.10 20.
Income from Tendu patta collection (In Rs)	9600	16300	+6700	14240	22900	+8650	23840	39200	+15360 39.1
Per Capita income in Rs from Tendu Leaves	114.0	160.0	+46.0	158.0	210.0	+52.0	272.0	370.0	+98 26.4
Per household income	192	326	+ 134	284.0	458.0	+174.0	476.0	784	+308 39.2

Source: (Singh, 2012)
Italics are the indicatives of percent.

It is clear from Table 14, that the time taken for the collection of tendu leaves was recorded 7 hrs in Jhabua and 6-7 hours in Mandla district. People's are travelling 11 on an average in the study area to collect tendu leaves. It was informed by the people's that they brings tendu leaves by two modes (a) head loads and (b) tying in clothes. (Singh, 2012).

Issues Related Tendu Leaves

- Special weather phenomena- such as dust storms, Pre- monsoon storms in collection period of tendu leaves.
- Topography of the region or area.

Table 14
Time Consumed and Distance Travelled by the Pluckers to Collect Tendu Leaves

<i>Attributes related to Tendu leaves.</i>	<i>Jhabua</i>		<i>Mandla</i>		<i>Average</i>	
	<i>Time in Hrs</i>	<i>Distance travelled (In Km)</i>	<i>Time in Hrs</i>	<i>Distance travelled (In Km)</i>	<i>Time in Hrs</i>	<i>Distance travelled (In Km)</i>
Tendu leaves collection	7	10-12	6-7	8-10	6.5	11

Source: Survey

- Tendu leaves pluckers are increasing in the study area due to rise in population. As result per capita collection is going down.
- The number of days for plucking tendu leaves.
- Regarding the distribution of bonus among the tendu leaves Pluckers.
- Quality and quantity of tendu leaves brought by the pluckers to the *Phud Centre*.
- Issues related to water sprinkling on tendu leaves at the Phud before packing
- Some times the collection stops before completion of target set for tendu leaves.
- Issues related to wild animals during collection of tendu leaves in the study area.
- Some time delay occurred in the weekly payment to the tendu leaves collectors.
- The changing perception of *Phud Munsif*. (Collection centre in-charge) with local peoples.

Tackling Down the Issues Related Tendu Leaves

The following issues emerged out during survey in the study area of Jhabua and Mandla district of Madhya Pradesh need to be tackled down for sustaining the volume of NWFPs in the forest with specific reference to Tendu leaves.

- The issue related to Collection depends upon the regenerative capacity of forest could be tackled down by introducing sustainable methods of harvesting and leaving 10-15% of the fruits on the tree for next regeneration to the NWFPs collectors.
- The changing climatic condition is beyond the control of human beings yet its impact could be minimized by maintaining ecological balance in the study area through protection of young recruits, plantation and adopting sustainable methods of harvesting.
- The issue related to forest fires may be controlled through peoples participation and Precautions to be taken by the NWFPs collectors during collection.
- The mode of bringing time factors etc, issues are important from peoples' point of view. The time factor in number of hours could only be improved when the regenerative capacity of forest increases or volume of production increases and number of peoples engaged in collection of Tendu leaves decreases hence it is suggested that population control is very important.

- The peoples of committee do generally not like the collection of Tendu leaves by other peoples in the forest as their share in collection reduces. Based on the people's preference and modification suggested that the demarcation of forest boundaries may be confined outside people.
- The issue related to lack of value addition of NWFPs in the study area could be improved by research Inputs and further use of NWFPs.
- Another important issue related to lack of political will requires peoples will.
- The issue related to green accounting and economic growth is a essential for sustainable income to the peoples and as result if included in national income accounts could helpful in the increase in National income of our country.
- However the operational Issues are always at stake if one considers it appropriate to include environmental assets and their services more explicitly. For instance, in order to compute a green national income one has to find ways to calculate changes in value of environmental assets. However, neither ecology-economy feedback mechanisms nor their monetary values are easy to recover. Moreover, if one is willing to include some notion of sustainability the question is which particular specification one has in mind. Furthermore, even if does not agree that a correction of national income is a useful device, one might favour some sort of monitoring system for environmental resources. For instance, integrated assessments, combining environmental and traditional economic indicators, like National Accounting matrix including Environmental Accounts system also ask for specification of what is measured and how. Therefore it is recommended that the environmental assets should be included in the Nation Income Accounting.
- The issue related to Special weather phenomena- such as dust storms, Pre- monsoon storms in collection period of tendu leaves. Is the natural process hence. It is suggested that the tendu leaf plucking works should done as per the weather condition. If good whether condition prevails then the tendu leaves collection may be extended some more days till pre-moons starts.
- The topography of the region also effects the tendu leaves collection in the study area. However, the regeneration of tendu in the forest area increases the volume of production which in term results in collection and income from tendu leaf.
- The control on increasing population is necessary.
- Regarding the distribution of bonus among the tendu leaves Pluckers is a praise worthy work of forest department, however the compensation amount may b e increased considering the present rate of inflation and rise in prices of different commodities in the market.
- The quality and quantity of tendu leaves brought by the tendu plukers at the phud centre should be graded and specific training should be given to the plukers relating to the quality of tendu leaves, so that the time consumed in shorting of leaves should be minimized.

- The issues related to water sprinkling on tendu leaves at the Phud before packing could be tackled down by selecting centre at the place of water source.
- The mode of payment should be not be delayed.
- The changing perception of Phud Munshi (In charge of collection centre) with local peoples, should be in tune with the people's or else it may affect the total collection target.

CONCLUSION AND RECOMMENDATIONS

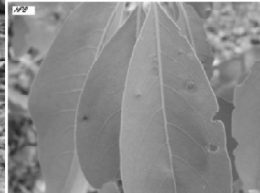
- It is strongly recommended that the contribution of both nationalised and non nationalized forest products extracted from forest need to be Included in the national Income accounting as the valuation of such NWFPs are more than billion Rs every year.
- New method for sustainable harvesting of NWFPs should be developed on the basis of field base research and technological diffusion in the society.
- The high demand elasticity of NWFPs should be controlled and as per the supply elasticity of forest or regenerative capacity of forest or it may result in the extinct of certain species in future.
- The number days after the achievement of target if weather allows the number of day related to collection of tendu leaves may be increased till first Monsoon.
- The increase number of days may result in increased Madhya Pradesh Government revenue vice- a-vice income of the tendu leaves pluckers.
- The changing perception attitude and responses of the Phud Munshi is not desirable from people's point of hence The harmonious relation with the local people is sought .
- Government policy related to Insurance scheme is one of the important step to safeguard the tendu leaves pluckers.

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Women plucking tendu leaves.

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