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A study on socio-economic benefits derived by poor rural producers from bamboo value chain up-gradation in Tripura north-east India

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ABSTRACT

The present paper is the result of research study on value chain up-gradation in bamboo sector development in Tripura Northeast India and its implication on socio-economic development. The value chain up-gradation is an approach is very much relevance for poverty reduction, gender and environment in traditional as well as no-traditional sector in particularly bamboo. It helps to develop and upgrade the various nodes in the value chain and direct impact could be found in socio-economic development of rural poor and small producer groups. The policy makers, rural development professionals and related stakeholders could also find a better way of planning to give space to integrate the poor producers in market. The private investors, entrepreneurs could also get a business enabling environment to scale-up the sector to get an opportunity to link with domestic and international market.

INTRODUCTION

Bamboo- a word that conjures up different images in the mind; images of construction material, furniture, handicrafts, basket ware, matting, paper, food, fodder and fuel wood. No wonder then, that this resource has been variously called "the poor man's timber", " the cardle-to-coffin timber" ,"green gold" and " steel of the nature" In Asia, the history of bamboo is so inextricably interwoven with human history that one could describe a bamboo civilization in the continent. Globally, 2.5 billion people- almost half the world population- are estimated to use bamboo in one form or other (Rao and Sastry,1996). It is an important commodity in the cash economy.

Bamboo is a tree like, woody grass with some 1250 species in 75 genera with sizes ranging from miniature to giant culms over 60 meter and is the world's strongest growing woody plant capable of providing ecological economic and livelihood security to the people. India has the largest Bamboo forest in the world. Next to China, India has the richest bamboo genetic resources in 136 species, including 11 exotic species out of which 58 species belonging to 10 genera are found in the North Eastern Region (Planning Commission Government of India April 2003, http/planningcommission.nic.in).

Tripura is one of the eight states of Northeast India, which is not only the smallest state of the region but also the third smallest state in the country. The Bamboo resource is spread over about 2397 km^2 in the state of Tripura forming about 23 per cent area of the state.

Bamboo plays an important role in generation of employment and development of rural economy of Tripura. It is estimated that around 6.1 million mandays is generated per annum by way of management, harvesting and utilization of bamboo. Around 1.49 lakhs rural poor artisans are engaged in the state in value addition of bamboo, producing annual sale of Rs.35.34 crores (TFD, 2001). However, only about 2 per cent of the total extracted bamboo is used for value addition and so the sector has tremendous potential for growth (Sharma, 2008).

The value chain refers to full range of activities that are required to bring a product or service from conception, through the different phases of production, to delivery to final consumption and disposal after use (Kaplinsky and Morris, 2001). In Global Value Chain analysis the concept of upgrading is used to identify the possibilities for producers to 'move up the value chain', either by shifting to more rewarding functional positions, or by making products with more value-added invested in them, and/or providing better returns. Upgrading is about acquiring capabilities and accessing new market segments through participation in particular chains. Humphrey and Schmitz (2002) have developed the following typology:

– Process upgrading: achieving more efficient production by reorganization,

– Product upgrading: moving into products with increased unit value,

– Functional upgrading strategies for small producers,

The process upgrading, product upgrading and functional upgrading are the main areas in the entire value chain up gradation approach. It helps the poor producers to participate in value chain development for socio-economic development through enhancement of skill, product development, added value in product and chain, technology development, business enabling environment through better policy and linkages with markets. The present paper focused on the socio-economic benefits derived from bamboo value chain up-gradation for poor rural producers in Tripura Northeast India with the following objectives: to analysize the socio-economic benefits in value chain up-gradation in bamboo sector, to enable rural small/poor producers increase production volumes in bamboo based activities and realize greater value and market share, to organise the sustainable production of raw materials inputs in the required quantities, to enable higher quality and standards of production (of inputs and final products) and meet market demands, and to create a more favorable policy environment for the bamboo small entreprenures in Tripura.

METHODS

Under the study, fifteen bamboo economic developemnt clusters within Tripura state has taken for the whole study. Basically, it is an empirical study including socio-economic dimention of the poor rural small producers involved with the cluster in the state. Moreover, the study has also covered the bamboo small and budding entreperenures oustside the cluster in the state.

Sample:

As part of the study, 1125 small producers belonging to self-help groups (SHGs) which included 125 budding bamboo entrepreneurs outside the cluster were interviewed from the study area in the state. Out of that, 375 respondents were selected as sample on random sampling procedure.

Material:

A structured interview schedule was used which consisted of opened and closed end questions. The interview schedule was previously pre-tested and finally printed for field use.

Procedure:

The study followed by observation for gathering the data, rapport building and the interview schedule was used for collecting data. In addition, PRA/RRA tools were also used for assessing the value chain up-gradation in bamboo sector under the study.

OBSERVATIONS AND ANALYSIS

The present study is exploratory cum descriptive in nature. It showed the nature and circumstances of the poor small producers/SHGs in cluster based budding bamboo enterprises in Tripura through value chain up-gradation. It obviously included in the study *i.e.* process up-gradation, enhancement of income, added value, technology up-gradation, policy up-gradation, religion and educational status.

Majority of the respondents among the small (35.73%) were scheduled caste, 25.33 per cent were schedule tribes, 16.80 per cent were general and 15.20 per cent OBCs and 6.94 per cent were minority (Table 1). It has been shown that vast majority of the small producers belonged to scheduled caste and followed by tribal community of Tripura. The rural poor have a direct relation with bamboo and their socio-economic development. As a result, majority of the rural poor belongs to socio-economically backward community has been largest participation in value chains up-gradation.

Table 1 : Category wise distribution of small producer in value chains

Sr. No.	Category	Number	Percentage
1.	Schedule castes	134	35.73
2.	Schedule tribes	95	25.33
3.	Other backward castes	57	15.20
4.	Minority	26	6.94
5.	General	63	16.80
6.	Total	375	100

Table 2 shows the small producers participation in various nodes in value chains up-gradation. It is evident that 35.46 per cent participation actively involved in value chains process

Table 2 : Participation of small producer in capacity enhancement

Sr. No.	Category	Number	Percentage
1.	Awareness and motivation camp on process up-gradation	133	35.46
2.	Exposure visit	91	24.26
3.	Design/added value	15	4.00
4.	Market linkages	10	2.66
5.	Technology up-gradation	8	2.13
6.	Entrepreneurship skill development training (EDP)	97	25.86
7.	Business plan and financing	5	1.33
8.	Policy up-gradation for cluster development	16	4.26
	Total	375	100

up-gradation camp for development of their self knowledge on value chain, 25.86 per cent were in entrepreneurship skill development training which helped them to produce market driven quality products, 24.26 per cent visited similar project outside the state to enhance the knowledge on added value and scanning the business enabling environment to negotiate for policy support for bamboo sector development. Only 1.33 per cent were participated in business plans development to provide business development services in the sector.

Table 3 shows that 35.20 per cent participated in bamboo incense sticks product, 29.86 per cent in bamboo crafts and 2.13 per cent in bamboo housing components. It reflected that the small producers shown keen interest in bamboo incense sticks production in larger extent due to regular market and growth in the sector and less were interested in bamboo housing components because of irregular market demand and somewhere else.

Table 3 : Participation of small producers in product up-gradation in value chain

Sr. No.	Category	Number	Percentage
1.	Bamboo incense sticks	132	35.20
2.	Bamboo charcoal	33	8.80
3.	Bamboo furniture	10	2.66
4.	Bamboo housing components	8	2.13
5.	Bamboo nursery	16	4.26
6.	Bamboo harvesting	27	7.20
7.	Bamboo primary processing	9	2.40
8.	Bamboo crafts	112	29.86
9.	Bamboo deport	11	2.93
10.	Bamboo industrial products	17	4.53
	Total	375	100

Tables 4, 5 and 6 show the age group of the male and female producers, economic status, rural and urban status in

Table 4 : Age-wise distribution of the small producer in value chains

Sr. No.	Age group	Male	Percentage	Female	Percentage
1.	15-25	15	13.15	91	34.84
2.	25-35	35	30.70	65	24.90
3.	35-45	42	36.84	78	29.88
4.	45-55	14	12.28	17	6.51
5.	55-65	8	7.01	10	3.83
	Total	114	100	261	100

the value chain up-gradation. Table 4 exhibits shown that 34.84 per cent of female belonged to 15-25 years of age group in the value chain up-gradation, followed by 29.88 per cent in the age group of 35-45 years. It assumes that the adolescents have the tendency to learn the bamboo crafts based economic activity to contribute their family substantially after the marriage. On the other, majority of hand male counterpart was 36.84 per cent in the age group of 35-45 years and assumed that they involved in trading based activity. It was observed that 76.26 per cent small producers belonged to below poverty line and 23.73 per cent were above poverty line in bamboo value chain up-gradation (Table 5).

Table 5 : Community wise distribution of the small producers

Sr. No.	Category	Number	Percentage
1.	Above poverty line (APL)	89	23.73
2.	Below poverty line (BPL)	286	76.26
	Total	375	100

Table 6 presents the households of rural and urban small producers. It was observed that majority (76.54 %) were of rural households and only 23.46 per cent were of urban households.

Table 6 : Rural and urban households of small producers in value chains

Sr. No.	Population	No. of HHs	Percentage
1.	Rural households	287	76.54
2.	Urban households	88	23.46
	Total	375	100

Tables 7 and 8 show the distribution of educational status of the small producers in value chain up-gradation and financial facilities for development of the business. It evident from Table 7 that 34.09 per cent were illiterate among the women, followed by 30.70 per cent of male participants in value chain up-gradation in bamboo sector, 0.76 per cent obtained industrial training or other related training among women, 29.50 per cent

Table 7 : Educational status of the small producer in value chains up-gradation

Sr. No.	Education	Male	Percentage	Female	Percentage
1.	Illiterate	35	30.70	89	34.09
2.	Upto class 8th	44	38.59	77	29.50
3.	Upto class 10th	19	16.66	67	25.67
4.	Upto class 10+2	11	9.46	23	8.81
5.	Graduate	2	1.75	2	0.76
6.	Post Graduate	0	0.00	1	0.38
7.	ITI/BCDI/NID courses	3	2.63	2	0.76
	Total	114	100	261	100

Table 8 : Status of financing facilities for small producers in value chain up-gradation

Sr. No.	Institutions	Number	Percentage
1.	National banks	19	5.06
2.	Cooperative banks	28	7.46
3.	Commercial banks	17	4.53
4.	Rural bank Tripura	88	23.46
5.	Private banks	11	2.93
6.	Micro finance institutions	47	12.53
7.	Local money lenders	68	18.13
8.	Middlemen and traders	84	22.40
9.	Non-banking financial institutions	13	3.46
	Total	375	100

women and 38.59 per cent male participants were educated upto class 8th level. Only 1.75 per cent male participants were graduates in value chain up-gradation and very negligible (0.76%) were female graduates (Table 7).

Table 8 shows that 23.46 per cent finance was provided by the Tripura Rural Bank followed by middlemen and traders (22.40%) and 18.13 per cent local money lenders in bamboo sector. The role of commercials and nationalized banks were very negligible.

Table 9 shows the comparison of income among the small producers through value chain up-gradation in bamboo sector. It is shown that before value chain up-gradation, 36.53 per cent households incomes were Rs. 500-750 per month and after value chain up-gradation, 24.26 per cent house hold income increased to Rs.1250-1500 per month. It described that the majority of the producers enhanced triple income through value chain up-gradation for small producers, majority belonging to rural areas. Further, it proved that the value chain up-gradation gave an opportunity to the rural small producers to improve their socio-economic life and a sustainable income.

Table 10 shows a comparison of expenditure among the small producers. It showed that before value chain up-gradation, 50.40 per cent household's expenditure was made for food procurement, 19.46 per cent for SHG savings, 4 per cent for children education and 2.66 per cent for self-enhancement. After value chain up-gradation, 42.40 per cent made expenditure on food procurement, 23.46 per cent for SHG savings, 14.66 per cent for children education and 7.73 per cent for self-enhancement. Further, it assumed that the investment through SHG increased and partly food expenditure invested on children education and their self-enhancement. It is the positive indicator for socio-economic development.

Table 11 shows a comparison of market linkage practices

Table 9 : Household monthly income comparison of the small producers in value chains

Sr. No.	Income	Before value chains	Percentage	After value chains	Percentage
1.	500-750	137	36.53	16	4.26
2.	750-1000	86	22.93	19	5.06
3.	1000-1250	46	12.26	55	14.66
4.	1250-1500	32	8.53	91	24.26
5.	1500-1750	26	6.93	68	18.13
6.	1750-2000	11	2.93	43	11.46
7.	2000-2250	7	1.86	29	7.73
8.	2250-2500	12	3.20	23	6.13
9.	2500-2750	8	2.13	17	4.53
10.	2750-3000	10	2.66	14	3.73
	Total	375	100	375	100

Table 10 : Degree of expenditure comparison of the small producers in value chains

Sr. No.	Expenditure	Before value chains	Percentage	After value chains	Percentage
1.	Food procurement	189	50.40	159	42.40
2.	SHG savings	73	19.46	88	23.46
3.	Household needs	65	17.33	27	7.20
4.	Children education	15	4.00	55	14.66
5.	Medical treatment	23	6.13	17	4.53
6.	Self enhancement	10	2.66	29	7.73
	Total	375	100	375	100

Table 11 : Marketing practices for the small producers in value chain up-gradation

Sr. No.	Marketing linkage practices	Before value chains	Percentage	After value chains	Percentage
1.	Cluster development	29	7.73	67	17.86
2.	Middleman	132	35.2	53	14.13
3.	Self enterprise	53	14.13	78	20.80
4.	Direct to buyers/market	57	15.20	83	22.13
5.	Government sales outlet	66	17.60	43	11.46
6.	Export	11	2.93	28	7.46
7.	Any others	27	7.20	23	6.13
	Total	375	100	375	100

in value chain up-gradation in bamboo sector. Before value chain up-gradation, 35.20 per cent household depended on middlemen, 17.60 per cent linked with Government sales outlet, 15.20 per cent to direct market linkages with national buyers and 2.93 per cent to export. After value chain up-gradation, 22.13 per cent made on direct market linkages, 20.80 per cent self enterprise and 7.46 per cent export market. It assumed that the value chain up-gradation in bamboo sector in Tripura has given an opportunity to the small producers to participate the national market.

Under the research study two focus group discussions (FGD) were conducted in the majority concentrated areas of the bamboo small producers *i.e.* Nalchar, Sonamura sub-division and Ambassa, Dhalai sub-divisions. In each group, 20-25 members were invited in different age groups including budding entrepreneurs and cluster level small producers. Moreover, the group members belonged to different categories based on social and economic strata. It was participatory methods and applied PAR tools *i.e.* chapatti games, social mapping and get well soon. The participants expressed that the value chain up-gradation given them an opportunity to participate directly in national market, enhance knowledge on quality control for developing value added products and work in cluster development mode. Due to lack of working capital through commercial and nationalized banks, the small producers could not be able to link export market linkages.

Conclusion:

Bamboo is a poor man's timber. It has ample potential for livelihood and socio-economic development. The value chains up-gradation is a new strategy in the bamboo sector and has given an opportunity to the small producers in Tripura to enhance their income and sustainable livelihoods and participate directly in domestic market. Definitely, the small producers are facing problems in working capital and a suitable enabling environment. A suitable policy prescription through value chain up-gradation will change the current scenario and scale-up and develop an enabling environment for private public partnership (PPP) in bamboo sector. Last but not the least, the current value chain up-gradation in bamboo sectors will replicate in other sector for wide scale poverty reduction, gender development and environment protection.

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