

AN ANALYSIS OF ROLE OF SERICULTURE INDUSTRY IN RURAL DEVELOPMENT-A CASE STUDY IN PURULIA DISTRICT

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ABSTRACT

Rural development has turned to be one of the most important considerations of the national policy makers over the globe. A number of policies are formulated. Several means are earmarked and applied. Agro based industry is one of such means. Sericulture Industry, an agro based, labour intensive rural industry is playing a vital role in rural development since long. A number of indicators for rural development are identified from time to time. Employment generation, women empowerment and employment of aged as well as disabled population are some of them. In this paper it is been tried to analyse the role of sericulture industry in rural development against the indicators mentioned above.

Key words: Rural Development, Agro based industry, Women Empowerment, Sericulture industry.

INTRODUCTION

The reduction of rural poverty continues to be a mission and goal of the developing countries like India as the majority of the poor population still resides in the countryside. The World Bank, for example, estimates that more than 70 % of the world's poor live in rural areas¹. So far, various strategies have been adopted to address this concern particularly to create employment of rural people. The agriculture sector, however, has been contending with a number of factors that have limited its potential for generating new jobs in rural areas. The main reasons for backwardness are lack of application of technology, higher rate of illiteracy, small land holding size, insufficient capital, low rate of investments, poor incentives, the inadequate farm infrastructure, limited market, stagnant prices of agricultural products, over dependence on climate, lack of information network etc. It is therefore necessary to focus on a broader spectrum of the rural economy. The establishment of rural based industries like sericulture, in particular, can be very effective in creating new job opportunities and providing supplemental income. Being a rural agro-based labour intensive industry Sericulture industry can play vibrant role in improving a rural economy and society through generation of

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employment. Besides active participation of women, aged and disabled population in income earning process result rural development, which are the features of sericulture industry.

MEANING OF RURAL DEVELOPMENT

In simple words rural development may be defined as the process of improving the quality of the economic well being of people living in rural areas. With globalization challenges for the existing rural areas are increasing. It is a product of want of better living conditions, search for modern medical facilities and mental setup for easy access to modern amenities. Migration and urbanization are the results of the non availability of these prime requirements of generation Y.

MEANS OF RURAL DEVELOPMENT

A number of means for rural development may be ear marked. Some of them are

1. Improvement of infrastructural perquisites including supply of pure drinking water, proper sanitation and sewage, telecommunication and transportation.
2. Provision for employment.
3. Social and economic security for women as well as differently able population.
4. Agro biodiversity.

Each and every one of the means mentioned above is separately competent enough to initiate rural development. However every under developed rural area hopes for introduction of all of these means gradually in their life, if not at a time for better future.

MEASURES ADOPTED FOR RURAL DEVELOPMENT

A number of measures have been adopted at global, national, state and district level. Among them following measures may be mentioned:

- Introduction and implementation of NREGA
- PDS
- Introduction of BPL and Antodya cards
- Introduction of health card
- Establishment and proper functioning of NABARD and its associates.
- Kanyashree Project
- Introduction of Scholarships for SC, ST, OBC and minority poor and meritorious students.
- Self Help Groups-their functioning and nurturing.

- Fostering knowledge transfer and innovation in agriculture, forestry and rural areas;
- Enhancing the viability and competitiveness of all types of agricultural activities, and promoting innovative farm technologies and sustainable forest management;
- Introduction of crop insurance.
- Promoting food chains , animal welfare and risk management in agriculture;
- Restoring, preserving and enhancing ecosystems related to agriculture and forestry;
- Promoting resource efficiency and supporting the shift toward a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors;
- Promoting social inclusion, poverty reduction and economic development in rural areas.
- Integrated Rural Development Programme (IRDP):
- Training Rural Youth for Self-Employment (TRYSEM):
- Development of Women and Children in Rural Areas (DWCRA):
- National Rural Employment Programme (NREP):
- Rural Landless Employment Guarantee Programme (RLEGP):
- Jawahar Rozgar Yojana (JRY):
- Employment Assurance Scheme (EAS):
- Million Well Scheme (MWS):
- Prime Minister’s Rozgar Yojana (PMRY):
- Jawahar Gram Samridhi Yojana (JGSY)
- Jai Prakash Rozgar Guarantee Yojana (JPRGY)
- Rural Housing Schemes

In spite of adoption of so many measures still as per census 2011 87.26% of total population resides in rural area with more than 70% unemployment. This is mainly due to the fact that all of the abovementioned measures come to hands of rural India in the form of aids. For actual, sustainable and perpetual rural development generation of the means of rural development within the rural area is needed.

BRIEF AND RELEVANT PROFILE OF PURULIA DISTRICT

Purulia district had undergone numerous and lengthy phases of reforms before it emerged as a separate district in West Bengal from Manbhum district of Bihar on and from 1st Nov. 1956 under the West Bengal and Bihar (Reorganization of Territories) Act, 1956.

In spite of glorious past and notable contributions in independence movement the district is unable to set aside its’ decades long adjective of “backward district”. The district is featured with

- Dominance of rural population. The district has a total population of 2927965 (as per 2011 census) of which 2554584 (87.24%) are residing in rural areas.
- Tribal people comprise a notable part of the population of this district. Purulia district is having second highest percentage of tribal population of the state (18.3 per cent) after Jalpaiguri (18.9 per cent).
- Agriculture is totally monsoon based as the district is ill irrigated.
- Illiteracy is another disadvantageous feature of the district. In rural Purulia literacy percentage is only 62.73. It is featured with low women literacy of 48.06 percent. However picture regarding literacy is brighter in urban areas with total literacy of 76.18 percent and women literacy of .67.15 percent. Male literacy in rural and urban areas are 76.83% and 84.63% respectively.
- Unemployment continues to be one of the most important problems of the district.

INDICATORS OF RURAL DEVELOPMENT WITHIN⁵

Several indicators of rural development within are well known to the world. A few of them are:

- EMPLOYMENT GENERATION: As per census 2011 almost 50% of rural populations of the district are unemployed.
- POVERTY; As per the report of the Rangarajan Committee 31% of rural population of the district are poor, which is 13.7% in urban areas
- LITERACY: Percentages of male literacy in rural and urban areas of the district are 77.15% and 88.76% respectively. The data regarding same for women are 57.93% and 79.11% respectively.
- AVERAGE INFANT MORTALITY RATE: Average infant mortality rate in the district is 54.7% in rural areas and 34.7% in urban areas.
- HOUSEHOLD ELECTRIFICATION: While 93.1% household in urban India is electrified only 55.7% of rural households of the district are electrified.
- HOUSEHOLD WITH TOILETS: In urban India 52.8% households have toilets. However it is shame to say that only 17.6% of rural house holds have toilets in the district. So far as the indicators of rural development are concerned the district portrays a shameful picture. Besides abovementioned indicators we may mention a few more indicators of rural development as under:

- ECONOMIC INDICATORS: employment generation, Improvement in purchasing power and change in the pattern of consumption.
- SOCIAL INDICATORS: Women empowerment and participation of aged and disabled population in developmental process

Scenario in the district is not different against these indicators. This picture of overall underdevelopment of the district has call for to look after and nurture the traditional treasure of the district-The Sericulture Industry more specifically tasar culture

SELECTED INDICATORS

Sericulture industry among its various inherent qualitative features facilitates the process of rural development within by means of undernoted aspects which are also the indicators of rural development:

- EMPLOYMENT GENERATION
- EMPLOYMENT TO AGED AND DISABLED POPULATION
- WOMEN EMPOWERMENT

ROLE OF SERCULTURE INDUSTRY IN EMPLOYMENT GENERATION

Generation of employment is a burning issue to the national planners. Since our early days of independence sericulture industry has become a moderate source of employment generation.

Sericulture industry is a vertical combination of two major stages,viz. The agricultural stage meant for production of cocoon known as pre cocoon stage and manufacturing and trading stage known as Post-cocoon stage. Each of the stages is consist of a few sub-stages. The same can be described as under in the light of employment opportunities:

SUBSTAGES OF AGRICULTURE (Pre-cocoon)

FOOD PLANT CULTIVATION, REARING OF SILK WORMS, PRODUCTION OF COCOONS AND COLLECTION OF COCOONS.

SUB STAGES OF MANUFACTURING & TRADING(Post-cocoon)

REELING & SPINNING, WEAVING, DYEING PRINTING, STICHING & REWEAVING AND MARKETING.

With the above mentioned steps it may be carefully noted that Producing silk is a lengthy process and demands constant close attention. To produce high quality silk, there are two conditions which need to be fulfilled – preventing the moth from hatching out and perfecting the diet on which the silkworms should feed.

Against above mentioned description of the stages of the industry it is crystal clear that the industry is labour intensive and employs a considerable number of human resources in every stage of production.

EMPLOYMENT GENERATION AS A WHOLE

All the activities of sericulture industry, viz. food plant cultivation, silkworm seed production, silkworm rearing, reeling and weaving of silk and collection of by products and its processing can provide a large scale employment, thereby a source of livelihood for the rural and tribal people. Sericulture industry is rated as the second largest employer in India after agriculture. Owing to this notable nature, the Indian planners have identified sericulture as one of the best-suited occupations for ideal growth and development of rural India.

Geo-climatic condition of the district is favourable for growth and development of Sericulture Industry in the district Purulia. Socio-economic condition of the district is also in support to the growth and expansion of Sericulture Industry in the district. In the following table the labour intensive nature of sericulture industry is depicted

Table No-1: TABLE SHOWING ENGAGEMENT OF HUMAN RESOURCES IN DIFFERENT STAGES IN 2015-16 (Unit: Man Days/Acre)

Years Stages	Functions	RNPUR-I	MANBAZAR-I
		Total	Total
Pre-cocoon	Land preparation	27	27
	Planting saplings	9	9
	Application of fertilizers	9	9
	Irrigation	23	0
	Upkeep	16	12
	Collection of cocoon	43	34
	Sorting of cocoon	27	22
		154	
Post-cocoon	Boiling of cocoon	283	237
	Reeling of silk yarn	567	473
	Dyeing of silk yarn	57	47
	Spinning	38	32
	Weaving	47	39
	Printing and stitching	15	13
	Marketing	25	21
		1032	
TOTAL		1186	975

In table no-1 to show the labour intensive nature of sericulture industry we have shown stage wise employment generation in terms of man days per acre in two

blocks. Raghunathpur –I and Manbazar-I have been selected as their respective contributions in districts production in pre-cocoon stage are 45% and 28%, whereas the same in the post cocoon stage are 87% and 10% respectively.

Table no-4 shows that about one thousand man days per acre may be generated by sericulture industry because of its inherent nature of employing human resource in each and every sub-stage.

EMPLOYMENT OF AGED AND DISABLED POPULATION

In table no-2 picture regarding disabled and aged population of the district is presented.

TABLE NO-2: TABLE SHOWING PICTURE REGARDING DISABLED AND AGED POPULATION OF THE DISTRICT

TOTAL POPULATION IN BRIEF						
RURAL			URBAN			
MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	
2161420	2070990	4232410	192788	180526	373314	
NUMBER OF DISABLED PERSONS						
RURAL			URBAN			
MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	
TOTAL	30274	24172	54446	4062	3280	7342
PERCENTAGE	1.4	1.16	1.29	2.11	1.82	1.97
NUMBER OF AGED PERSONS (65 YEARS AND ABOVE)						
RURAL			URBAN			
AGE GROUP	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
65 Yrs-69 Yrs	29932	32580	62512	4046	3978	8025
70 Yrs-74 Yrs	19048	20647	39695	2740	2661	5401
75 Yrs-79 Yrs	8460	9632	18092	1346	1371	2717
80 Yrs and above	8131	9106	17237	1451	1467	2918
TOTAL	65571	71965	137536	9583	9477	19061
PERCENTAGE	3.03	3.47	3.25	4.97	5.25	5.11

Table no-2 shows that total numbers of disabled and aged persons in the district are not negligible. The number is found to be greater in urban areas.

ATTITUDE OF THE SOCIETY TOWARDS DISABLED AND OLD AGED POPULATION

In Table no-2 it has observed that number of disabled and aged population of the district are mention worthy in terms of number. These huge numbers of people are left out of the arena of employment due to attitude of the society towards this

section of the society. This attitude is not only thought or kept in the mind, it is expressed in front of this helpless section of the population. Their inabilities are always highlighted. However their potentials, abilities and hidden skills are not explored.

In nut shell attitude of the society towards this population is negligence. They are treated as burden of the society.

The unique features of sericulture industry if properly applied are capable to change entire scenario.

Above mentioned description of the stages of sericulture industry clarifies the scope for accommodating disabled and aged population who are treated as not fit to work. In table no 3 respective stages fit to accommodate disabled and aged people are presented.

TABLE NO-5: TABLE SHOWING ABILITY OF SERICULTURE INDUSTRY TO ACCOMMODATE DISABLED AND AGED PEOPLE

SUB STAGES	FIT FOR DISABLED OR NOT	FIT FOR AGED OR NOT
FOOD PLANT CULTIVATION	NOT FIT	NOT FIT
REARING OF SILK WORMS	FIT	FIT
PRODUCTION OF COCOON	FIT	FIT
COLLECTION OF COCOON	FIT	FIT
REELING AND SPINNING	FIT	FIT
WEAVING	FIT	FIT
DYEING,STICHING,PRINTING.ETC.		FIT
MARKETING	FIT	FIT

Table no 5 shows that disabled and aged people who usually treated as burden of the society for being non-working population are fit for almost all the stages of sericulture industry. It is to be noted here that there are some specific disabilities and old age factors those may debar this section to be judged as fit for the stages earmarked against them. For example it is found that mentally challenged persons are able to perform all the activities associated with the stages mentioned above against proper training and guidance. It is not always true that they are unfit for food plant cultivation but it is risky for a mentally challenged person to be actively involved in food plant cultivation because a little bit negligence of the trainer may harm him or her seriously. However in the other stages the chance of harm is lesser. It is also well known that a person with problem in his legs is not fit for rearing of silk worms and collection of cocoon. Again he/she is fit for all other stages. Visually challenged persons are fit for reeling and spinning as well as weaving and marketing. Thus nature of disability may make a person unfit for a particular stage but overall

picture regarding ability of sericulture industry to accommodate disabled persons is praise worthy. On the other hand old aged persons are fit for all the stages of sericulture industry. They are not supposed to be involved in the stage-food plant cultivation for quantum of physical labor involved. Though there are several exceptions. Therefore it may be commented that the population which is neglected by the society with a tag of not-fit to work can serve the society with their active participation in sericulture industry.

TABLE NO-7: TABLE SHOWING ENGAGEMENT OF HUMAN RESOURCES AND ENGAGEMENT OF AGED AND DISABLED PERSONS IN DIFFERENT STAGES IN 2014-15

Years Stages	Functions	RAGHUNATHPUR-I			MANBAZAR-I		
		Total	Aged persons	Differently able persons	Total	Aged persons	Differently able persons
Pre-cocoon	Land preparation	27	0	0	27	0	0
	Planting saplings	9	0	0	9	0	0
	Application of fertilizers	9	0	0	9	4	0
	Irrigation	23	0	0	0	0	0
	Upkeep	16	8	4	12	7	3
	Collection of cocoon	43	12	0	34	8	0
	Sorting of cocoon	27	10	4	22	11	5
			30	8			
Post-cocoon	Boiling of cocoon	283	80	20	237	55	18
	Reeling of silk yarn	567	185	65	473	110	55
	Dyeing of silk yarn	57	12	0	47	10	0
	Spinning	38	20	7	32	17	5
	Weaving	47	5	7	39	4	5
	Printing and stitching	15	7	4	13	6	3
	Marketing	25	5	0	21	6	.0
TOTAL		1186	344	111	975	238	94

Unit: Man Days/Acre

Table no-7 shows that both old aged and disabled persons has a notable participation in sericulture industry performed in those two blocks. Both types of the population are fond of being engaged particularly in reeling of silk yarns from cocoons. They are also generous to be engaged in other stages of the industry

SERICULTURE INDUSTRY AND WOMEN EMPOWERMENT

It has been seen that the sericulture activity brings regular income to the community without any bias of caste, creed, gender, or religion. A remarkable feature of this activity is its egalitarianism—sericulture farmers, rich and poor, earn the same income from it. As women have a crucial role in the activities of sericulture, it equally creates opportunities and make them independent socially, economically, politically, and otherwise.

Sericulture is an agro-based cottage industry involving interdependent rural, semi-urban and urban-based activities in which estimated participation of women is about 60 (sixty) %. Thus, in contrast to any other agro-based profession the role of women in sericulture industry is dominating which will be helpful for improving the status of women in family enterprises. Thus another burning issue of the day, empowerment of women can be moved forward to a reasonable extent with the development of Sericulture Industry.

Reeling silk and spinning were always considered household duties for women, while weaving and embroidery were carried out in workshops as well as the home. In every silk-producing province the daughters, mothers and grandmothers of every family devoted a large part of the day for six months in a year to the feeding, tending and supervision of silkworms and to the unraveling, spinning, weaving, dyeing and embroidering of silk.

Against this unique feature of the industry in following table we would like to show employment in different stages of the industry and employment of women and differently able persons as obtained from our field survey among the units in two blocks of Purulia District, viz, Raghunathpur-I and Manbazar-I.

Respective joint engagement of Raghunathpur-I and Manbazar -I in pre-cocoon and post-cocoon stage are 62% and 96%. It signifies that these two areas may be considered as representative of the district.

Table No-8: TABLE SHOWING ENGAGEMENT OF HUMAN RESOURCES IN DIFFERENT STAGES IN 2014-15 (Unit: Man Days/Acre)

Years Stages	Functions	RAGHUNATHPUR-I		MANBAZAR-I	
		Total	Women	Total	Women
Pre-cocoon	Land preparation	27	13	27	12
	Planting saplings	9	5	9	4
	Application of fertilizers	9	0	9	4
	Irrigation	23	0	0	0
	Upkeep	16	8	12	7

	Collection of cocoon	43	22	34	18
	Sorting of cocoon	27	10	22	11
			58		
Post-cocoon	Boiling of cocoon	283	150	237	142
	Reeling of silk yarn	567	425	473	355
	Dyeing of silk yarn	57	12	47	10
	Spinning	38	20	32	17
	Weaving	47	5	39	4
	Printing and stitching	15	7	13	6
	Marketing	25	0	21	4
TOTAL		1186	677	975	594

The table no-8 shows that women dominate the activities like Land preparation, Planting saplings, Upkeep, Collection of cocoon, Sorting of cocoon, Boiling of cocoon, Reeling of silk yarn and Spinning of the same. It is not the inability of women which restricts their dominance over other activities, but the male dominance over the social structure and conservativeness of the society of Purulia.

The above mentioned table shows that total man days generated per acre is considerably moderate. Engagement of women and differently able persons are notably high. Highlighting this unique feature of the industry it is appealed to the policy makers to make necessary arrangements for increasing involvement of women and differently able person in the industry. This can be used as an effective tool for providing economic independence to this section of the society.

In spite of several hurdles the tasar culture of Purulia District is approaching towards its' golden era owing to following facts;

- Adoption of new technologies.
- Continuous support from both state and central government.
- Free supply of dfls at a larger volume.
- Reduction in the death ratio of dfls.
- Government intervention in the post cocoon stages in form of strengthening co-operative societies, establishing tasar cluster, running cocoon huts and direct purchase of cocoon, reeled yarns, weaved cloths and finished silk products.
- Export promotion.
- Stoppage of intervention of Chinese silk.
- Encouraging Afghans (popularly known as Kabuliwala) to come to the land of tasar as earlier.

Basic reasons behind selection of these two blocks as sample are:

- ❖ Manbazar-I and Raghunathpur-I consists of about 40% of total plantation area of food plants of the district.⁶
- ❖ Engagement of Manbazar-I and Raghunathpur-I in post cocoon stage is more than 80% of the districts engagement.⁶

CONCLUSION

Purulia district is featured with rural dominance in terms of population distribution, huge unutilised land, low agricultural productivity, huge unemployment, underdevelopment in both urban and rural areas, increasing women dominance over population, unfavourable socio-economic conditions as well as reluctant attitudes for regular hard work and even more. All of these features constitute an adverse environment for development of the district. Under these circumstances we may mention the unique features of sericulture industry. Some of them are the industry is extremely labour intensive, it has ability to absorb workers from the age of nine to ninety, it is meant for employing women and differently able persons, post cocoon stage may be practiced at any time of the day even in midnight, being mostly family based need for hired labour is notably low, availability of ample helps from the Government in pre-cocoon stage and being cottage based small scale industry requirement of capital as well as investment is low, etc. The list of benefits available from sericulture industry towards rural development may be extended even more. Therefore it can be concluded that sericulture industry has potentials to be an effective means for employment generation and rural development in Purulia district.

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