

FINAL REPORT

**EVALUATION OF CENTRALLY SPONSORED
SCHEME DURING XI PLAN**

CATALYTIC DEVELOPMENT PROGRAMME



SPONSORED BY

**CENTRAL SILK BOARD
MINISTRY OF TEXTILES
GOVERNMENT OF INDIA**

SUBMITTED BY



**ECONOMIC SERVICES GROUP
NATIONAL PRODUCTIVITY COUNCIL
NEW DELHI**

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CHAPTER 1

ABOUT THE STUDY

1.1 Central Silk Board

Central Silk Board (CSB), constituted in April, 1949, by an Act of Parliament (Act No. LXI of 1948), is a statutory body under the Ministry of Textiles, Government of India, established for the development of sericulture and silk industry in the country. The CSB undertakes its own mandated activities in Research and Development, Nucleus and Basic Silkworm Seed Production, leadership role in commercial Seed Production, and brand promotion of Indian silk in domestic and international markets, through its 300 units located in different parts of the country. As a part of its developmental initiatives, CSB has implemented Catalytic Development Programme (CDP) as a Centrally Sponsored Scheme, in association with the State Department of Sericulture (DOS) for improving the production and productivity of Indian silk across 26 traditional and non traditional states.

1.2 Role of State Departments of Sericulture (DOS)

Almost all sericulture practicing states have their own Department of Sericulture (DOS) to promote sericulture related activities. DOS's main responsibilities are: implementation of developmental programmes, extension, seed production, marketing, maintenance of support systems in the value chain, and enforcement of State Acts, if any. All these States are focusing on sericulture development through implementation of Centrally Sponsored "Catalytic Development Programme" by ear marking matching state share based on the component.

1.3 Catalytic Development Programme (CDP)

The Catalytic Development Programme (CDP) was conceived during IX Five Year Plan period and has been continuing since then. The objective of the CDP is to focus on complete and holistic development of sericulture industry, involving all the stakeholders. From XI Plan onwards, CDP has been implemented in a "Project Mode Approach" with clearly defined goals, targets, resources and time schedule. The programmes are categorized under four major sectors (1) Seed Sector, (2) Cocoon Sector, (3) Post Cocoon Sector, and (4) Support Services Sector.

The CDP scheme is popular among the primary stakeholders as it not only supports them financially to set up viable enterprises (cocoon production, seed production, reeling, processing etc) but also enables them to directly access the latest techniques and methods developed by CSB through its R&D institutions.

The scheme consists of various components and sub-components for promotion of all varieties of silk in India. During XI plan, the CDP comprised of 57 components under which component specific sharing pattern has been followed. According to this sharing pattern all three stakeholders viz. CSB, State DOS and beneficiaries have to share the expenses related to the implementation of the schemes in varying ratios.

1.4 Objectives of Catalytic Development Programme

- To focus on complete and holistic development of sericulture industry in the country involving States and beneficiaries for sustainability, and improvement of output in terms of quality, quantity and productivity.
- To provide a unique and effective platform for transfer of technologies evolved by the Research & Development Institutes in the field.
- CDP aims at filling demand-supply gap through technology development and absorption, quality up-gradation, investment generation, productivity improvement and employment generation, especially to women, SC/ ST and below poverty line farmers.
- To bring horizontal and vertical growth in bivoltine silk cocoon and raw silk production in the clusters, improved managerial and technical skills for ensuring management of group activities through training and input support and provide need based infrastructure and technological support to silk industry.

1.5 CDP Implementation during XI Plan (2007-08 to 2011-12)

Catalytic Development Programmes implemented during X Plan was proposed for continuation during XI Plan with certain modifications along with certain additional components for Mulberry & Vanya Sectors. During XI plan, CSB in association with various State Departments of Sericulture has implemented Catalytic Development Programme (CDP) in 26 States and two autonomous councils within Assam. The objective of the implementation of CDP is to sustain the interest of the farmers in sericulture and also to enhance the quality of silk produced.

In view of the importance of production of high grade bivoltine silk to reduce the reliance on imported raw silk, greater thrust to Vanya silk, and creating more employment in rural areas especially for women/ tribal / marginal farmers through sericulture practices etc., the CDP was implemented during XI plan in project mode approach in the form of packages mainly under four sectors viz. Seed, Cocoon, Post-Cocoon sectors and Support Services sectors in order to benefit all categories of stakeholders like graineures, sericulture farmers, reelers, weavers etc.. **Table 1.1** reports the financial outlay of the CSB share of CDP scheme during XI Plan (2007-2012). The Government of India under revised cost estimate had approved the CDP a total cost of Rs.1527.97 crores for implementation during XI Plan, of which CSB share is Rs.821.74 crores and the balance Rs 300.73 crores and Rs 405.50 crores were borne by the State Governments and beneficiaries respectively.

Table 1.1 XI Plan financial outlay for CDP scheme -Central Silk Board share

(value: Rs crores)

XI Plan initial Out lay	2007-08 Actual	2008-09 Actual	2009-10 Actual	2010-11 Actual	2011-2012 Actual	XI plan Revised Outlay
661.62	80.82	90.74	144.06	260.89	245.23	821.74

1.5.1 Project Mode: Packaging of Schemes under XI Plan

Unlike under IX and X Plan periods, the implementation of the CDP during XI plan was carried out in Project mode with clearly defined goals, measurable targets, resources and time schedule. The Catalytic Development Programme (CDP) consists of 57 components and sub-components under Mulberry, Tasar, Eri and Muga Sectors. The components are beneficial for both existing and new farmers who take up sericulture. The State Departments of Sericulture has to identify existing as well as new farmers and offer the components according to their requirements from the basket of components. The packages under CDP covers four major areas such as Seed sector, Cocoon sector, post-cocoon sector and support services components which are common to all packages.

1.5.2 Components under CDP

Seed sector package has components for seed production in the Public/Private sector and/or with public-private partnership in case of Mulberry sector and through support to States and also for private Graineurs in the Vanya Sector.

The package under Cocoon sector supports components for food plant development (Mulberry varieties like V-1 and Bivoltine hybrids/Double hybrids) together with the technology for a concerted effort to produce Bivoltine silk, supply of rearing equipments including improved mountages, irrigation facilities, construction of rearing houses, supply of disinfectants, chawkie rearing centre, with the essential insurance coverage for all segments of Sericulture.

Package for post-Cocoon sector covers components for silk reeling & packing, silk weaving, silk wet processing, bye-product and utilization for market support.

Funding pattern of each of the components is given in **table 1.2**.

Table 1.2 Funding pattern of CDP scheme during XI plan

Sector	Category of State	Variety	CSB Share%	State Share %	Beneficiaries Share %
Seed Sector	General States	Mulberry	60	20-40	20
		Vanya	60	20-40	20
	Special Status States	Mulberry	80	10	10
		Vanya	80	10	10
Cocoon Sector	General States	Mulberry	25-50	25-50	25-50
		Vanya	50-80	20-25	15-25
	Special Status States	Mulberry	80-90	10	0-10
		Vanya	50-80	10-25	10-25
Post Cocoon Sector	General States	Mulberry	50-75	0-25	0-50
		Vanya	50	25	25
	Special Status States	Mulberry	80	10	10
		Vanya	80	10	10
Corporate participation in Sericulture	Any State	Only for Bivoltine	40	20	40
Support Services Sector	Any State	Mulberry	100	0	0
		Vanya	100	0	0

Source: Compiled from Handbook for CDP Guidelines, CSB Bangalore

1.6 About the Present Study

Government of India suggested Central Silk Board (CSB) to commission third party independent evaluation of Centrally Sponsored Scheme (i.e. CDP) and the three Central Sector Schemes implemented by CSB during XI plan:

I. Centrally Sponsored Scheme

A. Catalytic Development Programme (CDP)

II. Central Sector Schemes:

B. Research & Development/Training/IT initiatives

C. Seed Organization & Human Resource Management (HRD)

D. Quality Certification System (QCS)

Since National Productivity Council (NPC) had already conducted a midterm evaluation of “Baseline Survey of Sericulture activities in India along with Evaluation of Catalytic Development Programme during XI Plan” and has vast experience in conducting evaluation studies of various Government schemes and programmes, CSB requested NPC’s consent to undertake the evaluation study through a Memorandum of Understanding (MoU).

This Report presents the evaluation of the Centrally Sponsored Scheme Catalytic Development Programme (CDP) during XI Five Year Plan. Three central Sector Schemes have been evaluated separately in three other Reports which are undertaken concurrently along with this study.

NPC has undertaken the “Evaluation of Catalytic Development Programme (CDP) during XI Five Year Plan” with a view to ascertain its effectiveness towards sericulture development in the country and fulfillment of its objectives, issues in operational modalities and implementation and thus recommend improvement measures so as to make the CDP scheme more effective and fruitful during XII Five Year Plan (2012-2017).

The evaluation study has been carried out with the following Terms of Reference.

1.7 Terms of Reference

- i. To analyze the performance of CDP Scheme in the sericulture practicing states (physical and financial) – as per the achievements made end of the XI Plan.
- ii. To make analysis on each component of the Scheme to understand the success rate/percentage of acceptability by states and beneficiaries,
- iii. To suggest ways and means to implement the CDP under Private sector and strategy for implementation.
- iv. To find out the implements’ views on the components under CDP and CDP as a Scheme.
- v. To ascertain the reasons for not availing the benefits of certain key components of CDP by states,
- vi. To find out whether States are following the implementation guidelines/operational modalities suggested in the Plan document (Programme Approval & Monitoring Group (PAMG), State level purchase committee, mile stones etc.,)
- vii. To suggest modifications if any, in the strategy of implementation of the components under CDP.

- viii. To find out whether relevant stakeholders (including extension workers, District Officers, NGO's/SHGs, etc.,) are involved in implementation of the CDP components/Schemes.
- ix. To undertake cluster-wise crop survey.
- x. To study the State-wise impact of markets (cocoons and silk yarn) on the extent of area under mulberry, cocoon and silk yarn production.

1.8 Methodology Adopted for the Evaluation of CDP

The evaluation study has been undertaken mainly through two phases. First phase involved extensive compilation of data on both physical and financial parameters of all the 57 schemes of CDP at State level from the implementing agencies such a CSB and DOS and also consolidation of the same at the All India level. Second phase of the study included detailed field level interviews of major categories of CDP beneficiaries drawn from the selected fourteen Sericulture States.

The evaluation of CDP has been undertaken based on detailed field interactions with CDP implementing agencies and beneficiaries. The interactions have been carried out with structured questionnaires specially designed for implementing agencies (DOS/CSB/NGO), beneficiary categories (Graineurs, Cocoon farmers and Reelers/weavers/wet processors), Co-operative societies/SHGs/Mobile Disinfection units, Cocoon Markets/Raw silk exchanges, Extension officers etc. The field survey questionnaires are enclosed as **Annexures – 1.1 to 1.6**. Details regarding the questionnaires given in **Table 1.3**

Table 1.3 : Details regarding Field Survey questionnaires

Sl. No.	Stakeholder category	Questionnaire Code	Annexure Nos.-
1	Implementing Agencies (CSB/DOS/NGOs)	CDP-01	1.1
2	Private Graineur/LSPs	CDP-02	1.2
3	Cocoon farmers (Seed/Commercial)	CDP-03	1.3
4	Post Cocoon (Reelers/Weavers/Dyers/Wet processors)	CDP-04	1.4
5	Cocoon markets/Raw silk Exchanges/Co-operative Societies	CDP-05	1.5
6	Extension Officers/Cluster In charge	CDP-06	1.6

The questionnaires were designed keeping in view of the Terms of Reference and objectives of the CDP evaluation study. The questionnaires were finalized after extensive consultations with the officials of Central Silk Board.

The objective of carrying out detailed field interviews of various stakeholders was to find out impact of the CDP on production, productivity, quality, technological upgradation, issues and bottlenecks in the implementation of the scheme, modifications/amendments required in the scheme, usefulness of CDP for the beneficiaries, operational modalities followed or any other issues related to CDP implementation.

The compiled data has been analyzed using the Statistical Software (PASW 18 or SPSS 18) for consolidation of the data and also for drawing analytical tables based on the feedback received from various stakeholders categories.

1.9 Sample Selection Procedure

Sericulture is being practiced across 26 states in the country, however, three states namely Gujarat, Haryana and Rajasthan have only marginal sericulture activity. Based on geographical locations Sericulture states have been grouped into five regions by Central Silk Board.

For conducting detailed field study, 14 states have been selected based on concentration of sericulture activity, regional representation and sericulture category (**Table 1.4**).

Table 1.4 States Selected for Field Survey based on Sericulture category

Sl. No.	Region	States	Sericulture Category
1.	North Western Himalaya Region	J&K (Trd.)	Mulberry
2.		Himachal Pradesh (N-Trd.)	Mulberry
3.		Uttarakhand (N-Trd.)	Mulberry
4.	Northern & Central India	Uttar Pradesh (N-Trd.)	Mulberry
5.		Jharkhand (N-Trd.)	Tasar
6.		Chhattisgarh (N-Trd.)	Tasar
7.		Maharashtra (N-Trd.)	Mulberry
8.	North Eastern India	Assam (N-Trd.)	Eri, Muga
9.		Meghalaya (N-Trd.)	Eri, Muga
10.		Manipur (N-Trd.)	Eri, Mulberry
11.	Eastern Region	West Bengal (Trd.)	Mulberry
12.	Southern India	Andhra Pradesh (Trd.)	Mulberry
13.		Karnataka (Trd.)	Mulberry
14.		Tamil Nadu (Trd.)	Mulberry

*Trd.-Traditional, N-Trd. - Non-Traditional

1.10 Field Survey coverage

Table 1.5 presents the proposed field survey plan for the CDP evaluation study.

Table 1.5 Proposed Sample plan for CDP Evaluation

S.No	State	Implementing Agencies	Grain eures	Seed Cocoon	Commercial Cocoon	Post Cocoon	Seed Cocoon Markets	Comm. Cocoon Market	Mobil e Disinfection units	Raw Silk Exchange	Co-op Societies	Extension Officer /In charge of the cluster	Sub total
		CDP-01	CDP-02	CDP-03	CDP-03	CDP-04	CDP-05	CDP-05	CDP-05	CDP-05	CDP-05	CDP-06	
1	Karnataka	2	20	50	75	75	0	8	0	4	0	16	250
2	Andhra Pradesh	2	5	30	65	65	2	6	1	2	0	16	194
3	Tamilnadu	2	10	25	70	60	0	4	0	1	1	6	179
4	Jammu & Kashmir	1	0	5	32	7	0	0	0	0	0	7	52
5	West Bengal	2	15	18	28	27	3	2	0	0	0	8	103
6	Uttarakhand	2	1	3	14	5	0	1	0	0	0	3	29
7	Himachal Pradesh	1	0	3	16	5	0	0	0	0	0	5	30
8	Uttar Pradesh	1	0	5	20	31	0	0	0	0	0	4	61
9	Maharashtra	2	0	4	25	18	0	0	0	0	0	5	54
10	Assam	2	3	15	41	30	0	1	0	0	1	5	98
11	Meghalaya	1	4	7	15	7	0	0	0	0	0	2	36
12	Manipur	1	0	5	8	6	0	0	0	0	0	2	22
13	Chattisgarh	1	5	12	25	18	0	0	0	1	0	2	64
14	Jharkhand	1	2	15	31	15	0	0	0	0	2	4	70
	Total	21	65	197	465	369	5	22	1	8	4	85	1242

Actual field survey did vary from the initial field survey plan due to local conditions, availability of sericulture farmers, cocoon markets, raw silk exchanges etc. However, efforts have been made to adhere to the initial sample plan wherever it is possible. Actual field survey coverage is given in **Table 1.6**.

Table 1.6 Actual Field Survey Coverage for CDP Evaluation study

S.No.	State	Implementing Agencies	Grain eures	Seed Cocoon	Commercial Cocoon	Post Cocoon	Seed Cocoon Markets	Comm. Cocoon Market	Mobil e Disinfection units	Raw Silk Exchange	Co-op Societies	Extensi on Officer/ In charge of the cluster	Sub total
		CDP-01	CDP-02	CDP-03	CDP-03	CDP-04	CDP-05	CDP-05	CDP-05	CDP-05	CDP-05	CDP-06	
1	Karnataka	1	7	52	78	79	-	11	-	2	-	17	247
2	Andhra Pradesh	1	5	32	65	56	-	4	1	-	-	11	174
3	Tamilnadu	1	3	38	70	25	-	6	-	-	-	8	151
4	Jammu & Kashmir	1		8	49	8	-	-	-	-	-	8	74
5	West Bengal	1	8	21	23	27	4	-	-	-	-	7	91
6	Uttarakhand	1		5	31	3	-	2	-	-	-	8	50
7	Himachal Pradesh			29	6	8	-	-	-	-	-	6	49
8	Uttar Pradesh	1			20	20	-	-	-	-	-	3	44
9	Maharashtra	2		13	16	13	-	-	-	-	-	3	47
10	Assam	1	3	10	18	16	-	1	-	1	-	3	53
11	Meghalaya			7	11	4	-	-	-	-	-	1	23
12	Manipur	1	1	8	10	5	-	-	-	-	-	1	26
13	Chattisgarh	2	3	12	25	12	-	-	-	-	-	-	54
14	Jharkhand	1	1	21	25	15	1	-	-	-	2	5	71
	Total	14	31	256	447	291	5	24	1	3	2	81	1155

Source: NPC Field Survey July-September 2012

1.11 Structure of the Evaluation Report

The Evaluation Report on catalytic Development Programme has been presented in eleven chapters. **Chapter I** presents the objectives, Terms of Reference, Methodology, sample frame and structure of the Report. **Chapter II** provides a broad overview of the status of sericulture in India in terms of varieties, spread, import, export, employment and comparison of Sericulture activities in India and China. **Chapter III** provides comparison of physical and financial progress of CDP with respect to target and actual achievement at All India level. **Chapter IV** discusses the success rate and acceptability of CDP components across states and beneficiaries during XI Five Year Plan. **Chapter V** analyses the impact of Cocoon Markets and Raw Silk Exchanges on the development of Sericulture at the state level. **Chapter VI** provides detailed analysis of Cluster Promotion Programmes at various locations in India based on the DFLs reared, Cocoons produced, raw silk production and employment generated during XI Five Year Plan **Chapter VII** discusses the implementation guidelines or operational modalities followed by states under the CDP scheme. **Chapter VIII** discusses the involvement of stakeholders in the implementation of CDP and the way forward, **Chapter IX** evaluates the CDP implementation

across various sericulture states. **Chapter X** provides SWOT analyses of both Mulberry and non-Mulberry sector and chapter XI provides summary and recommendations for the continuation of CDP during XII Five Year Plan.

1.12 Limitations of the Study

- Due to a number of extraneous factors which were beyond the control of the field survey team such as law and order problems in Assam and North Eastern States the field survey could not be conducted at all the locations as per the initial plan.
- Some of the beneficiary respondents were not aware of Catalytic Development Programme. Although sincere attempt has been made to make them aware of Catalytic Development Programme Scheme to arrive at the conclusions determining impact of Catalytic Development Programme yet, it is based on the learning derived by the respondents.
- Since the Sericultural activities are undertaken on an informal and part time basis, majority of the respondents were not maintaining records or data on production, employment and other input factors. Therefore, the evaluation had to be conducted based on discussions and other related information mainly from the memory of respondents to arrive at the conclusions about the impact of Sericulture activities and Catalytic Development Programme.

CHAPTER II

STATUS OF SERICULTURE IN INDIA

2.1 Introduction

Silk is a fibroin made of proteins secreted in the fluid state as single filament by a caterpillar, popularly known as 'silkworm'. These silkworms feed on the selected food plants and spin cocoons as a 'protective shell' to perpetuate the life. Silkworm has four stages in its life cycle viz., egg, silkworm, pupa and moth. Man interferes this life cycle at the cocoon stage to obtain the silk, a continuous filament of commercial importance, used in weaving of the silk fabric.

Sericulture is an ancient industry in India started since second century B.C. According to historians, raw silk was exported during the reign of Kanishka in 58 B.C. In its long history, sericulture has passed through periods of great prosperity as well as decline. During the 18th, 19th and early 20th centuries sericulture flourished in the States of the then Bengal, Mysore and Kashmir. There was much demand for silk during the Second World War for war related consumption. Organized development of sericulture started from post Independence period, mainly due to the initiatives of Govt. of India. Its growth has been rapid and sustainable during the last three decades.

Between the lush green mulberry fields and the glittering fashion houses, there are many intricate, subtle and skillful activities that go into the making of the glittering silk which are carried out mostly by rural people with substantial contribution from women. The production of Indian Silk has over the years been an occupation of the women, by the women and for the women. Most of the sericulture activities require less physical stress and could be easily handled by women and other dependent members of the family along with other household activities. Women constitute over 53% of those employed in down-stream activities of sericulture. This is possible because sericulture activities starting from mulberry garden management, leaf harvesting and silkworm rearing is more effectively taken up by the women folk. There are several factors that encourage them to find better employment opportunities in sericulture. The socio-economic backdrop of Indian women, who are less educated, rural based and cannot go far away places in search of jobs, forced them to find out an enterprise which suits to her life background. Further, the proximity of the avocation close to her family work-culture is preferred.

2.2 Silks of India

There are five major types of silk of commercial importance, obtained from different species of silkworms which in turn feed on a number of food plants. Except mulberry, other varieties of silks are generally termed as non-mulberry silks. The non-mulberry silk is recently christened as "Vanya Silk", due to its wild nature. India has the unique distinction of producing all the commercial varieties of silk.

A. Mulberry silk

Bulk of the commercial silk produced in the world comes from this variety and often refers to mulberry silk. Mulberry silk comes from the silkworm, *Bombyx mori* L. which solely feeds on

the leaves of mulberry plant. These silkworms are completely domesticated and reared indoors. The mulberry sector continues to be predominantly rural and small farmer-based, with post cocoon activities in the cottage and small industry sector. Mulberry silk contributes to around 80% of the silk production. In India, the major mulberry silk producing States are Karnataka, Andhra Pradesh, West Bengal, Tamil Nadu and Jammu & Kashmir which together contributes 97% of country's total mulberry raw silk production.

B. Tasar:

Tasar (Tussah) is copperish beige colour, coarse silk mainly used for furnishings and interiors. It is less lustrous than mulberry silk, but has its own feel and appeal. Tasar silk is generated by the silkworm, *Antheraea mylitta* which mainly thrive on the food plants of Asan and Arjun. The rearings are conducted outdoor in nature on the trees. In India, tasar silk is mainly produced in the States of Jharkhand, Chhattisgarh and Odissa, besides Madhya Pradesh, Maharashtra, Bihar, West Bengal and Andhra Pradesh. Tasar culture is the main stay for many tribal communities in India.

C. Oak Tasar:

It is a finer variety of tasar generated by the silkworm, *Antheraea proylei* J. in India which feed on natural food plants of oak (*Quercus*), found in abundance in the Sub-Himalayan belt of India covering the States of Himachal Pradesh, Jammu & Kashmir, Utarakhand, Assam, Mizoram and Manipur. China is the major producer of oak tasar in the world and this comes from silkworm *Antheraea perni*.

D. Eri:

Also known as Endi or Errandi, Eri is a multivoltine silk spun from open-ended cocoons, unlike other varieties of silk. Eri silk is the product of the semi domesticated silkworm, *Philosamia ricini* that feeds mainly on castor leaves. Eri Silkworm being polyfagous has wide range of food plants such as Tapioca/cassava, Papaya, Payam, Kessaru and Barkessuru etc. Eri-culture is a household activity practiced mainly in North Eastern Region for protein rich pupae, a delicacy for the tribals in the region. Resultantly, the eri cocoons are open-mouthed and are spun. The silk was used indigenously for preparation of *chaddars* (wraps) for own use by the tribals. Eri silk fabric is a boon for those who practice absolute non-violence and do not use any product obtained by killing any living creature. Eri silk now popularized as "Ahinsa Silk". Now Eri silk is getting popular the world over due to the isothermal properties which make it suitable for shawls, jackets and blankets. In India, Eri culture is practiced mainly in the North-Eastern States. It is also getting popularized in Bihar, West Bengal, Odisha, Uttar Pradesh and Andhra Pradesh. Eri silk is suitable for knit products, under wears, kids wear, denim and other fashion garments.

E. Muga:

This golden yellow colour silk is prerogative of India and the pride of Assam State. It is obtained from the wild multivoltine silkworm, *Antheraea assamensis*. These silkworms feed on the aromatic leaves of Som and Soalu plants and are reared outdoor on trees similar to that of tasar. This fabric is one of the world treasures of fine silk fabrics, woven on foot-powered, hand operated looms, which creates a subtle unevenness. The natural shimmery golden colour of this rare, wild silk needs no dye to enhance its exquisite beauty. It is a high value product used in

products like sarees, mekhalas, chaddars, etc. Muga culture is specific to the State of Assam and an integral part of the tradition and culture of that State. However, the muga culture is getting popularized to other States like West Bengal, Meghalaya and Nagaland due to the availability of Som and Soalu plants. Muga is now used to replace *zari* in sarees and for surface ornamentation is garments / apparels, etc. **Table 2.1** reports the states which produce different types of Silk.

Table 2.1: States Producing Different Types of Silk

Sl. No.	Type of silk	Producing States
1	Mulberry	Karnataka, Andhra Pradesh, West Bengal, Tamil Nadu and Jammu & Kashmir, Assam, Arunachal Pradesh, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Meghalaya, Nagaland, Odisha, Punjab, Sikkim, Tripura, Uttarakhand, Uttar Pradesh
2	Tasar	Jharkhand, Chhattisgarh and Orissa, besides Maharashtra, West Bengal, Andhra Pradesh, Bihar, Madhya Pradesh and Uttar Pradesh
3	Oak Tasar	Manipur, Himachal Pradesh, Uttar Pradesh, Assam, Meghalaya and Jammu & Kashmir.
4	Eri	Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Sikkim, Uttar Pradesh, Uttarakhand and West Bengal
5	Muga	Assam, Meghalaya, Manipur, Arunachal Pradesh, Mizoram, Nagaland and West Bengal

Out of the total raw silk production of 23060 MT (2011-12), 79% of the Raw silk produced in India is mulberry, while Eri contributes 13%, Tasar 7% and Muga 1%. (**Figure 2.1**).

Figure 2.1: Category wise Raw Silk Production (2011-12)

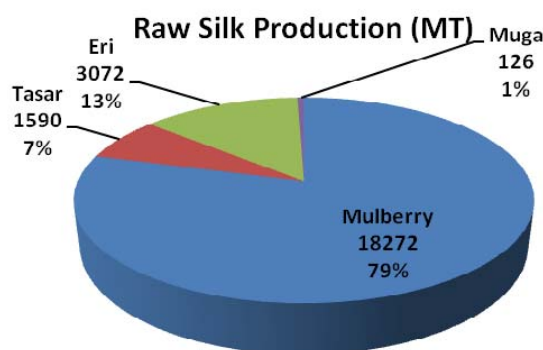


Table 2.2 Statewise production of various silk varieties in India (in %)

State	Mulberry	Tasar	Eri	Muga
A. Traditional States				
Karnataka	43%			
Andhra Pradesh	35%			
Tamil Nadu	8%			
West Bengal	11%	3%		
Jammu & Kashmir	1%			
B. Non-Traditional States				
Assam			64%	94%
Arunachal Pradesh				1%
Bihar		2%		
Chattisgarh		18%		
Haryana				
Himachal Pradesh				
Jharkhand		65%		
Kerala				
Madhya Pradesh		5%		
Maharashtra	1%	1%		
Manipur			8%	
Mizoram				1%
Meghalaya			18%	3%
Nagaland			8%	1%
Orissa		6%		
Punjab				
Rajasthan				
Sikkim				
Tripura				
Uttarakhand				
Uttar Pradesh		1%	1%	
Total(a+b)	100%	100%	100%	100%

Source: Estimated from data provided by CSB

2.3 Silk Production Process

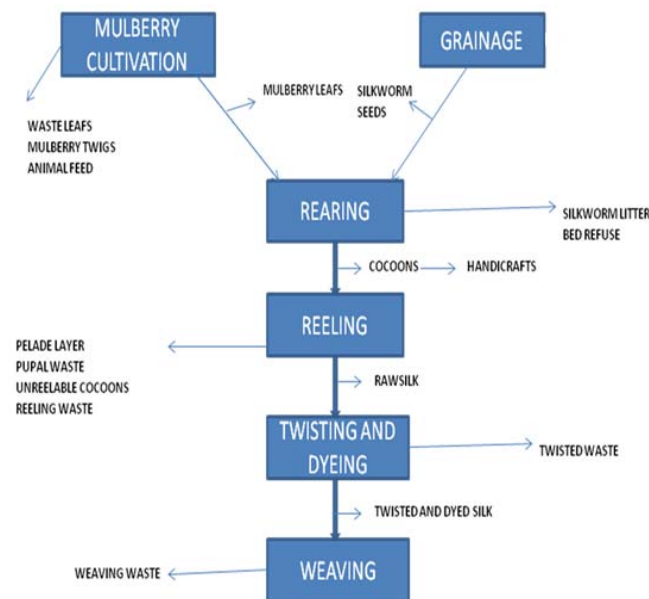
The stages of silk production are as follows:

- Sericulture is the cultivation of cocoons for their filaments.
- Breeding of silkworm occurs once in a year but under scientific conditions, they may hatch three times a year.

- The female moth lays around 350 to 400 eggs and the moths die soon after. As they are subject to hereditary infection, the eggs from infected moths are destroyed which results into production of fine silk. Larvae of about 3mm are hatched from the eggs.
- For about 20 to 30 days, they are carefully nurtured and are fed five times a day on chopped mulberry leaves.
- The caterpillar have small openings under their jaws called spinnerets through which they secrete a protein like substance. This substance solidifies when it comes in contact with air and the filament thus formed is spun around the silkworm in the figure resembling the digit 8. In three days the cocoon gets completed which is about a peanut shell's size. The filament is held together by sericin or silk gum.
- The life of the worm is ended by the process of 'stoving' or 'stifling' in which the cocoons are heated. Some of the cocoons are preserved so that the pupa inside them develop into moths for further breeding.
- Cocoons are sorted based on their color, size, shape and texture. Then they are immersed in hot and cold water to soften the sericin so that filament could be unwound into one continuous thread.
- The raw silk is unwound from cocoons and are collected into skeins in the factories known as Filature. Three to ten filaments are together reeled for producing the desired diameter of raw silk thread.

Mulberry Silk Production Process is schematically presented in **Figure 2.2**.

Figure 2.2 Mulberry Silk Production Process



2.4 World Sericulture Sector at a Glance

Asia is the major producer of silk in the world and it produces over 98.5 percent of global output. Though there are over 40 countries on the world silk map, bulk of it is produced in

China and India, followed by Brazil, Uzbekistan, Thailand, Vietnam, Korea and Japan. China is the leading producer of silk in the world with an annual production of 1,04,000 MT followed by India with a production of 23060 MT during the year 2011-12 (**Table 2.3**). China and India

together produce 96.5% of raw silk in the world. Sericulture in China has the advantage of easy availability of skilled workforce at cheap rates, abundance of land, favorable climate throughout the year as well as a growing economy. While sericulture in India is going through tough times. Due to rapid industrialization, land under mulberry cultivation is going down. Now the farmers prefer to work in the industries rather than in sericulture. Young people are not showing much interest in sericulture. Moreover, the climatic conditions in India are also not favoring sericulture particularly the high quality bivoltine silkworms.

Sericulture in developed countries such as Japan and Korea has been diminishing due to economic growth and urbanization. European countries like France, Italy and Spain which used to have a fairly large sericulture industry, are no longer engaged in mulberry planting and silkworm rearing. In this context, India has the advantage and potential to become a key player in the global silk market if proper Government support and effective efforts on Research and Development is made towards the sericulture sector. India has the inherent advantage and potential to develop sericulture as an ideal tool for rural development and play a major role in global silk market.

Table 2.3: World Raw Silk Production

Country	2006		2007		2008		2009		2010		2011	
	Qty	% Share	Qty	% Share	Qty	% Share	Qty	% share	Qty	% share	Qty	% share
China	130000	84.45	108420	82.65	98620	81.24	104000	81.89	115000	82.11	104000	79.10
India	18475	12.00	18320	13.97	18370	15.13	19690	15.50	20410	14.57	23060	17.54
Brazil	1387	0.90	1220	0.93	1177	0.97	811	0.64	770	0.55	558	0.42
Thailand	1080	0.70	760	0.58	1100	0.91	665	0.52	655	0.47	655	0.50
Uzbekistan	950	0.62	950	0.72	865	0.71	750	0.59	2448	1.75	2448	1.86
Vietnam	750	0.49	750	0.57	680	0.56	550	0.43	550	0.39	550	0.42
Korea Rep.	150	0.10	150	0.11	135	0.11	135	0.11	135	0.10	135	0.10
Japan	150	0.10	105	0.08	95	0.08	90	0.07	53	0.04	44	0.03
Others	1000	0.65	500	0.38	350	0.29	304	0.24	30	0.02	29	0.02
Total	153942	100.00	131175	100.00	121392	100.00	126995	100.00	140051	100.00	131479	100.00

Note: Figures of India is for financial year from April to March next year

Source: Compiled from website of International Sericulture Commission updated as on August 2012.

2.5 Silk Industry in India

Indian silk industry has improved manifold since independence from the raw silk production level of 18475 MT during 2006-07 to 23060 MT at the end of XI Plan period 2011-12 (**table 2.4**). Development and introduction of improved races of silkworm breeds, high yielding food plants, improvement in rearing practices, organized seed production network, technology up-gradation in reeling, weaving, wet processing, etc., along with the investment made by the governmental agencies have led to overall improvement in productivity and quality of Sericulture sector in India.

Table 2.4: Raw Silk Production (Mulberry And Vanya Silks) during XI Five Year Plan- State wise

S.No	State	Raw Silk Production (MTs)					
		2006-07 X Plan	XI Plan				
			2007-08	2008-09	2009-10	2010-11	2011-12
A.	Traditional States						
1	Karnataka	7883	8240	7238	7360	7338	7796
2	Andhra Pradesh	5556	4497	4512	5137	5170	6454
3	Tamil Nadu	1125	1368	1411	1233	1182	1418
4	West Bengal	1633	1700	1852	1915	1935	1980
5	Jammu & Kashmir	103	105	102	111	120	133
	Sub-total (A)	16300	15910	15115	15756	15745	17781
B.	Non-Traditional States						
6	Assam	858	956	1261	1519	1849	2112
7	Arunachal Pradesh	7	12	19	19	20	17
8	Bihar	16	21	27	46	53	46
9	Chattisgarh	117	155	154	173	177	299
10	Haryana					0.2	0.17
11	Himachal Pradesh	17	20	22	20	22	23
12	Jharkhand	121	144	297	407	768	1027
13	Kerala	14	14	20	22	26	5
14	Madhya Pradesh	56	87	130	173	167	166
15	Maharashtra	87	129	204	226	221	182
16	Manipur	447	296	340	386	322	327
17	Mizoram	11	9	15	23	33	34
18	Meghalaya	209	316	449	465	492	555
19	Nagaland	117	125	163	255	285	242
20	Orissa	41	55	70	89	87	96
21	Punjab	4	5	4	5	6	2
22	Rajasthan	0.3	0.3	1	2	2	0
23	Sikkim	0.3	0.4	2	5	4	6
24	Tripura	5	8	8	13	8	13
25	Uttarakhand	14	17	19	17	21	14
26	Uttar Pradesh	33	40	52	72	103	113
	Sub-Total(B)	2175	2409.839	3255.6	3934.3	4665	5279
	Grand-Total (A+B)	18475	18320	18370	19690	20410	23060

Source : Compiled from State Department of Sericulture of All States

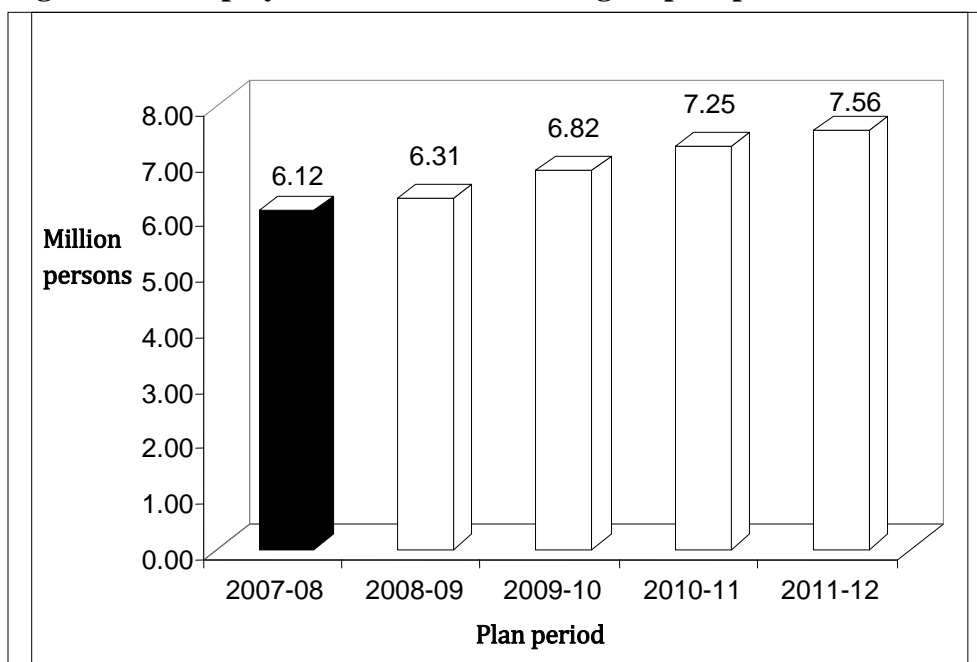
2.6 Importance of Sericulture Sector in India

India is the second largest producer of raw silk and the largest consumer of silk products in the world. India has a tradition and culture bound strong domestic market for silk. Sericulture has been quite significant for India for the following reasons:

a. Employment opportunities in the Sericulture Sector

At the end of XI plan period, the employment generation in sericulture is 7.56 millions. The employment opportunities have grown up from 6.12 million to 7.56 million during 2007-08 to 2011-12 (Figure 2.3).

Figure 2.3 : Employment Generation during XI plan period



- The employment generation in mulberry sector has been calculated for each Ha. of plantation from the activities ranging from plantation to finished products. 0.165 man year employment could be generated from 1 kg of mulberry finished products. For the non-mulberry sector, employment generation is calculated for producing one kg of vanya finished silk products. This works out to be 0.47 man year for tasar, 0.61 man year for Eri and 0.530 man year for Muga silk products.
- This potential is *par-excellence* and no other industry generates this extent of employment especially in rural areas.

b. Sericulture can be practiced with very low land holding

Sericulture activity can be practiced with very low land holding. NPC field survey shows that 88.7% of the sericulture farmers have either marginal or small land holding. Sericulture activity has been a good source of income for the farmers who do not have enough land holding.

c. Low Gestation & High returns on Investment

Estimated investments of Rs 45,000 to 48,000 (excluding cost of land and rearing space) is sufficient for taking up mulberry cultivation and silkworm rearing in one acre of irrigated land. Mulberry plantation takes about six months to grow. Mulberry once planted can go on supporting silkworm rearing year after year for 15-20 years depending upon inputs and farm management practices. Five to Six crops can be taken in one year under tropical conditions. By adopting sericulture, a farmer earns net income in the range of Rs 35,000 to 40,000 per acre per annum. NPC Field survey shows that in southern states a cocoon producer with an investment of Rs 100 can earn upto Rs 145.

d. Eco friendly activity

- As a perennial crop with good foliage and root-spread, mulberry contributes to soil conservation and provides green cover.
- Waste from silkworm rearing can be recycled as inputs to mulberry garden.
- Dried mulberry twigs and branches are used as fuel in place of firewood and therefore reduce the pressure on vegetation/forest for firewood.
- Being a labour intensive and predominantly agro-based activity, involvement of smoke-emitting machinery is minimal.
- Developmental programmes are mainly initiated for mulberry plantation at upland areas where un-used cultivable land is made productive.
- Mulberry can also be cultivated as intercrop with plantation crops.
- Mulberry being a deep-rooted perennial plant can be raised in vacant lands, hill slopes and watershed areas.

e. Availability of natural Vanya silkworm food plantation

Vast tracts of forest based tasar food plantations available in the country, if judiciously exploited for rearing tasar silkworms can offer supplementary gainful employment for tribal population.

2.7 Silk Goods Export and Import status- India

During the period 2006-07 to 2010-11, the exports have decreased from Rs 3338.35 crores to Rs 2863.76 crores, while imports of raw silk have increased from Rs 673.37 crores to Rs 927.59 crores. The trade ratio (Export/Import) has declined from 4.96 to 3.09. (**Table 2.5**)

Table 2.5 Silk Goods Exports and Imports : 2006-07 to 2011-12

Year	Export (Rs crores)	Import of raw silk (Rs crores)	Trade Ratio
2006-07	3338.35	673.37	4.96
2007-08	2727.87	734.44	3.71
2008-09	3178.19	903.06	3.52
2009-10	2892.44	933.70	3.10
2010-11	2863.76	927.59	3.09
2011-12 (P)	2285.08	1111.98	2.05

92% of the raw silk import is from China Republic (**Table 2.6**). India failed to control imports of silk from China despite imposing anti-dumping duty on both raw silk and silk fabric. The raw silk imports increased from Rs.673.37 crore in 2006-07, to Rs.1112 crores in 2011-12. Imports of Chinese raw silk increased due to the widening gap between domestic silk production and demand for silk-based products. The Government of India had imposed customs duty on Chinese raw silk for five years from 2003 to 2008 to safeguard the interest of domestic sericulture farmers and weavers. The anti-dumping duty was imposed on the basis of landing price of \$27 per kg till January 2008. The same slab continued when the government extended the anti-dumping duty till January 2009. With the intervention of the CSB and other industry players, the Government had further extended the anti-dumping duty for five years from 2009 by increasing the slab to \$37 per kg. As the China used to be the only source for India to meet its domestic demand for raw silk, China dumped its raw silk at lower prices than the Indian made raw silk prices. The weaving industry became more reliant on the raw silk imported from China adversely affecting Cocoon and raw silk production as the farmers moved towards more profitable cash crops. This may be one of the major reasons for declining on farm activities of sericulture. During the recent years, the anti dumping duty on import of raw silk has been reduced from 30% to 5%. Now the weaving industry has also been in danger as the weavers depend mainly on Chinese raw silk as the domestic production of raw silk is not adequate. Now the China is utilizing this opportunity and the price per Kg of raw silk imported from China is rising day by day and sometimes it touches Rs 3300 per kg. Under these circumstances, Indian weavers are left with no alternative but to close the operations.

Table 2.6 Country wise Import of raw silk by India

SNo	Country	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12(P)	
		Qty (MT)	Rs crore	Qty (MT)	Rs crore	Qty (MT)	Rs crore	Qty (MT)	Rs crore	Qty (MT)	Rs crore	Qty (MT)	Rs crore
1	China Republic	5318	649.9	7840	727.51	8316	895.78	7097	913.07	5539	896.55	5159	1024.79
2	Brazil	103	13.11	54	4.97	31	3.35	68	7	-	-	-	-
3	Korea Republic	9	0.97	9	0.82	-	-	16	1.35	2	0.34	44	9.80
4	Hongkong	2	0.35	-	-	8	0.94	1	0.06	7	3.09	20	3.18
5	Uzbekistan	117	7.65	19	1.14	18	1.32	82	5.89	130	10.09	80	6.96
6	Others	16	1.39	-	-	19	1.67	74	6.33	142	17.22	370	67.25
	Total	5565	673.37	7922	734.44	8392	903.06	7338	933.7	5820	927.59	5673	1111.98

Source: MSFTI & FTSI, Directorate General of Commercial Intelligence & Statistics, Kolkata

Table 2.7 provides the product wise export, import and Trade balance (Export-Import) during the period 2001 to 2009. Out of seven product categories considered only in three product categories, India's trade balance is positive during 2009 whereas in 2001 India's trade balance was positive for four product categories.

India exports silkworm cocoons suitable for reeling and also imports a smaller quantity of it. An increase in the overall silk exports (under HS Code: 50) upto 2005 and a fall thereafter is a reflection of decline in exports of silk woven fabrics or silk waste (with HS Code: 5007). Till 2005-06 the exports of silk woven fabrics and silk waste were the strengths of Indian sericulture industry but after 2006-07, the exports of silk woven fabrics have been declining. However the imports of silk woven fabrics have also declined during this period points to the impact of global

economic recession on India silk sector. Altogether data suggests that India has been losing its competitiveness and strength in case of silk woven fabrics.

Table 2.7 Export, Import & Trade Balance of Silk products from India

Unit: US Dollar thousand

Category	2001	2002	2003	2004	2005	2006	2007	2008	2009
Product Code '5001: Silk-worm cocoons suitable for reeling									
Exports	216	247	435	241	513	230	323	107	28
Imports	28	266	13	6	10	6	115	87	24
Trade Balance	188	-19	422	235	503	224	208	20	4
Product Code '5002: Raw Silk (not thrown)									
Exports	3,367	652	1,311	1,428	3,877	2,873	1,063	2,534	1,708
Imports	132,375	133,106	135,113	124,636	176,502	158,254	179,729	193,985	197,300
Trade Balance	-129,008	-132,454	-133,802	-123,208	-172,625	-155,381	-178,666	-191,451	-195,592
Product code '5003: Silk waste, nes									
Exports	7,754	3,242	1,148	484	3,130	5,000	3,830	522	3,329
Imports	1,840	1,837	3,225	2,648	3,519	3,475	3,278	511	1,157
Trade Balance	5,914	1,405	-2,077	-2,164	-389	1,525	552	11	2,172
Product Code '5004: Silk yarn (other than yarn spun from silk waste)									
Exports	3,348	1,915	1,448	853	1,096	1,438	1,082	1,062	1,707
Imports	13,224	9,656	22,044	38,826	32,861	38,329	18,108	24,066	33,827
Trade Balance	-9,876	-7,741	-20,596	-37,973	-31,765	-36,891	-17,026	-23,004	-32,120
Product Code '5005: spun Yarn from Silk Waste , not put up for retail sale									
Exports	2,031	2,389	2,309	2,031	5,060	5,685	6,827	4,418	1,993
Imports	2,593	8,676	2,294	1,888	2,131	3,263	4,990	5,088	3,320
Trade Balance	-562	-6,287	15	143	2,929	2,422	1,837	-670	-1,327
Product Code '5006: Silk yarn & yarn spun from silk waste, put up for retail sale									
Exports	1,729	530	4,191	5,308	4,645	2,302	621	1,445	588
Imports	48	522	3,110	3,325	6,685	6,440	3,958	3,166	5,163
Trade Balance	1,681	8	1,081	1,983	-2,040	-4,138	-3,337	-1,721	-4,575
Product Code '5007: Woven Fabrics of Silk or of silk waste									
Exports	234,804	261,997	325,802	371,017	385,264	365,802	334,670	348,674	261,782
Imports	20,792	41,417	86,482	109,444	191,933	141,719	184,915	143,972	152,647
Trade Balance	214,012	220,580	239,320	261,573	193,331	224,083	149,755	204,702	109,135

Sources: ITC calculations based on COMTRADE Statistics

2.8 India and China: A Comparative Study of Sericulture

Though, Indian breeds/hybrids have the potential to produce the same quality, our system of sericulture practices is entirely different from those practiced in China. The strict maintenance of discipline and better linkage from farmers to weavers, large-scale operation of egg production, reeling and weaving using modern machineries, strict control measures for diseases, uniform adoption of new technologies, supply of required quantity of quality eggs on time to avoid the chances of contamination of young silkworm etc., make the Chinese sericulture more vibrant, economically sound and sustainable. Another area of difference is that the entire production is state controlled with no open marketing/auction systems for silk cocoons and yarns. The comparative statistics (**Table 2.8**) indicate the strength of China in the areas of seed production and distribution system, higher unit area productivity and quality thus reducing the costs of production. Silk produced in India has been of inferior quality than China. Though, R&D efforts have been made to improve the quality of multivoltine silk, India's silk is yet to achieve the internationally accepted standards of quality. Even the best of multivoltine silk produced could not match the bivoltine silk in quality. Therefore, there is a need to enlarge the production base and improve current productivity levels of bivoltine silk to achieve the international standards and quality demanded by the power loom sector.

Table 2.8 Comparative Statistics of Mulberry Silk: India vs China

Parameters	China*	India-General
Area under mulberry (ha)	8.05 lakh	1.84 lakh
Leaf Yield (MT/ha/yr)	25-30	30-50
Races reared	All bivoltine	Mostly cross breeds
Egg production (DFLs)	68.240 crores	24.91 crores (Mulberry)
Supply system	Majority chawkie reared	Majority supplied as eggs. Now Chawkie rearing is coming up.
Time of supply	Batch wise	Throughout the year
DFLs brushed/ha/yr	1050	1492
Cocoon yield (kg/100 DFLs)	84	52.85
Leaf cocoon ratio(kg)	16-18	20-22
Cocoon yield (kg)/ha	700	716.56
Cocoon Wt.(g)	1.9 – 2.0	1.6 – 1.8
Shell percentage	21-23	CB: 17-19/Biv: 20-22
Filament Length (m)	>1000	CB<1000/ BV >1000
Renditta	6.4	8 (6.7 for bivoltine)
Grade of silk	A-4A	Grade less to 2A, 3A
Cost of cocoon production (₹./kg)	75-80	120-140
Prevailing cocoon price (Rs)	115	194
Raw silk production (kg/ha/yr)	129	88.82
Avg. Crop loss/year (%)	3 to 5 %	10 to 15%
Demand and Supply Position	90% Export	Self consuming 30% deficit
Raw silk produced (MT/yr)	104,000	19,690
Exports Earnings (in US Dollars)	1287.555 Million	609.58 Million

Source: *ISC web-site updated as on January, 2010

CHAPTER III

PHYSICAL AND FINANCIAL PERFORMANCE OF CDP DURING XI FIVE YEAR PLAN: ALL INDIA ANALYSIS

3.1 Introduction

This chapter analyzes the performance of Catalytic Development Programme (CDP) implemented during XI five year plan in terms of production targets and achievements, financial targets and achievements, matching share by the States and Component wise allocation and utilization of funds at all India level. The chapter also evaluates the success/acceptability of various CDP schemes among implementing agencies and beneficiaries.

3.2 Production Targets and Achievements during XI plan- All India

The production targets and achievements of CDP Scheme during the XI Plan has been given in **Table 3.1**. The CDP schemes has played a vital role in promoting sericulture activities and also in reaching overall targets set under XI Five year Plan (2007-09 to 2011-12).

Table 3.1 Production Targets planned during XIth Plan

S.No	Particulars	At the end of X Plan (2006-07)	XI Plan Target	Actuals					XI Plan Acht	Physical progress between 2006-07 to 2011-12
				2007-08	2008-09	2009-10	2010-11	2011-12		
I	Mulberry area (lakh Ha).	1.92	2.18	1.85	1.78	1.84	1.70	1.81	83%	-5.73%
II	Raw Silk Production (MT)									
a)	Mulberry (MT)									
i)	Bivoltine	1100	5000	1175	1250	1200	1400	1685	34%	53.18%
ii)	Cross-breed	15425	18000	15070	14360	15122	14960	16587	92%	7.53%
	Total	16525	23000	16245	15610	16322	16360	18272	79%	10.57%
b)	Vanya									
i)	Tasar	350	420	428	603	803	1166	1590	379%	354.29%
ii)	Eri	1485	2390	1530	2038	2460	2760	3072	129%	106.87%
iii)	Muga	115	190	117	119	105	124	126	66%	9.57%
	Total (Vanya)	1950	3000	2075	2760	3368	4050	4788	160%	145.54%
	GRAND TOTAL	18475	26000	18320	18370	19690	20410	23060	89%	24.8%
c)	Employment Generation (Lakhs)	60	77	61.2	63.1	68.2	72.5	75.6	98%	26%
d)	Exports Earnings (Rs crores)	3338	4500	2728	3178	2892	2864	2285	51%	-31.55%

Source: CSB, Bangalore

CSB had planned to bring 2.18 Lakh hectare of land under Mulberry Cultivation at the end of XI Plan but in actual terms till 2011-12, 1.81 lakh hectares could be brought under mulberry cultivation. Due to urbanization and industrialization, the land valuation have gone up substantially and farmers are selling their land for infrastructural development as well as for industrial purposes. This is one of the major reasons for the decline in area under mulberry

cultivation. During 2006-07 to 2011-12, the area declined from 1.92 Lakh hectares to 1.81 lakh hectares.

In the case of Mulberry raw silk, production target was set at 23000 MT by the end of 2011-12 but in actual terms raw silk production reached 18272 MT by 2011-12. The production of bivoltine raw silk, which is the finest quality of mulberry silk, has not shown significant improvement in India. Against the target for production of 5000 MT of bivoltine raw silk, the production stood at only 1685 MT. One of the main objectives of Catalytic Development Programme is to increase the bivoltine silk production in the country and it is very much essential in order to compete with China. During XI plan Central Silk Board has implemented a number of initiatives but it did not work out well. This is due to the fact that on farm activities in bivoltine cocoon production is not strengthened. Moreover, unfavourable climatic conditions of India especially the North Himalayan states due to extreme weather conditions only two crops (spring and autumn) are possible. Because of this fact, sericulture is not cost effective and it is practiced as a secondary activity. In Southern states, 2-3 crops are taken for bivoltine and rest of the crops are taken for cross breed production. However, in Tamilnadu under Cluster Promotion Programmes, bivoltine clusters have been developed in which farmers are encouraged to take bivoltine crops and they are taking 5-7 bivoltine crops per annum.

In order to increase the bivoltine cocoon production in the country, Research and Development efforts need to focus more on the climate and region specific thermo tolerant silkworm races.

Eri and Tasar silk production has reported much progress during XI plan. Chattisgarh and Jharkhand states have substantially improved Tasar production through their innovative strategies like Resham doot concept. Tasar culture has lots of development potential as the vast tracts of host plants are naturally available in these states.

Table 3.1 shows that the employment opportunities in sericulture sector have increased from 60 lakhs during 2006-07 to 75.6 lakhs during 2011-12. At the field level, it was reported by many extension officers and farmers that the skilled workers are in short supply. The young workforce farmers rarely adopt sericulture. They prefer to work in industries. The employment guarantee schemes like MGNREGA have adversely affected the supply of labor for sericulture sector considerably as it provides the money easily to the labours. The labours are reluctant to get involved in tedious sericulture activities. In Southern region, because of the drought conditions, farmers are moving towards other crops like cotton, groundnut etc.

The export earnings were targeted at Rs 4,500 crores by the end of XI Plan as against Rs 3338 crores during 2006-07. The actual export earnings from silk products reached only at Rs 2285 crores by the end of XI plan.

3.3 Sector-wise financial outlay and revised outlay for CDP under XI Plan

Total outlay allocated for CDP implementation during the XI plan was pegged at Rs 1476.24 crores of which CSB's share was Rs 661.62 crores. Formal approval of Government of India for implementation of CDP in the country during XI plan was given on 1st February 2008. However, the CSB share was revised to Rs 821.74 crores (**Table 3.2**).

Table 3.2 Sector-wise Central Share under CDP during XI Plan**(Rs Crores)**

S.No	Sector	CSB Revised Share XI Plan
1.	Package for Seed Sector	72.94
2.	Package for Cocoon Sector	565.93
3.	Package for Post- Cocoon Sector	113.35
4.	Corporate participation in Sericulture	0.00
5.	Support Service Sector	69.52
	Total	821.74

Source: Compiled from data collected from CSB Bangalore

3.4 Sector wise & component wise achievement of CDP during XI Plan**3.4.1 Seed Sector**

Table 3.3 reports component wise physical and financial targets and achievements for Seed Sector under Catalytic Development Programme during the XI Five Year plan.

Table 3.3 Component wise Physical and Financial achievement of CDP for Seed Sector during XI Plan - 2007-08 to 2011-12.**(Finance figures in Rs Crores and physical units in numbers)**

S. No	Name of the Scheme / Component	XI Plan (2007-12) Approved Targets		XI Plan (2007-12) Achievements		Financial Achievement %	Physical Achievement %
		Physical	Financial	Physical	Financial		
1	Package for Seed Sector						
a)	Mulberry						
1	Support for upgrading existing Seed / Grainage Units under Mulberry Sector (Units)	114	5.02	120	4.94	98%	105%
2	Support to establish large scale Bivoltine Seed production Grainages in Public / Pvt. Sector (Nos.)	2	1.20	2	1.20	100%	100%
3	Assistance for Seed Testing Facilities in Public / Pvt. Grainages (for Quality seed production) (Nos.)	228	2.22	185	1.71	77%	81%
4	Assistance for mulberry silkworm seed production units (Support to get ISO / BIS Quality Seed Certification for Silkworm Seed Units)						
a)	P1 Grainages (Nos.)	6	0.61	4	0.51	84%	67%
b)	P2 Grainages (Nos.)	5	0.97	3	0.47	48%	60%
	Total for Mulberry		10.02		8.83	88%	
b)	Vanya						
i)	Tasar						
5	Assistance to Private Tasar Graineurs (Nos.)	2906	18.32	4676	31.79	174%	161%
6	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	114	1.96	161	2.66	136%	141%
7	Assistance for strengthening of Seed Multiplication / Infrastructure for Oak Tasar in the State (Nos)	28	0.92	20	0.94	102%	71%
8	Assistance to seed rearers (Nos.)	1019	5.16	1172	5.95	115%	115%
	Total for Tasar	-	26.36		41.34	157%	
ii)	Eri						
9	Assistance to State Depts., for Strengthening of existing	81	3.27	72	3.54	108%	89%

9 a	Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos.) Equipment support to Adopted Eri seed rearers	2000 ASRs	covered above	1154	covered above		58%
	Total for Eri		3.27		3.54	108%	
iii)	Muga						
10	Assistance to Muga Private Graineurs (Nos.)	1447	12.53	1431	12.39	99%	99%
11	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure (Nos.)	43	8.36	50	6.84	82%	116%
11 a	Equipment support to Adopted Muga seed rearers	2000 ASRs	covered above	50	covered above		
	Total for Muga		20.89		19.23	92%	
	Total for Vanya		50.52		64.11	127%	
	Total for Seed Package		60.54		72.94	120%	

Source: Data provided by CSB Bangalore

Table 3.3 reports that target outlay allocated for seed sector at All India level is Rs 60.54 crores which includes Rs 10.02 crores for Mulberry, Rs 26.36 crores for Tasar, Rs 3.27 crores for Eri and Rs 20.89 crores for Muga. The total achievement in the seed sector has been Rs 72.94 crores during XI plan. This shows that 120 percent of the financial target has been achieved in the total seed sector. Though the mulberry seed sector financial achievement is 88% but the situation on the field is not so impressive as many private seed producers are closing down their grainages. Majority of the mulberry seed production is from the NSSO or the State government grainages. Private Graineures or Licensed Seed producers (LSPs) are mainly based at Karnataka, Assam, Madhya Pradesh and West Bengal only. In other states all the seed demand is fulfilled by Government only. In Karnataka the numbers of LSPs have declined from 891 in 2001-02 to 212 during 2011-12. This is due to lesser demand of seed/DFLs among the farmers and also declining sericulture activities in the pre cocoon sector.

During field surveys, it was reported by the Graineures that for taking the benefit of this component, they will have to sign an agreement with CSB/DOS to produce 50 Lakh Bivoltine DFLs per annum. But as the demand of bivoltine DFLs are not much due to the unfavourable climatic conditions, they are scared of taking the benefit of this component.

Table 3.3 shows that during the XI plan support measures have been introduced for upgrading existing seed grainages in mulberry sector as this component shows 105% achievement with respect to target.

CSB has also been putting its emphasis on Tasar seed production. CSB has been providing assistance for strengthening of Tasar seed multiplication infrastructure as this component has 136% of the financial achievement with respect to the target. Overall vanya sector has a financial achievement of 127%.

Table 3.4 Supply of DFLs with respect to target of raw silk production for both Bivoltine and Cross Breed

Category	Target planned at the end of XI Plan	Actual Production achieved in 2011-12
Target planned for agencies involved in production of Bivoltine DFLs (in lakhs)		
CSB-NSSO, Grainages	190.00	125.05
DOS-Grainages	273.00	
LSPs	133.00	
Total	596.00	
BV Raw Silk production (MT) per annum	5000	1685
Target for the agencies involved in production of Cross Breed DFLs (in Lakhs)		
CSB-NSSO, Grainages	80.00	196.49
DOS-Grainages	454.00	
LSPs	2133.00	
Total	2667.00	
Target for CB Raw Silk production (MT)	18000	16587

Source: CSB, Bangalore

3.4.2 Cocoon Sector

Target outlay set by CSB for cocoon sector is Rs 564.56 crores, of which Rs 435.13 crores were targeted for Mulberry, Rs 23.89 crores for Tasar, Rs 91.60 crores for Eri and Rs 13.94 crores for Muga (**Table 3.5**). Overall 100.24% financial achievement has been estimated during XI plan in the cocoon sector. Many efforts have been put in the Vanya cocoon sector.

Table 3.5 Financial achievement for Cocoon sector

Sector wise	(Rs Crores)		
	CSB target for Outlay during XI Plan (2007-12)	Financial Achievement for XI Plan	Financial Achievement (Percent)
Total for Mulberry	435.13	430.35	98.90%
Total for Tasar	23.89	24.07	100.75%
Total for Eri	91.60	97.48	106.42%
Total for Muga	13.94	14.02	100.57%
Total for Vanya	129.43	135.57	104.74%
Total for Cocoon Package	564.56	565.92	100.24%

Source: Estimated from data provided by CSB, Bangalore

Table 3.6 reports component wise physical and financial targets and achievements for Cocoon Sector under Catalytic Development Programme during XI plan.

Table 3.6 Component wise Physical and Financial achievement of CDP for Cocoon Sector under CDP during XI Plan**(Rs Crores and physical unit in numbers)**

S.No	Name of the Scheme / Component	XI Plan (2007-12) Approved Targets		XI Plan (2007-12) Achievements		Financial Achievement %	Physical Achievement %
		Physical	Financial	Physical	Financial		
2	Package for Cocoon Sector						
a)	Mulberry						
1	Support for Mulberry Plantation Development: (in acres)	104,381	31.88	178668	51.92	163%	171%
2	Assistance for irrigation and other Water Conservation and usage techniques : (Hectares)	27,715	65.45	25058	58.38	89%	90%
3	Supply of Rearing Appliances (including improved mountages) / farm equipments to farmers) - for Bivoltine Sericulture Farmers (acres)	68,030	118.94	68137	118.51	100%	100%
4	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine seed farmers(Nos.)	40,788	3.84	41313	4.30	112%	101%
5	Assistance for Construction of Rearing Houses (RHs) -Nos.) Models of Rs.2,00,000/-, Rs.1,50,000/-, Rs.1,00,000 & Rs.75,000	21305 11532	80.81 30.60	18456 8630	83.27 24.18	103% 79%	87% 75%
	Rs.50,000	34572	92.85	34455	80.25	86%	100%
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of CRC equipments:(Units)	397	5.53	484	5.56	101%	122%
7	Insurance Support (For all Sectors) (lakh DFLs)	88	3.03	121.43	2.69	89%	138%
8	Setting up of Production units for Bio-logical inputs (Inoculants, Biological control agents etc.)	37	0.35	21	0.18	51%	57%
9	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics.	165	1.41	117	0.96	68%	71%
10	Assistance for Farmers Training (Nos.)	73	0.44	27	0.16	36%	37%
	Total for Mulberry		435.13		430.36	99%	
b)	Vanya						
i)	Tasar						
11	Support to rearers for Augmentation of tasar host plantation (Hectares)	20,369	20.48	20441	19.56	96%	100%
12	Assistance for raising and maintenance of systematic plantation of Oak Tasar(Hectares)	415	0.51	538	0.68	133%	130%
13	Assistance for Construction of Cocoon Storage Houses in Tasar Sector (Nos)	1273	2.90	1649	3.83	132%	130%
	Total for Tasar		23.89		24.07	101%	
ii)	Eri						
14	Support for Castor/Tapioca cultivators with Start-up tools (Half acre units)	19218	1.40	16306	1.23	88%	85%
15	Augmentation of perennial Eri food plants with supply of Start-up tools (acres)	12,674	9.82	13739	10.70	109%	108%
16	Construction of Rearing houses (Nos.)	21964	80.38	23584	85.55	106%	107%
	Total for Eri		91.60		97.48	106%	

iii)	Muga						
17	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (acres)	11,071	13.94	11220	14.02	101%	101%
	Total for Muga		13.94		14.02	101%	
	Total for Vanya		129.43		135.57	105%	
	Total for Cocoon Package		564.56		565.93	100%	

Source: Estimated from data provided by CSB Bangalore

Although the financial achievement of the component “Support for mulberry plantation” is 163%, while the physical achievement is 171%. The target under this component is to bring 1.04,381 acres of land under mulberry plantation against which the achievement is 1,78,668 acres. The cumulative physical target set for bringing 2.18 lakh hectares of area under mulberry cultivation at the end of XI Five Year Plan is not met. Only 1.81 lakh hectares could be brought under mulberry cultivation. In the component “Assistance for drip irrigation facility”, 89% of financial achievement and the physical achievement of 90% have been reported. This component has proved to be very useful especially in few regions of Southern states where water is available. But the ground water level is decreasing in the recent years which are causing problems. In majority of the regions of Southern states like Karnataka, Andhra Pradesh sericulture is practiced in rain fed conditions. During the last few years the rainfall is declining which is also a major cause of concern. During field surveys with DOS, Andhra Pradesh, it was reported that the drip irrigation is much in demand in the state.

In the Tasar cocoon sector, under the component “Assistance for construction of cocoon storage houses”, 132% financial achievement and 130% physical achievement has been reported. As reported by DOS, Jharkhand, 450 number of Tasar cocoon storage houses have been sanctioned during XI Five Year Plan. But the constructions of the cocoon storage houses have not been started yet and shall be commenced in October 2012. The model for construction has been made. As per the CSB guidelines, the cocoon storage houses shall be constructed with locally available treated bamboo so that it is within the unit cost of Rs 50,000. DOS, Jharkhand reported that the tasar farmers are mainly tribals and economically backward. Due to lack of space, farmers are forced to sell the cocoons to Mahajans, who do not give good prices. In this way cocoon storage house shall help the farmers in getting reasonable prices.

3.4.3. Post Cocoon Sector

Table 3.7 reports overall financial achievement for Post cocoon sector. 91% of the planned target has been achieved during XI plan.

Table 3.7 Financial achievement of CDP during XI plan

Category	CSB target Share of CDP during XI Plan (2007-12) (Rs Crores)	Financial Achievement for XI Plan (Rs Crores)	Financial Achievement (%)
Total for Reeling & Spinning	78.03	64.57	83%
Total for Weaving	35.63	38.88	109%
Total for Wet Processing	10.46	9.90	95%
Total for Post Cocoon	124.12	113.35	91%

Source: Compiled from Data Provided by CSB, Bangalore

Table 3.8 provides component wise physical and financial target and achievements made for Post Cocoon Sector under CDP during XI plan.

Table 3.8 Component wise Physical and Financial achievement of CDP for Post Cocoon Sector during XI Plan

(Rs Crores and physical unit in numbers)

S.N	Name of the Scheme / Component	XI Plan (2007-12) Approved Targets		XI Plan (2007-12) Achievements		Financial Achievement %	Physical Achievement %
		Physical	Financial	Physical	Financial		
3	Package for Post Cocoon Sector						
i)	Silk Reeling & Spinning Components						
1	Popularization of New Slow-Speed, (Twenty-end per Basin) Certified Multi-end Reeling Machines (18 basins - equivalent to 360 ends) (Nos. of units)						
2	Support for establishment of Certified Multi-end Reeling Machines: a) 10 Basins b) 20 Basins	235 22	12.13 1.86	199 18	10.34 1.29	85% 69%	85% 82%
3	Establishment of Automatic / Semi automatic Reeling Units (Imported) (No.of Units)	6	3.00	8	4.00	133%	133%
4	Support for establishment of Improved Cottage Basin Reeling Units (No.of Units)	166	2.53	119	1.89	75%	72%
5	Support for existing Charkha Reeling Units to dissuade child labour (Motorized Charkhas) (No.of Units)	1002	0.50	913	0.45	90%	91%
6	Support for Setting up of Certified Dupion Silk Reeling Units (10 KG. / 20 KG. - Prorata basis) (No.of Units)	18	1.15	17	0.90	78%	94%
7	Support for Hot Air Driers- Electrical/Multi-fuel / Ushnakotis for Reeling Units - 50 kg. & 100 kg. cap (No.of Units)	268 185	1.74 2.15	283 169	1.73 1.94	99% 90%	106% 91%
8	Assistance for Twisting Units (400 Spindles) (Nos.)	253	10.90	257	11.06	101%	102%
9	Support for establishment of Pupae Oil Extraction Production and Bye - product utilization Units (Nos.)	1	0.15			0%	0%
10	Incentive for production of Bivoltine Silk (MTs)	7532	12.49	1746	7.20	58%	23%
11	Quality linked price Support system for Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs (No.of States)	25	10.40	22	10.47	101%	88%
12	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga (Nos.)	19	8.09	15	4.99	62%	79%
13	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop Soc./SHGs (Nos.)	140	1.20	146	1.08	90%	104%
14	Support for Vanya Reeling/Spinning Sector a) Spinning (Nos.) b) Reeling-cum-Twisting (Nos.)	7069 3476	1.83 3.24	6684 3092	1.75 3.01	96% 93%	95% 89%
15	Support for establishment of Spun /Spinning Mills (Nos.)	4	4.67	2	2.46	53%	50%
	Total for Reeling & Spinning		78.03		64.56	83%	
ii)	Silk Weaving Components						
16	Support for establishing shuttle-less looms (each unit with 8 looms and 1 sectional warping machine) (Units)	47	13.89	42	12.57	90%	89%

17	Support for Handloom Sector for Loom Upgradation						
	1. Support for Certified Handlooms specially designed for [Parallel beat-up / Swing beat-up, Negative let off, 5 - Wheel take - up, Separate cloth ruler along with Jacquard (240 hooks)] (Nos.)	5862	9.67	5696	10.03	104%	97%
	2. Loom Upgradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.) (Nos.)	12653	6.90	15110	8.41	122%	119%
	3. Computer Aided Textile Designing (CATD) (Nos.)	185	5.17	286	7.88	152%	155%
	Total for Weaving		35.63		38.89	109%	
iii)	Silk Wet Processing Components						
18	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing : (Nos.)						
	1. Yarn Dyeing : 25 Kg. capacity	118	2.86	82	2.02	71%	69%
	2. Yarn Dyeing : 50 Kg. capacity	24	1.00	22	0.93	93%	92%
	3. Arm Dyeing : 50 Kg. capacity	28	2.32	36	3.08	133%	129%
	4. Fabric Processing Facilities	25	4.28	23	3.87	90%	92%
	Total for Wet Processing		10.46		9.90	95%	
	Total for Post Cocoon		124.12		113.35	91%	

Source: Estimated from data provided by CSB Bangalore

The component on providing “Assistance for 10 basin multi end reeling unit” has been very successful. CDP scheme has emerged as a very good platform for providing this multi end reeling unit to the reelers. 8 numbers of Automatic Reeling Machines (ARMs) were also sanctioned during XI Five Year Plan. Automatic reeling units have been much useful in increasing the quantity and quality of raw silk production in the country. ARMs have encouraged farmers to produce good quality cocoons and to get good prices for their produce. Field survey was conducted at ARM, established in Jangaon, Andhra Pradesh, which is producing 18 MT of mulberry silk annually. The unit is providing employment to 50 persons. CDP assistance of Rs 1 crore has been provided of which CSB contribution was Rs 50 Lakhs.

The component on “Support for Hot Air Driers-Electrical/Multi- fuel/ Ushankoties for Reeling Units” for 50 Kg capacity reported financial achievement of 99% while physical achievement is at 106%. This component is being given along with “Multi end reeling units”. The hot air drier facilitates the uniform cooking of cocoon. The hot air drying associated with good cooking can improve the renditta by 0.3 to 0.7. That means 300-700 gm of lesser quantity of cocoon shall be required to produce 1 Kg of raw silk.

Another component on “Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units through State Governments/ NGOs/Coop Soc./SHGs” has shown financial achievement of 90% as Rs 1.08 crores have been spent for the service of 146 Master reelers/weavers. During field interaction with a Master dyer at Hindupur, it was reported that due to his presence at the cluster, quality of yarn dyeing, colour combinations have improved much. The owner of the unit reported that the dyer is very experienced and is capable of making different innovative colour combinations. The master dyer has been disseminating his skill among young dyers. Now the master is appointed as manager in the dyeing unit. It was also reported that because of the technical contributions of Scientists of CSB, the yarn dyeing has been made much easy due to the introduction of hydraulic yarn lifting mechanism. The new technology resulted in uniform yarn dyeing and reduced human drudgery and 30% of the labour can be reduced.

During XI plan emphasis was put on silk weaving components as the financial achievement is 109%. 42 shuttle less looms have been sanctioned during XI five year plan. Many of the shuttle less looms are either in the implementation stage or have just started operation and the production trials are going on. In the component “Support for certified handlooms” financial achievement has been 104% while the physical achievement is 97%. Weaving industry has been facing serious problems due to high cost of raw silk yarn. However, the components like “Certified handloom” and “Loom upgradation” has taken CSB R&D efforts towards introduction of pneumatic lifting mechanism onto field.

CSB had planned to establish 19 cocoon banks under CDP during XI plan, with a view to provide necessary interventions in marketing of cocoons to minimize exploitation by the Mahajans/ Middlemen. However, by the end of the XI Plan only 15 cocoon banks have been sanctioned.

3.4.4 Corporate Participation in Sericulture

Table 3.9 Financial achievement in Corporate participation

Category	CSB target Share during XI Plan (2007-12) (Rs Crores)	Financial Achievement (Rs Crores)	Financial Achievement (%)
Corporate participation in Sericulture	6.13	0.00	0.00

Source: Compiled from Data provided by CSB, Bangalore

CSB’s share for the corporate participation in sericulture is Rs 6.13 crores (**Table 3.9**). Under this component, the large corporate/NGOs/Societies/SHGs who are interested to set up large automatic reeling units can enter into a contract with farmers who are capable of absorbing high end/modern technology for production of superior quality bivoltine cocoons. The corporate houses can identify farmers with the support of respective State Department of Sericulture and CSB; they would be able to develop a model to buy-back good quality cocoons on the basis of quality linked price scheme.

During field visits across various States, NPC study team found that corporate participation in sericulture is negligible because NGOs or corporate sector are not showing much interest due to low profitability in the reeling sector. Also the dumping of cheap raw silk by China is discouraging corporate sector to get involved and the weavers are getting attracted towards China’s silk. Initiatives need to be taken up for encouraging large corporate/NGOs/SHGs to get involved in reeling sector. CSB along with State Departments of Sericulture need to take up initiatives to encourage large corporate to come forward. There is a need to market this component. For this Central Silk Board along with concerned Department of Sericulture should negotiate with the large corporate/NGOs/Societies/Federations/SHGs and should convince them about socio-economic aspects including profitability of the Sericulture sector.

3.4.5 Support Services Sector

In the support services sector the financial achievement is 105% as Rs 69.52 crores were spent against the target of Rs 66.39 crores. This sector is basically meant for marketing and promotion of silk products through exhibitions and innovative product design, awareness through pamphlets and audio visual aids, training of CSB official and entrepreneurs, Beneficiary empowerment programme and consists of other women development component for social upliftment of the

women. A large quantum of money of Rs 32 crores were spent on Beneficiary empowerment Programme (BEP) (Table 3.10). During XI plan much emphasis is put on training of sericulture farmers through various Regional Sericulture Training Institutes owned by State Government and through CSB Regional offices. As given in table 3.10 under the component a total of 82089 sericulture farmers have been trained at a cost of Rs 32 crores. The initiatives for training of sericulturists have also been taken by other Central Sector Schemes of CSB like R&D/Training/IT initiatives and Seed Organisation & HRD schemes. Under these schemes R&D institutes and National Silkworm Seed organisation of CSB provide the training. These training components under both CDP and other Central Sector Schemes may be merged so that focussed attention could be given to training. The training should focus on new technology/package of practices oriented toward better productivity and quality.

The expenditure on “Women Development Components” is Rs 25.58 crores. The component includes Health insurance for women workers and creating toilets, restrooms and crèches in the cocoon market. ICICI Lombard has been given the task of implementation of the Health insurance scheme. The scheme covers the women worker’s family of four i.e. self, spouse and two children. The scheme is to cover people between the age group of 1 day to 80 years. The scheme has covered 359259 beneficiaries. Though the Health insurance coverage has been provided to the farmers but during the field survey it was reported that 98% of the beneficiaries did not receive any insurance benefits so far. Department of Sericulture, Maharashtra reported that beneficiaries’ insurance claims were not settled by the insurance company.

Table 3.10 Component wise Physical and Financial achievement in Support Services Sector- XI Plan

(Financial figures Rs Crores and physical unit in numbers)

S. No	Name of the Scheme / Component	XI Plan (2007-12) Approved Targets		XI Plan (2007-12) Achievements		Financial Achievement %	Physical Achievement%
		Physical	Financial	Physical	Financial		
5	Support Services Sector						
1	Product Design and Development - Generic Promotion of Indian Silks / Sericulture (Including Exhibitions, Buyer-Seller meets, etc.,	DD	0.41		0.35		
2	Vanya Silk Market Promotion Cell (No. of States)	DD	1.74		1.87		
3	Entrepreneurship Development & Management Development Programmes. (No. of batches)	90	1.51	86	1.38	91%	96%
4	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.(No. of Beneficiaries)	59018	26.41	82089	32.03	121%	139%
5	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.) (No. of States)	DD	4.24		5.34	126%	
6	Assistance towards Studies /Consultancies / Surveys / Monitoring / Supervision / Evaluation etc. (No. of States)	DD	0.41		0.55	134%	
7	Assistance to NGOs / SHGs & Agencies other than CSB & State for meeting administrative expenditure towards Project Implementation in the Vanya sector and in the Mulberry sector (No. of States)	DD	0.54		0.53	98%	
8	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	DD	0.76	86	0.69	91%	
9	Women Development Components		29.65		25.58	86%	

	a) No. of beneficiaries	436366		359259			82%
	b) Toilet / crèches	100		144			144%
10	Emphasis on Tribal areas (No. of Beneficiaries)	691	0.72	1501	1.20	167%	217%
	Total for Support Services		66.39		69.52	105%	

Source: Compiled from data provided by CSB

Note: DD- Demand Dependent

CHAPTER IV

SUCCESS RATE & ACCEPTABILITY OF CDP COMPONENTS ACROSS STATES & BENEFICIARIES

4.1 Introduction

This chapter analyzes the success rate and acceptability of various components of Catalytic Development Programme (CDP) across the states by analyzing the State wise Physical and financial achievement of various components on the basis of the interactions with various stakeholders viz. State Sericulture Departments, CDP beneficiaries, Extension Officers and CSB officials.

During field interactions with Department of Sericulture of Northern States, it was reported that the most of the components of CDP are formulated on the basis of the sericulture conditions in Southern states. Even the technology developed is suitable for Southern States only for example Hot air drier of 50 Kg capacity. In southern states this capacity is enough as the cocoons are marketed and procured almost every day. But in Northern States, as only two crops are possible, reelers have to procure large quantity of cocoons during these two crops and store at a common location for longer duration. This capacity of hot air drier is not enough for Northern States. Instead they demand conveyor operated Hot air drier of large capacity situated at a common facility centre so that it could be used by all the nearby reelers. Similarly all other components need to be checked before implementation whether they are useful for that particular state or not.

It was reported that a number of CDP components are not conducive for North India because the Sericulture is not cost economical in Northern States, so due to high beneficiary contribution share of 25% towards construction of rearing sheds, farm appliances etc, many sericulturists are reluctant to take up CDP components. The Seed sector components are not useful for Northern States as negligible number of Private Graineurs/Licensed Seed Producers are available in Northern states.

In order to make the Catalytic Development Programme (CDP) more effective, there need to be some flexibility of implementation of the scheme. Since the crop pattern, agro-climatic conditions, sectoral priority, input requirements etc. are different for different zones of the country, zone based interventions are required for effective implementation of CDP. CSB should consult each State Department of Sericulture and prepare the sericulture development plan and implementation guidelines for each financial year after factoring in the local conditions and status of sericulturists in that particular state.

Region wise physical and financial progress of various components is given in **Table 4.1**. The data reveals that a large segment of financial allocation and components have been utilized by the Southern states only.

Table 4.1 Component wise and Region wise Financial & Physical Progress under CDP during XI Plan**(Financial Figures in Rs Lakhs and Physical figures in numbers)**

S.No	Name of the Scheme		Northern Region	Southern Region	Eastern Region	Central Region	North Eastern States	Total
1	Package for Seed Sector							
a)	Mulberry							
1	Support for upgrading existing Seed/Grainage Units under Mulberry Sector (Unit)	Financial	70.0	126.6	144.4	25.0	128.0	494.00
		Physical	9	17	74	4	16	
2	Support to establish large scale Bivoltine Seed production Grainages in Public/Pvt. Sector (Nos.)	Financial	0	120	0	0	0	120.00
		Physical	0	2	0	0	0	
3	Assistance for Seed Testing facilities in Public/Pvt. Grainages (for Quality Seed Production)	Financial	6.0	127.2	28.3	0	9.6	171.10
		Physical	5	140	31	0	9	
4 a)	Assistance for mulberry silkworm seed production units (Support to get ISO/BIS Quality Seed Certification for Silkworm Seed Units) P1 Grainages	Financial	0	33.3	18	0	0	51.30
		Physical	0	2	2	0	0	
b)	P2 Grainages	Financial	0	47.2	0	0	0	47.20
		Physical	0	3	0	0	0	
b)	Vanya							
i)	Tasar							
5	Assistance to Private Tasar Graineurs	Financial	8.6	6.1	2944.9	219.2	0	3178.80
		Physical	12	30	4306	328	0	
6	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	Financial	1.3	0	170.8	93.3	0	265.40
		Physical	1	0	107	53	0	
7	Assistance for strengthening of Seed Multiplication / Infrastructure for Oak Tasar in the State (Nos)	Financial	27.9	0	0.4	0	65.8	94.10
		Physical	9	0	8	0	11	
8	Assistance to seed rearers (Nos)	Financial	33.6	1.1	394.5	144.6	20.8	594.60
		Physical	548	25	7326	3305	518	
ii)	Eri							
9	a) Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos)	Financial	24	2.5	29.9	21	207	284.40
		Physical	8	1	11	6	46	
	b) Equipment Support to Eri seed rearers cum graineurs (Nos)	Financial					69.2	69.20
		Physical					1154	
iii)	Muga							
10	Assistance to Muga Private Graineurs (Nos)	Financial	0	0	14.3	0	1225	1239.30
		Physical	0	0	29	0	1402	
11	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure (Nos)	Financial	14.3	7.9	7.9	0	654.2	684.30
		Physical		1	1	0	97	

2	Package for Cocoon Sector							
a)	Mulberry							
1	Support for Mulberry Plantation Development: (Raising of high yielding Mulberry varieties in (in Acres)	Financial	567.1	3897	99.7	143.3	484.9	5192.00
		Physical	16833	142028	3526	5201	11081	
2	Assistance for irrigation and other Water Conservation and usage techniques: (Ha)	Financial	404.7	4089.4	334.2	606.7	403.2	5838.20
		Physical	1624	18190	1303	2930	1012	
3	Supply of Rearing Appliances (including improved mountages) / farm Equipments to farmers) – for Bivoltine Sericulture farmers (acres)- (Chakma ADC Rs.16.92 lakhs)	Financial	1989.5	6023.8	553.1	888.6	2395.5	11850.50
		Physical	12540	30139	12046	4117	9295	
4	Supply of quality Disinfecting Materials And other crop protection measures for Bivoltine seed farmers (Nos.)	Financial	101.5	258.5	5.6	8.3	55.9	429.80
		Physical	4400	33131	750	684	2348	
5	Assistance for Construction of Rearing Houses (RH) - Nos.	Financial	5095.6	6705.7	1532	1678.8	3758	18770.1
		Physical	17969	20157	8347	5829	9285	
6	Assistance for maintenance of Chawki gardens , construction of Chawki Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments : (Units)	Financial	242.3	74.4	28.5	60.1	151.2	556.50
		Physical	177	170	29	50	58	
7	Insurance Support (For all Sectors)(lakh dfls)	Financial	14.9	25.5	226.4	0	2	268.80
		Physical	2.5	13	12127.3	0	0	
8	Setting up of Production units for Bio-logical in puts (Inoculants, Biological control agents etc.)	Financial	0	11.6	0	6.4	0	18.00
		Physical	0	13	0	8	0	
9	Assistance for Farmers Training (Nos)	Financial	0	3	2.5	6.5	3.6	15.60
		Physical	0	6	500	12	4	
10	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics.	Financial	0	31.1	44	6	14.9	96.00
		Physical	0	48	50	8	11	
b)	Vanya							
i)	Tasar							
11	Support to rearers for Augmentation of tasar host plantation (Ha.)	Financial	15.8	0	1092.8	847.6	0	1956.20
		Physical	165	0	12346	7930	0	
12	Assistance for raising and maintenance of systematic plantation of Oak Tasar (in Hec.)	Financial	22.2	0	0	0	45.6	67.80
		Physical	178	0	0	0	360	
13	Assistance for Construction of Cocoon Storage Houses in Tasar Sector	Financial	8.8	0.5	265.5	55	53.6	383.40
		Physical	53	2	1062	220	312	
ii)	Eri							
14	Support for Castor/Tapioca cultivators with Start-up tools (Half an acre unit)	Financial	36.5	0.9	42.4	27.1	16	122.90
		Physical	5900	150	6726	3280	250	
15	Augmentation of perennial Eri food plants with supply of Start-up tools (in acres)	Financial	0	0	0	0	1070.3	1070.30
		Physical	0	0	0	0	13739	
16	Construction of Rearing	Financial	946.8	34.1	487.8	224.2	6862	8554.90

	houses(Nos).	Physical	3215	189	2239	708	17233	
iii)	Muga							
17	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (Acres)	Financial	9.7	0	62.7	0	1329.6	1402.00
		Physical	140	0	918	0	10162	
3	Package for Post Cocoon Sector							
i)	Silk Reeling & Spinning Components							
1	Popularization of New Slow-Speed, (Twenty-end per Basin) Certified Multi-end Reeling Machines (18 basins - equivalent to 360 ends)	Financial	0	0	0	0	0	0.00
		Physical	0	0	0	0	0	
2	Support for establishment of Certified Multi-end Reeling Machines 10 Basins	Financial	109.5	759.6	0	84.7	80	1033.80
		Physical	15	156	0	18	10	
	20 Basins	Financial	0	111.9	0	17	0	128.90
		Physical	0	16	0	2	0	
3	Establishment of Automatic / Semi automatic Reeling Units (Imported)	Financial	0	400	0	0	0	400.00
		Physical	0	8	0	0	0	
4	Support for establishment of Improved Cottage Basin Reeling Units	Financial	38	34.8	34.8	13.8	68	189.40
		Physical	22	29	23	11	30	
5	Support for existing Charkha Reeling Units to dissuade child labour (Motorized Charkhas)	Financial	0	20	24.6	0.8	0	45.40
		Physical	0	400	498	15	0	
6	Support for Setting up of Certified Dupion Silk Reeling Units (10 KG. / 20 KG. - Prorata basis)	Financial	0	77	5	6.6	1.6	90.20
		Physical	0	5	5	6	1	
7	Support for Hot Air Driers-Electrical/Multi- fuel/ 50 kg. capacity (Nos.)	Financial	35	24.6	36.9	13.5	62.7	172.70
		Physical	47	51	73	26	86	
	100 kg capacity (Nos)	Financial	155.2	2.6	19.4	16.7	0	193.90
		Physical	124	3	25	17	0	
8	Assistance for Twisting Units	Financial	95.9	895.1	25.7	60.3	28.8	1105.80
		Physical	21	199	8	23	6	
9	Support for establishment of Pupae Oil Extraction Production and Bye - product utilization Units	Financial	0	0	0	0	0	0.00
		Physical	0	0	0	0	0	
10	Incentive for production of Bivoltine Silk (MTs)	Financial	136.7	542	2.1	39.3	0	720.10
		Physical	191.4	1472.4	3.7	78.8	0	
11	Quality linked price Support system for Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs	Financial	201.3	172.5	162	144	367.2	1047.00
		Physical	3	4	6	3	20	
12	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga	Financial	24	0	140	33.8	301.5	499.30
		Physical	2	0	6	2	5	
13	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop	Financial	15.5	4.5	38	25.8	24.3	108.10
		Physical	19	7	53	38	29	

	Soc./SHGs							
14	Support for Vanya Reeling/Spinning Sector a) Spinning (Nos)	Financial	7.2	0	21.4	14.7	131.5	174.80
		Physical	369	0	1041	769	4505	
	b) Reeling-cum-Twisting (Nos)	Financial	6.8	0	65.7	60.6	168.1	301.20
		Physical	58	0	828	699	1507	
15	Support for establishment of Spun /Spinning Mills ii) Silk Weaving Components	Financial	0	25	0	110.5	110.5	246.00
		Physical	0	0	0	1	1	
16	Support for establishing shuttle-less looms (each unit with 8 looms and 1 sectional warping machine)	Financial	607.3	575	0	75	0	1257.30
		Physical	24	15	0	3	0	
17	Support for Handloom Sector for Loom Upgradation							
	1. Support for Certified Handlooms specially designed	Financial	145.3	203.6	295.4	64.2	294.3	1002.80
		Physical	946	1454	1586	398	1312	
	2. Loom Upgradation through Jacquards	Financial	90.1	507.6	111.8	29.2	101.9	840.60
		Physical	1674	10299	1509	372	1256	
	3. Computer Aided Textile Designing (CATD)	Financial	60.8	559.3	38	29.7	100	787.80
		Physical	23	218	11	9	25	
iii)	Silk Wet Processing Components							
18	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing : 1. Yarn Dyeing : 25 Kg. capacity	Financial	39.4	105.6	26.3	11.4	19.2	201.90
		Physical	9	48	11	6	6	
	2. Yarn Dyeing : 50 Kg. capacity	Financial	0	63	21.1	9	0	93.10
		Physical	0	17	4	1	0	
	3. Arm Dyeing : 50 Kg. capacity	Financial	81	101	66	21.1	38.4	307.50
		Physical	9	14	7	2	4	
	4. Fabric Processing Facilities	Financial	38.8	75	116.1	77.4	80	387.30
		Physical	2	4	7	5	5	
4	Support Services Sector							
1	Product Design and Development - Generic Promotion of Indian Silks / Sericulture (Including Exhibitions, Buyer-Seller meets, etc.,		0	11.6	13.4	0	10	35.00
2	Vanya Silk Market Promotion Cell		0	0	0	0	187	187.00
3	Entrepreneurship Development & Management Development Programmes.		12.9	21.3	30.5	18.7	53.6	137.00
4	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits. (Nos)	Financial	90.2	1403.2	265.6	121.5	1323	3203.50
		Physical	3546	40372	8449	2608	23984	
5	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.)		56.4	165.1	91.3	36.9	184.6	534.30
6	Assistance towards Studies /Consultancies / Surveys / Monitoring / Supervision / Evaluation etc.		1	48.4	5	0	0.5	54.90
7	Assistance to NGOs / SHGs & Agencies other than CSB & State for meeting		42.9	10.5	0	0	0	53.40

	administrative expenditure towards Project Implementation in the Vanya sector and in the Mulberry sector							
8	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	Financial	7	16.8	20.2	3.2	21.7	68.90
		Physical	28	24	20	5	9	
9	Women Development Components		115.4	779.7	1464.1	88.4	111	2558.60
a.	New beneficiaries		16827	118090	199242	7500	17600	
b.	Renewed Beneficiaries							
c.	Creating toilets, rest rooms & crèches Cocoon Markets		5	19	98	22	0	
10	Emphasis on Tribal areas	Financial	0	0	107.4	2.2	10.4	120.00
		Physical	0	0	1390	20	91	
	Total		11950.7	29312.6	11734.4	6285.7	22890.8	82174.2

Source: Compiled from data provided by CSB, Bangalore

4.2 Success Rate & Acceptability of the components

Table 4.2 provides the details regarding the success rate and acceptability of various seed sector components of Catalytic Development Programme on the basis of data collected from Graineurs during field investigations and interactions with various State Department of Sericulture.

Table 4.2 Success and acceptability of CDP components: Seed Sector

S.No	Scheme	Name of the Scheme	Success/Acceptability
I	PACKAGE FOR SEED SECTOR		
	a)	Mulberry	
1	111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector (Units)	Against the target for upgrading 114 grainages during XI plan, 120 grainages have been upgraded under CDP during XI plan. This component has very high acceptability due to the implementation of Seed Act in 2010.
2	112	Support to establish large scale Bivoltine Seed production Grainages in Public / Pvt. Sector (Nos.)	Two grainages have been established in Tamilnadu and Karnataka.. In order to increase the Bivoltine sericulture in India, more number of Bivoltine grainages need to be established under this component for increasing bivoltine seed production..
3	113	Assistance for Seed Testing Facilities in Public / Pvt. Grainages (for Quality seed Production)(Nos.)	As against the target to cover 228 beneficiaries during XI plan only 185 beneficiaries were assisted under this component. The Graineurs in Karnataka reported that the testing equipments such as microscope provided under CDP can detect Pebrine disease. Seri biotech Research Laboratory (SBRL) is undertaking research on PCR based silkworm disease detection equipment.
4		Assistance for mulberry silkworm seed production units (Support to get ISO / BIS Quality Seed Certification for Silkworm seed Units)	The achievement in terms of financial target during XI plan is 62.02 %. Against the target of 6 P1 and P2 grainages) achievement is 4 grainages, (P1) 3 grainages (P2) respectively. Physical achievement is 63% which is comparable with financial target.
a)	114	P1 Grainages (Nos.)	Only three states Karnataka, Tamilnadu and West Bengal have taken these components. The component is beneficial for the implementation of Seed act.
b)	115	P2 Grainages (Nos.)	

	b)	Vanya	
	i)	Tasar	
5	151	Assistance to Private Tasar Graineurs (Nos.)	The component has been attracting Tasar Graineurs. The financial achievement is 173.52%. Against the physical target for 2906 Graineures, 4676 Graineures have been assisted under this component. Jharkhand and Orissa have shown much improvement in Tasar culture as in these states, Tasar raw silk production is increasing. The Tasar Graineures in Warangal district of Andhra Pradesh reported that if the price of Tasar DFLs is increased sufficiently, more Graineures will take up this activity. However, farmers in Assam state reported that they require more training, so that acceptability of this component could be increased further.
6	152	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	Acceptability of this component is very high. The financial achievement under this component is 135.71% as against the physical target of 114 PPCs, 161 PPCs have been strengthened during XI Plan.
7	153	Assistance for strengthening of Seed Multiplication / Infrastructure for Oak Tasar in the State	102% of the financial target has been achieved during XI plan.
8	154	Assistance to Tasar seed rearers (Nos.)	This component has high acceptability as the financial achievement is 115.31%. Against the target for covering 10196 Seed rearers, 11722 seed rearers have been assisted.
	ii)	Eri	
9	161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearers cum Private Graineurs(Nos.)	Majority of the Eri culture practicing states are accepting this component as against the target for strengthening 81/ 2000 grainages /ASR, 72 grainages / 1226 ASR have been covered during XI Plan. Eri DFLs production in the country has been increasing and it has reached 308.91 MT which is one of the major outcome of this component.
	iii)	Muga	
10	171	Assistance to Muga Private Graineurs.	This CDP component has highly motivated the Muga Private Graineurs. Financial achievement in this component is 98.88%. NPC study team observed that it has encouraged farmers to open new grainages in Meghalaya and Assam states.
11	172	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure.	Against a target to provide assistance for 43 Muga seed multiplication centres,100 have been covered. During XI plan, this component was most utilized by Nagaland, as 54 Muga Seed multiplication centers were strengthened there.

Table 4.3 Success and acceptability of the CDP Components: Cocoon Sector

S.No	Scheme code	Name of the Scheme	Success/Acceptability
II	Package for Cocoon Sector		
a)	Mulberry		
1	211	Support for mulberry plantation development	This component has high acceptability during XI plan 171.16% of planned target has been achieved. The component has also become the effective tool for implementation of newly developed mulberry host plantation variety like V1, M5 for better leaf yield. Many new farmers were motivated for mulberry cultivation.
2	212	Assistance for irrigation and other water conservation and usage techniques	This assistance provided for drip irrigation system under this component is much demanded in water scarce places especially in southern states. During field visits it was observed that in places where water is adequately available farmers prefer flood/furrow method of irrigation. Field survey revealed that 48.9% of the farmers do not have any provision for water storage and conservation.
3	213	Supply of Rearing Appliances (including improved mountages)/farm	This component has high acceptability. Against the target for covering 68,030 Bivoltine Seri farmers (both commercial as well as reeling cocoon), 68137 farmers have been assisted, which clearly depicts the success and

		equipments to farmers - for Bivoltine Sericulture Farmers	<p>acceptability of the component. Farmers are much satisfied with the component. This component may be made more acceptable by including farm mechanization equipments like mini power tillers, matured silkworm seed separator, weed cutter, branch cutter etc.</p> <p>This component has helped to increase the cocoon productivity (kgs of cocoon per 100 DFLs) and has helped farmers to produce quality cocoons which fetches them good prices. The cocoon productivity has increased from 53.80 Kg to 55.22 Kg</p>
4	214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers (Nos.)	<p>Although this is one of the useful component which has been fulfilling its objectives well, as against the targets for covering 40,788 farmers, 101.28% of the target has been achieved.</p> <p>However, during field survey, the farmers taking crops of Cross Breed cocoon reported that they also require disinfection material under CDP.</p>
5	Assistance for construction of rearing sheds of the model of		
	215	Rs 1,50,000/-	<p>This is the most successful and popular component of mulberry cocoon sector. Almost all farmers of sericulture practicing states are accepting it well. However revision of cost of rearing sheds are needed under this component. However during field survey it was observed that some farmers are hesitant to avail this component as beneficiary share is quite high. If this problem is resolved, it would lead to increase in acceptability of the component and thus increase cocoon production.</p> <p>The separate rearing sheds given under this component has ensured hygienic conditions and prevent contamination during silkworm rearing. The seed productivity (kgs of cocoon produced per 100 DFLs) has also increased.</p>
	216	Rs 1,00,000/- &	
	217	Rs 50,000/-	
6	218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments (Units)	<p>The financial achievement in this component is 121.91%. Against a target for establishing 387 CRCs, 484 CRCs have already been established.</p> <p>The Chawkie rearing center concept has helped the farmers to increase their production. Most of the farmers have 2 acres of land under mulberry cultivation. The rearing sheds provided under CDP scheme has the capacity for rearing 250 DFLs. The mulberry leaves from 1 acre of land is enough for feeding silkworms. Before CRC concept, farmers used to take one crop in two months from two acres of land, which required huge labour. After CRC concept, the farmers take one crop in each month from 1 acre of land.</p> <p>NPC study team observed that many commercial cocoon farmers in traditional sericulture belt undertake chawkie rearing at their own rearing sheds.</p> <p>The concept of chawkie rearing centers in the field is very low and there is a requirement of intense follow up and training as this is a very useful component</p>
7	219	Insurance Support (For all Sectors) lakh DFLs Demand Dependant	<p>This scheme has low acceptability as the financial achievement is 88.77%. This scheme includes the insurance coverage for rearing house, rearing, reeling and weaving equipments. It also includes health insurance coverage for beneficiaries as well as their family.</p> <p>This component is mostly utilized by Jharkhand, Tamilnadu and West Bengal.</p> <p>Moreover the state departments reported they find it difficult to attract insurance companies for implementation of the scheme for the rearing, reeling and weaving equipments. However, most of the health insurance coverage is provided in the Support Services sector.</p>
8	220	Setting up of Production units for Biological inputs (inoculants, Biological control agents etc.)	The acceptability of this component is very low. Against a target for establishing 37 such production units, only 21 units were sanctioned during XI plan. The reason for lesser utilization is lack of technical know- how amongst the stakeholders.
9	221	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture.	Against a target of providing 165 service agents, 117 were assisted during XI Five Year Plan. This component is quite useful and acceptable especially in traditional sericulture belts. This has helped the farmers in getting proper disinfection of their rearing sheds and other equipments before and after the

			crops. During field interaction with a Seri polyclinic in Andhra Pradesh, it was reported that due to this better disinfection has been taking place and crop yield has increased. This component is very useful.
10	222	Assistance for Lead Farmers Training (Nos.)	Though the financial achievement is 36.36% but 27 number of farmers were trained against the target of 73 farmers. This components has not been effective. During field discussions, it was reported that after receiving the training, lead farmers do not disseminate their skills. This component need to be looked upon.
b)		Vanya	
	i)	Tasar	
11	251	Support to rearers for Augmentation of Tasar host plantation (Hectares)	Against a target of 20,369 Hectares, 20441 hectares were covered. In terms of financial achievement it is 95.50%. During XI plan, this component was much utilized by Madhya Pradesh, Jharkhand, Chattisgarh and Orissa. During field interactions with DOS, Andhra Pradesh, they are also planning to take up systematic plantation of Tasar during XII Five Year Plan. This component has helped in increasing Tasar raw silk production in the country and should be continued further but with increased unit cost.
12	252	Assistance for raising and maintenance of systematic plantation of Oak Tasar (Hectares)	The physical achievement is 129.63 % and financial is 133.33% which is comparable with the financial target. Many farmers of Mizoram state even do not own land. Uttarakhand state where the Oak Tasar sericulture is practiced, farmers have very less land holding so it is not possible to raise the systematic plantation. Farmers obtain foliage from forest based plantation. It is quite acceptable in Manipur and has been included in cluster promotion programme.
13	253	Assistance for Construction of Cocoon Storage Houses in Tasar Sector (Nos.)	Against a target for providing assistance for construction of 1273 Cocoon storage houses in Tasar Sector during XI plan, 1649 Tasar cocoon storage houses have been sanctioned. As reported by DOS, Jharkhand, 450 number of Tasar cocoon storage houses have been sanctioned during XI Five Year Plan. But the constructions of the cocoon storage houses have not been started yet and shall be commenced in October 2012. The model for construction has been made. As per the CSB guidelines, the cocoon storage houses shall be constructed with locally available treated bamboo so that it can fit into the unit cost of Rs 50,000. DOS, Jharkhand reported that the tasar farmers are tribals and economically backward. Due to lack of space, farmers are forced to sell it to Mahajans, who do not provide good prices. In this way cocoon storage house shall help the farmers. This component has high acceptability among Tasar cocoon farmers.
ii)		Eri	
14	261	Support for Castor/Tapioca cultivators with Start-up tools(Half acre units)	From the financial achievement point of view this component seems to be unsuccessful. Against a physical target for coverage of 19218 units (Half an acre units), 16306 has been achieved. This component was utilized mostly by Uttar Pradesh, Orissa, Chattisgarh, Nagaland and West Bengal. In Fatehpur, Uttar Pradesh, a Eri cluster has been developed. In Uttar Pradesh the Eri cocoon production has increased from 6.96 MT in 2007-08 to 15.4 MT in 2011-12.
15	262	Augmentation of perennial Eri food plants with supply of Start-up tools (acres)	Against the target of covering 12764 acres under this scheme, 13739 acres was covered during XI Plan. This component has a good demand in Eri culture practicing NE States.
16	263	Construction of Rearing houses (Nos.)	This component has very high acceptability. As against the target for providing assistance to 21964 rearing houses, 23584 number of rearing houses were sanctioned with the financial achievement of 107.37%. Majority of the houses were sanctioned in North Eastern States, Uttar Pradesh, Orissa and West Bengal.

iii)		Muga	
17	271	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (acres)	This component has high acceptability in Assam and Meghalaya. There is a need to raise nursery of Muga food plants so that the Muga silk production could be increased in these states.

Table 4.4 Success and Acceptability of CDP Components: Post Cocoon Sector

S.No	Scheme code	Name of the Scheme	Success/Acceptability
III PACKAGE FOR POST COCOON SECTOR			
i) Silk Reeling & Spinning Components			
1	411	Popularization of New Slow-Speed, (Twenty-end per Basin) Certified Multi-end Reeling Machines (18 basins - equivalent to 360 ends) (Number of Units)	This component was deleted under the RCE proposal.
2		Support for establishment of Certified Multi-end Reeling machines	This component has very high acceptability in Traditional States where production of raw silk is quite high. The reelers in traditional states are accepting this component well. They also reported that due to this CDP component their production capacity as well as quality of raw silk has improved. They also reported that one 10 end reeling machine gives an output of 10-12 Kg of raw silk per day. In non traditional states reelers are still relying on cottage basins. Penetration of this component in non-traditional states is very low. Against a target for providing support to 335 units of 10 basins around 199 units were implemented. For 20 basins against a target of 22 units only 18 have been established. New upcoming reelers prefer this multi end reeling machine. If the pre cocoon sector is strengthened, the acceptability of this component shall increase automatically. However, a substantial increment is required in the unit cost of the multi end reeling machine.
a)	412	10 Basins	
b)	413	20 Basins	
3	414	Establishment of Automatic / Semi automatic Reeling Units (Imported) (Number of Units)	This component has good acceptability and success. Against a target for 6 Units, 8 units have been established throughout country. This component has increased the production levels of raw silk. During the field visit to an Automatic reeling machine (ARM) unit (400 ends) at Jangaon, A.P. the NPC study team observed that the establishment of automatic reeling unit has ensured secured market for nearby cocoon growers. The consumption capacity of this ARU is 700 Kgs of cocoon per day in two shifts at maximum capacity. The Renditta has become 7 in this unit. This Jangaon ARM unit has provided employment to around 50 people. The unit is engaged in 99% of Bivoltine & 1% Multivoltine reeling. The only issue that lies with ARM is the continuous supply of good quality cocoons. The ARM owner reported that the establishment cost of the unit is around Rs 2.5 crores including land and machinery. During field interactions with DOS, Andhra Pradesh, it was reported that currently this machine is imported and which costs around Rs 1.3 crores. CSB should take initiatives to design this machine in India itself so that cheaper machines are made available.
4	415	Support for establishment of Improved Cottage Basin Reeling Units	This component has very little acceptability. Against a planned target for establishing 166 units, only 119 units could be established by the end of XI plan. The new and upcoming reelers of traditional states are now preferring Multi end reeling machine over cottage basin reeling unit.

			The cottage basin has moderate acceptability in non traditional and North eastern sericulture states. Post cocoon activities in Northern Himalayan states like Uttarakhand, Himachal Pradesh, Jammu & Kashmir is very low because of non availability of cocoons throughout the year. Majority of the reelers in these states are using charkha for raw silk reeling.
5	416	Support for existing Charkha Reeling Units to dissuade child labour	This component is acceptable and needs faster implementation Whether it is a cottage basin unit or multi end reeling unit reelers, majority of them keep charkha unit for reeling of inferior quality of cocoons.
6	417	Support for Setting up of Certified Dupion Silk Reeling Units (10 KG. / 20 KG. - Prorata basis) (Number of Units)	Though the financial achievement is 94%, but only 17 units have been established against the target for establishing 18 such units. It provides the technology for production of international grade Dupion silk, by using sorted out defective cocoons (i.e., double, flimsy, Uzi affected, urinated, thin-end and melted cocoons). The technology also discourages the use of child labour, provides better working condition and enhances the returns from the by-product. 5 units in Madhya Pradesh, 5 units in West Bengal, 3 units in Andhra Pradesh, 2 in Karnataka, 1 in Chattisgarh and 1 in Nagaland have been established.
7		Support for Hot Air Driers- Electrical/Multi-fuel Ushankoties for Reeling units	As against the target for providing support to 268 units for 50 Kg capacity hot air driers, 283 have been assisted under CDP. In 100 Kg capacity hot air driers, against the target of 185 units, 169 units have been assisted.
a)	418	50 kg. capacity (Nos.)	The hot air drier facilitates the uniform cooking of cocoon. The hot air drying associated with good cooking can improve the renditta by 0.3 to 0.7. That means 300-700 gm of lesser amount of cocoon shall be required to produce 1 Kg of raw silk.
b)	419	100 kg capacity(Nos.)	
8	420	Assistance for Twisting units(Nos.)	This component has much acceptability in traditional Sericulture practicing states. Against the target for establishing 253 twisting units during XI plan, 257 units were established. Out of these 257 units, 198 units were established in Southern states only. Twisting units have improved the quality and acceptability of Silk yarn. The reelers of Andhra Pradesh reported these twisted silk yarns have given them an additional value added of around Rs 75-100/- per Kg.
9	421	Support for establishment of Pupae Oil Extraction Production and Bye - product utilization Units (Nos.)	This component has no acceptability. No sericulture practicing state has been accepting it. The reelers of traditional sericulture states do not find any marketing problem for selling mulberry pupae. They get the competitive prices for it. In North Eastern states people eat Eri Pupae for better health. In Andhra Pradesh mechanism of utilizing Eri Pupae is yet to be identified. Research project has been given to Indian Institute of Chemical Technology (IICT) for identifying nutritional and pharmaceutical content in Eri pupae needs to be taken up.
10	422	Incentive for production of Bivoltine Silk (MTs)	This component has tried to motivate and compensate the decreasing profits of the Bivoltine raw silk reelers. Currently the reeling industry is facing problems of low profit margins. A multi end reeler in Southern States on an average has the cost of production of Rs 2275 per kg for Bivoltine raw silk production. For ARM it is estimated at Rs 2242/Kg (Annexure 4.1). The average rate of selling bivoltine raw silk is on an average around Rs 2300 per kg. As per this component Rs 50 as an incentive (CSB Share) is given on 1 Kg of BV raw silk production. In Andhra Pradesh a reeler is given an incentive of Rs 80 per Kg of which Rs 50 per kg is borne by CSB and rest (Rs 30 per Kg) is borne by state department. Department of Sericulture, Andhra Pradesh has been giving incentive of Rs 40 per Kg for reeling Cross Breed Silk too under their State Plans just to protect the interest of the reelers.
11	423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs (No. of States)	This component needs to be implemented effectively. Quality linked price support system is must for effective marketing of cocoon and raw silk. This component was utilized by almost all major sericulture practicing states except J&K, Maharashtra and Uttarakhand. In some of the places cocoon testing centres (CTCs) have been established in major cocoon markets. This CTCs check the quality of the cocoon on the basis of its shell ratio,

			<p>length of the thread etc and estimate the renditta expected. A test card is prepared and put over the cocoon lot. Reelers see the renditta and on the basis of that they negotiate with the cocoon growers. During field visit at Cocoon market, Ramanagaram, it was reported that CTC checks only bivoltine cocoon lot due to shortage of equipments and manpower.</p> <p>On the same lines Raw silk testing centres (RSTCs) have been established but these are three in numbers. Rest of the work is taken care of by Silk Conditioning & Testing House (SCTH).</p> <p>To have the effective marketing, Quality linked price support system needs to be strengthened.</p> <p>This component also includes the establishment of new cocoon markets and upgradation of existing cocoon markets. During field visits in various cocoon markets, majority of the cocoon markets are performing well, It was reported that majority of the cocoon growers are transacting through cocoon markets only. However, during field visits, it was observed that these cocoon markets require maintenance and upgradation. Further analysis on the effectiveness of the cocoon markets is discussed in Chapter V of this Report.</p> <p>In Assam, there is no organized marketing system for buying and selling of cocoons. At present there is no functional cocoon market in the state, a new market is being set up but it is still yet to become functional. At present the farmers and the reelers sell their cocoons only through personal contact with agents and local buyers.</p> <p>The component also includes the creation of non-erodable Revolving Fund (RF) for purchasing cocoons / raw silk at a minimum price fixed on quality basis. Depending upon the changing market situation, the States in consultation with CSB have to fix a minimum price on quality basis and such quality should be confirmed by testing before auction in the Cocoon Markets / Silk Exchanges. In case, the graded cocoons / raw silk is not fetching a minimum price so fixed, the States can procure such cocoons / raw silk and the same can be disposed later, for which the RF can be utilized.</p>
12	424	Establishment of Cocoon Banks / Market Support to Vanya Sector -	<p>Sericulture in the non traditional and some of the Northern States is not as developed as in traditional states in terms of silk production, productivity and number of crops per year. Majority of the non-traditional sericulture States have two commercial crops per year. This situation compels the reeling units / reelers of the above states to procure raw material and store them for atleast six months, to be used during the off season. This involves not only a huge capital but also requires enough storage space to stock the raw material. In order to help the reelers / reeling units of the above States and make available the raw material throughout the year, it is proposed to support establishment of Cocoon Banks during the XI Plan period. It is proposed to extend support to the interested State Govts. / Departments or the State identified agencies like NGOs, Societies and SHGs for establishment of Cocoon Banks with suitable infrastructure and equipments for cocoon grading, drying and storage.</p> <p>CSB has supported for established 15 cocoon banks as against the target of 19 for Tasar, Oak Tasar, Eri & Muga. A total of Rs 5 crores have been spent against the financial target of Rs 8.09 crores.</p> <p>3 Cocoon Banks were established in Jharkhand, 2 in West Bengal, 1 each in Madhya Pradesh, Orissa, Uttar Pradesh, Himachal, Assam, BTC, Manipur, Mizoram and Nagaland.</p>
13	425	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State	<p>The component has shown financial achievement of 90% as Rs 1.08 crores have been spent on 146 Master reelers/weavers against 1.20 crores and 140 numbers respectively. During field interaction with a Master dyer in Hindupur, it was reported that due to his presence the quality of yarn dyeing, colour combinations have improved much. The owner of the unit</p>

		Governments/ NGOs/Coop Soc./SHGs	reported that the dyer is very experienced and can make different innovative colour combinations just by his experience. The master dyer has been disseminating his skill among young dyers.
14	Support for Vanya Reeling/Spinning Sector		The physical and financial targets and achievement data suggests that this component is quite successful. Eri Spinning machines has been sanctioned to the beneficiaries, but during field visits in Assam, it was observed that beneficiaries often do not use these machines. It was reported that they mostly prefer hand spun Eri threads as the demand for hand spun Eri thread in market is more than the machine spun Eri. Also it is worth mentioning that Eri spinning culture is mainly taken up as a leisure activity by the farmers, mostly women. It is very convenient for them using hands for Eri cocoon spinning. In Assam 1658 Eri cocoon spinning machines were given. Similarly in Meghalaya, it was observed that majority of the reelers still use Takli for Muga raw silk reeling. However in Jharkhand, the beneficiaries use the pedal-cum-motorized reeling and twisting machines for Tasar raw silk reeling.
	426	a) Spinning (For Eri)	
	427	b) Reeling-cum-Twisting (For Tasar and Muga)	
15	428	Support for establishment of Spun /Spinning Mills	Two spun/spinning mills were sanctioned during XI Five Year plan, one each at Chattisgarh and Assam.
	ii) Silk Weaving Components		
16	451	Support for establishing shuttle-less looms (each unit with 8 looms and 1 sectional warping machine)(Units)	This component has high acceptability in major silk weaving clusters of India viz. Banaras, Kancheepuram, Dharmavaram, etc. As against the target for establishing 47 shuttle less looms, 42 looms have been sanctioned during XI plan.. Many of the shuttle less looms are either in the implementation stage or have just been implemented and the production trials are going on. The component need to be continued for producing defect free silk fabrics so as to support export market and garment manufacturing sector.
17		Support for Handloom Sector for Loom upgradation	These components have been quite successful and acceptable. Pneumatic lifting mechanism introduced in the handlooms have reduced the human drudgery. Against the target for providing support for 2000 certified handlooms, 5696 handlooms were given. However, DOS Jharkhand reported that due to the manufacturing complicated structure, the height of the handloom is too much which does not fit in the weavers room.
	452	Support for Certified Handlooms specially designed	
	453	Loom Upgradation through Jacquards	
18	454	Computer Aided Textile Designing (CATD)	This component has very high acceptability especially in major silk weaving clusters. The financial achievement in this component is 152.41% as against the target for assisting 185 such designers, 286 designers were assisted. The component need to be continued to equip the textile designer with a tool to face the changing market trend in a faster way.
	Silk Wet Processing Components		
19		Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing : (Nos)	This component is very successful in popular clusters of traditional states like Kancheepuram, Dharmavaram, Hindupur etc. Hydraulic lifting mechanism has been introduced in the yarn dyeing which has reduced the human drudgery.
	461	1. Yarn Dyeing : 25 Kg. capacity	
	462	2. Yarn Dyeing : 50 Kg. capacity	
	463	3. Arm Dyeing : 50 Kg. capacity	
	464	4. Fabric Processing Facilities	

CHAPTER V

STATE WISE IMPACT OF COCOON MARKETS AND SILK YARN

5.1 Cocoon Markets

Cocoon markets facilitate Sericulture farmers (cocoon producers) and post cocoon processors (reelers) to transact the cocoons. The performance of Cocoon market has been measured in terms of quantity of cocoons transacted, number of lots arrived to the market and the effectiveness of the market in fetching good prices to the cocoon producers. Major cocoon markets have the IT based record monitoring and accounting system. There are other facilities such as auditorium, audio visual aids to facilitate better transfer of technology. Amenities like rest rooms for ladies and gents are also provided in the markets.

5.2 Raw Silk Exchanges

In order to facilitate marketing of raw silk produced, Raw Silk Exchanges were set up where the reelers (Raw Silk producers) and the buyers (Traders, Twisters, Weavers, Co-operative Societies etc.) transact the raw silk. The performance of a Raw Silk Exchange is measured in terms of quantity of raw silk transacted, number of lots arrived to the market and effectiveness of the silk exchange in fetching good prices to the reelers.

5.3 State wise Cocoon Markets and Raw Silk Exchanges

Table 5.1 State wise Cocoon Markets and Raw Silk Exchanges

S.No.	STATE	COCOON MARKETS	RAW SILK EXCHANGES
	Traditional States		
1	KARNATAKA	54	10
2	ANDHRA PRADESH	7	1
3	TAMILNADU	19	1
4	WEST BENGAL	8	2
5	JAMMU & KASHMIR	6	2
	Non-Traditional States		
6	ASSAM	-	1
7	BIHAR	1	-
8	CHATTISGARH	9	4
9	HIMACHAL PRADESH	60	-
10	JHARKHAND	5	-
11	MADHYA PRADESH	8	8
12	MAHARASTRA	1	-
13	MANIPUR	1	3
14	ORISSA	94	2
15	PUNJAB	8	-
16	UTTARANCHAL	4	1
17	UTTAR PRADESH	7	1
	TOTAL	198	20

Source: Compiled from various State Department of Sericulture

5.4 Existing system of Marketing in the Cocoon Market & Raw Silk Exchange

In the Govt. Cocoon Markets, the cocoons are arranged in lots. A bidding slip containing the crop details of the farmer is displayed on the lot for the benefit of the reelers. Cocoon lots are auctioned by the Govt. staff of the Market and the highest bidder will be offered the lots. Reelers have to deposit the money in advance. Bills of reeler and farmer are prepared separately and amounts paid to the farmers on the spot on the same day. 1% market fee is collected from each of the farmer and reeler and remitted to Government on the next day. In most of the states this open auction system of marketing is being followed except Uttarakhand. In Uttarakhand, the price of cocoons and raw silk is fixed by a Committee consisting of State Government Officials, representatives from cocoon growers and reeler's society. The prices are fixed on the basis of cost of production and average raw silk price in Bangalore. During field interactions with DOS, Uttarakhand, it was reported that this system is also not working, as the labour wages considered for calculation of cost of production is the minimum wages of the Uttarakhand which is very low and farmers and reelers are not satisfied with it.

On the same lines the transaction of Raw Silk is carried out in Raw Silk Exchanges. 0.75% market fee is collected from each of the reelers and traders and remitted to Government on the next day.

In order to eliminate the role of middlemen in the raw silk trading, various Co-operative societies and federations like TANSILK, Andhra Pradesh SERIFED, Karnataka Silk Marketing Board limited (KSMBL) etc. have come up. These societies/federations procure raw silk from reelers and sell it to the weavers at a controlled rate. TANSILK purchases raw silk of the silk reelers through the Anna Silk Exchange at Kancheepuram and supplies to its twister members for further process of twisting. Such twisted silk (Ready silk) is purchased from the twisters and supplied to the silk handloom weavers' co-operative societies, Khadi and Sarvodaya Sanghs according to their requirements. The Govt. of Tamilnadu has directed that all the silk handloom weavers co-operative societies in Tamilnadu should purchase their silk requirement only from TANSILK. TANSILK is also expected to buy all the silk coming to the Anna Silk Exchange that is not bought by the regular buyers. Thus it provides support to the reeling industry of the State. Similarly Government of Andhra Pradesh is also providing incentives to the weavers who procure raw silk from SERIFED. The incentive is Rs 150 per Kg subject to the maximum of Rs 600/- per month.

5.5 Impact of the Cocoon Market and Raw Silk Exchanges

Establishment of Cocoon markets have provided a good platform to the Sericulture farmers for transaction of cocoons and majority of the farmers are transacting their cocoon through cocoon market only. However, this marketing system has not effectively addressed the problems of the sericulture industry. Because of the uncertainty of the raw silk prices and the cocoon prices, many farmers feel demotivated to take up sericulture as the returns are not assured. During field survey it was reported that sometimes the situation becomes so worst that the farmers do not even recover their cost of production. The average price of cocoon per kg of some of the cocoon markets is given in **table 5.2**. It may be noted that the cocoon prices have increased substantially in the Southern states because of the presence of cocoon markets, but at Uttarakhand, the increase in cocoon price is of 36% only. The price fluctuations creates problems to the farmers. So, in order to overcome the problem, a system on minimum support price on the basis of its quality need to be put in place, so that the farmers could get better fixed remuneration for their

produce on the basis of quality. Similarly Seed cocoon rates have also not increased much as they increased by 21% only.

Table 5.2 Average Price of Cocoon- Major Cocoon Markets in India

S.No	Name of the Cocoon Market	Location	State	Type of Cocoon Transaction	Average Price of Cocoon (Rs per Kg)					
					2007-08	2008-09	2009-10	2010-11	2011-12	% increase
1	Mobile Market	Udumalpet	Tamilnadu	Commercial	141.00	136.00	187.00	267.00	226.00	60
2	Government Cocoon Market	Krishnagiri	Tamilnadu	Commercial	90.16	106.14	143.82	201.82	109.60	22
3	Government Cocoon Market	Salem	Tamilnadu	Commercial	110.00	141.00	190.00	255.00	191.00	74
4	Cross Breed Cocoon Market	Hosur	Tamilnadu	Commercial	94.05	111.60	153.35	219.80	178.55	90
5	Govt Cocoon Market	Hindupur	Andhra Pradesh	Commercial	107.98	136.15	169.08	229.92	189.41	75
6	Government Cocoon Market	Premnagar	Uttarakhand	Commercial	117.00	102.00	120.00	150.00	159.00	36
8	Govt Cocoon Market	Bapulapedy	Andhra Pradesh	Commercial	86.51	104.80	138.11	197.45	139.50	61
9	Govt Cocoon Market	Ramanagar	Karnataka	Commercial	117.70	142.60	173.60	238.70	189.50	61
10	Govt Cocoon Market	Dharmavaram	Andhra Pradesh	Commercial	106.64	131.49	160.42	219.84	176.10	65
11	Bivoltine Seed Cocoon Market	Madakarina	Andhra Pradesh	Seed	350.00	410.00	385.00	450.00	425.00	21

Cocoon markets were established in almost all prominent clusters of Southern States so that the farmers do not have to travel long distances for selling their produce but this also has not solved the problem. For e.g. during field visits, majority of the farmers of Andhra Pradesh reported that they sell their commercial cocoon in the Government Cocoon Market, Ramanagaram in Karnataka, though Andhra Pradesh is having 17 cocoon markets of its own. This is because Karnataka has a strong reeling community and more reelers participate in the auction process. As the demand of the cocoon becomes more, farmers get good prices for their cocoon. Same is the case with the raw silk exchange in Andhra Pradesh where not much transaction takes place as the raw silk production is marginal in Andhra Pradesh and weavers, twistors in Andhra Pradesh visit silk exchanges in Karnataka for meeting their raw silk requirements. Therefore, before setting up cocoon markets and raw silk exchanges, the supply-demand and field analysis should be done. Moreover, in order to sustain sericulture, new interior pockets need to be identified for establishing mini cocoon markets. Instead of establishing cocoon markets in every cluster with huge investments and infrastructure, mini cocoon markets having minimal cocoon testing equipments may be established which will check the quality of the cocoon and procure it from farmers. These small cocoon markets shall be linked to the main cocoon market which is centrally located at the regional level. It is imperative that CSB/DOS should fix floor pricing based on the previous days average price at the regional cocoon centres and procure the cocoons from the farmers and preserve it and transact it at the regional/major cocoon centres.

Such a system will instill confidence among small sericulture farmers who are interested in sericulture and join the activity since it assures a livelihood and reasonable return on investment. Moreover, the difficulties and high cost of transporting the small quantities of cocoons for long distances in search of a market also can be done away with. Government agencies can collect the cocoons from small farmers and transport in bulk to nearby cocoon markets. Since the area at the major sericulture belts have either declined or saturated, farmers from remote areas need to be encouraged to take up sericulture for meeting the domestic demand for raw silk.

5.6 Cocoon transaction

Table 5.3 reports cocoon transacted during XI Five Year Plan in three major cocoon markets in West Bengal such as Kaliachak, Debra Bazar and Tekatuli. It may be noted that cocoon transacted in Kaliachak cocoon market increased by more than four times while the cocoons transacted at the other two cocoon markets stagnated.

Table 5.3 Cocoon Transaction- West Bengal

Year	Kaliachak Cocoon Market		Debra Bazar Midnapore Cocoon Market		Tekatuli Cocoon Market	
	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)
2007-08	2202.69	110-83	38.960	89-239	2.0	150
2008-09	2442.39	131-97	25.071	90-260	2.0	150
2009-10	2509.31	187-140	21.109	148-342	2.25	175
2010-11	5457.59	250-165	30.349	147-377	2.5	175
2011-12	8455.89	195-110	26.787	143-327	2.5	200

Source: NPC Field Survey, August-September 2012

Table 5.4 A to 5.4 C reports cocoon transacted during XI Five Year Plan across 8 major cocoon markets in Karnataka such as Ramanagaram, Tumkur, Sidalghatta, Chikkabalpur, Bangalore, Hassan, T.Narasipura and Kollegal.

Table 5.4 (A) Cocoon Transaction- Karnataka

Year	Govt Cocoon Market Ramanagar		Tumkur cocoon Market (Bivoltine Seed)		Sidlaghatta Cocoon Market	
	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)
2007-08	12183.214	117.70	275.96	478	14354.240	125
2008-09	11987.660	142.60	234.38	316	12596.750	154
2009-10	12115.164	173.60	129.41	336	13131.120	181
2010-11	12506.930	238.70	260.93	577	12882.530	225
2011-12	13612.278	189.50	313.19	456	14941.728	198

Source: NPC Field Survey, August-September 2012

Table 5.4 (B) Cocoon Transaction- Karnataka

Year	Cocoon Market Chikkabalpur		Bangalore Cocoon Market (Bivoltine)		Hassan Cocoon Market	
	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)
2007-08	118	117	149	339	100.37	275
2008-09	78	135	115	317	103.69	274
2009-10	72	179	83	353	116.95	318
2010-11	69	232	78	517	94.50	536
2011-12	721	187	65	423	104.20	392

Source: NPC Field Survey, August-September 2012

Table 5.4 (C) Cocoon Transaction- Karnataka

Year	T.Narasipura Dist- Mysore Cocoon Market		Commercial Cocoon Market Kollegal	
	Cocoon Transacted (MTs)	Average Price Per kg (Rs)	Cocoon Transacted (MTs)	Average Price Per kg (Rs)
2007-08	8.45	47.5	7491	117.40
2008-09	5.1	56	6747	140.55
2009-10	53.93	149	6527	170.95
2010-11	60.46	171	6274	232.43
2011-12	16.43	121	6665	183.29

Source: NPC Field Survey, August-September 2012

5.7 Raw Silk yarn transaction

Table 5.5 reports the raw silk transacted during the last five years in West Bengal. Similarly table 5.6 reports the raw silk transaction in Karnataka and table 5.7 reports the quantum of raw silk transacted at Hindupur, Andhra Pradesh.

Table 5.5 Raw Silk Transaction at Panchgram, Murshidabad (West Bengal) Raw Silk Exchange

Year	Raw Silk Transacted(MTs)	Average Price Per kg (Rs)
2007-08	100.80	1316.66
2008-09	108.50	1316.66
2009-10	100.50	1316.66
2010-11	117.00	1316.66
2011-12	118.00	1316.66

Source: NPC Field Survey, August-September 2012

Table 5.6 Raw Silk Transaction at Raw Silk Exchanges- Karnataka

Year	Sidlaghatta Raw Silk Exchange		Chickbalpur Raw Silk Exchange	
	Raw Silk Transacted(MTs)	Average Price Per kg (Rs)	Raw Silk Transacted(MTs)	Average Price Per kg (Rs)
2007-08	39.2	1171	178.970	
2008-09	36.2	1279	206.680	1566
2009-10	39.8	1592	200.200	1700
2010-11	40.8	2075	204.689	2337
2011-12	38.0	1627	310.898	1800

Source: NPC Field Survey, August-September 2012

Table 5.7 Raw Silk Transaction at Hindupur, Andhra Pradesh Raw Silk Exchange

Year	Raw Silk Transacted(MTs)	Average Price Per kg (Rs)
2008-09	1.800	678
2009-10	0.890	799
2010-11	0.443	1063

Source: NPC Field Survey, August-September 2012

CHAPTER VI

ANALYSIS OF CLUSTER PROMOTION PROGRAMS UNDER CDP

6.1 Introduction

Central Silk Board (CSB) in close co-ordination with State Departments of Sericulture has implemented Cluster Promotion Programme (CPP) during XI Plan. The main objective of CDP is the promotion and development of sericulture on a sound footing in a limited geographical area by means of transfer of latest technology in a systematic way and also through infrastructure up-gradation of farmers, improvement of skills & knowledge of farmers and strict discipline in sericulture practices to improve production, productivity and quality of cocoons to support the targeted production of both mulberry and vanya silk categories during XI Plan. This also facilitates the measurement of the performance of sericulture activities and various sericulture developmental programmes in these clusters

The CPP programme was commenced in the year 2008-09 after obtaining the concurrence from the participating States. CSB-DOS have jointly organized 45 model sericulture clusters in pre-cocoon sector during 2008-09 and 2009-10, across 16 States viz., Karnataka (7), Tamilnadu (6), Andhra Pradesh (6), Jammu & Kashmir(4), West Bengal (3), Maharashtra (3), Orissa (2), Uttarakhand (2), Uttar Pradesh (1), Himachal Pradesh (1), Chhattisgarh (1), Assam / BTC (4), Meghalaya (1), Mizoram (1), Nagaland (1), and Manipur (2), covering Mulberry (31), Tasar (3), Oak Tasar (4), Muga (4) and Eri (3) sectors. Besides these clusters, CSB in co-ordination with the States has organized 5 Post-Cocoon clusters, one each in Tamilnadu, West Bengal, Andhra Pradesh, Maharashtra and Assam.

The CSB has released/sanctioned Central Share of Rs 39.21 crores under Catalytic Development Programme (CDP) during 2008-09 to 2010-11 (upto September, 2010) for implementation of the Cluster Promotion Programme. State-wise abstract of existing clusters and CDP funds released to states during 2008-09, 2009-10 and 2010-11 under Cluster Promotion Programme is given in **Annexure 6.1**. The funds for cluster promotion programme are being met out of the provision made to States along with CDP funds.

In mulberry Sector, assistance has been provided mainly towards raising plantation, irrigation, supply of improved rearing appliances, disinfectants, support for chawkie rearing, construction of rearing houses, seri-poly clinics, insurance, beneficiary training programme, etc. In vanya sector the assistance extended for raising plantation, supply of rearing equipments/tools to seed and commercial rearers, private graineurs, construction of eri rearing houses, Farmers' Training/Study Tour, insurance support, etc.

The CSB has been providing required technical/extension support through its main R&D Institute and their nested units and the State will also provide matching grants & extension staff for effective implementation of Cluster Promotion Programme.

CSB-DOS have drawn up a mechanism to evaluate and monitor the progress achieved under the CPP. Towards this, the crop review meetings are being conducted at the Main R&D Institute level regularly on completion of each crop and suitable remedial measures suggested for crop improvement. The monitoring of the Programme is also taken up at the State level. The Joint

Cluster Promotion Committees (JCPCs) constituted for each cluster have been monitoring the programme at the field level and extending necessary technical / extension support in close co-ordination with the DOSs. The overall performance review on implementation of Cluster Promotion Programme is also undertaken by CSB on a regular basis.

6.2 Methodology for Implementation

The clusters, which have congenial agro-climatic and other conditions (such as availability of labour) for silk production, are identified. Soon after the identification of the clusters, a benchmark survey was conducted jointly by CSB and DOS staff to assess the existing status of sericulture with farmers and also their requirement of equipment, rearing houses, etc. Based on the field survey, assistance was provided to the farmers through Catalytic Development Programme to strengthen their facilities.

Each cluster is directly attached to the nearest Research Extension Centre (REC) of CSB and in case, there is no REC an exclusive Cluster Promotion Centre is established. The scientists and technical staff of REC/CPC look after the implementation of CPP with close co-ordination with extension officers and staff of state sericulture department. A Joint Cluster Promotion Committee (JCPC) is constituted for each cluster. The scientist in charge of local CSB unit is the Chairman of the JCPC. The members of JCPC include local DOS officers, technical staff working in the concerned CSB unit and two progressive farmers of the cluster. The JCPC meets once in fortnight regularly and draw action plan and programme for conducting the activities. It also reviews the performance of the silkworm crops regularly and takes remedial measures, if there is any problem.

As a technology transfer intervention, Chawki Rearing Centre (CRC), Farmers' Field School (FFS), etc., are established in each cluster with financial assistance under CDP to provide input support and services to the farmers. For each crop, the chawki worms are reared and supplied to the farmers after joint certification by the co-ordinating scientists and DOS officials. The subject matter specialists regularly visit the farmers and provide technical guidance. The bivoltine hybrids are reared in this programme. After completion of each crop, the results of the crop are collected.

The farmers are trained in training schools/Institutes and also through lead farmers under Farmers' Field School. Besides, awareness programmes, group discussions, enlightenment programmes, demonstrations, study tours, field days, etc., are conducted in each cluster to interact, share experiences, demonstrate and educate the farmers on various improved technologies.

6.3 Impact of Cluster Promotion Programme

The silkworm rearing has been conducted at all the 31 mulberry clusters covering 9 States, 4 muga clusters in 3 States, 3 Eri clusters of 3 States, 3 tropical clusters of 2 States and 4 oak tasar clusters in 3 States. In mulberry sector, 36.79 lakh DFLs of bivoltine, multi-bivoltine and multivoltine hybrids have been reared by 6137 farmers. The crop performance in Southern States has been satisfactory with an average yield of 65 kg /100 DFLs. Seven clusters were developed in Karnataka which yielded 65.2 Kg cocoon/100 DFLs. In Tamilnadu, six clusters were developed during XI plan. The farmers of these clusters got an average cocoon yield/100 DFLs is of 73.65 Kg. In Andhra Pradesh six clusters were developed in which 60Kg of cocoon

per 100 DFLs was achieved. In J&K the average cocoon yield /100 DFL is around 43 kg while it is around 40 kg/100 DFLs in West Bengal, 56 kg/100 DFLs in Assam and 33 kg/100 DFLs in Mizoram.

In Vanya Sector, 41,480 muga DFLs were reared by 530 farmers and there is significant improvement with around 48 muga cocoons / DFL as compared to the benchmark production of 30 cocoons / DFL. In eri sector, 58054 DFLs were reared by 483 farmers and average yield is around 6.6 kg cut cocoons / 100 DFLs. The tropical tasar clusters have reared 41,480 DFLs involving 550 farmers and the average yield is around 42 cocoons / DFLs. In oak tasar, Himachal Pradesh has conducted commercial rearing with 3000 DFLs and the average yield is around 15 cocoons / DFLs. The cocoon yield reported in vanya sector is higher than the average benchmark production.

6.4 State wise cluster performance during 2011-12

6.4.1. Mulberry Sector

6.4.1.1 Karnataka

Clusters covered: Harohalli, Ithandahalli, Shapur, Y.N.Hosakote, Gajanur, B.G.Kere, Bidarkote

Name of the cluster	No. of DFLs brushed	No. of DFLs harvested	Yield/100 DFLs(Kg)	Rate/ Kg (Rs.)	Defective cocoon %
Harohalli	157650	156600	70.9	230.76	4.5
Ithandahalli	320475	299125	68.4	233.00	3.3
Shapur	95070	91780	63.8	230.00	4.4
Y.N.Hosakote	88100	78950	65.4	239.80	4.3
Gajanur	142475	111925	58.8	214.50	6.3
B.G.Kere	92200	86050	62.6	239.60	4.0
Bidarkote	77425	58125	64.0	237.66	4.8
Total/Average.	973395	882555	65.2	234.46	4.6

Source: Data provided by RSRS Kodathi

6.4.1.2 Andhra Pradesh

(Name of the cluster- HINDUPUR)		
Category	Unit	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	342
DFLs reared	Lakh No.	13.53
Production of cocoons		
Mulberry	MT	764.346
Production of raw silk		
Mulberry	MT	109.20
Employment generated	Nos.	2265

(Name of the cluster: MADAKASIRA)		
Total beneficiaries covered	Nos	319
DFLs reared	Lakh No.	11.692
Production of cocoons		
Mulberry	MT	677.695
Production of raw silk		
Mulberry	MT	96.81
Employment generated	Nos.	2140
(Name of the cluster: KUPPAM)		
Total beneficiaries covered	Nos	277
DFLs reared	Lakh No.	16.391
Production of cocoons		
Mulberry	MT	1018.507
Production of raw silk		
Mulberry	MT	145.50
Employment generated	Nos.	2880

(Name of the cluster: PALAMANER)		
Total beneficiaries covered	Nos	264
DFLs reared	Lakh No.	12.765
Production of cocoons		
Mulberry	MT	868.648
Production of raw silk		
Mulberry	MT	124.10
Employment generated	Nos.	2010
(Name of the cluster: BHIMADOLE)		
Total beneficiaries covered	Nos	188
DFLs reared	Lakh No.	5.398
Production of cocoons		
Mulberry	MT	327.22
Production of raw silk		
Mulberry	MT	46.75
Employment generated	Nos.	2185
(Name of the cluster: KALYANDURG)		
Total beneficiaries covered	Nos	315
DFLs reared	Lakh No.	7.471
Production of cocoons		
Mulberry	MT	425.069
Production of raw silk		
Mulberry	MT	60.72
Employment generated	Nos.	1650

6.4.1.3 Tamilnadu

Name of the Cluster: Udamalpet			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	3005	3425
DFLs reared	Lakh No.	19	25.361
Production of cocoons			
Mulberry	MT	1235	1842
Production of raw silk			
Mulberry	MT	197.6	294.729
Employment generated	Nos.	24250	29825

Name of the cluster - GOBICHETTYPALAYAM			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	75	72
DFLs reared	Lakh No.	2	1.97
Production of cocoons			
Mulberry	MT	1300	1386
Production of raw silk			
Mulberry	MT	20	21.33
Employment generated	Nos.	625	658

Name of the cluster - SANARAPATTY				
Category	Unit	Achievement		
		2010-11	2011-12	
Total Beneficiaries covered	Nos	265	315	
DFLs reared	Lakh No	1.13315	1.817	
Production Cocoons				
Mulberry	MT	77.563	128.726	
Production of Raw Silk				
Mulberry	MT	11.00	18.389	
Employment Generated	Nos	5666	9085	

Name of the Cluster: Uthangarai			
Category	Units	Target	Achievement at the end of 2011-12
Total Beneficiaries covered	Nos		387
Dfls Reared	Lakh No	1.6	1.64
Production of cocoons			
Mulberry	Lakhs	1.04	1.18
Production of Raw Silk			
Mulberry	MT	19.64	18.13

Name of the Cluster: Palani					
Category	Unit	Achievement at the end of 2011-12			
		2008-09	2009-10	2010-11	2011-12
Total Beneficiaries covered	Nos	200	253	303	353
DFLs reared	Lakh No	1.16975	3.3889	3.89645	5.37605
Production Cocoons					
Mulberry	MT	79.868	236.845	268.124	384.562
Production of Raw Silk					
Mulberry	MT	11.4	33.835	383	54.937
Employment Generated	Nos	5838	16945	19482	26880

Name of the Cluster: Berigai			
Category	Unit	Target	Achievement at the end of 2011-12
Mulberry Plantation	Acres	190 acres	884.15 Acres/604 beneficiaries
Total Beneficiaries covered	Nos		604
DFLs reared	Lakh No		5.315
Production Cocoons			
Mulberry	MT		386.2
Production of Raw Silk			
Mulberry	MT		48.275
Employment Generated	Nos		1812

Summary of Clusters sanctioned in Tamilnadu

S.No	Name of the Cluster	No of dfls brushed	Cocoon prodn (Kg)	Actual Yield/100 DFLs (kg)	Defective cocoon %	Cocoon price (Rs/kg)
1	.Berigai	219175	152158	69.42	3.95	229.00
2.	Palani	583210	422910	73.00	4.00	238.00
3.	Udumalpet	657925	515398	78.30	3.60	233.96
4.	Gobi	200225	140758	70.29	4.57	229.00
5.	Sanarpatti	173435	122871	70.80	4.67	225.40
6.	Uthangarai	164620	117948	71.60	2.90	210.15
	Total/Average	1998590	1472043	73.65	3.95	277.59

6.4.1.4 Maharashtra

Name of the Cluster: Beed			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	500.00	614.00
DFLs reared	Lakh No.	3.00	3.875
Production of cocoons			
Mulberry	MT	150.00	139.665
Production of raw silk			
Mulberry	MT	18.75	17.458
Employment generated	Nos.	206250	192038

Name of the cluster: Osmanabad			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	500.00	370
DFLs reared	Lakh No.	3.00	1.92
Production of cocoons			
Mulberry	MT	150.00	76.00
Production of raw silk			
Mulberry	MT	18.75	9.50
Employment generated	Nos.	206250	104500
Name of the cluster: Buldana			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	500.00	136
DFLs reared	Lakh No.	3.00	0.642
Production of cocoons			
Mulberry	MT	150.00	32.40
Production of raw silk			
Mulberry	MT	18.75	4.05
Employment generated	Nos.	206250	4455

Source: Data provided by Department of Sericulture, Maharashtra

6.4.1.4 Jammu & Kashmir

CPC, Nowshera

Nowshera lies in District Rajouri, which is one of the potential sericultural areas of the state. The Cluster is in operation since the year 2008-09 under which 150 Beneficiaries are being covered. These include 89% Male, 11% females out of which 15% belong to SC and 2% to ST The project aims to increase the cocoon, besides, aiming at improvement in quality parameters.

Season / Year	DFLs reared	No. of rearers	Cocoon yield (kg)	Cocoon yield per 100 DFLs(kg)	Benchmark Cocoon yield per 100 DFLs(kg)	Improvement over benchmark
Spring 2009	15000	157	5989.90	39.93	30.00	33.10%
Autumn 2009	1100	18	155.00	14.90	12.00	24.17%
Spring 2010	13500	137	5713.000	42.32	30.00	41.07%
Autumn 2010	5000	87	914.000	23.50	12.00	95.83%
Spring 2011	15000	144	6610.000	44.06	30.00	46.67%
Autumn, 2011	7500	144	1183.00	15.77	12.00	31.42%

CPC, Tral

Tral lies in south of Kashmir valley in district Pulwama. The Cluster is in operation since 2008-09. 150 Beneficiaries are covered under the scheme. These include 94% Male, 6% Female (all belonging to BPL category). The project aims to increase the cocoon production, besides, aiming at improvement in quality parameters.

Season / Year	DFLs reared	No. of rearers	Cocoon yield (kg)	Cocoon yield per 100 DFLs(kg)	Benchmark Cocoon yield per 100 DFLs(kg)	Improvement over benchmark
Spring 2009	10925	100	3419.910	31.30	30.00	4.33%
Summer 2009	No rearing was conducted under CDC programme and only as REC.					
Spring 2010	14100	147	5066.000	35.90	30.00	19.67
Summer 2010	1050	11	250.750	23.90	12.00	99.17%
Spring 2011	14750	146	6224.500	42.20	30.00	40.00%
Summer, 2011	775	13	332.500	42.90	12.00	257.00%

CPC, Tikri

Tikri lies in District Udhampur of Jammu & Kashmir on the foothills of Katra, the abode of Vaishno Devi Shrine. The Cluster is in operation since 2009-10 under which 150 Beneficiaries have been covered. These include 90% Male, 10% females out of which 68% belong to SC and 7% to OBC. The project aims to increase the cocoon production, besides, aiming at improvement in quality parameters.

Season / Year	DFLs reared	No. of rearers	Cocoon yield (kg)	Cocoon yield per 100 DFLs(kg)	Benchmark Cocoon yield per 100 DFLs(kg)	Improvement over benchmark
Spring 2010	8625	127	1627.000	18.86	35.75	-47.24%
Autumn 2010	3500	88	1175.900	33.59	28.60	17.45%
Spring 2011	12500	146	4196.255	33.57	35.75	-6.11%
Autumn, 2011	4000	78	1071.9	26.79	28.60	-6.32%

CPC, Bandipora

Bandipora is newly created District, which is one of the potential sericultural areas of the state and lies on the banks of world famous lake "Wular". The Cluster is in operation from the year 2009-10 under which 150 Beneficiaries are being covered. These include 70% Male, 30% females, all belonging to BPL category. The project aims to increase the cocoon production, besides, aiming at improvement in quality parameters.

Season / Year	DFLs reared	No. of rearers	Cocoon yield (kg)	Cocoon yield per 100 DFLs(kg)	Benchmark Cocoon yield per 100 DFLs(kg)	Improvement over benchmark
Spring 2010	11000	150	5004.000	45.49	33.00	37.85%
Summer 2010	1500	22	390.00	26.00	25.00	4.00%
Spring 2011	15000	150	7393.00	49.28	33.00	49.33%
Summer, 2011	2700	32	779.00	28.85	25.00	15.40%

6.4.1.5 Uttarakhand

CPC, Kalsi/Vikas Nagar

Kalsi/Vikas Nagar is potential sericulture area in Dehradun district, where the CDC was established during the year 2008-09 with 75 existing and 75 new farmers. These include male as well as female rearers out of which 86 are SC, 51 ST and 10 OBC.

Season / Year	DFLs reared	No. of rearers	Cocoon yield (kg)	Cocoon yield per 100 DFLs(kg)	Benchmark Cocoon yield per 100 DFLs(kg)	Improvement over benchmark
Autumn 2009	460	15	162.29	35.28	22.26	51.40%
Spring 2010	3900	75	1349.700	35.00	25.33	56.78%
Autumn 2010	5370	102	1193.10	22.21	22.26	-0.18%
Spring 2011	5495	104	2499.300	45.48	25.33	3.88%
Autumn, 2011	6230	113	1453.100	23.32	22.26	7.02%

Eri Cluster

6.4.2 Uttar Pradesh

Name of the Cluster: Fatehpur			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	350	350
DFLs reared	Lakh No.	61315	64747
Production of cocoons			
Eri	MT	28.256	27.332
Production of raw silk			
Eri	MT	3.75	3.64
Employment generated	Nos.	350	350

Source: Data provided by Department of Sericulture, Uttar Pradesh

6.4.3 Muga Cluster

6.4.3.1 Assam

Name of the Clusters: Darang (Mulberry), Golaghat & Lakhimpur (Muga), Eri (Udalguri)			
Category	Unit	Target	Achievement at the end of 2011-12
DFLs reared	Lakh No.		
Eri	Lakh No.	805.27	853.66
Muga	Lakh No.	694.00	503.60
Mulberry	Lakh No.	23.50	13.23
Production of cocoons			
Mulberry	MT		
Eri	MT	5945.10	5945.10
Muga	Lakh No.	26475.43	26475.43
Production of raw silk			
Mulberry	MT	52.03	52.03
Eri	MT	4292.61	4292.61
Muga	MT	503.60	503.60

Source: Data provided by Department of Sericulture, Assam

6.4.4 Tasar Cluster

6.4.4.1 Orissa

Name of the Cluster: Nuagaon, Pallahara			
Category	Unit	Target	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	150	150
DFLs reared	Lakh No.	33602	32815
Production of cocoons			
Tasar	Lakhs nos	16.50	20.80
Production of raw silk			
Tasar	MT	1.63	2.07
Employment generated	Nos.		300

6.4.4.2 Chattisgarh

Name of the Cluster: Bastar district		
Category	Unit	Achievement at the end of 2011-12
Total beneficiaries covered	Nos	150
DFLs reared	Lakh No.	88800
Production of cocoons		
Tasar	Lakhs nos	41.78
Production of raw silk		
Tasar	MT	3.30
Employment generated	Nos.	450

CHAPTER VII

CDP IMPLEMENTATION GUIDELINES/OPERATIONAL MODALITIES FOLLOWED BY STATES DURING XI FIVE YEAR PLAN

7.1 Sharing pattern of funds by different stakeholders

According to the guidelines of the CDP scheme, the sharing pattern for General States is 50:25:25 (Central:State:Beneficiary) and for the Special status States it is 80:10:10 (Central:State:Beneficiary). NPC field survey team personally interviewed selected fourteen DOS offices for the direct field surveys of which 10 DOS provided the details related to implementation procedures followed (**table 7.1**). Almost all States, who have provided the data, contributed as per the CDP scheme guidelines. Southern states such as Karnataka, Andhra Pradesh and Tamilnadu contributed as per the scheme guidelines. Jammu & Kashmir being a special status state, its contribution is 9.12%. Among the other states, fund sharing data was provided by only six states of which two states are general category states. About 80% of the funds are provided by CSB for the special category states. In the case of Chattisgarh state almost the entire implementation cost was contributed by Central as well a State Government as the beneficiary contribution was just 0.91%.

Table 7.1 Sharing of funds by different stakeholders during XI Five Year Plan

State	Sharing	Contribution (Rs Lakhs)					Total	% Share
		2007-08	2008-09	2009-10	2010-11	2011-12		
Karnataka	CSB Share	1015.00	1877.00	2355.00	5754.00	4892.00	15893.00	43.18%
	State share	777.369	1162.080	1324.970	3571.160	2234.990	9070.569	24.64%
	Beneficiary share	981.470	1086.93	1976.73	5213.13	2587.02	11845.28	32.18%
	Total	2773.839	4126.01	5656.7	14538.29	9714.01	36808.849	100.00%
Andhra Pradesh	CSB Share	980.00	1555.00	1073.00	1527.00	1913.00	7048.00	45.39%
	State share	774.715	689.497	309.07	816.74	1002.405	3592.427	23.13%
	Beneficiary share	1433.34	909.379	323.44	942.47	1279.75	4888.379	31.48%
	Total	3188.055	3153.876	1705.51	3286.21	4195.155	15528.806	100.00%
Tamilnadu	CSB Share	745.00	945.00	962.00	2205.00	1091.00	5957.00	
	State share	485.133	787.133	574.57	1154.229	773.876	3774.941	
	Beneficiary share	Data not provided						
	Total	1230.133	1732.133	1536.57	3359.229	1864.876	9722.941	
Jammu & Kashmir	CSB Share	182.00	316.00	1080.00	1708.00	1604.00	4890.00	83.27%
	State share	19.165	32.266	82.39	191.92	209.59	535.331	9.12%
	Beneficiary share	14.7	29.424	61.61	166.42	174.71	446.864	7.61%
	Total	215.865	377.69	1224	2066.34	1988.3	5872.195	100.00%
Maharashtra	CSB Share	95.00	200.00	233.00	507.00	646.00	1681.00	38.71%
	State share	68.18	142.15	141.9	358.254	323	1033.484	23.80%
	Beneficiary share	135.445	140.717	271.7825	561.719	518.365	1628.0285	37.49%
	Total	298.625	482.867	646.6825	1426.973	1487.365	4342.5125	100.00%
Uttar Pradesh	CSB Share	321.00	414.00	571.00	1004.00	795.00	3105.00	49.52%
	State share	213	196.2	266.1	404.925	306.091	1386.316	22.11%
	Beneficiary share	322.158	212.13	321.81	494.98	427.278	1778.356	28.36%
	Total	856.158	822.33	1158.91	1903.905	1528.369	6269.672	100.00%
Jharkhand	CSB Share	44.00	256.00	1066.00	2414.00	2448.00	6228.00	82.53%
	State share		15.74	131.55	357.77	225.75	730.81	9.68%
	Beneficiary share		7.24	129.8	244.78	206	587.82	7.79%
	Total	44	278.98	1327.35	3016.55	2879.75	7546.63	100.00%
Chattisgarh	CSB Share	344.00	378.00	502.00	215.00	263.00	1702.00	80.53%
	State share	80.1	80.96	132.898	40.39	57.835	392.183	18.56%
	Beneficiary share	4.39	3.49	6.428	2.12	2.77	19.198	0.91%
	Total	428.49	462.45	641.326	257.51	323.605	2113.381	100.00%
Assam	CSB Share	1465.00	389.00	1162.00	2482.00	2403.00	7901.00	82.33%
	State share	210.81	65.24	98.069	109.98	479.1	963.199	10.04%
	Beneficiary share	172.75	34.36	102.071	186.28	237.455	732.916	7.64%
	Total	1848.56	488.6	1362.14	2778.26	3119.555	9597.115	100.00%

Manipur	CSB Share	595.00	90.00	325.00	485.00	903.00	2398.00	83.92%
	State share	63.095	5.689	35.25	55.297	72.384	231.715	8.11%
	Beneficiary share	63.5	5.689	37.534	52.147	68.735	227.605	7.97%
	Total	721.595	101.378	397.784	592.444	1044.119	2857.32	100.00%

Source: Data compiled from various State Department of Sericulture

7.2 Operational modalities followed by the States

All States have been following the tendering procedure for the procurement of equipments and machineries under Catalytic Development Programme (CDP), however, Department of Sericulture of Assam, Manipur, Andhra Pradesh and Jharkhand reported that the procurement of equipments and materials through tendering process is taking lot of time and is causing delays in implementation of CDP scheme.

Moreover, due to the cost escalations, State Departments of Sericulture were able to procure equipments/machineries as per the Government of India approved unit costs. Actual cost of machines, construction material, equipments have gone up very high.

Department of Sericulture, Assam and Andhra Pradesh reported that under CDP scheme Project administration charges are not provided without which effective monitoring and implementation of CDP scheme becomes very difficult. At least 2.5% of total project cost may be earmarked for the project administration and monitoring charges.

In majority of the sericulture practicing states the post cocoon machineries are not available locally and are bought from Bangalore and the packaging, transportation & installation costs are high for the machineries procured from outside the state and the beneficiaries are finding it difficult to meet these expenses, which are causing hindrance to CDP implementation. Besides, technicians/ mechanics for repairing the machines are not available in these states. Mechanics from outside the state are called to put the machine in order which involves extra expenditure.

State Department of Sericulture of North Eastern States reported that due to late receipt of CSB share, the matching share from State Government is not released on time. As a result there is a delay in the implementation of the CDP scheme by about 6 months.

CHAPTER VIII

INVOLVEMENT OF STAKEHOLDERS IN THE IMPLEMENTATION OF CDP AND THE WAY FORWARD

8.1 Involvement of DOS/CSB/NGOs/SHGs in implementation of CDP scheme

Based on the feedback received from the State Department of Sericulture officials and also the information received through questionnaires, all the State Departments of Sericulture reported that they have deployed Assistant Director/Sericulture Officers at the district levels, Sericulture Extension Officers and, Sericulture Demonstrators at cluster level. Besides, the officials of regional offices of Central Silk Board are also actively participating in the implementation of CDP components. Many officials from the State Department of Sericulture reported that the present manpower strength is not adequate. Moreover, the age of the employees is also going up and many employees shall retire in next 6-7 years and no fresh recruitment is taking place. Same is the case with Central Silk Board as well where the average age of the employees are reported to be more than 50 years.

The involvement of NGO/SHGs in the implementation of CDP was reported to be very low. Among the surveyed states only a few states such as Uttarakhand, Maharashtra, Jharkhand, and Manipur reported the involvement of NGOs in the implementation of the CDP scheme. During field interactions with an NGO “**Grameen Evam Krishi Vikas Samithi (GKVS)**” in Haldwani, it was reported that they are implementing various Sericulture Developmental schemes, District annual state plan, SGSY and Catalytic Development Programme. Under CDP, they are working towards Eri culture development. GKVS reported that even after making so many follow ups with CSB and DOS, they have not received the funds sanctioned for the financial years 2010-11 and 2011-12 till date (**Table 8.1**). Lack of funds and delays in getting funds are discouraging NGOs to come up for sericulture development.

Table 8.1 Funding pattern for GKVS (NGO), Haldwani, Uttarakhand

Year	Grant Sanctioned (Rs Lakhs)			Fund Received by NGO (Rs Lakhs)	
	CSB's share	State's Share	Beneficiaries' Share	CSB's share	State's Share
2007-08	-	-	-	-	-
2008-09	-	-	-	-	-
2009-10	28.32	2.326	1.839	15.95	1.99
2010-11	39.69	3.752	4.09	0.00	0.00
2011-12	44.88	4.213	4.175	0.00	0.00
Total	112.89	10.291	10.104	15.95	1.99

Source: As reported by GKVS

Department of Sericulture Manipur, has involved two NGOs per district for the implementation of CDP (**Table 8.2**).

Table 8.2 Involvement of stakeholders in Manipur for Sericulture development

Extension Workers	District Officers	Non Governmental Organizations	Self Help Groups
50	9	2 in Each District	130

Source: As reported by Department of Sericulture, Manipur

8.2. PRADAN interventions in Tasar Sector in Dumka, Jharkhand

Project background: PRADAN (Professional Assistance for Development Action) in the States of Jharkhand has taken activities from nursery raising to silk production including pre-cocoon, seed and post-cocoon sectors since the year 2003-04 with a holistic approach under Swarnajayanti Gram Swarozgar Yojana (SGSY) special Projects with financial assistance from Ministry of Rural Development, Government of India and Central Silk Board. They have taken some innovative ideas viz., large scale raising of block plantations of tasar host plants in private lands of tribals, nucleus seed rearing by Adopted Seed Rearers, nucleus seed cocoon preservation and basic seed production by private individuals, organization of private graineurs etc in order to meet the project objectives.

NPC team surveyed two locations of PRADAN in Dhaka and Sahritola of Dumka district of Jharkhand. In Dhaka, they have raised large scale block plantations of tasar host plants in private lands of tribals. There are one set of farmers who do neucleus crop rearing with intensive care on these block plantations.

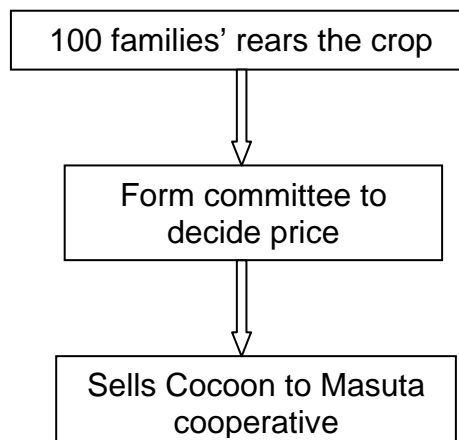


They collect eggs from CSB and these eggs are reared in this isolated area. There are around 100 families who rear the crop and supply the



cocoons

produced from these area to the preservation unit i.e Masuta cooperative floated by PRADAN. The discussions with some of these farmers revealed that the rates are decided by a committee formed by farmers themselves after getting information from nearby areas. However, it was found that the rates at which they are selling the cocoons to Masuta cooperative are about 20-25% less than market rates.



In Sahritola area, NPC team has seen a large preservation unit of PRADAN - (with 250,000 cocoon preservation capacity) used for seed rearing. It is two storey building having two halls. Each hall has capacity of 1,25,000 lacs cocoons. The families of nearby areas are producing reeled and spun yarn. The company is taking care of backward and forward linkages. Masuta Producers Company promoted by PRADAN is taking care of the activity.



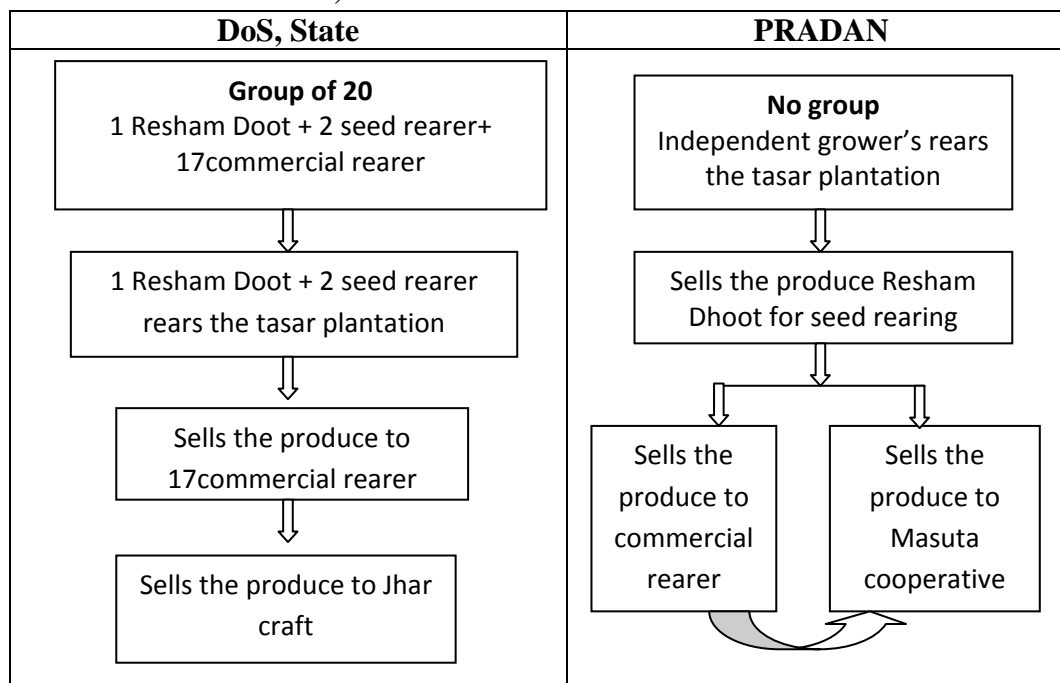
8.2.1. Project with financial assistance from National Bank for Agriculture and Rural Development (NABARD)

On the similar line of Swarnajayanti Gram Swarozgar Yojana (SGSY) special Projects model, PRADAN has now undertaken new project from NABARD, whereby they are raising large scale block plantations of tasar host plants in ten hectares of private lands of tribals. This project was started last year, it is for three years, first year for plantation and 2nd and 3rd years for maintenance, NPC study team has visited the site and observed substantial the progress in this project as well. The plantation in the project is in initial stages only.



On the ridges they are planting pulses and wood based trees to provide extra income to the farmers in the coming years. On discussion with officials of PRADAN it was found that they have divided the land in to three parts. The upper/ higher part which is generally not fertile is used for tasar plantation, they are creating reservoir in between 2nd and 3rd part, water pond for watering the areas in second/ middle part of land whereas the lower / third part will be used for agriculture purposes.

8.2.3. Difference between DoS, State and PRADAN



Although PRADAN has sufficient number of seed rears but not sufficient number of commercial rearers. They are increasing the number of commercial rearers by imparting training, handholding, exposure etc in collaboration with CSB. From 550 families in 2007-08 to 1950 families in 2010, they are planning to reach 2500 families by 2012 year end.

Road ahead:

During discussion with PRADAN and various Pilot Project Centre (PPC) of state government of Jharkhand in Dumka district, it has been noticed that there is no synergy between different entities working in the area of tasar plantation or tasar silkworm rearing. Some of the villages are already covered or being developed for tasar rearing by PPC were approached by PRADAN for either tasar plantation or enrolling as commercial rearers.

It would be resource saving and at the same time avoid duplication of beneficiaries if the areas/ villages for adopting tasar cultivation are demarcated between different agencies. This will help in providing benefits to more number of tribals who practice tasar cultivation.

8.3. Bhartiya Agro Industries Foundation (BAIF)

A complete system from egg to silk production at the village level has been developed and popularized in Maharashtra and Karnataka. More than 250 families with 163 hectares mulberry plantation, received technical guidance and marketing support in collaboration with the Directorate of Sericulture, Government of Maharashtra and whose earnings have increased to Rs. 1.20 lakh per year from Rs. 40,000 per year. They produced 59 tons of cocoon which was processed into silk clothes and garments and sold through the Silk Mart outlet at Urulikanchan. Over 1700 farmers are getting the benefit from the programme and earning in the range of Rs. 4000 to 26,000 from tasar silk and Rs. 25,000 to Rs. 3.5 lakhs from sericulture, while generating over 2.7 lakh person days of employment per year. 80 landless families in Thane, Pune, Gadchiroli and Bhandara districts of Maharashtra are earning in the range of Rs. 6000 to Rs.

30,000 per year through integrated activities such as tasar silkworm egg production, tasar silkworm rearing, reeling of tasar cocoons, processing of raw silk and weaving of silk fabrics.

8.4. Summary

The involvement of NGOs in the implementation of CDP scheme is very low. Since both CSB and State Department of Sericulture are facing shortage of manpower, it is very much essential to involve NGOs in the implementation of the Catalytic Development Programme (CDP). There are various NGOs working in the agriculture sector. They may be encouraged to participate in the sericulture development as well. For higher participation of NGOs some of the issues raised by them such as delays in disbursement of Government share etc. need to be addressed.

CHAPTER IX

STATE WISE EVALUATION OF CATALYTIC DEVELOPMENT PROGRAMME

This chapter evaluates the performance of CDP scheme during XI Plan across fourteen major sericulture practicing states in India. The evaluation focuses on DFLs, cocoon and raw silk production, productivity levels, increase in income generation, value addition due to various technologies/best sericulture practices disseminated through CDP scheme etc.. In **Chapter 4** of this Report, component wise success and acceptability on the field was analyzed. The findings are based on the qualitative and quantitative data collected from various Stakeholders viz. State Department of Sericulture, Graineures, Seed cocoon farmers, commercial cocoon farmers, reelers, weavers, dyers, twistors, CATD, Extension officers, Cluster in charges etc. The data/information was collected through structured questionnaires (**Annexure 1.1 to 1.6**).

9.1 KARNATAKA

Table 9.1 shows the sharing of funds between various Stakeholders in Karnataka. During XI Five Year Plan about Rs 368 crores were spent for sericulture development in the state, out of which CSB share was Rs 158.93 crores, while State share was Rs 90.71 crores.

Table 9.1 Sharing of funds under CDP during XI Five Year Plan

(Rs. Lakh)

Year	CSB's share	State's share	Beneficiaries' Share	Total
2007-08	1015.00	777.36	981.47	2773.83
2008-09	1877.00	1162.08	1086.93	4126.01
2009-10	2355.00	1324.97	1976.73	5656.70
2010-11	5754.00	3571.16	5213.13	14538.29
2011-12	4892.00	2234.99	2587.02	9714.01
Total	15893.00	9070.56	11845.28	36808.84

Source: Department of Sericulture, Karnataka & Central Silk Board, Bangalore

Table 9.2 reports the DFLs production in Karnataka state. During 2007-08 to 2011-12, production of Cross breed DFLs have declined from 1054.21 lakh DFLs to 627.30 Lakh DFLs, however, the production of bivoltine DFLs have increased marginally from 103.24 lakh DFLs to 113.46 Lakh DFLs.

Table 9.2 DFL Production in Karnataka

Year	Bivoltine (Lakh nos.)	Crossbreed (Lakh nos.)
2007-08	103.24	1054.21
2008-09	99.18	824.19
2009-10	91.00	780.37
2010-11	76.01	722.21
2011-12	113.46	627.30

Source: Department of Sericulture, Karnataka

Table 9.3 reports that cocoon production and seed productivity (cocoon yield per 100 DFLs) in Karnataka. The bivoltine cocoon production has decreased during 2007-08 to 2011-12 from 2585 MT to 2249 MT. Cross breed cocoon production declined from 58211 MT to 53708 MT during XI plan period. Seed productivity for Bivoltine decreased from 44.38 Kg to 35.73 Kg during XI

plan. In Karnataka, bivoltine silkworm race CSR2 X CSR4 is mostly being used. The seed productivity for cross breed increased from 53.80 Kg/100 DFLs in 2007-08 to 55.22 Kg/100 DFLs by 2011-12.

Table 9.3 Cocoon Production & Seed Productivity in Karnataka

Year	Bivoltine		Crossbreed	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)
2007-08	2585	44.38	58211.00	53.80
2008-09	2409	41.74	50968.00	54.46
2009-10	2126	40.90	52156.00	53.94
2010-11	1929	34.42	50780.00	49.41
2011-12	2249	35.73	53708.00	55.22

Source: Department of Sericulture, Karnataka

Table 9.4 reports the raw silk production and renditta in Karnataka state. During XI plan period, bivoltine raw silk production in the state decreased from 401 MT to 363 MT, while renditta for bivoltine raw silk improved from 6.45 Kg to 6.20 Kg. Similarly CB raw silk production decreased from 7839 MT to 7433 MT during XI plan, while renditta improved from 7.42 to 7.22.

Table 9.4 Raw Silk production & Renditta in Karnataka

Year	Bivoltine		Cross Breed	
	Raw Silk Production (MT)	Renditta Cocoon required for producing 1 Kg of raw silk (in Kg)	Raw Silk Production (MT)	Renditta Cocoon required for producing 1 Kg of raw silk (in Kg)
2007-08	401	6.45	7839	7.42
2008-09	374	6.45	6864	7.42
2009-10	335	6.35	7025	7.42
2010-11	311	6.20	7027	7.22
2011-12	363	6.20	7433	7.22

Source: Department of Sericulture, Karnataka

Table 9.5 shows component wise physical and financial achievement made under CDP. Under the component support for mulberry plantation, physical achievement was only 14%. During field interactions with DoS Karnataka, it was reported that due to increased economic opportunities from industrialization and urbanization, farmers are not taking up sericulture and department is finding it very difficult in providing support for mulberry plantation.

Table 9.5 Component wise Physical and Financial target and achievement under CDP: Karnataka

(Fin.- Rs lakhs and Physical nos.)

S.No	Name of the scheme	Target		Achievement		% Achievement	
		Financial	Physical	Financial	Physical	Financial	Physical
1	Support for mulberry plantation	2519.41	90720	590.61	12600	23%	14%
2	Drip Irrigation	2784.12	11179	3633.41	10880	131%	97%
3	Rearing appliances	2564.27	12714	3326.38	17429	130%	137%
4	Rearing houses	3777.13	10018	6081.66	9653	161%	96%

5	Chawki Rearing Centers	11.23	13	17	17	151%	131%
6	Insurance Support	0.00	0	300.32	40000		
7	Setting up of bio-control units	0.89	1	1.78	1	200%	100%
8	Multiend reeling units (20 basins)	92.03	11	12.75	1	14%	9%
9	Multiend reeling units (10 basins)	478.63	96	429.87	57	90%	59%
10	Automatic Reeling Machine	250.00	5	150	2	60%	40%
11	Support for establishment cottage basin units	6.25	5	18.38	16	294%	320%
12	Motorized charkha	15.00	300	9.6	144	64%	48%
13	Incentive for production of BV silk	425.46	1246.28	930.64	930.04	219%	75%
14	Quality linked price support system	4.50	1	4.64	1	103%	100%
15	Beneficiary empowerment Programme	1066.75	33150	414.51	25551	39%	77%
16	Publicity for the sector	61.85		6.06		10%	
17	Supply of quality disinfectant to BV farmers	191.97	24261	404.08	22405	210%	92%
18	Upgradation of Government grainages	90.00	15	23.68	4	26%	27%
19	Upgradation of private grainages			37.41	6		
20	Testing facility for private grainage	118.20	130	70.32	58	59%	45%
21	Testing facility for Govt. grainages			62.91	48		
22	Kissan nursery			5.27	10.99		
23	Tool kit			63.65	4053		
24	Vermi compost			1.68	16		
25	Construction of women rest house and Creches at Govt. Cocoon market	8		18.87	11	236%	
26	Sericulture Training Institutes	0.00	0	0.8	2		
27	Seri poly clinic	3.50	7	2.65	3	76%	43%
	Total	14509.69		16620.04			

Source: Department of Sericulture, Karnataka

9.1.1 NPC Field Survey Findings

A detailed field study was conducted in Karnataka during July-September 2012 among various CDP beneficiary categories (**Table 9.6**). Respondents were selected from the major sericulture clusters/districts such as Kolar, Chikkamagalur, Bangalore Rural, Bangalore Urban, Mysore, Tumkur, Mandya, Ramanagaram, Chamarajnaraga, Chitradurga, Dharwad, Yedyur, Hassan, Bagalkote etc.

Table 9.6 Sector-wise distribution of Respondents – Karnataka

Sector	Number of Respondents Interviewed	Number of CDP Beneficiaries
Graineur	8	5
Commercial Cocoon	78	78
Seed Cocoon	52	52
Post Cocoon	76	76
Total	214	211

Source: NPC Field Survey, July-September 2012

9.1.1.1 Seed Graineurs

Out of 8 Graineurs surveyed, 5 Graineures were CDP beneficiaries. Out of 8 Graineures, 7 were either Licensed Seed producers and 1 was State Government grainage. All the graineures own the grainage halls. The average age of respondents were at 45 years. Two of the Graineures were females. All the respondents belong to backward class category. 5 Graineures were involved in only Cross breed DFLs production, while 3 were involved both bivoltine and cross breed DFLs production.

Beneficiary Graineurs under CDP reported that they have received Rs 1,20,000 under the component “Support for updrading existing grainage unit under mulberry sector”. Beneficiaries have been assisted with Centrifugal Humudifier, Microscope, Heater, PVC Trays and PVC Stand worth around Rs 65,000 to 1,20,000.

The Licensed seed producers in Karnataka are facing a number of problems during the last two years since several grainages have been closed down due to decreasing demands for DFLs. The graineurs of Karnataka state have reported that there is not much demand for DFLs and thus closing down their grainages.

Karnataka has the highest number of grainages in India. Licensed Seed Producers (LSPs) reported that Grainages who do not have license are also operating and producing seed, which is not advisable since there are no quality checks. These grainages are selling seed at lower prices, creating problems for LSPs. Recently CSB started implementing Seed Act which will resolve this problem.

NPC field survey results reveal that the Graineures average family income from sericulture activities increased from Rs 2.02 Lakhs in 2007-08 to Rs 3.37 Lakhs by 2011-12 (**Table 9.7**). Highest reported average family income from sericulture activities was in 2010-11 at Rs 5.32 Lakhs.

Impact of the CDP on seed productivity has been reported in (**Table 9.8**). It may be seen that average quantity of seed cocoon processed and average DFLs production considerably improved during XI plan as a result of the implementation of CDP.

Table 9.7 Impact of CDP on Income

(Rs Thousand)					
Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	202.44	377.13	371.80	532.30	336.60
Expenditure on Sericulture	123.33	189.67	206.67	157.50	106.67
% Utilization of Income on Sericulture	61	50	56	30	32

Source: NPC field survey July-September 2012

Table 9.8: Impact of CDP on Production & Productivity

Category	Type of production	2007-08	2011-12
Average quantity of Seed Cocoon processed per Graineur (MT)	Cross Breed	202.44	336.60
	Bivoltine	2.16	6.97
Average Quantity of DFLs production per Graineur (Lakh nos.)	Cross Breed	123.33	106.67
	Bivoltine	12.56	40.64
Average egg recovery (%)	Cross Breed	29.00	30.00
	Bivoltine	24.00	24.00

Source: NPC field survey July-September 2012

9.1.1.2 Cocoon Farmers

NPC study team interviewed 130 cocoon farmers, out of which 78 are involved in commercial rearing and 52 are involved in seed cocoon rearing. All the respondents interviewed by NPC study team are the beneficiaries of CDP schemes during XI plan. The average age of the respondent was at 49 years and Sericulture experience was at 11 years.

Out of 130 beneficiaries, 11.7% were female. All the beneficiaries interviewed from Karnataka were involved in mulberry cocoon production. 90% of the beneficiaries belong to either BC or general category, 8% belong to SC and 2% belong to ST category. 17% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 42% were small farmers having land holding between 1 to 2 hectare, 22% were semi medium having land holding between 2 to 4 hectares, 12% were medium farmers having land holding between 4 to 10 hectares, while 8% were large farmers having land holding above 10 hectares.

Table 9.9: Average Land Holding per Sericulture farmer in Karnataka

(Hectares)

Category	Land Holding
Average Land Holding	2.42
Agriculture Irrigated	2.01
Agriculture Rainfed	1.87
Sericulture Irrigated	2.29
Sericulture Rainfed	0.89

Source: NPC field survey July-September 2012

It may be seen from **table 9.10** that the average income from sericulture activities has shown a declining trend since 2009-10. However, the expenditure on sericulture kept on increasing as it increased from 45% of the total income to 71% by 2011-12.

Table 9.10: Impact of CDP on income generation

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	143	170	157	146	126
Expenditure on Sericulture	65	71	76	97	90
% Utilization of Income on Sericulture	45	42	48	66	71

Source: NPC field survey July-September 2012

Cocoon yield/100 DFLs for the Cross breed seed cocoon increased from 34 Kg to 40 Kg during XI plan. For Cross breed commercial cocoon, the cocoon yield/100 DFLs increased from 57 Kg in 2007-08 to 60 Kg in 2011-12. In the case of bivoltine commercial cocoon, the increase was marginal.

Table 9.11: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Seed Cocoon			
Average No. of crops per annum	Cross Breed	5	5
	Bivoltine	5	5
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	200	200
	Bivoltine		
Cocoon yield per 100 DFLs	Cross Breed	34	40
	Bivoltine		

Commercial Cocoon			
Average No. of crops per annum	Cross Breed	5	5
	Bivoltine	3	2
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	200	200
	Bivoltine	190	212
Cocoon yield per 100 DFLs (Kg)	Cross Breed	57	60
	Bivoltine	40.67	40.75

Source: NPC field survey July-September 2012

9.1.1.3 Post Cocoon Sector

NPC study team surveyed 76 post cocoon beneficiaries. Category wise distribution of post cocoon beneficiaries interviewed is given in **Table 9.12**.

Table 9.12. Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Cottage basin/Charkha	19
10 basins Multi end Reeling	38
20 basins Multi end reeling unit	1
Twisting Machine	8
ARM	1
Handloom weaver	7
CATD Designer	1
50 kg tub dyeing	1
Total	76

Source: NPC field survey July-September 2012

Out of 76 beneficiaries interviewed, 15.8% were females. 8% of the beneficiaries belong to Schedule caste and rest belong to either BC or general category. The average age of the respondent was at 49 years and the experience was at 16 years. 32% of the beneficiaries interviewed had attained primary education, 24% till middle class, 24% till secondary, 12% were Graduate & above and 6% were illiterate. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. Majority of the reelers reported that their earnings got affected due to frequent fluctuations in the raw silk prices.

Table 9.13 Impact of technological interventions under CDP on Renditta

Year	Renditta* (in Kg)
2007-08	7.89
2008-09	7.90
2009-10	8.01
2010-11	8.05
2011-12	7.95

Source: NPC field survey July-September 2012

*Note: Quantity of mulberry cocoon required to produce 1 Kg of raw silk

9.1.2 Field Observations

- Under the CDP the sericulture farmers received drip irrigation facility upto 1 ha of farm only. DOS Karnataka requested that the limit on landholding size may be extended.
- There is negligible involvement of SHGs/NGOs in sericulture activities in Karnataka.
- The charkha reelers are not covered under CDP. It may be noted that the second grade cocoon is bought and used by these charkha reelers. They are helping the farmers by buying the second grade cocoons which otherwise will be wasted.

- Basic infrastructure to carryout training programs in Chamarjanagar, Bagalkot and T. Narsipur is lacking. The Institutes in Hassan, K.R. Pete are understaffed to carry out the programs.
- Many sericulturists are migrating to other jobs in Karnataka due to economic growth. If this trend continues, even the remaining sericulturists might also migrate to other jobs.
- For the sericulture business to flourish, the import duty on silk products has to be rolled back to 30% since the imported silk products hamper the sale of domestic products.
- Some reelers are facing problems from their neighbors because they complain of bad smell and some of the reelers are forced to close the unit.
- Some of youth working in IT sector have left their jobs and started doing sericulture in Hassan District which is a good sign.
 - Sericulturists have formed groups of 15 to 20 people. These groups conduct meetings once a month and help each other. Technology transfer is made easy. These groups have also arranged micro financing schemes to help the group members financially.
 - DOS officers have a good rapport with the sericulturists and are helping them to implement schemes and adopt new technology.

9.1.3 Recommendations for Karnataka State

1. The unit cost for support fixed under CDP need to be revised upwards.
2. The raw silk testing centre at Sidlaghatta needs more infrastructures for testing facilities.
3. Since banks are reluctant to provide loans to the sericulturists, CSB may evolve strategies to persuade banks provide loans at a lower rate of interest without surety.
4. A base price may be fixed for the cocoons and silk yarn. This will be helpful to the reelers, twistors and weavers.
5. Mechanization is needed in cocoon sector in order to overcome labour shortage.
6. The farmers in remote villages are illiterate and unwilling to take up new technology and also to undergo training.
7. CRC rearers have to stay in the CRCs for long hours. They use harmful disinfectants. So in interest of their health, they may be provided gas masks at a subsidized rate.
8. Small portable sprayers need to be provided to the farmers under CDP.
9. Due to the power cuts in the state, the farmers require generators to run their equipment. Generators and kerosene to run the generations may be provided at subsidized rates.
10. The import duty which has been reduced from 30% to 5% need to be reverted again.

9.2 ANDHRA PRADESH

Andhra Pradesh has the privilege to produce three varieties of silk Mulberry, Eri and Tasar, but the share of mulberry production is quite high. CSB along with Department of Sericulture has been implementing CDP components for all the three varieties of Silk. Since the mulberry production is prominent and the CDP assistance is significantly higher for mulberry variety of silk, present study has been focussed more on CDP evaluation for Mulberry sector.

During XI five year plan, Rs 155.29 crore were spent under CDP scheme. The Central Share was of Rs 70.48 crores, State share was of Rs 35.92 crores while beneficiaries contributed around Rs 12.80 crores. Besides CDP, Department of Sericulture is implementing their State schemes for Sericulture Development.

Table 9.14 Funds Under CDP during XIth Plan (Total for Mulberry, Eri and Tasar Sector)

(Rs Lakhs)				
Year	CSB Share	State Share	Beneficiaries Share	Total
2007-08	980.00	774.71	1433.34	3188.05
2008-09	1555.00	689.49	909.37	3153.86
2009-10	1073.00	309.07	323.44	1705.51
2010-11	1527.00	816.74	942.47	3286.21
2011-12	1913.00	1002.40	1279.75	4195.15
Total	7048.00	3592.42	4888.37	15528.79

Source: Data Provided by DOS, Andhra Pradesh & Central Silk Board

Table 9.15 Schemes other than CDP implemented by State Department of Sericulture, Andhra Pradesh

S.No	Name of the Scheme	Objective	Operational modality	Impact
1	Supply of quality disinfectants to increase productivity	Silk Worm crops are often affected due to various diseases leading to crop losses. Hence, use of quality disinfectants by farmers is encouraged to ensure good harvests.	Implemented through district officers with 50% Beneficiary contribution	Control of diseases and increase in yield
2	Procurement of tasar seed cocoons for preparation of tasar layings for supply to the rearers.	The seed cocoons produced by tasar rearers are procured for preparation of Tasar dfls on scientific lines and supply to tasar rearers at the rates fixed by the tasar seed committee which meets periodically for fixation of rates.		The scheme provides marketing facility to all seed rearers. Quality disease free tasar layings are supplied to tasar farmers.
3	Supply of High yielding variety saplings	New farmers who take up sericulture are supplied with HYV mulberry saplings for establishment of mulberry gardens	Implemented through district officers with 50% Beneficiary contribution	The gardens are well established without any gaps or mortality of plants
4	Production incentive to the Reeling Cocoons produced by the farmers including Eri farmers	To provide incentive to the Cocoons @Rs. 20/- per Kg for CB & Eri Farmers and @ Rs. 40/- per kg to BVH farmers as there is no minimum support price to Cocoons		Price support to farmers for the cocoons
5	Yarn support price to Silk weavers outside Co-operative fold	During 2011-12, the Hon'ble CM has announced the special scheme to the silk weavers to provide relief to the weavers @		Relief to weavers who are outside co-operative fold

		Rs. 150/- per Kg of yarn as subsidy for 4 Kgs per family per month		
6	Assistance to Farmers for supply of Bivoltine layings	The Rearing of Bivoltine races is risk involved process. Sometimes, the farmers lose their crops totally due to diseases at last stage. To encourage the farmers to take up Bivoltine rearing and to increase the production of White silk, it is proposed to provide subsidy of Rs 100/- per 100 Bivoltine layings / Chawkie worms and to reduce the burden on the farmer.		Increase in BVH Brushings
7	Training Action Plan	Trainings are identified as a priority item to update the knowledge and skills of the farmers and personnel to provide better services to the stakeholders of the department. Training & updating the knowledge and skills of the farmers / staff through the BTS ,Hindupur, Regional Training Centres at Shadnagar, Bakkanapalem and Hindupur , Mobile Farmers Training Units for on farm activities , Regional Training Institute Madanapalli for non farm activities & Central Silk Board institutes both for on farm and nonfarm activities.		Updating the knowledge in latest technologies
8	Implementation of e-Governance Project	Govt. have identified e-Governance as one of the most effective tool for providing fast services to the stakeholders of the department. As per the Govt. instructions separate budget was earmarked for this programme.		
9	Share Capital Assistance to SERIFED	SERIFED is a state level apex body working for the benefit of the Sericulturists, reelers, weavers etc. In order to strengthen the share capital base of SERIFED and support different developmental activities in non farm sector, share capital assistance is extended.		One apex society is assisted with share capital
10	Interest subsidy on working capital loans to silk reelers	Because of its low profit margin, the Reelers are not able to clear their loans to the Banks and there by becoming defaulters and the Reelers are not able to continue the activity. Therefore, it is proposed to provide 9% rate of the interest charged by the banks as subsidy to reduce the interest burden.		The reelers are able to continue the activity
11	Incentive to silk reelers for production of raw silk on improved MERUs, Cottage basins , ARMs and Charkas	The Govt. in G.O.Ms.No.154 Agri & Coop.(Seri) Dept., Dt.21-6-2008 have sanctioned incentive of Rs.30/-, Rs.80/-, Rs.130/- per Kg for Charka / Cottage Basin, CB silk produced on Multiend Reeling Units, Bivoltine Silk respectively to encourage the non-farm sector and to consume all the cocoons arrived in Cocoon Markets with in the State.		Nonfarm sector has improved in the state
12	Green Manuring to the Existing Bivoltine Hybrid Farmers by supplying Dhaincha Seed.	Farmers are provided with Dhaincha Seed to enable the Bivoltine farmers to raise as intercrop followed by green manure mulching to increase the soil fertility, which helps in producing quality leaf for successful production quality bivoltine cocoons.		The soil fertility has increased resulting in increased production of quality BVH cocoons
13	Assistance to farmers for Farm Mechanization	The Dept. has provided all associate facilities such as Rearing Shed, Rearing Appliances,	Implemented through district	Reduced the labour cost

		Drip Irrigation etc., to the farmers under CDP for production of quality bivoltine cocoons. Of late due to labour problem, the farmers are finding it difficult to continue the activity and they have been requesting to provide Farm Mechanization equipment on subsidized cost to overcome the labour shortage. The Dept. has recently identified suitable brush cutter for shoot harvesting of mulberry shoots to conduct Silk Worm Rearings on shelves.	officers with 50% Beneficiary contribution	
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Source: Data provided by Department of Sericulture, Andhra Pradesh

The bivoltine DFLs production in Andhra Pradesh has increased from 4.07 Lakhs to 13.03 Lakh DFLs during the XI plan period, while cross breed DFLs production has declined from 98.18 Lakhs to 93.21 Lakhs (**Table 9.16**). This is due to successful implementation of CDP by DoS, the farmers are encouraged to take up bivoltine sericulture. Eri DFLs production has decreased by almost 70%. Eri sericulture is not cost effective in Andhra Pradesh.

Table 9.16 DFL Production Details in Andhra Pradesh

(Lakhs)

Year	Mulberry		Eri	Tasar
	Bivoltine	Cross breed		
2007-08	4.07	98.185	1.823	6.57
2008-09	10.02	98.63	1.036	6.86
2009-10	11.601	94.575	0.216	5.05
2010-11	11.75	100.08	0.48	10.30
2011-12	13.028	93.21	0.564	8.64

Source: Data provided by Department of Sericulture, Andhra Pradesh

During XI plan period, the bivoltine cocoon production has increased from 1050 MT to 1678.33 MT, while cocoon yield per 100 DFLs has decreased from 58.33 Kg to 55.98 Kg (**Table 9.17**). The cocoon yield per 100 DFLs for cross breed has improved from 56.25 kg to 57.25 Kg during the XI plan. Under the vanya category, Eri cocoon production declined substantially while Tasar cocoon production exhibited considerable increase.

Table 9.17 Cocoon Production & Productivity Details in Andhra Pradesh

Year	Bivoltine		Cross breed		Eri		Tasar	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (kg)	Cocoon Production (lakh Nos.)	Cocoon yield per 100 DFLs (kg)
2007-08	1050	58.33	39017.85	56.25	40.75	15.98	69.95	1060
2008-09	906.36	49.61	39250.68	55.79	8.52	8.22	166.67	2428
2009-10	737.75	41.46	45118.125	52.91	10.00	9.01	287.00	2750
2010-11	1187.3	48.68	44917.91	58.63	6.61	14.67	125.77	1159
2011-12	1678.33	55.98	49507.47	57.25	8.628	15.22	159.61	1102

Source: Data provided by Department of Sericulture, Andhra Pradesh

During XI plan period raw silk production and renditta (cocoon required for producing 1 Kg of raw silk has improved in Andhra Pradesh (**Table 9.18**).

Table 9.18 Raw Silk Production & Renditta in Andhra Pradesh

Year	Bivoltine		Cross Breed		Eri		Tasar
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)*
2007-08	150	7	4335.31	9	5.0	0	7.0
2008-09	129.48	7	4361.18	9	7.0	0	13.0
2009-10	105.39	7	5013.12	9	8.0	14.46	10.0
2010-11	169.61	7	4990.88	9	5.0	13.5	4.0
2011-12	258.206	6.5	6188.433	8	6.5	0	1.33

Source: Data provided by Department of Sericulture, Andhra Pradesh

Table 9.19 Component wise Financial and Physical achievement of CDP Implementation

Scheme Code	Name of the Scheme	Total Amount given under component	Funding Pattern (CSB: State: Benef)	Target		Achievement		Financial Achievement in %	Physical Achievement in %
				Financial	Physical	Financial	Physical		
PACKAGE FOR SEED SECTOR									
B	VANYA								
B i)	TASAR								
151	Assistance to Private Tasar Graineurs	4.00	60:20:20	4.00	5	4.00	5	100	100
154	Assistance to seed rearers	1.51	60:20:20	1.51	25	1.51	25	100	100
B ii)	ERI								
161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs	5.00	50:50:00	5.00	1	5.00	1	100	100
PACKAGE FOR COCOON SECTOR									
A	MULBERRY								
211	Support for mulberry plantation development	1193.28	50:25:25	1193.3	28910	958.09	28910	80.2903	100
212	Assistance for irrigation and other water conservation and usage techniques	939.38	50:25:25	939.38	2505	-	-	0	0
213	Supply of Rearing Appliances	3000.06	50:25:25	3000.1	10002	1933.89	6439	64.4617	64.377
214	Supply of quality Disinfecting Materials	129.75	25:25:50	129.75	8650	48.258	3770	37.1936	43.584
215	Assistance for Construction of Rearing Houses	2762	25:25:25	2762	3682	2762.5	3682	100.018	100

218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building	13.8	25:25:50	13.8	8	6.9	4	50	50
219	Insurance Support (For all Sectors)	160.19	75:15:10	160.19	-	160.19	-	100	
220	Setting up of Production units for Biological inputs	10.12	50:50:00	13.68	6	3.56	2	26.0234	33.333
221	Assistance for Farmers Training	6	50:50:00	6	-	-	-	0	-
222	Door to Door Service Agents for Disinfection	12	50:50:00	12	8	12	8	100	100
253	Assistance for Construction of Cocoon Storage Houses in Tasar Sector	0.75	50:25:25	0.75	-	0.75	-	100	-
B ii)	ERI								
261	Support for Castor/Tapioca cultivators with Start-up tools	0.84	60:20:20	-	-	-	-	-	-
263	Construction of Rearing houses	10	60:20:20	-	-	-	-	-	-
B iii)	MUGA								
271	Raising of nursery of Muga food plants / Augmentation of Muga plantations	15.85	50:50:00	15.85	-	15.85	-	100	-

PACKAGE FOR POST COCOON SECTOR**SILK REELING AND SPINNING COMPONENTS**

Scheme Code	Name of the Scheme	Total Amount given under component	Funding Pattern (CSB: State: Benef)	Target		Achievement		Financial Achievement in %	Physical Achievement in %
				Financial	Physical	Financial	Physical		
412	10 basins	225.00	50:25:25	-	30	-	30	100	100
413	20 Basins	25.50	-	-	2	-	2	100	100
414	Establishment of Automatic / Semi automatic Reeling Units (Imported)	150	50:25:25	150	2	150	2	100	100
416	Support for existing charkha Reeling unit	3.75	50:25:25	-	130	-	130	-	100
418	Hot air drier 50 kg. capacity (Nos.)	7.50	50:25:25	-	10	-	10	-	100

420	Assistance for Twisting units	148.5	75:0:25	-	33	-	33	-	100
422	Incentive for production of Bivoltine Silk	297.59	38.46:61.5 4:0	297.59	229.75	269.27	229.75	90.4	100
423	Quality linked price support system for cocoons and raw silk	70.00	75:25:0	70.00	-	70.00	-	100	-
451	Support for establishing shuttle-less looms	45.00	50:25:25	-	12	-	12	-	100
452	Support for Certified Handlooms specially designed	250.00	50:25:25	-	1200	-	1200	-	100
454	Computer Aided Textile Designing	41.25	50:25:25	-	11	-	11	-	100
WET PROCESSING COMPONENTS									
461	Yarn Dyeing (25 Kg capacity)	45.00	75:0:25	-	20	-	20	-	100
SUPPORT SERVICES SECTOR									
512	Publicity for the sector	12.00	50:50:00	12.00	-	12.00	-	100	-

Source: Data provided by DoS, Andhra Pradesh

9.2.1 NPC Field Survey Findings

9.2.1.1 Seed Graineurs

Out of 4 Graineurs surveyed from the state, 1 was involved in Tasar, while the other three were involved in Mulberry DFLs production. Only one Graineur was CDP beneficiary who was involved in Tasar sericulture. Out of 3 Graineures, who belong to Mulberry, two were the State Government grainages and one was the Licensed Seed Producer (LSP). All the Graineurs were involved in Cross Breed DFLs production.

CDP scheme was not implemented for Mulberry Seed Graineurs under XI Plan. During field interactions it was reported that seed cocoon farmers of Andhra Pradesh sell their cocoons in Karnataka cocoon market as they get more prices. Majority of the cocoon farmers buy DFLs from Karnataka as well. 70% of the DFLs requirement of cocoon farmers is met from Karnataka DFLs. Government Grainages are able to meet the remaining DFLs requirement. Therefore, CDP scheme is not provided to the Seed Graineurs from Andhra Pradesh. However, assistance to Seed Graineurs is provided under Normal State Plan Schemes (NSPS).

9.2.1.2 Cocoon farmers

NPC study team surveyed 93 cocoon farmers, out of which 65 are involved in commercial rearing and 28 are involved in seed cocoon rearing. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 43 years and the experience was at 13 years.

Out of 93 beneficiaries, 10.8% were female. 90 beneficiaries interviewed were involved in mulberry cocoon production, while three were involved in Tasar production. 96.8% of the beneficiaries interviewed belong to either BC or general category, 3.2% belong to SC category. 30.7% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 31.8% were small farmers having land holding between 1 to 2 hectare, 25% were semi medium having land holding between 2 to 4 hectares, 11.4% were medium farmers having land holding between 4 to 10 hectares, while 1.1% were large farmers having land holding above 10 hectares.

Table 9.20: Average Land Holding with Sericulture farmers (Hectares)

Category	Land Holding
Average Land Holding	2.70
Agriculture Irrigated	1.16
Agriculture Rainfed	1.74
Sericulture Irrigated	0.94
Sericulture Rainfed	1.10

Source: NPC field survey July-September 2012

Table 9.21: Impact of CDP on income generation

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	127	118	154	196	154
Utilization of Income on Sericulture	67	74	78	83	78
% Utilization of Income on Sericulture	53	63	51	42	51

Source: NPC field survey July-September 2012

Table 9.22: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Seed Cocoon			
Average No. of crops per annum	Cross Breed	5	5
	Bivoltine		
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	250	350
	Bivoltine		
Cocoon yield per 100 DFLs	Cross Breed	30	35
	Bivoltine		
Commercial Cocoon			
Average No. of crops per annum	Cross Breed	5	5
	Bivoltine		
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	250	350
	Bivoltine		
Cocoon yield per 100 DFLs (Kg)	Cross Breed	58	62
	Bivoltine		

Source: NPC field survey July-September 2012

9.2.1.3 Post Cocoon Sector

NPC study team surveyed 56 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.23**.

Table 9.23. Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Cottage basin/Charkha	11
10 basins Multi end Reeling	8
20 basins Multi end reeling unit	4
Twisting Machine	1
ARM	2
Handloom weaver	15
Powerloom weaver	2
Shuttle less loom	2
CATD Designer	4
Tub dyeing	3
ARM Dyeing	3
Total	55

Source: NPC field survey July-September 2012

Out of 55 beneficiaries, 9% were female. 1.8% of the beneficiaries interviewed belong to Schedule caste and rest belong either to BC or general category. The average experience of the respondents was 16 years. 15% of the beneficiaries interviewed had attained primary education, 23% till middle class, 37% till secondary, 17% were Graduate & above and 8% were illiterate. Out of 55 beneficiaries interviewed by NPC study team, 53 had availed CDP schemes during XI plan. The two non CDP respondents were involved in powerloom weaving.

Table 9.24 Impact of CDP on income generation

Type of Post Cocoon Beneficiaries	Income Generation (Rs Thousand)				
	2007-08	2008-09	2009-10	2010-11	2011-12
Cottage basin	25.00	26.82	-3.64	44.30	43.24
10 basins Multi end Reeling	145.63	119.00	115.13	149.00	151.00
Twisting Machine	240.00	220.00	200.00	170.00	150.00
Handloom weaver	90.00	80.00	70.00	100.00	100.00
CATD Designer				177.33	176.67
Tub dyeing	120.00	150.00	160.00	170.00	200.00
ARM Dyeing	100.00	105.00	115.00	115.00	125.00

Source: NPC field survey July-September 2012

Table 9.25 Impact of CDP technological interventions on Renditta

Year	Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in Kg)
2007-08	7.75
2008-09	7.74
2009-10	7.78
2010-11	7.69
2011-12	7.67

Source: NPC field survey July-September 2012

9.2.2. Field Survey Observations

- Research and Development activities are required to be aligned with the climatic conditions for both on farm and off farm activities. There is a need to evolve region specific thermo tolerant silkworm races. During discussions Commissioner of Sericulture, Andhra Pradesh said that if the focus on R&D is not, the sericulture sector

would become in danger. Because of urbanization and industrialization the sericulture sector has to be brought into other interior regions for which suitable silkworm races are required. Similarly in Post cocoon sector, the efforts should be made for manufacturing Automatic Reeling machine in house. Currently ARM is imported from China and costs Rs 1.3 crores to the beneficiary. If ARM could be manufactured indigenously more number of machines could be installed in the country.

- There is a need to study quality of bivoltine raw silk yarn produced in India *vis a vis* quality of raw silk yarn imported from China. Further, there is a need to study where the raw silk yarn reeled on multi end reeling machine being sold. Is it being replaced with China bivoltine warp?
- Efforts should be made on retrenching the cost of production of raw silk. Currently this is very high. For promoting the reeling in this situation, Department of Sericulture, Andhra has been giving incentive for both Bivoltine and Cross Breed raw silk reeling.
- The price difference between Bivoltine Hybrid and Cross Breed cocoon is very less. As the bivoltine cocoon production requires extensive care, the relatively lesser price of Bivoltine hybrid discourages farmers to take bivoltine crops.
- In coming 5-10 years the handlooms shall be replaced with the power looms. The Computer aided Textile designing has been one of major reason for existence of handlooms. If CATD were not there, the handlooms might have been extinct.
- Budget allocation to the DOS should be enhanced.
- Sericulture crop should be given a status of Agriculture crop so that they can also enjoy benefit of schemes like loan waiver, crop insurance, NREGS etc.
- 10-15% of the project cost to be given as Project administration cost. Other centrally sponsored schemes like SGSY, they are giving Project administration cost.
- The action plan for recruitment in both CSB and DOS should be made. Currently there is a shortage of manpower.
- Suitable vehicles are required for better mobility of extension staff.
- Training institutions need to be vitalized in terms of building, technology, courses etc.
- There is a proper linkage between academia and Sericulture department. Currently there is a total disconnect between universities and sericulture department. Since no recruitment is carried out during last 8-10 years, young researchers are not coming forward for sericulture related courses and research activities.
- Currently some portion of the Catalytic Development Programme (CDP) is reserved for SC/ST. In Andhra Pradesh, the on farm sericulture activities are mostly taken up by the General/Backward Class people. Similarly majority of the reelers/twisters belong to Muslim community. Majority of the SC/ST farmers go for paddy crops. In such kind of situation, it becomes very difficult to find SC/ST farmer doing sericulture activity. So, some flexibility for covering SC/ST farmers needs to be built into the scheme.
- Raw silk yarn exchanges in Andhra Pradesh are ineffective as the reeling activity is very less in Andhra. Majority of the weavers are buying raw silk from reelers/raw silk exchanges of Karnataka. Reelers of Andhra Pradesh are selling their raw silk on their own. As there is no Government control on transaction of raw silk exchanges, these are not working effectively.
- Government cocoon markets are working well because of the implementation of the seed act. Cocoon transaction is totally controlled by Government. Currently DOS, Andhra Pradesh gives Rs 40 per Kg incentive for bivoltine hybrid cocoon production.

- Minimum Support price mechanism for seed and commercial cocoon production needs to be made. Currently farmers are facing problems due to excessive fluctuations in the price.
- The raw silk pricing mechanism needs to be studied.
- Farm mechanization is required in the cocoon sector. Mechanized equipments may be provided to a Self Help Group of 3-4 farmers. They may be given interculturators, Power sprayer and shredders.
- Currently there is a huge demand for drip irrigation in the state. Currently, the unit cost of the drip irrigation under CDP is very less. Moreover, under Andhra Pradesh micro irrigation project (APMIP), 90% subsidy is being given. Moreover, limitation on land covered under drip irrigation in the scheme is to be removed.
- Support to the old farmers is to be provided for improving the soil fertility and to sustain the mulberry garden.
- Disinfectants should be supplied to all the sericulture farmers including CB, LR and FR Seed farmers.
- Disinfectants should be supplied to all sericulture farmers including Tasar & Eri on par with BV farmers.
- The Seed farmers are not fetching remunerative prices when there is lack of demand for seed cocoons even though they are fit for seed and also the cocoon yield is less when compared to the commercial cocoons. Therefore incentive may be provided to the seed farmers as compensation with seed cocoon rates for the seed cocoon rejected due to lack of demand but fit for seed at Rs 100/- per kg.
- Providing assistance to tasar weavers for procurement of reeling cocoons @ Rs 400/- per 1000 Nos of tasar cocoons.
- Non erodable working capital for payment of cost of tasar cocoons to tasar farmers.
- Production incentive to tasar commercial farmers @ Rs 100/- per 1000 Nos of cocoons.
- Disinfection and growth promoter for tasar food plantation.
- Start up tools to tasar farmers.
- Providing wet reeling units to tasar reelers.

Mulberry

- In Ananthpur region seed sector to be made private. Cross breed grainages are to be supported under CDP. Currently CDP provides a component for bivoltine grainage. Currently majority of seed demand is fulfilled either by the state Govt. or by the Karnataka.
- In the cocoon sector productivity (cocoon yield per DFL) has gone up during last five years.
- On farm sector is struggling with the scarcity of water & labor.
- NREGS may be brought for sericulture sector as well. For mulberry plantation, earlier Rs. 30,400 used to be given. Currently labour shortage is restricting farmers to adopt sericulture at a commercial level.
- Farmers requested that subsidy on digging bore well may also be given if feasible.
- More number of farmers are coming up for drip irrigation. But due to limited Govt. funds they are not getting it.
- The unit cost of rearing sheds and rearing appliances are to be increased. Unit cost of verandah (mounting hall) to be increased.

- Mechanizations is needed in the farm appliances. Mechanized appliances like power tiller, power sprayer, weed cutter etc to be introduced under CDP.
- Farmers requested that Fertilizers/FYM to be provided under CDP.
- The concept of vermi-composting to be strengthened,
- Fluctuations in cocoon prices also causing problems to the reelers.
- Some sort of minimum support price system to be introduced, currently it is there but the minimum support price is Rs.130 which is too low.
- Some support system should be introduced for seed cocoon farmers. The seed cocoons which are fit for seed production but the Govt. grainages are unable to buy them because of leaser demand, some good price should be given cocoon. If the seed cocoons are unfit for the seed production, the cocoons are to be sold to reelers who do not fetch good prices. Govt. should support in that case.
- Raw silk exchanges have been quite ineffective in Andhra Pradesh as majority of the raw silk is transacted through Karnataka only
- Reelers requested the subsidy on interest of loan may also be introduced currently they pay heavy interest @ 17% pa on the working capital.
- The unit cost of multi-end feeling m/c is to be increased. Currently the cost of multi end reeling machine is Rs 14.16 lakhs.
- Automatic Reeling unit, Hindupur, is not found working.
- The efficiency of reelers/weavers is also decreased because of shortage of power.
- ARM, Jangaon also requested that interest subsidy on working capital may also be introduced.
- They also requested that incentive on bivoltine raw silk production should also be increased for them as compared to multi end reeling machine.
- Excise duty of raw silk should be increased to for preventing dumping of raw silk from china.
- The socio-economic condition of handloom weavers is not so good. Currently a weaver gets around Rs 700 per saree.
 Expenditure per saree (in Rs)
 25 (Pirn winding for weft)
 30 (Join making) Threads
 25 (warp winding)
 10 (gum change)
 80 (market fee of SERIFED)
 170 (over heads + misc. + depreciation + Mtce.)

 Rs.340/Saree
- A weaver produces 6-7 sarees per month. It means he gets Rs.2500-3000 per month. They are supported by DOS, Andhra Pradesh @ Rs.600 per month towards buying raw silk. The problem arises when raw silk prices get increased. Each weaver family on an average has two handlooms. However, the CDP scheme on upgradation of looms which consists of pneumatic lifting mechanism has been very effective. Some scheme on improving their socio-economic condition may be introduced.

Tasar

- Start up tool kit like (prunning m/c, seekature, stickle, peacock may be introduced/given under CDP.
- After Bessel formation, fertilizer and manure may also be given under the scheme.
- Bird trapping nets to be provided.
- Currently Tasar cocoon rate for Bivoltine In Rs. 1/cocoon. Incentive @ Rs.0.20/cocoon may be introduced for motivating Tasar cocoon farmers.
- Systematic plantation of Tasar should be encouraged.
- Reeling/weaving of Tasar raw silk is to be introduced in the Warangal district. Tasar culture should be made like a household activity. Evening family should have complete chain starting from DFL production to raw silk production.

Eri

- Eri culture is not being practiced commercially.
- The acreage of Easter cultivation has come down drastically. Farmers are moving towards another's commerce crops. Only 2 crops are possible in Eri culture.
- Intervention of sericulture department is required in improving quality of castor leaves. Currently Agriculture university is promoting castor plantation.
- Mechanism of utilizing bye product (Eri Perpae) has to be introduced. Research project given to IICT for identifying nutritional and promecutical content may be pursued.
- Currently Rs.143 per kg is the cost of production of Eri which consists of 70% of the labour cost. The price of cocoon is Rs. 70 per kg. As only family labour is involved they are dosing it. & socio.
- In order to introduce Eri Culture at a commercial level NREGS should be introduced in Eri culture.

9.3 TAMILNADU

Central Silk Board along with Department of Sericulture, Tamil nadu implement various components/ sub components under Catalytic Development Programme for development of Sericulture and Silk industry in the State. Financial assistance has been provided for planting high yielding variety of mulberry plants, installation of drip irrigation system, construction of separate rearing houses, procurement of improved rearing equipments, establishing chawkie rearing centres, supply of quality disinfectants etc.,. Only Mulberry Silk variety is produced in Tamil Nadu. During XI plan Government contribution (both Central and State Govt.) was Rs 97.32 crores.

Table 9.26 Funding pattern under CDP during XI Five Year Plan in Tamilnadu

(Rs Lakhs)

Year	CSB's share	State's Share
2007-08	745.00	485.13
2008-09	954.00	787.13
2009-10	962.00	574.57
2010-11	2205.00	1154.23
2011-12	1091.00	773.88
Total	5957.00	3774.94

Source: Data provided by Department of Sericulture, Tamilnadu & Central Silk Board

The bivoltine DFLs production in Tamilnadu has decreased from 15.29 Lakhs to 14.38 Lakh DFLs during the XI plan period, while cross breed DFLs production has declined from 78.29 Lakhs to 56.42 Lakhs (Table 9.27).

Table 9.27: DFL Production (Lakh nos)

Year	Bivoltine	Cross Breed	Total
2007-08	15.29	78.29	93.58
2008-09	15.8	68.43	84.23
2009-10	11.81	65.01	76.82
2010-11	10.64	64.71	75.35
2011-12	14.38	56.42	70.8

Source: Data provided by Department of Sericulture, Tamilnadu

During XI plan period the bivoltine cocoon production has increased from 2091.7 MT to 3701.5 MT, while cross breed cocoon production decreased from 7584 MT to 5983.6 MT. The productivity for bivoltine cocoon (cocoon yield per 100 DFLs) has improved drastically from 60.7 Kg to 70.9 Kg during XI plan period, while for cross breed it increased from 64.8 Kg to 67.6 Kg (Table 9.28).

Table 9.28: Cocoon Production & Productivity Details in the State

Year	Bivoltine		Crossbreed	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)
2007-08	2091.71	60.7	7585.29	64.8
2008-09	2451.48	61.1	7497.57	66.1
2009-10	2192.49	65.7	6395.14	65.4
2010-11	2587.50	67.2	5569.78	65.1
2011-12	3701.55	70.9	5983.69	67.6

Source: Data provided by Department of Sericulture, Tamilnadu

During XI plan, the bivoltine raw silk production has increased from 321.80 MT to 592.25 MT, while the cross breed raw silk production declined from 1046.67 MT to 825.30 MT. The renditta for bivoltine has improved from 6.5 to 6.25 (Table 9.29).

Table 9.29: Raw Silk Production Details in the State

Year	Bivoltine		Crossbreed	
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)
2007-08	321.80		1046.67	
2008-09	377.15	6.5	1034.20	7.25
2009-10	350.80	6.25	882.10	7.25
2010-11	414.00	6.25	768.20	7.25
2011-12	592.25	6.25	825.30	7.25

Source: Data provided by Department of Sericulture

Table 9.30: Physical and Financial achievement during XI Plan - component wise

Scheme Code	Name of the Scheme	Target		Achievement		Financial achievement t %	Physical achievement t %
		Financial	Physical	Financial	Physical		
	PACKAGE FOR SEED SECTOR						
A	MULBERRY						
111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector	268.550	1	149.869	1	56	100
	PACKAGE FOR COCOON SECTOR						
A	MULBERRY						
211	Support for mulberry plantation development (Acres)	743.826	21380.	736.655	21206	99	99
212	Assistance for irrigation and other water conservation and usage techniques (Hectares)	837.500		797.555		95	
213	Supply of Rearing Appliances (including improved mountages)/farm equipments to farmers - for Bivoltine Sericulture Farmers	1361.10	4565	1629.79	5555	120	122
214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers	2.764	200	3.000	200	109	100
215	Rs.1,50,000/-	1012.42	1428	1012.42	1428	100	100
216	Rs. 1,00,000/- &	1178.75	2740	1177.25	2737	100	100
217	Rs. 50,000/-	713.125	1769	713.125	869	100	49
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments	32.775	19	32.775	19	100	100
219	Insurance Support (For all Sectors)	34.175	12.000	34.175	15.000	100	125
220	Setting up of Production units for Biological inputs (inoculants, Biological control agents etc.)	10.680	6	10.416	6	98	100
222	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics	24.000	16	17.091	16	71	100
B ii)	ERI						
261	Support for Castor/Tapioca cultivators with Start-up tools	0.420	50	0.000	0	0	0
263	Construction of Rearing houses	20.000	50		17		34
	PACKAGE FOR POST COCOON SECTOR						
A	SILK REELING AND SPINNING COMPONENTS						
412	Multiend 10 Basins	134.300	18	129.430	18	96	100
414	Establishment of Automatic / Semi automatic Reeling Units (Imported)	130.000	2	130.000	2	100	100
415	Support for establishment of Improved Cottage Basin Reeling Units	37.500	20	37.500	24	100	120
418	50 kg. capacity (Nos.)	26.400	35	19.200	25	73	71
419	100 kg capacity	4.375	3	4.365	3	100	100

420	Assistance for Twisting units (Govt)	42.000	7	41.700	7	99	100
420	Assistance for Twisting units (Pvt)	333.000	74	288.000	64	86	86
422	Incentive for production of Bivoltine Silk	108.000	108.000	12.146	12.146	11	11
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs	30.000		30.000		100	
452	1. Support for Certified Handlooms specially designed for [Parallel beat-up / Swing beat-up, Negative let off, 5- Wheel take - up, Separate cloth ruler along with Jacquard (240 hooks)]	5.250	25	5.250	25	100	100
453	2. Loom Up gradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.)	1210.000	12150	910.000	9432	75	78
454	3. Computer Aided Textile Designing (CATD)	144.000	44	144.000	44	100	100
C	SILK WET PROCESSING COMPONENTS						
462	2. Yarn Dyeing : 50 Kg. capacity	45.000	12	7.500	2	17	17
	SUPPORT SERVICES SECTOR						
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	301.500	6280	301.500	6280	100	100
515	Publicity for the sector (Audio visuals / Printing/Exhibitions/BSMs/ Awareness programmes, Workshops/Seminars etc.)	73.800	726	73.800	726	100	100
519	Women Development Components	381.743	45370	391.739	45370	103	100

Source: Data provided by Department of Sericulture

9.3.1 NPC Field Survey

9.3.1.1 Seed Graineurs

Out of 3 Graineurs surveyed, all were involved in Mulberry DFLs production. No Graineur interviewed was CDP beneficiary. Out of 3 Graineures, one was the State Government grainages and two were Licensed Seed Producer (LSP). Two Graineurs were involved in Cross Breed DFLs production only, while one was involved in both bivoltine and cross breed DFLs production.

Table 9.31 Income generation from Sericulture activities for LSPs

Year	2010-11	2011-12
Income	320	216

Source: NPC Field Survey July-September 2012

9.3.1.2 Cocoon farmers

NPC study team surveyed 108 cocoon farmers, out of which 70 are involved in commercial rearing and 38 are involved in seed cocoon rearing. All the respondents were involved in mulberry activity only. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 45 years and the experience was at 8 years.

Out of 108 beneficiaries, 13.8% were female. 96 % of the beneficiaries interviewed belong to either BC or general category, 3% belong to SC category and 1% belong to ST category. 38% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 53% were small farmers having land holding between 1 to 2 hectare, 2% were semi medium having land holding between 2 to 4 hectares, 2% were medium farmers having land holding between 4 to 10 hectares, while 5% were large farmers having land holding above 10 hectares.

Table 9.32: Average Land Holding with Sericulture farmers (Hectares)

Category	Land Holding
Average Land Holding	2.48
Agriculture Irrigated	1.42
Agriculture Rainfed	0.58
Sericulture Irrigated	1.15
Sericulture Rainfed	0.95

Source: NPC field survey July-September 2012

Table 9.33: Impact of CDP on income generation

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	67.07	117.14	114.46	81.58	113.10
Utilization of Income on Sericulture	14.86	18.34	26.65	21.69	16.25
% Utilization of Income on Sericulture	22	16	23	27	14

Source: NPC field survey July-September 2012

Table 9.34 Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Seed Cocoon			
Average No. of crops per annum	Cross Breed		
	Bivoltine	5	5
Average No. of DFLs brushed per crop (Nos.)	Cross Breed		
	Bivoltine	209	289
Cocoon yield per 100 DFLs	Cross Breed		
	Bivoltine	71	75.33
Commercial Cocoon			
Average No. of crops per annum	Cross Breed		
	Bivoltine	5	5
Average No. of DFLs brushed per crop (Nos.)	Cross Breed		
	Bivoltine	250	250
Cocoon yield per 100 DFLs (Kg)	Cross Breed		
	Bivoltine	72	72

Source: NPC field survey July-September 2012

9.3.1.3 Post Cocoon Sector

NPC study team surveyed 25 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.2.1.F**.

Table 9.35: Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Cottage basin/Charkha	12
10 basins Multi end Reeling	9
Twisting Machine	4
Total	25

Source: NPC field survey July-September 2012

Out of 25 beneficiaries, 13.6% were female. All the beneficiaries belong either to BC or general category. The average experience of the respondents was 14 years. 32% of the beneficiaries interviewed had attained till middle class education, 32% till secondary, 23% were Graduate & above and 14% were illiterate. Out of 55 beneficiaries interviewed by NPC study team, 53 had

availed CDP schemes during XI plan. The two non CDP respondents were involved in powerloom weaving.

Table 9.36 Impact of CDP on income generation

Type of Post Cocoon Beneficiaries	Income Generation (Rs Thousand)				
	2007-08	2008-09	2009-10	2010-11	2011-12
Cottage basin	63.90	36.62	41.13	76.08	105.69
10 basins Multi end Reeling	132.64	155.90	139.61	172.40	200.23
Twisting Machine	110.00	212.20	158.60	121.35	120.00

Source: NPC field survey July-September 2012

Table 9.37 Impact of CDP technological interventions on Renditta

Year	Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in Kg)
2007-08	8.41
2008-09	8.53
2009-10	8.16
2010-11	8.09
2011-12	7.85

Source: NPC field survey July-September 2012

9.4 Jammu & Kashmir

During XI plan, in Jammu and Kashmir Rs 58.72 crore were spent towards Sericulture development, out of which Central share was of Rs 48.90 crores, while State Government share was Rs 5.35 crores.

Table 9.38: Funding pattern under Catalytic Development Programme during XI plan (Rs. Lakh)

Year	CSB Share	State Share	Beneficiaries Share	Total
2007-08	182.00	19.165	14.700	215.865
2008-09	316.00	32.266	29.424	377.69
2009-10	1080.00	82.39	61.610	1224
2010-11	1708.00	191.92	166.42	2066.34
2011-12	1604.00	209.59	174.71	1988.3
Total	4890.00	535.331	446.864	5872.195

Source: Data provided by Department of Sericulture, Jammu & Kashmir

Table 9.39 reports the DFLs production in Jammu & Kashmir. The bivoltine DFLs production decreased to 17.78 Lakhs during 2008-09 from 24.16 Lakhs in 2007-08. But the production started picking up afterwards and reached 24.66 Lakh during 2011-12.

Table 9.39 DFLs production in Jammu & Kashmir (Lakh Nos.)

Year	Bivoltine	Tasar
2007-08	24.159	0.07
2008-09	17.783	0.078
2009-10	19.729	0.115
2010-11	21.210	0.099
2011-12	24.656	0.125

Source: Data provided by Department of Sericulture, Jammu & Kashmir

Table 9.40 reports the cocoon production and productivity (cocoon yield per 100 DFLs). During XI plan, the bivoltine cocoon production has increased from 803 MT to 920 MT and the cocoon yield per 100 DFLs increased by 5 Kg which is quite significant improvement brought by CSRTI Pampore.

Table 9.40 Cocoon Production & Productivity Details in Jammu & Kashmir

Year	Bivoltine		Tasar	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (Lakh No.)	Cocoon yield per 100 DFLs (Nos.)
2007-08	803	32		400
2008-09	738	32		538
2009-10	797	35	0.02	495
2010-11	851	35	0.002	115
2011-12	920	37		68

Source: Data provided by Department of Sericulture, Jammu & Kashmir

Table 9.41 reports the raw silk production and renditta in Jammu & Kashmir. During XI plan, the raw silk production has increased from 105 MT to 133 MT and renditta improved by 0.25 Kg.

Table 9.41 Raw Silk Production Details in Jammu & Kashmir

Year	Bivoltine		Tasar	
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)
2007-08	105	7.62	-	6000
2008-09	102	7.24	0.01	6000
2009-10	110	7.25	0.500	6000
2010-11	120	7.09	0.1	6000
2011-12	133	6.92	-	6000

Source: Data provided by Department of Sericulture, Jammu & Kashmir

Table 9.42 Component wise Physical and Financial achievement during XI Plan

Rs Lakhs & Nos.

Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Target		Achievement		Financial Achievement in %	Physical achievement in %
				Financial	Physical	Financial	Physical		
A	PACKAGE FOR MULBERRY SEED SECTOR								
111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector	80.00	80:20:00	80.00	8	20.00 (Rs 60 Lakhs for 2011-12 is under implementation)	2 (6 units for 2011-12 is under implementation)		
B	PACKAGE FOR MULBERRY COCOON SECTOR								
211	Support for mulberry plantation development (in acres)	304.29	80:10:10	304.50	29.00	304.29	28.98	99.93	99.93
213	Supply of Rearing Appliances (Nos.)	1062.18	80:10:10	1021.5	6300	1062.18	6457	104	102.5
217	Assistance for Construction of Rearing Houses (RH) - 50,000/-	1665.00	80:10:10	1665.00	3700	945.00 (Rs 720.00 Lakhs for 2011-12 is under implementation)	2100 (1600 units for 2011-12 is under implementation)		
218	Assistance for maintenance of Chawkie gardens, construction of CRC building and procurement of equipments	39.20	80:20:00	39.20	56	39.20	56	100	100
A	SILK REELING AND SPINNING COMPONENTS								
412	Multi end 10 Basins	9.00	80:10:10	9.00	1	9.00	1	100	100
419	Hot air drier 100 kg capacity	157.50	80:20:00	157.50	90	122.50 (Rs 35.00 Lakhs for 2011-12 is under implementation)	70 (20 units for 2011-12 is under implementation)		

						implementation)			
422	Incentive for production of Bivoltine Silk	51.81	90:10:00	51.81	58.37	51.81	58.37	100	100
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs	60.00	90:10:00	60	1	Sanctioned in 2011-12. Under implementation	Sanctioned in 2011-12. Under implementation		

Source: Data provided by Department of Sericulture, Jammu & Kashmir

9.4.1 NPC Field Survey

9.4.1.1 Seed Graineurs

In Jammu & Kashmir, there is no Private Graineur. Only three government grainages are there, which are involved in DFLs production. Therefore, because of unavailability, no graineur CDP beneficiary was interviewed

9.4.1.2 Cocoon farmers

NPC study team surveyed 57 cocoon farmers, out of which 49 are involved in commercial rearing and 8 are involved in seed cocoon rearing. All the respondents were involved in mulberry activity. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 43 years and the experience was at 23 years.

Out of 57 beneficiaries, 25.5% were female. 58% of the beneficiaries interviewed belong to SC category, 39% belong to either BC or general category and 2% belong to ST category. 88% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 2% were small farmers having land holding between 1 to 2 hectare, 5% were semi medium having land holding between 2 to 4 hectares, 4% were medium farmers having land holding between 4 to 10 hectares, while 1% were large farmers having land holding above 10 hectares.

Table 9.43: Average Land Holding with Sericulture farmers

(Hectares)

Category	Land Holding
Average Land Holding	0.84
Agriculture Irrigated	0.10
Agriculture Rainfed	0.65
Sericulture Irrigated	0.23
Sericulture Rainfed	0.30

Source: NPC field survey July-September 2012

Table 9.44: Impact of CDP on income generation**(Rs Thousand)**

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	9	9	13	11	14
Utilization of Income on Sericulture	1	5	4	3	5
% Utilization of Income on Sericulture	11	56	31	27	36

Source: NPC field survey July-September 2012

Table 9.45: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Seed Cocoon			
Average No. of crops per annum	Cross Breed		
	Bivoltine	1	2
Average No. of DFLs brushed per crop (Nos.)	Cross Breed		
	Bivoltine	100	100
Cocoon yield per 100 DFLs	Cross Breed		
	Bivoltine	25	34
Commercial Cocoon			
Average No. of crops per annum	Cross Breed		
	Bivoltine	1	2
Average No. of DFLs brushed per crop (Nos.)	Cross Breed		
	Bivoltine	100	100
Cocoon yield per 100 DFLs (Kg)	Cross Breed		
	Bivoltine	45	50

Source: NPC field survey July-September 2012

9.4.1.3 Post Cocoon Sector

NPC study team surveyed 8 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.46**.

Table 9.46. Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Cottage basin/Charkha	7
10 basins Multi end Reeling	1
Total	8

Source: NPC field survey July-September 2012

Out of 8 beneficiaries interviewed, 33% were female. All the beneficiaries belong either to BC or general category. The average experience of the respondents was 14 years. 67% of the beneficiaries interviewed were Graduate & Above and 33% till secondary.

Table 9.47 Impact of CDP on income generation

Type of Post Cocoon Beneficiaries	Income Generation (Rs Thousand)				
	2007-08	2008-09	2009-10	2010-11	2011-12
Cottage basin/Charkha	-90.00	40.00	37.50	47.00	35.00

Source: NPC field survey July-September 2012

Table 9.48 Impact of CDP technological interventions on Renditta

Year	Renditta* (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in Kg)
2007-08	3.34
2008-09	3.34
2009-10	3.18
2010-11	3.17
2011-12	3.10

Source: NPC field survey July-September 2012

*Renditta mentioned here is for dry cocoons, while data provided by State Government is for Green cocoon

9.4.2 Field Observation Report

Government of India through Central Silk Board (VSB) under Ministry of Textiles which is a nodal agency of the GOV is playing a pivotal role for all development of Silk industry in the country with particular emphasis on production of high quality bi-voltine silk. Besides, technical assistance of Central Government through CSB is providing financial assistance to the States in implementation of different schemes for over all development of Sericulture. J&K State falling under North western states enjoys special states status. During XIth Five year Plan various Centrally Sponsored developmental schemes pertaining to different sectors viz. Mulberry Sector, Post Cocoon Sector, Silkworm seed sector. Training & Allied activities are currently under implementation in the State. The cocoon production which was to the extent of 803 MT at the end of first year of XIth plan has scaled upto 860 MT during last year (2010-11) and during 2011-12 has scaled upto 920 MT. Similarly, the income generation which was Rs.500.0 Lac at the beginning of XIth Plan was recorded at Rs.1100.00 Lac during last year. This has been due to production of quality seed and quality cocoons which was possible by augmentation of the infrastructure crated at farmers level under Catalytic Development Programme during successive plans. The introduction of cluster concept proved to be a boon in the integrated and focused development of the industry. The detail of Centrally Sponsored Schemes presently under implementation is given here under:

1. Support for Rearing Mulberry Tree Plantation in Cluster Form

Under the scheme mulberry plants are being distributed among the farmers of the State to plant in their private holdings in cluster mode with a minimum of 300 plants/cluster to augment area mulberry plantation. The unit cost under the scheme is Rs.3500/300 plants and the farmer gets Rs.2250/- (Rupees Two Thousand Two Hundred Fifty Only) for purchase of chemical fertilizers/FYM and irrigation and transportation charges. The funding pattern under the scheme is 80:10:10 (CSB:State:Benfy). During the XIth plan 20.95 Lac plants so far have been got planted through farmers.

2. Cluster development of Mulberry Plantation/Departmental Land

The scheme is implemented by utilization of vacant State/Departmental land, mainly to benefit landless, economically backward farmers to develop rich mulberry reserves which after attaining full production capacity are utilized by silkworm rearers for conducting silkworm rearing to earn their livelihood. The unit cost is Rs.7/- plant and the funding pattern under the scheme is 80:20 (CSB:State). During the XI Plan 9.26 Lac plants so far have been raised on state/Departmental land.

3. Supply of Rearing Appliances

Under transfer of technology Rearing Kit at a unit cost of Rs.20,000/Kit with subsidy component of Rs.18,000/Kit comprising of Iron Sigries, Plastic Trays, Iron Stand and Feeding Stand is provided to identified traditional cocoon growers to improve their rearing conditions to reduce diseases incidences due to unhygienic rearing and to improve cocoon quality and to increase average cocoon yield. The sharing pattern under the scheme is 89:10:10 (Centre: State: Benfy.) During the XI Plan 4300 number of farmers has so far been covered under the schema and the physical target for this year (2011-2012) is 2000 beneficiaries which have been identified.

4. Assistance for construction of Rearing House (CGI Sheets)

The CGI sheets at a unit cost of Rs.17000 per beneficiary with a subsidy component of Rs.15300/beneficiary are provided to the identified beneficiaries on the basis of economic status and length/period he/she was conducting rearing. The Rearing House with CGI roofing sheets last for longer period and rearing space provided improves rearing conditions thereby increasing the productivity per once of silkworm seed and improves quality of cocoons as well. The sharing pattern under the scheme is 80:10:10: (Centre: State: Benfy.). During the XI Plan 4000 number of farmers has so far been covered under the scheme and the physical target for the year (2011-2012) is 2200 beneficiaries which have been identified.

5. Assistance for construction of Rearing House

The farmers are provided financial assistance to the tune of Rs.45000/- out of Rs.50,000 being the unit cost for construction of separate Rearing Houses with an objective to increase rearing space/capacity of the rearers which in-tune increase cocoon production thereby better returns to the farmers. The scheme has been implemented from 2009-10 onwards. The sharing pattern under the scheme is 80:10:10: (Centre: State: Benfy.). During the XI plan 2100 number of farmers have so far been covered under the scheme and the physical target for this year (2011-12) is 1600 beneficiaries which have been identified.

6. Health Insurance Scheme for Women

The concept for Health Insurance Scheme for Women has been introduced in the State for the first time during the year 2008-09. The annual limit has been fixed at Rs.15000/per family comprising of 4 members and premium for a single insurance policy is Rs.767.28 with beneficiary contribution of just Rs.55.66. During the XI Plan 7500 number of women rearers have so far been covered under the scheme and the physical target for this year (2011-12) is 5000 beneficiaries which have been identified.

7. Establishment of Hot Air Dryers

As a step forward for adoption of technological advancement & to have a shift from conventional Sun drying of the cocoons, the concept of Hot Air Drying has been introduced in the State for the first time. The establishment of Hot Air Dryer facilities timely drying of cocoons on scientific lines in bulk, which helps the farmers to maintain the quality of cocoons and to fetch better and timely disposal of the cocoons. The unit cost of Hot Air Dryer is Rs.1.75 Lac shared by Central and State Governments on sharing pattern of 80:20: (Centre: State:). The facility is being availed by the farmers/reeling entrepreneurs for drying of cocoons. The

innovation has helped the farmers to maintain the quality of cocoons and dispose off their produce immediately after its harvest and fetch better prices which otherwise was sundried and stored for three to four months before putting it to auction. The sun drying would deteriorate the cocoon quality and damages the crop during rainy season thereby financial losses to farmers. During the XI Plan 82 number of hot Air Dryers have so far been established under the scheme.

8. Establishment of reeling units

In order to generate dependable market to cocoon growers, value addition to cocoons and local employment generation in the state emphasis is being given to establish reeling units in Private Sector in a phased manner, so that entire quantity of cocoons produced is consumed within the State, already 34 Silk Reeling Units have been installed in the state. Under CDP Schemes during 11th five year plan it is proposed to establish Multiend Reeling units, Cottage Basin, Twisting units and drying units in the state where unemployed educated youth can be absorbed to run the units. A Silk Tech Park at Zakura Srinagar has been recently inaugurated by the Industries and Commerce Department and land was allotted to good number entrepreneurs for establishment of such units. For establishment of such units subsidy is provided by CSB and State on 80:20 basis while as beneficiary contribution is 10% only. During the XI plan so far 1 Multiend reeling units, 1 Twisting unit and 1 Common facility centre (Dyeing unit) have come-up in the State.

9. Incentive on Silk Yarn

In order to boost Bivoltine Sericulture Rs.100/- of Silk Yarn reeled on Multiend and Cottage basin units is provided as an incentive to the Pvt. Reelers under CDP scheme jointly shared by CSB and State Sericulture on 90:10 basis.

10. Establishment of Cocoon Bank

To make cocoon readily available for Private Reeling units round and to ensure optimum utilization of the installed capacity of the units cocoon bank under the over all control of Directorate of Sericulture has been established with branches at Jammu and Srinagar. An amount of Rs.100.00 Lac has been kept for operating the scheme.

11. Establishment of Silk Exchange

Linkages between silk reelers and weavers are being developed and strengthened to reduce their dependence on middle man for sale of yarn which results in exploitation. Silk Exchange has been established in Jammu and Srinagar where the reelers and Weavers can meet. An amount of Rs.60 Lakhs has been kept to operate it.

12. Corpus funds for market intervention

In order to dispose off left over cocoons of the farmers whose cocoon lots do not compete in open auction and in absence of healthy competition in the market, department comes to rescue of farmers by purchasing such cocoon lots at support price of Rs.210, Rs.135 and Rs.120 per kg(dry) for A,B &C grade respectively out of the funds provided in the scheme. An amount of Rs.45.00 Lacs received from CSB as Central Share along with Rs.5.00 Lakhs as State Share is available with the Department in civil deposit account.

13. Average cocoon rates:

Average price for “A” grade silkworm cocoon has increased from Rs.192/kg(dry) during 2008-09 to Rs.410/kg(dry) during 2010-11 and Rs.415/kg(dry) during 2010-11 showing an increase of Rs.223/kg.

During the year 2010-11 & 2011-12 the cocoon growers got remunerative prices of their produce and the farmers in some markets of the State fetched record high price of Rs.700 per kg dry.

The floor price of commercial cocoons has been increased by the Government from Rs.180/kg(dry) to Rs.210/kg during the year 2009-10.

The floor price of seed cocoons has also been enhanced to Rs.150/kg(green) from Rs.100/kg.

14. Green Cocoon Marketing:

The concept of Green Cocoon marketing has been introduced in the state during current year (2011-12). The Department put to use Hot Air Dryers for the purpose and about 7000 Kgs of green cocoons of District Srinagar and Budgam were dried on trial basis. The results were quite encouraging as the average price fetched by the farmers remained Rs.190/kg Green (i.e Rs.570/kg Dry), Rs.360 over and above the floor price. The highest bid recorded was Rs.205/kg (i.e Rs.615/kg Dry). In Jammu division 6681 Kgs of green cocoons were transacted in Udhampur and Kathua Markets. The average price remained Rs.186/kg green (i.e Rs.558/kgs Dry) with highest bid of Rs.252/kg green (i.e. Rs.756/kg Dry).

Sensing the success of Green marketing, the Department contemplates to introduce the concept throughout the valley in near future in order to sericulture activity more remunerative.

15. Hot Air Dryer:

For facilitating cocoon drying on scientific lines by the farmers, the Department has introduced the concept of Hot Air Dryers in the State for the benefit of farmers and so far 82 such units have come-up in the state and more number of such units are going to be installed in near future. The renditta (unit quantity required to produce 1 kg of raw silk) has come down to 8 Kg from 9 Kg during 2008-09 due to the improvement in quality of cocoons.

16. Silkworm Rearers Population:

Number of silkworm rearers has risen to a threshold of 27000 during the year (2010-11) from a staggering 19000 of 2008-09 registering an increase of 42% in cocoon growers population it is likely to reach 27000 during current year 2011-12.

The concept of separate rearing house at farmers level has been introduced in the state w.e.f 2009-10 and so far 2100 sericulture farmers have been brought under the scheme and during the current financial year 1600 beneficiaries are being covered. Under the scheme financial assistance of Rs.45000/- as subsidy component is provided to the identified beneficiary against the total amount of Rs.50,000/- being the unit cost. Under Cluster Promotion Programme for “Construction of Rearing House” the unit cost is Rs.1.00 Lac and Rs.0.90 Lac being the subsidy component.

17. Multi cropping:

J&K State is a mono crop region and sericulture activity is a subsidiary occupation. In order to make it more remunerative for all stake holders, the Department with assistance of sister concerns-Research wings of Central Silk Board and SKUAST is striving hard to introduce multiple cropping in the State. And as a prelude to this, the Department introduced the “multiple cropping” for sustainable sericulture in the State in certain pockets last year and the results on ground were quite encouraging and the State produced 45000 Kgs in Jammu Division and 10000 Kg in Kashmir Division) of silk cocoons by way of multiple cropping in addition to customary spring crop. During the current year (2011-12), the Department is quite optimistic that the cocoon production by way of multiple cropping will surpass the year’s production.

18. Co-operative Rearing:

A new concept of Silkworm rearing on co-operative basis has been introduced in the state on the instructions of Hon’ble Agriculture Minister. Under the programme unemployed youth residing within the vicinity of departmental mulberry leaf reservoirs are encouraged to take up silkworm rearing in the departmental assets during late summer/autumn are provided with other required inputs. During current year 13 Ozs of silkworm seed were reared on trial basis in the departmental assets at Basic Seed Lac) and (244.496 Lac) respectively. About 150 beneficiaries in each Cluster are being covered by providing them various infrastructural inputs for increasing their production and productivity namely. Assistance for construction of Rearing House at a unit cost of Rs.1.00 lac, Rearing appliances at a unit cost of Rs.0.40 Lac support for raising of Mulberry Plantation & Maintenance Rs.5500/300 plants etc;

19. Post Cocoon Sector:

2 Silk Twisting units,1 Common Facility Centre and 4 new reeling units have been sectioned in the State for the development of the Post Cocoon Sector in the State during 11th plan so far.

9.5 West Bengal

On behalf of Government of West Bengal, the Directorate of Sericulture under the aegis of Department of Micro and Small Scale Enterprises and Textiles, is working towards Sericulture development and implementing CDP scheme along with CSB. CSB unit Silk Conditioning & Testing House (SCTH) is implementing post cocoon components, while State Department of Sericulture. Since the information is still awaited from State Department of Sericulture, West Bengal, this data given is for post cocoon sector only which is provided by SCTH. In West Bengal, both mulberry and Vanya silk varieties have been covered under Catalytic programme. However, more emphasis has been laid on Mulberry Silk variety as the major portion of CDP funds released by CSB is for mulberry sector. Central Government has contributed Rs 25.73 crores.

Table 9.49: Funding by CSB under Catalytic Development Programme during XI plan (Rs. Lakh)

Year	CSB Share
2007-08	102.00
2008-09	273.00
2009-10	870.00
2010-11*	780.00
2011-12*	548.00
Total	2573.00

Source: Data provided by CSB Bangalore

*These are the amount allocated to the State Department of Sericulture, West Bengal by CSB, while above data shows the actual expenditure.

Table 9.50 Raw Silk Production in West Bengal (MT)

Year	Bivoltine	Cross Breed	Vanya
2011-12	3.69	1920.09	55.79

Source: Data provided by CSB Bangalore

Table 9.51 Component wise Physical and financial Achievement

S.No	Name of the Scheme	Financial	Physical
1	Package for Seed Sector		
a)	Mulberry		
1	Support for upgrading existing Seed / Grainage Units under Mulberry Sector (Unit)	144.40	74
2	Support to establish large scale Bivoltine Seed production Grainages in Public / Pvt. Sector (Nos.)	0.00	0
3	Assistance for Seed Testing Facilities in Public / Pvt. Grainages (for Quality seed production)	27.00	30
4	Assistance for mulberry silkworm seed production units (Support to get ISO / BIS Quality Seed Certification for Silkworm Seed Units)		
a)	P1 Grainages	18.00	2
b)	P2 Grainages	0.00	0
b)	Vanya		

i)	Tasar		
5	Assistance to Private Tasar Graineurs	13.20	22
6	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	8.75	7
7	Assistance for strengthening of Seed Multiplication / Infrastructure for Oak Tasar in the State (Nos)	0.00	0
8	Assistance to seed rearers (Nos)	16.21	360
	Total for Tasar	38.16	
ii)	Eri		
9	a) Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos) b) Equipment Support to Eri seed rearers cum graineurs(Nos)	2.75	2
	Total for Eri	2.75	
iii)	Muga		
10	Assistance to Muga Private Graineurs (Nos)	14.34	29
11	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure (Nos)	7.92	1
	Total for Muga	22.26	
	Total for Vanya	63.17	
	Total for Seed Package	252.57	
2	Package for Cocoon Sector		
a)	Mulberry		
2	Assistance for irrigation and other Water Conservation and usage techniques :(Ha)	138.11	217
3	Supply of Rearing Appliances (including improved mountages) / farm equipments to farmers) - for Bivoltine Sericulture Farmers (acres)	171.86	9440
5	Assistance for Construction of Rearing Houses (RH) - Nos.	761.36	5625
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments: (Units)	2.97	5
7	Insurance Support (For all Sectors) (lakh dfls)	21.60	12126.79
9	Assistance for Farmers Training (Nos.)	2.50	500
10	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics.	7.75	13
	Total for Mulberry	1106.14	
b)	Vanya		
i)	Tasar		
11	Support to rearers for Augmentation of tasar host plantation (Ha.)	84.23	2079
12	Assistance for raising and maintenance of systematic plantation of Oak Tasar (in Hec.)	0.00	0
13	Assistance for Construction of Cocoon Storage Houses in Tasar Sector	20.75	83
	Total for Tasar	104.98	
ii)	Eri		
14	Support for Castor/Tapioca cultivators with Start-up tools (Half an acre unit)	9.93	1576
16	Construction of Rearing houses (Nos.)	181.80	1010
	Total for Eri	191.73	
iii)	Muga		
17	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (Acres)	62.65	918
	Total for Muga	62.65	

	Total for Vanya	359.36	
	Total for Cocoon Package	1465.51	
3	Package for Post Cocoon Sector		
i)	Silk Reeling & Spinning Components		
4	Support for establishment of Improved Cottage Basin Reeling Units	12.50	10
5	Support for existing Charkha Reeling Units to dissuade child labour (Motorized Charkhas)	22.33	453
6	Support for Setting up of Certified Dupion Silk Reeling Units (10 KG. / 20 KG. - Prorata basis)	5.00	5
7	Support for Hot Air Driers-Electrical/Multi- fuel/ Ushnakoties for Reeling Units		
	50 kg. capacity (Nos.)	13.08	33
8	Assistance for Twisting Units	11.25	3
11	Quality linked price Support system for Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs	45.00	2
12	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga	75.00	2
13	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop Soc./SHGs	1.00	2
14	Support for Vanya Reeling/Spinning Sector		
	a) Spinning (Nos)	3.04	214
	b) Reeling-cum-Twisting (Nos)	5.73	78
	Total for Reeling & Spinning	193.92	
ii)	Silk Weaving Components		
17	Support for Handloom Sector for Loom Upgradation		
	1. Support for Certified Handlooms specially designed	20.95	292
	2. Loom Upgradation through Jacquards	14.15	283
	3. Computer Aided Textile Designing (CATD)	2.50	1
	Total for Weaving	37.60	
iii)	Silk Wet Processing Components		
18	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing :		
	1. Yarn Dyeing : 25 Kg. capacity	2.25	1
	2. Yarn Dyeing : 50 Kg. capacity	3.75	1
	3. Arm Dyeing : 50 Kg. capacity	9.00	1
	4. Fabric Processing Facilities	37.50	2
	Total for Wet Processing	52.50	
	Total for Post Cocoon	284.01	
4	Support Services Sector		
1	Product Design and Development - Generic Promotion of Indian Silks / Sericulture	13.40	
3	Entrepreneurship Development & Management Development Programmes.	5.22	
4	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	115.67	4436
5	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.)	30.48	
8	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	4.65	5
9	Women Development Components	401.78	
	a. New beneficiaries	63000	
	b. Renewed Beneficiaries		
	c. Creating toilets, rest rooms & creches in Cocoon Markets	3	
	Total for Support Services	571.20	
	Total for CDP	2573.28	

Source: Data collected from CSB, Bangalore

9.5.1 NPC Field Survey

9.5.1.1 Seed Graineurs

Out of 8 Graineurs surveyed, 5 Graineures were involved in Mulberry and 4 were involved in Tasar Sericulture. All the Graineures were CDP beneficiaries. All the Graineures were Licensed Seed Producers. All the graineures own the grainage halls. The average age of respondents were at 47 years and experience at 23 years. All Graineures surveyed were male. 37.5% of the respondents were SC, 50% were ST and rest were either BC or general.

Table 9.52 Impact of CDP on Income Generation

(Rs Thousand)

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities (Mulberry)	92	92	95	99	109
Utilization of Income on Sericulture (Mulberry)	59	62	60	67	39
% Utilization of Income on Sericulture (Mulberry)	64	68	63	67	36

Source: NPC field survey July-September 2012

Table 9.53: Impact of CDP on Production & Productivity

Category	Type of production	2007-08	2011-12
Average quantity of Seed Cocoon processed per Graineur (MT)	Cross Breed	1.53	2.55
	Bivoltine	0.31	0.49
Average Quantity of DFLs production per Graineur (Lakh nos.)	Cross Breed	0.13	0.20
	Bivoltine	0.20	0.35
Average egg recovery (%)	Cross Breed	20	20.5
	Bivoltine	20	20

Source: NPC field survey July-September 2012

9.5.1.2 Cocoon farmers

NPC study team surveyed 44 cocoon farmers, out of which 23 are involved in commercial rearing and 21 are involved in seed cocoon rearing. 32 respondents were involved in Mulberry and 12 respondents were involved in Tasar sericulture. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 48 years and the experience was at 21 years.

Out of 44 beneficiaries, 11.3% were female. 40% of the beneficiaries interviewed belong to SC category, 48% belong to either BC or general category and 12% belong to ST category. 64% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 16% were small farmers having land holding between 1 to 2 hectare, 11% were semi medium having land holding between 2 to 4 hectares, 7% were medium farmers having land holding between 4 to 10 hectares, while 2% were large farmers having land holding above 10 hectares.

Table 9.54: Average Land Holding with Sericulture farmers**(Hectares)**

Category	Land Holding
Average Land Holding	3.75
Agriculture Irrigated	1.21
Agriculture Rainfed	0.75
Sericulture Irrigated	1.33
Sericulture Rainfed	0.47

Source: NPC field survey July-September 2012

Table 9.55: Impact of CDP on income generation**(Rs Thousand)**

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	32	35	37	40	44
Utilization of Income on Sericulture	10	6	9	10	11
% Utilization of Income on Sericulture	31	17	24	25	25

Source: NPC field survey July-September 2012

Table 9.56: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Seed Cocoon			
Average No. of crops per annum	Cross Breed	3	3
	Bivoltine		1
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	250	283
	Bivoltine		100
Cocoon yield per 100 DFLs	Cross Breed	28	28.2
	Bivoltine		34
Commercial Cocoon			
Average No. of crops per annum	Cross Breed	3	3
	Bivoltine		
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	162	212
	Bivoltine		
Cocoon yield per 100 DFLs (Kg)	Cross Breed	62	66
	Bivoltine		

Source: NPC field survey July-September 2012

9.5.1.3 Post Cocoon Sector

NPC study team surveyed 27 post cocoon beneficiaries. 12 were involved in Mulberry, 12 were involved in Tasar and 3 were involved in Muga reeling. Type of post cocoon beneficiaries interviewed is given in **Table 9.57**.

Table 9.57: Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Vanya Reeling	15
Handloom weaver	12
Total	27

Source: NPC field survey July-September 2012

Out of 27 beneficiaries interviewed, 55% were female. All the beneficiaries belong either to BC or general category. The average experience of the respondents was 20 years. 74% of the

beneficiaries interviewed had attended till primary education, 15% till middle, 7% were illiterate and 4% were Graduate & Above.

Table 9.58 : Impact of CDP on income generation

Type of Post Cocoon Beneficiaries	Income Generation (Rs Thousand)				
	2007-08	2008-09	2009-10	2010-11	2011-12
Vanya reeling	58.37	59.88	67.96	73.04	68.79
Handloom weaver	42.00	43.92	47.50	51.50	53.75

Source: NPC field survey July-September 2012

Table 9.59 Impact of CDP technological interventions on Renditta

Year	Mulberry Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in Kg)	Tasar Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in nos)	Muga Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in nos)
2007-08	9.7	1280	6000
2008-09	9.7	1280	
2009-10	9.2	1280	5000
2010-11	9.4	1280	5000
2011-12	9.5	1280	5000

Source: NPC field survey July-September 2012

9.6 Maharashtra

During XI Five year plan, Rs 43.42 crores were spent under CDP towards sericulture development in Maharashtra (Table 9.60).

Table 9.60: Funding pattern under Catalytic Development Programme during XI plan: Maharashtra

(Rs. Lakh)

Year	CSB Share	State Share	Beneficiaries Share	Total
2007-08	95.00	68.18	135.445	298.625
2008-09	200.00	142.15	140.717	482.867
2009-10	233.00	141.90	271.783	646.683
2010-11	507.00	358.254	561.719	1426.973
2011-12	646.00	323.00	518.365	1487.365
Total	1681.00	1033.484	1628.029	4342.513

Source: Data provided by Department of Sericulture, Maharashtra & Central Silk Board

Bivoltine DFLs production in Maharashtra has increased during XI five year plan period from 3.99 Lakh to 11.68 Lakhs, while cross breed DFLs production declined from 24.09 Lakhs to 10.58 Lakhs (Table 9.61).

Table 9.61 DFL Production Details in Maharashtra

(Lakh Nos.)

Year	Bivoltine	Crossbreed	Tasar
2007-08	3.99	24.091	4.00
2008-09	4.653	33.49	4.24
2009-10	9.07	27.74	5.18
2010-11	13.70	16.89	5.51
2011-12	11.678	10.58	6.90

Source: Data provided by Department of Sericulture, Maharashtra

Bivoltine cocoon production has increased from 144 MT to 604.46 MT during XI plan period. The bivoltine cocoon yield per 100 DFLs increased from 36 Kg to 54 Kg. While the cross breed cocoon production decreased from 1040 MT to 623 MT, while cocoon yield per 100 DFLs for cross breed increased significantly from 43 Kg to 57 Kg (Table 9.62).

Table 9.62 Cocoon Production & Productivity Details in Maharashtra

Year	Bivoltine		Cross Breed		Tasar	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs	Cocoon Production (Lakh Nos.)	Cocoon yield per 100 DFLs (Nos.)
2007-08	167.00	41.85	1017	42.21	0.06	3208
2008-09	178.934	38.45	1414.266	42.26	0.09	2273
2009-10	421.00	46.42	1323.00	48.00	0.25	3648
2010-11	706.500	52.00	950.00	56.25	0.085	1505
2011-12	604.462	54.00	623.346	58.92	0.241	3128

Source: Data provided by Department of Sericulture, Maharashtra

During XI plan bivoltine raw silk production increased from 18 MT to 83.38 MT, while renditta improved from 8 Kg to 7.25 Kg. The cross breed raw silk production increased during 2007-08

to 2009-10 from 103 MT to 162 MT, afterwards it declined to 86 MT during 2011-12. The renditta for cross breed raw silk improved from 10.40 Kg to 7.24 Kg (**Table 9.63**).

Table 9.63 Raw Silk Production Details in the State

Year	Bivoltine		Cross breed		Tasar	
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)
2007-08	{22.00	8.00	103	10.40	{3.696	2500
2008-09	26	7.88	174	8.59	4.28	2500
2009-10	56.00	7.51	162.00	8.16	7.559	2500
2010-11	101.00	7.00	111.00	8.00	9.00	2500
2011-12	83.375	7.25	86.040	7.24	12.35	2500

Source: Data provided by Department of Sericulture, Maharashtra

Table 9.64 Component wise Physical and Financial Targets and Achievements under CDP – Maharashtra

Rs Lakhs & Nos.									
Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Target		Achievement		Financial Achievement in %	Physical achievement in %
				Fin	Phy	Fin	Phy		
PACKAGE FOR SEED SECTOR									
A	MULBERRY								
111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector	0.60	60:40	0.6	1	0.60	1	100	100
B i)	TASAR								
151	Assistance to Private Tasar Graineurs	29.40	60:20:20		49		49		100
152	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	10.00	50:50		8		7		87.50
154	Assistance to seed rearers	22.95	60:20:20		510		510		100.00
A	MULBERRY								
212	Assistance for irrigation and other water conservation and usage techniques	222.4	50:25:25		1025		783.6		76.50
213	Supply of Rearing Appliances	285.6	50:25:25		1550		1382		89.16
214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed	0.08	50:25:25		10		10		100

	farmers								
215	Assistance for Construction of Rearing Houses (RH)	713.00	25:25:50		3128		2470		79
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments	15.53	25:25:50		29		18		62.
220	Setting up of Production units for Biological inputs	0.89	50:50		3		3		100
221	Assistance for Farmers Training	1.00	50-50	1	150	1	150	100	100
222	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics	4.50	50:50		8		6		75
B i)	TASAR								
251	Support to rearers for Augmentation of tasar host plantation				210		176		84
A	SILK REELING AND SPINNING COMPONENTS								
	Multi end Reeling machine								
412	10 Basins	45.00	50:25:25		9		9		100
413	20 Basins	17.00	50:25:25		2		2		100
415	Support for establishment of Improved Cottage Basin Reeling Units	1.25	50:25:25		1		1		100
420	Assistance for Twisting units	22.5	75-25	5		5			100
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs	45.00	75:25		1		1		100
425	Providing Services of Master Reelers/Weavers/ Dyers				1		1		100
426	a) Spinning	1.88	50-25-25	99		49		49.5	
427	b) Reeling-cum-Twisting				109		69		63.3
B	SILK WEAVING COMPONENTS								

451	Support for establishing shuttle-less looms	75.00	50:25:25		3		3		100
452	1. Support for Certified Handlooms specially designed	10.78	50:25:25		77		77		100
453	2. Loom Up gradation through Jacquards	2.50	50:25:25		50		50		100
454	3. Computer Aided Textile Designing (CATD)	7.50	75:25		2		2		100
C	SILK WET PROCESSING COMPONENTS								
	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing :								
461	1. Yarn Dyeing: 25 Kg capacity		75:25		1		1		100
462	2. Yarn dyeing: 50 Kg capacity		75:25		1		1		100
	SUPPORT SERVICES SECTOR								
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	46.35	100		927		927		100
515	Publicity for the sector (Audio visuals /Printing/Exhibitions/ BSMs/ Awareness programmes, Workshops/Seminars etc.)	4.03	50:50		61		61		100

Source: Department of Sericulture, Maharashtra

9.6.1 NPC Field Survey

9.6.1.1 Seed Graineurs

CDP scheme was not implemented for Mulberry Seed Graineurs under XI Plan. No Graineur was interviewed during field survey.

9.6.1.2 Cocoon farmers

NPC study team surveyed 20 cocoon farmers, out of which 12 are involved in commercial rearing and 8 are involved in seed cocoon rearing. 14 respondents were involved in Mulberry and 6 respondents were involved in Tasar sericulture. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 44 years and the experience was at 11 years.

All the beneficiaries interviewed were male. All the beneficiaries interviewed belong to either BC or general category. 55% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 35% were small farmers having land holding between 1 to 2 hectare,

5% were semi medium having land holding between 2 to 4 hectares, while 5% were large farmers having land holding above 10 hectares.

Table 9.65: Average Land Holding with Sericulture farmers

(Hectares)

Category	Land Holding
Average Land Holding	2.83
Agriculture Irrigated	0.71
Agriculture Rainfed	0.92
Sericulture Irrigated	0.52
Sericulture Rainfed	

Source: NPC field survey July-September 2012

Table 9.66: Impact of CDP on income generation (Rs Thousand)

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities	48	54	60	63	60
Utilization of Income on Sericulture	28	27	29	32	32
% Utilization of Income on Sericulture	58	50	48	51	53

Source: NPC field survey July-September 2012

9.6.1.3 Post Cocoon Sector

NPC study team surveyed 12 post cocoon beneficiaries. 11 were involved in Mulberry, 1 was involved in Tasar sericulture. Type of post cocoon beneficiaries interviewed is given in **Table 9.67**.

Table 9.67 Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Vanya Reeling	1
20 basin Multi end reeler	1
Handloom weaver	11
Total	13

Source: NPC field survey July-September 2012

Out of 13 beneficiaries interviewed, 1 was female. 15.4% of the beneficiaries interviewed were SC and rest of the beneficiaries are either BC or General. The average experience of the respondents was 13 years. 38% of the beneficiaries interviewed were Graduate & Above, 38% had attended secondary standard, 15% had attended till primary education, 8% till middle.

Table 9.68 Reasons for underutilization of CDP fund during XI Five Year plan:

S.No	Package	Reason for Underutilization
1.	Seed sector	1. Inadequate seed cocoon availability, 2. Seed area is to be located, 3. Poor performance of state PPCs due to lack of technical manpower and mobility Weak Pvt. Participation in silkworm seed production.
2.	Cocoon sector	1. No market development, 2. Tribal and other community are not coming forward for tasar cultivation, 3. Requires incentive on cocoon production

3.	Post cocoon sector	Pvt. Reeler and weavers are not coming up in post cocoon sector No. scheme of incentives to private reelers
4.	Support services sector	NA

Source: Department of Sericulture, Maharashtra

9.6.3 Issues and bottlenecks in the implementation of sector wise components under CDP

Seed Sector

- Inadequate seed cocoon availability
- Seed area in the state not earmarked/ notification.

Post cocoon sector

- Undeveloped post cocoon sector due to lack of commercial linkages skill development and policy thrust,
- Absence of training facilities for skill development and sharpening managerial abilities and technical skill,
- Absence of credit linkage for development of post cocoon sector

Table 9.69 Reasons for not availing the benefits of certain key components of CDP by your state

Sl. No.	Name of the Component not availed by the state	Reasons for not availing
1.	Support to establish large scale Bivoltine Seed production Grainages in Public/Pvt Sector	1. Absence of credit linkages 2. BV seed area not a earmarked.
2.	Assistance for seed testing facilities in public/Pvt. Grainages (for quality seed Production)	Absence of seed grower.
3.	Assistance for mulberry silkworm seed production units (Support to get ISO/BIS Quality seed Certification for Silkworm seed units) P1 grainages, B) P2 grainages	Not available of P-1 & P-2 Grainage
4.	Support for Mulberry plantation development	Implementation under DPDC scheme.
5.	Insurance support (for all Sector)	Benefic. Insurance claim not settle by the insurance company.
6.	Assistance for Construction of cocoon storage Houses in Tasar Sector	Non availability of Govt. land.
7.	Popularization of new slow-speed,(Twenty-end per Basin) certified Multi-end Reeling machines (18 basins equivalent to 360 ends)	Pvt. Reeler & Weavers are not coming up.
8.	Establishment of Automatic / Semi automatic reeling units (Imported)	Undeveloped Post Cocoon Technology (PCT) sector.
9.	Support for existing Charkha Reeling units to dissuade child labour (Motorized Charkhas)	Undeveloped PCT sector.
10.	Support for Setting up of Certified Dupion silk reeling units (10Kg/20Kg-Prorata Basis)	Undeveloped PCT sector.
11.	Corporate participation in Sericulture	Pvt. Party are not coming forward
12.	Product designing and Development (Generic promotion of Indian silk/ sericulture (Including exhibitions, Buyer-Seller meets, etc)	Undeveloped PCT sector.
13.	Vanya Silk market promotion Cell	Production vanya cocoon is less.
14.	Entrepreneurship Development & Management development Programmes	Undeveloped PCT sector.
15.	Support for establishment of Pupae oil extraction Production and Bye-product Utilization units	PCT not develop
16.	Incentive for production of Bivoltine silk	Undeveloped PCT sector

17.	Establishment of cocoon banks/market support to Vanya sector- RMBS for tasar	Due to shortage of tasar cocoons pvt traders are purchasing at comparative rate.
18.	Assistance to towards Studies / Consultancies/ Surveys/Monitoring/ Supervision/Evaluation etc.	Implementation by CSB.
19.	Assistance to NGOs/SHGs/ & Agencies other than CSB & state for meeting administrative expenditure towards projects implementation in the Vanya sector and in the Mulberry sector	NGO are not interested.
20.	Women development Components	Facilities are available
21.	Emphasis on Tribal areas	Treble beneficiary are not coming forward.

Source: Department of Sericulture, Maharashtra

9.6.5 Suggestions/Recommendations

- SC/ST and women's beneficiaries should have separate sharing pattern in all the schemes to increase their participation by lowering their contribution to 10%.
- Like raw silk there should be incentive schemes for BV cocoons to boost the BV production the CSB may offer incentive Rs. 15-20 per kg to BV rearers.

9.7 Himachal Pradesh

Department of Sericulture is implementing Catalytic Development Programme (CDP) in collaboration with Central Silk Board. The broad objectives of the programme is to bring horizontal and vertical growth in bivoltine silk cocoon and raw silk production in the clusters, improve managerial and technical skills for ensuring management of group activities through training and input support, provide need based infrastructure and technological support to silk industry.

During XI Plan, CSB has released total Rs. 12.43 crores (**Table 9.70**).

Table 9.70 CSB share under CDP during XI plan-Himachal Pradesh

Year	CSB share released	
	(Rs Lakhs)	
2007-08	54.00	
2008-09	166.00	
2009-10	159.00	
2010-11	285.00	
2011-12	579.00	
Total	1243.00	

Source: Central Silk board, Bangalore

Bivoltine cocoon production has increased from 106.94 MT to 180.32 MT during XI plan, while cocoon yield per 100 DFLs has increased from 32 Kg to 43.61 Kg (**Table 9.71**).

Table 9.71 Cocoon production & Productivity in Himachal Pradesh

Year	Bivoltine	
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)
2007-08	174	32.00
2008-09	173	
2009-10	152.69	
2010-11	175	
2011-12	180.32	43.61

Source: Department of Sericulture, Himachal Pradesh

Table 9.72 Raw Silk production & Renditta in Himachal Pradesh

Year	Bivoltine	
	Raw Silk Production (MT)	
2007-08	20.00	
2008-09	22.00	
2009-10	20.00	
2010-11	22.00	
2011-12	22.54	

Source: Department of Sericulture, Himachal Pradesh

Table 9.73 Component wise Physical and Financial Achievement: Himachal Pradesh

S.no	Name of Sector/Component	Unit	Unit Cost (in Rs.)	Physical	
				Target XI plan	Achievement Till 2010-11
I	MULBERRY SECTOR				
1	Support for mulberry plantation on private land	Benef. Nos	5500	1200	1200
2	Supply of rearing appliances to bivoltine seri-farmers	Nos.	20000	1255	650
3	Construction of silk worm Rearing House for the farmers	Nos.	75000	770	155
4	Assistance to private CRC and equipments	Nos.	150000	18	10
	Assistance to CRC in Govt. Sector	Nos.	345000	26	25
II	POST COCOON SECTOR				
1	Support for establishment of multi-End Ten basin silk Reeling Machine	Nos.	10,00,000	3	0
2	Assistance for establishment of Cottage 6-basin silk Reeling Machine	Nos.	250000	7	2
3	Support for establishment of Silk Twisting Machine	Nos.	6,00,000	1	1
4	Support for Hot-Air Dryer (50 kgs)	Nos.	96000	22	10
5	Quality linked prices support scheme for cocoon and silk yarn.	Rs.	5000000		
III	SERVICE SECTOR				
1	Health Insurance Scheme for women sericulturists	Nos.	767.28	2000	2000
2	Beneficiaries Empowerment Programmes	Nos.	5000	290	50
3	Assistance for printing of publication etc.	Rs.	300000		

Source: Department of Sericulture, Himachal Pradesh

9.7.1 NPC Field Survey

9.7.1.1 Seed Graineurs

No graineur is there in Himachal Pradesh.

9.7.1.2 Cocoon farmers

NPC study team surveyed 30 cocoon farmers, out of which 25 are involved in Mulberry activity and 6 are involved in vanya sericulture. All mulberry farmers interviewed were involved in Commercial cocoon activity. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 38 years and the experience was at 9 years.

Out of 31 beneficiaries, 58% were female. 13% of the beneficiaries interviewed belong to SC category, 84% belong to either BC or general category and 3% belong to ST category. 68% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 26% were small farmers having land holding between 1 to 2 hectare, 6% were semi medium having land holding between 2 to 4 hectares.

Table 9.74: Average Land Holding with Sericulture farmers**(Hectares)**

Category	Land Holding
Average Land Holding	2.4
Agriculture Irrigated	1.2
Sericulture Irrigated	0.28

Source: NPC field survey July-September 2012

Table 9.75: Impact of CDP on income generation**(Rs Thousand)**

Income	2007-08	2008-09	2009-10	2010-11
Income from Sericulture Activities	7	20	-6	14

Source: NPC field survey July-September 2012

Table 9.76: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Commercial Cocoon			
Average No. of crops per annum	Bivoltine	2	2
Average No. of DFLs brushed per crop (Nos.)	Bivoltine	46	106
Cocoon yield per 100 DFLs (Kg)	Bivoltine	42.16	48.94

Source: NPC field survey July-September 2012

9.7.1.3 Post Cocoon Sector

NPC study team surveyed 27 post cocoon beneficiaries. 12 were involved in Mulberry, 12 were involved in Tasar and 3 were involved in Muga reeling. Type of post cocoon beneficiaries interviewed is given in **Table 9.77**.

Table 9.77. Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
10 basin multi end	1
Cottage basin	1
Handloom weaver	1
Total	3

Source: NPC field survey July-September 2012

All the beneficiaries interviewed were male. All the beneficiaries belong either to BC or general category. The average experience of the respondents was 11 years. All the beneficiaries interviewed were Graduate & Above.

Table 9.78 Impact of CDP technological interventions on Renditta

Year	Mulberry Renditta (Quantity of mulberry cocoon required to produce 1 Kg of raw silk) (in Kg)
2010-11	8.15
2011-12	8.05

Source: NPC field survey July-September 2012

Table 9.79 Other schemes implemented by Department of Sericulture, Himachal Pradesh

S.No	Name of the Scheme	Objective	Operational modality	Impact
1	MGNREGA	Mulberry tree plantation	Through Rural Development Deptt. H.P.	Employment generation, Augmentation of mulberry Food plants
2	Distribution of mulberry saplings on-subsidized rate	Promotion of sericulture	Through Govt. sericulture centres of DOS.	Adoption of sericulture
3.	Distribution of mulberry saplings on-subsidized rate	Promotion of sericulture	Through Govt. sericulture centers of DOS.	Adoption of sericulture
4	Distribution of disinfectants, rodenticides	Control of silkworm diseases, predators	Through Govt. sericulture centers of DOS	Adoption of sericulture

Source: Department of Sericulture, Himachal Pradesh

9.7.4 Suggestions

- The scheme of providing disinfectant material to the commercial bivoltine silkworm rearers is needed for control of the silkworm disease that will ensure better success of the commercial silk cocoon crop._
- The schemes for imparting practical Training and organizing Demonstration to disseminates improved technology and technology transfer are required as per sharing pattern of CDP.
- Large amounts of data regarding status of beneficiaries production progress etc. are being generated under CDP. A suitable scheme is required to support I.T. connectivity with the field officers and to make data entry compilation and analysis of the data being generated that will help in more effective implementation monitoring and evaluation of CDP
- The sericulture is more attractive in the interior in the interior areas of the state therefore a scheme to transportation cost of silk produces from the inaccessible areas to the marketing centers in form of transport subsidy is required for the state

9.7.5 Beneficiary Empowerment Programme conducted by States & Seri related exposure visits under Catalytic Development Programme

No. of farmers assisted	Objective
50 achieved and 240 farmers are being benefitted for year 2011-12	Exposure of new & improved technology to the stakeholders

Source: Department of Sericulture, Himachal Pradesh

9.8 UTTARAKHAND

Table 9.80 Raw Silk production in Uttarakhand

Year	Bivoltine (MT)	Renditta (Kg)
2007-08	15.00	7.86
2008-09	17.00	7.92
2009-10	14.00	7.51

Source: Department of Sericulture, Uttarakhand

Table 9.81 Component wise Physical and Financial Achievement during XI plan

S.No	Name of the Scheme	Financial	Physical
1	Package for Seed Sector		
a)	Mulberry		
b)	Vanya		
i)	Tasar		
1	Assistance to Private Tasar Graineurs (Nos)	6.20	8
2	Assistance for strengthening of Seed Multiplication / Infrastructure for Oak Tasar in the State (Nos)	17.96	7
3	Assistance to seed rearers (Nos)	23.40	332
ii)	Eri		
4	a) Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos)	9.00	2
iii)	Muga		
5	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure (Nos)	14.27	1
2	Package for Cocoon Sector		
a)	Mulberry		
1	Support for Mulberry Plantation Development: (in Acres)	85.20	2869
2	Assistance for irrigation and other Water Conservation and usage techniques : (Ha)	31.20	130
3	Supply of Rearing Appliances	481.04	3125
4	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine seed farmers (Nos.)	99.60	4150
5	Assistance for Construction of Rearing Houses (RH) - Nos.	1174.80	3437
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments: (Units)	68.40	37
7	Insurance Support (For all Sectors) (lakh dfls)	14.20	1.59
b)	Vanya		
i)	Tasar		
8	Assistance for raising and maintenance of systematic plantation of Oak Tasar (in Hec.)	17.92	140
9	Assistance for Construction of Cocoon Storage Houses in Tasar Sector	7.25	29
ii)	Eri		
14	Support for Castor/Tapioca cultivators with Start-up tools (Half an acre unit)	3.58	375
16	Construction of Rearing houses (Nos.)	56.97	215
iii)	Muga		
17	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (Acres)	9.68	140
3	Package for Post Cocoon Sector		
i)	Silk Reeling & Spinning Components		

2	Support for establishment of Certified Multi-end Reeling Machines 10 Basins	32.00	4
7	Support for Hot Air Driers-Electrical/Multi- fuel/ Ushnakoties for Reeling Units 50 kg. capacity (Nos.)	4.35	6
8	Assistance for Twisting Units	13.44	3
10	Incentive for production of Bivoltine Silk (MTs)	23.13	29.31
11	Quality linked price Support system for Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs	57.34	0
13	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop Soc./SHGs	7.27	9
14	Support for Vanya Reeling/Spinning Sector a) Spinning (Nos)	0.33	11
	b) Reeling-cum-Twisting (Nos)	3.58	20
ii)	Silk Weaving Components		
17	Support for Handloom Sector for Loom Upgradation		
	1. Support for Certified Handlooms specially designed	36.70	171
	2. Loom Upgradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.)	10.08	74
	3. Computer Aided Textile Designing (CATD)	9.27	3
iii)	Silk Wet Processing Components		
18	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing : 1. Yarn Dyeing : 25 Kg. capacity 2. Fabric Processing Facilities	4.45 20.00	2 1
4	Support Services Sector		
3	Entrepreneurship Development & Management Development Programmes.	1.04	
4	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	48.66	1602
5	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.)	7.97	
7	Assistance to NGOs / SHGs & Agencies other than CSB & State for meeting administrative expenditure towards Project Implementation in the Vanya sector and in the Mulberry sector	38.94	
8	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	3.11	22
9	Women Development Components	22.04	
a.	New beneficiaries	2015	
b.	Renewed Beneficiaries		
c.	Creating toilets, rest rooms & creches in Cocoon Markets	5	
	Total for CDP	2464.36	

Source: Data provided by CSB, Bangalore

9.8.1 NPC Field Survey

9.8.1.1 Seed Graineurs

No Private graineur is there in Uttarakhand.

9.8.1.2 Cocoon farmers

NPC study team surveyed 35 cocoon farmers, out of which 20 are involved in Mulberry activity, 4 are involved in Oak tasar and 11 were involved in Eri culture. All mulberry farmers interviewed were involved in Commercial cocoon activity. All the respondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 45 years and the experience was at 9 years.

Out of 35 beneficiaries, 14.3% were female. 6% of the beneficiaries interviewed belong to SC category, 57% belong to either BC or general category and 37% belong to ST category. 61% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 27% were small farmers having land holding between 1 to 2 hectare, 6% were semi medium having land holding between 2 to 4 hectares, 3% were medium farmers and 3% were large farmers.

Table 9.82: Average Land Holding with Sericulture farmers

(Hectares)

Category	Land Holding
Average Land Holding	0.79
Agriculture Irrigated	0.54
Sericulture Irrigated	0.24

Source: NPC field survey July-September 2012

Table 9.83: Impact of CDP on income generation

(Rs Thousand)

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities (Mulberry)	3	3	4	4	5

Source: NPC field survey July-September 2012

Table 9.84: Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Commercial Cocoon			
Average No. of crops per annum	Bivoltine	2	2
Average No. of DFLs brushed per crop (Nos.)	Bivoltine	65	91
Cocoon yield per 100 DFLs (Kg)	Bivoltine	38.40	41.1

Source: NPC field survey July-September 2012

9.8.1.3 Post Cocoon Sector

NPC study team surveyed 3 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.85**.

Table 9.85. Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Handloom weaver	3
Total	3

Source: NPC field survey July-September 2012

All the beneficiaries interviewed were male. All the beneficiaries belong either to BC or general category. The average experience of the respondents was 11 years. All the beneficiaries interviewed were Graduate & Above.

Table 9.86 Reasons for not availing the benefits of certain key components of CDP

Sl. No.	Name of the component not availed by the state	Reasons for not availing
1.	Support to establish large scale Bivoltine seed production. Grainage in public / Pvt. Sector.	Presently ZSSO, Central Silk Board Dehradun is catering to the needs of Bivoltine silkworm seed for the state.
2.	Assistance for raising and maintenance of systematic plantation of Oak Tasar	Because of less land holding with beneficiaries, it is not possible to raise the systematic plantation. Presently foliage is being obtained from the forest based plantation.
3.	Popularization of new Slow-speed,(Twenty-end per Basin) Certified Multi-end reeling machines (18 basins-equipment to 360 ends)	Economically not viable for the reelers of Uttarakhand.
4.	Support for establishment of pupae oil extraction and by-product utilization units	Micro-project will be taken up in the future.
5.	Corporate Participation in Sericulture	The participation of Corporate in sericulture will be ensured after creating basic infrastructure and potential increase in sericulture activities.
6.	Assistance to NGOs / SHGs & Agencies for meeting administrative expenditure towards project implementation in the Vanya sector and in the Mulberry sector.	Administrative expenditure of ₹. 6.94 lakh has been released to following NGOs towards project implementation in Vanya and Mulberry sector- i) A.T. India Ukhimath District Rudrprayag ii) Grameen avam Krishi Vikas Sansthan- GKVS Haldwani-Nainital.
7.	Cluster development projects through NGOs / SHGs/Support for special SGSY projects / scheme of fund for Regeneration of traditional industries(SFURTI) etc.	The involvement of NGOs and SHGs is being ensured by DOS Uttarakhand in implementation of different developmental schemes.
8.	Women development components	More than 50 percent of women beneficiaries practice the sericulture activities. So there is no need to implement the separate women development component.
9.	Emphasis on tribal areas	Vanya silk activities are being implemented mostly in tribal areas

9.9 Uttar Pradesh

During XI plan, Rs 62.70 crores were spent under Catalytic Development Programme, out of which Central share was Rs 31.05 crores (**Table 9.87**).

Table 9.87 Funding pattern under Catalytic Development Programme during XI plan
(Rs. Lakh)

Year	CSB Share	State Share	Beneficiaries Share	Total
2007-08	321.00	213.000	322.158	856.158
2008-09	414.00	196.200	212.130	822.33
2009-10	571.00	266.100	321.810	1158.91
2010-11	1004.00	404.925	494.980	1903.905
2011-12	795.00	306.091	427.278	1528.369
Total	3105.00	1386.316	1778.356	6269.672

Source: Data provided by Department of Sericulture, Uttar Pradesh & Central Silk Board

During XI plan cross breed DFLs production in the State has increased from 1.67 Lakhs to 7.96 Lakhs.

Table 9.88 DFLs Production Details in Uttar Pradesh

(Lakh Nos)

Year	Mulberry		Eri	Tasar
	Bivoltine	Cross Breed		
2007-08	--	1.67	--	0.71
2008-09	--	4.00	0.05	0.668
2009-10	--	6.29	0.171	1.035
2010-11	--	8.04	0.62	1.274
2011-12	--	7.96	1.361	1.703

Source: Data provided by Department of Sericulture, Uttar Pradesh

During XI plan, the bivoltine cocoon production has increased from 130 MT to 430 MT, while cross breed cocoon production increased from 108.63 MT to 455.87 MT. The bivoltine cocoon yield per 100 DFLs increased from 41.38 Kg to 45.76 Kg, while for cross breed cocoons it increased from 28.1 Kg to 32.52 Kg.

Table 9.89 Cocoon Production & Productivity Details in Uttar Pradesh

Year	Mulberry				Tasar		Eri	
	Bivoltine		Cross Breed		Cocoon Production (Lakh Nos.)	Cocoon yield per 100 DFLs (Nos.)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)				
2007-08	130.123	41.38	108.629	28.1	0.04	3702	6.96	30.65
2008-09	200.473	42.45	145.26	28.28	0.05	3516	7.23	24.18
2009-10	173.476	43.8	284.821	31.58	0.067	3536	19.200	45.82
2010-11	259.473	48.38	537.00	34.95	0.072	3508	10.25	37.28
2011-12	431.460	45.76	455.87	32.52	0.110	4267	22.00	39.85

Source: Data provided by Department of Sericulture, Uttar Pradesh

The data given in **Table 9.90** shows that both cross breed and bivoltine raw silk production has increased during XI plan.

Table 9.90 Raw Silk Production and Renditta in Uttar Pradesh

Year	Mulberry				Tasar		Eri	
	Bivoltine		Cross Breed		Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)				
2007-08	17	8	13	10	4.16	1000	6.00	
2008-09	25.10	7.98	17	10	4.15	1000	5.78	
2009-10	21.68	8	38.82	10	5.89	1000	6.00	13.30
2010-11	36.5	8	49.3	10	9	1000	8.00	13.30
2011-12	47.46	9.09	39.635	11.5	10.8	1000	15.4	13.30

Source: Data provided by Department of Sericulture, Uttar Pradesh

Table 9.91 Component wise Physical and Financial Achievement during XI plan-Uttar Pradesh

S.No	Name of the Scheme	Financial	Physical
Package for Seed Sector			
a) Mulberry			
1	Support for upgrading existing Seed / Grainage Units under Mulberry Sector	6.00	1
2	Assistance for Seed Testing Facilities in Public / Pvt. Grainages	4.80	4
b) Vanya			
i) Tasar			
3	Assistance to Private Tasar Graineurs	2.40	4
4	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)	1.25	1
5	Assistance to seed rearers (Nos)	4.50	100
ii) Eri			
6	a) Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos)	15.00	6
2 Package for Cocoon Sector			
a) Mulberry			
1	Support for Mulberry Plantation Development:(Ha)	44.00	1600
2	Assistance for irrigation and other Water Conservation and usage techniques : (Ha)	373.50	1494
3	Supply of Rearing Appliances	107.00	535
4	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine seed farmers (Nos.)	1.89	250
5	Assistance for Construction of Rearing Houses (RH) - Nos.	481.25	2975
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments: (Units)	6.90	8
b) Vanya			
i) Tasar			
7	Support to rearers for Augmentation of tasar host plantation (Ha)	15.84	165
8	Assistance for Construction of Cocoon Storage Houses in Tasar Sector	1.50	24
ii) Eri			
9	Support for Castor/Tapioca cultivators with Start-up tools (Half an acre unit)	31.82	5350
10	Construction of Rearing houses (Nos.)	847.84	2860
3 Package for Post Cocoon Sector			
i) Silk Reeling & Spinning Components			
1	Support for establishment of Improved Cottage Basin Reeling Units	10.00	8
2	Support for Hot Air Driers-Electrical/Multi- fuel/ Ushnakoties for Reeling Units 100 kg capacity (Nos.)	28.88	33
3	Assistance for Twisting Units	58.50	13
4	Incentive for production of Bivoltine Silk (MTs)	24.89	50.11
5	Quality linked price Support system for	45.00	2

	Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs		
6	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga	15.00	1
7	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop Soc./SHGs	0.22	
8	Support for Vanya Reeling/Spinning Sector a) Spinning (Nos) b) Reeling-cum-Twisting (Nos)	6.39 2.40	336 30
ii) Silk Weaving Components			
9	Support for establishing shuttle-less looms (each unit with 8 looms and 1 sectional warping machine)	607.34	24
	Support for Handloom Sector for Loom Upgradation		
	1. Support for Certified Handlooms specially designed	108.60	775
	2. Loom Upgradation through Jacquards (or dobby / pneumatic lifting machanism / Ball to beam conversion device etc.)	80.00	1600
10	3. Computer Aided Textile Designing (CATD)	47.50	19
iii) Silk Wet Processing Components			
	Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing :		
	1. Yarn Dyeing : 25 Kg. capacity	4.50	2
	2. Arm Dyeing : 50 Kg. capacity	81.00	9
11	3. Fabric Processing Facilities	18.75	1
4 Support Services Sector			
1	Entrepreneurship Development & Management Development Programmes.	0.50	
2	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	10.71	359
3	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.)	4.50	
4	Assistance to NGOs / SHGs & Agencies other than CSB & State for meeting administrative expenditure towards Project Implementation in the Vanya sector and in the Mulberry sector	3.97	
5	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	0.50	2
	Total for CDP	3104.62	

Source: Data provided by CSB, Bangalore

9.9.1 NPC Field Survey

9.9.1.1 Seed Graineurs

No Graineur was interviewed during field survey.

9.9.1.2 Cocoon farmers

NPC study team surveyed 21 cocoon farmers, out of which 13 were involved in mulberry sericulture, while 8 were involved in eri sericulture. All are involved in commercial rearing. All the repondents interviewed by NPC study team have availed CDP schemes during XI plan. The average of the respondent was at 44 years and the experience was at 5 years.

All the beneficiaries interviewed were male. 52% of the beneficiaries interviewed were Schedule caste, while rest of the beneficiaries belong to either BC or general category. 58% of the beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 26% were small farmers having land holding between 1 to 2 hectare, while 16% were semi medium having land holding between 2 to 4 hectares.

Table 9.92: Average Land Holding with Sericulture farmers**(Hectares)**

Category	Land Holding
Average Land Holding	0.78
Agriculture Irrigated	0.48
Sericulture Irrigated	0.14

Source: NPC field survey July-September 2012

Table 9.93: Impact of CDP on income generation**(Rs Thousand)**

Income	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities (Mulberry)	1	1	2	4
Income from Sericulture Activities (Eri)	2	2.1	3.12	4

Source: NPC field survey July-September 2012

Table 9.94 Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Commercial Cocoon			
Average No. of crops per annum	Cross Breed	4	4
	Eri	0	2
Average No. of DFLs brushed per crop (Nos.)	Cross Breed	162	208
	Eri	25	58
Cocoon yield per 100 DFLs (Kg)	Cross Breed	25	32
	Eri	40	37.98

Source: NPC field survey July-September 2012

9.9.1.3 Post Cocoon Sector

NPC study team surveyed 20 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.95**.

Table 9.95 Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Twisting Machine	1
CATD Designer	1
Handloom weaver	11
Shuttle less loom	7
Total	20

Source: NPC field survey July-September 2012

All the 20 beneficiaries interviewed were male. All the beneficiaries interviewed were either BC or General. The average experience of the respondents was 26 years. 30% of the beneficiaries interviewed were Graduate & Above, 20% had attended secondary standard, 15% had attended till primary education and 35% were illiterate.

Table 9.96. Type of Post Cocoon Beneficiaries**(Rs Thousand)**

Income of Post Cocoon Beneficiaries	2007-08	2008-09	2009-10	2010-11	2011-12
Handloom weaver	3.64	4.09	4.55	5.45	5.45

Source: NPC field survey July-September 2012

9.9.2 Field Survey Observation- Uttar Pradesh

Uttar Pradesh though may not be a traditional Sericulture state, but by virtue of having various agro-climatic conditions, is practicing both Mulberry & Vanya (Tasar & Eri) Sericulture. Various activities in these districts are carried out by Directorate of Sericulture with Headquarters at Lucknow. Sericulture districts in UP are classified in 4 regions:

1. Plain
2. Tarai/Eastern
3. Sonanchal
4. Bundelkhand

Out of seventy districts, Mulberry Sericulture is practiced in thirty eight districts, Tasar is practiced in nine districts and recently introduced Ericulture is mainly taken up in Kanpur Nagar Dehat and certain other adjoining districts such as Fatehpur etc. However, certain districts have both Tasar & Eri or Mulberry & Eri.

U.P., though is one of the biggest consumer of raw silk in the country (<5000 MT) but its annual raw silk production has reached around 50 MT. Its weavers pronounced areas are Varanashi, Mubarakpur and Azamgarh. This reveals that there is no dearth of marketing in the State and thus no doubt that the industry holds enormous potential for its development and further expansion. To support and supplement the efforts of Directorate of Sericulture, which owns substantial infrastructure, Central Silk Board has established its strong network of Extension, Development and post cocoon technology in almost all over the State.

Despite the industry being age old and efforts being put in by state no substantive growth of industry in terms of production of silk has taken place. However, due to constant coordination and monitoring from RDO, production is showing an increasing trend and production of cocoon Kg per/100 dfls in mulberry sector has also increased from 25.79 during 2004-05 to 38.00 during 2010-2011, which has shown increase from the X Plan.

Physical achievements for last five years are tabulated as under for comparative study of the industry in State:-

(a) Mulberry

S.No.	Particulars	Units	2006-07	2007-08	2008-09	2009-10	2010-11
1.(a)	Planted area	Acres	430.45	402.90	2053.66		3873.50
(b)	Area Existing	Acres	2364.56	1448.90	2031.11	2100	5973.50
2.	Production of dfs/	Lakh No.	3.45	1.67	4.01	6.29	8.040
3.	Utilization of dfls including CSB source	Lakh No.	7.40	7.19	9.53	12.766	17.075
4.	Cocoon production	MT	213.9	238.75	333.80	458.296	658.427
5.	Raw Silk	MT	23.50	29.84	43.75	50.00	72.33

(b) Tasar

S.No.	Particulars	Units	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Arjun plantation	Acre	2471.125		1025.10	522.00	322.00
		Nos.		1,52,000			
2.	Production of DFLs	Lakh No.	0.52	0.71	0.94	1.035	1.274
	Utilization of DFLs *	Lakh No.	1.07	1.12	1.31	1.66	2.05
3.	Production of Cocoons	Lakh No.	30.31	41.61	49.91	58.693	71.925
4.	Production of raw silk	MT	3.03	3.85	4.15	5.89	7.190

*Including CSB source

(c) Eri

S.No.	Particulars	Unit	2006-07	2007-08	2008-09	2009-10	2010-11
1.	DFLs produced/Reared	Lakhs	0.262	0.28	0.30	0.42	1.283
2.	Cocoon production	MT	17.49	6.96	7.23	19.20	47.84
3.	Raw Silk	MT	3.50		1.15	2.65	6.450

Post Cocoon Activities at Varanasi

During XI plan, support for establishing shuttle less looms, twisting Machines and support for upgradation of handloom etc. has been provided under CDP.

Most of the beneficiaries contacted had received the assistance during 2010-11 and due to delays from the supplier's end the machine could get established only at the beginning of year 2012. These machines were under trial runs; hence exact production figures could not be obtained.



Shuttle less Loom given under CDP during XI plan Period

Major Issues

1. There is need to improve leaf productivity of mulberry plants by replacing obsolete ones by improved ones. Pre-cocoon sector in the state needs a proper assessment. If the state can improve its pre-cocoon activities than it should be given extensive care otherwise the subsidies in this sector should be diverted towards post cocoon sector.
2. The actual area of each farm with mulberry plantation need to be reassessed.
3. Transfer of technology is not adequate. For effective TOT, extension work needs to be carried out vigorously. NGOs, SHGs etc need to be involved in CDP implementation.
4. Infrastructural support given during earlier years may be put to optimum use, scheme duplication should be avoided and should be taken care during XII Plan.
5. There is need to evolve strategy for eri silk production. Under the present situation seed supply has been a major constraint.
6. Support of more than a lakh rupees under the CDP scheme should be associated with some target. As for example, a subsidy of around Rs. 37 lakhs are being given for establishment of shuttles looms, than a target production of silk must be associated with the support, otherwise the machinery obtained under CDP may be used for poly-ester or cotton cloth production.
7. Regular feedback of the schemes is required to be kept so that track on developmental schemes can be obtained.

9.10 ASSAM

Assam is a Sericulture State having a vast potential for the development and expansion of all the four varieties of Silk. The Agro-climatic conditions prevailing in the State are well suited for Mulberry, Eri and Muga Sericulture development throughout the State. Assam is a unique State in which all four varieties of silk namely Mulberry, Tasar, Muga and Eri is produced. The practice of Mulberry silkworm culture is more in Upper Assam than Lower Assam. Muga is the monopoly of the State. It is reared in large-scale in the Brahmaputra valley. The hill areas bordering Assam are the best areas for Muga seed. Eri & Muga are reared through out the year in almost all the districts. Eri-culture is deeply ingrained in the ethos of the region. At present also Eri sector is not systematically developed hence it remained as a subsidiary occupation of the tribal families mainly for Eri pupae, which is edible and delicious.

Since Muga and Eri production is more in the state and flow of CDP funds under these sectors are more therefore for the purpose of evaluation of CDP, Muga and Eri farmers have been interviewed.

The details of Sector wise & component wise Physical and Financial achievement during XI Plan is given in **Table 9.97**.

Table 9.97 Sector wise & component wise Physical Target and achievement during XI Plan

Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Physical	
				Target	Achievement
PACKAGE FOR SEED SECTOR					
B ii)	ERI				
161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs	40	90:10:00	8	8
B iii)	MUGA				
171	Assistance to Muga Private Graineurs	1122		1020	1020
172	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure	364.55	90:10:00	23	23
PACKAGE FOR COCOON SECTOR					
A	MULBERRY				
211	Support for mulberry plantation development acres	59.815	80:10:10	1743	1743
212	Assistance for irrigation and other water conservation and usage techniques (Ha)	75.50	80:10:10	151	151
213	Supply of Rearing Appliances (Nos of acres/farmers)	348.60		1743	1743
214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers	32.79		1093	1093
217	Assistance for Construction of Rearing Houses (RH) - Model of Rs. 50,000/-	871.50	80:10:10	1093	1093
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments	24.15	80:10:10	7	7
219	Insurance Support (For all Sectors)	76.728	80:10:10	10000	10000

B ii)	ERI				
262	Augmentation of perennial Eri food plants with supply of Start-up tools	353.45	80:10:10	7069	7069
263	Construction of Rearing houses	3472.5	80:10:10	7069	7069
B iii)	MUGA				
271	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers	813.40	80:10:10	4900	4900
PACKAGE FOR POST COCOON SECTOR					
A	SILK REELING AND SPINNING COMPONENTS				
415	Support for establishment of Improved Cottage Basin Reeling Units	15.36	80:10:10	16	16
418	Hot Air drier 50 kg. capacity (Nos.)	12.12	80:10:10	24	24
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs	60.00	90:10:00	15	15
424	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga	100.00	90:10:00	1	1
427	Reeling-cum-Twisting units		80:10:10	100	100
428	Support for establishment of Spun /Spinning Mills	155.30		1	1
SUPPORT SERVICES SECTOR					
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	265.85	100% CSB	5317	1303
515	Publicity for the sector (Audio visuals / Printing/Exhibitions/BSMs/ Awareness programmes, Workshops/Seminars etc.)			17	8.5
520	Emphasis on Tribal areas	0.11	100%	30	30

Source: Department of Sericulture, Assam

Table 9.98 reports the share of CSB, Department of Sericulture, Assam and Beneficiaries under Catalytic Development Programme (CDP). Assam, being a special category, a funding pattern of 80:10:10 from CSB, State Department of Sericulture and Beneficiaries respectively have been followed. During XI plan, for Sericulture development in Assam Rs 95.97 crores were spent.

Table 9.98: Details of CDP implemented during XI Plan (2007-12)

Year	(Rs Lakh)			
	CSB's share	State's Share	Beneficiaries' Share	Total
2007-08	1465.00	210.81	172.75	1848.56
2008-09	389.00	65.24	34.36	488.6
2009-10	1162.00	98.069	102.071	1362.14
2010-11	2482.00	109.98	186.28	2778.26
2011-12	2403.00	479.10	237.455	3119.555
Total	7901.00	963.199	732.916	9597.115

Source: State Sericulture Department, Assam & Central Silk board

The details of beneficiaries covered under CDP in Assam State during XI plan are given in the **table 9.99** below.

Table 9.99: Sector wise number of Beneficiaries covered under CDP during XIth Plan

Sector	Total no. of beneficiaries covered	SC	ST	Others	Of which women
Seed Sector	1020	52	340	628	116
Cocoon sector	13726	1005	5557	7164	6311
Post Cocoon sector	216				
Support Services sector	28673				

Source: Department of Sericulture, Assam

9.10.1 NPC Field Survey

9.10.1.1. Seed Sector

NPC study team surveyed 3 Seed Graineurs. Two were involved in Eri and one was involved in Tasar sericulture. Eri Graineurs had availed the CDP scheme. CDP scheme has not been implemented for Tasar Graineurs. All the beneficiaries interviewed were male.

Table 9.100 Income from Sericulture activities

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income of Eri seed Graineurs	130	130	135	140	150
Income of Tasar seed Graineurs					20

Source: NPC Field Survey, July-September 2012

The CDP scheme was successfully implemented as per the feedback received from the respondents, they didn't find any difficulty in getting the assistance from CSB.

9.10.1.2 Cocoon

NPC study team surveyed 28 farmers from Cocoon sector. 6 are involved in Seed cocoon and 22 are involved in commercial cocoon activity. 4 beneficiaries interviewed were involved in Mulberry, 6 in Eri and 18 were involved in Muga sector.

Table 9.101 Income from Sericulture activities

Income	2007-08	2008-09	2009-10	2010-11	2011-12
Income of Mulberry cocoon farmers	28	28	29	36	44
Income of Eri cocoon farmers	155	159	163	168	175
Income of Muga cocoon farmers	69	73	79	84	89

Source: NPC Field Survey, July-September 2012

Table 9.102 Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Commercial Cocoon			
Average No. of crops per annum	Eri	2	2
	Muga	2	2
Average No. of DFLs brushed per crop (Nos.)	Eri	400	500
	Muga	250	350
Cocoon yield per 100 DFLs	Eri (Kg)	22.83	28.67
	Muga (Nos.)	5400	5800

Source: NPC field survey July-September 2012

The CDP scheme was successfully implemented in the state and they didn't face any difficulty in getting the assistance from CSB. All beneficiaries were satisfied by the way of implementation of the scheme.

d. Post Cocoon

NPC study team surveyed 15 post cocoon beneficiaries. 1 was involved in Eri sector, 2 were involved in Muga, while 12 were involved in Eri, Mulberry and Muga type of silk viz. Type of post cocoon beneficiaries interviewed is given in **Table 9.103**

Table 9.103 Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Vanya Reeling	5
Handloom weaver	10
Total	15

Source: NPC field survey July-September 2012

Table 9.104 Income of Post Cocoon Beneficiaries

(Rs Thousand)

Income of Post Cocoon Beneficiaries	2007-08	2008-09	2009-10	2010-11	2011-12
Vanya Reeling	90.00	67.50	82.50	117.92	126.67
Handloom weaver	73.90	95.30	78.20	79.00	79.80

Source: NPC field survey July-September 2012

Table 9.105: CDP Components not availed by the State and reasons thereof

Sl. No.	Name of the Component not availed by the state	Reasons for not availing
1.	Support to establish large scale Bivoltine Seed production Grainages in Public / Pvt. Sector	Proposal not received from private entrepreneurs
2.	Assistance for raising and maintenance of systematic plantation of Oak Tasar	Tasar culture is not practiced in plain areas of Assam
3.	Popularization of New Slow-Speed, (Twenty-end per Basin) Certified Multi-end Reeling Machines (18 basins - equivalent to 360 ends)	Multi-end reeling unit are not viable as production of cocoon is limited.
4.	Support for establishment of Pupae Oil Extraction Production and By-product utilization units	No appropriate technology available
5.	Corporate Participation in Sericulture	No proposal received from Corporate

Source: Department of Sericulture CDP questionnaire, Assam

9.10.2 Improvement or modification required in the components

- Approval of A.O.P. should be communicated to implementing agencies with the IInd quarter ending to facilitate state government to provide required matching state share.

- b) At least 2.5% of the total project cost may be earmarked for project administrative charges.
- c) Project monitoring and administrative cost may be incorporated for effective implementation and monitoring.
- d) Adequate provision for assisting Muga seed rearers should be made to address seed sector adequately.
- e) For Muga cocoon graineurs, provision for mounting hall should be incorporated in the project cost.
- f) Unit cost of rearing to be considered based on geographical terrain viz: Hilly terrains, plain areas and market price of construction material.
- g) Provided loom shed to the weavers to whom certified looms are supplied and also to the weavers who have got the loom upgradation.
- h) Replacement of plastic items with eco friendly articles there by helping local entrepreneurs.

9.10.3. Issues and bottlenecks in the implementation of sector wise components under CDP

1. Amount for construction of rearing of both Eri and Muga grainage house may be increased.
2. There is no administration and mobility cost in CDP Scheme, which are to be provided urgently.
3. Inadequate R&D support.

9.10.4. Field Observations.

- CDP scheme is one time scheme, i.e., if a farmer has availed a component/scheme under a five year plan he is not eligible for availing the same scheme in future.
- As the Muga silk cost is very high (Rs 8500 per kg), the weavers are weaving blended fabrics to maintain the cost economies. Also DoS Assam has implemented one component “Quality Support Link Price Scheme for Raw Silk and cocoons” under which a SHG is formed and they are provided with working capital of Rs 3.86 Lakhs and other equipments of the worth of Rs 1.14 Lakhs.
- In Assam much of the land is covered by forest. There is a need for Joint Forest Management System needs to be developed under which some area must be kept reserved for Eri or Muga plantation.
- In Assam more number of Seed Graineures need to be developed and should be covered under CDP.
- In Assam the prices of Muga cocoons (Commercial) goes very high sometimes even ` 14 per cocoon. So, there is a need of regulated Government Cocoon Market. Till now there is no cocoon market in Assam state.
- The main problem in implementing the CDP Schemes in the state of Assam is the raising of plantations as farmers are not willing to grow plantations for silkworm rearing.
- There is a lot of crop failure in case of Muga mostly because of the climatic conditions as the rearing activities have to be carried out at outdoors.
- In case of a crop failure the farmer loses all his invested money and becomes highly demotivated to carry on with sericulture.
- Besides this the farmers also tend to move to other agricultural activities like rubber plantation and tea plantation (especially in upper Assam). With the extensive growth of

the tea sector and high return on investment, the poor farmers are automatically attracted towards these kinds of agricultural activities.

- Also in most of the areas the tea gardens are located very near to the SOM and SUALO plantations, the insecticides and pesticides used in the tea gardens. The residual effect of these chemicals have a deadly effect on the silkworms and lead to crop failure
- Also it was reported that all the time the fund released is delayed up to more than a year. So by the time the funds are released, the plantation period is already over and the farmer again has to wait for more time
- When the state government officials were enquired about the delay in the release of funds, it was reported that it is mainly because of government procedure and also due to unavailability of equipment manufacturers in the area, the procurement of materials specially post cocoon machines is a big problem.
- One major problem noticed was the unavailability of an organized marketing system for buying and selling of cocoons. At present there is no functional cocoon market in the state, a new market is being set up but it is still yet to be functional. At present the farmers and the reelers sell their cocoons only through personal contact with agents and local buyers.
- This leads to a heavy fluctuation in the price of the cocoons. Exploitation of the farmers by private parties is a common incident.
- There is a huge gap in the monitoring activities and communication gap between state officials and the sericulture beneficiaries. In one of the discussions with a sericulture reeler and weaver it was reported that the reeler was unable to do any kind of processing of reeling units because of unavailability of cocoons (MUGA), on the other hand state government officials reported to have bought cocoons at MSP. Also during field surveys it was found that farmers had to sell cocoons at a price which is even below than the Minimum support price. This is a classic example of complete mismanagement.
- Due to unavailability of a cocoon market, farmers have to do their cocoon transactions through private parties and agents. This leads to exploitation of the sericulture farmers.
- During the survey it was reported that money received for building the rearing buildings and grainage buildings are not enough keeping in mind the escalating cost of the labor and transportation charge. In this regard it is noticeable that the transportation costs have to be paid by the beneficiary only. In hilly areas the transportation charges are very high.
- Beneficiaries covered under Beneficiary empowerment program, are concentrated only in some areas and steps should be taken up to emphasize on increasing this number in coming days.
- Eri Spinning machines has been allotted to the beneficiaries , but the beneficiaries often do not use the machines. They mostly prefer hand spun eri threads. Also it is worth mentioning that Eri spinning culture is mainly taken up as a leisure activity by the farmers, mostly women.
- Spinners also comment that the demand for hand spun eri thread in market is more than the machine spun eri.
- For Muga reeling machines available are muga reeling cum twisting machines, but the acceptability of the muga reeling and twisting machines is very low mostly in interior villages. They still prefer traditional way of reeling Muga in Takli.
- Many traditional issues are also associated with the Muga sericulturist. for e.g. if there is a death in somebody's family, they do not do any sericulture activity for 1 year. This also hampers the productivity of the area in case of any unfortunate incident.

9.10.5. Recommendations

- Presently many NGOs and SHGs are showing interest in Post Cocoon weaving sector in Assam State. The District Rural Development Agency (DRDA) has also been working towards this goal. This provides employment to many of the weavers in the state. Presently CDP component “Quality linked Price support Scheme for raw silk and cocoon” is being implemented for them during XI plan for these Self Help Groups (SHGs). Under this scheme working capital of Rs 3,86,000/- is provided . Besides working capital one cocoon drying chamber, one motorized Muga reeling machine, plastic basins etc. of the worth of Rs 1,14,000/- is provided. But no loom upgradation is being done under this component. These NGOs/SHGs still possess the traditional kind of looms (charkha). It hampers the finishing of weaved clothes. One more component of CDP for loom upgradation should also be implemented simultaneously for them.
- Joint Forest Management System: In Assam much of the land is covered by forest where plantation of wood (oak etc.) takes place. There is a need for Joint Forest Management under which some area must be kept reserved for Eri or Muga host plantation.

9.11 MEGHALAYA

Table 9.106 Sector wise & component wise Physical and Financial achievement during XI Plan – Meghalaya

(Financial in Rs Lakhs; physical in units)

S.No	Name of the Scheme	Financial	Physical
1	Package for Seed Sector		
a)	Mulberry		
1	Support for upgrading existing Seed / Grainage Units under Mulberry Sector (Unit)	24.00	3
ii)	Eri		
9	a) Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs (Nos)	40.50	9
iii)	Muga		
10	Assistance to Muga Private Graineurs (Nos)	131.12	149
11	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure (Nos)	42.80	3
2	Package for Cocoon Sector		
a)	Mulberry		
1	Support for Mulberry Plantation Development:	20.90	475
2	Assistance for irrigation and other Water Conservation and usage techniques (Ha)	23.20	58
3	Supply of Rearing Appliances	124.00	475
4	Supply of quality Disinfecting Materials and other crop protection measures for <i>Bivoltine seed farmers</i> (Nos.)	2.40	100
5	Assistance for Construction of Rearing Houses (RH) - Nos.	186.00	465
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments: (Units)	11.04	4
ii)	Eri		
15	Augmentation of perennial Eri food plants with supply of Start-up tools (in acres)	116.00	1450
16	Construction of Rearing houses (Nos.)	580.00	1450
iii)	Muga		
17	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers (Acres)	214.52	1631
3	Package for Post Cocoon Sector		
i)	Silk Reeling & Spinning Components		
4	Support for establishment of Improved Cottage Basin Reeling Units	8.00	4
7	Support for Hot Air Driers-Electrical/Multi-fuel/ Ushnakoties for Reeling Units 50 kg. capacity (Nos.)	4.61	6
11	Quality linked price Support system for Cocoons and Raw Silk - for State Govts./Co-operatives/NGOs/SHGs	38.70	1
14	Support for Vanya Reeling/Spinning Sector	12.96	439
	a) Spinning (Nos)		
	b) Reeling-cum-Twisting (Nos)	45.99	388
ii)	Silk Weaving Components		
17	Support for Handloom Sector for Loom Upgradation	22.40	100
	1. Support for Certified Handlooms specially designed for		
	2. Loom Upgradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.)	8.16	102
	3. Computer Aided Textile Designing (CATD)	12.00	3
4	Support Services Sector		
2	Vanya Silk Market Promotion Cell	1.89	
3	Entrepreneurship Development & Management Development Programmes.	3.11	
4	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	132.45	2649
5	Publicity for the sector (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc.)	23.99	
8	Cluster Development Projects through NGOs/SHGs / Support for Special SGSY Projects / Scheme of Fund for Regeneration	0.50	1

	<i>of Traditional Industries (SFURTI) etc.</i>		
9	Women Development Components	9.42	
a.	<i>New beneficiaries</i>	<i>1500</i>	
b.	<i>Renewed Beneficiaries</i>		
c.	<i>Creating toilets, rest rooms & creaches in Cocoon Markets</i>	0	
10	<i>Emphasis on Tribal areas</i>	0.66	6
Total for CDP		1841.33	

Source: Data provided by CSB, Bangalore

9.11.1 NPC Field Survey

9.11.1.1. Seed Sector

From Meghalaya state, 17 graineurs have been selected for the field survey. 94% of the graineurs are State Grainages and 6% are Licensed Seed Producers. All the respondents surveyed have availed CDP schemes and are happy with the scheme provided by the CSB and State. All the respondents have been found to practice Muga culture. Among the beneficiaries in Meghalaya 6% have availed CDP scheme during X plan and the remaining 94% availed CDP scheme during XI plan.

None of the grainage units reported any difficulties in receiving the CDP assistance. All farmers are satisfied with the support received through the CDP scheme for establishing the grainages. No graineur has the licensed quota of seeds.

Only a few grainages have reported the need for change in DFLs (Disease Free Layings) production technology. They want new technology to check the quality of DFL's. 94% farmers reported the need for change in DFL production technology.

The facilities with which private graineurs are being assisted with are Nylon nets, seed cocoon and different types of equipments. No graineurs have been found installing any modern technology equipment/ machines/ tools. All graineurs reported that quality certification is given for the seeds.

All the respondents have told that seed cocoons are available round the year and are satisfied with the quality of the seed. They are happy and satisfied because they get the seed cocoons on time and are available at their doorstep.

The inputs used in grainages are Potassium hydroxide, Microscope, Cover slip, Seri-cloth, Moth crushing set, table, stool, plastic buckets, bamboo tray and stand. All of them are provided with testing equipments. But with those testing equipments they are not able to detect Pebrine disease so they require advanced equipments so that they can detect the disease. Most of them are aware of the equipments that can be availed under the CDP scheme for testing and storage of seeds. The complaint from the respondents was that there are delays in getting those equipments. The time varies from 6months to 24 months.

9.11.1.2. Cocoon Sector

NPC study team surveyed 19 cocoon farmers, out of which 9 are involved in seed cocoon and 10 are involved in commercial cocoon. 11 farmers are involved in Muga sericulture, while 8 were involved in Eri sericulture. All the respondents were CDP beneficiaries. 64% of the interviewed beneficiaries were female. All the beneficiaries interviewed belong to Schedule caste. The average age of the respondents was at 43 years and experience was at 11 years. 32% of the

beneficiaries interviewed were marginal farmers having land holding below 1 hectare, 47% were small farmers having land holding between 1 to 2 hectare, while 21% were semi medium having land holding between 2 to 4 hectares.

A very few of the interviewed beneficiaries have bought the machines apart from what they got under Catalytic Development Plan. 60% Farmers reported that they face the problems in application/ utilization of the old and new technology provided to the farmer because of lack of funds.

The farmers in the State are aware of Catalytic Development Programme. All the farmers' reported that CDP schemes are helpful in increasing yield and increasing their income.

Table 9.107: Impact of CDP on income generation

(Rs Thousand)

Income	2008-09	2009-10	2010-11	2011-12
Income from Sericulture Activities (Eri)	36	37	41	44
Income from Sericulture Activities (Muga)		20	21	25

Source: NPC field survey July-September 2012

Table 9.108. Impact of CDP on production & Productivity

Category	Type of production	2007-08	2011-12
Commercial Cocoon			
Average No. of crops per annum	Muga	2	2
Average No. of DFLs brushed per crop (Nos.)	Muga	49	84
Cocoon yield per 100 DFLs (Nos.)	Muga	3929	2717

Source: NPC field survey July-September 2012

9.11.1.3 Post Cocoon Sector

NPC study team surveyed 4 post cocoon beneficiaries. Type of post cocoon beneficiaries interviewed is given in **Table 9.109**.

Table 9.109 Type of Post Cocoon Beneficiaries

Type of Post Cocoon Beneficiaries	Number of Respondents
Vanya (Eri) Reeling	4
Total	4

Source: NPC field survey July-September 2012

All the beneficiaries interviewed were female. All the beneficiaries interviewed belong to Schedule caste. The average experience of the respondents was 14 years.

Table 9.110 Income of Post Cocoon Beneficiaries

(Rs Thousand)

Income of Post Cocoon Beneficiaries	2007-08	2008-09	2009-10	2010-11	2011-12
Vanya Eri Reeling	21.00	32.75	37.25	40.25	45.00

Source: NPC field survey July-September 2012

Table 9.111 Components not availed by States and reasons thereof

SL.NO.	Name of the Component not availed by the state	Reasons for not availing
1	Support to establish large scale Bivoltine Seed production Grainages in Public/Pvt. Sector.	There is no private seed producers.
2	Assistance for raising and maintenance of systematic plantation of Oak Tasar.	At present Tasar is not pursued by farmers of the state)
3	Popularization of New Slow- Speed, (Twenty- end per Basin) Certified Multi-end Reeling Machines (18 basins- equivalent to 360 ends).	
4	Support for establishment of Pupae oil Extraction Production and Bye- product utilization Units.	
5	Corporate Participation in Sericulture	Does not exist in the state.
6	Assistance to NGOs/SHGs & Agencies other than CSB & State for meeting administrative expenditure towards Project implementation in the Vanya Sector and in the Mulberry sector.	No NGO's/SHG's are involved in implementation of the scheme.
7	Cluster Development Projects through NGOs/SHGs/Support for Special SGSY Projects/Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc.	Supporting by BRGF & RKVY
8	Women Development Components	Component not recommended by CSB
9	Emphasis on Tribal areas	The resource person should be enhanced.

9.11.2. Commercial Cocoon & Seed Cocoon Farmers (Eri)

- There is a problem of Uzi fly in Eri plantation prevailing in some clusters of Meghalaya.
- Average price of Eri commercial cocoon is Rs 150 per kg.
- Apart from Eri seed Cocoons farmers also get Eri cut cocoons (which has less potential to get converted into seeds) which is sold at Rs 350 per kg. On an average a farmer gets 3Kg of cut cocoons per year.
- In June 2009 there was a crop loss due to hail storm.
- Most of the farmers reported that they need bird trapping nets under CDP.
- Few Catalytic Development Programme (CDP) Eri farmers and Self Help Groups (CDP) working in Eri sector have availed rearing house, net, rearing tray, rearing stands, sprayers, motor. The farmers have got Rs 25000/- subsidy towards construction of rearing sheds.

9.12 Manipur

Table 9.112 DFL Production Details in Manipur

(Lakh Nos.)

Year	Mulberry		Eri	Tasar
	Bivoltine	Cross breed		
2007-08	3.56	5.455	26.62	2.94
2008-09	4.23	2.40	31.76	2.94
2009-10	6.76	1.140	35.00	1.51
2010-11	8.64	3.99	28.25	1.42
2011-12	11.09	5.06	30.14	1.53

Source: Department of Sericulture, Manipur

Table 9.113 Cocoon Production & Productivity in Manipur

Year	Mulberry				Tasar	
	Bivoltine		Cross breed		Cocoon Production (Lakh Nos.)	Cocoon yield per 100 DFLs (Nos.)
	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)	Cocoon Production (MT)	Cocoon yield per 100 DFLs (Kg)		
2007-08	415.92	45	254.08	44	0.07	1426
2008-09	544	49.5	128.00	40	0.06	1825
2009-10	575	53	175	35	0.05	2869
2010-11	507.65	53	200	39	0.06	2479
2011-12	608.14	48	178.89	34	0.08	2467

Source: Department of Sericulture, Manipur

Table 9.114 Raw Silk Production Details in Manipur

Year	Mulberry				Tasar	
	Bivoltine		Cross breed		Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)
	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Kg)		
2007-08	56	8.86	24	11.70	3	4257
2008-09	80	9.21	16	11.06	3	1825
2009-10	77	9.13	25	8.75	3.5	3827
2010-11	72	8.38	25	10.87	2	4553
2011-12	67.47	9.00	16.53	10.82	2.45	3059

Source: Department of Sericulture, Manipur

Bivoltine sericulture has increased in the state during XI plan, as DFLs, Cocoon and raw silk production increased during the period, however, the cross breed raw silk production declined from 24 MT to 16.53 MT. the bivoltine raw silk production increased from 56 MT to 67.47 MT.

Table 9.115 Component wise achievement and target of CDP under XI plan
(Financial in (Rs Lakhs and Physical in nos)

Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Target		Achievement	
				Financial	Physical	Financial	Physical
PACKAGE FOR SEED SECTOR							
A	MULBERRY						
111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector	32.00	80:10:10	32.00	4	32.00	4
113	Assistance for Seed Testing Facilities in Public/Pvt. Grainages (for quality seed production)	6.00	80:10:10	6.00	6	6.00	6

	Total for MULBERRY						
B ii)	ERI						
161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs	22.50	90:10:00	22.50	5	22.50	5
B iii)	MUGA						
171	Assistance to Muga Private Graineurs	44.00	80:10:10	44.00	50	44.00	50
172	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure	25.36	90:10:00	25.36	2	25.36	2
TOTAL FOR SEED PACKAGE							
PACKAGE FOR COCOON SECTOR							
A	MULBERRY						
211	Support for mulberry plantation development	41.97	80:10:10	41.97	954	41.97	954
212	Assistance for irrigation and other water conservation and usage techniques (Ha)	53.2	80:10:10	53.2	133	53.2	133
213	Supply of Rearing Appliances (including improved mountages)/farm equipments to farmers - for Bivoltine Sericulture Farmers	253.28	80:10:10	253.3	954	423.36	954
214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers	6.48	80:10:10	6.48	270	6.48	270
217	Assistance for Construction of Rearing Houses (RH) - Model of Rs. 50,000/-	381.6	80:10:10	381.6	954	381.6	954
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments	35.88	80:10:10	35.88	13	35.88	13
B ii)	ERI						
262	Augmentation of perennial Eri food plants with supply of Start-up tools	76.16	80:10:10	76.16	952	76.16	952
263	Construction of Rearing houses	499.6	80:10:10	499.6	1249	499.6	1249
B iii)	MUGA						
271	Raising of nursery of Muga food plants / Augmentation of Muga plantations with supply of farming tools / assistance to Muga silkworm rearers & seed rearers	43.16	80:10:10	43.16	325	43.16	325
PACKAGE FOR POST COCOON SECTOR							
A	SILK REELING AND SPINNING COMPONENTS						
412	10 Basins	24.00	80:10:10	24.00	3	24.00	3
415	Support for establishment of Improved Cottage Basin Reeling Units	26.00	80:10:10	26.00	13	26.00	13
418	Hot air drier 50 kg. capacity (Nos.)	9.216	80:10:10	9.216	12	9.216	12
420	Assistance for Twisting units	14.4	80:10:10	14.4	3	14.4	3
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs	31.50	90:10:00	31.50		31.50	
425	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop	3.00	100:00:00	3.00	4	3.00	4

	Soc./SHGs						
426	a) Spinning (Nos)	13.12	80:10:10	13.12	432	13.12	432
427	b) Reeling-cum-Twisting (Nos)	22.04	80:10:10	22.04	190	22.04	190
B	SILK WEAVING COMPONENTS						
452	1. Support for Certified Handlooms specially designed for [Parallel beat-up / Swing beat-up, Negative let off, 5-Wheel take - up, Separate cloth ruler along with Jacquard (240 hooks)]	15.68	80:10:10	15.68	70	15.68	70
453	2. Loom Up gradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.)	200.4	80:10:10	200.4	130	200.4	130
454	3. Computer Aided Textile Designing (CATD)	12.00	80:10:10	12.00	3	12.00	3
C	SILK WET PROCESSING COMPONENTS						
461	1. Yarn Dyeing : 25 Kg. capacity	9.60	80:10:10	9.60	4	9.60	4
	SUPPORT SERVICES SECTOR						
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.	59.7	100:00:00	59.7		59.7	
515	Publicity for the sector (Audio visuals / Printing/Exhibitions/BSMs/ Awareness programmes, Workshops/Seminars etc.)	18.81	90:10:10	18.81		18.81	
520	Emphasis on Tribal areas	1.5	100:00:00	1.50		1.50	
	TOTAL FOR CDP	1982.15					

Source: Department of Sericulture, Manipur

Suggestion on Existing Component:

Department of sericulture is of the opinion that the component under Post Cocoon Sector needs modification. Further, to increase the target of each component particularly in Post Cocoon Sector to provide the Machines etc. proportionately with the Stakeholders. The proportionate increase of Support Service Sector/Common Facility Centre scheme in Post Cocoon Sector would be instrumental for an effective and efficient implementation of CDP in the State.

Assistance to NGOs / SHGs , Agencies other than CSB and State for meeting administrative expenditure towards Project implementation in the Vanya Sector and in the Mulberry sector, Cluster Development Projects through NGOs / SHGs / Support for special SGSY Projects / Scheme of Fund for Regeneration of Traditional Industries (SFURTI) etc., Women Development Components and the Emphasis on Tribal areas were the components that are in consideration for integration in the of activities to be taken up for Implementation under CDP.

9.12.2 Issues and bottlenecks in implementation of various sector wise components/Schemes under CDP faced by the State Sericulture Department:

- (i) Delay in release of fund by Central Government/ CSB.
- (ii) Procedural delay in obtaining sanction from the State Govt.
- (iii) Procedural delay in procurement of equipments through tendering etc.

9.12.3. Field Survey Findings

- **Development of Support Service Sector/Common Facility Centre**

The proportionate increase of Support Service Sector/Common Facility Centre scheme in Post Cocoon Sector needs more emphasis for effective implementation of CDP in the State.

- **Systematic plantations**

Most of the farmers are found following unsystematic mulberry plantation in Manipur.

- **Lack of Technical knowhow among the farmers and DOS employees and Lack of Training**

Field Operating Units (FOU= 5 persons), the cocoon producers, reelers and DOS employees need to be provided with training and refresher training aimed on upgrading their existing know how for Silkworm rearing, Grainage (seed production) . The Training programme among the farmers and DOS employees could be extended by CSB units by means of opening a CSB unit. The equipments provided by the local technical office cannot be put to optimum use because they are out dated. They need more upgraded and modern machines. Beneficiaries do not know how to operate modern machines and/or any training to use the new equipments too.

- **Non existence of Private Cocoon buyers**

Cocoon sale has to be facilitated by DOS and CSB between buyer and rearers by development of Cocoon markets and establishment of Cocoon banks which is yet to take off in the state.

- **Reeling and Spinning Machines**

Reeling and spinning machines are being distributed to the beneficiaries of CDP for the year 2007-08. However, the knowledge of operating the machines had been found to be relatively less and training and exposure was required in this regard. Further, some of the Mulberry silk beneficiaries were found to be procuring Vanya Reeling and Spinning machines.

- **Transfer of Technology**

The level of extension services being provided to the Farmers need to be upgraded in both the pre cocoon and post cocoon sector.

- **Non availability of Muga farm with DOS and farmers**

As muga cultivation is also practiced in there state there is a requirement of establishing Muga farms by DOS and Farmers.

- **Lack of Rearing appliances and chemicals**

Rearing appliances and nylon net for muga worm rearing, microscope, slides , slide covers, etc. are required to be supplied by DOS besides chemicals for scientific and organized development of the sericulture sector .

- **Non availability of functional muga grainage in DOS (valley districts).**

Required to be established a farm cum grainage in the valley districts

- **Viability & acceptability of Eri Silk farming**

The state is congenial for 6 crops of Eri within a calendar year and the ease in rearing and of the Eri worms makes the particular variety more acceptable among the farming community.

- **Non awareness of the potentials of muga and eri in valley districts of Manipur**

Most of DOS employees are not aware about the muga and eri potentials in the state and its relative adaptability and suitability of the climate, therefore, awareness among the employees may be extended by CSB.

- **Non existences of Research/seed production units of Muga and Eri of CSB like Assam, Meghalaya inspite of existence of potentials and productions.**

Central Silk Board needs to establish a unit which can extend various technical supports and logistics. CSB can be a link between buyers, sellers and also function as guiding force at least for a period of 5-10 years. Department of Sericulture in Manipur needs to rope in CSB for establishment of CSB unit immediately.

- **Transportation to the city is a hurdle:**

The communication to the nearest city is a major hurdle. Only 1 or 2 buses ply in 24 hours. Sometimes due to political disturbances the buses stop plying for 3 – 4 days and sometimes even for weeks and there is no other way to reach the city.

- **Border Closed due to Political issues**

Whenever the border closes due to political issues their cocoon sale falls in spite of their production.

- **High cost and non-availability of support materials**

Though they have received machineries like water pump machines and room heaters, they cannot use it to the level required because of the cost incurred to operate them. Water pump machine require fuel, which is very costly in Manipur and room heater requires electricity which in most of the times is scarce. Buyers from outside are skeptic: The buyers coming from outside / other states to buy seed cocoons and raw silk face transportation problems and are skeptic of coming to these places again.

- **No insurance for DFLs:**

Since the DFLs cannot be insured, it leads to a major loss sometimes when there is any disease spread / natural calamities like storm, etc. The DFL gets destroyed even when there is no electricity for 2 to 3 days at a stretch, which is quiet frequent, and the room temperature cannot be controlled.

- **Delays in release of funds by Central Silk Board and Procedural delay in obtaining sanction from the State Govt.**

The Central Silk Board releases the funds of the current financial year at the end of the financial year which causes a delay in the financial allocation of the funds to the beneficiaries and affects the process of disbursement.

- **Procedural delay in procurement of equipments in tendering etc.**

The geographical location as well as the tendering process affects the procurement and supply of equipments.

9.13 Jharkhand

Table 9.116 Sector wise & component wise Physical and Financial achievement during XI Plan – Jharkhand

(Financial - Rs lakh; Physical in nos.).

Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Target		Achievement		Financial Achievement in %	Physical achievement in %
				Financial	Physical	Financial	Physical		
PACKAGE FOR SEED SECTOR									
B	VANYA								
B i)	TASAR								
151	Assistance to Private Tasar Graineurs (working Capital)				2600		2600		100
152	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)				32		32		100
154	Assistance to seed rearers				5100		5100		100
B ii)	ERI								
161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs								
PACKAGE FOR COCOON SECTOR									
A	MULBERRY								
211	Support for mulberry plantation development				300		300		100
212	Assistance for irrigation and other water conservation and usage techniques				35		35		100
213	Supply of Rearing Appliances				15		15		100
215	Assistance for Construction of Rearing Houses (RH) - Model of Rs.1,50,000/-				320		320		100
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments				1		1		100
219	Insurance Support (For all Sectors)				74.90		74.90		100
222	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics				15		15		100
B	VANYA								
B i)	TASAR								
251	Support to rearers for Augmentation of tasar host plantation				5263		5263		100
253	Assistance for Construction of Cocoon Storage Houses in Tasar				450		450		100

	Sector							
A	SILK REELING AND SPINNING COMPONENTS							
415	Support for establishment of Improved Cottage Basin Reeling Units				7		7	100
418	50 kg. capacity (Nos.)				17		17	100
419	100 kg capacity				15		15	100
424	Establishment of Cocoon Banks / Market Support to Vanya Sector - RMBs for Tasar, Oak Tasar, Eri & Muga				1		1	100
425	Providing Services of Master Reelers/Weavers/ Dyers to reeling/weaving/dyeing Units - through / for State Governments/ NGOs/Coop Soc./SHGs				10		10	100
426	a) Spinning	7.752		255		255		100
427	b) Reeling-cum-Twisting				160		160	100
B	SILK WEAVING COMPONENTS							
452	1. Support for Certified Handlooms specially designed				1110		1110	100
453	2. Loom Up gradation through Jacquards (or dobby / pneumatic lifting mechanism / Ball to beam conversion device etc.)				1211		1211	100
454	3. Computer Aided Textile Designing (CATD)				6		6	100
C	SILK WET PROCESSING COMPONENTS							
461	1. Yarn Dyeing : 25 Kg. capacity	21.60	80:10:10	9		9		100
462	2. Yarn Dyeing : 50 Kg. capacity				2		2	100
463	3. Arm Dyeing : 50 Kg. capacity				5		5	100
464	4. Fabric Processing Facilities				3		3	100
SUPPORT SERVICES SECTOR								
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.				3000		3000	100
515	Publicity for the sector (Audio visuals / Printing/Exhibitions/BS Ms/ Awareness programmes, Workshops/Seminars etc.)							
519	Women Development Components				50000		50000	100
TOTAL FOR CDP								

Source: Department of Sericulture, Jharkhand

9.13.2 Field survey Findings

- Production of DFLs in the year 2007-08 to year 2011-12 has increased from 35.4 lacs to 160.4 lakhs in case of Tasar and from 21293 to 99050 in case of Mulberry CB respectively.
- Similarly production of cocoons in the year 2007-08 to year 2011-12 has increased from 1.72 lakh kahan to 9.76 lakh kahan in case of Tasar and from 6.7 MT to 39.62 MT in case of Mulberry CB respectively.
- Whereas production of DFLs per 100 cocoons in the year 2007-08 to year 2011-12 has increased from 39.9 to 60.8 in case of Tasar and from 30 to 40 in case of Mulberry CB respectively.
- Production of Raw silk in the year 2007-08 to year 2011-12 has increased from 143 MT to 1025 MT in case of Tasar and from 1 MT to 2.13 MT in case of Mulberry CB respectively.
- However cocoon required for producing 1 kg of raw silk in the year 2007-08 to year 2011-12 has decreased from 988.7 to 952.3 in case of Tasar and from 11.6 to 11.04 in case of Mulberry CB respectively.
- No corporate has come forward in this sector.
- Support under CDP is given to tasar seed rearers, spinners, reelers and weavers. For pre cocoon only Resham Doot and seed rearers are getting support whereas commercial rearers are not getting any support under CDP. Therefore the commercial users are in demand of some support under CDP.
- As far as post cocoon farmers are concerned, they are given spinning machine/reeling machine/ weaving machine etc and are well trained in using these machines. Some of them are using individually whereas in some cases they are working in CFCs.
- In some CFC, each lady is making 1 kg of tasar thread in two days. After deducting cocoon cost of Rs 1700-1800 for 1000 cocoon and some overhead cost of Rs 200 required to make 1 kg of tasar thread should get about Rs1200 in 2 days. But they are paid wage basis @ of Rs 650 only for 1 kg of thread in one and half days. Therefore instead of Rs 600 every day they are getting only Rs 400 every day.
- Payment of wages are also getting delayed in CFC.
- In some cases, group formation of 10-12 people is necessary for getting machines. This mechanism is conceived by Jharcraft to ease collection of bulk finished products and making payments. However in the process, many individuals' remains deprived of machines despite getting trained.
- Jharcraft is purchasing most of the produce of the Resham Doot and their commercial members, however far off distance of PPO from their production centres is the most worrying part of the farmers and therefore demanding nearby collection centres for collection.
- RMB Tasar in Chaibasa village was set up by CSB under their central sector scheme "Seed Organisation & HRD".
- There are 15 Mobile disinfection units but they are yet to start.
- Certified handlooms are not provided under CDP, as they requires a height of minimum 15-16 feet where as the rooms of majority of weavers does not have height to accommodate these looms. Moreover these looms are electricity driven, which is also scarce in most of the villages.

- Health insurance is available almost to CDP beneficiaries' i.e. rearers, spinners, reelers and weavers. Most of the cases, they are availing the medical facilities even in some of the villages, state government has made doctors visit compulsory on specific dates.
- There is no provision of toilets, rest rooms and crèche for women.
- In mulberry, there is inadequate irrigation facility

9.13.3 Suggestion

- There is requirement of grainage houses
- The amount sanction for the construction of grainage houses is very low, therefore the amount earmark for purchase of seed cocoon may be shifted for the construction of grainage houses.
- Present allotted amount of Rs 50000 for construction of grainage house under CDP is not sufficient; it should be increased to minimum of Rs 1 lakhs. Provision for repairing and maintenance of grainage house should also be made
- More reeling/ spinning machines may be made available to the women in many villages. Some of these women have not received any training under CDP.
- Jharcraft is buying the product from reelers/ spinners from different villages. But their office are centralized therefore release of payments against finished products to these reelers/ spinners gets delayed. Payment of finished product i.e thread may be released early.
- Advance training particularly on technology advancement should also be given for increasing the cocoon yield
- Net is provided only once under CDP. This is not easily available in the market, hence new nets should be made available at subsidized rates.
- Rates for augmentation of trees should be increased
- Provision of rearing net and tarpaulin to commercial rearers as well.
- CFC should have the facilities of toilets, rest rooms, sitting arrangement, drinking water and crèche for women.
- Provision of spinning machines for the wastes as well.
- Provision of doobby and jacquard machines to weavers
- Availability of motorized spinning machines
- Pressure cooker should be included in consumable items particularly for post cocoon activities
- Assistance of marketing of cocoon should be included in CDP.
- Diagnostic facilities should also be included within health facilities.
- Crop insurance should be made available so that losses due to disease, drought etc can be compensated
- Barbed wire fencing for prevention of plants from animal grazing should be provided under CDP for mulberry
- Cocoon dryer should be provided under CDP for mulberry
- Irrigation resource development/funds may be enhanced under CDP for mulberry.

9.14 CHHATTISGARH

Table 9.117: Financial and Physical Targets and Achievements under CDP during XIth plan

Rs Lakhs & Nos

Scheme Code	Name of the Scheme	Total Amount given under components	Funding Pattern (CSB: State: Benef)	Total XI Plan (2007-12)				Financial Achievement in %	Physical achievement in %
				Target		Achievement			
PACKAGE FOR SEED SECTOR				Financial	Physical	Financial	Physical		
A	MULBERRY								
111	Support for upgrading existing Seed/Grainage Units under Mulberry Sector	16.00	80:10:10	16.00	2	16.00	2	100	100
B i)	TASAR								
151	Assistance to Private Tasar Graineurs (working Capital)	0	80:10:10	99.20	124	99.20	124	100	100
152	Assistance to strengthening of tasar seed multiplication infrastructure (No of PPCs)			60.75	27	60.75	27	100	100
154	Assistance to seed rearers			54.00	900	54.00	900	100	100
B ii)	ERI								
161	Assistance to State Depts., for Strengthening of existing Eri farm cum Grainages including assistance to Seed Rearer cum Private Graineurs			13.5	3	13.5	3	100	100
A	MULBERRY								
211	Support for mulberry plantation development			15.04	310	15.04	310	100	100
212	Assistance for irrigation and other water conservation and usage techniques			97.60	244	97.60	244	100	100
213	Supply of Rearing Appliances			159.20	470	159.20	470	100	100
214	Supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers			4.56	210	4.56	210	100	100
216	Assistance for Construction of Rearing Houses (RH) - Model of Rs. 1,00,000/-			204	220	204	220	100	100
218	Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing centre (CRC) building and procurement of chawkie rearing equipments			21.80	7	21.80	7	100	100
B i)	TASAR								
251	Support to rearers for Augmentation of tasar host plantation			345.60	2700	345.60	2700	100	100
253	Assistance for Construction of Cocoon Storage Houses in Tasar Sector			17.50	70	17.50	70	100	100
B ii)	ERI								
261	Support for Castor/Tapioca cultivators with Start-up tools			20.74	2375	20.74	2375	100	100
263	Construction of Rearing houses			104	260	104	260	100	100

A	SILK REELING AND SPINNING COMPONENTS								
417	Support for Setting up of Certified Dupion Silk Reeling Units (10 KG. / 20 KG. - Prorata basis)			1.60	1	1.60	1	100	100
418	50 kg. capacity (Nos.)			3.20	4.00	3.20	4.00	100	100
419	100 kg capacity			3.20	4	3.20	4	100	100
423	Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs			54.00	1	54.00	1	100	100
426	a) Spinning			4.864	160	4.864	160	100	100
427	b) Reeling-cum-Twisting			30.20	250	30.20	250	100	100
428	Support for establishment of Spun /Spinning Mills								
SUPPORT SERVICES SECTOR									
514	Beneficiary Empowerment Programme conducted by States and Seri related exposure visits.			32.00	640	32.00	640	100	100
515	Publicity for the sector (Audio visuals / Printing/Exhibitions/BSMs/ Awareness programmes, Workshops/Seminars etc.)			20.70	5	20.70	5	100	100
TOTAL FOR CDP									

Source: Data compiled from the DOS, Chattisgarh

Recommendations

- Farmers feel that CDP scheme need to be plantation based and CDP component should be more for the plantation.
- There is scarcity of land under the state sericulture department. Plantation area is not adequate enough to extend sericulture. New plantation scheme need to be formulated in such a way that it help in extension of plantation area.
- There is no crop insurance scheme available in the state. Sometimes wild animals destroy the plant as well as silk worms in that case they lose everything.
- All the beneficiaries are working under the control of sericulture department.
- Lack of training: - Farmers require training of using modern techniques and equipments in this field to get more quantity production.

CHAPTER X

SWOT ANALYSIS

10.1 SWOT ANALYSIS FOR THE MULBERRY SECTOR

STRENGTHS	WEAKNESS
<ul style="list-style-type: none"> • Strong domestic demand, • Well established infrastructure facilities, • Favorable policy options from the government, • High employment opportunities • Strong tradition and cultural bonding • Low investment w.r.t. other crops • Low Gestation period <i>vis a vis</i> others. • Extensive network of R&D institutions. • Availability of experienced scientists. • Elaborate extension and training activities. • Wide spread of sericulture activities across 26 states. 	<ul style="list-style-type: none"> • Small and fragmented production bases, • Inadequate emphasis on quality of seed in private sector, • Non-acclimatization of bivoltine in Indian conditions, • Inconsistency in output quality, • Poor Technology absorption, • Thin margins and inadequate supportive systems for raw silk yarn disposal, • Absence of quality pricing system. • Unavailability of robust climate specific silkworm races. • No recruitment in the recent years affecting the core activities. • Lack of continuous supply of quality cocoons to Automatic reeling units.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Generate rural employment and discourage urban migration, • Increasing demand for eco-friendly natural fibres in the export market, • Liberalized policies of Govt. of India, • Women oriented, therefore leads to women empowerment. • Gainful employment to poor and women. • Women empowerment in rural areas. 	<ul style="list-style-type: none"> • Declining area under mulberry cultivation. • Rapid industrialization and urbanization is displacing sericulture from its traditional belts of Karnataka and Tamilnadu. • Migration of sericulturists to other industrial sectors, • Price volatility in cocoon and raw silk yarn, • Dumping of raw silk yarn from China, • Frequent changes in Govt. policies towards Sericulture like decrease in antidumping duty, • Dwindling water resources and climatic changes, • Falling capabilities of States to undertake investments on the basis of sector priorities, • Reluctance of younger generation to take up sericulture activities.

10.2 SWOT ANALYSIS FOR THE NON-MULBERRY SECTOR:

STRENGTHS	WEAKNESS
<ul style="list-style-type: none"> • Availability of naturally grown host plants on the forest lands, • Market demand for eco-friendly natural products, • Higher participation of tribal communities, • High demand for ethnic and traditional vanya silk designs in global market. • Novel ways of extension of Tasar and Eri culture among tribal population. • R&D activities in Tasar, Eri and Muga culture. • Well integrated extension work. 	<ul style="list-style-type: none"> • Productivity depends on the vagaries of nature, • Weakening forest ecosystem due to global warming, • Database of poor reliability, • Fluctuations in productivity and quality due to diverse range of practices, • Lack of improvements in post cocoon sector.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Contribute to inclusive development of tribal communities in their natural habitat, • High demand in global markets. • High levels of acceptance among tribal population. • Gainful employment to tribals and women in the interior regions. 	<ul style="list-style-type: none"> • Dwindling food plant base due to deforestation, • High production cost, • Uncertainties in crop output. • Poor storage facilities for cocoon • Poor market network and exploitation by middlemen. • Lack of quality consciousness.

CHAPTER XI

RECOMMENDATIONS

This Chapter recommends the modifications and changes required in the components. It also suggests the additional measures that may be included in the scheme to make it much effective and beneficial. Majority of the components are suggested to be continued considering the level of acceptability among the Stake holders and the impact on production and productivity.

Since the crop pattern, agro-climatic conditions, sectoral priority, input requirements are different for different zones of the country, zone based interventions need to be considered for effective implementation of CDP. The zone wise Recommendations are given below:

SECTOR, CATEGORY & REGION WISE RECOMMENDATIONS

Seed Sector

11.1.1 Mulberry

11.1.1.1 Southern India

- Utilization of grainages/ LSPs capacity in the state of Karnataka, Tamilnadu and Andhra Pradesh may be reviewed and these grainages may be suitably upgraded under CDP.
- Demand for DFLs needs to be estimated well in advance for better linkages and supply chain across various sericulture clusters.
- Shortage of trained manpower and also the dearth of suitable training/refresher courses are negatively affecting the grainage operations. Regular refresher training along with suitable skill upgradation is essential to produce quality seeds.
- Under the component “Support to establish large scale Bivoltine Seed production Grainages in Public / Pvt. Sector” bivoltine seed production of NSSO Bangalore grainage or Zonal grainages may be enhanced. The scheme may be extended to the Cross breed seed production units depending upon the feasibility. Few good existing grainages may be identified in southern states on the basis of infrastructure availability and ensure optimal use of facilities. These grainages may be supported under CDP scheme.
- There is a requirement of a comprehensive Quality Certification System across seed production units under State & Private Sector. It is recommended that strict regulatory role needs to be played by CSB.
- Seed testing should be made mandatory for all seed grainages both LSPs as well as State owned. The LSPs should be encouraged to avail these testing facilities. In order to support them to establish testing facility in the grainage, support may be provided for modernizing/developing seed testing labs, procuring equipments.
- State owned basic seed farms lack infrastructure and technical support. Most of them lack requisite facilities for basic seed multiplication. The Seed Act prescribes for adhering to certain quality norms in seed farms for ensuring disease freeness in the next multiplication level. These seed farms need to be strengthened.

- Support to upgrade State and private commercial seed production units.
- Under the Seed Act, there are strict norms for the production of commercial seed in all the seed production centres, including private units. However, it was observed that most of the grainages in State and private sectors are not logistically equipped to take this onerous task nor they have the resources to equip with additional facilities. Under these circumstances, it is proposed to support the State and private grainages to up-grade their facilities to produce seed in conformity with the quality norms prescribed under the Seed Act.
- All seed producing agencies need to be motivated to go for ISO certification as a part of quality seed production.

11.1.1.2 North Himalayan Region

- The existing bivoltine seed grainages may be strengthened and their capacity may be augmented under CDP scheme. There is a need to renovate the cold storage plant at SSPC Dehradun. These grainages may be equipped with adequate testing facilities along with ISO certification.
- Infrastructure upgradation is required at Basic seed farms.
- The state owned grainage is not operational in Himachal Pradesh. The operations may be resumed in the grainage.
- The non availability of requisite manpower along with suitable training/refresher courses adversely affects the grainage operations. Regular refresher trainings along with suitable skill up gradations are essential for scientific management of grainages.

11.1.1.3 Northern & Central India

- In Maharashtra, SSPC Gandhilaj, was upgraded under CDP scheme in 2008-09 which has started the production of Kolar Gold and Bivoltine hybrid DFLs. The centre has now been successfully producing 8 Lakh Kolar Gold and 2 Lakhs Bivoltine DFLs. For the purpose, centre has selected 20 progressive seed rearers. Demand of DFLs in the state is around 26 Lakhs has shown an increasing trend. The farmers of Maharashtra are buying DFLs from NSSO Karnataka. Another SSPC with higher capacity may be established in Pune district, which is the biggest sericulture cluster in Maharashtra.
- Infrastructure upgradation is required at Basic seed farms.
- For addressing Quality Certification System in practice in the seed production units under State & Private Sector, it is recommended that Strict regulatory role needs to be played by CSB. Also the seed testing should be made mandatory for all seed grainages. All seed producing agencies need to be motivated to go for ISO certification as a part of quality seed production.
- Support to get ISO / BIS Quality Seed Certification for Silkworm seed units (P1 and P2 Grainages) are initially meant for state sericulture department of southern states like Tamilnadu and Karnataka. These facilities need to be extended to other needy states to derive the benefit of the CDP component.

11.1.1.4 Eastern Region

- West Bengal has a good infrastructure for Seed production. The state has more than 200 grainages for seed production. There is a lack of technical know-how among graineurs resulting in poor detection of diseases.
- Infrastructure upgradation is required at Basic seed farms.
- The Private Graineurs in the state are to be trained and supported to produce quality seed. They also need to be encouraged by way of providing equipments.
- It is recommended that the graineurs with good infrastructure may be identified and promoted.

11.1.2 Vanya

11.1.2.1 Tasar Seed

11.1.2.1.1. Jharkhand, Chattisgarh, Orissa

- There is a need to involve more private participants in this activity for meeting the higher seed requirement during XII Plan. Potential entrepreneurs may be trained in seed production and support may be provided for the construction of Grainage building, insurance & maintenance of building/ equipment, purchase of grainage equipments, consumables, seed cocoons etc.
- In Jharkhand, Chattisgarh and Orissa, cellular seed testing facilities and practices need to be further encouraged among Private Tasar Graineurs, if need be, additional equipments may also be provided.
- More allocation for components Assistance to strengthening of tasar seed multiplication infrastructure & Assistance to Tasar seed rearers may be sought as these components have high acceptability in Jharkhand, Chattisgarh and Orissa. The units which have already received assistance require continuous support and need to be optimally utilized.
- Disease free seed cocoons are the prime source for quality tasar production. To ensure disease freeness of the seed crops, Mobile testing units (4/3 wheelers) with necessary material and manpower may be engaged. These mobile testing units may be well equipped with laboratory equipments, chemicals and consumables.

11.1.2.1.2. North Himalayan Region (Oak Tasar)

- The component Assistance for strengthening of seed multiplication infrastructure for Oak Tasar may be continued. Assistance may be provided for creating basic facilities like infrastructure, development for farm, equipments etc.

11.1.2.2. Eri Seed (Assam, Meghalaya and Manipur)

- There is a need to strengthen existing State Department owned Eri farm cum Grainages and to establish new grainages in the states of Assam and Meghalaya. It is recommended that more financial allocation may be sought for Eri sector under CDP.
- Private Graineurs may also be considered for providing support under Eri sector on the lines of Muga and Tasar sector.

- Eri private graineures may be identified and trained on processing and production of disease free layings. The graineurs may be assisted with necessary technical support, grainage building, improved moth testing by centrifugal (Fujiwara) method and consumables.
- In Eri sector, majority of the seed is being produced by farmers themselves in an unhygienic manner resulting very low productivity. The involvement of seed rearers in the seed production chain need to be introduced and strengthened for the establishment of systematic Eri seed production Scheme in the country. Therefore, Eri seed rearers may be assisted towards plantation maintenance and equipments for rearing.
- To develop systematic Eri Seed production and multiplication system in the country, it is necessary to involve State units in the basic seed multiplication process. During X and XI Plan period, 93 Eri farm cum grainages have been supported at State level. Some of these Farm cum grainages need to be converted into full fledged basic seed production units. These units will receive the nucleus seed from CSB and undertake two levels of seed production process to produce P₁ DFLs required for the commercial seed production units.
- There is a need to develop organized Eri seed supply system.
- As majority of Eri seed is produced in private sector, it is necessary to undertake surveillance of Eri seed production areas to ensure disease freeness of seed cocoons.

11.1.2.3. Muga Seed (Assam and Meghalaya)

- In Muga sector, inadequate supply of quality silkworm seed is one of the major constraints. The existing Muga private graineurs are not producing the DFLs at the expected level due to poor economic conditions prevailing in NE region. If continuous support is not provided, these private seed production units will not be able to produce DFLs on sustainable basis, which may affect the muga seed production and supply process. It is therefore proposed to support these existing Muga Private Graineurs for upgradation of seed production capacity.
- There is a need to revise the assistance provided to Muga Private Graineurs under CDP scheme. Cost of Muga seed cocoons is very high. It has been observed that Graineurs in Meghalaya buy Muga seed cocoons at uncontrolled high prices of Rs. 3-5 per Seed Cocoon. Under CDP a revolving capital of Rs 20,000 for buying seed cocoons is provided to Muga Graineurs but it has been reported that the same is not enough. Therefore, it is recommended that the assistance to Graineurs for buying seed cocoons may be increased to Rs 30,000/-.
- Department of Sericulture, Assam and Meghalaya have reported increase in Muga silkworm food plants acreage due to CDP interventions. However corresponding requirement of Muga seeds could not be supplemented due to shortfall in seed production to utilize entire effective plantation. The capacity of existing Government owned Muga seed production centre may be assessed and strengthened suitably for optimal production in Assam and Meghalaya. If there exists any further gaps the scheme may be utilized for establishing new grainages.
- More Muga seed zones may be established in cooler areas due to change in climatic conditions.
- Most of the Muga seed rearers produce seed cocoons in unhygienic conditions with poorly maintained plantation, without separate shed for cocooning and spinning and other

equipments for quality seed cocoon preparation. Hence, it is proposed to assist Muga adopted seed rearers for undertaking cultural operations, plant protection inputs, and construction of mounting hall cum watch and ward shed, nylon net and other equipments so as to produce quality seed cocoons.

11.2 Cocoon Sector

11.2.1 Mulberry

11.2.1.1 Southern India

a) Support for Plantation Development

- Department of Sericulture may approach the State Governments for inclusion of the mulberry food plant nursery raising activities under MGNREGA projects for raising mulberry saplings.
- Currently unit cost for the component “Support for Mulberry Plantation” is Rs 5500/- per acre towards preparation / Cost of Cuttings, Inputs (FYM, chemical fertilizer, irrigation and pesticides) for raising saplings / direct plantation / Transportation cost. Since this amount is not sufficient, the cost may be revised upwardly.
- Most of the farmers prefer saplings for plantation instead of propagation through cuttings. The saplings also could be used for replacement of old mulberry plantations, gap filling etc. To facilitate large scale production of saplings on commercial scale as an economic enterprise, it is proposed to introduce establishment of Kissan Nurseries. Department of Sericulture, Karnataka, is already supporting it in their annual state plan schemes.
- “Vermicompost”, promotes faster growth of plants, increases crop yield, increases water-holding capacity of soil, easy to produce and low cost, reduces salinity, acidity, induces resistance to pest and disease attack, enhances soil productivity, increases crop yield with less irrigation, lowers risk of crop loss due to pest attack resulting in better crop. This component was approved by Govt. of India as additional inputs to CDP during the X Plan, but was not continued in XI Plan. There has been good progress under this component in X Plan and many State DOS have requested for its re-introduction in XII Plan.

b) Drip Irrigation

- Drip Irrigation scheme need to be promoted in the states such as Karnataka, Tamilnadu and Rayalaseema and Chittor regions of Andhra Pradesh where there is an acute problem of water shortage.
- Presently, under CDP, assistance is provided for an area of 1 Hectare for drip irrigation system. Because of this constraint on the area coverage, the farmers who are having more than 1 Ha of land limits their sericulture host plant cultivation to 1 Hectare only. A subsidy of Rs 37500/- per Ha is given under this component. It is recommended that the area limit may be revised upwardly so that big farmers who have large area under their disposal also would be incentivized to practice sericulture in their farm lands.
- It is suggested that the allocation in the component may be enhanced and a suitable proportion of the funds may be earmarked for big rearers.

- Majority of the sericulturists in Southern states cultivate mulberry in rainfed conditions. With the increasing scarcity of water in many areas, it is critically important to introduce innovative technologies to enhance the water conservation ability of the soil.

c) Supply of Rearing Appliances for Bivoltine Farmers

- The CDP component “Supply of rearing appliances for Bivoltine farmers” may include farm mechanization equipments like mini power tillers, matured silkworm seed separator, weed cutter, branch cutter along with proper training facilities etc. The unit cost of the component may be enhanced suitably. The targets and allocations for supplying of rearing appliances need to be substantially enhanced in a phased manner.
- It is also recommended that the scheme on supply of rearing appliances may be extended to Multivoltine and Cross Breed farmers too as most of the farmers in southern states are depending on these crops.

d) Supply of Quality Disinfecting Materials

- The component on supply of quality Disinfecting Materials and other crop protection measures for Bivoltine Seed farmers may be extended to commercial cocoon farmers too. There is a need to ensure timely availability of quality disinfecting material and other crop protection measures with the farmers.

e) Assistance for construction of rearing sheds

- Farmers are hesitant to avail this component as beneficiary share is quite high. Micro-financial institutions or other financial institutions may be encouraged to provide loan in order to reduce the beneficiary’s burden and to ensure better construction of rearing sheds.
- Due to increase in price of raw material and labour component, the unit cost of rearing sheds has gone up in southern states. The unit costs for the rearing sheds were revised after the midterm evaluation, but farmers reported that this is still not adequate. The unit cost of Rs 75,000 for rearing shed was revised to Rs 1 Lakh. Assistance for construction of rearing sheds may be further increased to Rs 1.25 Lakhs. During field surveys, it was reported that it takes Rs 2.75-3.00 Lakhs for construction of rearing sheds while Government provide Rs 75,000.
- In Andhra Pradesh many new farmers who have land holding of less than one acre are showing interest in adopting sericulture. The CDP scheme may be extended to those farmers who have less than one acre mulberry plantation. These farmers may be considered for sanction of Type-III (Mini) rearing sheds with a size of 20x18x13 (360 sqft.) with unit cost of Rs 50,000/-.
- Since the maintenance cost is a major concern for the farmers, it is recommended that a new component on “Maintenance of rearing sheds” may be included under the CDP scheme.

f) Assistance for maintenance of Chawkie gardens, construction of Chawkie rearing Centre (CRC) building and procurement of chawkie rearing equipments

- The implementation of this component may be continued more vigorously. More number of CRCs needs to be established in Southern states. Big farmers having land of more than 5 acre may be selected for establishing chawkie rearing centers. Formal induction training may be provided to them and refresher trainings also need to be organized to keep them updated with technology and scientific management practices.
- Targets for CRCs should be planned in such a way that adequate number of chawkie Rearing Centres may be opened in all commercial cocoon clusters.
- Chawkie reared worms are very delicate worms. They should be transported to the farmers under controlled temperature conditions. Southern states especially Andhra Pradesh and Tamilnadu generally have high levels of humidity and temperature. Therefore, it is recommended that a suitable vehicle having temperature and humidity controlling equipments may be given to chawkie rearing centers under CDP.

g) Insurance Support

- Lack of interest shown by the Insurance companies towards sericulture sector is hampering the implementation of this component.
- Currently there is no coverage under insurance for crop loss due to pest attack. Two years back due to Papaya Mileau bug a significant portion of crop was lost in Tamilnadu. The crop insurance part of the scheme, if given, shall be of much respite in such cases. It is recommended that crop loss due to pest attack may also be covered under Insurance support.

h) Setting up of Production units for Biological inputs

- The R&D Institutions have made a number of innovations where microbes have been isolated and cultured which can be used either to enrich the soil fertility or control the diseases or Bio-pesticides / Bio-control agents and other plants / animal products used in sericulture. It is proposed to commercialize these innovations through qualified entrepreneurs, through collaborative efforts, if required.
- Training of target group needs to be undertaken on this CDP component.
- Since it is a very important component of integrated nutrient management, where state departments may not have sufficient knowhow there is a requirement of strengthening the bondage between state departments and research institutions.

i) Door to Door Service Agents for Disinfection and input supply

- It is proposed that Mobile Disinfection units may be established. Progressive farmers owning a minimum mulberry plantation of 5 acres may be allotted a Mobile Disinfection unit consisting of one four wheeler (Mini Tractor/Mini Van) and two disinfectant tanks with two high pressure sprayers and other essential accessories.
- At least one Mobile disinfection unit should be located in the clusters based on the requirement. The total cost has been estimated at approx Rs 4 Lakhs. & 70 % of the cost may be shared equally between DOS and CSB at 35% each and the rest 30% to be borne

by the beneficiaries. Similar kind of four units are already in operation in Andhra Pradesh.

j) Assistance for Lead Farmers Training

- This component needs to be encouraged for better technology transfer.
- Remuneration/stipend may be provided to the lead farmers as an incentive to attend the training.
- The training modules and implementation of the training programmes by the lead farmers should be continuously monitored to harness the benefits of the scheme.

k) New component on giving incentives on Bivoltine Cocoon production

- To encourage the farmers of southern states for taking Bivoltine crop, an incentive of Rs 30 per Kg for bivoltine cocoon produced may be provided.

11.2.1.2 North Western Himalayan Region

- Department of Sericulture, Himachal Pradesh, may approach the State Government to integrate the raising of mulberry saplings under MGNREGA projects to raise mulberry saplings.
- In Himalayan regions Co-operative societies may be established for cocoon production. State Department of sericulture may identify suitable land for host tree plantation and obtain these lands on lease. DoS may identify farmers and encourage them to take crops.

11.2.1.3 North Eastern Region

- The mulberry plantations in NE States are far away from the dwelling houses and there is a problem of grazing by cattle and other animals resulting in destruction of mulberry plantation. Regular watch and ward is not practical for the farmers. If support is provided for low cost fencing of the mulberry plantation it can sustain the plantation for higher leaf yield and increased cocoon production.
- Mounting of silkworms for cocoon formation is one of the crucial phases in silkworm rearing. The rearing houses may be constructed nearer to the plantation, where there is no facility for indoor mounting. Therefore, the NE States have requested for support for extending the existing rearing houses constructed in X and XI Plans for silkworm mounting. This will increase the production & productivity of cocoons, which is presently much below the national average in NE region.

11.2.2 Vanya Cocoon Sector

11.2.2.1 Tasar Cocoon

11.2.2.1.1. Tasar (Jharkhand, Chattisgarh, Uttarakhand and Orissa)

a) Support to rearers for Augmentation of Tasar host plantation

- After mid term evaluation the unit cost of the components was revised. Earlier Rs 16,000/- per hectare towards augmentation of tasar host plantation used to be given which has now been increased to Rs 40,000.
- Eco Race development projects should be taken up to promote production of natural tasar on forest plantation.
- In order to enhance the survival percentage and reducing the gestation period, raising tasar food plantation through saplings was found to be very effective. In order to encourage this method among the new farmers, support may be extended to raise saplings in their own backyards for self use.
- During XI plan, about 20,000 hectares were raised under systematic Tasar host plantation. The farmers need further support to maintain the plantation for optimum utilization.

b) Assistance for raising and maintenance of systematic plantation of Oak Tasar

- In Jharkhand, Chattisgarh, Uttarakhand and Orissa, there is a need to promote the raising and maintenance of systematic plantation of Oak Tasar.

c) Assistance for Construction of Cocoon Storage Houses in Tasar Sector

- Farmers of Jharkhand reported that they face problems in handling and transporting of the cocoons. Currently they travel either by bus or by cycle which spoils a significant portion of their cocoons. In view of their requests, it is proposed that a suitable provision may be included for buying a four wheel vehicle may be included under this component of CDP for the cocoon storage house which will collect the cocoons from the farmer's doorstep.

d) Assistance to Tasar commercial rearers for development of Chawkie garden.

- Chawkie rearing concept in tasar sector needs to be promoted as it reduces larval mortality and improves the cocoon quality and productivity. The rearers need to have well maintained chawkie garden with quality foliage for conducting chawkie rearing.

e) Transfer of Technology developed by CTR&TI Ranchi

- CTR&TI, Ranchi has developed Leaf Surface Microbes (LCM) for control of viral and bacterial diseases in Tasar Silkworm. The field results indicate about 44% improvement besides improvement in production to the tune of 12 cocoons per dfl. Hence, it is proposed to popularize this method in a large scale during XII Plan period.

- The CTR&TI, Ranchi has developed an effective medicinal formulation named “Jeevan Dhara” for controlling the deadly virosis disease. Field trial proved that application of the Jeevan Dhara could reduce the disease level significantly and improve productivity.

11.2.2.1.2. Tasar Cocoon (Andhra Pradesh)

- Start up tool kit like (prunning m/c, seekature, sickle, etc. may be introduced/given under CDP.
- After Bessel formation, fertilizer and manure may also be given under the scheme.
- Bird trapping nets to be provided.
- Currently Tasar cocoon rate for Bivoltine is Rs. 1/cocoon. Incentive @ Rs.0.20/cocoon may be introduced for motivating Tasar cocoon farmers.
- Systematic plantation of Tasar should be encouraged.
- Reeling/weaving of Tasar raw silk may be introduced in the Warangal district. Tasar culture should be made like a household activity having complete chain starting from DFL production to raw silk production.

11.2.2.2 Eri Cocoon (North Eastern States)

a) Support for Castor/Tapioca cultivators with Start-up tools

- Assam did not avail any support for this component in XI Plan. In entire NE States, only Nagaland State has availed assistance for this component. This component needs to be encouraged in Assam state.

b) Augmentation of perennial Eri food plants with supply of Start-up tools

- Eri perennial plantation. NE States have availed support for development of 13,739 acres during XI Plan. Assam has availed support for development of perennial plantation under CDP for 7314 acres (including BTC). CSB encourages this component for NE The augmentation of perennial Eri food plants may be encouraged in North Eastern States to reduce the dependence of the rearer on the forests and better risk management in the case of failure of seasonal food plants.

c) Construction of Rearing Sheds

- This component has high demand among farmers of Eri culture following states and may be continued during XII plan. The unit cost of the component needs substantial revision due to rise in the constructions of cost and the raw material prices.

d) Raising Kesseru food plant saplings (New component)

- Eri rearing undertaken in naturally grown food plantation reported low productivity. Adoption of systematic plantation could change this situation because the improved techniques have significantly contributed for higher leaf yield. For raising the systematic plantations, some farmers have started raising saplings in their own land for developing the main plantation. Since, this technique has been found to be very useful and effective for raising the garden, it needs to be popularized.

11.2.2.3 Muga Cocoon Sector (Assam and Meghalaya)

a) Assistance to beneficiaries for raising Som food plant saplings.

- The muga rearing conducted in systematic plantation is found to be more productive and hence economical. In order to raise more systematic plantations, planting saplings need to be encouraged.
- During XI Plan, about 8280 acres have been raised under systematic muga host plantation. It is necessary to support for further maintenance of the plantation as the farmers are very poor to meet such expenses.
- As the rearing takes place in open environment and muga silkworms are reared directly on the host plants, sometimes birds feed on these silkworms which lead to crop loss. It is proposed that bird prevention nets and a torch may be provided under this component of CDP scheme.
- According to the Sericulture Department of Assam, a new component on providing assistance for mounting hall may be incorporated under CDP scheme for Muga cocoon growers.

11.3 Post Cocoon Sector

11.3.1 Silk Reeling and Spinning

11.3.1.1. Southern Sericulture States

a) Popularization of New Slow-Speed Certified Multi-end Reeling Machines (18 basins - equivalent to 360 ends)

- The reelers are not accepting this component and CSB may review the economic viability of the scheme in Southern Sericulture states. The main reason for component failure is the requirement of large beneficiary share of Rs 10 Lakh (for General State). In comparison to this for 20 basin multi end reeling machine the share amount is Rs 4.25 Lakhs.

b) Support for establishment of certified Multi-end reeling machines 10 basins and 20 basins

- This component has very high acceptability in southern States where production of raw silk is relatively higher and there is availability of cocoon throughout the year.
- The unit cost needs upward revision.
- Beneficiary should have the choice to choose the components of the machine some components such as cocoon sorting table, the long skein silk making machine etc., are not used by all, however, the cost burden of the components which are not in use also is to be borne by the beneficiary.
- A new component on construction of shed/building and working capital may be introduced for setting up multi-end reeling units. DoS Andhra Pradesh has started constructing reeling sheds under their state scheme.

c) Establishment of Automatic / Semi automatic Reeling Units

- The component has proved to be very successful. There is a requirement of more number of Automatic Reeling units to be established in Southern states. The component should be continued with additional funds. The component may include the cost of construction of the working sheds and other storage space. Working capital also may be included as part of the component.

d) Support for Hot Air Driers-Electrical/Multi-fuel Ushankoties (50 Kg and 100 Kg) for reeling units

- Hot Air Driers-Electrical/Multi-fuel Ushankoties are widely accepted by reelers of Southern States.

e) Assistance for Twisting units

- Assistance given for twisting units under CDP has high acceptability in southern Sericulture practicing states.
- This CDP component has contributed substantially towards improvement in the quality and acceptability of Silk yarn. The reelers of Andhra Pradesh reported that these twisted silk yarns have resulted in fetching an additional Rs 60-75/- per Kg due to value addition.
- It is recommended that this component may be continued with additional funds during XII plan so that more number of units can get assistance under this component.

f) Incentive for production of Bivoltine Silk

- This CDP component has high acceptability among the bivoltine silk reelers. The incentives given for bivoltine silk production has contributed towards compensating the decline in profits of the reelers.
- The incentive of Rs 50 per Kg for BV raw silk production is being given by CSB. In Andhra Pradesh, the bivoltine raw silk reelers are given an incentive of Rs 80 per Kg out of which Rs 50 per kg is borne by CSB and the remaining (Rs 30 per Kg) is borne by state department.

g) Providing services of Master Reelers to Reeling units:

- One of the major constraints for sustaining silk reeling industry in non-traditional states and non-traditional areas of traditional States is the absence of skilled reelers. To overcome this problem, under X & XI Plan, Master Reelers were deputed to existing silk reeling units identified by the States to train the workers engaged in the units and to develop confidence among reelers to manage and run the units satisfactorily. Similarly weavers and dyers were also engaged in disseminating innovation. Considering the good feedback, demand and request from the States, it is proposed to continue the component.
- In majority of the states, the technicians/mechanics for repairing of post cocoon machineries are not available. On the same lines the master technicians could be developed and can provide services at various states.

h) Support for existing Charkha Reeling Units to dissuade child labour

- Majority of the reelers (including cottage basin unit and multi end reeling unit reelers), have charkha unit for reeling of inferior quality of cocoons. The motorization and mechanization of Charkha under this component has improved the quality of life for the charkha reelers. Beneficiary share may be reduced for encouraging reelers to avail this component.

i) Support for Setting up of Automatic Dupion Silk Reeling Units

- The double cocoons and inferior quality cocoons are converted into dupion silk yarn on a dupion reeling unit. The Indian dupion yarn which is manufactured in Charka is characterized by the presence of prominent slubs and is used as weft on handlooms. The imported dupion yarn which is manufactured on automatic dupion reeling machine is uniform with less prominent slubs and is used as weft on powerlooms for export fabric production. Good quality dupion yarn is in great demand for export fabric production and commands prices at par with that of raw silk. With a view to provide better value addition to inferior quality cocoons, it is proposed to support the establishment of automatic dupion reeling units with imported machinery.

j) There is a need of implementing Minimum Support price system for overcoming the effect of price fluctuations.**k) Interest subsidy on Working Capital to Reelers:**

- Reeling is the weakest link in the entire sericulture chain. The cost of the raw material i.e cocoons constitutes around 80% of finished product making the requirement of working capital a critical component. Added to this is the relatively poor flow of credit to the silk reeling sector. In order to encourage the credit flow to the reeling sector and to meet the working capital requirement of the reelers, it is proposed to introduce a scheme to provide interest subsidy to reelers on working capital loan availed by them. It is proposed to provide 50% of the interest charged by the financial institution as subsidy subject to an upper limit covering Cottage basins, Multiend and Automatic Reeling units established under CDP.

11.3.1.2 North Eastern States**a) Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs**

- Quality linked price Support system under CDP for cocoons and raw silk component has been found to be quite useful and should be continued further. Government may consider establishment of silk yarn banks in the lines of Raw material banks to facilitate small weavers.
- There is a requirement of establishing Eri and Muga cocoon markets in Meghalaya state.
- For constituting SHGs/NGOs/Co-operatives, the assistance of District Rural Development Agency may be sought.

b) Support for establishment of Improved Cottage Basin Reeling Units

- Emphasis should be laid on providing cottage basin units in the North Eastern states especially in Assam and Manipur.

c) Motorized machine for Eri Cocoon spinning

- For Eri cocoon spinning most of the farmers of Assam and Meghalaya are still using old traditional Takli. It was reported that the yarn obtained from hand spinning has much more wider acceptability than yarn obtained from this machine. This needs to be further looked into.

11.3.1.3 Northern Central States**a) Quality linked price Support system for cocoons and raw silk - for State Govts. / Co-operatives / NGOs / SHGs**

- There is a need to establish adequate number of cocoon markets in Maharashtra and Uttar Pradesh.
- In Banaras, Uttar Pradesh there is a need to establish raw silk exchanges.

b) Support for establishment of Improved Cottage Basin Reeling Units

- Emphasis should be laid on providing cottage basin units in North central states.

c) Support for establishment of certified Multi-end reeling machines 10 basins and 20 basins

- In non-traditional states like Maharashtra and Uttar Pradesh reelers are still relying on cottage basins. There is a need to promote multi end reeling machines in northern central states.

11.3.1.4 Northern Himalayan Region

- There is a need to establish cottage basin units in Himachal Pradesh, Uttarakhand and Jammu and Kashmir.
- The capacity of hot air drier to be given under CDP needs to be increased for the reelers as they have to store the cocoons for the long duration.

11.3.1.5 Eastern States (West Bengal)

- Post Cocoon sector is quite weak in West Bengal. Reelers are still using traditional charkhas for raw silk reeling. Cottage basins and multi end reeling machines need to be established in West Bengal.

11.3.1.6 Establishment of Pupae Oil Extraction and Bye - product utilization Units

- This component has no acceptability. No southern sericulture practicing states have accepted it.
- The reelers of traditional sericulture states do not find any market problem for selling mulberry pupae. They get the competitive prices for it.
- In North Eastern states people eat Eri Pupae for better health.

11.3.2 Silk Weaving Components

a) Support for establishing shuttle-less looms

- This component has high acceptability in major silk weaving clusters of India viz. Banaras, Kancheepuram, Dharmavaram, Mysore etc. Keeping in view the demand of the component and the demand of Indian woven silk fabrics in foreign market, more number of shuttle less looms may be established in big silk weaving clusters during XII plan.

b) Support for Handloom Sector

- **Certified Handlooms:** CSTRI has developed an improved handloom wherein special features like parallel beat up, five wheel take up mechanism etc have been incorporated to give the handloom weavers the distinct advantage to produce quality fabrics with better productivity. There is a need to take this technology to the field by incorporating region specific requirements in the loom.
- **Loom up-gradation through Jacquards & other equipments:** The existing handloom units are not having financial capacity to upgrade their handlooms for producing diversified products and for adopting small improvements required for better operation. In this direction, support may be provided for upgrading existing pit or frame or improved handloom units through installation of attachments like additional jacquards, dobby, pirn winding machine, Asu machine, dyed yarn winding machine etc.
- **Pneumatic Lifting Mechanism for Handlooms:** The use of three to four jacquards for weaving intricate designs result in considerable the strain on the weaver and the weavers report severe joint ailments leading to arthritis. This is probably one of the reasons for the younger generation to move away from traditional handloom weaving. The use of pneumatic lifting mechanism on handloom is a step in the right direction to reduce the strain on the weaver. Support has been provided for attaching pneumatic lifting mechanism on handlooms during the XI Plan period and it is proposed to continue the scheme during the XII Plan as well.

c) Computer Aided Textile Designing

- More CATD designers are required in the country where the weaving base is quite strong. Additional allocation of funds is required for this component under CDP. Training of these designers may also be undertaken under the CDP component.

d) Providing services of Master Weavers / Master Designers to Weaving units:

- Each handloom cluster is known for its unique product and design. However, there is very little effort to incorporate design changes to suit the changing market demands. The main reason cited has been the non availability of skilled manpower to handle this task. In order to address this issue under XI Plan, Master Weavers were deputed to silk weaving clusters to train the workers engaged in the cluster on various aspects of weaving and to develop confidence for the weavers to manage and run the units satisfactorily. Considering the good feedback, demand and request from the States, it is proposed to continue the component.

d) Support for setting up of Common Facility Centre for yarn dyeing / Fabric processing

- This component is very successful and popular among weaving clusters of traditional states like Kancheepuram, Dharmavaram, Hindupur etc. More number of such centres needs to be set up. There is a need to include washing tub under the package to be given under CDP.

11.4 Support Services

- Enhanced subsidy to SC/ST/Women beneficiaries to take up sericulture in General Status States to avail benefits in line with the subsidy extended to the Special Status States farmers.
- Health insurance for women sericulturists is a highly useful component but the implementation needs to be looked into since they face a number of problems in availing the benefits.
- Training programmes needs to be enhanced.
- Assistance may be provided to NGOs / SHGs & other Agencies for meeting administrative expenditure towards Project Implementation in the Vanya sector and in the Mulberry sector.

11.5 Price Support Mechanism for cocoon

High levels of price volatility is experiencing for mulberry cocoons across the country. The price realization of the cocoons is not in conformity with the input cost and inflationary trends. As a result, mulberry cocoon farmers resort to distress sale and many of them are turning to other crops for stable income. The recent reduction in import duty on raw silk has compounded this problem, resulting panic selling in the cocoon markets. There must be some mechanism to face such distress situations so that the farmers need not face heavy financial losses. It is also critically important to insulate the industry from such distress situations as more than 7 million people are depending on sericulture for livelihood.

Seed Cocoon rearing involves higher input cost and intensive care. It is necessary to provide incentive to seed cocoon Rearers. Those cocoons declared as fit for seed are sent for reeling for want of demand.

11.6 Convergence activities for sericulture development

There is a need for developing a convergence mechanism with various institutions for funding and effective monitoring of sericulture development initiatives. In vanya sector there is a need to integrate other livelihood components so as to bring in income generating opportunities throughout the year to achieve the inclusive growth. This warrants flexibility in funding pattern and shall include alternative livelihood opportunities like improved agriculture, vegetable

cultivation, animal husbandry, horticulture etc. Such initiatives are expected to lead into mutual learning and bring down the project monitoring costs due to presence of another funding agency/agencies viz., State Rural Livelihood Mission (SRLM), NABARD etc., who have a well defined project monitoring system at field level, which would be handy in view of shortage of manpower with Departments of Sericulture.

Various State Governments and funding channels viz., Rashtriya Krishi Vikas Yojana (RKVY), National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Tribal Welfare Commission (TWC), Integrated Action Plan (IAP), NABARD, ATMA, District Administration, State Special Schemes etc., are evincing interest to support sericulture sector.

Due to increasing electricity outages, installed capacities for conversion and processing are severely affected. This warrants the need for utilizing solar power and lighting dovetailing available schemes from the Ministry of Non-Renewable Energy (MNRE).

Price fluctuations and large scale volatility of cocoon prices in the market often severely affect the silk industry resulting in large scale uprooting of mulberry. It is necessary to take appropriate measures to tackle the issue by providing price support incentive to the sericulturists whenever the price goes below the production cost.

11.7 Flexi Funds

To address the critical requirements, which may arise while implementing various developmental programmes including CDP, lump sum provision may be made under the head **flexi funds**, where CSB share from CDP may be up to 15% of the project grant.

11.8 Involvement of Community based Organisations (CBOs)

Most of the implementers of the Rural development projects accept and understand the need to fully involve all members of a community in the planning and implementation of a rural development policy. It is only through participation that communities get a sense of ownership and feel motivated to operate and maintain the system.

This concept has been implemented successfully among the tasar farmers of Jharkhand under a different nomenclature; Resham Doot and Resham Mitra. The programme aims to resolve the

major problems of sericulture industry like dissemination of new findings and technology, group activity among the beneficiaries, popularization of bivoltine, training, extension, synchronizing the various activities of the sericulture to produce uniform quality cocoons, credit facilitation etc.

The silk industry by its very nature is a network of many on farm and off-farm activities, and has strong need for many forward and backward linkages. The heterogeneous activities in the entire silk production chain of silk industry calls for group approach and support systems in the areas of training, extension, infrastructural support, information support, technology support, credit availability, timely raw material availability, market tie-up, availability of skilled persons etc.. The Central and State Govts are providing all the support required for the overall development of sericulture. However the Govt. system has certain limitations such as limited staff, weak extension machinery, lack of mobility, knowledge gap etc. This is where the CBO system can play an important role and significant contribution supplementing the Govt. system, by raising the level of technology to suit local needs, by offering a better platform for the transfer of superior technology and training and also organizing the farmers for activities like technology absorption, narrowing the gap between lab and land, acting as trouble shooters at the field level at proper time.

11.9 Extension of CDP benefits to farmers not having cultivable land

Another important change proposed during the XII plan would be the extension of CDP benefits to the farmers who are not having cultivable land but undertaking rearing activities by purchasing leaves or producing leaves from leased land. There are many such farmers associated with the sericulture industry. They need to be made eligible for all the benefits under various components of CDP like rearing house, equipments etc., however with certain specific terms and conditions to ensure that the facilities provided would be utilized for a intended objectives.

11.10 Monitoring and supporting mechanism

The monitoring and supporting mechanism of the CSB needs to be strengthened by converting the Regional Offices in the respective areas as Zonal Offices to coordinate the zonal activities. Apart from monitoring the activities through the proposed Zone-wise offices, other Regional Offices of the CSB located in the respective States may monitor and support the State efforts in implementing the programmes.

11.11 Overall Impact of CDP

Overall analysis suggests that CDP scheme has been very successful in the country. During the XI plan period, production, productivity of sericulture sector and income of sericulture families have improved. The production of mulberry raw silk per hectare has gone up from 86.07 kg/hectare in 2006-07 to 92.75 kg/hectare during 2011-12, and renditta has improved as the kgs of cocoons required to produce one 1 kg of raw silk declined from 7.42 to 7.22 during 2007-08 to 2011-12.

Seed productivity has shown remarkable improvement in the traditional southern states in the range of 53-67 Kg per 100 DFLs during 2011-12. The seed productivity in non-traditional states reported in the range of 25-55 kg per 100 DFLs.

Over the years the employment in sericulture sector has increased. Because of CDP interventions and profitability of sericulture sector during XI plan, additional employment opportunities for

15.6 Lakh persons were created in the sericulture sector. During field visits across sericulture practicing states, it was observed that many new farmers are coming forward to take up sericulture activities. Many new farmers have just joined sericulture in the year 2010-11 and 2011-12 who are yet to take crops. Therefore, the exact impact of Catalytic Development Programme would be known only after 2-3 years.

It has been noted that, transfer of technology is not adequate. For effective transfer of technology, extension work needs to be carried out vigorously especially at the upcoming centres of sericulture activities. Moreover, NGOs/SHGs need to be encouraged to get involved in CDP implementation.

11.12. Continuation of CDP during XII Plan

CDP has contributed substantially to the growth and development of sericulture sector in the country. During the XI Plan, employment in the sector has grown by about 15.6 lakhs and has reached the level of 75.6 lakh people. This indicates that considerable interest in sericulture activities has been generated in the recent years through the intervention of CDP scheme. Moreover, many non-traditional sericulture practicing states have already taken up sericulture activities as a source of income and employment generation.

Sericulture income has been increasing for traditional states such as Karnataka, Andhra Pradesh, Tamilnadu, West Bengal and Jammu & Kashmir. In Southern sericulture traditional states the income estimated per sericulture farmer has been reported to be more than the per capita income of the state.

In non-traditional states the contribution of sericulture towards State Domestic Product (SDP) is not significant (in the order of 0.003%). In non-traditional states sericulture is practiced as a secondary activity and the income of these farmers from sericulture activities are relatively less.

During XII Plan, special emphasis needs to be given for the development of the seed sector. There is a need to encourage and develop Private Graineurs in the seed sector. Sericulturists refrain themselves for taking up seed sector components as it involves huge financial contribution from the beneficiaries. Moreover, they need to have a suitable grainage house. In order to motivate them, contribution of Central Government may be increased so that more graineurs would find it attractive to join the seed production. There is a need to implement Seed Act much more extensively so that quality of seeds could be ensured. More allocation in the seed sector may be sought in order to develop this sector.

Special attention needs to be given to Vanya sector development during XII plan as it arrests the deforestation and also provides gainful employment opportunities to tribal population and also utilization of vast tracts of natural forest resource. There is tremendous potential for enhancing Vanya silk since the silkworm food plants are naturally available in Jharkhand, Chhattisgarh, Orissa and North-Eastern states.

There is a need to encourage corporate participation in sericulture sector through rigorous promotional efforts by Central Silk Board and State department of sericulture. Emphasis should be given for effective transfer of technology to the farmers.

Emphasis should be given to promote rain-fed sericulture since there is scarcity of irrigation facilities. For sustenance of sericulture and for overcoming the negative effects of urbanization and industrialization on sericulture, new interior pockets need to be developed for sericulture activities.

Catalytic Development Programme has been broadly found successful and has been well received by the sericulture practicing states. CDP scheme has been able to maintain and sustain the sericulture sector and silk manufacturing to a large extent. However, during XII plan, much more need to be done for the development of this sector.

In view of the success of the CDP scheme during the XI Plan substantial scope exists for further improvement and development of the sericulture sector in the country and thus the CDP scheme need to be continued under XII Five Year Plan with certain modifications in the existing components and by adding a few new components as suggested above along with certain flexibility options.

Annexure 1.1

SURVEY QUESTIONNAIRE- CDP**Implementing Agencies (CSB/DOS/NGOs/SHGs/Co-operatives)**

National Productivity Council, an autonomous organization under Ministry of Commerce & Industry, Government of India, is carrying out a study on the "Evaluation of Catalytic Development Programme (CDP) during XI Five Year Plan", sponsored by Central Silk Board, Ministry of Textiles, Government of India. The objective of this field survey is to find out the effectiveness of CDP implementation during the XI plan period. Findings of this study will be utilized by CSB to modify and improve CDP implementation during XII Five Year Plan.

(Please fill as per instructions given)

Write codes/ values in the box provided at the right hand side)

1.0 General Information					
1.1	Region: (1=North Western Himalaya Region, 2=North Eastern India, 3=Northern & Central India, 4=Eastern Region, 5=Southern India)				
1.2	States: (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand, 15= Orissa)				
1.3	Category: (1=CSB, 2=DOS, 3=NGO, 4=SHG, 5=Co-op)				
1.4	Address of Implementing Agency: _____ Name of the contact Person: _____ Designation: _____ Contact No./E-Mail: _____				
1.5	What all schemes other than CDP are implemented in the State for Sericulture Development?				
	S.No	Name of the Scheme	Objective	Operational modality	
Use additional sheets if necessary.					
1.6	DFL Production Details in the State				
	Year	DFL Production (Lakh nos.)			
		Mulberry		Eri	Tasar
		BV	CB		Muga
	2007-08				
	2008-09				
	2009-10				
	2010-11				
	2011-12				

1.7 Cocoon Production & Productivity Details in the State										
Year	Mulberry (MT)				Eri (MT)		Tasar (Lakh Nos.)		Muga (Lakh Nos.)	
	BV		CB		Cocoon Production	Cocoon Production per 100 DFLs	Cocoon Production	Cocoon Production per 100 DFLs	Cocoon Production	Cocoon Production per 100 DFLs
	Cocoon Production	Cocoon Production per 100 DFLs	Cocoon Production	Cocoon Production per 100 DFLs						
2007-08										
2008-09										
2009-10										
2010-11										
2011-12										

1.8 Raw Silk Production Details in the State										
Year	Mulberry (MT)				Eri (MT)		Tasar		Muga (Lakh Nos.)	
	BV		CB		Raw Silk Production	Cocoon required for producing 1 Kg of raw silk	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)	Raw Silk Production (MT)	Cocoon required for producing 1 Kg of raw silk (Nos.)
	Raw Silk Production	Cocoon required for producing 1 Kg of raw silk	Raw Silk Production	Cocoon required for producing 1 Kg of raw silk						
2007-08										
2008-09										
2009-10										
2010-11										
2011-12										

2.0 Catalytic Development Programme XI Plan				
2.1 Funding details during (2007-12) (Rs. Lakh)				
Year	CSB's share	State's Share	Beneficiaries' Share	Total
2007-08				
2008-09				
2009-10				
2010-11				
2011-12				

2.1.1	If the amount to be shared by States and beneficiaries is not released, provide reasons:			
2.2	Please mention Sector wise & component wise Physical and Financial achievement during XI Plan (Please fill the format in Annexure A)			
2.3	What are the reasons for underutilization of CDP fund, if any, during XI Five Year plan:			
	S.No	Package	Reason for Underutilization	
	1	Seed sector		
	2	Cocoon sector		
	3	Post cocoon sector		
	4	Support services sector		
	(CDP component wise reasons for underutilization may be given. Attach Separate Sheets, if required)			
2.4	Please mention the issues and bottlenecks in the implementation of sector wise components under CDP?			

2.5	Please give suggestions for modifying or adding new components instead of the existing components and why?			
	<hr/> <hr/> <hr/> <hr/>			
2.6	Give reasons for not availing the benefits of certain key components of CDP by your state			
	Sl. No.	Name of the Component not availed by the state	Reasons for not availing	
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
3.0	Performance of Clusters (Operational Clusters):			
3.1	Cluster wise Targets			
	(Name of the cluster _____)			
	Category	Unit	Target	Achievement at the end of 2011-12
	Total beneficiaries covered	Nos		
	DFLs reared	Lakh No.		
	Production of cocoons			
	Mulberry	MT		
	Tasar	Lakh nos.		
	Eri	MT		
	Muga	Lakh nos.		
	Production of raw silk			
	Mulberry	MT		
	Tasar	MT		
	Eri	MT		
	Muga	MT		
	Employment generated	Nos.		
	Use same format for each of the cluster			

4.0 Coverage of Beneficiaries						
4.1 Category wise % beneficiaries covered with respect to total beneficiaries covered under Catalytic Development Programme during XI Five Year Plan.						
	Sector	Total no. of beneficiaries covered	SC (% to Total)	ST (% to Total)	Others (% to Total)	Women Beneficiary (% to Total)
	Seed Sector					
	Cocoon Sector					
	Post Cocoon Sector					
	Support Services Sector					
5.0 Corporate Participation in Sericulture						
5.1 What are the measures implementing agency is adopting to involve corporate participation/large scale farming in sericulture?						
5.2 Activities taken up under Beneficiary Empowerment Programme conducted by States & Seri related exposure visits under Catalytic Development Programme?						
	S.No	Activity	No. of farmers assisted	Objective	Impact of the visit/Programme	
6.0 Infrastructure available for Sericulture Development in the State during 2011-12						
	S. No	Infrastructure	Total Nos.	Objective	Existing Status	Modifications required and Why
	A.	Seed Sector				
	1	P1 Grainages				
	2	P2 Grainages				
	3	Basic Seed Farms				
	4	Mulberry Silkworm Seed Production Centres				
	5	Eri Silkworm Seed Production Centres				
	6	Tasar Silkworm Seed Production Centres				
	7	Muga Silkworm Seed Production Centres				
	8	Mulberry Seed Grainages under State Government				
	9	Eri farm cum Seed Grainages under State Government				
	10	Tasar Seed Grainages under State Government				
	11	Muga Seed Grainages or Muga Seed multiplication infrastructure under State Government				
	12	Mulberry LSPs/Pvt Graineures/Pvt Seed Grainages				
	13	Eri LSPs/Pvt Graineures/Pvt Seed Grainages				

	14	Tasar LSPs/Pvt Graineures/Pvt Seed Grainages				
	15	Muga LSPs/Pvt Graineures/Pvt Seed Grainages				
	B. Cocoon Sector					
	16	Mulberry Seed cocoon farmers				
	17	Mulberry Commercial Cocoon farmers				
	18	Eri Seed cocoon farmers				
	19	Eri Commercial Cocoon farmers				
	20	Tasar Seed cocoon farmers				
	21	Tasar Commercial Cocoon farmers				
	22	Muga Seed cocoon farmers				
	23	Muga Commercial Cocoon farmers				
	24	Cocoon farmers having irrigation and water conservation facility				
	25	Cocoon farmers having rearing appliances and rearing houses				
	26	Chawkie rearing Centers				
	27	Production unit for Biological inputs				
	28	Sericulture poly clinics for Disinfections and input supply or Mobile Disinfection units				
	29	Sericulture Training Institutes				
	30	Cocoon Market				
	31	Cocoon storage houses for Tasar				
	C. Post cocoon sector					
	32	Charkha reeling units				
	33	Cottage basin reeling units				
	34	10 basin multi end reeling unit				
	35	20 basin multi end reeling unit				
	36	Automatic Reeling unit				
	37	Dupion Silk reeling units				
	38	Hot Air Driers- Electrical/Multi fuel/Ushankotis for Reeling units				
	39	Twisting units				
	40	Cocoon/Raw Material Banks				
	41	Master reelers/weavers/dyers				
	42	Vanya reeling/spinning machines				
	43	Vanya spun/spinning mills				
	44	Handlooms				
	45	Powerlooms				

	46	Shuttleless looms					
	47	Computer aided Textile Designers					
	48	Dyeing units (25 Kg capacity)					
	49	Dyeing units (50 Kg capacity)					
	50	Arm Dyeing (50 Kg capacity)					
	51	Fabric Processing Units					
	D. Research & Development & Training Institutes						
	52	R&D Institutes					
	53	Training Institutes					
	E. Any Other						
7.0 Stakeholders involved							
7.1	Whether all stakeholders (including extension workers, District Officers, NGOs/SHGs, etc.) are involved in the implementation of the CDP components/schemes. (1=Yes, 2=No)						
7.2	If yes, please furnish the number of stakeholders involved in the implementation of CDP schemes during XI Plan						
	Relevant Stakeholders (Nos)						
	Extension Workers	District Officers	Non Governmental Organizations			Self Help Groups	
8.0 Suggestions and Recommendations							
8.1	Initiatives Planned under CDP for the XII Five year Plan						
	Sr. No.	Name of the Initiative	Objectives/Targeted stake holders			Provisional Fund Requirements	
9.0 Documents required							
9.1	Performance Summary for each of the Cluster Development Project undertaken during XI Five Year Plan as per format given in section 3.1 of this questionnaire.						

THANK YOU

Annexure 1.2

SURVEY QUESTIONNAIRE: CDP Sericulture Graineurs (Seed for Mulberry or Vanya)

(Please fill as per instructions given. Write codes/ values in the box provided at the right hand side)

1.0	General Information						
1.1	Region (1=North Western Himalayan Region, 2=North Eastern India, 3=Northern and Central India, 4=Eastern region, 5=Southern India)						
1.2	State (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand)						
1.3	Name of the District:						
1.4	Category of Graineurs (1=Mulberry, 2=Vanya)						
1.5	Name of the Cluster:						
1.6	Name of the Respondent: Name of the Grainage: _____ Address: _____ City/Town/Village: _____ District: _____ Pin: _____ Phone/Mobile No.: _____ E-mail, if any _____						
1.7	Age of the respondent (Farmer)(in yrs):						
1.8	Gender (1=Male, 2=Female)						
1.9	Category (1= SC, 2=ST, 3=Others)						
1.10	Educational Level (1=Illiterate, 2=Primary, 3=Middle (6-8 class), 4=Secondary (8-12 class), 5=Graduate & above)						
1.11	Experience in sericulture (in yrs):						
1.12	Category of Sericulture Activity (1=Multivoltine, 2=Bivoltine, 3=Tasar, 4=Eri, 5=Muga)						
1.13	Type of grainage organization (1=Central, 2=State, 3=Licensed Seed Producers, 4= Private Graineur 5= Others)						
2.0 Asset/Income Related Information							
2.1	Sources of family income						
	Sl.No.	Source of Income	Approximate Annual Income (Rs. In thousand)				
			2007-08	2008-09	2009-10	2010-11	2011-12
	a)	Sericulture					
	b)	Income from other activities					
		Total:					
2.2	Income Utilization						
	Sl.No.	Income Utilization	Approximate Utilization (Rs. In thousand)				
			2007-08	2008-09	2009-10	2010-11	2011-12
	a)	Sericulture					
	b)	Food and other expenses					
		Total:					
2.3	Year of establishment of grainage _____						
2.4	Ownership of grainage building (1=Own, 2=Rented, 3=Leased)						

2.7	Type of production (1=Seasonal, 2=Regular)		
2.8	Type of grainage based on production (only for mulberry) (1=Cross Breed, 2=Bivoltine, 3=Both)		
2.9	Do you have any nearby seed cocoon market? (1= Yes 2= No)		
2.10	How do you procure seed cocoon and what method do you adopt for seed cocoon transportation?		
3.0 Catalytic Development Programme (CDP) during XI Five Year Plan			
3.1	Have you availed Catalytic Development Programme (CDP) during XI Plan period (2007-12)? (1=Yes, 2=No)		
3.2	Please provide the details of Financial Assistance received under CDP Scheme (2007-12) : <i>(If the farmer deals with mulberry then please fill in the mulberry columns only and leave the vanya columns blank and vice versa)</i>		
	Schemes and Components	Assistance received under CDP (Rs Lakh). 2007-12	Type of Assistance availed including equipments/ Remarks
	I. Mulberry Seed Sector		
	a) Support for upgrading Seed/Grainage Units under Mulberry Sector		
	b) Support to establish large scale Bivoltine Seed Production Grainages in Public/Private Sector		
	c) Assistance for Seed Testing Facilities in Public/Private Grainages(for quality seed production)		
	d) Assistance for Mulberry Silkworm Seed Production units (Support to get ISO/BIS Quality Seed Certification for Silkworm Seed units).		
	II. Vanya Seed Sector		
	Tasar Sector		
	a) Assistance to private Tasar graineurs		
	b) Assistance to strengthening of Tasar seed multiplication infrastructure		
	c) Assistance for strengthening of Seed multiplication/infrastructure for oak Tasar in the state		
	d) Assistance to Seed Rearers		
	Eri Sector		
	e) Assistance to Seed Rearers cum private graineurs		
	Muga sector		
	f) Assistance to Muga private graineurs		
	III. Support Services Schemes		
	I Beneficiary Empowerment Programme		
	a) Training conducted by CSB/States for farmers & Seri exposure visits		
	II Publicity for Sericulture Sector		

	a) Booklets, Pamphlets, Brochures etc						
	b) Awareness programme(Audio visuals/ Exhibition/ Seminars/Workshop etc)						
	III Cluster Development Programme						
	a) Assistance for Resham Sathi						
	b) Field visits of officers (1=yes, 2=no)						
	IV Women Development Components						
	a)Health Insurance for women workers						
	b)Creating toilets, rest rooms and crèche for women in cocoon markets						
	V Emphasis on Tribal Area						
	a)Identification and training of village level resource persons						
	b)Setting up of seri-clinics with inputs/spares and start up expenditure						
	c) Organizing seminars/workshops to recognize the grass root level innovations by tribals (1=yes, 2=no)						
3.3	Have you faced any difficulties in receiving the CDP assistance? (1=Yes, 2=No)						
3.3.1	If yes, please specify						
	Schemes/Component	Problems/constraints					
3.4	Have you received support for establishing a grainage? (1=Yes, 2=No)						
3.5	Production Details (2011-12)						
	Production of Seeds	Numbers of seed/Cocoon processed		Quantity of DFL production		Average Egg Recovery	
		2007-08	2011-12	2007-08	2011-12	2007-08 2011-12	
	Mulberry						
	Multivoltine						
	Multi- x Bivoltine						
	Bivoltine						
	Eri						
	Tasar						
	Muga						
	*DFL: Disease Free Layings						
3.6	Whether any of your machines are bought under schemes other than CDP? (1=Yes, 2=No)						
3.7	If yes, please mention the details during 2007-12						
	Name of the machine <i>(for additional machines please attach enclosure in the same format)</i>	Year of purchase	Name of the scheme		Price at which it is procured (Rs.)		
4.0	Technological Gaps						

4.1	Stages	Facility Available	Latest Technology Available	Reasons for not availing latest technology/Remarks
	Sorting & Preservation			
	Sex Separation			
	Pairing & Egg laying			
	Pupa & moth examination			
	Egg sheet account			
	Maintenance of records			
	Surface sterilization of eggs			
	Storage of eggs			
	Delivery of eggs			
	Seed Testing			
5.0	Support Services Schemes			
5.1	Have you availed any of the Support service scheme (for e.g. Health insurance, crèche, toilet facilities, seri exposure visits etc.?) (1= Yes 2= No)			
5.2	If yes, have you faced any problems in receiving the Support Services under CDP? (1=Yes, 2=No)			
5.2.1	If yes, please specify			
	Schemes/Component	Problems/constraints		
5.3	Did the Booklets/Pamphlets/Brochures/Audio Visual aids contain adequate information? (1=Yes 2=No)			
5.3.1	Please give your views on the usefulness of the above mentioned Publicity material			
5.4	Was the training given to you proved beneficial (only for training related components)? (1= Yes 2= No)			
5.4.1	If no, Please specify			
5.5	Are you satisfied with the Health Insurance coverage given to you? (1 = Yes 2=No)			
5.5.1	Please comment on the usefulness of the Health insurance coverage?			
5.5.2	Have you ever claimed Health Insurance (given under CDP scheme) (1= Yes 2= No)			
5.5.3	If yes, Did you face any difficulty in claiming insurance amount? (1= Yes 2= No)			

5.5.4	Please explain the type of difficulties faced?
6.0	Suggestions & Recommendations
6.1	Whether the present CDP Schemes are helpful in increasing sericulture activities? _____ _____
6.2	Whether the present CDP Schemes are helpful in increasing your income? _____ _____
6.3	How do you mobilize the working capital? Please explain
6.4	Suggestions for improvement of the CDP Scheme during XII Five Year Plan _____ _____ _____ _____

Thank you

Name of the Official/Investigator : _____
 Signature : _____
 Place of Survey : _____ Date: _____

Annexure 1.3

SURVEY QUESTIONNAIRE: CDP**Sericulture Farmers/Rearers (Seed & Commercial Cocoon for Mulberry/Vanya)**

(Please fill as per instructions given. Write codes/ values in the box provided at the right hand side)

1.0	General Information						
1.1	Region (1=North Western Himalayan Region, 2=North Eastern India, 3=Northern and Central India, 4=Eastern region, 5=Southern India)						
1.2	State (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand)						
1.3	Category of Sericulture farmers/rearers (1=Mulberry, 2=Vanya)						
1.4	What kind of rearing is carried out? (1= Seed Cocoon 2= Commercial cocoon)						
1.5	Name of the Cluster						
1.6	Name of the Sericulture Farmer/Rearer: _____ Address: _____ _____ City/Town/Village: _____ District: _____ Pin: _____ Phone/Mobile No.: _____ E-mail, if any _____						
1.7	Age of the respondent (in yrs):						
1.8	Gender (1=Male, 2=Female)						
1.9	Category (1= SC, 2=ST, 3=Others)						
1.10	Experience in sericulture (in yrs):						
1.11	Sericulture Activity (1=Mulberry, 2=Tasar, 3=Eri, 4=Muga)						
1.12	Category of Farmers based on Land Holding (1=Marginal, 2=Small, 3=Semi medium, 4=Medium, 5=Large) [Below 1 ha = marginal; 1to 2 ha = Small, 2 to 4ha = semi –medium & 4 to 10ha = medium; 10 ha and above = large]						
2.0	Asset Related Information						
2.1	Land Information (1=Own, 2=Leased, 3=Rented)						
2.2	Land holding & Crops Grown : (2011-12)						
	Sl. No	Type of Land	Area Under Cultivation (Ha)				Total
			Agriculture	Sericulture	Horticulture	Others	
	1	Irrigated					
	2	Rain-fed					
	3	Total					

2.3	Sources of family income						
	Sl. No.	Source of Income	Approximate Annual Income (Rs. In Thousands)				
			2007-08	2008-09	2009-10	2010-11	2011-12
	a)	Sericulture					
	b)	Income from Other activities					
	Total:						
2.4	Income Utilization						
	Sl.No.	Income Utilization	Approximate Utilization (Rs. In thousand)				
			2007-08	2008-09	2009-10	2010-11	2011-12
	a)	Sericulture					
	b)	Food and other expenses					
	Total:						
2.5	Assets Available with the cocoon farmer/rearer						
	SL. NO.	Asset	Equipments/Tools (Nos.)				
			2007-08 to 2011-12				
			Bought yourself	Under CDP			
	I	Farm Equipments/Implements					
	a	Tractor					
	b	Power tiller					
	c	Ploughs					
	d	Sprayers					
	f	Bore wells/Tube wells/Open well etc.,					
	g	Others farm appliances					
	II	Rearing Equipments					
	a	Rearing house (*Independent/Coupled with dwelling house)					
	B	Rearing stands					
	C	Rearing trays					
	D	Bed cleaning nets					
	E	Mountages					
	F	Hygrometer					
	G	Wet & dry bulb Thermometer					
	H	Room heater/ Humidifier					
	I	Others(Uzi mesh/Nylon nets/ Leaf chamber/ Basin stand/ Feeding stand/Bamboo basket/ Leaf chopping knife & Board/ Foam pad/ / Ant well/ Mask / Thermo stat/ Mats/ Foot mat etc) farm appliances etc					
3.0	Catalytic Development Programme (CDP) related details						
3.1	Please provide the details of Financial Assistance received under CDP Scheme : (If the farmer deals with mulberry then please fill in the mulberry columns only and leave the vanya columns blank and vice versa)						
	Schemes and Components	Sources (1=Central, 2=State, 3=NGOs, 4=SHGs, 5=others, Please specify)	Assistance received under CDP (Rs Lakhs)		Remarks		
			2007-2012				
	I. Mulberry cocoon Sector						
	a)	Support for Mulberry Plantation					
	b)	Assistance for Irrigation and other water conservation & usage techniques					
	c)	Supply of Rearing Appliances/farm equipments					
	d)	Supply of quality Disinfectant & other crop protection measures					
	e)	Assistance for construction of Rearing Houses					
	f)	Assistance for Chawki Rearing (Commercial					

	Farmer)			
	f) Assistance for Seed Crop Rearing (Seed Farmer)			
	g) Insurance Support (please mention which type of insurance support is provided)			
	h) Setting up of production units for biological inputs (inoculants, biological control agents)			
	i) Assistance for farmer training			
	j) Door-to-door service agents for disinfections and inputs supply			
	II. Vanya cocoon Sector			
	Tasar Sector			
	a) Support for Augmentation of Tasar host Plantation			
	b) Assistance for maintenance of systematic plantation of Oak Tasar			
	c) Assistance for construction of Cocoon Storage Houses			
	Eri Sector			
	d) Support for castor/tapioca cultivators with start-up tools			
	e) Augmentation of perennial Eri Food plants with supply of startup tools			
	f) Assistance for construction of Rearing Houses			
	Muga sector			
	g) Raising of nursery of Muga food plants/Augmentation of Muga Plantations with supply of faming tools/assistance to rearers			
	III. Support Services Schemes			
	I Beneficiary Empowerment Programme			
	a) Training conducted by CSB/States for farmers & Seri exposure visits			
	II Publicity for Sericulture Sector			
	a) Booklets, Pamphlets, Brochures etc			
	b) Awareness programme(Audio visuals/ Exhibition/ Seminars/Workshop etc)			
	III Cluster Development Programme			
	a) Assistance for Resham Sathi			
	b) Field visits of officers (1=yes, 2=no)			
	IV Women Development Components			
	a) Health Insurance for women workers			
	b) Creating toilets, rest rooms and crèche for women in cocoon markets			
	V Emphasis on Tribal Area			
	a) Identification and training of village level resource persons			
	b) Setting up of Seri-clinics with inputs/spares and start up expenditure			
	c) Organizing seminars/workshops to recognize the grass root level innovations by tribals (1=yes, 2=no)			
3.2	Have you faced any difficulties in receiving the CDP assistance (1=Yes, 2=No)			

3.2.1	If yes, please specify										
	Schemes/Component	Problems/constraints									
4.0 Insurance Coverage											
4.1	Please specify the type of insurance coverage you are having? (1=Crop insurance, 2=Coverage for the silkworm crop, 3=Coverage for the rearing house, 4=Coverage for the Rearing appliances/equipment, 5=Coverage of health insurance for the beneficiary and its family, 6=Others)										
4.2	Have you received any insurance claims? (1= Yes , 2=No)										
4.3	If yes, please specify the amount received (Rs.)										
4.4	Delivery mechanism of amount? (1=Kind, 2=Cash, 3= Cheque, 4= Draft, 5= Others)										
5.0 Productivity Related Information											
5.1	Productivity Details:										
	Variety	Unit	Plantati on Variety	Land Holding (ha)		No. of Crops per year		No. of DFLs brushed per crop (Nos.)		Cocoon yield per crop (MT)	
				2007-08	2011-12	2007-08	2011-12	2007-08	2011-12	2007-08	2011-12
	Mulberry										
	Multivoltine	MT									
	Multi- x Bivoltine	MT									
	Bivoltine	MT									
	Eri	MT									
	Tasar	Lakh Nos									
	Muga	Lakh Nos									
DFLs=Disease free layings											
5.2	Have you ever faced crop loss? (1= Yes 2= No)										
5.3	Reasons for crop loss and any compensations received?										
6.0 Marketing support											
6.1	Mode of disposal of cocoon produced (1=Govt. Cocoon Market, 2=Private Agency, 3=Others)										
6.2	Do you get the best price for cocoons in the Govt. Cocoon market? (1= Yes 2= No)										
6.3	If no what are the reasons and what changes are required in the pricing mechanism of cocoon markets?										
6.4	Value of products marketed in 2011-12										
	Variety					Amount (Rs)					
	Mulberry										
	Multivoltine (Rs/kg)										
	Multi- x Bivoltine (Rs/kg)										
	Bivoltine (Rs/kg)										
	Eri Cut Cocoons (Rs/kg)										
	Tasar (Rs/ '000 Nos of cocoons)										
Muga (Rs/ '000 Nos of cocoons)											

6.5	Availability of institutional services in the vicinity: (1=Licensed Silkworm Seed Producers, 2=Govt Silkworm Seed Production Unit, 3=CRC, 4=Commercial Banks/ Financial institutions, 5=Cocoon Market, 6=Technical service Centre, 7=Common Facility Centers, 8=Reeling Unit, 9=Others (Please specify))		
7.0	Technological Gaps		
7.1	Technological Gaps in the field		
	Technology	Facility/Technology Available	Latest Technology in this area
	Farm equipments		
	Irrigation & Water conservation		
	Fertilizers		
	Disinfection		
	Chawkie rearing		
	Young age rearing		
	Rearing appliances		
	Mountages		
8.0	Support Services Schemes		
8.1	Have you availed any of the Support service scheme (for e.g. Health insurance, crèche, toilet facilities, seri exposure visits etc.?) (1= Yes 2= No)		
8.2	If yes, have you faced any problems in receiving the Support Services under CDP? (1=Yes, 2=No)		
8.2.1	If yes, please specify		
	Schemes/Component	Problems/constraints	
8.3	Did the Booklets/Pamphlets/Brochures/Audio Visual aids contain adequate information? (1=Yes 2=No)		
8.3.1	Please give your views on the usefulness of the above mentioned Publicity material		
8.4	Was the training given to you proved beneficial (only for training related components)? (1= Yes 2= No)		
8.4.1	If no, Please specify		
8.5	Are you satisfied with the Health Insurance coverage given to you? (1 = Yes 2=No)		
8.5.1	Please comment on the usefulness of the Health insurance coverage?		
8.5.2	Have you ever claimed Health Insurance (given under CDP scheme) (1= Yes 2= No)		
8.5.3	If yes, Did you face any difficulty in claiming insurance amount? (1= Yes 2= No)		
8.5.4	Please explain the type of difficulties faced?		
9.0	General Questions		
9.1	Are you aware that State Government has implemented various Schemes other than Catalytic Development Programme (CDP) for the benefit of sericulture farmers (RKVY, MNGRA, etc)? (1=Yes, 2=No)		
9.1.1	If yes, name them		

9.2	Whether the present CDP Schemes are helpful in socio economic upliftment of farmers (viz. Sustainable income, Health , Education, food , security etc.,)? (1= Yes, 2=No)	
9.3	Whether the present CDP Schemes are helpful in increasing your income? (1=Yes, 2=No)	
10.0	Suggestions for improvement of CDP scheme	
10.1	Suggestions for improvement Technology Upgradation/Modernization _____ Marketing Support _____ Training _____ Infrastructure _____ Additional CDP Schemes _____ Others _____	

Thanking You

Name of the Official/Investigator : _____
Signature : _____
Place of Survey : _____ **Date:** _____

Annexure 1.4

SURVEY QUESTIONNAIRE: CDP (Sericulture Reelers/Weavers/Wet Processors)

National Productivity Council, an autonomous organization under Ministry of Commerce & Industry, Government of India, is carrying out a study on the “Evaluation of Catalytic Development Programme (CDP) during XI Five Year Plan”, sponsored by Central Silk Board, Ministry of Textiles, Government of India. The objective of this field survey is to find out the effectiveness of CDP implementation during the XI plan period. Findings of this study will be utilized by CSB to modify and improve CDP implementation during XII Five Year Plan

(Please fill as per instructions given. Write codes/ values in the box provided at the right hand side)

1.0	General Information	
1.1	Region (1=North Western Himalayan Region, 2=North Eastern India, 3=Northern and Central India, 4=Eastern region, 5=Southern India)	
1.2	State (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand)	
1.3	Name of the District:	
1.4	Name of the Cluster:	
1.5	Name of the Respondent: _____ Address: _____ _____ City/Town/Village: _____ District: _____ Pin: _____ Phone/Mobile No.: _____ E-mail, if any _____ Voter ID _____ Pan Card _____ AadharNo. _____	
1.6	Age of the respondent (Farmer)(in yrs):	
1.7	Gender (1=Male, 2=Female)	
1.8	Category (1= SC, 2=ST, 3=Others)	
1.9	Educational Level (1=Illiterate, 2=Primary, 3=Middle (6-8 class), 4=Secondary, 5=Graduate & above)	
1.10	Experience in sericulture (in yrs):	
1.11	Sericulture Activity (1=Mulberry, 2=Tasar, 3=Eri, 4=Muga)	
1.12	Activity (1= Basic or Cottage basin reeling unit 2=10 end Multi end reeling unit 3= 20 end Multi end Reeling unit 4= Twisting machine 4= Automatic Reeling unit 5= Handloom weaver 6= Powerloom weaver 7= Shuttle less Loom 8= CATD Designer 9= 25 Kg Tub Dyeing 10= 50Kg Tub Dyeing 11= Arm Dyeing 12= Fabric Processing unit)	
1.13	Type of reeling device available (1=Improved charka, 2=Cottage basin, 3=Filature, 4=Multiend, 5= Automatic, 6=Vanya reeling)	
1.14	Is your charka reeling unit motorized? (1=Yes, 2=No)	
1.15	Type of handloom being used: (1=Pit-looms, 2=Frame-looms, 3=Improved handloom)	

2.0		Asset/Income Related Information							
2.1	Sources of income for the family								
	Sl.No.	Source of Income	Approximate Annual Income (Rs. In thousand)						
			2007-08	2008-09	2009-10	2010-11	2011-12		
	a)	Sericulture							
	b)	Income from other activities							
	Total:								
2.2	Income Utilization								
	Sl.No.	Income Utilization	Approximate Utilization (Rs. In thousand)						
			2007-08	2008-09	2009-10	2010-11	2011-12		
	a)	Sericulture							
	b)	Food and other expenses							
	Total:								
2.3	Raw Silk Production (for Reelers)								
	Year	Quantity of Silk yarn produced per annum (MT)	Cocoon Used per annum				Renditta (Quantity of cocoon required to produce 1 Kg of raw sil yarn)	Average Price of cocoon procured (Rs/Kg)	Average Price of raw silk sold (Rs/Kg)
			Mulberry (Kg)	Eri (MT)	Tasar (nos.)	Muga (Nos.)			
	2007-08								
	2008-09								
	2009-10								
	2010-11								
2011-12									
2.4	Production details for weavers								
	Year	Quantity of Silk yarn used (MT)	No. of units produced	Average Price per unit (Rs)	Impact of CDP				
	2007-08								
	2008-09								
	2009-10								
	2010-11								
2011-12									
2.5	Details for Dyers								
	Year	Quantity of Silk yarn dying (MT)	Average price realized for dyeing one Kg of raw silk	Impact of CDP					
	2007-08								
	2008-09								
	2009-10								
	2010-11								
2011-12									

2.6	Details for Computer aided Textile Designers			
	Year	No. of punch cards produced per annum	Average price realized for one punch card	Impact of CDP
	2007-08			
	2008-09			
	2009-10			
	2010-11			
2011-12				
3.0 Analysis of Catalytic Development Programme (CDP)				
3.1	Have you availed Catalytic Development Programme (CDP) during XI Plan period (2007-12)? (1=Yes, 2=No)			
3.2	If yes, please provide details of Financial Assistance received under CDP Scheme during 2007-2012.			
	Schemes and Components	Sources (1=Central, 2=State, 3=NGOs, 4=SHGs, 5=others, Please specify)	Assistance received under CDP (Rs Lakhs) 2007-12	Remarks
	I. Silk Reeling & Spinning			
	i)Support for establishment of Certified (10 ends per basin) Multi-end Reeling Machines a)10 Basin Units b)20 Basin Units			
	ii)Establishment of Automatic/Semi-automatic Reeling Units			
	iv)Support for establishment of Improved Cottage Basin Reeling Unit			
	iii) Support for existing Charkha Reeling Units to dissuade child Labour (Motorised Charkha)			
	iv)) Support for Hot Air Driers- Electrical/ Mechanical/ Multi-fuel/ Ushnakotis for Reeling Units a)50 Kgs capacity b)100 Kgs capacity			
	v)Assistance for Twisting units(400 spindles)			
	ix)) Support for establishment of Pupae Oil Extraction Production and By-product utilization units			
	x) Incentive for production of Bivoltine Silk (physical MTs) a) Automatic Reeling Units b) Other Devices			
	xi)Quality linked price support system for cocoons and Raw silk (State Govt./ Co-operatives/ NGOs/ SHGs)			
	xii)Establishment of Cocoon Banks/ Market Support to Vanya Sector-Raw Material Banks for Tasar, Oak Tasar, Eri & Muga			
	xiii) Providing services of Master Reelers / Weavers / Dyers for reeling / weaving / dyeing units through State Governments / NGOs / Co-op. Societies / SHGs (No. of Persons)			
	xiv) Support for Vanya Reeling/ Spinning Sector a) Spinning b) Reeling-cum-twisting			
	xv) Support for establishment of Spun/Spinning Mills			
	II. Silk Weaving			
	i) Support for establishing shuttle-less looms(each unit with 8 looms and 1 sectional warping machine)			

	ii) Support for Handloom Sector for Loom Upgradation a) Certified Handlooms b) Loom Upgradation through Jacquards & other equipments c) Computer Aided Textile Designing (CATD)			
	III. Silk Wet Processing			
	i) Support for setting up of Common Facility Centre (CFC) for yarn dyeing/fabric processing a) Yarn Dyeing-25 Kg capacity b) Yarn Dyeing-50 Kg capacity c) Arm Dyeing- 50 Kg Capacity d) Fabric Processing Facilities			
	IV. Product design , development and diversification			
	i) Product development and diversification ii) Design Consultation iii) Interaction meet , workshop , seminar iv) Publicity, Exhibition, demonstration v) Other Supports			
	V. Vanya Silk Market Promotion Cell			
	i) Vanya Silk Exhibition- cum- Buyers- Sellers meet ii) Vanya Silk Shoppers iii) Packaging , Labeling, Product Development etc.			
	VI. Beneficiary Empowerment Programme			
	i) Training conducted by CSB/States for farmers & Seri exposure visits			
	VII. Publicity for Sericulture Sector			
	i) Booklets, Pamphlets, Brochures etc ii) Awareness programme (Audio visuals/ Exhibition/ Seminars/Workshop etc)			
	VIII. Women Development Components			
	i) Health Insurance for women workers ii) Creating toilets, rest rooms and crèche for women in cocoon markets			
	IX. Emphasis on Tribal Area			
	i) Identification and training of village level resource persons ii) Setting up of seri-clinics with inputs/spares and start up expenditure iii) Organizing seminars/workshops to recognize the grass root level innovations by tribals (1=yes, 2=no)			
3.3	Have you faced any constraints in availing CDP scheme? (1=Yes, 2=No)			
3.4	If yes, please specify			
	Schemes/Component	Problems/constraints		
3.5	Have you faced any technology related problems in CDP scheme ? (1=Yes, 2=No)			
3.6	If yes, please specify			
3.7	Have you faced delay in payment or nonpayment, while availing CDP scheme? (1=Yes, 2=No)			
3.8	If yes, please specify			
4.0	Support Services Schemes			
4.1	Have you availed any of the Support service scheme (for e.g. Health insurance, crèche, toilet facilities, seri exposure visits etc.?)			

	(1= Yes 2= No)			
4.2	If yes, have you faced any problems in receiving the Support Services under CDP? (1=Yes, 2=No)			
4.2.1	If yes, please specify			
	Schemes/Component	Problems/constraints		
4.3	Did the Booklets/Pamphlets/Brochures/Audio Visual aids contain adequate information? (1=Yes 2=No)			
4.3.1	Please give your views on the usefulness of the above mentioned Publicity material			
4.4	Was the training given to you proved beneficial (only for training related components)? (1= Yes 2= No)			
4.4.1	If no, Please specify			
4.5	Are you satisfied with the Health Insurance coverage given to you? (1 = Yes 2=No)			
4.5.1	Please comment on the usefulness of the Health insurance coverage?			
4.5.2	Have you ever claimed Health Insurance (given under CDP scheme) (1= Yes 2= No)			
4.5.3	If yes, Did you face any difficulty in claiming insurance amount? (1= Yes 2= No)			
4.5.4	Please explain the type of difficulties faced?			
5.0	General Questions			
5.1	Are you aware that State Government has implemented various Schemes for the benefit of sericulture processors? (1=Yes, 2=No)			
5.2	Are any of your machines bought under schemes other than CDP? (1=Yes, 2=No)			
5.2.1	If yes, please provide details			
	Name of the machine(for additional machines please attach additional sheets in the same format)	Year of purchase	Price at which it is procured	Name of the scheme
5.3	What problems encountered while establishing and running the unit? _____ _____ _____			
5.4	Whether the present CDP Schemes are helpful in increasing productivity? _____ _____ _____			
5.5	What are the benefit received from components under CDP scheme? _____ _____ _____			
5.6	Whether the present CDP Schemes are helpful in increasing your income? _____ _____ _____			

5.7	Whether there is any requirement of other support systems under CDP scheme? <hr/> <hr/> <hr/> <hr/>
5.8	Suggestions for improvement of CDP scheme during XII Five Year Plan: <hr/> <hr/> <hr/> <hr/>

Thank you

Name of the Official/Investigator : _____
Signature : _____
Place of Survey : _____ **Date:** _____

Annexure 1.5

SURVEY QUESTIONNAIRE: CDP
COCOON MARKET/RAW SILK EXCHANGE/RAW MATERIAL BANKS/TASAR
COCOON STORAGE HOUSES/MOBILE DISINFECTION UNIT/CO-OP
SOCIETIES/SELF HELP GROUPS (SHGs)/COMMUNITY BASED ORGANISATIONS
(CBOs)

National Productivity Council, an autonomous organization under Ministry of Commerce & Industry, Government of India, is carrying out a study on the "Evaluation of Catalytic Development Programme (CDP) during XI Five Year Plan", sponsored by Central Silk Board, Ministry of Textiles, Government of India. The objective of this field survey is to find out the effectiveness of CDP implementation during the XI plan period. Findings of this study will be utilized by CSB to modify and improve CDP implementation during XII Five Year Plan

(Please fill as per instructions given. Write codes/ values in the box provided at the right hand side)

1.0	General Information					
1.1	Region (1=North Western Himalayan Region, 2=North Eastern India, 3=Northern and Central India, 4=Eastern region, 5=Southern India)					
1.2	State (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand)					
1.3	Sericulture Activity (1= Cocoon Market 2= Raw Silk Exchange 3= Raw Material Bank 4= Tasar Cocoon Storage House 5=Disinfection unit 6= Co-op society 7= Self Help Groups 8= Community Based Organisation 9= Others (Please Specify)					
1.4	Sericulture Activity (1=Mulberry, 2=Tasar, 3=Eri, 4=Muga)					
1.5	Name & Location of the Cocoon Market/Raw Silk Exchange/Raw Material Banks/Tasar Cocoon Storage House/Disinfection unit/Co-operative society:					
1.6	Name of the Respondent: _____ Address: _____ _____ City/Town/Village: _____ District: _____ Pin: _____ Phone/Mobile No.: _____ E-mail, if any _____					
2.0	Cocoon Markets & Silk Exchanges					
2.1	What is the mechanism followed for Pricing of Cocoon/Raw Silk yarn (for Cocoon Markets & Silk Exchanges)?					
2.2	Cocoon transaction					
	Year	Cocoon Transacted (MTs)	% Cocoon transaction wrt production	Value (Rs Lakhs)	Mkt Fee (Rs Lakh)	Average Price Per kg (Rs)
	2007-08					
	2008-09					
	2009-10					
	2010-11					
	2011-12					

2.3	Raw Silk yarn transaction					
	Year	Raw Silk Transacted (MTs)	% Raw Silk transaction wrt production	Value (Rs Lakhs)	Mkt Fee (Rs Lakh)	Average Price Per kg (Rs₹)
	2007-08					
	2008-09					
	2009-10					
	2010-11					
	2011-12					
2.4	Infrastructure Available in Cocoon Market					
	Category	Infrastructure available				
	Sorting of cocoons					
	Grading of cocoons					
	Weighing of cocoons					
	Records Management					
	Account Management					
	Online Trading					
	Transaction Monitoring					
	Any Other					
	Infrastructure Available in Silk Exchanges					
	Category	Infrastructure available				
	Sorting of raw silk yarn					
	Grading of raw silk yarn					
	Weighing of raw silk yarn					
	Records Management					
	Account Management					
	Online Trading					
	Transaction Monitoring					
	Any Other					
2.4	Suggestions for effective management of Cocoon Market & Raw Silk exchanges?					
3.0	Assistance under Catalytic Development Programme					
3.1	Assistance (in Rs) received for construction of Cocoon Storage Houses/strengthening of Raw Material Banks/Disinfection unit/Co-op society?					
3.2	Infrastructure owned by the Raw Material Banks/Tasar Cocoon Storage Houses/Disinfection units/Co-op society/SHG					

3.3	Infrastructure/Facilities provided under Catalytic Development Programme (CDP)?			
	Infrastructure/Facility/ Working Capital	No. of items	Assistance received (in Rs)	Remarks
4.0	Management of Raw Material Banks/Tasar Cocoon Storage Houses			
4.1	What is the mechanism adopted for management of Raw material in Raw Material Banks/Tasar Cocoon Storage Houses?			
5.0	Co-op Society/Self Help Groups/Community Base Organisations			
5.1	Established by (1= State Government (DOS) 2= CSB 3= District Rural Development Agency 4= Private Organisation 5= Any other (Plz specify)			
5.2	In which sector this Co-op Society/SHG/CBO is working? (1= Seed sector 2= Seed Cocoon sector 3= Commercial Cocoon sector 4= Reeling 5= Weaving 6= Dyeing			
5.3	Objectives of the Co-op Society/SHG/CBO			
5.4	No. of members in the Co-op Society/SHG/CBO			
5.5	Services provided by the Co-op Society/SHG/CBO?			
5.6	Employment provided by the Co-op Society/SHG/CBO.			
5.7	Mechanism of Knowledge sharing in Co-op Society/SHG/CBO?			
6.0	Disinfection unit			
6.1	No. of users of the disinfection unit			
6.2	Services provided by the disinfection unit			
7.0	Impact of Catalytic Development Programme & Suggestion			
7.1	Overall impact of CDP			
7.2	Suggestions for improving the implementation of CDP during XII Five Year Plan.			

Thank You

Annexure 1.6

SURVEY QUESTIONNAIRE: CDP CLUSTER INCHARGE/EXTENSION OFFICER

National Productivity Council, an autonomous organization under Ministry of Commerce & Industry, Government of India, is carrying out a study on the "Evaluation of Catalytic Development Programme (CDP) during XI Five Year Plan", sponsored by Central Silk Board, Ministry of Textiles, Government of India. The objective of this field survey is to find out the effectiveness of CDP implementation during the XI plan period. Findings of this study will be utilized by CSB to modify and improve CDP implementation during XII Five Year Plan

(Please fill as per instructions given. Write codes/ values in the box provided at the right hand side)

1.0	General Information		
1.1	Region (1=North Western Himalayan Region, 2=North Eastern India, 3=Northern and Central India, 4=Eastern region, 5=Southern India)		
1.2	State (1=Andhra Pradesh, 2=Jammu & Kashmir, 3=Karnataka, 4=Tamil Nadu, 5=West Bengal, 6=Assam, 7=Chhattisgarh, 8=Himachal Pradesh, 9=Jharkhand, 10=Maharashtra, 11=Manipur, 12=Meghalaya, 13=Uttar Pradesh, 14=Uttarakhand)		
1.3	Name & Location of the Cluster		
1.4	Name of the Officer: _____ Address: _____ _____ City/Town/Village: _____ District: _____ Pin: _____ Phone/Mobile No.: _____ E-mail, if any _____		
1.5	Officer related to which sericulture activity? (1= Seed sector 2= Commercial Cocoon 3= Seed Cocoon 4= Post cocoon)		
1.6	Officer belong to which organisation (1= CSB 2= DOS 3= Others (Pls specify))		
1.7	What all schemes have been implemented in the cluster?		
	Name of the Scheme	Impact on the cluster	
1.8	What are the problems regarding implementation of Catalytic Development Programme during XI Five Year Plan?		
1.9	Have you received any training for Sericulture Development? (1= Yes 2=No)		

1.10	Details of Training/Seri exposure visit received			
	Name of the training	Scheme under which training was given	Whether training given was satisfactory (1= Yes 2= No)	How have you utilized this training
1.11	Suggestions for improving the implementation of CDP during XII Five Year Plan.			

Thank You

Name of the Official/Investigator : _____
 Signature : _____
 Place of Survey : _____ Date: _____

Annexure 4.1

Cost of Production for Multi end and Automatic reeling machine reelers

A. Cost of Production for Multi End Reeling machine

Values used:

Production per day= 12 Kg

Labour = 1 per basin

Labour Charges = Rs 200 per day

Renditta = 6.8

Bivoltine Cocoon cost = Rs 300 per Kg

Cost Head	Notions used	Cost (in)	Cost of production per Kg of raw silk (Rs)
Cocoon procurement cost	6.8 (Renditta) X Rs 300 per Kg		2040
Labour cost	1.2 Kg production/man day X Rs 200 per day	2400000	166.67
Electricity	Rs 200 per day/12 Kg production per day	300000	17
Water	500 per month/360 Kg of production per month	6000	1.39
Transportation	Rs 750 per trip X 2 trips per month/360 Kg production per month	18000	4.2
Fuel cost (Firewood + Diesel)			42.5
Maintenance		12000	2.78
Total Cost of Production per Kg of Raw silk			2274.54

Source: Estimated from NPC field survey

A. Cost of Production for Automatic Reeling machine

Values used:

Production per annum= 18000 Kg

Labour = 50 persons

Labour Charges = Rs 4000 per month

Renditta = 6.8

Bivoltine Cocoon cost = Rs 300 per Kg

Cost Head	Formula used	Cost of production per Kg of raw silk (Rs)
Cocoon procurement cost	6.8 (Renditta) X Rs 300 per Kg	2040
Labour cost	50 Labour X 4000 per month X 12 months	133.33
Electricity	25000 per month X 12 months	16.67
Water	500 per month X 12 months	0.33
Transportation	Rs 750 per trip X 7 trips per month X 12 months	4.2
Fuel cost	1000 Kg/day X Rs 2.5 /kg X 27 X 12	45
Maintenance		2.78
Total Cost of Production per Kg of Raw silk		2242.31

Source: Estimated from NPC field survey

ANNEXURE 6.1

STATE-WISE ABSTRACT OF EXISTING CLUSTERS AND CDP FUNDS RELEASED TO STATES DURING 2008-09, 2009-10 AND 2010-11 UNDER CLUSTER PROMOTION PROGRAMME

(Rs. In lakhs)

S.No.	State	Sector	Location of Existing clusters	Funds released (CSB's share)	Funds sanctioned (CSBs share)	
				2008-09	2009-10	2010-11
1)	PRE-COCOON CLUSTER					UPTO Sept. 2010)
Southern States (19)						
1	Karnataka(7)	Mulberry	<u>Harohally</u> <u>Ithandahally</u> <u>Y.N. Hoskote</u> <u>Bidarkote</u> <u>Shapur</u> <u>Gajanur</u> <u>G.R. Kere</u>	111.125	152.285	125.86
2	Tamil Nadu(6)	Mulberry	<u>Udumalpet</u> <u>Palani</u> <u>Gobi</u> <u>Berigai</u> <u>Sanarpatty</u> <u>Uttangarai</u>	80.00	164.923	261.14
3	Andhra Pradesh(6)	Mulberry	Madakasira V.Kota Hindupur Palamner Kalyanadurga Bhimadole	67.25	202.633	-
North Eastern States (9)						
4	Assam (3)	Mulberry Muga Muga	Darang Golaghat Lakhimpur	20.37 3.28 3.28	129.032	115.848
5	BTC, Assam (1)	Eri	Udalguri	1.175	87.33	112.082
6	Meghalaya (1)	Muga	Tura	3.281	25.221	73.33
7	Mizoram (1)	Mulberry	Serchhip	18.92	41.24	39.44
8	Nagaland (1)	Eri	Dimapur Distt.	-	77.00	82.20
9	Manipur (2)	Oak Tasar	Senapathy Churchandapur	-	42.494	

Eastern Region (3)						
10	West Bengal (3)	Mulberry Mulberry Muga	Nabagram Kaliachak Co0ch Behar	4.883 8.358 2.30	68.975	70.844
North Western States (7)						
11	Jammu & Kashmir (4)	Mulberry	Nowshera Tral Tikri Bandipora	12.68 13.08	488.848	229.667
12	Uttarakhand(2)	Oak Tasar Mulberry	Bageshwar Kalsi & Vikasnagar	7.312 12.558	52.842	52.284
13	Himachal Pradesh (1)	Oak Tasar	Kangra, Mandi & Kullu	0.953	17.924	13.905
Northern/Central Region (7)						
14	Maharashtra (3)	Mulberry Mulberry	Osmanabad Beed Buldana	27.68 54.88	97.63	25.215
15	Uttar Pradesh (1)	Eri	Fatehpur	15.315	38.16	36.041
16	Orissa (2)	Tasar	Nuagaon Pallahara	3.216	9.268	3.243
17	Chhattisgarh (1)	Tasar	Bastar Dist.	-	9.132	
Total -45 Cluster (pre-cocoon)				47.896	1704.937	1466.099
II POST-COCOON CLUSTER (6)						
1	Karnataka (1)*	-	Location is under finalisation	-	-	-
2	Tamilnadu (1)	-	S.V. Nagaram (Arni)	-	38.57	60.25
3	West Bengal (1)	-	Shantipur (Nadia)	-	15.50	-
4	Andhra Pradesh (1)	-	Hindupur (Ananthapur)	-	62.50	-
5	Maharashtra (1)	-	Yeola-Pithan	-	62.29	12.14
6	Assam (1)	-	Nalbari	-	27.60	-
TOTAL-II – 6 Clusters (post-cocoon)				0	206.46	72.39
GRAND TOTAL-51 Clusters (45+6) (Pre &Post Cocoon)				471.896	1911.397	1538.480

Mulberry-31: Tasar-3: Oak Tasar-4; Muga-4 and Eri-3 = 45 (Pare-Cocoon Clusters)

*Proposal for one post-cocoon cluster in Karnataka is awaited. =06 (Post-Cocoon Clusters)

Total 51

STUDY TEAM

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