

**NOTE ON THE PERFORMANCE OF
INDIAN SILK INDUSTRY
&
FUNCTIONING OF CENTRAL SILK BOARD**

(as on 1st January-2016)



**CENTRAL SILK BOARD
(Ministry of Textiles, Govt. of India)
BANGALORE-560068**

SERICULTURE INDUSTRY

INTRODUCTION:

Silk is the most elegant textile in the world with unparalleled grandeur, natural sheen, and inherent affinity for dyes, high absorbance, light weight, soft touch and high durability and known as the “Queen of Textiles” the world over. On the other hand, it stands for livelihood opportunity for millions owing to high employment oriented, low capital intensive and remunerative nature of its production. The very nature of this industry with its rural based on-farm and off-farm activities and enormous employment generation potential has attracted the attention of the planners and policy makers to recognize the industry among one of the most appropriate avenues for socio-economic development of a largely agrarian economy like India.

Silk has been intermingled with the life and culture of the Indians. India has a rich and complex history in silk production and its silk trade dates back to 15th century. Sericulture industry provides employment to approximately 8 million persons in rural and semi-urban areas in India. Of these, a sizeable number of workers belong to the economically weaker sections of society, including women. India’s traditional and culture bound domestic market and an amazing diversity of silk garments that reflect geographic specificity have helped the country to achieve a leading position in silk industry. India has the unique distinction of being the only country producing all the five known commercial silks, namely, mulberry, tropical tasar, oak tasar, eri and muga, of which muga with its golden yellow glitter is unique and prerogative of India.

India is the Second largest producer of silk in the World. Among the four varieties of silk produced, in 2014-15, Mulberry accounts for 74.51% (21,390 MT), Tasar 8.5% (2,434 MT), Eri 16.5% (4,726 MT) and Muga 0.55% (158 MT) of the total raw silk production of 28708 MT.

Production of raw silk in India during the year 2015-16 (April to November- 2015) has been 19,070 MT in which, mulberry and Vanya raw silk output amounts to 12,954 MT and 6,116 MT, respectively.

PERFORMANCE OF SERICULTURE SECTOR

	XI Plan (2011-12)	XII Plan (2012-17)	XII Plan Achievements			
	Achment.	Target	2012-13	2013-14	2014-15	2015-16* (p)
Mulberry Plantation (Lakh ha.)	1.81	2.40	1.86	2.03	2.20	2.07
RAW SILK PRODUCTION						
Mulberry (Bivoltine)	1,685	5,000	1984	2,559	3,870	2,789
Mulberry (Cross Breed)	16,587	18,000	16731	16,917	17,520	10,165
Sub Total (Mulberry)	18,272	23,000	18,715	19,476	21,390	12,954
V A N Y A						
Tasar	1,590	4,562	1729	2,619	2,434	1,592
Eri	3,072	4,238	3116	4,237	4,726	4,381
Muga	126	200	119	148	158	143
Sub Total (Vanya)	4,788	9,000	4964	7,004	7,318	6,116
GRAND TOTAL	23,060	32,000	23,679	26480	28,708	19,070
Cumulative Employment Generation (Lakh persons)	75.60	92.42	76.53	78.50	80.30	---

Source: The data received from respective DOS State & compiled at CSB (Central office)

*upto Nov-2015 , P: provisional

The State-wise production of Raw silk during 2012-13, 2013-14, 2014-15 & 2015-16 (up to Nov-2015) are given in **Annexure-I**.

RAW SILK IMPORTS:

The quantity and value of raw silk imported during XI Plan and during the first 4 years of XII Plan are given below:

Year	Quantity (MT)	Value (Rs. in Crores)
XI Plan (2011-12)	5683	1111.53
XII Plan 2012-13	4959	1238.56
2013-14	3260	896.44
2014-15	3489	970.82
2015-16* (p)	1994	569.61

Source: DGCIS, Kolkata.

* Upto October-2015, (p)provisional

EXPORTS:

The Indian silk goods are being exported to the traditional major markets like the USA and European countries and small markets of Asia Region. The silk goods export earnings decreased over the years due to global recession. The export earnings during 2014-15 were Rs.2,829.88 crores. Export values of silk goods during XI Plan and during the first 4 years of XII Plan are given below:

Items	XI Plan (2011-12)	2012-13	2013-14	2014-15 (p)	2015-16* (p)
Natural Silk Yarn	19.68	21.96	36.25	25.38	7.08
Silk Fabrics	1497.97	1410.31	1455.63	1465.40	351.96
Readymade Garments	765.83	787.15	874.00	1214.01	1063.86
Silk Carpet	20.08	21.14	15.71	15.97	9.64
Silk Waste	49.77	62.97	99.30	109.12	54.32
Total	2353.33	2,303.53	2480.89	2829.88	1486.86

Source: FTSI & MSFTI, DGCIS, Kolkata

*upto October-2015, P: provisional

Note: Final Data is based on ITC (HS) codes details received from source data.

EMPLOYMENT GENERATION:

The employment generation in the country is raised to 8.03 million persons in 2014-15 compared to 7.85 million persons in 2013-14, indicating a growth of 2.29%.

SCHEMES/PROGRAMMES OF THE CENTRAL SILK BOARD

The mandated activities of CSB are Research and Development, Research Extension, maintenance of four tier silkworm seed production network, leadership role in commercial silkworm seed production, standardizing and instilling quality parameters in the various production processes, promotion of Indian Silk in domestic and international markets and advising the Union Government on all matters concerning sericulture and silk industry. These mandated activities of Central Silk Board are being carried out by the 324 units of CSB located in different States under the following four Central Sector Schemes (Integrated Scheme for development of sericulture Industry):

1. Research & Development, Training, Transfer of Technology and I.T. initiatives.
2. Seed Organization, Coordination and Market Development (HRD).

3. Quality Certification Systems and Export Brand Promotion & Technology Up-gradation.
4. Catalytic Development Programme (Centrally Sponsored Scheme now restructured as Central Sector Scheme and merged with R&D and Seed schemes).

RESEARCH AND DEVELOPMENT (R&D)

The main Research & Training Institutes of the CSB provide scientific and technological support for enhancing production and productivity for sustainable sericulture through innovative approaches. The main institutes at Mysore (Karnataka) Berhampore (West Bengal) and Pampore (J&K) deal with Mulberry sericulture whereas Ranchi (Jharkhand) deals with Tasar culture and Lahdoigarh, Jorhat (Assam) deals with Muga and Eri culture. Regional Sericulture Research Stations (RSRS/RTRS/RMRS) for Mulberry and Vanya sericulture have been functioning for the development of region specific technology package and dissemination of research findings as per regional needs. Besides, a network of Research Extension Centre (RECs) & its sub units for mulberry and vanya silk are also functioning to provide extension support to sericulturists. In order to provide R&D support in post cocoon sector, the Board has established a Central Silk Technological Research Institute (CSTRI) at Bangalore. In addition, the CSB has also set up Silkworm Seed Technology Laboratory (SSTL) in Bangalore (Karnataka), Central Sericultural Germplasm Resource Centre (CSGRC) at Hosur (Tamil Nadu) and Seribiotech Research Laboratory (SBRL) at Bangalore.

During the year 2015-16, up to the end of December 2015 a total of 43 new research projects have been initiated and 29 projects have been concluded by various R&D institutes of CSB and currently a total of 87 research projects viz., 66 in Mulberry Sector, 14 in Vanya Sector and 7 in Post cocoon sector are under progress.

Highlights of Research programmes:

Mulberry

- ❖ The hybrids that were identified through Post Authorization programs such as CSR16xCSR17, MH1xCSR2 in south zone, FC1xFC2, M.con1xB.con4, M.con4xB.con4, M.con1xM.con4 in East and North-East, CSR46xCSR47 FC1xFC2 and APS5xAPS4 in North and North-West are under popularization for commercial exploitation.
- ❖ Two new bivoltine hybrids viz., G11xG19 and B.con1xB.con4 with better yield and adaptation are in the 2nd year of the authorization trials.
- ❖ A highly productive single hybrid, S8xCSR16 was developed with cocoon yield potential of 70-80kg/100 dfls and characterized by high reelability, neatness, raw silk recovery and renditta and it is ready for large scale testing.
- ❖ Four new mulberry varieties viz., C2038, G4, Suvarna-2, Tr-23 are under All India Coordinated Experimental Trials. In South G4 and in East and North C2038 and in hilly areas Tr-23 are performing better than other varieties.
- ❖ Released a new mulberry variety MSG2, for cultivation in semi-arid regions, where soil moisture stress is a limiting factor for sericulture. It has a leaf yield potential of

22-33 MT/ha/yr compared to the existing S13 variety (13-16MT) and it is suitable for growing as small trees under protective irrigation.

- ❖ Developed an improved crossbreed (L14 x S8) through hybrid evaluation tests utilizing improved L14 lines and new bivoltine male components.
- ❖ Four thermo-tolerant silkworm lines were developed utilizing SSR markers (LFL0329 & LFL1123) associated with thermo-tolerance.
- ❖ Identified low temperature stress tolerant mulberry genotypes with high leaf yield viz., C-108 (15.4 mt) in C-384 (9.7 mt) and C-212 (9.2 mt).
- ❖ C-2028, a water logged tolerant mulberry variety is being popularized in West Bengal, Assam and other Eastern and North Eastern States.
- ❖ The NPV tolerant bivoltine silkworm hybrid MSN4 xCSR4 is performing better than control under field testing.
- ❖ Evaluation trials confirmed the safe employment of the 4, 6, 8 and 10 months hibernation schedules for preservation of the bivoltine silkworm breeds SK₆ and SK₇ and tropical univoltine race Barpat.
- ❖ 1269 Mulberry Germplasm accessions are being conserved in the *ex situ* field gene bank.
- ❖ 458 silkworm germplasm stocks (77 Multivoltine, 361 Bivoltine and 20 mutants) are being maintained through scheduled rearing.

Vanya Silk

- ❖ Tasar Daba bivoltine silkworm 'BDR-10' is under popularization.
- ❖ A new Tasar silkworm line "CTR-14" is under field testing.
- ❖ Eri silkworm breed 'C2' is under popularization.
- ❖ Developed two superior lines of hybrid progenies (CMR-1) as well as backcross line (CMR-2).
- ❖ Insect Repository has been established at CMERTI, Lahdoigarh.
- ❖ Identified an alternative food plant *Lagerstroemia speciosa* for Tasar silkworm rearing, which is easy rooter and fast growing. Trials are on to validate the rearing performance.
- ❖ Two Som accessions (S3 & S6) resistant to leaf spot disease, leaf blight and rust are being popularized in the field.

Post Cocoon

- ❖ Demonstration of Indigenous Automatic Silk Reeling Machine (ARM) to produce superior quality import substitute silk is being done using concept model.
- ❖ Demonstration of Solar powered low cost spinning machine that can be operated in rural areas by harnessing solar power.
- ❖ Popularization of Low cost eight end multi-end reeling machine for tasar silk reeling.
- ❖ In Vanya silk post cocoon sector Popularization Wet reeling of tasar and Muga cocoons, Sizing machine for tasar silk, Modified dry reeling machine for tasar cocoons, Pressurized hank degumming machine and Equipment for recycling of silk reeling water are being popularized in field.

- ❖ Demonstration of Pellade extraction and pupa separation machine to remove pellade layer from spent silkworm pupae.
- ❖ Developed three varieties of Chanderi sarees (Silk x Silk).
- ❖ Developed technology of “Use of Slug catcher (as replacement for porcelain button) for Slug removing” and is being field tested.
- ❖ Developed technology of “Yarn degumming using CSTR Eco degumming machine” and is being field tested.

Patents & Commercialization:

a. Patents obtained:

1. Peddle operated composite cocoon harvester.
2. Mountage used for production of cocoon
3. Manually operated matured silkworm separator and collector

b. Applications filed for patenting:

1. Six patent applications were filed to National Biodiversity Authority for clearance. Preparation of pupa powder
2. Culturing of Cordyceps
3. Use of spent silkworm moths
4. Pupae for human food
5. Preparation of pupae oil and
6. Preparation of silkworm powder

C. Commercialization of Technologies:

- ❖ MoUs entered with the manufacturers of Samruddhi, Serimore and Sanitech Super for the commercial utilization after thorough technical evaluation.
- ❖ Aroma finishing on silk.
- ❖ Technology package for proper handling and processing pupae byproduct for effective utilization.

Transfer of Technology (TOT):

The technologies emanated out of the concluded projects are being effectively transferred to the field through various extension communication programmes viz, Krishimelas, Group Discussions, Enlightenment programmes, Field Days, Farmers’ Meet, Audio Visual programmes, Technology demonstrations etc. During 2015-16, up to the end of December, a total 716 ToT programmes have been organized and 47 technologies were transferred effectively to the user level. Further, 85,734 cocoon and silk samples have been tested under post cocoon technology.

Collaborative Research Projects and Biomaterial Research:

- 1) The R&D institutes of CSB, in addition to the in-house funded projects, are also carrying out collaborative research projects with the financial assistance from DBT, DST, PPV and FRA, ILRI Ranchi etc. During 2015-16, a total of 18 research projects with external funding are being carried out.
- 2) CSB Institutes also collaborate with other research Institutes such as IIT Kharagpur, IARI New Delhi, CCMB Hyderabad, NIFT Tirupur, Sree Chitra Tirunal Institute for

Medical Sciences and Technology, Trivandrum, Kerala, BTRA Mumbai, Coir Board, GKVK Bangalore, NEIST Jorhat, TERI Bangalore, BIT Mesra and NCL Pune. At present, 12 such projects are being carried out.

- 3) International collaboration with different institutes has also been undertaken. One project aiming at developing DNV resistant silkworm has already been initiated with Japan while another project is being carried out with Bulgaria on breed improvement.

New Breeds/Varieties approved for popularization:

The silkworm breeds/hybrids authorized recently for commercial exploitation by the Hybrid Authorization Committee (HAC) are being popularized in the field. Important among them are:

#	New breeds/varieties	Region
Mulberry sector		
1	CSR50 x CSR51	For South zone
2	(CSR52 x CSR50) X (CSR51 x CSR53)	All India
3	N x (SK6 x SK7)	For Eastern zone
4	M6DP x SK4	
Vanya sector		
5	BDR-10 (Tasar)	All regions suitable for tasar culture
6	C2 (Eri)	All regions suitable for Eri culture

CAPACITY BUILDING & TRAINING:

The R&D institutions of CSB, spread across the country, covering all activities on the silk value-chain pertaining to all the four silk sub-sectors, are intensively involved in training, skill seeding and skill enhancement on a sustainable basis. From the year 2015-16 onwards, CSB’s capacity building and training initiatives have been restructured under the following five heads to be implemented and monitored by the Capacity Building & Training Division:

(i) Skill Training & Enterprise Development Programmes (STEP):

Under this category a variety of short-term training modules focusing on Entrepreneurship development, In-house and industry Resource Development, Specialized Overseas Training, popularization of sericulture technologies, lab to land technology demonstration programmes, training impact assessment surveys etc have been planned to be taken up.

(ii) Establishment of Sericulture Resource Centre (SRC):

These training cum facilitation centres would be established in select Mulberry Bivoltine & Vanya clusters with a unit cost of Rs.3.50 lakhs to act as an important link between Extension Centres of R&D labs and the beneficiaries. The purpose of these SRCs is -

technology demonstration, skill enhancement, one-stop shop for Seri-inputs, doubt clarification and problem resolution at cluster level itself.

(iii) Capacity Building & Training by R&D Institutes of CSB:

In addition to conducting structured long-term training programme (Post Graduate Diploma in Sericulture) the R&D institutes of CSB will also conduct technology-based training both for farmers and other stakeholders besides organizing Krishi Melas, Farmer’s day, farmer’s interaction workshops etc. for empowering the framers and other industry stakeholders.

(iv) Capacity Building in Seed Sector:

Silkworm seed is the most critical sector that drives the entire silk value chain. The quality of seed determines the quality of industry output. Therefore addressing the capacity building and training needs of this sector is of paramount importance. It is proposed to conduct a variety of training programmes to cover industry stakeholders like – Pvt. Silkworm Seed Producers, Adopted Seed Rearers, Managers and work force attached to Govt. owned grainages.

(v) Information, Education and Communication (IEC):

IEC is meant for supporting Capacity Budding and training initiatives by popularizing recommended technologies though Brochures, pamphlets, handouts, booklets etc. This component also propose to produce technology based instructional videos, study materials and documentary films to show case the industry

Table below shows details of number of persons trained under programmes organized by the Research & Training Institutes of CSB during the first four years of XII Plan are given below:

#	Training courses	No. of persons Trained			
		2012-13	2013-14	2014-15	2015-16 Up to Dec-15
1	Structured Courses (PGDS Mulb & Non-Mulb Courses)	47	45	33	37
2	Farmers Skill Training	-	-	-	7446
3	Technology Orientation Programme	-	-	-	1729
4	Capsule Courses	785	1199	4071	-
5	Adhoc Courses (TUP + SDP + MDP + RDP + Need based + Farmers Training Programmes.)	10311	3239	2571	-
6	Other Training Programmes (STEP)	3017	4082	4425	339
7	Integrated Skill Development Scheme (ISDS)	2225	8235	6689	-
	TOTAL	16385	16800	17789	9551

I.T. INITIATIVES:

- ❖ CSB concentrated on software development using contemporary technologies and networking of various Research Institutes under its control for smooth exchange of information such as availability of raw material, market trends etc.
- ❖ 'SMS service' through mobile phone on day-to-day market rates of Silk and Cocoons for the use by the farmers and other stakeholders of the industry.
- ❖ SERI-5K database has been designed and developed to maintain and manage Bivoltine cluster farmers throughout the country.
- ❖ SILKS Portal: Sericulture Information Linkages and Knowledge System portal has been developed in association with North Eastern Space Application Centre, Dept.of Space by capturing geographical images through satellite and used for analysis and selection of potential areas for promoting Sericulture activities in those areas.
- ❖ AEBAS: Aadhaar enabled biometric attendance system is implemented at Central Office, Bangalore including CSTRl and NSSO.
- ❖ Video Conference: CSB has full fledged Video Conference facility at CSB Complex, Bangalore, CSR&TI, Mysore & Berhampore. Linking other main Institutes like CSR&TI, Pampore, CMER&TI, Lahdoigarh, CTR&TI, Ranchi and RO, New Delhi through Video Conference is in progress.

SEED SUPPORT (production of silkworm seed)

The CSB has a chain of Basic Seed Farms supplying basic seeds to the States. Its commercial seed production centers augment efforts of the States in supplying commercial silkworm seed to farmers.

The Table below indicates the total quantity of seed production during first 4 years of XII Plan (2012-13, 2013-14, 2014-15 & 2015-16 (upto December-2015))

(Unit: Lakh dfls)

Particulars	XI Plan (2011-12) Achmnt.	2012-13		2013-14		2014-15		2015-16 (upto Dec-2015)	
		Target	Achmnt.	Target	Achmnt.	Target	Achmnt.	Target	Achmnt.
Mulberry	321.54	325.00	308.48	325.00	338.57	350.00	370.13	375.00	300.80
Tasar	36.44	33.13	39.74	34.51	38.44	44.09	42.46	47.14	50.17
Muga	2.52	5.02	4.87	5.52	5.00	6.07	6.11	7.26	5.61
Eri	3.17	3.39	4.21	3.60	3.61	4.10	5.69	4.52	4.67
Total	363.57	367.21	357.30	368.63	385.62	404.26	424.39	433.92	361.25

MARKET SUPPORT

Raw Material Bank (RMB) for Tasar at Chaibasa (Jharkhand) along with 4 Sub-depots, one each at Raigarh (Chhattisgarh), Bhagalpur (Bihar), Warangal (A.P) and Bhandara (Maharashtra) and Muga Raw Material Bank (MRMB) for Muga at Sibsagar in Assam with 3 Sub-Depots, at Dhakukhana, Sualkuchi (Assam) and Coochbehar (W.B.) are functioning with the primary objective of ensuring economic and fair price to the actual Tasar & Muga cocoon producers.

The details of procurement and sale made by RMB & MRMB and its Sub-depots during XI Plan and first 4 years of XII Plan (2012-13, 2013-14, 2014-15 & 2015-16 (upto December-2015)) are given below:

(Unit: Qty.in lakh Nos. & Value in Lakh Rs.)

Year	RMB (Tasar)				MRMB (Muga)			
	Procurement		Sale		Procurement		Sale	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
XI Plan (2011-12)	162.84	111.44	166.07	123.86	2.907	2.41	2.907	2.56
XII Plan 2012-13	247.64	177.36	222.87	159.99	4.47	6.33	4.47	6.58
2013-14	248.65	267.30	240.78	232.50	6.47	10.11	6.47	10.49
2014-15	180.35	192.60	237.70	306.11	5.42	9.40	5.20	8.27
2015-16 (up to Dec-2015)	126.89	152.74	122.13	151.83	0.33	0.45	0.33	0.45

QUALITY CERTIFICATION SYSTEM:

Central Silk Board is popularising “Silk Mark”, for purity of silk products through the Silk Mark Organisation of India (SMOI). “Silk Mark”, an assurance label, protects the interests of the consumers from the traders selling spurious products in the name of pure silk.

The progress achieved under the Silk Mark Scheme during the XI Plan period and during the first 4 years of XII Plan (2012-13, 2013-14, 2014-15 & 2015-16 (upto December-2015)) is given below:

Particulars	XI PLAN Achmnt. (2011-12)	XII PLAN							
		2012-13		2013-14		2014-15		2015-16*	
		Target	Achmnt.	Target	Achmnt	Target	Achmnt	Target	Achmnt
Total No. of new Members enrolled	301	250	267	250	302	250	285	250	193
Total No. of Silk Mark Labels sold(Lakh nos.)	26.00	25.00	25.57	26	27.32	28.0	25.50	25.00	19.63
Awareness Programmes Exhibition/Fairs/ Workshop/Road shows	526	300	410	345	518	360	430	390	399

*upto December-2015

Silk Mark Expo

In order to ensure that Silk Mark gains further credibility & popularity, Silk Mark Expos are being organized exclusively for Silk Mark Authorized Users from across the country. The Expo is an ideal platform not only to popularize Silk Mark but also in bringing the manufacturers and the consumers under one platform for buying and selling of pure silk products. Substantial business for the participants is generated during this event. During the event massive awareness and publicity campaigns are carried out by the SMOI.

During the year 2015-16 (till December-2015) 13 Expos have been organised at Guwahati (2), Kochi, Puducherry, Thiruvananthapuram, Bhubaneshwar, Kolkata, Ranchi, Hyderabad, Bhopal, Jaipur, Pune, Bangalore against the annual target of 22 Expos.

BRAND PROMOTION & TECHNOLOGY UP-GRADATION

During XII Plan, this new component is being implemented for the Brand Promotion of **Indian Silk**. This will provide tremendous impetus to the Indian Silk export promotion in international market. This can be in the form of advertisement and market promotion, participation in international show as 'Indian Silk Brand', establishment of laboratories at Kolkata, Sualkuchi for silk testing, etc.

- Promotional programmes for Indian Silk at Sualkuchi, Uppada and Chanderi have been completed.
- Exclusive Indian silk portal is under development.
- Participated in ISC congress by showcasing the products developed at Sandur Kushala Kala Kendra, Bellary district by utilising the services of renowned visual artist from France Ms. Isabella Arcerio and the tribal women based in Sandur.
- An exclusive e-commerce portal, www.silkmark.gocoop.com to promote the products of silk clusters has been set up. In the first phase, five clusters namely Varanasi, Bhagalpur, Uppada, Pochampalli and Sualkuchi have been covered. A fairly good response is being received for the portal from the consumers.

CENTRALLY SPONSORED SCHEMES (CSS)- CATALYTIC DEVELOPMENT PROGRAMME

Apart from Central Sector Schemes, CSB has also been supporting the State Governments in implementing a Centrally Sponsored Scheme viz Catalytic Development Programme (CDP) with an aim of synergizing and disseminating improved technology packages, innovations developed by its R & D units and incentivizing investments among the stakeholders to adopt improved technology leading to enhanced production, productivity and improvement in quality of silk so as to enhance the income of primary producers.

During the year 2015-16, based on the recommendations of the 14th Finance Commission, the Govt. of India has increased the State's share in net proceeds of union tax revenue from 32% to 42%. On account of the higher flow of funds to the State Government, the Union Government has taken a decision to windup majority of the Centrally Sponsored Schemes including the Catalytic Development Programme. Accordingly, the Government of India has taken a decision to discontinue implementation of Catalytic Development Programme as Centrally Sponsored Scheme with effect from the year 2015-16. All the above mentioned Central Sector Schemes are organically linked to one another and aimed to increase the quality and productivity of silk in the country thereby enhance the income of Stake Holders. It is therefore brought all these schemes under one Scheme – viz "Integrated Scheme for Development of Silk Industry".

The CDP Scheme has been discontinued as Centrally Sponsored Scheme, the activities have been taken under Central Sector Scheme viz R&D and Seed and these two schemes have been restructured to give priority to Breed, Seed, Post Cocoon Technology and Capacity Building. Other two ongoing schemes viz Coordination and Market Development and Quality Certification System covering SMOI and Brand Promotion will continue without any modifications.

Financial Allocation for Plan Schemes:

The revised allocation proposed for the year 2015-16 is within the overall allocation of Rs.178.10 crore approved by Government of India and the allocation approved for the remaining two years (2015-16 & 2016-17) is within the allocation of Rs.1269.00 crore approved by the EFC, Govt. of India for XII Plan.

The table below indicates the XII Plan allocation and expenditure during first four years and proposed allocation for 2016-17 as per restructured central sector schemes.

#	Central Sector Schemes for Sericulture	XII Plan Allocation	2012-13 Expdtr.	2013-14 Expdtr.	2014-15 Expdtr.	(Rs. in crore)		2016-17 Proposed
						2015-16		
						Allocation (RE)	Expntr. till Dec-15	
1	Research, Development, Training & IT Initiatives	203.71	30.25	37.97	44.50	88.30	64.35	75.12
2	Seed Organisation/Coordination	119.08	11.58	26.64	30.56	59.78	46.37	54.85
3	Coordination and Market Development	40.35	7.96	7.18	9.02	9.02	6.76	9.50
4	Quality Certification System and Export/Brand promotion & Tech. up-gradation	16.85	3.05	7.30	0.50	1.00	0.69	1.00
5	Catalytic Development Programme (CDP)	889.00	205.16	295.76	213.00	20.00	16.80	20.00
	Grand Total	1269.00	258.00	374.85	297.58	178.10	134.97	160.47

Convergence Efforts:

The Ministry of Textiles is extending support to the sericulture sector in the form of CSS & NERTPS. Efforts are taken for further by mobilizing additional funds through convergence, by availing the schemes being implemented by various other Ministries of Govt of India. As per the latest reports received from States, during the year 2014-15, against the proposals of States for Rs. 671.47 crores, the States have received sanction for Rs.256.84 crores, of which Rs.183.14 crore has been released so far under RKVY, MGNREGA and other convergence programmes. During the current financial year 2015-16 (till December-2015), States have submitted proposals for Rs.579.98 crores and received sanction for an amount of Rs.177.34 crores and received funds worth Rs.96.01 crores.

Implementation of Cluster Promotion Programme for Bivoltine silk:

During XII Plan, the foremost thrust to augment the import substitute silk in the country and to increase the production of BV silk to 5000 MT from the production level of 1985 MT (2012-13). To achieve the target, Central Silk Board in association with State Sericulture Departments has organized 172 Bivoltine Clusters.

With the joint concentrated efforts, 3870 MTs of Bivoltine raw silk has been produced against a target of 3500 MTs during 2014-15(110.58%) i.e. 1311 MT (51.23%) in excess

against 2559 MT produced during the year 2013-14, 62.5% (2357 MT) of the total raw silk production (2600 MT) is achieved through Clusters.

During the year 2015-16 (up to November-2015) 2789 MT of bivoltine raw silk production has been recorded against the total bivoltine rawsilk target of 4500 MT.

Implementation of Cluster Promotion Programme for Vanya silk:

50 clusters (45 clusters in pre-cocoon and 5 clusters in post cocoon sectors) to produce 400 MT Vanya silk have been identified. CSB and the State DoSs have identified and posted necessary CDFs to work in harmony and ensure completion of benchmark survey and diagnostic studies in the clusters & preparation of cluster projects with need based interventions. Benchmark survey, diagnostic studies and preparation of cluster projects have been completed. Two orientation workshops were organized for building awareness and capacity building of CDFs and State officials to take off implementation process. Detailed guidelines issued for implementation of the programme at Cluster level and monitoring at State & Institute level have been institutionalized for expediting the implementation and review of the progress of the programme periodically.

Due to closure of CDP scheme from the year 2015-16, at present 20 clusters identified to strengthen the Tasar seed sector and 5 clusters in post cocoon sectors are being supported under CSS. The budget allocation to individual Tasar clusters has been finalized and conveyed to State Govt. and CSB units for implementation. A total of Rs 11.45 Cr has been released to states for implementing the Vanya cluster Programme.

Bivoltine Sericulture Technology Development Project:

Central Silk Board in coordination with JICA is implementing a Follow up-Cooperation Programme on JICA projects since 2012. The out come of the programme are:

- One way multiplication system as recommended by JICA for maintenance of silkworm seed is followed meticulously for quality maintenance.
- 10 end Automatic Reeling machine has been developed indigenously. The same is under replication to manufacture 40 ends
- Rotary Mountages with Nylon net collection system has reduced labour cost upto 50% and found very economical with quality Bv cocoon production. The same is under popularization under CSS.

Japan Overseas Co-operation Volunteers (JOCV) assisted by JICA

To support in the field of extension methodology, JICA has dispatched 3 JOCVs for a period of 3 years from January, 2015 to 2017, to work in the identified Bivoltine clusters to support CSB in organizing Self Help Groups/ CBOs involving sericulturists, for effective technology transfer in the identified areas for the improvement in Bivoltine production

SCHEDULED CASTES AND TRIBAL SUB-PLAN (SCSP & TSP) DURING 2015-16:

During 2015-16, against total allocation of Rs.27.00 crores, CSB has released Rs.22.24 crores (up to Dec-2015) under restructured Central Sector Scheme viz., Integrated Scheme for Development of Silk Industry (ISDSI) towards implementation of SCSP and

TSP. It is proposed to implement SCSP in mulberry clusters, Institute Village Linked Programme (IVLP), Post Cocoon Technology (PCT) programmes by providing priority to SC beneficiaries. Under TSP, It is envisaged to support Tribal Tasar Rearers and Reelers in selected blocks of major tasar silk producing States to improve the productivity and quality so as to increase the income of stake holders through R&D intervention. The programme will be implemented by the States in coordination with the local Research Extension Centres of Central Silk Board. All the beneficiaries of SCSP & TSP will get higher subsidy on line with special status states.

SERICULTURE DEVELOPMENT IN NORTH EASTERN STATES

North East has the unique distinction of being the only region producing four varieties of silk viz., Mulberry, Ok Tasar, Muga and Eri. Overall NE region contributes 18% of India's total silk production. During the year 2014-15, approximately 85,982 hectares of land is covered under different varieties of silkworm food plants in NE States, 16,127 Sericulture villages and 3,95,433 families are directly involved in Sericulture activities.

The production of all varieties of raw silk during the year 2015-16 (Upto November-2015) in North East States as given below:

Production 2015-16 (Upto November-2015) {Prov} (Qty: in MT)				
Mulberry	Tasar	Eri	Muga	Total
216	3.37	4376	143	4738

NERTPS Project for Sericulture (support for North East Region)

North East Region Textile Promotion Scheme

In order to boost the textile sector in the NE region, the Govt of India has approved a project- based strategy for the North East Region under an umbrella scheme by name “**North East Region Textile Promotion Scheme**”. The broad objective of the North East Textile Promotion Scheme is to develop and modernize the textile sector in the North East Region by providing the required Government support in terms of raw material, seed banks, machinery, common facility centres, skill development, design and marketing support etc. Under NERTPS various sericulture projects have been approved under two broad categories viz., ISDP and IBSDP.

I. Integrated Sericulture Development Project (ISDP)

Under North Eastern Region-Textiles Promotion Scheme (NERTPS), Govt. of India has approved 14 Sericulture Project with a total cost of Rs. 521.94 crore (Gol share of Rs. 421.45 crores) for implementation in NE States viz., Assam, BTC, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura, including a Silk Printing & Processing unit for Tripura for a period of 3 years from 2014-15 to 2016-17. While 13

projects are meant for implementation by States to consolidate the State efforts to strengthen the existing facilities including support for infrastructure creation at farmers /seed cocoon producers/reelers/weavers' level in identified areas, 1 (one) project is for creation of Seed Infrastructure for CSB to produce quality seed in NE to support States and stakeholders with a cost of Rs.37.71 crore (Mulberry, Eri and Muga sectors).

II. Intensive Bivoltine Sericulture Development Project [IBSDP]

Besides the above, 8 New projects on Intensive Bivoltine Sericulture Development for all NE States (except Manipur) with a total cost of Rs.236.78 crores (GoI share of Rs.210.41 crores) have also been taken up for production of International quality bivoltine silk. The project envisages to cover 500 acres under mulberry plantation in 2 blocks at each cluster involving approx 1,100 women beneficiaries per State including weavers. Overall, it aims to cover 4,000 acres of mulberry plantation around 9000 women beneficiaries covering 8 NE States. Social Mobilization and Women Group Formation along with supporting interventions for plantation development and infrastructure creation are integral part of the project. These projects are presently under implementation in respective States.

The details of physical and financial target & achievement (till December-2016) are given in **Annexure- II**.

ANTI DUMPING DUTY ON IMPORTS RAW SILK & SILK FABRICS:

Raw Silk: In order to safeguard the interest of the domestic silk industry against the cheap imports, a petition was filed by CSB with Directorate General of Antidumping & Allied Duties (DGAD) on behalf of various silk reelers Associations along with the State Governments of Karnataka, Andhra Pradesh & Tamilnadu for imposition of antidumping duty on raw silk imported from China P.R. Considering the merits of the case, the antidumping duty was imposed with a reference price of US\$ 37.32 per Kg. and the same was in force till January-2014. Subsequently an application has been filed before the Director General of Antidumping & Allied Duties (DGAD), New Delhi on 8th May 2014 for imposition of the antidumping duty on Chinese raw silk of 3A Grade & Below. DGAD after thorough investigation recommended imposition of definitive antidumping duty in the form of fixed duty of US\$ 1.85 per Kg on the landed cost of imported raw silk vide notification No.14/17/2014/DGAD dated 4-12-2015. The current antidumping declaration is expected to stabilize the price of raw silk in domestic market.

FINANCIAL PROGRESS:

The table below indicates year-wise financial performance of the Central Silk Board during the XI Plan and during the First 4 years of XII Plan.

(Cr.Rs.)

BUDGET HEADS	XI Plan		XII Plan				
	Allocation	Expenditure	2012-13 Expenditure	2013-14 Expenditure	2014-15 Expenditure	2015-16 Allocation (BE)	2015-16* Expenditure
NON PLAN							
Administrative Expenses of CSB	831.90	831.90	236.69	264.47	279.17	331.00	239.20
Development of Silk Industry	77.95	77.95	19.00		--	--	--
Total	909.85	909.85	255.69	264.47	279.17	331.00	239.20
PLAN							
Administrative Expenses of CSB	118.00	118.00	41.71	--	--	--	--
Development of Silk Industry	670.00	670.00	142.40	259.04	218.48	149.77	125.29
Projects/Schemes of North-Eastern States	271.40	271.40	73.89	115.81	79.10	28.33	9.68
Total	1059.40	1059.40	258.00	374.85	297.58	178.10	134.97
Grand Total	1969.25	1969.25	513.69	639.32	576.75	509.10	374.17

*upto December-2015

PLAN PROGRAMMES OF CSB:

Financial Allocation and Expenditure incurred by CSB towards implementation of major Schemes and Programmes of CSB during XI Plan and during the First 4 years of XII Plan are given below:

(Cr.Rs.)

#	Programmes of CSB	XI Plan Allocation	XI Plan Expenditure	2012-13 Expenditure	2013-14 Expenditure	2014-15 Expenditure	2015-16 Allocation (BE)	2015-16** Expenditure
1	Research, Development, Training & IT Initiatives	144.55	144.6	30.25	37.97	44.50	88.30	64.35
2	Seed Organisation	78.36	78.31	19.54	33.82	39.58	59.78	46.37
3	Coordination & Market Development (HRD)	14.75	14.75	3.05	7.00	0.42	9.02	6.76
4	Quality Certification System & Export/Brand promotion & Tech.upgradation	--	--	--	0.30	0.08	1.00	0.69
5	Catalytic Development Programme (CDP)	821.74	821.74	205.16	295.76	213.00*	20.00	16.80
Grand Total		1059.40	1059.40	258.00	374.85	297.58	178.10	134.97

*Funds released by MoT to States directly **upto December-2015

State wise Raw Silk production during 2012-13 to 2015-16(upto Nov-2015)

(in MT)

#	State	Achievement			
		2012-13	2013-14	2014-15	2015-16 (P) (upto Nov-2015)
1	Karnataka	8219	8574	9645	6517
2	Andhra Pradesh	6550	6912	6485	2844
3	Telangana			101	64
3	Tamil Nadu	1185	1120	1602	1284
4	Kerala	6	4	7	3
5	Maharashtra	97	122	221	145
6	Uttar Pradesh	157	188	236	105
7	Madhya Pradesh	190	195	248	53
8	Chhattisgarh	391	391	234	131
9	West Bengal	2070	2079	2500	1627
10	Bihar	22	52	53	1
11	Jharkhand	1090	2003	1946	1401
12	Odisha	104	53	98	42
13	Jammu & Kashmir	145	136	138	73
14	Himachal Pradesh	23	25	30	28
15	Uttarakhand	17	22	29	13
16	Haryana	0.13	0.13	0.3	0.37
17	Punjab	5	4	4	0.6
18	Assam & Bodoland	2068	2766	3222	3030
19	Ar.Pradesh	22	15	12	33
20	Manipur	418	487	516	318
22	Meghalaya	517	644	656	749
23	Mizoram	40	44	50	38
24	Nagaland	324	606	619	550
25	Sikkim	3	0.20	8	6
26	Tripura	15	40	48	15
Total		23,679	26,480	28,708	19,070

(p): Provisional

NERTPS: Physical and financial target & achievement**I. Integrated Sericulture Development Project (ISDP)**

State	Total Cost (Crores)	Gol share (Crores)	Gol Release till Dec-2016 (Crores)	Benef. to be covered (Nos)	Output during Project (MT)
Assam	66.67	47.42	14.67	3,265	196
BTC	34.92	24.68	8.22	1,576	171
Ar. Pradesh	18.42	18.42	7.19	1,362	79
Manipur	149.76	126.60	30.08	2,896	450
Manipur (for Hill Districts)	30.39	24.67	7.75	1,514	68
Meghalaya	30.16	21.91	7.30	1,466	162
Mizoram	32.49	24.49	8.16	1,811	117
Nagaland	31.47	22.66	7.55	1,898	166
Tripura	47.95	33.20	11.06	3,510	275
Tripura (for Printing)	3.41	3.41	1.20		1.50 lakh mts./yr
Creating Seed Infrastructure for CSB	37.71	37.71	12.57	--	30 lakh Mulberry & 21.50 lakhs Muga / Eri dfls / yr
BTC(IEDPB)	11.41	10.61	-	500	60
Mizoram(IMS DP)	13.52	12.83	-	600	15.86
Nagaland(IES DP for WE)	13.66	12.83	-	1000	72
Total	521.94	421.45	115.77	21,398	1,831

II. Intensive Bovoltine Sericulture Development Project (IBSDP)

State	Total Cost (Crores)	Gol share (Crores)	Gol Release till Dec-2016 (Crores)	Benef. to be covered (Nos)	Raw Silk Output during Project (MT)
Assam	29.55	26.28	5.50	1,100	29
BTC	30.06	26.75	5.50	1,200	26
Ar. Pradesh	29.47	26.20	5.50	1,100	20
Meghalaya	29.01	25.77	5.50	1,000	27
Mizoram	30.15	26.87	5.50	1,100	26
Nagaland	29.43	26.16	5.50	1,100	27
Sikkim	29.68	26.43	5.50	1,050	27
Tripura	29.43	25.95	5.50	1,100	27
Total	236.78	210.41	44.00	8,750	209