INTRODUCTION

The Planning Commission, vide its letter No.I&M-3 (17)/2011 dated 28th April, 2011 constituted a Working Group for the Textiles & Jute Industry for the Twelfth Five Year Plan under the Chairmanship of Smt Rita Menon, Secretary (Textiles) and Shri N.D.George, Economic Adviser MOT as Member Secretary. The composition and terms of reference of the Working Group are at **Appendix - A**.

2 The Working Group, in turn, constituted eight Sub Groups as indicated below:

Sr. No.	Name of the Sub-Group	Chairman
(i)	Textiles & Apparel Industry	Shri V. Srinivas, Joint Secretary, MoT Shri A. B. Joshi, Textile Commissioner – Co-Chairman
(ii)	Powerlooms	Shri V. Srinivas, Joint Secretary, MoT Shri A. B. Joshi, Textile Commissioner – Co-Chairman
(iii)	Wool & Woollen	Shri V. Srinivas, Joint Secretary, MoT Shri A. B. Joshi, Textile Commissioner – Co-Chairman
(iv)	Sericulture	Smt Monika S. Garg, Joint Secretary, MoT Smt Sathiavathy, Member Secretary, CSB
(v)	Jute	Shri Sujit Gulati, Joint Secretary, MoT
(vi)	HRD & Skill Development	Shri V. Srinivas, Joint Secretary, MoT Smt Monika S. Garg, Joint Secretary, MoT – Co- Chairman
(vii)	Fashion & Textiles Education	Smt Monika S. Garg, Joint Secretary, MoT
(viii)	Technical Textiles	Shri A. B. Joshi, Textile Commissioner Shri Sujit Gulati, Joint Secretary, MoT – Co - Chairman

3. The composition and terms of reference of the various Sub Groups are at **Appendix - B**. The Working Group held its first meeting on 20.05.2011. The Second meeting was held on 04.07.2011 when the main findings and recommendations of the Sub-Groups was dicussed in details. The Sub-Groups held several meetings as indicated at **Appendix**. B-1.

4. The Report of the Working Group has been prepared under the overall guidance of the Steering Committee on Industry for the Twelth Five Year Plan under the chairmanship of Shri Arun Maira, Member Plannning Commission. It contains the recommendations of the Sub-Groups which were accepted by the Working Group and suggestions given by the Working group members.

Chapter-1

THE CHALLENGES AND STRATEGY FOR GROWTH OF THE INDIAN TEXTILE INDUSTRY

- TEXTILES AS A FOCUS INDUSTRY
- OBJECTIVES OF THE TEXTILES SECTOR IN THE TWELFTH PLAN
- POLICY FRAMEWORK
- PLANNING FOR GROWTH

Chapter-1

THE CHALLENGES AND STRATEGY FOR GROWTH OF THE INDIAN TEXTILE INDUSTRY

India is poised to become a significant player in the global textile economy both as a consumer and as a producer of textiles. The synergistic efforts of all the stakeholders including Govt. has resulted in the industry growth rate of 8-9% during the last 2-3 years as compared to 3-4% during the last six decades since independence. However, there is slowdown in the growth during the current year but industry has the capability and resilience to overcome this temporary phase of global economic recession and emerge stronger**.**

1.2 The Indian domestic textiles and apparel market is one of the fastest growing market in the world. The most important growth driver is the robust economic growth that has been witnessed in the country. India's GDP has been growing at a rate of 6% since the liberalization of economy in 1991 and has grown over by 8% in the past few years. At 8% CAGR, India's GDP would almost triple from US$ 1200 bn to US$ 3500 bn by 2023. Currently, India is the 9th largest economy in the world in absolute terms and is expected to overtake most of the European nations in the next 15 to 20 years. It will eventually become world's 3rd to 4th largest economy by 2050.

1.3 The textile industry as a part of manufacturing sector has been one of the important sectors to contribute towards and maintain GDP growth. A series of steps taken by the Government over a period of time has helped the industry to grow and sustain the growth momentum. These include schemes such as the Technology Mission on Cotton and the Technology Upgradation Fund Scheme and rationalization of fiscal duties. The Technology Mission on Cotton has increased cotton production and reduced contamination levels. The Technology Upgradation Fund Scheme (TUFS) has facilitated the installation of state-of-the-art / near state-of-the-art machinery at competitive capital cost. The rationalization of fiscal duties has provided a level playing field to all segments, resulting in the holistic growth of the industry.

1.4 The Indian textile industry is amongst the very few in the world that is truly vertically integrated from raw material to finished products (from fibre to retail). Indian textile industry has leveraged its strong manufacturing position to improve its export performance. India is one of the largest exporters of readymade garments and made-ups to the World. India

is considered as the second most preferred destination for major global retailers due to its strength of vertical and horizontal integration. India's position has improved from being the 9th largest exporter of textiles and clothing in 1999 to becoming the 5th largest exporter in 2008. India has emerged as an important sourcing base for leading brands like Nike, Reebok, Pepe Jeans, FCUK, Armani, Versace etc. The strength of the country's products is reflected in the repeat orders from these brands / companies and increase in their outsourcing from India.

TEXTILES AS A FOCUS INDUSTRY

1.5 The Twelfth Plan envisages an average industrial growth of 11-12percent alongwith significant growth in export and employment. The medium-term vision of the plan is to achieve annual average manufacturing growth of 12-14 percent. The Twelfth Plan approach is to create more conducive environment for development of the industry. In this context, the Indian textile industry, with its traditional strengths, skills, entrepreneurial capabilities, export performance and employment potential is an obvious choice for focussed attention.

1.6 China which, only a few years ago, had technology levels, skills and export performance almost at par with India except for a slight edge in raw materials has shown that growth in textiles can be accelerated dramatically and profitably if appropriate policies could be put in place quickly and key infrastructure provided.India probably needs to adopt a similar, if not a better, strategy for the following reasons:

- The potential for significant growth in the Indian Textile Industry is undisputed.
- Textiles is one of the largest component of India's exports and can grow further and faster.
- The employment opportunities that can be created in the sector are enormous.

1.7 This is one sector in which global competitiveness can be created in a short time at minimal cost. Textiles, therefore, should not only be a focus sector but a lead sector in manufacturing and export growth.

OBJECTIVES OF THE TEXTILES SECTOR IN THE TWELFTH PLAN

1.8 The 12th Five Year Plan targets a growth rate of 9.8% for the manufacturing sector. The National Manufacturing Plan targets an increase in manufacturing sector growth to 12-14% over the medium term. Since the Textile Sector contributes about 12 per cent of the

manufacturing output, the growth of this sector is crucial to the realization of targets relating to total output and employment growth. In furtherance of the above objective, the Working Group on Textiles and Jute Industry for the 12th Plan has set the following objectives for the Textile Sector:

i. To build up world class state-of-the-art manufacturing capacities to attain and sustain predominant global standing in manufacture and export of textiles and clothing.
ii. To achieve annual average growth rate of 11.5 per cent in volume terms in cloth production and 15 per cent in value of exports.
iii. To increase domestic value addition and technological "depth" in manufacturing of textile products.
iv. To enhance global competitiveness of Indian textile products through appropriate policy support.
v. To provide skill development training to 35 lakh persons.
vi. Create additional employment to the tune of 15.81 million by 2016-17.
vii. To build and strengthen the innovation eco-system of the textile industry through enabling policy interventions, strengthening of the knowledge infrastructure, inter-institutional collaborations and funding of business innovations at all levels, specially of Small and Medium Enterprises (SMEs).
viii. To ensure sustainability of growth, particularly with regard to the environment.

PLANNING FOR GROWTH

1.9 In the 12th Plan, a holistic, need-based and balanced approach is proposed to be adopted in the formulation of schemes and programmes for the different segments of the textile industry, particularly the weaker segments for inclusive and sustainable growth of the industry. This would involve creation of a conducive policy environment to enable the industry to compete on cost and quality parameters in the domestic and export market. The environmental issues will be addressed adequately through policy mechanism and support to the industry, in line with global parameters.

POLICY FRAMEWORK

1.10 There is a need to put in a place, a more investor friendly policy framework synergisingthe existing inherent strengths of the Indian textile industry enabling it to consolidate its position in the growing domestic market and capitalizing on the vast opportunities for growth in exports. The main elements of such a policy framework are as below:

Continuation of Modernisation and Technological Upgradation of Different Segments of Textile Industry: Technology Upgrdation Fund Scheme(TUFS):

1.11 TUFS is the flagship scheme of the Ministry of Textiles which was launched in April 1999 to facilitate technology upgradation of the textile industry to meet the challenges of the quota free globalised trade. The scheme aims to provide access to timely and adequate capital at internationally comparable rates of interest to enable textile industry to upgrade its technology level. The scheme has facilitated installation of state of the art machinery by the textile industry. The scheme was continued in modified form w.e.f. 01.04.2007 to 28.06.2010. The scheme has again been launched in restructured form for the period 28.04.2011 to 31.03.2012.

1.12 During the last Eleven years and three months of its operation, as on 28.06.2010, project cost of Rs.2,07,747 crore has been sanctioned and out of this, Rs.103632 crore (about 50 percent of the total project cost) has been sanctioned during the last three years of TUFS.

1.13 In order to ensure that the tempo of investment that has begun during the last two-three years in these sectors, it is essential to continue the Technology Upgradation Fund Scheme in its present form until the end of the Twelfth Five Year Plan. Even with the capacities envisaged for the terminal year of the Twelfth Five Year Plan, India will be significantly lower in capacities compared to the China in all segments of the textiles industry especially in spinning, weaving, processing and garmenting. Currently, over 20 percent of the total production of cotton in the country is being exported as raw cotton. Obviously, there is significant scope for converting raw cotton currently being exported into yarn, both for exports and for domestic consumption. Investments in the downstream segments of weaving and processing is necessary to ensure that the maximum quantity of yarn produced in the country is converted into finished products domestically in order to meet the increasing requirements of the garment industry. Sufficient supply of yarn and fabrics internally will reduce the dependence of the garment industry on imported yarn and fabrics, and promote significant value addition.

1.14 Further, interest rates currently available to the textile and clothing industries of major competing countries are substantially lower than the present PLRs in India. Hence to make available investible funds at competitive rates, it is essential to continue TUFS.

1.15 The Working Group has aimed at 11.5 percentgrowth in production and 15 percent in exports. To achieve this growth, incremental production facilities would have to be set up. It is estimated that the requirement of funds for setting up these incremental facilities will be approximately Rs.1,44,592 crore during the Twelfth Plan period. This investment will not come without support from Government in the form of the extension of TUFS.

1.16 The financial outlay during the Twelfth Plan for TUFS may appear to be high at Rs.15886 crore, but considering the contribution of the industry in terms of exports and employment it is negligible.

Creating textiles specific infrastructure: The Scheme for Integrated Textile Parks (SITP) :

1.17 The Scheme for Integrated Textile Parks (SITP) was launched in 2005 to neutralize the weakness of fragmentation in the various sub-sectors of textiles value chain, and the non-availability of quality infrastructure. The aim was to consolidate individual units in a cluster, and also to provide the industry with world class infrastructure facilities on a public private partnership (PPP) model to set up their textile units. From initial indications, the scheme has been a huge success. Under the SITP, 40 projects with total project cost of Rs.4183.36 crore including Government of India assistance of Rs 1419.69 crore has been sanctioned. Grant amounting to Rs 812.40 crore has been released upto 30-6-2010.

1.18 There has been an overwhelming response to the scheme from State Governments, entrepreneurs, and various industry associations. In addition, State Governments, industry groups and entrepreneurs are asking for the continuation of the scheme in the Twelfth Five Year Plan. Considering the growth potential of the textiles industry, the progress of implementation, and response of entrepreneurs, the scheme should be continued in the Twelfth Five Year Plan to cover an additional 40 textile parks. The fund outlay proposed is Rs. 1400 crore.

Continuation of MM (Mini Mission)–I, II and IV of Technology Mission on Cotton (TMC)

1.19 In order to consolidate the strength in raw material especially the cotton sector and to remove contamination, the Government had set up the Technology Mission on Cotton (TMC) on 20th February 2000. The Mission, consisting of four Mini-Missions, was intended to run for a 5-year term, commencing from 1999-2000. Subsequently, the scheme was extended for some time.

1.20 With a view to maintaining consistency in research & developmental efforts through ICAR and State Agricultural Universities, the MM-I of TMC may be continued during Twelfth Plan for development of high yielding pest resistant seeds/hybrids to increase yield per hectare and bring down the cost of cultivation. Likewise, schemes of transfer of Technology under MM-II of TMC may be continued in Twelfth Plan to percolate the benefit of latest technology in cotton production to small and marginal farmers. The fund outlay proposed for MM – I & II of TMC is Rs. 250 crore during Twelfth Plan.

1.21 TMC has contributed to an increase in productivity, and reduced the contamination of the cotton. In Eleventh Plan, 860 G&P units have been modernized under MM-IV of TMC besides some more factories modernized/upgraded under the Scheme of NABARD as also TUFS. In addition, some other factories have also been modernized/ upgraded by the ginners on their own. Thus, at present total number of modernized G&P factories in the country are around 1700. With an average production of 20000 bales in one factory, total processing capacity is for around 340 lakh bales. Based on the estimated cotton production of 438 lakh bales by the end of the terminal year of Twelfth Five year plan, it is recommended that the efforts for modernization of G&P units through MM-IV of the Technology Mission on Cotton (TMC) be continued in the Twelfth plan period. The fund outlay proposed for MM – IV of TMC is Rs. 250 crore during Twelfth Plan.

The Integrated Processing Development Scheme: Scheme for setting up Common Effluent Treatment Plants with Marine Outfall (CETPMO)

1.22 The major challenges that are being faced by the processing sector in the countryare availability of water for processing, effluent treatment and disposal of the treated water and solid effluents. Therefore, it is recommendedthat a scheme for Common Effluent Treatment Plants with Marine Outfall (CETPMO) may be introduced by the Government for the

existing textile processing clusters on the basis of an SPV where the Central Government contributes 25 percent, State Governments bear 25 percent of the expenditure, and remaining 50 percent of expenditure is borne by the industry. The maximum distance from the sea could be restricted to 400 kilometers to make it commercially viable.

1.23 New processing parks should be created in coastal areas to facilitate setting up of Common Effluent Treatment Plants(CETP) CETP with marine outfall technology. The processing park should have an industry support / knowledge centre with Testing Centres, Research & Development (R&D) Centres, Investor Facilitation Centresand a common "lab dip / sampling outsourcing centre".These parks may be covered under SITP, eligible for 40% of the investment with a ceiling of Rs. 40 crore. The fund outlay proposed for the scheme is Rs. 1400 crore.

Extension of Knitwear Technology Mission (KTM)

1.24 Apparel Export Promotion Council(AEPC) launched the Knitwear Technology Mission (KTM) to empower the exporting community to go in for wider range of products. KTM project was initiated in 2008 by AEPC with the emphasis on developing new genre fabrics from man-made fibres and blends, active/functional apparel and also to promote technical textiles viz., medical textiles, home textiles and smart/intelligent textiles. There is a need for extensionof KTM. The Knitwear Technology Mission (KTM) would provide various support services to the industry including knowledge service (market information about knitwear), testing & certification, research, training & education, design services and investor facilitation services like technology selection etc. The fund requirement for this is Rs. 40 crores.

Wovenwear Technology Mission (WTM)

1.25 WTM would provide various support services to the industry including knowledge service (market information about wovenwear), testing & certification, research, training & education, design services and investor facilitation services like technology selection etc., to produce and development of new woven blend. The fund requirement for this is Rs. 30.57 crore.

Integrated Apparel Development Scheme:Setting up of 'Integrated Apparel Clusters

1.26 Suchclusters would provide employment generating opportunities in some of the selected villages / cities of the States, to be identified by the State Governments. It will be endeavouredto promote self employment, entrepreneurship development, industrialisationand ancillarisationin apparel and textile value chain, byproviding fiscal benefits, transport

subsidy, development of industrial infrastructure, power subsidy, incentives for the use of environmental protection equipment, employees' accommodation and other proposed benefits in order to promote these clusters. The fund requirement for this scheme is Rs. 1000 crore.

Scheme for setting up Center of Excellence/ Product Innovation Center/ Design Studio

1.27 The market expansion and increase in product portfolio is possible through design and product development. At present there is no such facility / service available which exclusively targets the Indian market. The need is to identify the latent consumer needs / bonds and convert them into a product idea which will be readily accepted by the market. This can be done by a distinct centre for design research and product development services. The fund requirement for this scheme is Rs. 25 crore.

Size India: Anthropometric study of the Indian population

1.28 There is a need to carry out a scientific, systematic anthropometric study of the Indian population for the purpose of developing a sizing system for readymade garments. India is such a large country with several hetrogenous population groups that one size / fit is not suitable across the board. Providing right size and fit to the market will promote the consumption of ready to wear and expedite the shift from ready to stitch. The fund requirement for this study is Rs. 8.88 crore.

Common Compliance Code (CCC)

1.29 Major apparel markets have strong legal and social obligations towards final consumer. USA and EU buyers are practicing 'factory compliance' and independent international agencies like NGOs are providing solutions for factory improvement. The industry has reported that 'factory compliance' has become a pre-condition before orders are placed by major retailers. An individual retailer has a separate 'code of conduct' and is on 'charge basis'.

1.30 There is a need for the development of a 'Common Code of Conduct' or 'Compliance Code' which is acceptable by majority of apparel buyers. The work involved is mammoth and costly. Thus there is a need to formulate a scheme for making apparel manufacturing units 'compliant' during the Twelfth Plan period. The fund requirement during Twelfth Plan is estimated at Rs. 36.70 crore.

Green Development Fund.

1.31 Ecological pressure and compliance related issues are mounting, as rules are getting stricter and international protocol is increasing. It is proposed to lay special emphasis on textile production technologies with reduced carbon foot print and adopting cleaner technologies. R & D and product development projects related to development of green product or green process should be allocated a separate fund for R & D.

1.32 Textiles Research Association(TRA)/Centre of Excellence(COE) : TRA / CoE's at SITP's / Institution/ Individual scientist / Textile companies to look at this as efforts towards sustainable development. It is proposed to ear mark Rs. 50 crore, for R & D and product development for eco friendly processors and products. This would include machine design modification and machine developments, which will enable cleaner technologies and cleaner production.

Setting up of a Directorate of Textile Intelligence

1.33 A Directorate of Textile Intelligence functioning under the Ministry of Textiles with its presence in the major domestic production centres and ports should be created which should be able to provide reliable production and trade data on real time basis. The Collection of Statistics Act 2008 and the Collection of Statistics Rules, 2011 notified on 16th may by Ministry of Statistics and Programme Implementation (MOSPI) could provide the necessary authority for the Directorate. The directorate should source, collate and disseminate international textiles statistics to both policy makers and stakeholders in the industry. The fund requirement for this scheme is Rs. 10 crore.

Higher Outlay for the Textiles Sector:

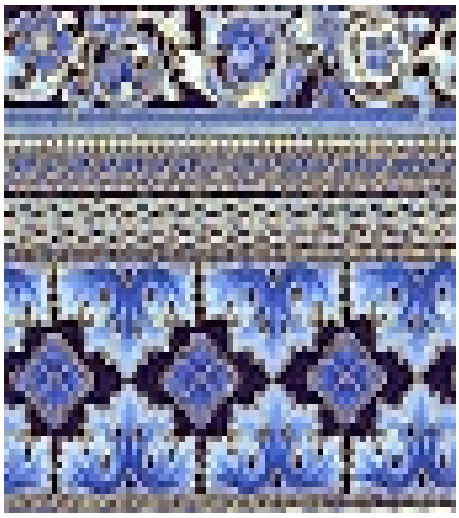
1.34 Considering the significance of this industry to the Indian economy in terms of exports and its capacity for employment generation, the Plan outlay for textiles has remained small. The industry has survived global recession due to a robust domestic market. The industry has attained a strong position in some segments like spinning, but is way behind in other segments such as weaving, knitting, processing etc. All the segments of the industry need to be developed and reach strong positions as all are interrelated. While most of the segments of the industry are fragmented, segments providing intermediate material like yarn is organised. Therefore, while making allocations for the decentralized sectors, the organized sector's needs cannot be ignored.

1.35 To provide impetus to the growth of this industry, there is a need for substantial augmentation in the overall plan allocation for the textiles sector. Accordingly, the Working Group has recommended a Plan outlay, which is significantly higher than for previous Plans.

Chapter-2

GROWTH IN THE ELEVENTH PLAN AND PROJECTIONS FOR THE TWELFTH PLAN

- ELEVENTH PLAN TARGETS AND ACHIEVEMENTS
- PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN (2012-17)



Chapter-2

GROWTH IN THE ELEVENTH PLAN AND PROJECTIONS FOR THE TWELFTH PLAN

ELEVENTH PLAN TARGETS AND ACHIEVEMENTS

Review of the performance of the different segments of the industry is discussed in detail in the respective chapters relating to them. However, the summarised position with regard to Eleventh Plan targets and achievements during the first four years of the Eleventh Plan period are given below: (details are given in **Appendix –1)**:

Table – 2.1

Eleventh Plan Targets and Achievements

Sl. No.	Items	Units	2007-08		2008-09		2009-10		2010-11	
			Target	Achieve-ment	Target	Achieve-ment	Target	Achieve-ment	Target	Achieve-ment- (P)
1.	**Consumption of fibres**									
(i)	Cotton (SSI & Non-SSI)	Mn. Kg.	4012	3707	4505	3581	5066	3782	5678	4310
		Lakh bales of (170 kg each)	236	218	265	211	298	222	334	254
(ii)	Man Made Fibres	Mn. Kg	1221	1087	1331	966	1452	1093	1583	1084
2.	**Production of Yarn**									
(i)	Spun Yarn	Mn. Kg.	4180	4003	4680	3912	5240	4193	5870	4647
(ii)	Filament Yarn	Mn. Kg	1457	1510	1596	1417	1748	1523	1915	1549
3.	**Production of cloth (incl.K.W.S)**	Bn. Sq Mtr	60.5	56.0	67.6	54.9	75.6	60.3	84.5	61.81
4.	**Per capita availability of Cloth**	Sq. Mtr	42.84	41.85	46.99	39.01	51.60	43.12	56.62	43.25
5.	**Textile Exports (incld. Jute, Coir, Handicrafts)**	Bn. US $	24.0	22.1	31.2	20.9	40.0	22.1	51.1	7.4 (Apr-July)
6.	**Production of Textile Machinery**	Rs. in Bn	36	61.55	47	40.63	61	42.45	79	61.50

Analysis of Targets vis-à-vis Achievements during the Eleventh Plan

Consumption of Fibres

2.2 Cotton consumption has been lower than the target during the first four years of the Eleventh Plan. Likewise, the consumption of man-made fibres has also been lower in the first four years of the Eleventh Plan. The shortfalls for the year 2010-11 in the case of cotton and man-made fibres, respectively, were about 24 percent and 32 percent.(See **Appendix** -1)

2.3 In the man-made fibre segment, the consumption of Polyester Staple Fibre (PSF) and Acrylic Staple Fibre (ASF) has been below the target during each of the first four years, while the consumption of Viscose Staple Fibre (VSF) has exceeded the target marginally during two years and Polypropylene has exceeded the targets marginally during three- first years and met the target in 2010-11. (See **Appendix** – 1)

Production of Spun /Filament Yarn:

2.4 The production of cotton yarn increased in the first four years of the Eleventh Plan period except for the year 2008-09, based on the trend of cotton production, but still, could not achieve the annual target.

2.5 The production of blended yarn also increased in the first four years of the Eleventh Plan period (except for the year 2008-09) and has exceeded the target in all the four years. However, the production of 100 percent non-cotton spun yarn exceeded the target during the first year of the Eleventh Five Year Plan only and has fallen short of the target during the remaining three years.

2.6 The production of total filament yarn has exceeded the target during the first year of the Eleventh Five Year Plan, but has not been able to achieve the target from 2008-09 onwards, for the next three years. The production of Polyester Filament Yarn (PFY) has exceeded the target for the first year of the Eleventh Five Year Plan, but fallen short of the target, thereafter. However, the production of Nylon Filament Yarn (NFY), Polypropylene filament Yarn (PPFY) and Viscose Filament Yarn (VFY) has fallen short of the target, during all the first four years of the Eleventh Plan period.(See **Appendix**– 1)

Inter se Fibre consumption pattern:

2.7 The consumption pattern of cotton and non-cotton fibres/yarns has almost reached the projected ratio. It was envisaged that in the terminal year of the Elevenh Plan, the consumption ratio of cotton vis-à-vis non-cotton fibers/yarns would be 63:37 and the actual ratio of cotton to non-cotton during the fourth year of the Eleventh Five Year Plan is 64:36.

Per capita availability of cloth:

2.8 The per capita availability of cloth has been lower than the target during the first four years of the Eleventh Plan period.

Textiles Exports:

2.9 Textiles exports were significantly lower than the target in each of the first four years of the Eleventh Plan period. In fact, the targets were not met by any of the segment of the industry during any of the first four years of the Eleventh Plan.

2.10 This indicates that the growth rates estimated for working out the projections were too optimistic and support measures were inadequate. Apparently, the growth rates were targeted at a higher level under the assumption that the proposed policy framework and other support would be provided to the textiles industry. The proposals of the Working Group were either not implemented or accepted for implementation during the latter part of the Plan period. For example, policies / schemes like labour reforms, brand promotion, aggressive wooing of FDI, textilpolis, increasing availability of textile machinery etc. were not implemented while proposal of Human Resource Development was implemented only last year. Perhaps this is the main reason for the drastic shortfall in achievement of the targets for textiles production and exports.

Textiles Machinery:

2.11 Actual production of textiles machinery has been considerably higher than the target fixed in the first year of the of the Eleventh Plan thereafter it fell short of the target during the next three years of the Eleventh Plan.

PROJECTIONS FOR THE TWELFTTH FIVE YEAR PLAN (2012-17)

2.12 The year 2011-12 has been adopted as a base year for working out the projections for the Twelfth Plan period. The figures for 2011-12 have been estimated on the basis of actual figures for year 2010-11. The projections have been made first for the fabric and thereafter projections have been made for upstream segments, i.e., yarn and fibres.

Cloth Production

2.13 Fabric production registered a compounded annual rate of growth of 3.75 per cent during the first four year of Eleventh Plan. However, during 2009-10, there has been significant growth of 9.8 percent in the fabric production.

2.14 The paper on issues for approach to the twelfth five year plan of the Planning Commission has mentioned that the GDP growth rate of 9-9.5 percent should be aimed at during the plan period and the manufacturing sector need to grow at 11-12 percent. Further,

the National Strategy for Manufacturing, prepared by the National Manufacturing Competitive Council (NMCC) has indicated that 2006-2015 will be the decade of

manufacturing for India, and an average growth rate of 12-14 percent in respect of manufacturing should be aimed at.

2.15 In the backdrop of Approach Paper of the Planning Commission and the views of the NMCC, and also the growth rates achieved in cloth production during the Eleventh Five Year Plan, the Working Group has decided to target a growth in cloth production at 11.5 percent in volume terms and, accordingly, these projections have been made.

2.16 Based on the compounded annual rate of growth of 11.5 percent, cloth production in the terminal year of Twelfth Plan works out to 111,848 million sq. mtrs. on the base of 64902million sq. mtrs. for the year 2011-12.

2.17 To test whether production level will match the demand of fabric, an attempt was made to work out the demand for fabric, both as fabric and as garments /clothing, during the Twelfth Plan. The demand for cloth arises from three different segments of the market, i.e., household demand, non-household demand, and demand for exports.

2.18 The major factors that increase the growth of household demand is the growth rate of GDP, the population, the per capita spending on textiles by households, and the price elasticity and the Inter-Fibre competition. Based on the estimated growth in these factors, household demand was estimated at 74,324 million sq. mtrs. Non-household demand for fabrics (and as garments and clothing), has been increasing at CAGR of 5 percent, the same growth rate has been adopted for Twelfth Plan. Considering the export growth at 15 percent, the demand of fabrics (and as garments and clothing) for export is estimated at 22,011 million sq. mtr.

2.19 The total demand from all three sectors works out to 109,945 million sq. mtrs. by the end of the Twelfth Plan. The details are in **Appendix 2.**

2.20 It is seen that demand for the fabrics (i.e., 109,945 million sq. mtrs) is almost at par with the projected production of cloth based on the annualized rate of growth of 11.50 percent, (i.e., 111,848 million sq. mtrs.) by the end of the Twelfth Plan.

Fibre wise projection of cloth production: On the basis of past trends in fibre-wise cloth production, and the expected trends in fibre/yarn consumption, fibre-wise projection of cloth for the Twelfth Five Year Plan has been projected in Table-2.2. The past trend of production is in **Appendix-3**.

Table – 2.2

Fibre-wise Projection of Cloth Production
by the Terminal Year of Eleventh (2011-12) and Twelfth Plan (2016-17)

(Mn. sq. Mtrs.)

Type of cloth	Estimated production (2011-12)	Projected Production (2016-17)
Cotton	32761	57737
Blended	8542	14721
100 percent Non-cotton	22746	38329
Khadi, Woollen & Silk	853	1063
Total	**64902**	**111848**

2.21 The production of cotton cloth grew at an annual average growth of 4.4 percent during first four years of the Eleventh Five Year Plan. However, it increased at the rate of 7.5 percent in 2009-10, and 7.9 percent in 2010-11, year on year. Continuing with this trend, it is projected that it will increase at the rate of 12 percent during the twelfth Plan period. The production of blended cloth grew at an annual average growth of 4.3 percent during the first four years of the Eleventh Five Year Plan. However, it increased during the year 2009-10 at a rate of 14.8 percent. It is estimated to increase at 11.5 percentduring the Twelfth Plan period. The production of 100 percent non-cotton cloth has shown an annual average growth of 2.6 percent during first four years of the Eleventh Five Year Plan. However, it increased at the rate of 11.2 percent during 2009-10. It is projected to grow at a rate of 11 percent during the Twelfth Plan period.

2.22 The year-wise, fibre-wise projected cloth production and per capita availability during the Twelfth Five Year Plan is given in the Table 2.3

Table – 2.3

Projection of Year-wise, Fibre-wise Cloth Production during the Twelfth Plan

(Mn. Sq. mtrs.)

Type of cloth	Eleventh Plan		Assumed growth rate during the Twelfth Plan	Twelfth Plan projections				
	2010-11 Actual (Prov.)	2011-12 (Estimated)		2012-13	2013-14	2014-15	2015-16	2016-17
Cotton	31201	32761	12	36693	41096	46027	51551	57737
Blended	8135	8542	11.5	9524	10619	11841	13202	14721
100 percent Non-cotton	21663	22746	11	25248	28026	31109	34530	38329
Khadi wool & silk	812	853	4.5	891	931	973	1017	1063
Total	**61811**	**64902**	**11.50**	**72356**	**80672**	**89949**	**100300**	**111848**

Sectoral Allocation of Cloth Production:

2.23 Cloth is produced in the country in the form of woven cloth and knitted cloth. The percentage share of knitted cloth in total cloth production is only 23 percent, the remaining 77 percent is produced in the form of woven cloth.

2.24 In a globalised economy, the mill sector has the advantage of maintaining/controlling its quality at each stage of production, and has a better chance of facing competition both in domestic and international market. The decentralised handlooms and powerlooms sectors are vulnerable to international competition and it is assumed that they may lose some of their share to the organized sector during the Twelfth Plan.

2.25 The hosiery sector, which registered a modest increase till 2008-09, showed significant growth in 2009-10. Howeverit again slipped to the modest growth rate of 4.9 percent during 2010-11.

2.26 Considering the present production trend, it is expected that share of cloth production by the mill sector will increase slightly from 4 per cent in 2010-11 to 4.64 percent in the terminal year of Twelfth Plan. The expected sectoral share of cloth production in the terminal year of the Twelfth Plan is as under:

Table – 2.4

Projection of Sector-wise Share in Cloth Production by the Terminal Year of the Twelfth Plan

Sector	Percentage share in production	
	Existing (2010-11)	Terminal year of Tenth Plan (2016-17)
Mill sector	4	4.64
Powerloom sector	61	60.78
Handloom sector	11	11.09
Hosiery sector	23	22.68
Khadi / Wool & Silk	1	0.81
Total	**100**	**100**

2.27 The year-wise, sector-wise projected production of cloth during the Twelfth Five Year Plan is given in the Table 2.5 below:

Table – 2.5

Sector-wise and year-wise cloth production during the Twelfth Plan

(Mn. Sq. mtrs.)

Sector	Eleventh Plan		Twelfth Plan projections				
	2010-11 Actual (Prov.)	2011-12 (Estimated)	2012-13	2013-14	2014-15	2015-16	2016-17
Mill	2208	2318	2724	3201	3761	4419	5193
Powerloom	37516	39392	43922	48973	54605	60885	67886
Handloom	6903	7248	8082	9011	10047	11203	12491
Hosiery	14372	15091	16743	18577	20611	22868	25371
Khadi, Wool, Silk	812	853	863	874	884	895	906
Total	**61811**	**64902**	**72334**	**80635**	**89908**	**100269**	**111848**

Projections of Yarn Production

Spun Yarn

2.28 An analysis of the trend of production of spun yarn and filament yarn reveals that the growth rate of spun yarn has been faster as compared to the growth of filament yarn.

2.29 The dominant share in spun yarn production is that of cotton yarn, which accounts for about 74% of the total spun yarn production. The assumed growth rate in the production of spun yarn is given at **Appendix–3.** The projected production of yarn on the basis of assumed growth by the terminal year of Twelfth Plan is given below:

Table – 2.6

Projected Production of Spun Yarn during the Twelfth Plan

(Mn. Kg)

Type of spun yarn	Eleventh Plan		Assumed growth rate during the Eleventh Plan	Twelfth Plan projections				
	2010-11 Actual (Prov.)	2011-12 (Estimated)		2012-13	2013-14	2014-15	2015-16	2016-17
Cotton	3443	3615	8	3904	4217	4554	4918	5312
Blended	784	823	8	889	960	1037	1120	1210
100 percent Non-cotton	420	462	8	499	539	582	629	679
Total spun yarn	**4647**	**4900**	**8**	**5292**	**5716**	**6173**	**6667**	**7201**

2.30 Production of spun yarn increased at an annual average rate of 5.1 per cent during the last five years (2006-07 to 2010-11) and has shown the highest year on year growth of 10.8 per cent in the year 2010-11. Therefore, a higher growth rate of 8 per cent is projected for the Twelfth Plan period, considering the higher growth expected in fabric production.

Filament Yarn

2.31 All the filament yarns i.e. Viscose, Nylon, Polyester and Polypropylene have shown fluctuating trend in production. PFY and NFY showed growth of 3.6 and 1.0 during the first four years of the Eleventh Plan period. Negative growth rate to the tune of 6.7 percent and 0.4 are seen in respect of VFY Polypropylene Filament yarn (PPFY) during the Eleventh Plan period. (See **Appendix**– 1)

2.32 Production of filament yarn in 2010-11 shows growth of 1.7 percent over 2009-10. (See **Appendix** – 3), A growth rate of 10.67 per cent is projected for the Twelfth Plan period. The production of filament yarn during the Twelfth Plan and assumed growth rates are given in Table-2.7 below:

Table – 2.7

Projected production of filament yarn during the 12th Plan

(Mn.kg)

Type of yarn	Eleventh Plan		Assumed growth rate during the Eleventh Plan	Twelfth Plan projections				
	2010-11 Actual (Prov.)	2011-12 (Estimated)		2012-13	2013-14	2014-15	2015-16	2016-17
Viscose	40.92	45.00	9.24	49	54	59	64	70
Nylon	33.5	30.35	9.6	33	36	40	44	48
Polyester	1461.2	2100.00	10.76	2326	2576	2853	3160	3501
Polypropylene	13.14	19.00	5.64	20	21	22	24	25
Total	**1548.76**	**2194.35**	**10.67**	**2428**	**2688**	**2974**	**3292**	**3643**

Requirement of yarn for fabric:

2.33 The total production of yarn is estimated at 10,844 million kg. (comprising 7201 million kg spun yarn, and 3643 million kg filament yarn) which is adequate to produce 112 bn sq. mtrs. of fabric during the terminal year of Plan period. In fact, 8,531 million kg. of yarn is required to produce 112 bn. sq. mtrs of fabrics. The remaining 2,313 million kg. (10,844 million kg – 8,531 million kg.) of yarn will be used for export and for other purposes.

Projection of production for textiles fibres:

2.34 Adequate availability of raw material is a prerequisite for the growth of the entire textiles industry. The quality of textiles products is also dependent to a great extent on the kind of raw materials used in the production process. The Indian textiles industry produces a wide variety of fibres, from cotton to man-made to wool, silk, jute and multiple blends thereof, though cotton continues to be the predominant fibre for the production of textiles items.

2.35 The production of cotton fibre increased at annual average growth rate of 2.7 percent during the first four years of the Eleventh Plan period(See **Appendix** 3). The industry has estimated that cotton production will increase to 452 lakh bales by the terminal year of the Twelfth Plan recording an average growth of 6 percent(See Table 2.8).

2.36 Among the man-made fibres, the production of PSF has shown a growth of 3.1 percent during the first four years of the Eleventh Plan period. However, it showed a decline

of 14.7 per cent in the year 2008-09. Industry has projected growth in the production of PSF by 7.78 percent during the Twelfth Plan period(See **Appendix** 3).

2.37 The production of Acrylic staple fibre has shown decline of 4.9 percent during the first four years of Eleventh Plan period. However, it recorded a growth of over 13.8 percent during 2009-10. Industry has projected growth in the production of ASF to the tune of 7.65 percent during the Twelfth Plan Period(See **Appendix** 3).

2.38 The growth in production of PPSF is projected by the industry at 5.92 per cent during the Twelfth Plan period(See **Appendix** 3). The production of different fibres during the Twelfth Plan alongwith assumed growth are given in Table-2.8 below:

Table –2.8

Projected production of fibres during the 12th Plan

(Mn. Kg)

Type of fibre	Eleventh Plan		Assumed growth rate during the Eleventh Plan	Twelfth Plan projections				
	2010-11 Estimate	2011-12 (Estimated)		2012 -13	2013 -14	2014 -15	2015 -16	2016 -17
Raw Cotton	5304	5746	6	6091	6456	6844	7254	7689
(Cotton year)	(312)	(338)		(358)	(380)	(403)	(427)	(452)
Man Made Fibre								
V.S.F.	301.64	330.00	6.87	353	377	403	430	460
P.S.F.	896.33	1100.00	7.78	1186	1278	1377	1484	1600
A.S.F.	79.47	92.00	7.65	99	107	115	124	133
P.P.S.F.	3.75	3.00	5.92	3	3	4	4	4
Sub-total Man-made	**1281.19**	**1525.00**	**7.58**	**1640**	**1765**	**1898**	**2042**	**2197**
Grand Total	**6585**	**7271**	**6.34**	**7732**	**8221**	**8743**	**9296**	**9886**

Note: Cotton production figures in brackets denote lakh bales of 170 kg. each.

Requirement of fibre for yarn production

2.39 It is seen that the total production of fibre is estimated at 9886 million kg. which is adequate to produce the 7201 million kg. of spun yarn(See Table 2.8).

Projected Exports:

2.40 Textiles exports have recorded an annualized rate of growth of 10 percent in dollar terms during the first four years of the Tenth Plan. Considering the growth in textile exports due to the investment flowing in this sector to expand / modernize the capacity in the entire value chain and the conducive environment provided by the Govt., the Working Group decided to project the overall growth for exports at 15percent(See Table 2.9). Segment wise growth in exports has been projected based on the trend in growth, post MFA, in the respective segments.

Table-2.9

Projections of Exports for Twelfth Five Year Plan							
Items	**Million US $**						**% Share of Total**
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	
Cotton Textiles	**7500**	8400	9408	10537	11801	13218	12.00%
Man Made Textiles	**5500**	6380	7401	8585	9959	11552	16.00%
Silk Textiles	**800**	880	968	1065	1171	1288	10.00%
Woollen Textiles	**700**	770	847	932	1025	1127	10.00%
Clothing	**14000**	16520	19494	23002	27143	32029	18.00%
TOTAL	**28500**	32950	38117	44121	51099	59214	10.00%
Jute, Coir & Handicrafts	**3850**	4235	4659	5124	5637	6200	10.00%
Grand Total *	**32350**	37185	42776	49245	56736	65414	CAGR 15.17%

Projected Employment

2.41 The textiles industry is a labour intensive industry and contributes to 19 percent of the total factory sector industrial work force. In fact, it is the 2nd largest employment provider, next only to agriculture.

2.42 Textiles operations are widespread, embracing, activities including cotton ginning, spinning and manufacture in composite units, handlooms, powerlooms, processing, knitting clothing and made-ups to textiles marketing. The reach of this vast sector extends to the remotest rural areas, urban and semi-urban towns and to the large cities. The ramifications textiles activities have a multiplier effect on employment opportunities.

2.43 With growth in textiles production, employment in this sector is also expected to grow at the rate of 15 percent. The employment in textiles is expected to increase from 45.19 million persons to 52 million persons by the terminal year of the Twelfth Plan. The employment in allied sectors is also expected to increase from 60.20 million persons to million persons(See Table 2.10). The details are given in **Appendix –4**. The summarised position is given below:

Table 2.10

Projected employment in textiles and apparels during the 12th Plan

(Mn. Nos.)

Item	As on 31st March, 2011 (Prov.)	2016-17 (Projected)
Textile Industry	45.19	52
Allied Industry	60.2	69
Total Employment	**105.4**	**121**

2.44 To meet the challenges of a globalised economy and achieve the production and export targets fixed for theTwelfth Plan, the strategies and action plan are discussed in the respective chapters.

Chapter - 3

RAW MATERIALS FOR THE TEXTILES INDUSTRY

- PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN
- APPROACH TO THE TWELFTH PLAN PROJECTED PRODUCTION
- PROJECTED PRODUCTION
- RECOMMENDATIONS
- PROPOSED PLAN OUTLAY

Chapter - 3

RAW MATERIALS FOR THE TEXTILES INDUSTRY

Indian textile industry which is broad based and vertically integrated consumes diverse range of textiles fibres and yarns to produce various types of products for the domestic and export markets. The range of fibres consumed by the industry includes natural fibres like cotton, silk, wool, jute and man-made fibres like polyester, viscose, nylon, acrylic, polypropylene etc. Though the textiles industry is pre-dominantly cotton based, the consumption of other fibres / yarns is also significant. Considering the significance of raw material for the finished product, it is imperative to augment the availability of different varieties (from standard to specialised) of textile fibres/ yarns of internationally acceptable quality at reasonable prices to provide the platform to the value added textile products to acquire `world class' status.

3.2 In this chapter, only the issues concerning raw cotton and man-made fibres / yarns will be discussed. Other raw materials like silk, wool, and jute will be discussed in respective chapters of the textile industry.

PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN

Production

Cotton

3.3 Cotton production in the country which was hovering between 136 to 280 lakh bales in the Xth Five year plan is expected to reach a level of around 338 lakh bales at the end of the terminal year of the XIth Five Year Plan i.e. 2011-12, which has been due to significant increase in acreage as also increase in yield per hectare.

3.4 The acreage under cotton which was in the range of 77 to 91 lakh hectares in Xth Five year plan period is expected to reach a record level of 112 lakh hectares in 2010-11 and with receipt of good and attractive prices by the cotton growers for their produce, the acreage under cotton by the end of terminal year of XIth Five year plan i.e. 2011-12 is likely to go up further.

3.5 Some of the new areas like Orissa are coming up in cotton cultivation and after successful launching of Boll guard I, Boll guard II and with introduction of third genetically

modified technology of Herbicide resistance Bt under Round of Ready Flex (RRF) would help in increasing the productivity of cotton in the coming years.

Man-made fibres / yarns

3.6 During the Eleventh Plan, the production of man-made fibres / yarns was projected to increase from 2674 million kg. in 2007-08 to 3821 million kgs. in 2011-12 with an annualized rate of growth of 9.33 percent. The actual increase in man-made fibre/yarn production has been 2754 million kgs in 2007-08 to 2830 million kgs in 2010-11 is registering an annual rate of growth of 3 percent.

Consumption

Cotton

3.7 During the Eleventh Plan, cotton consumption by mills was expected to increase from 236 lakh bales (of 170 kg. each) in 2007-08 to 375 lakh bales by the terminal year of the Eleventh Plan (2011-12) at a compounded growth rate of 12.27 percentage. The actual increase in cotton consumption has been from 218 lakh bales to 254 lakh bales in 2010-11, showing a compounded growth of 5.23 percent(Appendix I).

Man-made fibres / yarns

3.8 During the Eleventh Plan period, the consumption of manmade fibres / yarns was expected to increase from 2696 million kgs in 2007-08 to 3857 million kgs. by the terminal year of the Plan at a compounded annual growth rate of 9.37 percent. However, actual consumption showed a compumded growth of 1.3 percentage. Polyester staple fibre / filament yarn is the major component of the man made fibre/ yarn segment and constitutes about 83-84 percent of the total production of man-made fibres/ yarns. In the man-made fibres / yarns segments PPSF & NFY have exceeded targets during the 1st year of the plan.

Import & Export of fibres / yarns

Cotton

3.9 During the Eleventh Plan period, there was a mixed trend in the import of cotton. The import was 6.62 lakh bales in 2007-08, which increased to 11.47 lakh bales in 2008-09 and declined to 8.99 lakh bales in 2009-10. Against this, due to recession there has been sharp decline in export of cotton during 2008-09. The export in 2007-08 was 84 lakh bales which marginally declined to 78 lakh bales in 2009-10.

Cotton Fabric

Man-made fibres / yarns

3.10 There has been decrease in the export of man-made fibres/ yarns during the first four years of the Eleventh Five Year Plan. The export of manmade fibre yarn decreased from 419 million kgs in 2007-08 to 365 million kgs. during 2009-10. The maximum export was that of polyester filament yarn. Simultaneously, there has been a decline in the import of man-made fibres/ yarns during the period. Import declined from 121 million kgs in 2007-08 to 86 million kgs. in 2009-10. The maximum import was that of polyester filament yarn. Thus during the Eleventh Five Year Plan, the man made fibres / yarns industry was a net exporter.

APPROACH TO THE TWELFTH PLAN

3.11 The approach to the Twelfth Plan is to develop a strong multi fibre base with emphasis on:

- Increasing the yield of cotton
- Increasing the production of Extra Long Staple (ELS) cotton to reduce the gap between demand and indigenous supply of ELS cotton.
- Targeting enhanced competitiveness of cotton fibre, as well as ensure most judicious and efficient utilisation of the country‘s strength for sustainable development of all the sub sectors of the cotton economy through backward and forward integration.
- Increasing the production of man-made fibre/ yarn including specialty and high tenacity man-made fibres / yarns.
- Price stabilisation of cotton and manmade fibres and yarn.

3.12 Keeping in view, the demand projections for cloth and also the performance of the raw material sector during the Eleventh Plan period, the fibre wise production of raw materials for the textile industry was discussed in chapter – 2.

3.13 Based on the fibre wise analysis, the projected figure of consumption of cotton and man-made fibres / yarns is given overleaf:

Table 3.1

Projected fibre / yarn consumption by the textiles industry during the Twelfth Plan

(In Mn. Kg.)

Name of the Fibre / yarn	Eleventhth Plan		Assumed growth rate during the Twelfth Plan	Projected consumption				
	2010-11	2011-12		2012-13	2013-14	2014-15	2015-16	2016-17
Cotton (I) (Mill consumption SSI & Non-SSI)	4310 (254)	4845 (285)	8 ----	5233 (308)	5651 (332)	6103 (359)	6592 (388)	7119 (419)
Man-Made Fibres								
V.S.F.	256	280.06	6.87	299	320	342	365	390
P.S.F.	742	910.58	7.78	981	1058	1140	1229	1324
A.S.F.	83	96.09	7.65	103	111	120	129	139
P.P.S.F.	3	2.40	5.92	3	3	3	3	3
Sub-Total (II)	**1084**	**1289.14**	**7.57**	**1387**	**1492**	**1605**	**1726**	**1857**
Man-Made Filament yarns								
V.F.Y.	49	53.89	9.24	59	64	70	77	84
N.F.Y.	30	27.18	9.6	30	33	36	39	43
P.F.Y.	1222	1756.26	10.76	1945	2155	2386	2643	2928
P.P.F.Y.	15	21.69	5.64	23	24	26	27	29
Sub-Total (III)	**1316**	**1859.01**	**10.65**	**2057**	**2276**	**2518**	**2786**	**3083**
Non-mill cotton consumption	340 (20)	340 (20)	**0.00** 0	340 (20)	340 (20)	340 (20)	340 (20)	340 (20)
Grand Total	**7050**	**8333.15**	8.27	**9016**	**9759**	**10566**	**11444**	**12399**

Note: (i) Figures in the brackets are lakh bales of 170 kg. each.

3.14 Based on the above analysis, the consumption of fibres / yarns will grow at an average of about 8.5 percent by the terminal year of the Twelfth Plan.

3.15 On the basis of the projections made for the Twelfth Plan, the share of non-cotton fibres in the overall consumption of raw materials will increase from the present 38 percent to 40 percent while that of cotton will decrease from 62 percent to 60 percent.

3.16 In the global scenario, the consumption ratio of cotton to non-cotton is 40: 60, while in India it is reverse. The projected consumption ratio indicates the continuation of the same

trend. This consumption trend is on account of the fact that cotton production is on the upswing and India has emerged as the second largest producer of cotton in the world.

PROJECTED PRODUCTION

Cotton

3.17 The area under cotton cultivation has been moving in the limited range of 8 million hectares to 9.20 million hectares over the last several years. During 2009-10 and 2010-11 it has touched 10.3 million hectares and 11.12 million hectares respectively. Since cotton has to compete with other cash crops like soybean, groundnut, sugarcane, tobacco, chilies, etc., it is expected that the area under cotton cultivation, during the Eleventh Five Year Plan may remain in the range of 9 million hectares to 9.5 million hectares. Acreage under cotton in the country is expected to be in the range between 115 to 125 lakh hectares in the twelfth five year plan period. The cotton production is expected to increase to 452 lakh bales by the terminal year of the Twelfth Plan registering annual growth rate of 6 percent.

Man-made fibres / yarns

3.18 The growth rate in the production of man-made fibres /yarns is projected to be of the same level as that of their consumption. On that basis, the production of man-made fibres / yarns is expected to increase from 4068 million kgs in 2012-13 to 5840 million kgs in 2016-17, registering an overall growth of 9.46 percent during the Twelfth Plan period. The existing installed capacity of man-made fibres / yarns is 3952 million kg as against the projected production of 5840 million kg. Therefore, the existing installed capacity would not be adequate to meet the demand, and additional capacity, especially to manufacture polyester staple fibre and filament yarn should come up during the Eleventh Plan period to meet this demand.

Table -3.2

Installed capacity vis-à-vis projected production

(In Mn. Kg.)

Sr. No.	Fibre / Filament Yarn	Installed capacity as on 31-03-2011	Projected Production (2016-17)	Surplus/Deficit
	Man-Made Fibres			
(i)	Viscose Staple Fibre	419	460	-41
(ii)	Acrylic Staple Fibre	153	133	20
(iii)	Polyester Staple Fibre	1183	1600	-417
(iv)	Poly propylene Staple Fibre	9	4	5
	Sub Total	**1764**	**2197**	-433
	Man-Made Filament yarns			
(i)	Polyester Filament Yarn	2059	3500	-1441
(ii)	Nylon Filament Yarn	32	48	-16
(iii)	Viscose Filament Yarn	80	70	10
(iv)	Poly propylene Filament Yarn	17	25	-8
	Sub Total	**2188**	**3643**	-1455
	Grand Total	**3952**	**5840**	-1888

3.19 It may be pertinent to emphasise that unless incremental capacity for the production of man-made fibres and yarns is installed and a conducive policy environment is provided, the imports of man-made fibres / yarns will increase to keep pace with the domestic demand.

RECOMMENDATIONS

3.20 The Indian textile industry draws its strength primarily from a strong indigenous raw material base. Since the Indian textile industry is targeted to grow at the rate of 11.5 percent in volume terms during the Twelfth Five Year Plan, it is necessary to ensure the availability of good quality raw material at reasonable prices. To strengthen the raw material base, following recommendations are made:

Continuation of MM-I, II and IV of Technology Mission on Cotton (TMC)

3.21 With a view to maintain consistency in Research & developmental efforts through ICAR and State Agricultural Universities, the MM-I of TMC may be continued during Twelfth Plan for development of high yielding pest resistant seeds/hybrids to increase yield per hectare and bring down the cost of cultivation. Likewise, schemes of transfer of Technology under MM-II of TMC may be continued in Twelfth Five Year Plan to percolate the benefit of latest technology in cotton production to small and marginal farmers. 3.22 In Eleventh Plan, 860 G&P units have been modernized under MM-IV of TMC besides some more factories modernized/upgraded under the Scheme of NABARD as also TUFS. In addition, some other factories have also been modernized/ upgraded by the ginners on their own. Thus, at present total number of modernized G&P factories in the country are around 1700. With an average production of 20000 bales in one factory, total processing capacity is for around 340 lakh bales. Looking to the estimated cotton production of 438 lakh bales by the end of the terminal year of Twelfth Five year plan, it is recommended that The efforts for modernization of G&P units through MM-IV of the Technology Mission on Cotton (TMC) be continued in the Twelfth plan period. The fund outlay proposed for MM – IV of TMC is Rs. 250 crore during Twelfth Plan.

Scheme to incentivise production of ELS Cotton

3.23 Looking to the short supply in ELS cotton, there is need to increase acreage under cotton. A scheme may be devised for providing special subsidy package to sustain long duration crop and keep alive the interest of cotton growers of ELS cotton. The fund outlay proposed for this scheme is Rs. 30 crore.

Contract Farming

3.24 Contract farming, which provides downstream linkages to spinning industry for unmixed quality cotton and to cotton growers in increasing profitability in cultivation, may be given boost in the Twelfth five year plan with suitable financial incentives through cheaper credit to farmers for quality inputs.

Commercial cultivation of Bt seeds

3.25 Looking to the advantage of increased yield per hectare as also reduction in cost of cultivation due to lesser use of pesticides, acreage under BT has increased manifold. Farmers

need to be encouraged to continuously go in for higher use of BT seeds through higher yield and better technical parameters in the Twelfth five year plan.

Promoting production of organic cotton

3.26 With a view to eliminate chemical impact on land, air, water from synthetic, fertilizers and pesticides, create a healthy environment and safe rural economy, building strong ecosystems and increased biodiversity there is need to increase the production of organically grown cotton in the country. Sustaining organic cotton and Suvin cultivation should be given the status of national agenda in the Twelfth five year plan period.

Price Stabilization

3.27 The cotton prices depend on the demand and supply position domestically and internationally for cotton and yarn, fabrics and made-ups. Therefore, there is need to balance the demand and supply position from time to time to stabilize cotton prices for the benefit of all the stakeholders.

Coverage of synthetic fibre and yarn under TUFS:-

3.28 Under TUFS, all the segments of the textile industry including VSF and VFY are covered **except** manufacturing of synthetic fibres and yarn (i.e., PSF, PFY, NFY, ASF, PPSF, PPFY etc.). At present, there are only a few big players manufacturing synthetic fibres in the country. To increase the availability of synthetic fibre and yarn in the country at reasonable price, it is of utmost importance to facilitate setting up of new capacities in the country. It is, therefore, recommended that synthetic fibres should be covered under TUFS with fund support from their administrative Ministry i.e. Department of Chemicals and Petrochemicals. The machinery for manufacture of synthetic fibers post polymerisation may be covered under TUFS. Since the processes upto polymerisation are primarily chemical in nature, polymerisation machinery may not be covered. To encourage setting up of small size units, particularly from chips, the restriction on term loan and also on capital cost may be fixed under the scheme. The funds may be provided by Dept. of Chemicals and Petro Chemicals.

Fibre - neutral excise policy

3.29 A fibre - neutral excise policyis recommended i.e. all textiles and fibres should attract the same excise duty i.e. 5% optional. A major concern area has been the historical discrimination of man-made fibres and textiles against cotton and cotton textiles in the form

of higher excise duties. Although there has been substantial reduction in excise duties on manmade fibres and textiles during the last 10 years, the current duties on MMF and MMF textiles are still high; while cotton is exempt from excise duty, MMF attracts excise duty of 10%. Further, while MMF textiles attract a mandatory CENVAT of 10%, cotton textiles have an optional CENVAT of 5%. Any reduction in excise duties on MMF and MMF textiles will have a highly positive impact on the growth of MMF consumption.

Setting up of MMF advisory council

3.30 An MMF advisory council with all the stakeholders may be set up to note, advice and also to take an integrated approach to solving the problems of MMF producers and users of MMF and to accelerate their growth. Such a scenario would result in high growth of man-made fibres and textiles industry, thereby contributing to higher revenues, increase in employment generation, and higher foreign exchange earnings. Financial implications of these recommendations would be balanced by the intangible benefits and cascading effect in the economy.

Anti dumping duties

3.31 At present, there are apprehensions amongst MMF textile players that often anti-dumping duties are levied on man-made fibres without adequate consultation with the concerned user industry. In order to redress the grievances of the user industry, it is recommended that introduction of anti-dumping duties on man-made fibres must involve consultation with the Ministry of textiles to truly reflect the concerns of the user industry. At present this is restricted to Department of Chemicals and Petrochemicals.

3.32 The users of man-made fibre are predominantly small players who are not able to initiate anti-dumping proceedings for their products, as it involves huge costs. Thus, there is a need for introduction of an institutional mechanism to provide support (financial and other) to industry associations to initiate and defend the anti-dumping proceedings / safe guard duties. The fund outlay proposed for providing fund assistance to the industry association of small players for initiating anti dumping duty proceedings is Rs. 5 Crore during the Twelfth Plan. The proposed outlay is given overleaf:-

PROPOSED PLAN OUTLAY

Sr. No	Description	Outlay (Rs. in Crore)
1	MM – IV of TMC	250
2	Incentivising production of ELS Cotton	30
3	Providing assistance for initiating Anti Dumping proceedings	10
	TOTAL	**290**

Chapter - 4

ORGANISED MILL INDUSTRY

- PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD
- APPROACH TO THE TWELFTH FIVE YEAR PLAN
- RECOMMENDATIONS

Chapter - 4

ORGANISED MILL INDUSTRY

The cotton / man-made fibres textiles mill industry is the oldest industry in the country. During the Eleventh Plan Period there was overall increase in size of the industry primarily due to Government initiatives such as fiscal reforms, Technology Mission on Cotton, Scheme for Integrated Textile Parks and the Technology Upgradation Fund Scheme. These measures/ schemes helped immensely in attracting investments for increasing capacities and upgrading technology across the value chain.

4.2 With favourable market conditions, triggered by increasing disposable incomes arising from the robust growth of the domestic economy, a record increase in domestic cotton production and the removal of quotas in the international markets, significant increase in investments and production capacities is feasible in the Twelfth Plan Period.

PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD

Spinning

4.3 The textile industry has witnessed significant growth during the last 4 years in terms of installed spindleage, yarn production and exports. The number of spinning mills in the organised sector has gone up by 23% during the first four years of Eleventh plan from 1597 mills in 2007-08 to 1960 in 2010-11. The number of spindles and rotors has gone up by 14% each and employment in the sector by 5% during this period. After shrinking in number and capacity during 10th FYP, there has been reversal of trends in composite mills during 11th FYP period. The number of composite mills in the organised sector has gone up by 5% during first four years of Eleventh plan from 176 mills in 2007-08 to 185 in 2010-11. In addition to the spinning & composite mills in the organized sector, a large number of small scale spinning units have come up particularly in Tamil Nadu. The number of SSI units increased during first four years of Eleventh plan from 1219 mills in 2007-08 to 1385 (prov.) in 2010-11.

4.4 The overall spindleage during the Eleventh Plan period increased from 39.50 million spindles in March 2007 to 44.32 million spindles 2010. There has been continuous growth in the capacity of open end rotors. The number of open end rotors increased from 6.01 lakh rotors in March 2007 to 7.40 lakh rotors in 2010.

4.5 The primary product of the textile industry is spun yarn, which is predominantly produced in the organized sector. The SSI sector accounts for about 10 percent of the spun yarn production. Spun yarn is the raw material for the composite / weaving mills and for the decentralized handlooms, powerlooms and hosiery sectors. The production of cotton yarn

has shown an increasing trend during the first four years of the Eleventh Five Year Plan except during 2008-09 when there was a fall in production due to slowdown in the economy. Cotton yarn production which was 4003 million kg. during the year 2007-08 increased to 4647 million kg during 2010-11. The export of cotton yarn decreased from 664 million kg. in 2007-08 to 555 million kg. in 2008-09 and increased to 589 million kg. in 2009-10 and further to 720 million kg. in 2010-11.

4.6 Apart from cotton yarn, blended yarn, and 100 percent non-cotton spun yarn are also produced by the spinning sector. During the first four years of Eleventh Five Year Plan, the production of 100 percent non-cotton yarn increased from 378 million kg. in 2007-08 to 420 million kg. in 2010-11. Blended yarn production increased from 677 million kg. to 784 million kg. during the corresponding period.

4.7 Spinning industry has been able to keep pace with international technological trends by taking advantage of the Technology Upgradation Fund Scheme (TUFS). In fact, the spinning segment has taken the maximum advantage of TUFS. As on 28.06.2010, projects, worth Rs. 67,821 crore stood sanctioned under TUFS in the spinning sector, and Rs.36,554 crore in the composite sector. However, to maintain our core competence in spinning segment and convert it into the competitive edge in the globalised scenario, it is necessary that the modernization and technological upgradation process should continue through expansion of capacity and the replacement of the old / outdated spindles. Reportedly, the replacement of spindles is required within ten years of the installation in order to maintain optimum production.

Weaving

4.8 In the organized sector, weaving is concentrated in the composite mills and exclusive weaving units. Weaving capacity remained at the same level of 0.71 lakh looms during the first four years of the Eleventh Five Year Plan. It shows that the mill sector is increasingly installing shuttleless looms, and this trend is expected to continue during the Twelfth Plan also. The organized weaving sector has also availed of TUFS and projects worth Rs.16,786 crore were sanctioned under TUFS till 28.06.2010.

4.9 The production of cloth by the mill sector has shown an increasing trend during the first four years of the Eleventh Five Year Plan. The production increased from 1781 mn sq.mtr. during 2007-08 to 2208 mn.sq.mtr during 2010-11. It is expected that during the Twelfth Five Year Plan, the mill sector will increase its share in cloth production from the

existing 4 percent to 5 percent on account of its strengths of an integrated production structure.

APPROACH TO THE TWELFTH FIVE YEAR PLAN

4.10 Policy initiatives to encourage innovation, focus on R & D and to build world class state of the art manufacturing capacity to achieve predominant global standing in manufacture and export of textile items.

4.11 **Projections for theTwelfth Five Year Plan** The projections for the production of spun yarn and cloth by the organized sector are given below:

TABLE 4.1Projections for the production of spun yarn and cloth by the organized sector

	Eleventh Plan			Twelfth Plan projections				
	2010-11 Actual (Prov.)	**2011-12 (Estimated)**	**Assumed Growth Rate**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Fabric Production by Organised Mills (Mn.sq.mtr)	2208	2318	17.50	2724	3201	3761	4419	5193
Spun Yarn Production By Mill Sector (Mn. kgs)								
Cotton	3443	3615	8	3904	4217	4554	4918	5312
Blended	784	823	8	889	960	1037	1120	1210
100 percent Non-cotton	420	462	8	499	539	582	629	679
Total spun yarn	**4647**	**4900**	**8**	**5292**	**5716**	**6173**	**6667**	**7201**

RECOMMENDATIONS

Continuation of TUFS

4.12 TUFS has been the most important factor which has encouraged organized sector for modernization and capacity expansion. TUFS will sustain capacity expansion, modernization and profitability of the industry. To meet the targets of the Twelfth Five Year Plan, it is necessary to continue TUFS during the Twelfth Five Year Plan.

Handloom Reservation Act 1985

4.13 Handloom Reservation Order issued under Handloom Reservation Act 1985, reserves 11 items for production exclusively by the handlooms industry. However, there is no restriction on the import of these products. Thus, powerloom units and mills in India are restricted from producing these items, whereas powerlooms units or mills of other countries can produce and export these items to India. Also, it is more viable to produce most of these items in powerlooms. Therefore, a high-level committee may be constituted comprising of all the stakeholders to review the Handloom Reservation Order with a view to redefine reserved items more scientifically and precisely to avoid misinterpretation at the operating level, and to exempt such items in which powerlooms and mills have a distinct potential and competitiveness in the international market for export production.

Hank Yarn Obligation Scheme

4.14 Cotton yarn producers are required to pack yarn on hanks to the extent of 40%, to ensure supply of adequate quantities of yarn to the handloom industry. However, hank yarn is extensively used by power loom industry. There is need to review the obligation. The Working Group suggests that a high level committee may be constituted with all the stakeholders to assess the exact requirement of the hank yarn by the handloom weavers and suggest modifications in the obligation. The possibility of evolving an alternative mechanism to ensure the supply of adequate quantity of hank yarn to the handloom weavers may also be considered.

Flexibility in the labour laws

4.15 Our labour laws prohibit deployment of women in night shift, working factories for more than 48 hours a week and temporary employment of workers for seasonal jobs. These provisions hurt both employees and employers and therefore, needs to be liberalized.

Financing of consolidation

4.16 Consolidating fragmented textile units into organized industrial units would need substantial investment in land, building and machinery. Liberal term loans and working capital at affordable interest cost would be a positive encouragement. For establishment of large production facilities, some kind of investment allowance needs to be introduced for projects beyond a stipulated size. The Working Group recommends accelerated depreciation for encouraging consolidation.

Raw Material Security

4.17 Indian T&C industry is highly dependent on cotton - 60% share against less than 40% share globally. Calibrated cotton exports can sustain cotton availability for domestic consumption with minimum disturbance to trade and ensure adequate stock-to-use ratio. Bank limits for cotton purchase need to be enhanced to cover increasing prices, loans need to be provided at reasonable interest rates for a period of at least 9 months and against margin money of 10%. Warehousing finance for cotton is currently available at around 13% interest. This needs to be reduced.

Fiscal duty concessions

Customs duty

4.18 Machinery is a critical input for the textiles industry. A total of 387 machines are already listed at 5 percent duty, however, there are still large number of items of important and critical textiles machinery which attract Customs duty of 7.5 percent. There is a good momentum in the investment to build up new capacities and modernization. This momentum can be strengthened & improved if import duties on these items of textiles machinery are reduced. Import duty should be reduced from 7.5 percent to 5 percent on all machines. The list of machines which are not indigenously available may be compiled and made eligible for zero duty imports.

Excise duty

4.19 Currently, the rate of excise duty on textiles machinery is quite high, at 16 percent. With the addition of sales tax and octroi duty, the cumulative incidence of duties works out in excess of 25 percent. This acts as a disincentive to large investment for modernization and expansion of capacity. To motivate larger investments by textiles units, the excise duty rate on textiles machinery should be scaled down from 16 to 8 percent. This measure will help textiles units in bringing down their cost of investment, and indigenous textiles machinery manufacturers to expand their capacities.

Chapter – 5

POWERLOOMS

- PERFORMANCE OF THE POWERLOOMS SECTOR DURING THE ELEVENTH FIVE YEAR PLAN
- REVIEW OF THE ELEVENTH PLAN SCHEMES & PROGRAMMES
- APPROACH TO THE TWELFTH PLAN
- RECOMMENDATIONS

Chapter – 5

POWERLOOMS

The decentralised powerloom sector plays an important role in the textile economy in terms of fabric production and employment generation. It contributes 62 percent to total fabric production in the country and provides employment to 57.29 lakh persons. It is estimated that nearly 60% of the fabrics being sourced by the indigenous apparel / made ups sector for manufacture of garments / made ups for domestic and export market is accounted for by the decentralised powerloom sector.

5.2 There are approximately 5.18 lakh powerloom units with 22.92 lakh powerlooms as on 31.03.2011. The technology level of this sector varies from obsolete plain loom to high tech shuttle-less looms. There are approximately 1,05,000 shuttleless looms in this sector. It is estimated that more than 75% of the shuttle looms are obsolete and outdated with a vintage of more than 15 years and have virtually no process or quality control devices / attachments. However, there has been significant up-gradation in the technology level of the powerloom sector during the last 5-6 years.

5.3 The powerloom sector produces a wide variety of fabrics for domestic as well as export markets, such as shirting, suitings, dress materials, saree, dhoti, sheetings, towels, chaddhar, furnishing, shawls, blankets, etc. made out of cotton, blended, synthetic, silk, wool, etc.

PERFORMANCE OF THE POWERLOOMS SECTOR DURING THE ELEVENTH FIVE YEAR PLAN

5.4 **Production**

Fabric production in the powerloom sector increased to 37517 mn.sq.mtr. in 2010-11 from 32879 mn.sq.mtr. in year 2006-07, but could not achieve the target of 51662 mn.sq.mtr. for the year 2010-11. The powerloom fabric production has not been able to achieve the targets fixed for the 11th Five Year Plan as seen from the details given below.

Table-5.1
Year-wise Powerloom fabric production targets vis-a-vis achievements

(Million sq. mtr.)

Year	Target	Achievement
2007- 08	36,803	34,725
2008 -09	41,198	33,648
2009 -10	46,151	36,997
2010-11	51,662	37,517
2011-12	57,916	N.A.

The technology level in the powerloom sector has improved considerably during the eleventh Five Year Plan. Approximately 50,000 shuttleless looms have been installed during the first four years of the 11th Five Year Plan in the powerloom sector.

REVIEW OF THE ELEVENTH PLAN SCHEMES & PROGRAMMES

5.5 Technology Upgradation Fund Scheme (TUFS) :

TUFS was launched to modernise the textiles and jute sector w.e.f. 1.4.1999 for a period of 5 years, and was later extended up to 31.3.2007. During the 11th Five Year Plan TUFS was continued upto 28.6.2010 and again restructured TUFS was initiated w.e.f. 28.4.2011upto 31.3.2012. Considering the problem of liquidity, an option was provided to the powerloom sector under TUFS of 20% Credit linked Capital Subsidy w.e.f. 6.11.2003. During 1.4.2007 to 28.6.2010 the ceiling on capital subsidy was Rs.20.00 lakh with capital ceiling of Rs.2.00 Crore under 20% MMS for powerloom sector. However, under restructured TUFS applicable during the period 28.4.2011 to 31.3.2012 the ceiling on capital subsidy has been increased to Rs.1.00 Crore for brand new shuttleless looms and Rs.60.00 lakh for other eligible looms with ceiling on capital of Rs.5.00 Crore. During the first four years of the 11th Five Year Plan (from 1.4.2007 to 31.3.2011) Rs.116.69 Crore has been disbursed to 1436 cases.

The TUFS was evaluated by M/s. CRISIL and in its report it is mentioned that the weaving segment has witnessed the sharpest increase in productivity (Over 20%) amongst all segments under TUFS and investment in shuttleless looms have clocked a nearly 7 fold increase. However, investments are still falling short off over requirement. Consequently, the sector lags behind significantly in modernisation. To sustain and bolster the growth momentum in investments in modern loom, the TUFS should be continued. CRISIL has also

suggested modification in 20% MMS Scheme for the powerloom sector and on the same lines modifications have been incorporated in the restructured TUFS applicable from 28.4.2011.

5.6 **Group Workshed Scheme:**

Govt. of India has introduced a Group Workshed Scheme for decentralised powerloom sector on 29.07.2003 under the 10th Five Year Plan. The scheme aims at setting up of powerloom parks with modern weaving machinery to enhance their competitiveness in the global market. The scheme was evaluated by SASMIRA, Mumbai during 2009 – 10 and based on its recommendation the scheme was modified and extended upto 31.3.2012. Under the modified scheme subsidy for construction of Workshed is limited to 40% of the unit cost of construction subject to a maximum of Rs.160 per sq.ft. whichever is less. Ordinarily, minimum 4 weavers should form a group with 48 modern looms of single width or 24 wider width loom and minimum 4 loom per person are permitted. The maximum subsidy is Rs.12.00 lakh per person. The scheme does not envisage more than 500 looms under one project.

During 11th Five Year Plan, 39 projects have been approved for construction of group Workshed with project cost of Rs.296.92 Crore for construction of Workshed area of 11.25 Lac sq.ft. with Govt. share of subsidy of Rs.13.98 Crore. The subsidy of Rs. 6.97 Crore have been released till date. Out of 39 approved projects, the construction of 13 projects has been completed.

5.7 **Integrated Scheme for Powerloom Sector Development:**

The Integrated Scheme for Powerloom Sector Development was launched during 2007 – 08 for the overall development of the powerloom sector with five components i.e.

i. Marketing Development programme for Powerloom Sector,
ii. Exposure visit of Powerloom Weavers to other Clusters,
iii. Survey of the Powerloom Sector,
iv. Powerloom Cluster Development &
v. Development and Upgradation of skills (HRD)

Under Marketing Development Programme, 39 Buyer – Seller Meets have been organised at different places in the country, under component of Exposure Visits, 2361 weavers have been exposed to higher technology area and under development and upgradation of skills component, 47,454 number of trainees have been trained.

5.8 Group Insurance Scheme for Powerloom weavers / workers

Government of India has launched a revised Scheme for welfare of Powerloom workers through Group Insurance Scheme in association with LIC from 1st July 2003. The scheme was modified by merging the existing JBY Scheme and Add-on GIS w.e.f. 1stJanuary 2008. As per the modified Scheme, the total premium is Rs.330/- out of which, Rs.150/- is to be paid by the Office of the Textile Commissioner, and Rs.100/- is being paid by the LIC from the social security fund of Government of India. Only a premium of Rs.80/- is to be paid by the powerloom weaver for getting the benefits under the said scheme for one year. The benefit under the scheme is Rs.60,000/- for natural death, Rs.1,50,000/- for accidental death and total permanent disability, Rs.75,000/- for partial permanent disability.

In addition to the above, a worker is also entitled for educational grant of Rs.600/- per child / per half year for two children studying in IX to XII standard for maximum period of 4 years.

During the first four year of 11th Five Year Plan 5,32,049 workers have been covered in the scheme. The Amount of Rs. 16.41 Crore have been disbursed towards settlements of claim under GIS during 2007-08 to 2010-11.

5.9 Powerloom Service Centres & Its modernisation:

Govt. of India has set up 44 Powerloom Service Centres (PSCs) in different clusters of the country. In addition to the above, approval for opening one more PSC at Imphal has been accorded during 2010-11 under the control of Govt. Manipur. PSCs have been providing a number of services (viz. training to weavers, testing facilities, design development, technical consultancy, dissemination of information about technology and schemes and as Lead Implementing Agency) to the decentralised powerloom sector and have been instrumental in the growth and modernisation of powerloom sector.

All Powerloom Service Centres except PSC Bhiwandi – II (SASMIRA) have mostly been modernised during 9th& 10th Five Year Plan. During 11th Plan Rs. 5.86 Crore was released for further up-gradation of PSCs and opening one new PSC at Imphal under the control of Govt. of Manipur.

5.10 APPROACH TO THE TWELFTH PLAN

Though Government has been providing assistance to the powerloom sector during the past plan periods but still this sector faces multi-fold problems. The most critical being the abysmally low level of technology prevalent therein, coupled with widespread fragmentation of loom holding size, lack of economies of scale, poor productivity, generally poor product quality and low unit realization. The tackling of these problems requires further up-gradation / modernisation of powerloom sector.

5.11 RECOMMENDATIONS

It is proposed to continue the existing schemes along with new schemes / interventions for development of powerloom sector. The interventions required for powerloom sector development during 12th plan period are as under:

5.12 Interventions for infrastructure support for improving the competitiveness of powerloom sector:

5.12.1 Powerloom Cluster Development Programme (PCDP)

- Identification of clusters and selection & training of Cluster Development Officer.
- A Committee will be set up to identify 40 clusters eligible under the programme.
- Cluster Development Officer (CDO) either Officer from Office of the Textile Commissioner or outsourced from agency will be posted in cluster for diagnostic study, preparing action plan and facilitating formation of SPV / Consortium for implementation of the programme for cluster development.
- The Cluster Development Officer will be given training in the reputed institution @ Rs.40,000/- per CDO.
- In case of outsourced CDO, one time assistance of Rs.6.00 lakh for 3 years per cluster will be provided covering expenditure on wage / salary to CDO, office expenditure, stationery, travelling, meetings etc.
- Rental for office space may be provided to CDO upto maximum of Rs.3000/- per month.

5.12.2 **Common Facility Center**

- An SPV / Consortium will be formed for setting up of Common Facilities Centre.
- The Common Facilities Centre will house design centre / studio, testing facilities, training centre, information-cum-trade centre and common raw material / yarn / sales depot, water treatment for plant for industrial use and common pre-weaving facilities as per cluster specific necessity. The maximum subsidy for common facilities including yarn depot will be **Rs. 200.00 lakh** per cluster and the balance of the project cost would have to be contributed by the SPV / State Government agency.

5.12.3 **Yarn Bank :**

- Government shall also provide interest free corpus fund maximum **Rs.100.00 lakh** for yarn bank per cluster for availability of yarn to the weavers at reasonable rate.
- Textile Associations / SPV / Consortium will be eligible to operate a Yarn Bank.
- The eligible agency will collect orders from the small weavers and purchase the yarn in bulk to avail of the quantity discount and supply to the weavers at reasonable rate**.**

5.12.4 **Design development centre.**

- Computer aided Textile Design system will be set up in clusters for design development, colour forecast, trend forecast. One time assistance of maximum **Rs. 5.00 lakh** per cluster towards purchase of Computer aided Textile Design system will be provided. The Design Centre will be managed by the SPV / Consortium / Textile Association.
- A qualified designer will be engaged by the Textile Commissioner in clusters for design development etc. Remuneration of **Rs. 6.00 lakh** for a maximum period of 3 years per cluster will be provided to the designer.

5.12.5 **Awareness programme / Seminar / Workshop / Pilot activities and Cluster publicity.**

- Awareness programme / Seminar / Workshop may be organised to discuss and disseminate the new technology and product market development for powerloom weavers and assistance for the same @ **Rs. 1.00 lakh** per cluster per year would be provided.
- Besides organising awareness programme / Seminar / Workshop, there is a need of pilot activities in the clusters to demonstrate the activity of soft intervention for cost effectiveness, quality improvement / certification, energy saving, product diversification, market study, product tracking etc. for which the financial assistance will be **Rs. 1.00 lakh** per cluster per year.
- For cluster publicity (printing of brochure, catalogues, documentation of samples etc) **Rs.75,000/-** per cluster per year will be provided.
- For publishing quarterly activity bulletin for all clusters, the Central Cell will be provided **Rs. 20.00 lakh** per annum.
- Evaluation of Cluster Development Programme will be carried out through an independent outside agency for which **Rs. 1.00 lakh** per cluster will be provided.
- A contingent expenditure may be provided to the nominated CDO of the Office of the Textile Commissioner for incurring essential expenses to carry out diagnostic study and cluster development programme. The estimated fund of **Rs. 10.00 lakh** per annum will be placed with Textile Commissioner.

5.12.6 Setting up of new Powerloom Service Centres.

For opening of new Powerloom Service Centre, Central Government will provide upto **Rs. 200.00 lakh** to set up facilities for weaver's training, testing of fabrics and garment making or any other need based textile services. Necessary land and building will be provided by the Powerloom Association / State Government agencies. No recurring expenditure will be provided to the new PSCs.

5.12.7 Modernization & Up-gradation of Powerloom Service Centres.

There is a need to further upgrade the existing PSCs by installing new machines and equipments and laboratory facilities. The existing Grant-In-Aid for recurring expenditure of

Textile Research Association (TRA) / State Government agencies PSCsis not adequate. A Committee will be constituted to study and assess the annual recurring expenditure of such PSCs for revising the existing grand-in-Aid.

5.12.8 Purchase / Construction of building for existing PSCs

Most of the PSCs are housed in rented premises. Frequent shifting adversely affects their activity. Therefore, it is proposed to provide fund for purchase / construction of building only to five PSCs during 12th Plan period under this head.

5.12.9 Modernized work-sheds.

- The Group Workshed Scheme has been revised during 2009 – 10, based on the recommendation of the evaluation study. The scheme has encouraged consolidation in the sector and therefore, it is proposed to continue it during the 12th Plan.
- It is estimated that 50 lakh sq. ft. will be constructed during 12th Plan, and the fund requirement for the subsidy will be to the extent of **Rs. 80.00 Crore**.

5.12.10 The total fund requirement for 12th Plan period for infrastructure support is estimated as under

Table-5.2 Fund requirement for 12th Plan period for infrastructure support

(Rs. in Crore)

Training to CDO – Rs.40,000 x 20 (Assuming that in 20 clusters, CDOs will be from O/o Tx.C.	0.08
Assistance to outsourced CDO – Rs.6.00 lakh x 20	1.20
Rent for office for CDO – Rs.3000 x 12 x 3 x 40	0.43
Subsidy for Common Facilities – Rs.200.00 lakh x 30	60.00
Corpus Fund for Yarn Bank – Rs.100.00 lakh x 40	40.00
Remuneration to designer – Rs.6.00 lakh x 40	2.40
Assistance for Computer System – Rs.5.00 lakh x 40	2.00
Awareness programme – Rs.1.00 lakh x 40 x 5	2.00
Pilot activities – Rs.1.00 lakh x 40 x 5	2.00
Cluster publicity – Rs.0.75 lakh x 40 x 5	1.5
Publicity by Central Cell – Rs.20 lakh x 4 x 5	1.00
Evaluation of cluster – Rs.1.00 lakh x 40	0.40
Contingent expenditure to CDO of Tx.C	0.50
Setting up new PSCs – Rs.200.00 lakh x 2	4.00
Up-gradation of PSCs	10.00
Grant-In-Aid to PSCs – Rs.750.00 lakh x 5	37.50
Own building for 5 PSCs	5.00
Group Workshed	80.00
Total	**250.01**

5.13 **Cluster specific infrastructure facility.**

Infrastructure will include common activities such as Pre-Weaving/Sizing, Yarn Dyeing / Bleaching / Process House etc. Cluster specific infrastructure requirement will be assessed by a committee constituted by Textile Commissioner. The Clusters will be graded according to the facilities existing in the cluster & requirement of specific infrastructure to fill up the potential gap. The assistance will be provided on the basis of grading of powerloom clusters as detailed below: -

- Grade – A upto 60% of Project Cost
- Grade – B upto 70% of Project Cost
- Grade – C upto 80% of Project Cost
- Grade – D 90% of Project Cost including clusters in NE / J&K

In addition to plant & machinery, assistance for construction of building will be provided upto to 25% of construction cost.

Table-5.3
Cluster specific infrastructure funding estimates

(Clusters have been graded tentatively)

#	Cluster	Common facility centre	Grade	Invest-ment	Fund
1.	Burhanpur	Synthetic & Cotton Process House	B	26.60	18.62
2.	Vijayamangalam, Erode	Pre Weaving	A	2.80	2.24
3.	Indore / Ujjain	Process house	B	17.50	12.25
4.	Komarapalayam	Pre Weaving including Sizing	A	35.00	21.00
5.	Nalgonda	Pre Weaving including Sizing	C	3.50	3.15
6.	Nagari	Yarn Dyeing	B	16.10	12.88
7.	Gadag-Betagiri	Yarn Dyeing	C	10.50	8.40
8.	Nagpur	Yarn Dyeing	B	4.20	3.78
9.	Ichalkaranji	Fabric bleaching / Processing house	A	70.00	42.00
10.	Malegaon	Pre Weaving including Sizing	C	4.20	3.36
11.	Nabadwip, WB.	Pre Weaving including Sizing & processing	C	4.20	3.78
12.	Ranaghat	Pre Weaving including Sizing & processing	C	4.20	3.78
13.	Gaya	Pre Weaving, Yarn dyeing & processing	D	17.50	15.75
14.	Bhagalpur	Pre Weaving, Yarn dyeing &	C	17.50	14.00

		processing			
15.	Guwahati	Pre Weaving, Yarn dyeing	D	3.50	3.15
16.	Karur	Pre Weaving, Training & Testing	A	7.70	4.62
17.	Salem	Pre Weaving at 8 locations	A	18.20	10.92
18.	Ghorakpur	Process house	C	17.50	14.00
19.	Mau	Process house	C	17.50	14.00
20.	Tanda	Process house	C	17.50	15.75
			Total	**315.70**	227.43
21.	Estimated assistance for building construction				50.00
			Grand Total		**277.43**

5.14 **Interventions for Market development support:**

5.14.1 **Buyer – Sellers Meet:**

In order to provide opportunity to the decentralised powerloom sector to market their products at domestic and international market, exhibition, buyer seller meet will be held at different cities. The assistance will be given for infrastructure support, stall rent and furnishing, electricity charges, publicity, back up services and administrative expenses. The level of assistance will be **Rs.15.00, 10.00 & 7.00 lakh each for 3 days** at Class-A, B & C respectively or actual whichever is less. For North Eastern region and J & K, additional 20% of the above assistance will also be provided since the facilities like transportation, hall, accommodation etc are costlier in that regions

5.14.2 **Reverse buyer – seller meet:**

Reverse buyer – seller meet also be organised by providing travelling expenditure and accommodation charges to the fabric buyers / buying houses to attend the meet for promotion / market of powerloom fabric in domestic / foreign market. The assistance will be **provided @ Rs.20.00 lakh, Rs.15.00 lakh & Rs.10.00 lakh** respectively for Class – A, B & C cities. For North Eastern region and J & K, additional 20% of the above assistance will be given.

5.14.3 **Exposures Visit of powerloom weavers to other clusters:**

Powerloom weavers / entrepreneurs from the low level technology cluster to be exposed to higher technology area to produce diversified textile products or value added products to overcome deficiencies in the cluster. The expenditure for to and fro train fare from the place of powerloom weaver to the area alongwith travel assistance

of Rs.1000/- per day for maximum 3 days visit in cluster per beneficiary will be provided. In case for North Eastern region and J & K, additional 20% of incidental expenditure will be given.

5.14.4 **Total fund requirement for 12th Plan period for market development support is estimated as under:-**

Table-5.4
Fund requirement for 12th Plan period for market development support
(Rs. in Crore.)

Buyer – Seller Meet – Rs.11.00 lakh x 20 x 5	11.00
Reverse Buyer – Seller Meet – Rs.15.00 lakh x 5 x 5	3.75
Exposure Visit – Rs.4000 x 1000 x 5	2.00
Total	**16.75**

5.15 Interventions for Technology up-gradation:

5.15.1 **Upgradation of Plain Powerloom:**

Government will provide financial assistance to upgrade existing plain powerloom with additional features like weft stop motion, warp stop motion, semi-positive let off motion, efficient braking device, anti crack device, replacement of metallic parts by self lubricating nylon parts. The extent of 50% of the cost of the up-gradation attachment / kits subject to a maximum subsidy of Rs.15,000/- per powerloom and maximum subsidy per unit for 8 No. of powerloom will be @Rs.1,20,000/-. In case of North Eastern region, 75% of the cost of the up-gradation attachment / kits subject to a maximum subsidy of Rs.20,000/- per powerloom and maximum subsidy per unit for 8 No. of powerloom will be available @Rs.1,60,000/-. The requirement of fund for the 12th Five Year Plan is estimated to be **Rs.300.00 Crore** for upgrading 2 lakh plain powerloom.

5.15.2 **Specialised Scheme for North Eastern region under Credit linked Capital Subsidy:**

In case of North Eastern region, a specialised scheme has to be formulated to provide 40% Credit linked Capital Subsidy (CLCS) for new Automatic / shuttleless powerloom and warping machine for development of textile SSI units. The maximum subsidy for purchasing new shuttleless powerloom and warping machine would be Rs.40.00 lakh per unit subject to 10% promoter's contribution. The eligible machinery includes indigenous / imported new shuttleless powerloom and warping machine with or without accessories.

5.15.3 **Continuation of 20%MMS under Technology Up-gradation Fund Scheme**

The TUFS has contributed significantly to the technology up-gradation of the powerloom sector. To continue the momentum, it is necessary to extend the TUFS during the 12th Five Year Plan.

5.15.4 **Total fund requirement for 12th Plan period for Technology Up-gradation / Modernisation is estimated as under:-**

Table-5.5 Fund requirement for 12th Plan period for Technology Up-gradationModernisation

(Rs. in Crore)

Up-gradation of plain powerloom for 2 lakh looms	300.00
Specialised Scheme for NER and J & K for 1600 new shuttleless loom and 100 warping machines	55.00
Total	**355.00**

(Fund for 20% MMS will be allocated separately under TUFS.)

5.16 Welfare Schemes for Powerloom weavers:

5.16.1 **Continuation of Group Insurance Scheme with some modifications:**

The scheme is beneficial to the powerloom workers / weavers and the performance of Group Insurance Scheme was encouraging during the 11th Five Year Plan. It is proposed to continue the scheme in the 12th Five Year Plan. The estimated fund requirement would be **Rs. 20.50 Crore** to cover 10 lakh workers.

5.16.2 **Health Insurance Scheme (HIS) for Power loom Workers/ Weavers.**

- The Health insurance Scheme aims at financially enabling the powerloom workers/ weaver to access the best of healthcare facilities in the country.
- The Scheme is to cover not only the worker/ weaver but his/ her spouse and two children, to cover all pre-existing diseases as well as new diseases and keeping substantial provision for OPD.
- The ancillary Powerloom workers/ weavers like those engaged in pre-weaving such as winding, warping. Sizing, drawing in, beaming etc. are also eligible to be covered.

Funding Pattern for HIS:

- **Contribution by the Govt. of India:**
  - Rs.769.36 p.a. per family (Premium Rs.681.60 + Service Tex @10% & education cess @ 3% of ST Rs.87.76). Any tax in excess of above shall be borne by GOI.

- Contribution by the powerloom weaver / state Govt.
- Rs. 170.40/- p.a. per family (Including Taxes)
- Total : Rs. 939.76/- p.a. (Including Tax)
- The minimum contribution by the weavers should be Rs. 50/- per family even in cases where State government is making contribution of his behalf.
- Max. annual benefit per family (1 + 3) – Rs. 15,000/- only.
- The scheme will be implemented by the O/o the Textile Commissioner through ICICI Lombard General Insurance Company

Fund requirement to cover 1,00,000 family – Rs. 7.69 Crore

5.16.3 **Powerloom Weavers Distress Relief Fund Scheme**

The Powerloom Weavers Distress Fund Scheme is expected to provide relief to powerloom weaver's family who are in economic distress. For ameliorating the condition of economic distress among powerloom weavers, assistance shall be provided to the State Government for (i) Setting up a telephone help line, (ii) Ex-gratia grant to family of powerloom weavers who has committed suicide due to economic distress, (iii) Provision for revolving fund for powerloom weavers in distress, publicity etc.

Table-5. 6 : Fund requirement for Distress Relief.

(Rs. In Crore)

Setting up of Telephone helpline (for benefit of 1.25 lac families) (100%)	1.87
Ex-gratia grant (100%)	2.50
Revolving Fund for -	
• Raw material for 25,000 family @ Rs.10,000/- (80%)	20.00
• Food (for 25,000 families @ Rs. 3000/- for 15 days (80%)	6.00
• Counseling for 25,000 family (@ Rs. 1200/-) (80%)	2.40
Publicity of the scheme by O/o the Textile Commissioner	0.25
Total	**33.02**

Note: - 80% of the expenditure from GOI & rest of 20% shared by State Govt.

5.16.4 Comprehensive welfare Scheme (Social compliance cum developmental):

Assistance for construction of **workshed alongwith house** will be provided for comfortable work & stay for improving production & quality products to the powerloom weavers.

Funding Pattern:

a) **Assistance-** The maximum subsidy will be @ 40% of construction cost or Rs.160/- per sq.ft. of construction whichever is less.

b) **The maximum area in a shedfor a family -** 2000 sq.ft. which will include 1600 sq.ft. for 8 looms @ 200 sq.ft. per loom and 400 sq.ft. for house.

Assumptions

To provide subsidy for1,500 sheds during 12th plan.

Fund Requirement for 12th Plan:

5000ds x 2000sq.ft. x Rs.160/- = **Rs.160.00 Crores**.

5.16.5 Improving hygienic behavior & construct sanitation facilities.

The scheme is to provide better environment to improve hygienic behaviour and to have sanitation facility etc. The assistance will be provided for construction of road, drainage facilities, electrification facility, underground septic tank facility, toilet facility, common medical facility, improving drinking water supply etc. and Initially it is proposed to implement in a) Burhanpur, b) Nagpur, c) Solapur d) Mau, e) Tanda and f) Guwhati clusters under the scheme.

Funding: -

Rs. 120 Crore @ Rs. 20 Crore per cluster (Only one time assistance)

Total Proposed Outlay for 12th Plan (Rs. In Crores)

1	Infrastructure support	250.01
2	Cluster specific infrastructure funding	277.43
3	Market development support funding	16.75
4	Technology up-gradation / modernization	355.00
5	Group Insurance Scheme	20.50
6	Health Insurance Scheme	7.69
7	PL weavers distress relief fund scheme	33.02
8	Comprehensive welfare scheme	160.00
9	Improving hygienic behavior and to construct sanitation facility	120.00
10	**Total**	**1240.40**

Chapter - 6

PROCESSING AND FINISHING

- PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD
- APPROACH TO THE TWELFTH FIVE YEAR PLAN
- PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN
- RECOMMENDATIONS

Chapter - 6

PROCESSING AND FINISHING

The processing stage is the most significant process in the value chain of various textile products contributing to the maximum value addition in terms of colours, motives, essential user requirements etc. In the international scenario, the value addition at this stage is perhaps the maximum while in the Indian context, it is the weakest link in the textile production chain which results in loss of potential value addition and also valuable foreign exchange earnings. Export orientation requires consistent quality and avoiding rejection or reprocessing. The processing sector needs to be supported and upgradaed urgently in order to increase the unit value realisation both at the cloth as well as garment/made ups stage.

6.2 The recent Supreme Court / High Court judgments in a number of cases with regard to pollution control have also created disturbance and disorientation in this segment. Incentive and encouragement is the need of the hour to attract fresh investment to build up a strong and vibrant textile processing and finishing capacity in the country capable of producing eco friendly, quality textiles of world standards.

6.3 The processing units are segregated into three broad segments. i. Integral part of the textile composite units, ii. Stand alone large process houses and iii. Stand alone SSI processing units. This industry operates in a highly specialised manner but is fragmented and 90% of the units are in the SME sector. Most of these SME units are engaged in not more than one or two activities. Majority of the uits are engaged in dyeing and printing of grey fabric. Yarn dyeing, however has also grownin a big way. Most of the large firms have set up their captive yarn dyeing facility. Many of the yarn spinners have also started setting up yarn processing facilities (bleaching, mercerising, singing and dyeing). Processing industry is a cluster centric activity and is operating in northern region operating across the clusters of Ludhiana and Amritsar in Punjab, Varanasi in UP, Jodhpur, Pali, Balothra in rajasthan and Faridabad in NCR. The Western region consists of clusters spread across Surat and Ahmedabad, Jethpur in Gujarat and Tarapur, Bhiwandi, Dombivali in Maharashtra. The Southern market consists of specialised clusters of Sirsila and Nagri in AP, Erode, Karur, Tirupur in Tamil Nadu. Each cluster in the country is operating independently and

differently. The most organised processing and finishing cluster is in Tirupur after Surat and Ahmedabad clusters.

PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD

6.4 There has been significant improvement in the processing sector during the eleventh plan period. The contributory factor being TUFS and introduction of additional 10% capital subsidy for processing machinery during eleventh plan under TUFS. During the first four years of the eleventh five year plan upto 28.6.2010, 2236 units have availed of the TUF Scheme. Out of this 1235 units are SSI units and 1001 are non SSI units. In all, Rs. 21,907 crore project investment was made under TUFS in textile processing segment.

6.5 The number of modern process houses in the country increased from a mere handful (4 units) prior to the Scheme to around 200 units as per the Evaluation Report on TUFS by CRISIL. The aforesaid Report has also revealed that TUFS has enabled improvement in productivity, reduction of cost and wastage and achieved high degree of value addition. There has also been quality improvement because of decrease in reprocessing per cent from 18-20 per cent before TUFS to 8-10 per cent after TUFS. Units have also achieved better light and colour fastness on fabrics on account of investing in state of art technology machines under TUFS.

APPROACH TO THE TWELFTH FIVE YEAR PLAN

6.6 Strategy for the development and growth of the processing sector during the twelfth plan would be to encourage setting up of high and medium tech process houses, technology upgradation in the existing units specially low tech power processing units and also extending necessary support for setting up of CETP with marine outfall technology to meet the environmental norms.

PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN

6.7 During the twelfth plan the production of cloth production is projected to increase from 64.90 bn. sq. mtr (estimated) in 2011-12 to 111.85 bn. sq. mtr. in the terminal year i.e. 2016-17, with incremental production of 46.95 bn. sq. mtr. It is expected that processing of 60% of the incremental cloth production i.e. 28 bn. sq. mtr. will be done by modern hi tech large and medium processing houses, while the remaining 40% will be catered to by the existing processing houses by upgrading their capacities.

6.8 To meet the incremental target of 28 billion sq. mtr., the incremental processing capacity required would be 310 process houses having facility of continuous processing of fabrics of 1,00,000 mtrs. and above per day and 240 process houses having facility of continuous processing of fabrics of 50,000 mtrs. but less than 1, 00,000 mtrs. per day. The total production of 550 units is estimated at 28 billion sq. mtrs. per annum. The total investment required for setting up these 550 units would be Rs.40600 crore (high-tech 310units @ Rs.100 crore and having average processing capacity of 65.83 million sq. mtr. per annum and medium tech 240 units @ Rs.40 crore and having average processing capacity of 30.37 million sq. mtr. per annum).

RECOMMENDATIONS

Continuation of the TUFS:

6.9 The TUFS has stimulated investments in the sector as stated above in Para 6.4 and 6.5 to meet the incremental demand for fabric processing an investment to the tune of Rs. 1,46,600 crore will be required during the twelfth five year plan. Without the support of TUFS it will not be possible to attract such a huge investment. It is therefore recommended that the TUFS may be continued in the twelfth plan.

Scheme for Common Effluent Treatment Plant with marine outfall:

6.10 The major challenges that are being faced by the processing sector in the country, i.e. availability of water for processing, effluent treatment and disposal of the treated water and solid effluents. It is necessary to ensure that Government assistance for new investments in processing units is allowed only for the water frugal technology machines. In order to ensure conservation of water, Government also can insist upon recycling of water. In order to protect the environment and also meet the international pollution norms, it has become imperative to treat the textile effluents in an economical manner. Since, common salt is the major chemical used for processing textile materials, meeting the marine standards is highly economical and easier than adopting any other technology with Reverse Osmosis and zero discharge. Land fill will also become a problem with the conventional technology. Marine outfall technology is being widely adopted all over the world. This would also enable desalination and disposal of treated water. Currently, a large number of processing units are located in different clusters and facing problems in meeting the pollution norms. Hundreds of units have been closed by the pollution control authorities or courts because of pollution

problems. Therefore, it is suggested that a scheme for Common Effluent Treatment Plants with Marine Outfall (CETPMO) may be introduced by the Governments for the existing textile processing cluster on the basis of an SPV where the Central Government contributes 25 percent, State Governments bear 25 percent of the expenditure, and remaining 50 percent by the industry. The maximum distance from the sea could be restricted to 400 kilometres to make it commercially viable. Considering the current cost it is estimated that 1 km of pipeline would cost around Rs. 3 crore and pumping, on-line control and monitoring facilities might cost around Rs.300 crores for each common facility. Taking Coimbatore as the main cluster which needs immediate attention, around 400 kilometers of pipe line is required to link all the major clusters like Tirupur, Karur, Erode, Salem, etc. Hence, the total project might cost around Rs.1,500 for providing the facility for the processing clusters in Tamil Nadu. Hence, it is recommended to provide 25% grant by Central Government and 25% grant by the State Government not exceeding Rs.350 crores each. During The twelfth plan working group recommends for Textile Effluent Treatment with Marine Discharge facilities for four major textile wet processing clusters (Tirupur, Surat, Ahmedabad and Navi Mumbai). A total budget of Rs.1,400 crores could be allocated by the central government for all the four clusters put together.

Setting up of New Processing Parks

6.11 New processing parks should be created in coastal areas to facilitate setting up of CETP with marine outfall technology. For this, State Government may identify appropriate location having sufficient land area of 300-500 acres for developing the processing parks along the coastal line. The processing parks should be run under the Public Private Partnership (PPP) model. The processing park should have following facilities:

1. CETP with marine-outfall technology.
2. Industry Support Centre: The park should have an industry support / knowledge centre with the following facilities:

   i. **Testing Centres** for quality control / certification / accreditation of finished fabric / garments to meet buyers' technical standards

   ii. **Research & Development (R&D) Centres** for developing innovative dyes / finishes like environmental friendly dyes etc. The R&D centre will also work with latest technology and develop innovative / efficient processes for the industry. R&D Centres in different processing parks across India should be interconnected for knowledge sharing

iii. **Investor Facilitation Centres** for helping the industry in identifying and sourcing new technology/ machinery for specific processing / finishing requirements

iv. **A common "Lab dip / Sampling Outsourcing cCntre**" may be established for developing dyeing recipe / lab dips for individual companies during their sampling stage. Once the sample/ styles are approved by the buyers, the recipe may be given to respective processor for dyeing in bulk.

v. **Training Centres** for industrial training to be given to staff / workers. Specialized industrial diploma courses in processing shall be organized similar to the ATDC for apparel industry

vi. Investments need to be encouraged from Indian and foreign companies in the parks through appropriate investment incentives like tax / duty benefits. Preference to be given to investments in modern machinery.

vii. **Marketing / Branding**: These parks should be branded /marketed globally as specialized high tech processing clusters for e.g. "Ludhiana Knitwear Processing Park" etc.

viii. Many existing units in the nearby cluster with environmental issues may be shifted to these new parks.

6.12 These parks may be covered under SITP eligible for 40% of the investment with a ceiling of Rs. 40 crore. For such new processing parks CETP with marine-outfall technology may be excluded from the ceiling of Rs. 40 crore and 50% of the expenditure on such CETP without any cap may be permitted. A fund outlay of Rs. 1400 crore may be allocated during the twelfth five year plan.

Adequate supply of natural gas to process houses.

6.13 Electricity Energy (e.g. heating and steam) and electricity are the main cost factors together with availability of soft water. It costs more than 35% of the total cost. Now last year, the Ministry of Natural Gas and petroleum have prioritized the gas supply to different industries e.g. fertilizer, production of electricity, refinery requirement etc.However, textile industry has been put in the last category. This has resulted in only 50 to 60 % supply of natural gas to process houses who have converted their machinery to gas base from coal base. Policy needs to be devised to ensures adequate supply of natural gas to the existing process houses.

Proposed plan outlay

Scheme for Common Effluent Treatment Plant with marine outfall	Rs. 1400 crore
Setting up of new processing parks	Rs. 1400 crore
Total	**Rs. 2800 crore**

Chapter - 7

CLOTHING, APPAREL AND MADEUPS

- PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD
- APPROACH TO THE TWELFTH FIVE YEAR PLAN
- PROJECTIONS FOR THE TWELFTH FIVE-YEAR PLAN
- RECOMMENDATIONS
- PROPOSED TWELFTH PLAN OUTLAY

Garmenting Unit

Chapter - 7

CLOTHING, APPAREL AND MADEUPS

The clothing sector occupies a significant position in the Indian economy by virtue of its contribution to the export earnings and employment generation. It contributes 45 percent to India's total textile exports and provides direct employment to about 6 mn. persons. This sector is low investment and highly labour intensive. An investment of Rs. 1 lakh in the sector creates 6 – 8 jobs. This sector is also a woman friendly and provides employment to large number of women. This sector is also environment friendly as it is least polluting and can provide employment to the rural population as this sector does not need sophisticated skill set.

A view of Apparel Unit

7.2 The clothing industry in India is fragmented and predominantly in the SSI sector. This industry operates in a cluster centric approach which has a clear cut advantage in terms of raw material, services and customers. Though fragmented, each cluster is quite diversified and unique. This industry is concentrated primarily in 18 to 20 clusters/areas, i.e., Tirupur, Ludhiana, Bangalore, Delhi,Noida,Gurgaon, Mumbai, Kolkata, Jaipur and Indore etc.

Tirupur, Ludhiana and Kolkata being the major centres for knitwear while Bangalore, Delhi/Noida/Gurgaon, Mumbai, Jaipur and Indore for woven garments.

7.3 The clothing sector has been dominated by cotton fabric based manufacture and export. In the area of exports, about 80 percent of the total garment exports (in quantitative terms) is accounted for by cotton fabrics, followed by 11 percent for man-made fabrics and 2 percent for woollen fabrics. The same is, more or less, the case of domestic consumption and overall production.

7.4 India's share in the total world apparel trade is about 3.6% and is ranked sixth. India exports more than one hundred garment product categories, mainly falling in cotton, semi-fashion middle price segment of casual wear with the main product categories being T-shirts, men's shirts, ladies blouses, ladies dresses and skirts. Member states of the EU, USA, Canada, UAE, Japan, Switzerland and Australia are the major markets for India's clothing exports. The share of knitted garments in value terms is about 38 percent in over all export of clothing, while in quantum terms it is 53 percent. There is no doubt that the knitted sector is emerging as the faster growing sector of the two and over a period of time, has succeeded in overtaking woven garment sector. Global investment and capacity creation patterns are also following similar trends.

7.5 India's unit value realization in clothing exports hovers around 3.81 US$ per piece, partly due to the fact that our concentration is mainly on cotton and low value knitted garments and our cotton fabric base is not upto international standards. The unit value realization in woven garment sector is about US$ 5.05 per piece while it is US$ 2.70 per piece in knitwear sector.

PERFORMANCE DURING THE ELEVENTH FIVE YEAR PLAN PERIOD

7.6 During the first four years of the Eleventh Five Year Plan, the apparel market grew from Rs. 101,300 Crores to Rs. 150,000 crores registering a compounded annual Growth Rate of 14 percent. The growth was faster in the organsied sector of the industry which grew at the rate of over 20 percent and contributes nearly 25 percent of total apparel market. The demand for made-ups during the corresponding period increased from Rs. 8,450 Crores to Rs. 10,000 crore registering CAGR of 6 percent.

7.7 In the export front, during the period 2007-08 to 2010-11the exports of apparel and made ups increased from US$ 13.8 bn. to US$ 15.7bn. The growth remained subdued

because of lower demand from international markets in the wake of the global financial crisis and significant fluctuations in the price of raw material prices.

APPROACH TO THE TWELFTH FIVE YEAR PLAN

7.8 The garments are the main stay of our textile exports. In the domestic market, fast growing domestic demand, increasing consumer purchasing power, increasing presence of Indian and international retailers and increasing penetration of organized retail will be the key growth drivers. While on the export front, revival of global economy and increasing domestic consumption in China, (leading to scarcity for exports) will provide the necessary boost for the Indian industry.

PROJECTIONS FOR THE TWELFTH FIVE-YEAR PLAN

7.9 It is projected that the total demands for apparel and made ups will increase from US$ 65 bn in the beginning year of the 12th plan to US$122 bn by the end of the terminal year of the 12th Plan.

7.10 During the 12th FYP, domestic consumption is targeted to increase from US$46 bn to US$89 bn while the export is expected to increase from US$ 19 billion to US$ 33 billion.

RECOMMENDATIONS

Labour Laws

7.11 The garmenting industry is constrained in investing larger size units on account of rigid labour policies. The labour productivity in the Indian clothing sector is one of the lowest. The labour laws need to be restructured to create a productive and productivity – conducive environment to ensure smooth production. While the genuine interests of the labour need to be protected, the policy environment and the implementation machinery should induce confidence among the entrepreneurs. Flexible labour policy will help in consolidation and merger of the units to achieve economies of scale and become internationally cost competitive in the globalised scenario.

Brand Promotion

7.12 Retailing and Brand Promotion go together. If India's clothing manufacturers are to increase profits, they need to eliminate margins of middleman and reach retailers directly. There is a need to map our own brands, which can become popular and develop interest of investors. A study needs to be carried out to assess the requirements for the launch of a brand, brand acquisition and brand promotion

Extension of Knitwear Technology Mission

7.13 Apparel Export Promotion Council (AEPC) launched the Knitwear Technology Mission (KTM) to empower the exporting community to go in for wider range of products. KTM project was initiated in 2008 by AEPC with the emphasis on developing new genre fabrics from man-made fibres and blends, active/functional apparel and also to promote technical textiles viz., medical textiles, home textiles and smart/intelligent textiles. Focus of KTM is on engaging newer and greener technology in manufacture, increasing the designing capability of knitwear sector aimed at higher value addition and also to bring round the year business. The Knitwear Technology Mission (KTM) would provide various support services to the industry including knowledge service (market information about knitwear), testing & certification, research, training & education, design services and investor facilitation services like technology selection etc. The project was approved by Ministry of Textile in 2010-11.

7.14 The KTM would function as an autonomous self sustaining organization on "no-profit no-loss" model. The services would be provided to the industry based on industry requirements with the required cost charged.

7.15 For setting up the KTM an initial funding would be required from the government to cover the project cost and initial working capital of the centre till it becomes self sufficient. The centre should be set up in Tirupur to start with since it is the biggest knitwear cluster in India (later more centres could be set up in other cities like Ludhiana after success of the centre). The total cost of the project is Rs. 24.82 crore with Govt. share of Rs. 12.03 crore.

Common Compliance Code (CCC)

7.16 Major apparel markets have strong legal and social obligations towards final consumer. USA and EU buyers are practicing 'factory compliance' and independent international agencies like NGOs are providing solutions for factory improvement. The industry has reported that 'factory compliance' has become a pre-condition before orders are

placed by major retailers. An individual retailer has separate 'code of conduct' and is on 'charge basis'.

7.17 There is a need for the development of a 'Common Code of Conduct' or 'Compliance Code' which is acceptable by majority of apparel buyers. The work involved is mammoth and costly. Thus there is a need to formulate a scheme for making apparel manufacturing units 'compliant' during the Twelfth plan period.

7.18 The Common Compliance Code project will prepare the Indian garment and apparel industry on a common platform towards a more social and environmentally compliant industrial environment. Being one of the first of its kind innovative and socially-relevant initiative, it will greatly help in improving India's image in the global market. The tangible and intangible deliverables of the project include a Common Compliance Code, a Factory Implementation Guideline, Assessment, Monitoring and Certification System integrating, Monitoring Guidelines, Monitoring Training Modules and Common Compliance Code Web Portal. The fund requirement during Twelfth Plan is estimated at Rs. 36.70 crore.

Setting up of 'Integrated Apparel Clusters:

7.19 The clusters would provide generating employment opportunities in some of the selected villages / cities of the States, to be identified by the State Govts. The identified industrial areas by the State, where sufficient industrial activity has not taken place, the same can also be considered under Integrated Apparel Clusters. The projects over Rs 5 cr. investment in the apparel, trimmings and embellishments and connected textile chain would be considered to be set up under 'Integrated Apparel Clusters'. One of the main objectives of the Integrated Apparel Clusters would be enhancement of employment opportunities. Endeavours will be made to promote self employment, entrepreneurship development, industrialization and ancillarization in apparel and textile value chain, through providing fiscal benefits, transport subsidy, development of industrial infrastructure, power subsidy, incentives for the use of environmental protection equipment, employees' accommodation, and other proposed benefits in order to promote these clusters.

Table -7.1 : Important Legends of the scheme of Integrated Apparel clusters.

Investment	5000	Rs. Crores
Investment per machine	2	Rs. Lacs
No. of machines	2500	Lacs
Unit size	500	machines

No. of units	500	number
Unit investment	10	Crores
Annual turnover of clusters	15000	Crores
Annual turnover of single unit	30	Crores
Incentive perio d	10	years

The total fund requirement during Twelfth Plan is estimated at Rs. 1000 crore.

Wovenwear Technology Mission (WTM):

7.20 The Wovenwear Technology Mission (WTM) would provide various support services to the industry including knowledge service (market information about wovenwear), testing & certification, research, training & education, design services and investor facilitation services like technology selection etc. to produce and development of new woven blend.

7.21 The WTM would function as an autonomous self sustaining organization on "no-profit no-loss" model. The services would be provided to the industry based on industry requirements with the required cost charged.

7.22 For setting up the WTM full funding would be required from the government to cover the project cost and initial working capital of the centre till it becomes self sufficient. The fund requirement for the WTM is estimated at Rs. 30.57 crore.

Scheme for setting up Center of Excellence/ Product Innovation Center/ Design Studio-

7.23 The market expansion and increase in product portfolio is possible through design and product development. At present there is no such facility / service available which exclusively targets the Indian market. The need is to identify the latent consumer needs / bonds and convert them into a product idea which will be readily accepted by the market. This can be done by a distinct centre for design research and product development services.

7.24 The centre will provide two types of services to the domestic market.

- **Design and style intelligence**: Design forecasting, colour forecasting, trend and fashion analysis, emerging trends and trends in terms of fibres, style, fit etc.

- **Product development:** Involvement in product development for the Indian market in focused sectors, i.e., sportswear, lingerie as per the current market trends and providing the assistance to the manufacturers in developing designs according to requirement.

7.25 The centre would have state-of-the-art equipments and design software for developing graphics like textile CAD, plotters, LCD, design software etc. Designs would be developed

for both knit fabrics and garments and experienced and qualified designers from India and abroad would be engaged. The fund requirement for setting up of this centre is estimated at Rs. 25 crore.

Size India: Anthropometric Study of the Indian Population

7.26 Objective of this scheme is to carry out a scientific, systematic anthropometric study of the Indian population for the purpose of developing a sizing system for readymade garments. India is such a large country with several hetrogenous population groups that one size / fit is not suitable across the board. The high cost of sizing activity on a large scale prevents brands / retailers to do that on their own. Providing right size and fit to the market will promote the consumption of ready to wear and expedite the shift from ready to stitch. A well established study will act as a benchmark for next 30 – 40 years.

7.27 Although anthropological studies have been conducted, the measurements taken for anthropological studies are quite different from those required for the purpose of developing size charts for garment manufacture and hence cannot be used for the purpose. The need for having a systematic and scientific system for measuring and classifying human bodies in India for the purpose of developing a sizing system for garments is becoming more and more acute with the unprecedented retail growth. With an increase in the mall shopping culture, for clothing requirements, the consumers are becoming aware of the fit or rather the lack of it that the various brands offer. Fit has been cited as one of the major criteria that determine the purchase decisions for clothing- and thus could make or mar brands' popularity. Hence there is a need to conduct an Anthropometric Study of the Indian Population.

7.28 The duration of study is about 8 months and the estimated fund requirement is estimated at Rs. 8.88 crore.

PROPOSED TWELFTH PLAN OUTLAY

Common Compliance Code	Rs. 36.70 crore
Scheme for setting up Center of Excellence/ Product Innovation Center/ Design Studio	Rs. 25 crore
Size India : Anthropometric Study	Rs. 8.88 crore
Knitwear Technology Mission	Rs. 40 crore
Integrated Apparel cluster	Rs. 1000 crore
Wovenwear Technology Mission	Rs. 30.57 crore
Total	**Rs. 1141.15 crore**

Chapter - 8

EXPORTS

- PERFORMANCE DURING THE ELEVENTH PLAN PERIOD
- APPROACH TO THE TWELFTH PLAN
- PROJECTIONS FOR THE TWELFTH PLAN
- RECOMMENDATIONS
- PROPOSED PLAN OUTLAY

Chapter - 8

EXPORTS

The Indian textile industry is an export intensive industry and about one third of its total production is exported in some form or the other. Through export friendly Government policies and positive efforts by the exporting community, textiles exports have increased from US$ 22.15 billion in 2007-08 to US$ 22.38 billion in 2009-10 with an annual rate of growth of 4.51 percent. Clothing is the biggest segment in India's textiles export basket contributing about 45 percent to total textiles exports. The import intensity of this industry is very low, constituting about 16 percent of the total textiles exports and about 5 percent of total textiles market.

8.2 Though textiles continue to be a major component of the India's export basket, their share in total export of the Indian economy has been steadily declining. It has declined from 29 percent in 1998-99 to 12 percent in 2009-10 due to the emergence and growth of new export oriented segments in the economy like I. T., gems and jewellery and auto components.

8.3 India's share in the international textiles trade was 4.31 percent in textiles and 3.62 percent in clothing during 2009. Exports of cotton based items continue to predominate in our international trade which is natural in view of India's competitive advantage in cotton. However, the global trade in textiles is mainly based on manmade / blended fabric. This could be one of the reasons for the low share of India in the global textiles trade.

8.4 China dominates the world trade in textile and clothing with exports of US $ 200 billion representing 35% of the market share. Exports from India account for 4% of world trade and are currently valued at US $ 25 billion

8.5 India is also one of the leading suppliers of garments to USA. In the EU also India is a leading supplier after China and Turkey. However, Bangladesh has a higher level of exports of garments than India in the EU market mainly on account of a duty free access.

8.6 Recent trends in global economies like China show that in areas of labour intensive and mass production, wage increases, structural adjustments rising cost of credit are compelling investors to look towards alternate locations. Coordinated efforts to attract these investments in to need to be put in place.

PERFORMANCE DURING THE ELEVENTH PLAN PERIOD

8.7 The Working Group for the Eleventh Five Year Plan had projected the export growth of 22 percent in value terms to reach the level of US$ 55 billion by the terminal year of the Eleventh Plan. However, export has drastically fallen short of the targets. The reason for the shortfall could be ambitious target fixed by the Working Group and also non-implementation of policy framework suggested by the Working Group for achieving those targets, i.e., labour reforms, scheme of textilpolis, brand promotion, stable policy regime etc.

8.8 The export of textiles has, however, grown by 4.51 CAGR percent in dollar terms during the first four years of the Eleventh Plan (See table 8.1). The highest growth was recorded by man-made textiles (10.83%) followed by the clothing sector (7.77%) during this period. The exports from different segments of the industry and the annualized growth rate are given in the table below.

Table 8.1

Segment wise Export of the Textiles and Clothing Industry during Eleventh Plan Period

Million US $

Items	2007-08	2008-09	2009-10	2010-11 (P)	CAGR 2007-08 / 2010-11
Cotton Textiles	5553	5083	5644	6840	7.20
Man Made Textiles	3177	3281	3959	4325	10.83
Silk Textiles	657	676	597	543	-6.15
Woollen Textiles	443	478	476	441	-0.15
Clothing	9070	10242	10125	11354	7.77
TOTAL	18900	19760	20801	23503	7.54
Jute, Coir & Handicrafts	3247	1179	1586	1775	-18.23
Grand Total	22147	20939	22387	25278	4.51

8.9 During the Eleventh Plan exports declined by (-) 5.45 percent in 2008-2009 due to the global economic downturn. The situation improved during 2009-2010 with exports increasing by 6.92 percent.

APPROACH TO THE TWELFTH PLAN

8.10 Considering the high growth path of the Indian economy aiming to maintain a GDP growth rate of around 9%, a recent strategy paper prepared by the Ministry of Commerce suggests the need to accelerate the pace of export growth, if the country has to meet with the obligations arising out of a Balance of Trade (BoT) deficit and Current Account Deficit

(CAD), as imports are likely to increase to ease supply side constraints arising from a high rate of overall economic growth.

8.11 To address the challenges arising from higher growth rate the Ministry of Commerce has proposed a strategy to double merchandise exports in the next three years i.e. 2011-12 to 2013-14. Building on an export performance of US $ 246 billion in 2010-11, the strategy paper aims to "more than a doubling of exports in three years to US $ 500bililon".

8.12 On the basis of the above formulation the strategy paper prepared by the Ministry of Commerce has arrived at a target of US $ 45.50 billion for the textile and clothing sector by 2013-2014 at a CAGR of 27.72% during a three year period.

8.13 In view of the above, the working group recommends to put in place a policy framework to facilitate textiles and clothing to attain and sustain their pre-eminent global standing in the manufacture and exports of textiles with special thrust to Ready Made Garments, Man Made Fibres and Technical Textiles,, and attain the target of US $ 65.41 billion by the terminal year of the 12th Five year Plan.

PROJECTIONS FOR THE TWELFTH PLAN

8.14 Based on the export growth in the past and potential for exports, the growth projections for different segments of the textile industry have been made.

Table 8.2

Growth projections for different segments of the textile industry for Twelfth Five Year Plan							
Items	**Million US $**						**% Share of Total**
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	
Cotton Textiles	**7500**	8400	9408	10537	11801	13218	12.00%
Man Made Textiles	**5500**	6380	7401	8585	9959	11552	16.00%
Silk Textiles	**800**	880	968	1065	1171	1288	10.00%
Woollen Textiles	**700**	770	847	932	1025	1127	10.00%
Clothing	**14000**	16520	19494	23002	27143	32029	18.00%
TOTAL	**28500**	32950	38117	44121	51099	59214	10.00%
Jute, Coir & Handicrafts	**3850**	4235	4659	5124	5637	6200	10.00%
Grand Total *	**32350**	37185	42776	49245	56736	65414	CAGR 15.17%

RECOMMENDATIONS

8.15 To achieve the target of US $ 65.41 billion by the end of the Twelfth five year plan there is a need to put in place a framework of policies cutting across various segments and sub segments of the sector as follows:

Ensuring Stability in Export Policies

8.16 To achieve the projected export growth targets, we need to provide adequate confidence to our exporters to substantially enhance their market presence in traditional markets and aggressively seek out new markets. A stable policy environment is essential for a vibrant foreign trade,

Continuation of present level of incentives

8.17 It is very essential to continue with the existing incentive schemes such as Duty Drawback, Tax benefits, and Interest Subvention scheme. The thrust should be to make these schemes more user friendly.

Full reimbursement of all Taxes and Levies

8.18 With a lot of our competitors seen to be increasingly incentivizing their textile sectors through various subsidies, the government should provide for full reimbursement of all taxes and levies in a stipulated time frame to enable the industry to retain its competitiveness.

Reduction in Transaction Costs

8.19 Trade related transaction cost is one of the major determinants of export competitiveness of an economy. Trade-related transaction costs refer to a large number of regulatory requirements compliance measures procedures and infrastructure related costs, including, communication costs with clients, domestic transport costs to bring goods from the production site to the border, time and money spent in ports on border procedures or to make products ready for shipment; international transport costs and inspection and certification costs. Simplifying the processing of documentation, trade facilitation, reducing human interface with exporters, working out web based solutions are much needed initiatives.

Strengthening of Trade Related Infrastructure

8.20 A commitment to a substantial step up in the overall Plan support for the trade related infrastructure beyond historical trends will be needed. Schemes for market development and access need to be expanded substantially to reduce critical gaps pertaining to export related infrastructure in the States and Central agencies. Due to inadequate availability of resources

under the scheme, it has so far not been possible to take up large projects which by themselves could make a substantial improvement in the overall infrastructure available for promoting exports. Enhancing funding for the scheme in the last year of the Eleventh Plan and in the Twelfth Plan, as well as improving the quality of output and effective monitoring of the scheme would be a major cornerstone of the strategy.

Availability of Export Finance on easy terms

8.21 Reforms in the Banking Sector and availability of finance at competitive terms provide for ease of doing business in the exporting segment. Export finance should be available at 7 percent rate of interest.

Negotiating preferential access to prospective markets

8.22 Seeking deeper market access as opposed to the limited coverage agreements have become an important tool globally for achieving economic objectives and increased market access. The policy of working out preferential access to new markets and putting in place conducive trading arrangements with trading partners through Preferential Trade Arrangements (PTAs), Free Trade Agreements (FTAs) and Comprehensive Economic Cooperation / Partnership Agreements (CECAs/CEPAs) needs to be continued and expanded.

Market Strategy

8.23 A market diversification strategy based on the changing dynamics of growth in the world economy is necessary to ensure sustained growth of exports. The demand in the traditional markets of the developed western world, North America and Europe, is projected to be relatively sluggish at 2 percent due to slowing output expansion in these economies. Against this, emerging economies are expected to grow at about 6.5 percent.

8.24 The core of the marketing strategy must therefore be to (a) maintain share in "tried and tested" markets; (b) capture higher value in the products exported to traditional markets; and (c) explore new opportunities in emerging and secondary markets. Towards this end a shift in focus should be made from US and EU markets to South East Asia, Latin America and Africa. At the same time, efforts should be made to strengthen engagement with traditional markets, by increasing volumes and value addition.

Brand Image building

8.25 Brands, in today's consumer oriented market, play important role in terms of market penetration and higher unit value realization. The markets of USA and Europe, which account for more than 90 percent of Indian apparel exports, are entirely dominated by various

global brands and Indian exporters are merely suppliers to such brands. Given the scenario, the time has come to seriously work upon a strategy, which promotes India as a BRAND for sourcing all type of textiles and clothing items, irrespective of fibre base.

8.26 Sustained supply of quality products inculcates a Brand Image, not only for the product but the country as well. As the products get upgraded in value terms they carve a niche for themselves which should be nurtured to become a Brand.

8.27 As creation, promotion and sustenance of Brands is highly capital intensive, requiring vast amount of funds, the present allocation for such activities should be substantially increased and 'Brand Promotion Fund' with a corpus of Rs. 10 crore should be created.

Incentives to MMF textiles & garments

8.28 Export oriented incentives should be provided to manufacturers of MMF textiles and garments for a limited period to neutralize the impact of cost-disadvantage vis-à-vis exporters in competing countries. This could include higher drawback rates and inclusion of processed fabrics, madeups and garments made of man-made fibres with higher incentive under the Focus Product Scheme. It is proposed that a graduation scheme for three years can be introduced under the Focus product scheme with benefits of 10% in first year, 7% in second year and 3% in third year. This scheme may cover man-made textiles and garments. In case financial implications do not permit coverage of textiles and garments then at least garments sector should be incentivised as exports of these are currently very low in value terms.

Labour Reforms

8.29 Labour laws which adversely affect the competitiveness of the industry need to be reformed in order to make Indian textile industry globally more competitive. The following reforms may be adopted:

8.30 **Permitting use of contract labour in export oriented units (EOUs)**: The exports business is seasonal and contractual in nature. Excess labour during lean periods or during initial stages of developing an export market(s), when order uncertainty is high, can lead to financial difficulties. Section 10 of the Contract Labour (Regulation and Abolition) Act, 1970, needs to be amended. The section should exclude textiles units engaged in exports related activity (exports / deemed exports comprising 50 percent or more of their sales) to facilitate outsourcing of activities without any restrictions as well as to offer contract

appointments, at the same time ensuring protection of the rights of these laborers in terms of their health, safety, welfare, social security, etc. For example, countries such as China, Bangladesh and Sri Lanka have allowed contract labour in the textiles sector.

8.31 **Permitting firms to adjust their workforce:** Units employing over 100 people currently fall under the purview of the Industrial Disputes Act, 1947. The Act stipulates that employers must obtain necessary approvals for lay-offs. This proves to be a hindrance especially for medium sized enterprises. There is need to relax the norms of the Industrial Disputes Act (Chapter VB) by keeping units employing up to 500 people (presently 100) outside its purview. For example, Malaysia regards right to hire, assign work, reward, transfer, promote and adjust work – force as managerial rights. Workforce adjustment (ILO Convention on Termination of Employment) at the instance of employer due to structural and other changes should be permitted.

8.32 **Extending work hours:** The Government also needs to consider the demand of labour intensive sections of the textiles industry, such as the made-ups and garmenting industry, to increase the hours in a shift to twelve from nine at present, and also increase the working hours in a week to sixty hours from forty eight, in order to cater to peak season requirements of customers as well as to compensate for lower labour productivity.

8.33 **Employment of women during night shift:** Our labour laws prohibit deployment of women in night shift, which affects not only the employer but also employee and therefore this rule needs to be liberalised.

De-linking of zero duty EPCG and Duty Credit Scrip for status holders with TUFS

8.34 As per new Exim Policy (2009-2014), the zero duty EPCG benefit is only available to the companies which have not availed of TUFS benefits. Likewise, duty credit scrip at 1 percent of FOB value of exports to the status holders is only available if TUFS benefit is not availed of during a particular year. Since most of the textile units which were suffering due to global slowdown had availed of benefit under TUFS, the exclusion clause will prevent them from taking advantage of the additional benefit offered by the govt. Therefore, these benefits should be dealing with TUFS.

Anti-dumping / Anti-subsidy cases – funding support:

8.35 Anti-dumping/anti-subsidy investigations on exports of textiles are increasing gradually. Defending such cases which are highly technical, legal and procedural, imposes a heavy financial burden on the concerned industry / industry associations / Export Promotion

Councils. While, in some cases, the EPCs' collect funds from member-exporters, such amounts generated are not sufficient to cover all related expenses. Support from the Government is also limited as the Market Development Assistance (MDA) funds generally grant no more than Rs. 10 lakh for the purpose In view of this, it is necessary to provide funding support to such efforts so that the costs incurred in effectively fighting anti-dumping/ antisubsidy cases can be fully met and the country is able to benefit from the best of the legal/technical advice available in the world on the subject. Accordingly, an amount of at least Rs.25 crore should be provided under the nomenclature '**Export Market Support Scheme**' for contesting anti-dumping/anti-subsidy cases in the Twelfth Five year Plan, with a consensual formulation for cost-sharing by the associations.

8.36 A nodal agency with experts from the legal / costing fields, export promotion councils and trade associations should be formed to defend the dumping and subsidy cases and to advise the Government on initiating such cases in respect of products being dumped in India. The nodal agency should also monitor the tariffs or non-tariff barriers faced by Indian products in target markets.

Export Promotion Studies:

8.37 This is a continuing scheme from the 11th Plan. Under this scheme, the Ministry of Textiles has commissioned a number of studies on various aspects of the textiles sector with focus on export promotion.

8.38 During the 12th Plan, it is proposed to widen the scope of this scheme. In addition to undertaking domain specific studies for promotion of textile exports and for enhancing the overall competitiveness of the Indian textile industry, it is proposed to subscribe to online resources, published research reports and databases on the textile sector. This scheme may also be used to purchase software for data analyses and for conducting seminars/workshops etc. for textile sector development and export promotion.

During Twelfth Five Year Plan Rs. 20 crore is proposed.

The proposed outlay for the 12th plan is given overleaf:

PROPOSED PLAN OUTLAY

Brand promotion	Rs. 10 crore
Export Market Support Scheme	Rs.25 crore
Export Promotion Studies	Rs.20 crore
Total	**Rs. 55 crore**

Chapter - 9

TEXTILES ENGINEERING INDUSTRY

- SEGMENT-WISE STATUS OF TEXTILE MACHINERY INDUSTRY
- ELEVENTH FIVE YEAR PLAN TARGETS AND ACHIEVEMENTS
- APPROACH TO THE TWELFTH PLAN
- PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN
- RECOMMENDATIONS

Chapter - 9

TEXTILES ENGINEERING INDUSTRY

The Indian Textile Engineering Industry (TEI) is one of the most important Capital Goods Sectors in India. The TEI has contributed substantially to the growth of the industry over the last five decades by providing machinery to the different segments of the textile industry. The industry is also exporting approximately. 10% of its production to more than 50 countries of the world.

9.2 In the past, the TEI had largely depended on foreign technical/technical-cum-financial collaborations, and indigenous development was not significant. After the liberalization of Industrial Policy in 1991, many of the foreign collaborations were not renewed. The TEI started upgrading its technology on its own. While the spinning sector was upgraded continuously, the pre-weaving sector followed later. Today the technologies of spinning and pre-weaving machinery are of international standard. Due to the spurt in demand after 2004, the TEI had geared up its technology level and ventured in the fields of shuttleless rapier looms, waterjet looms and airjet looms as well as continuous dyeing ranges, bleaching range, mercerizing and pre-shrinking ranges.

9.3 The Indian TEI consists of over 1446 machinery and components manufacturing units with over 600 units producing complete machinery, and the remaining, parts and accessories. The investment in the industry is in the range of Rs. 6,900 crores with built up annual estimated capacity of Rs.8,048 crores. There are alarge number of SMEs (above 80%) manufacturing complete machinery as well as all types of components/parts and accessories, testing and monitoring equipments and auxiliaries. A good number of firms are of international standard in terms of product design, capacities and technology. The SMEs developed their products by indigenising technology through foreign collaborations/joint ventures and/or obtaining technical know how from R&D Centres and Technical Institutes within the country or by their own developments.

9.4 The capacity utilisaiton of the industry has been varying in the range of 53 – 76% during the last six years. The details of installed capacity, production and capacity utilisation of the TEI is given as under follows::

Table 9.1

Installed capacity, production and capacity utilisation of the Textile Machinery Industry

(Rs. Crore)

Year	Installed Capacity	Production	Capacity Utilisation
2004-05	**6,100**	**3,705**	**61%**
2005-06	**7,000**	**4,402**	**63%**
2006-07	**8,048**	**5,753**	**71%**
2007-08	**8,048**	**6,155**	**76%**
2008-09	**8,048**	**4,063**	**50%**
2009-10	**8,048**	**4,245**	**53%**

Source : Textile MachineryManufactures Association of India

9.5 It is also observed that percentage share of total domestic demand for machinery met by indigenous textile machinery industry has been in the range of 64-47%. The details are given below:

Table 9.2

Actual Demand for Textile Machinery, Parts and Accessories

(Value in Rs. Crore)

YEARS	PRODUCTION	EXPORT	PRODUC-TION (Minus Exports)	IMPORTS (less parts imported by machinery manufacturers i.e. 15% of Production)	TOTAL DOMESTIC DEMAND	% Share of demand met by indigenous industry
2004-05	3,705	361	3344	1916	5260	64
2005-06	4,402	377	4025	4405	8430	48
2006-07	5,753	425	5328	6021	11349	47
2007-08	6,155	640	5515	4332	9847	56
2008-09	4,063	607	3456	3802	7258	48
2009-10	4,245	525	3,720	4500	7583	49

Source : Textile Machinery Manufactures Association of India

It may be seen from the above table that indigenous textile machinery industry is meeting less than 50% of the domestic demand during the four years out of the last six years.

9.6 It is observed from the segment-wise production of textile machinery that spinning and allied machinery contribute to about 50% of the total production of textile machinery in the country. The segment-wise production of textile machinery industry is given as follows:-

Table 9.3

Category -wise Capacity & Production of Textile Machinery

(Rs. Crore)

		Production				
Category	**Installed Capacity YEAR**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**
Ginning and Pressing Machines	174.94	106.33	117.19	77.35	67.36	112
Spinning and Allied Machines	4386.05	3316.79	3545.03	2340.09	2037.64	3388
Synthetic Filament Yarn Machines	885.36	584.48	625.3	412.79	830	900
Weaving & Allied Machines	702.87	580.95	621.64	410.35	495	600
Processing Machines	886.18	593.85	635.19	419.29	460	700
Hosiery/RMG Machines	68.93	47	50.46	33.31	35	50
Textile Machinery Parts	220.17	237.04	121.86	80.43	30	50
Textile Testing Equipments	322.38	114.01	253.07	167.39	170	200
Multiple Segments	144.65	47.56	50.94	33.55	33	41.25
Others	256.52	125.43	134.32	88.45	87	108.75
Total	8048.05	5753.44	6155	4063	4245	6150
%Increase/Decrease		**31%**	**7%**	**-34%**	**4%**	**45%**

Source: TMMAI, Survey of Textile Committee

SEGMENT-WISE STATUS OF TEXTILE MACHINERY INDUSTRY

Spinning Machinery:

9.7 The major spinning machinery, i.e., blow room machinery, cards, draw frame, combers, speed frame, ring frame, ancillary machinery, open-end spinning, two for one twisting and auto-cone winding machines and parts and accessories of international standard are being manufactured in India. Above 60% of the domestic demand is met by the domestic manufacturers. However, high-tech auto coners, open end spinning machines and some special purpose machinery which are not indigenously manufactured are being imported. Also, components are being imported by machinery manufacturers and large scale imports of spares and components by the large number of spinning EOUs which had imported spinning machinery during the early days is taking place.

Weaving Machinery

9.8 Textile machinery industry is producing pre weaving / weaving preparatory machinery, i.e., high speed sectional warping, direct warping and sizing, winding, rewinding at par with world class technology and meeting about 70% demand of textile industry.

9.9 Textile machinery industry is able to meet fully the requirements of old technology powerlooms, i.e., plain powerlooms, semi-automatic and automatic powerlooms. However, the demand for hi-tech shuttleless looms is primarily met by imports. The TEI in India has developed shuttleless rapier looms - with crank beat-up and cam beat-up technology – running at 200 to 400 rpm, with weft insertion rates ranging from 450 to 800 rpm, airjet loom running at 800 rpm, and waterjet looms running at 800 rpm.

9.10 The acceptability of shuttleless looms of indigenous manufacturers, particularly of airjet and waterjet looms, among the textile industry is, however, low due to technology and also the price. The major reason for high price of indigenous looms is the import content (20% - 45%) of component for manufacture of shuttleless looms. Only high volume of production can lower the import content and create an atmosphere conducive for further indigenization. For any new reputed manufacturer of foreign high-tech brand, the initial import content would not be less than 60 percent.

Processing Machinery

9.11 Almost the entire range of processing machinery is now being manufactured in the country, with continuous scouring, bleaching, mercerising, washing, dyeing plants, preshrinking ranges and more, being produced by domestic manufacturers. The indigenous machinery available now competes on an even footing with their European counterparts with low material to liquor ratio and is capable of processing fabric with comparable results at, a very reasonable cost. Except for some wider width processing machines, and special purpose finishing machines for which there is limited demand, all other machines are manufactured in the domestic textile engineering industry.

9.12 Most of the manufacturers of processing machinery are producing machines for batch processes. Only one manufacturer has started producing complete processing plant of 50,000 mtrs. to 1,00,000 mtrs. per day capacity**.**

Garment making machinery and knitting machinery

9.13 Textile machinery industry is only manufacturing ordinary domestic sewing machines and low tech knitting machines. The capacity of domestic hosiery and garment making

machinery is approx. Rs.70 crore. High-tech garment making machinery and knitting machinery are not indigenously manufactured and therefore, are entirely imported. As per TEI, the decentralized character of the hosiery and garment sector was not conducive for indigenous development of garment making and knitting machinery. .

Synthetic Texturising Machinery

9.14 The Textile Engineering Industry located in and around Surat developed synthetic yarn and fabric processing machinery viz. draw texturising machines, draw twisters, two-for-one twisters for filament yarn, zero-twist filament sizing machines, rewinders and precision cone winding machines at par with international standards. The indigenous machinery manufactures are able to meet about 95% of the demand of the textile industry.

Non-woven and Technical Textile Machinery

9.15 The non-woven machinery is not being manufactured at all in the country as there was very little demand in the past. However there are many technical textile items, which are being manufactured on indigenous machines eg. glass fiber fabrics, fish nets, mosquito nets, filter fabrics etc.

JuteMachinery

9.16 There are half a dozen good manufacturer of jute machinery in the eastern sector. Many items of jute machinery are being manufactured in the country. However, the technology of jute machinery is comparitvely older. Now the attempts are being made to develop the technology with the support from the Ministry of Textiles under Jute Technology Mission. The total domestic capacity is about Rs. 70 crore and import is approximately Rs. 10 crore.

Testing & Monitoring Equipments

9.17 The Indian textile engineering industry started developing testing and monitoring equipment in the 60s and today a wide range of high quality latest generation testing and monitoring equipment is being manufactured in the country. Almost 80% of the requirement is met by the domestic manufacturers.

Parts & Accessories

9.18 Currently, barring a few critical items of equipment and accessories almost all kinds of parts and accessories of high quality are manufactured in the country. The total capacity is over Rs. 730 crore. Approx 40-50% goes to the OEM. Almost 80% of the requirement for parts and accessories is met from domestic sources.

9.19 Many important attachments and accessories developed indigenously compare favourably with international technology standards; these include weft straightners, cloth guides and other sophisticated instruments and attachments, i.e., beams, reeds, healds, jacquard harness, dobbies and jacquards (electronic jacquards), leno attachments, rings, needles, nose bars, overhead cleaners, screens, cylinders, ss vessels etc.

9.20 Some critical items of parts and accessories like compact spinning attachment, automatic yarn splicer, PLC controls, dedicated components for Shuttleless looms, electronic controls for high speed shuttleless looms, electronic dobby, electronic jacquards (there is a recent development), microprocessor and PLC controls for warping and sizing machines, hi-tech temperature indicator and controller and few other components and accessories are being imported.

ELEVENTH FIVE YEAR PLAN TARGETS AND ACHIEVEMENTS

9.21 The performance of the TEI during the Eleventh Five Year Plan was encouraging, excepting for the year 2008-09 which was a period of general recession. However, the year 2010-11 witnessed a positive growth of 45% over the previous year. However, the review of the actual performance reveals that targets for production of textile machinery were achieved during one year (2007-08) out of the first four years of the Eleventh Five Year Plan.

Table 9.4

Eleventh Five Year Plan Targets and Achievements – Textile Machinery Industry

(Rs. **Crore)**

Items	2007-08		2008-09		2009-10		2010-11		2011-12	
	T	A	T	A	T	A	T	A	T	A
Production of Textile Machinery	3600	6155	4700	4063	6100	4245	7900	6110	10300	-

T – Target, A – Achievement

APPROACH TO THE TWELFTH PLAN

9.22 The textiles machinery is one of the critical inputs in the accelerated growth process of the textiles industry. Therefore, the import of textiles machinery at a concessional rate of duty is necessary, particularly where the textiles engineering industry does not have adequate capacity. However, simultaneously, Indian textiles engineering industry will be encouraged

to increase its capacity to meet the demand of the different segments of the textiles industry in a time bound manner.

PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN

9.23 During the year 2009-10 and 10-11 the production increased by 4% and 45% respectively and for the year 2011-12 the production is estimated to grow by 9%. Taking into consideration the expected increase in the overall demand for textile products, the TEI is expected to grow at the rate of 17% (CAGR) during the Twelfth Five Year Plan.

Table 9.5

Projections of Exports, Imports & Production of Textile Machinery in Twelfth Five Year Plan

(Rs.**Crore)**

Year	**Exports**	**Domestic**	**Production**
2012-13	880	7920	8800
2013-14	1020	9180	10200
2014-15	1170	10530	11700
2015-16	1350	12150	13500
2016-17	1550	13950	15500

RECOMMENDATIONS

Transfer of Textiles Engineering Industry from Ministry of Heavy Industries to Ministry of Textiles

9.24 Textiles machinery is a critical input for the textiles industry. However, the Textile Machinery Industry (TEI), the fortunes of which are directly related to that of Textile Industry, comes under The Department of Heavy Industry (DHI) under the Ministry of Heavy Industries and Public Enterprises.

9.25 The Ministry of Heavy Industries and Public Enterpirses has been considering a roadmap for manufacture of high tech machinery by the capital goods sector, textile engineering being part of the same.

Constitution of dedicated Cell at Ministry of Textile for TEI

9.26 A dedicated Cell at appropriate level, be constituted at MoT to guide the stake holders of TEI and co-ordinate the activities carried out by the Office of the Textile Commissioner, the Office of the Jute Commissioner and Development Commissioner for Handlooms under the Textile Ministry and the Department of Heavy Industries & Public Enterprises as also Ministry of MSME, Ministry of Agriculture and other Ministries.

Extension of TUFS

9.27 Although the TUF scheme for the Textile Industry has indirectly helped the growth of the Textile Engineering Industry, currently it is not applicable to TEI. To enable the TEI to keep pace with the demand for hi-tech machines by the textile industry, the TUFS may be extended for the textile machinery manufacturing business as well, to support expansion of capacity and modernization. The fund outlay of Rs. 250 crore is suggested for this purpose.

Cluster Development/ Common Facility Centres

9.28 To boost competitiveness of TEI in the domestic as well as international markets, through technology upgradation, quality improvement and cost effectiveness, there is a need to set up three common facility centres in southern, western and eastern region. The fund requirement for development of three common facility centres is estimated at Rs. 375 crore.

Capital assistance for Development of Machinery

9.29 Capital assistance for development of machinery for environmental protection, conservation of energy, technical textiles / nonwoven machinery, hi-tech textile machinery in weaving and textile processing etc. is proposed.

9.30 A capital subsidy of 20% may be allotted to the first ten machines with higher technology delivered by the 1st manufacturer. Using better technology of any particular machine would help marketing of such machines using better technology. A ceiling of Rs. 5 Crores can be fixed on each type of machine.

An amount of Rs. 200 crore may be allocated for this purpose.

Support for R&D

9.31 The R & D support should be provided to the textile engineering industry. It is suggested that three research centres should be set up at Ahmedabad, Coimbatore and in Punjab with initial outlay of Rs. 20 crore for each to cover all sophisticated equipments required for the purpose. Additional funds of Rs. 15 crore may be granted to IIT, Powai Centre.

Rationalisation of Fiscal Policies

9.32 The Government has restructured the excise and import duties with a view to streamline the same before introducing the GST regime. Import duty on specified textile machinery and its parts is 5% . It would be necessary to compensate all duties and taxes at present being paid by the domestic manufacturers (20 to 25%) by way of CVD so that they remain competitive with the imported machinery. This will encourage the foreign players to

set up their manufacturing facility in India. It would also help the domestic manufacturer to develop new machinery and technology.

9.33 Any new machine taken up for local manufacturing is dependent on imported components for the initial 2-3 year period which is the time taken for gradual indigenization. Currently the import duty on such components is in line with the import duty on the machines. Incentives for local manufacturing should be provided by allowing the import of components at minimal duty, if not, at zero duty for a specified period. Technical knowhow fees paid should be exempt from tax for the initial five year period.

9.34 Income Tax laws permit 200% deduction on R & D expenses incurred by Corporate. However, this benefit is not available to partnership firms. Since more than 80% of TEI players belong to MSME sector, this benefit should be made available on conducting same procedural formalities for screening. This would boost the performance of TEI Industry.

Proposed Plan Outlay

Budget provision for encouraging development as detailed below to reduce technology gap.

Sr. No	Item	Amount required Rs. Cr
1	Capital incentive for manufacture of first 10 machines of each category(new technology)	200.00
2	Establishment of 3 nos. Research centres	75.00
3	Technology upgradation fund for TEI	250.00
	Total	**525.00**

CHAPTER – 10

RESEARCH AND DEVELOPMENT

- PERFORMANCE DURING THE ELEVENTH PLAN
- APPROACH TO THE TWELFTH PLAN
- RECOMMENDATIONS

CHAPTER – 10

RESEARCH AND DEVELOPMENT

Creativity and knowledge drives any sector to better heights. Together this will leads to innovations which will change India's presence in the world of Textiles. Research and Development (R&D) in India, has been more towards applied research and less on generic research. Though it is important to maintain applied research for supporting the unorganised, and MSME sector in textiles, it is also equally necessary to have emphasis on generic research.

10.2 There are eight Textiles Research Associations (TRAs) in the country. Ahmedabad Textile Industry Research Association (ATIRA), Bombay Textile Research Association (BTRA), South India Textile Research Association (SITRA) and Northern India Textile Research Association (NITRA) which carry out consultancy, testing, training and research and development in cotton and cotton/synthetic as well as cotton/natural fibre blends. Other fibre specific TRAs are Man-made Textile Research Association (MANTRA), Synthetic & Art Silk Mills Research Association (SASMIRA) who work predominantly in synthetics, Wool Research Association (WRA) and Indian Jute Industry's Research Association (IJIRA) carry out work in wool and jute, respectively. The Textiles Committee laboratories serve the testing, certification and market research needs of the industry. The TRAs are industry promoted bodies and work in a wide range of fibre/ technology areas for product development, process improvement, testing, consultancy and training needs of the industry. The policy initiatives of Government of India aim at supporting innovation, investment in R&D, support to generic research programmes of the TRAs and encourage the industry to support the TRAs in order to cater to their technological needs.

PERFORMANCE DURING THE ELEVENTH PLAN

10.3 While adopting and adapting imported technology continues to be one of the activities of TRAs, work on quite a few innovative developments has also been carried out. The TRAs together have carried out around 82 projects during last 4 years of Eleventh plan and have provided consultancy on various aspects of quality/product improvement, cost reduction, environmental aspects and manpower planning to the industry.

10.4 In addition, tailor made training programmes are being handled for various categories of personnel in the industry. The numerous training programmes of TRAs account for the training of more than 1000 personnel per year for the industry.

10.5 The testing laboratories of TRAs and those with the 44 Powerlooms Service Centres tested about three lakh samples of the industry for their physical, chemical and eco parameters.

APPROACH TO THE TWELFTH PLAN

10.6 In keeping with the vision for the textiles industry, Research and Development will be promoted to boost innovations. The Public Private Partnership mode will be actively pursued so that the industry will collaborate with TRAs in areas of their day to day technological needs, while the Government of India will support generic research projects. The industry participation will be sought in selection and monitoring of all research projects sponsored by the Government.

10.7 The thrust areas for R&D that are identified for focus are :

i. Decentralised sector including Handlooms
ii. Product Development
iii. Cost reduction in the entire manufacturing chain including utilities conservation.
iv. Eco-friendly technologies
v. Development of Technical Textiles, including test methods and test equipment
vi. Application of Information Technology
vii. Application of Biotechnology
viii. R&D in Knitting and Garment technology
ix. Application of Nanotechnology and Plasma Science

10.8 Public private partnership and harnessing knowledge from all front, by covering a wider spectrum of institutions, individuals and industry based R & D, along with TRA's to meet the R & D requirement of the industry for development and growth. Ministry of Textiles may continue to support the TRAs, however it is proposed to include agencies/ institution beyond TRAs as well, for support. These could be government or nongovernment or professional bodies like Registered R &D Institution, Colleges & Institution and Industry based R & D.

RECOMMENDATIONS:

Fully Sponsored R&D Projects

10.9 TRAs continue to be the flag bearers of R&D in textiles in the country and in view of the restructuring that has taken place in the industry during the last decade, coupled with the reforms in the trade scenario, it is necessary that Government should adequately support the TRAs. Continued R&D assistance by way of fully sponsored projects by the Government of India in areas identified is proposed. In the Twelfth Plan, an outlay of Rs 40 crore @ Rs.2 crore for 8 TRAs is proposed for sponsored R&D projects.

Upgradation of TRAs

10.10 While the Government support for the recurring expenditure of TRAs is negligible , it is essential that capital grants are provided for the upgradation of laboratories and other research needs. Technology is changing fast and equipment becomes obsolete earlier than in the previous decade. To cope with such changes, the facilities at TRAs have to be upgraded. This is particularly true with the advent of Technical Textiles in the Indian textiles scenario. Setting up and maintaining a Resource Bank for the technological database, technology forecasting and management practices in the entire textiles sector will be a priority. A separate provision of Rs 5 crore for this is proposed.

A fresh exercise on the needs of TRAs in terms of the upgradation of laboratories and a pilot plan will be undertaken for such funding and Rs 100 crore may be earmarked for upgradation of infrastructure in TRAs in Twelfth Plan.

Training/Skill Upgradation for TRA Development:

10.11 The speed at which technology is changing, Human Resource Department of TRA is must. A separate fund for upgrading skills of staff and scientists of TRAs is necessary. It is proposed to have skill and knowledge up gradation fund for TRAs of Rs. 15 crore in the 12th Plan.

Success Incentives (Patented Technologies):

10.12 Success incentive scheme for R & D in textiles could be initiated to encourage patenting by the TRAs. Each patent should be incentivised at Rs. 25.00 lac. (Rs. 5.00 lacs for team and Rs. 20 lacs for institution) it is projected that 50 patents would be filed during the 12th plan period. Rs. 12.5 crore may be ear marked for operationalising this scheme.

Centres of Excellence for Synthetic / MMF Textile

10.13 Synthetic textiles has 48 % share in the world market. Where as Indian export of MMF / Synthetic textile is less than 15 % of the total textile export. It is desirable to build a speciality centre of excellence, for manmade textiles which may have facility for market research, product development R & D, training centre and collage of engineering and management and product display centre. This centre would be set up at Surat, the largest MMF centre in India, jointly with Korean / Japanese / American / German institute.
An allocation of Rs. 50 Crore is suggested for the same.

Green Development Fund.

10.14 Ecological pressure and compliance related issues are mounting, as rules are getting stricter and international protocol increasing. It is proposed to lay special emphasis on textile production technologies with reduce carbon foot print and adopting cleaner technologies. R & D and Product Development Projects related to development of green product or green process should be allocated a separate fund for R & D.

10.15 TRAs, CoEs at SITPs / Institution/ Individual scientist / Textile companies to look at this as efforts towards sustainable development. It is proposed to ear mark Rs. 50 Crore, for R & D and product development for eco friendly processors and products. This would include machine design modification and machine developments which will enable cleaner technologies and cleaner production.

Support for Design, Quality and Compliance

10.16 The inability of Indian textiles and clothing industry to meet the stringent quality standards and compliance related to environmental standards etc. continues to adversely impact global competitiveness. Lack of product diversification due to limited investments in designing efforts has also been adversely affecting the competitiveness of Indian industry. The fact that a majority of Indian enterprises belong to SME category makes the problem more complex in view of fragmentation and limited capacity of the industry to meet emerging requirements. The distinction between export standards and domestic market standards is no longer valid in view of globalization of markets, where product diversification, quality and compliance are the key for survival and market expansion.

10.17 Although these issues have been recognized to be very important, there has not been adequate focus and thrust to assist the industry in addressing these requirements. The limited

efforts to provide testing services through the laboratories run by the Textiles Commissioner, Textiles Committee and TRAs have not yielded desirable and sustainable results.

10.18 Considering the importance of assisting the industry to improve its capacity in meeting emerging requirements related to design, quality and standards the following strategy / approach will be adopted during the Twelfth Five Year Plan:

10.18.1 Making available testing and designing services at the doorstep of the industry, which will help in improving the quality of products and assisting the industry to obtain internationally accredited quality, environmental and social standard certification.

10.18.2 **The testing and design support**

i. Testing and Designing facilities are proposed to be developed on Public Private Partnership (PPP) basis with the objective of deepening the testing and design culture on a wider scale in the industry and providing greater sense of ownership and involvement of the user industry. The industry associations, SPVs for textiles parks, cluster level industry bodies and other user industry driven organizations like TRAs and the Textiles Committee will be provided one time assistance by the Government towards establishing internationally accredited testing and design centers. The Government would provide required plant & machinery, while the user industry group will be responsible for land, building and infrastructure, apart from meeting the entire O&M costs. A framework will be developed under which the industry group, intending to develop the testing and design facility, will enter into an agreement with the Government to provide stipulated services to user enterprises. The industry group is expected to run the testing and design center on a commercially sustainable basis in the larger interest of member enterprises. In the event of the inability of the industry group to run the facility on a sustainable basis, the framework will enable the Government to recall the plant & machinery that was provided.

ii. The industry groups will be actively encouraged to forge linkages with key stakeholders and service providers of repute in order to ensure that the facilities being created are of acceptable standards and utility to the consumers and buyers.

iii. This framework, which is demand driven and need based, will ensure greater participation and ownership of the user industry resulting into greater utilization of the facilities, apart from providing internationally accredited testing and design services at the doorstep of the industry.

iv. The Government would develop detailed guidelines and framework to operationalize this initiative through the office of the Textiles Commissioner.

v. At least 50 such testing and design centers are proposed to be developed during the 12th Five Year Plan in the country and an allocation of Rs.100 crore is proposed for this purpose.

10.18.3Accreditation / Certification support

(i) An independent and third party accreditation / certification for product, process and systems is emerging to be a key requirement for global competitiveness of the Indian textiles and clothing industry. These requirements are largely related to environmental standards, quality standards and social compliance.

(ii) ISO 9000 QMS, which is a process certification / standard, has been increasingly adopted by the Indian industry, as a result of various developmental efforts by the Government organizations as well as the industry associations. However, the penetration and adaptation of product and process related certification / standards related to environment and social accountability has not been significant. Some such important global standards are; OEKOTEX 100 for certification of a product to be environmental friendly, SA8000, WRAP and ILO certifications for social accountability at the work place, ISO 14000 for certification of environmental management systems at the work place, etc.

(iii) The objective is to assist the small and medium enterprises in obtaining such internationally accredited certification and establishing systems, which would enable them to meet environmental and social standards more effectively. Assistance to establish ISO 9000 QMS is not envisaged in view of its already wide usage in the industry.

(iv) The cost on account of obtaining / establishing such standards and systems primarily includes expenses on hard as well as soft activities such as creation / modification of infrastructure at the work place, training, certification fee, publicity etc.

(v) An individual or a group of enterprises will be eligible to avail of assistance under this initiative.

(vi) The assistance by the Government will be limited to 25 percent of the cost of such certification with a ceiling of Rs.2.5 lakh in each case. It is proposed to assist at least 2000 enterprises in obtaining this certification during the Twelth Five Year Plan. Thus, an allocation of Rs.50 crore is proposed during the Twelth Five Year Plan.

(vii) The Government, in consultation with user industry associations and the certification bodies, will lay down detailed operational guidelines of the Scheme, which will be implemented through the office of Textiles Commissioner.

Proposed Plan outlay

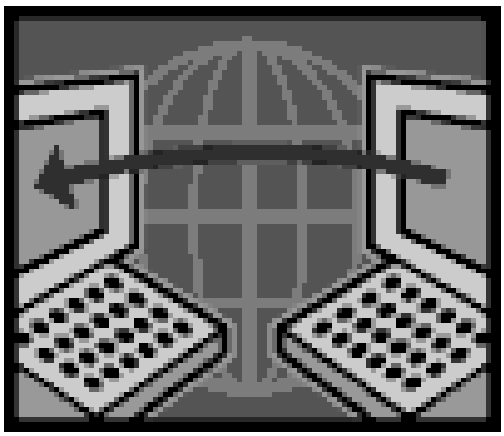
Rs in crore

Strengthening of R&D capabilities and laboratories of TRAs - one time support	105.00
Project Related R&D activities	40.00
Training / Skill Upgradation for TRAs	15.00
Success incentives	12.50
Centre of Excellence for MMF Textiles	50.00
Green Development Fund	50.00
Support for design, quality and compliances (i) Testing and design support Rs.100 crore (ii) Accredition / certification support Rs.50 crore	150.00
Total	**422.50**

Chapter - 11

Strengthening of Database on Textile Industry

- PRESENT POSITION
- DATA DEFICIENCY
- RECOMMENDATIONS



Chapter - 11

Strengthening of Database on Textile Industry

The absence of a comprehensive and proper database for the textiles sector as a whole has created difficulties in monitoring investment, development and growth and in making effective mid-course corrections in strategies and programmes. The gap is strongly felt in the data relating to the 0ecentralized sectors, especially processing, garments and made-ups. The creation of a comprehensive database for the textiles sector, covering the entire value chain right upto marketing of Readymade Garments (RMG) and made-ups, with a view to monitoring the investment, development and growth of the sector and import-export is being proposed in the Twelfth Plan.

PRESENT POSITION

Fibres

11.2 Data on cotton production, consumption are estimated by Cotton Advisory Board (CAB) established by government of India, which has representatives of the Ministry of Textiles, Ministry of Agriculture, Ministry of Commerce and Industry, State Governments where cotton production takes place, cotton farmers, traders and the textile industry. These estimates are revised from time to time in various meetings of the CAB. Department of Agriculture and Cooperation table the details on area under cotton in the CAB meetings. Separately, they also publish their own data on cotton production, which is often at significant variance with the data arrived at in CAB meetings. Cotton prices are not compiled by any government agency on regular basis. Cotton Association of India and certain other trade bodies have been compiling and disseminating price data on cotton.

11.3 Jute and Mesta- Directorate of Economics and Statistics, Department of Agriculture and Cooperation publish the Jute & Mesta data with its total acreage, crop production and yield. This data is made available with a time lag of around one year.

11.4 SilkBoard of India compiles the silk production data on country level. This data is published with a backlog of around three months.

11.5 Man-made fibres data is compiled by Textile commissioner’s office directly from the producers. These are made available with 2-3 months time lag.

Yarns

11.6 Man-made filament yarn data is compiled by Textile Commissioner's office directly from the producers. These are made available with 2-3 months time lag.

11.7 Spun Yarn data is compiled by Textile Commissioner's office through returns received directly from mills. These are made available with 2-3 months lag period.

Fabrics

11.8 Fabrics production data relating to organised mill industry is compiled by Textile Commissioner's office through returns. These are made available with 2-3 months time lag.

11.9 Fabrics production data for unorganised and handloom sector are estimated by Textile Commissioner's office by converting yarn production data using standard conversion factors.

Made-ups and Garments

11.10 Production data for made ups and garments are not collected by any government agency on a regular basis. No published data is available from any other sources either. Household consumption of textile products is compiled by Textile Committee through an elaborate annual survey. But there is no collection of consumption data for industrial, institutional and other non-household consumption.

Trade data

11.11 Data on exports and imports of textile products are compiled by the Directorate General of Commercial Intelligence and Statistics (DGCI&S) along with trade data for other products. Monthly summary data is published by DGCI&S with a time lag of around three months and annual data has a considerably longer time lag.

DATA DEFICIENCY

11.12 Objective and verifiable data on cotton is currently not available. CAB goes through a difficult process of arriving at a consensus in every meeting among agencies representing conflicting interests. Data on other fibres is fairly accurate and reliable since producers are large in size and limited in number. In the case of yarn, returns are currently being filed by mills with the Textile Commissioner as a matter of practice; but Textile Commissioner has no authority to mandate filing of such returns and therefore, the filing is practically voluntary. About 90 percent of yarn production is in the organised sector, where most of the mills have been filing returns. In the SSI sector where the balance 10 percent production takes place, not many units file production returns.

11.13 The conversion factors being used for deriving fabric production data from yarn production data were fixed by Textile Commissioner several years back. There have been substantial changes in the production pattern and weight of fabrics in various segments of the industry and these are not reflected in the conversion factors. Textile Commissioner had got the conversion factors reworked around 5 years back through a detailed exercise. It was noticed that substantial revision was necessary in most of the conversion factors. However, the revised conversion factors arrived at by the Textile Commissioner have not yet been put to use. It is widely acknowledged that a large portion of hank yarn produced in the country is used by power looms. However, in government data, fabrics produced by power looms from hank yarn are likely to get reflected as handloom fabrics.

11.14 In the case of made ups and garments, there is no data on production either from official or unofficial sources. Given the export and labour intensity of these segments, reliable data on their production is essential for formulating proper policies.

RECOMMENDATIONS

11.15 A Directorate of Textile Intelligence functioning under the Ministry of Textiles with its presence in the major domestic production centres and ports should be able to provide reliable production and trade data on real time basis. In order to ensure reliability of data, the Directorate should have statutory authority to demand and collect data. It will remain effective if the Directorate is not tasked with any other responsibilities. However, any extra staff currently available with Textile Commissioner's offices or Textile Committee's offices can be tapped for the Directorate. It could function as an independent agency reporting to the Ministry of Textiles, or as a part of the Textile Commissioner's office reporting to Textile Commissioner. In either case, prompt publication of the collected data will have to be the responsibility of the Textile Commissioner.

11.16 The Collection of Statistics Act 2008 and the Collection of Statistics Rules, 2011 notified last month by Ministry of Statistics and Programme Implementation (MOSPI) could provide the necessary authority for the Directorate. If these Rules are found to be inadequate, specific Rules can be introduced under the Act for the purpose of data collection on textile products. Adequate resources also need to be provided for ensuring effective functioning of the Directorate. It should have facilities for real time transfer of data from the production centres to the head quarters in order to facilitate timely compilation of data.

11.17 The Directorate should collect data directly from the producers of yarn, fabrics, made ups and garments irrespective of their size or sector. If collection of 100% data is not practicable in certain segments, there should be reliable procedures for extrapolating the collected data to reflect production by units that are not covered by compilation.

11.18 The Directorate can use the services of professionals or consultants/market agencies to compile advance estimates or actual estimates for domestic consumption demand of various products in textiles downstream and also sales at the level of retailers. It must capture the data from organised retailers and wholesalers directly.

11.19 Though the Textile Research Associations are carrying out several R&D projects there is no effective system which can access the data and information on the outcome of such projects. The directorate could co-ordinate with such associations and industry on a regular basis.

11.20 The directorate should source, collate and disseminate international textiles statistics to both policy makers and stakeholders in the industry. On line access to the database of the Directorate could be allowed against payments.

Proposed Plan Outlay

11.21 An outlay of Rs. 10 crore will be required to create a strong information base for all the field offices of the Ministry to enable them to implement schemes better and monitor growth and investments in the sector. For this purpose, the modernisation of the offices, strengthening of IT related services, databases etc. will be taken up.

Chapter – 12

FUND REQUIREMENT AND FINANCING ARRANGEMENTS FOR TUFS AND SITP

- SEGMENT-WISE INVESTMENT REQUIREMENT
- NEED TO EXTEND TUFS TO TWELFTH PLAN PERIOD
- NEED TO EXTEND THE SCHEME FOR INTEGRATED TEXTILE PARKS (SITP) DURING TWELFTH PLAN PERIOD
- NEED TO ENCOURAGE FDI

Chapter – 12

FUND REQUIREMENT AND FINANCING ARRANGEMENTS FOR TUFS AND SITP

The Working Group has targeted a production growth of 12 percent in volume terms and 15 percent growth in exports on value basis. Accordingly, the production for different segments of the textiles value chain has been worked out in the respective chapters. The existing capacities will not be adequate to meet the target. The incremental capacities will be required in each segment of the textile industry. To set up these incremental capacities, it has been projected that investment requirement during the Twelfth Five Year period would be Rs. 1, 44,592 crore.

SEGMENT-WISE INVESTMENT REQUIREMENT

12.1 The segment-wise investment requirement is given in the Table 12.1 below:

Table – 12.1

Segment-wise investment requirement

S. No.	Sector	Investment (In crore)
1	Spinning	41,750
2	Weaving	23,939
3	Knitting	2,503
4	Processing	64,400
5	Garment	12,000
	Total	**1,44,592**

12.2 The total investment envisaged is Rs.1, 44,592 crore during the Twelfth Five Year Plan period. The largest investment is required in the sectors of processing, spinning and weaving. The industry has to be motivated / encouraged to invest in expansion and creation of fresh capacities. The extension of TUFS, SITP and encouragement to FDI are necessary for attracting such huge investments.

TECHNOLOGY UPGRADATION FUND SCHEME (TUFS)

12.3 TUFS is the flagship scheme of the Ministry of Textiles which was launched in April 1999 to facilitate technology upgradation of the textile industry to meet the challenges of the quota free globalised trade. The scheme aims to provide access to timely and adequate capital at internationally comparable rates of interest to enable

textile industry to upgrade its technology level. The scheme has facilitated installation of state of the art machinery by the textile industry. It would not be wrong to say that TUFS has transformed 'sunset industry' into a 'sunrise industry'. The scheme was launched for five years, which was subsequently extended upto 31.03.2007. The scheme was continued in modified form w.e.f. 01.04.2007 to 28.06.2010. The scheme has again been launched in restructured form for the period 28.04.2011 to 31.03.2012.

12.4 During the last Eleven years and three months of its operation, as on 28.06.2010, project cost of Rs.2,07,747 crore has been sanctioned and out of this, Rs.103632 crore (about 50 percent of the total project cost) has been sanctioned during the last three years of TUFS. The details are at **Appendix –5**

12.5 Maharashtra, Tamil Nadu, Punjab, Rajasthan and Gujarat are the major states which have attracted TUFS related assistance in terms of amount sanctioned and disbursed. These states account for about 81 percent of the amount disbursed. The details are at **Appendix-6**

12.6 Spinning, Composite Upgradation, Processing and Weaving are the major segments which have availed of assistance under TUFS in terms of amount sanctioned and disbursed. These segments account for about 70 percent of the amount disbursed. The details are at **Appendix –7.**

NEED TO EXTEND TUFS TO TWELFTH PLAN PERIOD

12.7 In order to ensure that the tempo of investment that has begun during the last two-three years in these sectors, it is essential to continue the Technology Upgradation Fund Scheme in its present form until the end of the Twelfth Five Year Plan. Even with the capacities envisaged for the terminal year of the Twelfth Five Year Plan, India will be significantly lower in capacities compared to the China in all segments of the textiles industry especially in spinning, weaving, processing and garmenting. Currently, over 20 percent of the total production of cotton in the country is being exported as raw cotton. Obviously, there is significant scope for converting raw cotton currently being exported into yarn, both for exports and for domestic consumption. Investments in the downstream segments of weaving and processing is necessary to ensure that the maximum quantity of yarn produced in the country is converted into finished products domestically in order to meet the increasing requirements of the garment industry. Sufficient supply of yarn and fabrics internally will reduce the dependence of the garment industry on imported yarn and fabrics, and promote significant value addition.

12.8 Textiles Industry contributes 12 percent of the total manufacturing output (as per IIP), 17 percent of export earnings, contributes 4 percent to GDP and employs over 90 million worker directly and indirectly. The industry is the second largest employer after Agriculture and has had a significant role in the economic growth of the country. TUFS is the pre-eminent scheme to attract additional investments in the Textile Industry.

12.9 TUFS has been evaluated during the Eleventh Five Year Plan through an independent evaluator namely M/s CRISIL Research. The evaluation study has recommended that in view of the positive impact of TUFS in terms of increase in productivity, quality, value realization, turnover and reduction in cost etc, the scheme should be continued into the Twelfth Plan Period to promote further investments in the sector.

12.10 Further, interest rates currently available to the textile and clothing industries of major competing countries are substantially lower than the present PLRs in India. Hence to make available investible funds at competitive rates it is essential to continue TUFS.

12.11 The Working Group has aimed at 12 percent growth in production and 15 percent in exports. To achieve this growth, incremental production facilities would have to be set up. It is estimated that the requirement of funds for setting up these incremental facilities will be approximately Rs.1,44,592 crore during the Twelfth Plan period. This investment will not come without support from Government in the form of the extension of TUFS.

Fund requirement in case of extension of TUFS without any modificationin the present restructured format

12.12 Assumptions for working out fund requirement during the plan period

12.12.1 In case TUFS is extended without any modification in the present restructured format during the Twelfth Five Year Plan period, the investment expected will not exceed Rs1,44,592 crore.

12.12.2 The investment under TUFS is considered to be proportionate during the five years with first year investment of 10 percent, second year 20 percent, third year 25 percent, fourth year 25 percent, and fifth year 20 percent, respectively, during the Twelfth Five Year Plan period.

12.12.3 In line with the present pattern of project cost and amount sanctioned, of total investment required, (i.e., Rs.1, 44,592 crore) only 41 percent would be eligible for assistance under TUFS.

12.12.4 In line with the present pattern, 60 percent of the amount sanctioned would be disbursed in a particular year.

12.12.5 The repayment period under TUFS is seven years (including two years implementation / moratorium). Therefore, for working out the subsidy requirement for TUFS a period of seven years has been considered.

Table – 12.2

Estimated project cost sanctioned, amount sanctioned, amount disbursed and 5 percent interest reimbursement under TUFS

(Rs. crore)

Year	Project cost sanctioned	Amount sanctioned	Amount disbursed	Subsidy requirement
2012-13	14460	5929	3557	400
2013-14	28918	11856	7114	956
2014-15	36148	14821	8892	1464
2015-16	36148	14821	8892	1807
2016-17	28918	11856	7114	1886
Total	**144592**	**59283**	**35570**	**6513**

12.13 Based on the above assumptions, the project cost sanctioned, amount sanctioned, amount disbursed, and subsidy are given in Table 12.2. {The details of subsidy calculation are given at**Appendix –8 (a to d)**}.

Table – 12.3

Summarised position for fund requirement under TUFS

Sr. No.	Type of subsidy under TUFS	Amount required (Rs. crore)
1	5 percent / 4 percent interest reimbursement	4225
2	15 percent / 20 percent MMS	110
3	10 percent CLCS	2155
4	25 percent CLCS	23
	Sub Total	**6513**
5 *	Committed Liabilities for projects sanctioned till June 28, 2010.	4648
6 *	Projected liability for new projects to be sanctioned during the Eleventh Five Year Plan	4725
	Sub Total	**9373**
	Total	**15886**

* - As per CCEA note approved for Restructured TUFS.

NEED TO EXTEND THE SCHEME FOR INTEGRATED TEXTILE PARKS (SITP) DURING TWELFTH PLAN PERIOD

12.14 The textile industry has infrastructure problem. To provide the industry with world-class infrastructure facilities for setting up their textile units, the 'Scheme for Integrated Textile Parks (SITP)' was approved in July, 2005. The SITP is implemented through Special Purpose Vehicles (SPVs), where Industry Associations / Group of Entrepreneurs are main promoters. The Government of India's (GOI) support by way of Grant or Equity is limited to 40 percent of the project cost subject to a ceiling of Rs.40 crore. However, the combined equity stake of GOI / State Government / State Industrial Development Corporation, if any, should not exceed 49 percent so that the SPVs shall have operational autonomy.

12.15 Under SITP, 40 projects have been sanctioned with an estimated cost of Rs. 4183.36 crore. The Govt. of India's share is Rs. 1419.69 crore. The GOI grant is 40% of the project cost limited to maximum of Rs. 40 crore. Grant amounting to Rs 812.40 crore has been released till 30-6-2010.

Table – 12.4

Progress of SITP upto 30.06.2010

Sr. No.	Name of the state	No. of project in the state	Estimated project cost (Rs. Crore)
1	Andhra Pradesh	5	617.74
2	Gujarat	7	817.53
3	Maharashtra	9	970.50
4	Tamil Nadu	8	699.53
5	Rajasthan	5	447.72
6	Punjab	3	351.91
7	Other	3	278.43
	Total	**40**	**4183.36**

Source : MOT web site

12.16 The scheme would enable textile units to be located at potential growth centers and to meet international environment and social standards (covering the sectors of weaving, knitting, processing and garmenting).

12.17 There has been an overwhelming response to the Scheme from the State Governments, entrepreneurs and various industry associations, which is evident from the fact that within a time period of 5 years of launch of the Scheme, 40 Parks have been approved after completing the preliminary requirements like formation of SPVs, land arrangement, preparation / appraisal of project reports etc. In addition, there are consistent requests from

State Governments, industry groups and entrepreneurs for continuation of the scheme during the Twelfth Five Year Plan. Ensured entrepreneurs' initiatives, guided by a professionally managed Project management, give an advantage for success of the scheme.

12.18 Textile industry has been recognized as one of the thrust areas for growth during Twelfth Plan due to its potential to significantly increase investment, industrial production, employment generation and export. In the post quota regime, the Indian textile industry is poised for exponential growth on account of rising consumption, retail credit facilities and the penetration of the brand India image in more than 100 countries of the world. Therefore, taking into consideration the progress of implementation and response of the entrepreneurs, the scheme may be continued in the Twelfth Five Year Plan.

12.19 An outlay of Rs.1400 crore may be provided in the Twelfth Five Year Plan for implementation of the SITP.

NEED TO ENCOURAGE FDI

12.20 There is a need to attract FDI in the textiles sector. FDI benefit does not accrue only in monetary terms, but significant attendant benefits follow. These include technology transfers, import of latest technical know-how; latest manufacturing practices and processes, financial and marketing support, latest trend of fashion designs and styles, overall quality enhancement according to the world standards and the creation of mega facilities like processing plants with large scale capacities, etc.

Proposed Twelfth Plan Outlay

TUFS		
(i)	Committed Liabilities for projects sanctioned till June 28, 2010.	Rs. 4648 crore
(ii)	Projected liability for new projects to be sanctioned during the Eleventh Five Year Plan	Rs. 4725 crore
	Sub-Total	Rs. 9373 crore
(iii)	**Liability for new cases sanctioned during Twelfth Plan**	**Rs. 6513 crore**
	Total	Rs. 15886 crore
SITP		**Rs. 1400 crore**
	Grand Total	Rs. 17286 crore

Chapter-13

HUMAN RESOURCE DEVELOPMENT AND SKILL DEVELOPMENT

- PRESENT STATUS OF TEXTILES EDUCATION IN INDIA
- REQUIREMENT OF HUMAN RESOURCES IN THE TEXTILE SECTOR
- HUMAN RESOURCES IN THE TEXTILES SECTOR VISION 2010
- REVIEW OF THE ELEVENTH FIVE YEAR PLAN
- INTEGRATED SKILL DEVELOPMENT SCHEME (ISDS)
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Chapter-13

HUMAN RESOURCE DEVELOPMENT AND SKILL DEVELOPMENT

In value terms, India's Textiles and Garment (T&G) industry is estimated to be the order of US $ 78.0 billion in 2010, comprising exports of US $ 22.0 billion and domestic market of US $ 56.0 billion. The industry had grown from US $ 58 billion in 2006 at a CAGR of 7.69%. Segment-wise, garments constituted an estimated 64.0% of the domestic market, followed by household fabrics (nearly 17.0%), technical textiles (14.3%), and home textiles (4.7%).

PRESENT STATUS OF TEXTILES EDUCATION IN INDIA

13.2 With the growth of textiles industry as a mammoth industry in course of time, a large number of textiles institutes were founded in all corners of the country teaching mainly conventional technologies. There were structured educational inputs, mainly for supervisory and middle level, at pre-employment stages in all these institutes. There was hardly any institute providing skill-development and upgradation at the operators' level, except that after independence when the Textiles Research Associations were established. Training programmes were conducted at these institutes whenever industry approached them for the skill-upgradation of workers.

13.3 A recently published article indicates that the availability of institutes in India for vocational training is limited to 5500 industrial institute and 1750 Polytechnics with only 175 trade training porgrammes. China has over 5 lakhs such institutes and US has 1500 trade training porgrammes. It has been reported that the Skill Development Mission Plans to set up 1500 new Skill Development Centres with a progressive funding of 2.5 % of GDP proposed for the Skill Development Progarmme. The textile relatedtraining facilities are available with the following bodies:

1.	Apparel Training & Design Centres (ATDCs):	60
2.	National Institute of Fasnion Technology (NIFT):	15
3.	Textiles Research Associations (TRAs):	8
4.	Powerloom Service Centres (PSCs):	44
5.	Indian Institutes of Handloom Technology (IIHT):	5
6.	Weaver's Service Centres (WSC):	25
7.	Industrial Training Institutes (ITI):	

8. Home Science Colleges offering Textiles & Clothing Courses:
9. Indian institute of Carpet Technology
10. Institute of Jute Technology

Apparel Training & Design Centres (ATDCs)

13.4 At present, there are over 60 ATDC centres across the country out of which 25 are ATDC-IGNOU Community Colleges and the rest are ATDC-SMART centres. Many centres are on the anvil with plans to have about 102 ATDC & ATDC-SMART Centres by the end of the 11th Five Year Plan.

Textiles Research Associations (TRAs)

13.5 There are 8 Textiles Research Associations located at Mumbai, Surat, Ahmedabad, Coimbatore, Ghaziabad and Kolkata. Though engaged in R & D, testing, consultancy, etc., each of them provide training programmes to the industrial workforce depending on the requirement of the industry. One TRA has a full-fledged Textiles Institute at diploma level,and other vocational training.

Powerlooms Service Centres (PSCs)

13.6 There are 44 PSCs run by the Textiles Commissioner's Office, the TRAs and the State Governments. These PSCs are located in the powerloom clusters spread through out the country. Besides other services, most of the PSCs conduct training programmes for the powerlooms sector.

Indian Institutes of Handloom Technology (IIHTs)

13.7 There are five such institutes located at Varanasi, Salem, Jodhpur, Guwahati and Bargarh. These institutes mainly provide training for the Handlooms Sector at the Diploma level, and also other skill development to handlooms weavers and dyers.

Weaver's Service Centres (WSC)

13.8 There are twenty five Weaver's Service Centres spread over the country. They carry out training mainly for the handlooms weavers for skill development in weaving, dyeing and design related to traditional textiles.

Industrial Training Institutes (ITI)

13.9 The Directorate General of Employment & Training (DGE&T) initiated the Craftsman Training Schemes (CTS) in 1950 to impart skills in various vocational trades to

meet the skilled manpower requirements for the technology and industrial growth of the Country. During the 1990's, growth had been steep and, presently, there are more than 4971 ITIs with an annual capacity of more than 7.20 lakh. Unfortunately, hardcore textiles technology is not a part of their training scheme. About 1240 ITIs offer textiles training.Training in these institute is mainly given in the trades such as i) Bleaching, ii) Dyeing, iii) Block printing, iv) Cutting and tailoring, v) Dress making, vi) Embroidery, vii) Hand weaving of knitwear tape, viii) Durries, ix) Carpet, x) Knitting with hand operated machine; and xi) Weaving of silk and woollen fabrics etc. Such training normally aims at skill development of individuals for self-employment.

REQUIREMENT OF HUMAN RESOURCES IN THE TEXTILE SECTOR

CRISIL Estimates

13.10 In a study by the Credit Rating Information Service of India Limited (CRISIL), the textiles sector in India is projected to grow from its present level of approximately US $ 37 billion to US $ 85 billion by the year 2010. Domestic consumption is projected to rise to US $ 45 billion, and exports are targeted at US $ 40 billion. These estimates will see phenomenal growth in the manufacturing, processing and garmenting sectors of the textiles industry, which in turn will throw up the need for an estimated 12 million new jobs, of which 5 million will be in the organized sector, and the remaining 7 million in supporting and ancillary services. In order to cope with the enhanced requirement of trained man-power on such a massive scale within a short span, the sector will have to be strengthened and augmented for providing this workforce.

HUMAN RESOURCES IN THE TEXTILES SECTOR VISION 2010

13.11 Report of the Committee to assess the requirement of Human Resources in the Textiles Sector Vision 2010 indicates a requirement of 50 lakh work force with an investment of Rs. 1,40,000 crore by the end of 2011.

CITI Estimates

13.12 A CITI report has estimated the current force in the textile and apparel industry to be around 35 million and has reckoned the same to move upto 47 million by 2015 including 5 million skilled and 2 million technical and other personnel.

Human Resource and Skill Requirements in the Textile Industry (2022): NSDC Report

13.13 The study conducted by National Skill Development Corporation (NSDC) indicates the overall Textiles and Clothing (T&C) sector will grow at a CAGR of 9.5%. While analysing the human resource requirement, NSDC has categorised the overall T&C sector as: i) The Mainstream T&C sector – comprising of Spinning, Fabric Manufacturing, Fabric Processing, and Garmenting, ii) Other related industries such as: a) Handloom, b) Woollen, c) Sericulture, d) Handicrafts, e) Jute. NSDC report anticipated that the human resource requirement in the Mainstream T&C sector to be closely related to market driven T&C industry growth, the human resource requirement in areas such as handloom and handicrafts would have to be supplemented by initiatives from the Government and Industry. The addition of human resource into these other sectors would be at a much lower rate as compared to the Mainstream sectors due to need for significant support for earnings, scope for enhanced technology intervention and automation as compared to current levels, the need to add value and attractiveness of the sector among the human resource supply.

13.14 Keeping in mind the above factors and the growth of the industry, NSDC report projected the human resource requirement for the T&C sector. It is expected that the overall employment in the sector would increase from about 33 to 35 million in 2008 to about 60 to 62 million by 2022. This would translate to an incremental human resource requirement of about 25 million persons. Of this the Mainstream T&C sector has the potential to employ about 17 million persons incrementally till 2022. It implies that by the end of the 12th Plan (2016-17), which is roughly close to 2018, the textile sector's incremental human resource requirement would be about 17.8 million, of which 11.00 million human resources would be required in the Mainstream T&C sector (Table 13.1).

Table 13.1

Projected human resource requirement in the T&C sector (in million)

	2008	2012	2018	2022	Incremental
Main-Stream Textile & Clothing					
Spinning	1.2	1.5	**2.0**	2.4	1.3
Fabric Manufacturing	5.1	6.5	**9.0**	11.0	5.8
Fabric Processing	0.3	0.4	**0.5**	0.6	0.3
Garmenting	6.5	8.6	**12.6**	15.8	9.3
Sub Total	**13.1**	**16.9**	**24.1**	**29.9**	**16.8**
Other Related Sectors					
Handloom Sector	6.7	7.0	**7.2**	7.4	0.7
Woolen Sector	1.9	3.2	**4.3**	5.2	3.3
Sericulture	6.3	7.0	**7.9**	8.5	2.3
Handicraft Sector	7.0	8.0	**9.0**	9.8	2.7
Jute Industry	0.4	0.6	**0.8**	0.9	0.5
Sub-Total	**22.3**	**25.8**	**29.1**	**31.8**	**9.4**
Total	**35.4**	**42.6**	**53.2**	**61.6**	**26.2**

Source: IMaCS analysis/NSDC

13.15 Based on the distribution of human resource employed, the projected profile of human resource requirement across various education levels is presented in Table 13.2 and functional levels at Table 13.3.

Table 13.2

Projected human resource requirement across various educational levels (in million)

Work force distribution by education	Engineers etc.	Diploma or equivalent certification by other agencies	ITI and other vocationally trained	Other graduates	CA/ MBA/ etc	$12^{th}/10^{th}$ standard and below/ dropouts	Total
Spinning	0.03	0.11	0.14	0.04	0.01	0.94	1.27
Fabric Manufacturing	0.06	0.12	0.47	0.06	0.06	5.09	5.85
Fabric Processing	0.00	0.01	0.03	0.00	0.00	0.28	0.33
Garmenting	0.09	0.19	0.75	0.09	0.09	8.13	9.34
Total	**0.18**	**0.42**	**1.38**	**0.19**	**0.17**	**14.44**	**16.79**

Source: IMaCS analysis/NSDC

Table 13.3

Projected human resource requirement across various functional levels (in million)

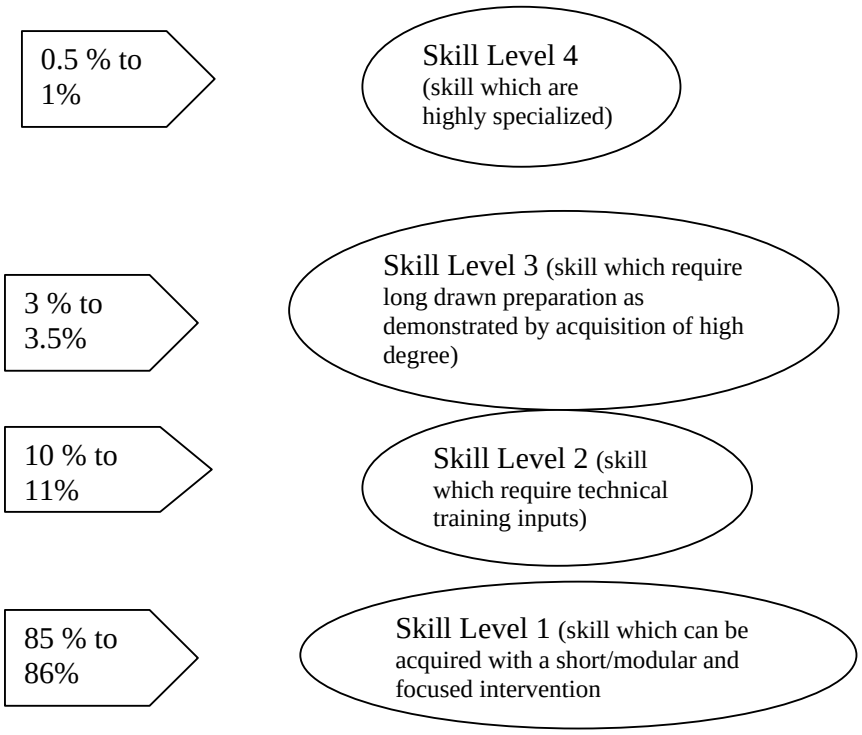
Work force distribution by function	Procurement	Production	Sales	Quality	Engineering and Maintenance	Support	Total
Spinning	0.02	0.98	0.03	0.06	0.05	0.13	1.27
Fabric Manufacturing	0.09	4.68	0.06	0.06	0.29	0.67	5.85
Fabric Processing	0.00	0.26	0.00	0.00	0.02	0.04	0.33
Garmenting	0.09	7.48	0.37	0.37	0.28	0.75	9.34
Total	**0.21**	**13.39**	**0.46**	**0.50**	**0.64**	**1.59**	**16.79**

Source: IMaCS analysis/NSDC

Skill Pyramid for the T&C industry

13.16 Given that the industry would require a varied profile of skill sets, the following figure presents an overview of the profile of skill requirements as derived from human resource requirements across different sectors of the T&C industry.

Figure: Skill Pyramid within the Textile and Clothing Industry



Source: Industry inputs, IMaCS analysis/NSDC

13.17 The skill pyramid, in summary, captures where the T&C industry stands relatively in terms of skills (a function of activity, educational requirements, and amount of 'preparatory' time required to inculcate a specific skill) as compared to all other industries. From the above Figures it can be observed, the lower portion of the pyramid, 'Skill Level 1', has the highest incremental requirement of human resources. It requires persons who are minimally educated, yet can handle simple and/or repetitive tasks (persons employed in activities such as basic machine operations, knitting, cutting, and stitching/sewing, etc.). Such skills can also be obtained in lesser time duration as compared to engineering or ITI courses. As many as over 15 millionpersons are required across skill levels 1 and 2 outlined above.

Training Need-gaps in the Textile Sector

13.18 In order to examine infrastructure requirements, it will be expedient to examine the training need-gaps. In the context of new trade regimes, the demand for trained manpower, competent to manufacture quality products, with high productivity, and to handle sophisticated machines, has been increasing rapidly in textiles and garment manufacturing. The introductions of new technologies, IT solutions, technical textiles, etc., have led to training need-gaps for textiles technologists and operators, who will have to re-orient their knowledge and expertise in newer areas. Training gaps in the decentralized sector, which produces more than 95% of the textiles products, require appropriate training inputs for workers, supervisors, middle management and entrepreneurs. Training need-gaps for the decentralized sector have to be tackled differently in comparison to the organized sector. Garmenting and Fashion technology are relatively new in the Indian textiles scenario. These sectors have substantial potential for the industry, both in terms of export and domestic consumption. Being labour intensive, these sectors will require focused training for skill-development and skill-upgradation. Training and retraining in these areas will be a wise investment in our human resources, to exploit the full potential of the textiles and garment industry.

REVIEW OF THE ELEVENTH FIVE YEAR PLAN

13.19 To achieve the target growth rate of 12 percent in volume terms, the investment requirement during the 11th Plan has been estimated at Rs.1,50,600 crore and the incremental direct manpower requirement is estimated at 6.5 million in spinning, weaving, knitting, processing and clothing. The segment wise incremental direct manpower requirement is given in Table 13.4. The maximum employment is estimated in clothing segment Table 13.5.

13.20 The projected Plan Outlay during the Eleventh Plan was modest and projected at just Rs. 110 crores for setting up of training centres on the PPP basis.

Table 13.4

Segment-wise incremental direct manpower requirement in spinning, weaving, knitting, processing and clothing

S. No.	Sector	Investment (In Crores)	Direct Man Power Requirement ((In Lakhs)
1	**Spinning**	50,200	4.10
2	**Weaving**	20,200	2.70
3	**Knitting**	2,400	0.20
4	**Processing**	56,000	1.50
5	**Clothing**	21,800	56.50
	Total	**1,50,600**	**65.00**
Source: Report of the Working Group on Textiles & Jute Industry for the Eleventh Five Year Plan (2007-12), Ministry of Textiles			

Table 13.5

Sector-wise category-wise incremental employment generation during the Eleventh Five Year Plan

(lakh persons)

Sr. No.	*Category*	Incremental employment in		
		Textiles	Clothing	Total
1	Managerial, technical & administration	0.85	5.65	6.50
2	Skilled (ITIs & certificate course)	1.70	11.30	13.00
3	Semi-skilled (machine operators)	4.25	28.25	32.50
4	Unskilled	1.70	11.30	13.00
	Total	**8.50**	**56.50**	**65.00**
Source: Report of the Working Group on Textiles & Juts Industry for the Eleventh Five Year Plan (2007-12) Ministry of Textiles				

INTEGRATED SKILL DEVELOPMENT SCHEME (ISDS)

13.21 To address the training needs of the textiles and related segments, Integrated Skill Development Scheme (ISDS) has been launched in October 2010. In addition to the training

programme planned under ISDS, the training programmes are being conducted by various segment of the Ministry of Textiles such as the office of the Development Commissioner for Handlooms and Handicrafts.

13.22 The ISD Scheme seeks to make intervention to assist the textiles economy to meet the gap in manpower requirement. It planned to provide training to 26.75 lakh persons at the estimated cost of Rs. 1952.83 crores (Rs. 2359.70 crores including non-govt) over a period of 5 years. During the remaining two years of the XI Plan (2010-11 & 2011-12), the schemes has been approved as a Pilot Project with the approved outlay of Rs 228.99 crores with a physical target of 2.70 lakh persons.

Objective and Strategy of the Scheme (ISDS):

13.23 The objectives of the ISDS are to i) address the trained manpower needs of textiles and related segments including Handicrafts, Handlooms, Sericulture, Jute, Technical Textiles etc. by developing a cohesive and integrated framework of training based on the industry needs. Addressing this need is critical for enhancing the competitiveness of the industry in the globalized economy, ii) increase the employability of residents of the targets areas through imparting of skills in the above segments, iii) create a trainers' pool by conducting the advance training programmes at a cluster level, and iv) ensure training in design development programmes, which is critical for handloom weavers' handicraft artisans / jute artisans, to help them produce diversified products with innovative uses and improved quality to meet changing market trends.

13.24 The strategy of the scheme is to leverage on the existing strong institutions and training experience within the Ministry on the one hand and ensures private sector participation through a PPP Model on the other. The expansion of training centers would be demand driven, based upon the requirements of the Industry.

Salient Features of the Scheme:-

13.25 The salient features of the Scheme are as follows:-

13.25.1 The Scheme would work on the basic principles of leveraging on the existing resources and infrastructure. The Scheme would target to train approximately 26.75 lakh persons over a period of 5 years.

13.25.2 Private sector participation will be ensured, and outcomes will be strengthened by incentivizing training where the trainees get employed/self-employed after training is imparted

13.25.3 The average cost per trainee (for the Government) to be borne through the Scheme would be approximately Rs.7300/-.

13.25.4 The Government will meet 75% of the total cost of the project and balance 25% would be met from Fee / Industry Contribution [90% - 10% pattern for NE states]. However, in courses / programmes (of Component –I) where it is not feasible to organise the beneficiary contribution, the Empowered Committee shall be authorized to approve a higher level of Government assistance.

13.25.5 A budget line of Rs. 229 crore for a new HRD Scheme under new initiatives of the Ministry of Textiles already exists, which will be operated for this scheme.

13.25.6 A Mid-term evaluation would be carried at the end of the first 2 years to make mid-course modifications in the Scheme as required. The Physical & Financial Targets of the Scheme during 2010-11 & 2011-12 are at Table 13.6.

Table 13.6 Physical & Financial Targets of the ISDS during 2010-11 & 2011-12

	Physical (000 persons)			**Financial (Rs. crores)**		
Sector	**Year 1**	**Year 2**	**Total**	**Year 1**	**Year 2**	**Total**
Textiles (TRA/PSC)	8.60	17.20	25.80	10.57	13.54	24.10
Apparel (ATDC)	26.68	38.95	65.63	44.29	44.04	88.33
Handicraft	22.00	35.00	57.00	16.25	25.27	41.52
Handloom	9.20	17.40	26.60	5.83	11.23	17.05
Jute	7.20	12.15	19.35	2.58	4.01	6.59
Sericulture	1.75	1.95	3.70	0.90	0.70	1.60
Technical Textiles	8.80	13.20	22.00	9.15	9.15	18.20
PPP	11.00	2.00	36.00	8.25	18.75	27.00
Total	**95.23**	**160.85**	**256.07**	**97.82**	**126.68**	**224.50**
			(Add Admin / Monitoring & Evaluation Cost 1% + 1%)			228.99

13.26 ISDS has been launched in October 2010.This is one of the best schemes to have come out in the recent times and certainly will help in shoring up the available workforce to the talent and skill deprived in the textile sector particularly in apparel sector. By the end of

the March 2011, 6 projects have been sanctioned with the approved project cost of Rs. 288.22 crores. Against the approved GOI' share of Rs. 201.33 crore, a sum of Rs. 100.70 crore has been released.

13.27 During 2011-12, 7 more projects have been sanctioned having a project cost of Rs. 61.20 crore and a sum of Rs. 18.46 crore out of Rs.45.10 crore has been released as part of the GOI grants till June, 2011. Five more projects have been received, which are at various stages of approval/consideration (Table 13.7). Project-wise progress of ISDS is at **Annexure** 9.

Table 13.7 - Progress of the Integrated Skill Development Scheme (ISDS)

(Rs. crore)

Sl. No.		No. of Projects	Approved Project Cost	Approved Grant	Grant Disbursed
A	Sanctioned during 2010-11	6	288.22	201.33	100.70
B	Sanctioned during 2011-12 (till June, 2011)	7	61.20	45.10	18.46
	Total (A + B)	13	349.42	246.43	119.16
C	Proposals under Consideration	5			

Skill Related Scheme for the Handlooms and Handicrafts

13.28 In addition to the training programme planned under ISDS, the training programmes are being conducted by various segments of the Ministry of Textiles such as the office of the Development Commissioner for Handlooms and Handicrafts.In case of Handloom Sector, the skill development is an integral component of Integrated Handloom Development Scheme(IHDS). Under Cluster Development Programme and Group Approach, which are component of IHDS, the training programme is being conducted in the field of i) weaving, ii) dyeing, iii) design and iv) management. During 2007-08 to 2010-11, about 30,000 persons were trained at the cost of Rs. 26.91 crore. In addition, 458 training programmes have been arranged under Integrated Handloom Cluster Development Scheme.

TWELFTH PLAN APPROACH TOWARDS SKILL DEVELOPMENT

13.29 The approach paper of the Twelfth Plan of the Planning Commission has laid emphasis on **faster, more inclusive and sustainable growth**. A target range of GDP growth of **9 to 9.5% has been envisaged**. The key instruments for making growth more inclusive,

inter alia includes: (i) faster creation of jobs in manufacturing and (ii) stronger effort at health, education and skill development. The Growth of manufacturing has been projected at 11 - 12% per year in the 12th Plan to create the jobs for our growing labour force. This has become a particularly urgent need since it is now clear that agriculture will no longer absorb more workers and may indeed release some of the existing work-force. As per the estimation of the Planning Commission, the manufacturing sector will have to create around 3 to 4 million jobs over and above the pace of job creation in the recent past. A large part of the additional growth will have to come from the medium & small sector, which continues to face a plethora of hurdles in realizing its true potential.

13.30 Twelfth Plan Approach towards Skill Development focuses on enhancing skills and faster generation of employment, in order to reap the demographic dividend. Skill building can be viewed as an instrument to improve the effectiveness and contribution of labor to the overall production. It is an important ingredient to push the production possibility frontier outward and to take growth rate of the economy to a higher trajectory. Skill building could also be seen as an instrument to empower the individual and improve his/her social acceptance or value.

13.31 The contemporary focus on skill building or skill development in India is derived from the changing demographic profiles in India vis-à-vis China, Western Europe and North America. These changing demographic profiles indicate that India has a unique 20 to 25 years' window of opportunity called "demographic dividend". The demographic dividend is essentially due to two factors (a) declining birth rates and (b) improvement in life expectancy. As a result India has the world's youngest work force with a median age way below that of China and OECD countries. Alongside this window of opportunity for India, the global economy is expected to witness a skilled man power shortage to the extent of around 56 million by 2020. Thus, the "demographic dividend" in India needs to be exploited not only to expand the production possibility frontier but also to meet the skilled manpower requirements in India and abroad.

13.32 To reap the benefits of "demographic dividend", the Eleventh Five Year Plan had favored the creation of a comprehensive National Skill Development Mission. As a result, a "Coordinated Action on Skill Development" with three-tier institutional structure consisting of (i) PM's National Council on Skill Development (ii) National Skill Development Coordination Board (NSDCB) and (iii) National Skill Development Corporation (NSDC) was

created in early 2008. Prime Minister's National Council on Skill Development has spelt out policy advice and direction in the form of "Core Principles" and has given a Vision to create 500 million skilled people by 2022 through skill systems (which must have high degree of inclusivity). NSDCB has taken upon itself the task of coordinating the skill development efforts of a large number of Central Ministries/Departments and States. The NSDC has geared itself for preparing comprehensive action plans and activities which would promote PPP models of financing skill development. The three-tier structure has laid the institutional foundations for a more proactive role of public and private and third sector interactions and interfaces for harnessing the benefits of demographic dividend.

CHALLENGES ON SKILL DEVELOPMENT DURING THE TWELFTH PLAN

13.33 The challenges on skill development, as visualized by the Planning Commission, that merit attention are presented below:

13.33.1 Government's preoccupation with providing and financing training has led to overlook its role in one key area- disseminating information about the availability and effectiveness of training programs. An important role that the Employment Exchanges, NCVT and the SCVTs could play is dissemination of information on the nature and quality of training particularly with respect to enrollment, institutional capacity, completion of information and graduate follow-up data from all registered vocational institutions. This will enable the government and the stakeholders to see whether the system is responding to employers' needs and devise policies accordingly.

13.33.2 Whilst industry associations and individual employers are beginning to show interest involving themselves in the development and management of the ITIs, their involvement in the vocational training system is still at a nascent stage. Involvement of employers in management will see a major spurt only if the governments are willing to provide greater autonomy. However, increased autonomy needs to be accompanied by greater accountability and performance must be measured on the basis of internal/external efficiency indicators.

13.33.3 The management of the Vocational Education and Training System is fragmented and shared between various institutions, especially the NCVT, DGET and the SCVTs. There is a lot of scope to improve coordination between them and improve their effectiveness through more functional partnerships.

13.33.4 There is a need to identify institutions to carry out impact evaluation studies/ tracer studies/ surveys of graduates from vocational institutes on a regular basis.

13.33.5 Since funding is largely restricted to publicly provided training, little attention is paid to financing as an innovative means to encourage good quality public / private / in-service training. Once an institution begins to receive funding, subsequent funds are assured regardless of the institution's performance. Student fees in ITI's/polytechnics go to the State treasuries and hence, the training providers have very little financial incentive to improve efficiency and cater to the market requirements. Therefore, there is a need to re look at the funding of skill development activities.

13.33.6 Vocational training institutes should be given greater freedom in terms of resource generation (sale of production or service activities, consultancy) and in utilizing the proceeds for not only cost recovery but also incentivizing those who generate revenues.

RECOMMENDATIONS

13.34 There is a serious gap between the training needs of the different segments of the textile industry and the training provided by the existing training institutes both in terms of volume and course contents. To fill up the demand supply gap, a focused and financially sustainable strategy needs to be put in place during the Twelth Five Year Plan. There is a need to implement ISDS, launched in 2010, vigoursly during the 12^{th} Plan. To address the issue of shortage of trained manpower the following recommendations are made:

Strengthening, Existing institutions with the Ministry of Textiles

13.35 There is a strong institutional structure and several instruments and valuable training experience available within the ambit of the Ministry of Textiles towards skill development. The existing institutions in the Ministry include Textile Research Association (TRAs); National Institute of Fashion Technology (NIFT), Apparel Training & Design Centre (ATDCs); Powerloom Service Centre, Weavers' Service Centre; Indian Institute of Handloom Technology (IIHTs); Research & Training Institute under the Central Silk Board; Institute for Jute Technology (IJT); Centre of Excellence for Technical Textile and so on. There is a need to leverage on these existing resources and maximize their potential through upgradation / enhancement / deepening of these capacities.

Infrastructure upgradation in the existing ITIs and polytechnics

13.36 All ITIs, polytechnics especially in the vicinity of the textile clusters should be encouraged to introduce courses on different trades and certificate courses in the core textile field like spinning technician, weaving technician, textile mechtronics, textile electrician, processing technician, garmenting technician, pattern making etc. One time capital grant may be given for upgrading the infrastructure of such institutes. Recurring expenditure should be met by the concerned institution.

Setting up of training centre on Public Private Partnership (PPP) mode

13.37 A PPP based approach would be adopted for setting up of training centres. The user industry and the institutions associated with the development of textile industry would be encouraged to establish a SPV which would implement the initiative. Involvement of user industry and the related institutions in the initiative would not only ensure effective implementation of the scheme but also facilitate better opportunities for the employment of the trainees. The SPV would identify training centers in important textile and garment clusters such as textile parks, mega clusters in the country, which are willing to conduct training on a commercial basis. These centers would be identified among the existing training agencies.

13.38 The SPV would be responsible for designing the training courses and their periodical updation to match the ever changing requirements of the industry, procurement and supply of plant and machinery to the training centers under a lease agreement, monitoring / quality control/ certification of the training programme, training of the trainers etc.

13.39 One of the major components of the strategy would be the adoption of IT enabled services to develop and use of training content and methodology. Use of such technologies would ensure the standardization of the content, better impact and reduction in training duration and above all cost effectiveness. The role of the Government is envisaged to be limited to one- time assistance to the SPV towards part of the cost of plant and machinery and over all support and coordination to ensure effective implementation of the initiative.

Continuation of Empowered Committee (EC)

13.40 A permanent training co-ordination cum monitoring council has been recommended by the Working Group on Textiles & Jute Industry for the 11th Plan (2007-12). As per the guidelines of the ISDS, Empowered Committee (EC) has already been constituted for the approval and monitoring of the projects sanctioned under the ISDS under the Chairpersonship of Secretary (Textiles) with following composition:

Secretary (Textiles)	**-**	**Chairpersonship**
AS&FA, Ministry of Textiles	-	Member
Joint Secretary (Expenditure), Ministry of Finance	-	Member
Joint Secretary, Ministry of Labour (DGET)	-	Member
Textile Commissioner, Mumbai	-	Member
Joint Secretary (Trg/HRD), Ministry of Textiles	-	Convener

The Working Group has recommended continuation of this arrangement.

PROJECTED PHYSICAL AND FINANCIAL TARGET DURING THE TWELFTH PLAN

13.41 The ISDS has been launched in 2010. It planned to provide training to 26.75 lakh textiles workers over a period of five years: the first last two years during the 11th Plan and the remaining 3 years during 12th Plan. The ISDS is still in initial stage but it is well structured and approved for implementation after discussion at various fora. Therefore three years projected physical target, falling during the 12th Plan, has been primarily retained and also modified based on the comments / suggestions offered by the Members of the Working -Group.

13.42 As per the existing guidelines, the average cost per trainee is Rs.7,300 and Government will meet 75% and balance 25% to be met from fee / industry contribution. It has been suggested that at the higher level of courses of over 6 months, balance 25% proposed to be charged from students but for entry level skill courses because of the market dynamics of the last 5 years it has become difficult to charge fee to such students as they expect free training and even stipendiary support. The initial experience of implementation of ISDS particularly in case of ATDCs indicates that to collect 25% contribution for courses up to 3 months is really not feasible. Most of the target candidates are so poor that they will need support of mid-day meal, transport allowances and stipend to keep them engaged for 8 hours training. It has, therefore, been recommended that at best 10% can be generated through a combination of industry / student's & State Govt. contribution. There is a need to link the amount payable to the duration of training of 1 – 3 months, 3 – 6 months and above 6 months. Such slabs will help in not only offering courses at an entry level but also offer skills to a larger cross section of people. Similarly, a major concern is that in the ISDS, the "training of trainers" head of account has not been provided with sufficient operational funding through enough capital support. The actual cost of training will be far too high and

no contribution would be forthcoming in such case. For example under ATDC-SMART, over 100 trainers / instructors and about 50 Machine Mechanics have been trained and the training costs cannot be fully met from the funds provided. It is therefore recommended that 100 % cost in case of "training of trainers" to be provided by the Government. During the initial year of the ISDS implementation, it has been experienced that cost per trainee of Rs. 7300 is on lower side. Therefore, the Working Group has recommended Rs. 10500 for per trainee cost. The total requirement of funds is Rs. 3882.41 crore to train 35.86 lakh (Table 13.8 and Table 13.9). Of Rs. 3882.41 crore, 90 % would be contributed by Government. Physical Target and proposed outlay during 12th Plan (2012-17) has been given at Table 13.8 and Table 13.9 respectively. Hence recommended proposed outlay is Rs. 3,500 crore. The sharing pattern of the proposed outlay is at Table 13.10.

Table13.8 Year-wise Projected Target during 12th Plan (2012-17)

(000 persons)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	Total
Textiles (TRA/PSC)	40.00	41.00	42.00	43.00	44.00	210.00
Apparel (ATDC)	50.00	55.00	60.00	65.00	70.00	300.00
Handicraft	20.00	25.00	30.00	35.00	40.00	150.00
Handloom	34.20	44.00	50.00	52.50	55.13	235.83
Jute	30.00	35.00	40.00	44.00	45.00	194.00
Sericulture	4.10	4.40	4.70	4.94	5.18	23.32
Technical Textiles	24.00	27.50	27.50	28.88	30.32	138.20
PPP	400.00	450.00	475.00	500.00	510.00	2335.00
Total	**602.30**	**681.90**	**729.20**	**773.31**	**799.63**	**3586.34**

Table 13.9 Year-wise Proposed Plan Outlay during 12th Plan (2012-17)

(Rs. crore)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	Total
Textiles (TRA/PSC)	42.00	43.05	44.10	45.15	46.20	220.50
Apparel (ATDC)	52.50	57.75	63.00	68.25	73.50	315.00
Handicraft	21.00	26.25	31.50	36.75	42.00	157.50
Handloom	35.91	46.20	52.50	55.13	57.89	247.62
Jute	31.50	36.75	42.00	46.20	47.25	203.70
Sericulture	4.31	4.62	4.94	5.18	5.44	24.48
Technical Textiles	25.20	28.88	28.88	30.32	31.84	145.10
PPP	440.00	495.00	522.50	550.00	561.00	2568.50
Total	**652.42**	**738.50**	**789.41**	**836.98**	**865.11**	**3882.41**

Table 13.10 Sharing Pattern of Proposed Plan Outlay during 12th Plan (2012-17)

(Rs. crore)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	Total
GoI Share (90%)	**587.17**	**664.65**	**710.47**	**753.28**	**778.60**	**3494.17**
Industry / Beneficiary Contribution (10%)	65.24	73.85	78.94	83.70	86.51	388.24
Total	652.42	738.50	789.41	836.98	865.11	3882.41

CHAPTER-14

SERICULTURE AND SILK INDUSTRY

- STATUS OF THE INDUSTRY
- INTERVENTIONS IN THE XI PLAN AND OUTCOME
- APPROACH TO THE XII PLAN

Mulberry Moth

CHAPTER-14

SERICULTURE AND SILK INDUSTRY

Status of the Industry

Silk - The Queen of Textiles spells luxury, elegance, class and comfort. India is the only country which has the unique distinction of having all the four known varieties of silk namely, domesticated **mulberry silk** (*Bombyx mori*), semi domesticated **eri silk** (*Philosomia ricini*), wild **tasar silk** (*Antheraea mylitta*) and exclusive wild golden **muga silk** (*Antheraea assama*), muga silk being unique to India.

14.2 Globally, silk is produced in more than 20 countries across the world. China, India, Brazil, Thailand and Uzbekistan are the leading producers of silk in the world. China alone accounting for about 82% of total world silk production. It is a highly employment intensive industry. The world raw silk production stood at 126,995 MT in 2009; of this, the proportion of mulberry raw silk production stood at 75% (90,992 MT). World raw silk production has experienced a decline of 21% from 153,942 MT in 2006 to 126,995 MT in 2009. The silk production in Japan had dropped significantly since 1987 which was filled by China by massive investments in on-farm sector thereby assumed an unassailable lead in the world silk market. India could not exploit this opportunity due to the inherent weakness of the way sericulture is practiced here. The recent reports emanating from China indicates a policy shift from this position with more liberal choice on jobs and occupations. With these policy changes, along with industrialization and decreasing population growth, silk production in China will be on the declining side. This scenario presents good chance for India to cash in on the potential demand for silk in the World

14.3. India is the second largest producer of silk in the world, a distant second to China, with 15.50% share of world production. India's strength is its strong domestic consumer base that could absorb whatever quantity or variety of silk produced, and as a result fulfills the demand of handlooms, and weft for the powerlooms. India continues to be the largest consumer of silk in the world, which is consistently increasing around 3.5% per annum.

14.4. Sericulture is a labour intensive industry in all its phases with employment generation of about 7.25 million people per annum. Since labour Force Participation Rate (LFPR) in sericulture is far ahead in comparison to similar rural avocations, it has significantly

contributed to poverty alleviation thereby achieving the national agenda of inclusive development. Indian silk industry is estimated to be worth US $ 2889 million (Rs 13000 crores) with a positive trade balance of US $ 234 million during 2009-10.

Contribution of silk industry to National Economy

- Employment generation of 7.25 million people which accounts for 21% share of Textile sector.
- Export earnings around Rs.3240 crores per year.
- Equity distribution from urban rich to rural poor.
- Ideal avocation for inclusive development of rural populace especially the weaker sections of the society.
- Empowering women and backward sections of the society
- Eco-friendly production process and high potential for acting as an ideal tool for biotechnological development.

Status of Sericulture in India

14.5. Status of production of raw silk during the XI Plan period in India is given in the table below:

Table – 14.1 Status of production of raw silk during the XI Plan period

(Unit: MT)

Variety	2007-08	2008-09	2009-10	2010-11(P)	2011-12 (Anticipated)
Mulberry	16245	15610	16322	16957	17838
Tasar	428	603	803	1166	1780
Eri	1530	2038	2460	2760	2926
Muga	117	119	105	122	127
Total	18320	18370	19690	21005	22671
CAGR during the Plan period - 4.35%					

P: Provisional

14.6. Major portion of the silk produced in India is from the Southern States of Karnataka, Tamilnadu and Andhra Pradesh. The silk production in Karnataka is on the decline since 1999-2000. This is due to the rapid industrialization and urbanization in the traditional silk producing areas of Bangalore and surrounding districts. However, the silk production is on the upward trend in Andhra Pradesh and Tamilnadu. Tamilnadu is the largest bivoltine silk producer in the country.

14.7. Jharkhand is the major tasar silk producing State, contributing 61.5% of the tasar silk produced in the country. During the last 4 years, some spectacular performance has been observed in the tasar sector through micro level management in the production chain. The other major tasar silk producing States of Chattisgarh, Orissa and Madhya Pradesh have good potential to develop tasar culture in a big way. The NE States are producing major portions of Muga and Eri silk production of the country. The sericulture in North Eastern States holds considerable importance as the employment generation from sericulture is very high there compared to other States.

14.8. Sericulture in other States like Maharashtra, Himachal Pradesh, Madhya Pradesh, Nagaland, Haryana, Punjab, Bihar, Uttar Pradesh, and Sikkim have not grown to the desired level. Of this, the States like Maharashtra, Himachal Pradesh and Madhya Pradesh have good potential to introduce bivoltine sericulture.

Indian Silk Industry status

14.9. Large portion of silk produced in India (about 60%) goes into handloom sector for production of traditional handloom products such as sarees and dress materials; made-ups and upholstery, etc. Both Tamil Nadu and Andhra Pradesh are famous for their handlooms clusters and strong weaving tradition. Silk sarees produced in Pochampally and Dharmavaram, have been known Worldwide for its craftsmanship, intrinsic designs and texture. The handloom silk products of Kancheepuram, Kumbakonam, Arni, Salem etc. are famous for its designs, motifs and zari works. West Bengal and Orissa have strong handloom sector, which uses mulberry silk, tasar silk and matka yarn of all qualities to produce products of all price ranges. The silk industry in J&K is famous for the high value silk carpets which are famous for its craftsmanship and design. There are about 3 to 4 lakh persons engaged in the carpet industry as weavers, artisans, printers, etc. Uttar Pradesh has a very strong weaving base. Over the years, Banaras silk sarees have become a renowned brand throughout the world. Weaving sector consumes about 3000 MT of raw silk per annum against annual production of 76 MT in the State. About 1.7 lakh weavers, 60,000 Handlooms and 10,000 powerloom are operational in Uttar Pradesh.

14.10. Silk fabrics production has witnessed fluctuating growth trend. Between 2002-03 and 2008-09, production recorded decline in 2003-04 and 2006-07 and growth in other years.

Table-14.2 Silk production statistics										
Product/Year	**Units**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10***	**2010-11**
Silk fabrics	Lakh sq. mtr.	4,266.7	4,225.9	4,570.7	5,110.8	4,200.0	4,346.0	4,439.0	4,600.0	4644.40
Spun silk yarn	MT	550	446	500	350	400	470	500	560	585
Noil yarn	MT	275	224	250	150	200	235	250	280	295

(Source: Central Silk Board)

Key Components of Sericulture and Silk Industry

14.11 Sericulture and silk industry is a combination of agriculture, animal husbandry, cottage industry and pure textile activities. The key components are:

14.12 **Cultivation:** Mulberry is planted mostly in bush form with pruning done twice in a year. It grows in almost all types of soil, but requires sufficient exposure to sun, organic inputs and water for good growth. Expansion of mulberry plantation largely depends upon the land availability in agro-climatically suitable regions and competition from other cash crops. Due to large scale urbanization in and around the traditional cocoon producing areas of Karnataka, which is the major mulberry silk producing State, the XI Plan target of 2.18 lakh hactres is not likely to be fully achieved.

14.13 The food plants of Eri, like mulberry is cultivated in farmer's field. The food plants of Muga and Tasar are naturally grown or cultivated under systematic plantation in degraded forest areas and village gracing reserves.

14.14 **Rearing:** Production of mulberry cocoons is done by small and medium farmers mostly as a secondary crop. Non-mulberry silk is traditionally cultured by the tribal and economically disadvantaged groups. The eri silkworms are reared like mulberry. Since the tasar and muga worms are reared in the nature, the role of the farmer changes to protecting the crop from predators and natural enemies.

14.15 **Reeling:** There are four types of reeling devices used in mulberry sericulture; (1) the charkha, (2) Cottage basin, (3) Multi-end reeling, and (4) Automatic reeling machine.

14.16 Charkha: The traditional reeling device in India is the charka, which was originally designed as a simple foot powered or hand driven apparatus. Charkha has been motorized at a later stage to reduce drudgery and eradicate child labour. The cocoons are cooked and filaments cast by hand from a single basin of boiling water, directly heated by wood fire.

14.17 Cottage basin: Cottage basin reeling is an improved technology over that of charka system, wherein cooking process is separated from reeling process. Silk is reeled on small reels first and then re-reeled on bigger reels to improve the winding quality.

14.18 **Multi-end reeling machines:**About 15% of the silk reeled in the country is from multi-end reeling machines. This technology developed by CSB has proved to reel better quality silk compared to the traditional machineries. If the quality of cocoons is not at the prescribed level, reeling in multiend would increase silk waste resulting significant revenue loss. In such case, cottage basin is preferred by the reelers.

14.19 Automatic reeling machines: Presently, about 5% of the silk produced in India is generated from automatic reeling machines. The automatic reeling machine mechanizes the processes of groping ends, picking ends; cocoon feeding to reeling thread and separation of dropped end cocoons during the reeling process. Generally, one set of the Automatic reeling machine has 400 ends, while one basin has 20 ends. The operating efficiency of Automatic reeling machine is easily affected by cocoon qualities, drying, cooking machinery and quality of reeling water.

14.20 Reeling in non-mulberry sector: "Natwa" pedal reeling machines used for Tasar reeling is made of bamboo and wood. Pedal reeling machine is also under operation which is derived from spinning equipment with twisting and winding of the yarn without a fan system. It is driven by a foot pedal and the cocoons are reeled by hand. Preferred sizes of Tasar silk are 40/44 D and 60/66 D. Low cost and high productivity motorized spinning wheel for eri and reeling cum twisting machines of Muga (bhir) are used in the field.

14.21. Reeling segment continues to be the weakest link in the silk value chain which remains highly unorganized and fragmented and mostly uses traditional reeling techniques. The major problems of reeling sector are; low yield of silk due to improper quality of cocoons, price fluctuation and dumping of imported silk, shift in preference among the weaving community from the traditional Indian silk to imported silk, and the inability of reelers to procure loans from banks for working capital, mainly because of poor financial conditions and the existence of defaulted loans.

14.22 Raw Silk Testing: Quality based pricing system is not fully established in India. Cocoons are sold on visual inspection and personal experience is relied upon in marketing of cocoons. No laws exist for compulsory testing and trading of cocoons. In spite of the best efforts of CSB by establishing the Silk testing centres in the cocoon markets, the situation has not improved.

14.23 Marketing of Raw Silk:Silk is transacted through Silk Exchanges controlled and guided by the State Govts. Although this system has broken the traditional link and trust existed between reelers and weavers, in some way it had helped to prevent exploitation of small reelers by middlemen. The major drawback of the system is the absence of quality pricing system.

14.24 Throwing: The throwing machinery used in India is mostly assembled locally. The equipments are not manufactured to ensure quality and productivity, especially in winding and twisting. There are no benchmarks set for the quality standards on throwing in India.

14.25 Wet processing: By and large, wet processing is done in rudimentary manner which reduces the quality and durability of fabric created. Most weavers use metal troughs or recycled drums for wet processing activities.

14.26 Dye manufacturing: The dye manufactures have not developed dyes exclusively for Indian silk materials following prescribed safety standards. Research on dyes is also not adequate. Ban on certain azo dyes in European countries have reasoned the exporters to pay more attention to the selection and use of dyes for exported goods. However, the silk goods consumed locally do not enjoy any such luxuries as very sub-standard and non-permissible dyes are used which would do much harm to the environment and biodiversity of the country.

14.27 Handloom sector: Silk handlooms have always held the pride of place in the Indian silk industry. Even with the advent of the most sophisticated technology in powerlooms to produce high quality silk sarees, the Indian women consider handmade silk sarees as precious and valuable. Significant progress has been made to preserve the traditional weaving in many clusters in India through geographical indicator registration.

14.28 Powerloom sector: About 40% of the silk products manufactured from India are from powerlooms. Most of the powerlooms (87%) are situated in Karnataka and Uttar Pradesh. The powerlooms depends mainly on imported yarn. Powerloom sector faces a number of problems like; old and inferior machineries, poor machinery maintenance, erratic power supply, lack of support from government for machinery up-gradation, etc.

14.*29* *Zari* Manufacturing: *Zari* manufacturing still continues to be in the primitive stage. In particular the *zari* material used for the silk sarees should be of high standard to match with the richness and aesthetic features developed through the delicate and intricate processes by the master craftsmen.

14.30 Spun silk industry: The processing of silk waste for production of spun silk yarn and noil yarn is done mostly in the private sector. The installed capacity of public and private sector mills for spun silk and noil yarn is 37480 Kg and 4290 Kg respectively.

INTERVENTIONS IN THE XI PLAN AND OUTCOME

Programmes and allocations in previous plan periods

14.31 The X and XI Plan objectives were mainly to bestow special attention for the improvement of productivity in all stages of production of silk and to ensure higher levels of income to the stakeholders, to produce competitively priced high-quality silk and to create greater opportunities for gainful employment in the rural areas through the spread of scientific sericultural practices and by promoting modernization and quality up-gradation of sericulture and silk industry. Emphasis for XI Plan under the Sericulture sector has been on the following:

a. Development of Sericulture: increase in area under Mulberry and Non-Mulberry; enhance productivity and quality through R&D and field extension leading to higher production and reduction of dependency on imports for domestic consumption and export production; and
b. Rural poverty alleviation, generation of employment, livelihood security and increase in family income.

14.32 During XI Plan period Govt. of India supported 4 major Schemes for development of sericulture and silk industry in India through Central Silk Board to achieve the above objectives.

Central Sector Schemes

14.33 Three **Central Sector Schemes** namely; (a) Research & Development / Training / IT initiatives for research and development in food plant, silk worm and post cocoon activities to improve the productivity and quality to complement the expansion programme; (b) Seed Organisation and HRD for preservation of silkworm races and propagation and seed regulation; (c) Quality Certification Systems for establishing quality system and brand promotion; were implemented by CSB during the XI Plan period.

14.34 The XI Five Year Plan allocation of Rs.154.87 crore for the Central Sector Schemes was revised to Rs. 237.66 Crores considering the importance of the sector and progress of various activities. Details are as follows:

Table 14.3 Revised 11th Plan Allocation for Central Sector Schemes

[Amount in crore Rs.]

Component	**Original XI Plan allocation**	**Expenditure in 1st FY**	**Expenditure in 2nd FY**	**Expenditure in 3rd FY**	**Expenditure in 4th FY**	**Annual plan 2011-12 (5th FY)**	**Revised XI Plan allocation**
R&D, and Training, IT	94.71	16.06	20.55	25.18	38.35	44.41	144.55
Seed Organization & HRD-Coordination and Market Development	46.50	11.30	17.71	12.83	16.15	20.37	78.36
Quality Certification	13.66	1.82	2.00	3.33	4.61	2.99	14.75
Total for Central Sector	**154.87**	**29.18**	**40.26**	**41.34**	**59.11**	**67.77**	**237.66**

Centrally Sponsored Schemes

14.35 The Ministry of Textiles sponsored the **Catalytic Development Programme** (CDP), the flagship programme in Sericulture sector, during the XI Plan. This programme, implemented by CSB through the State Governments, was designed as a tool for transfer of technologies evolved by the research institutes of CSB to the field and also facilitate financial and extension support to all stakeholders in the silk value chain starting from cultivation to weaving. This scheme focused mainly in the areas of seed, cocoon and post cocoon (industry) sectors; and is supported by the Support Service Sector. The components

under CDP are beneficial for both existing and new farmers for practicing sericulture. The programmes are implemented by the States with financial sharing by Central and State governments. CDP is presently implemented on a Project mode approach.

14.36 The original XI Plan allocation for CDP along with the sharing of funds by GoI, State and beneficiaries are given below:

Table 14.4 Original XIth Plan allocation for CDP along with the sharing of funds by GoI, State and beneficiaries(Amount in Crore. Rs.)

#	Name of the Package/ Component	Total Cost	Fund sharing (Rs. in crores)		
			GoI	State	Beneficiary
1	Package for Seed Sector	52.77	38.43	7.99	6.35
2	Package for Cocoon Sector	1139.12	456.72	248.89	433.51
3	Package for Post Cocoon Sector	176.90	112.69	36.96	27.25
4	Corporate Participation in Sericulture	89.45	35.78	17.89	35.78
5	Support Service Sector	18.00	18.00	-	-
TOTAL		**1476.24**	**661.62**	**311.73**	**502.89**

14.37 Considering the satisfactory progress of the programme and need for intensified intervention required in the field, the Plan allocation of the GOI share has been revised to **Rs. 821.74 Crores.**

14.38 Allocation for sericulture under State Plan programme has been on the downward trend during the last three Plan periods. Hence, the States are increasingly depending on CDP funds for taking up developmental activities in the States. Some non-traditional States and NE States are solely depending on Central assistance for any developmental works under sericulture sector. Consequently, allocations for CDP have been increasing steadily during the last three Plan periods. The State Plan expenditure estimated for the XI Plan period is **Rs.1102.80 Crores**

Financial targets and achievements

14.39 Out of the total revised allocation of Rs.1059.40 crore for XI plan period during the four years up-to 31st March 2011, Rs 746.40 Crores have been spent on the development of sericulture and silk sector. Annual Plan for 2011-12 is **Rs. 313.00 Crores.** The expenditure details are given below:

Table 14.5Expenditure Details during XIth Plan

(Amount in Crore Rs.)

#	Particulars	XI Plan outlay	2007 - 08	2008 - 09	2009 -10	2010 -11	2011-12 (Anti.)	Revised Plan outlay
1	Central Sector Schemes	154.87	29.18	40.26	41.34	59.11	67.77	237.66
2	Catalytic Development Programme	661.62	80.82	90.74	144.06	260.89	245.23	821.74
	Total	**816.49**	**110.00**	**131.00**	**185.40**	**320.00**	**313.00**	**1059.40**

Review of physical targets and achievement

14.40 The physical target suggested by the Planning Commission for the XI Plan period in terms of mulberry acreage expansion and production of raw silk along with the achievements of the first four years and anticipated achievement for the terminal year of XI Plan are given below:

Table 14.6 Physical Targets and Achievements during XIth Plan

#	Particulars	XIthPlan Target	Actual				2011-12 (Anti.)	XI Plan Acht.
			2007-08	2008-09	2009-10	2010-11		
I	Mulberry area (lakh Ha.	2.18	1.85	1.78	1.84	1.88	1.97	90%
II	**Raw Silk Production (MT)**							
a)	**Mulberry (MT)**							
i)	Bivoltine	5000	1175	1250	1200	1450	1557	31%
ii)	Crossbreed	18000	15070	14360	15122	15507	16281	91%
	Total Mulberry	23000	16245	15610	16322	16957	17838	78%
b)	**Non-mulberry**							
i)	Tasar	420	428	603	803	1166	1780	424%

ii)	Eri	2390	1530	2038	2460	2760	2926	122%
iii)	Muga	190	117	119	105	122	127	67%
	Total Non-mulberry	3000	2075	2760	3368	4048	4833	161%
	GRAND TOTAL	**26000**	**18320**	**18370**	**19690**	**21005**	**22671**	**87%**

14.41 Raw silk production during the XI Plan will be a tad behind the XI plan target of 26,000 M.T. (87%). Overall performance of mulberry silk production will not be at the expected level. This was mainly due to the below par performance in the bivoltine raw silk production against the target. However, the average annual growth rate during the plan period is expected to be **4.25 %,** which is quiet satisfactory considering the fact that this sector competes with other cash crops and is also affected by large scale urbanization and loss of land to infrastructure projects.

14.42 However, the non-mulberry silk would be recording spectacular growth rate of **20.21%,** and the percentage of achievement against the target reaching to 161%. Especially, Tasar silk outperformed with 424% achievement followed by eri with 122%. The muga silk production would be much below the expected level.

14.43 The major reasons for the short fall in mulberry and muga silks production are given below:

I. The performance of bivoltine was below par with the shortfall reaches to 69% against the target. The various attempts of the government to popularize bivoltine sericulture could not be achieved at the expected level. The farmers are also not preferring bivoltine due to high input cost required in garden maintenance, irrigation, separate rearing house, maintaining optimum temperature and humidity conditions during rearing, susceptibility to diseases, lack of quality pricing system and marketing, etc. Some of the other inherent features of bivoltine are also observed to be the major stumbling block for its popularization.

II. The rapid industrialization and urbanization witnessed in the major traditional sericulture areas of the country has considerably reduced the mulberry coverage.

III. The global recession witnessed during the Plan period led to crashing prices of sericulture commodities.

IV. High level penetration of spurious silk products, manmade fibres and changing patterns in the domestic silk market.

V. The fragile ecosystem of NE States and the inherent racial weakness of Muga silkworm have contributed to the reduction in Muga silk production.

14.44 Employment: At the end of XI plan period, the employment generation is expected to reach 7.56 millions, which is very minutely below (98%) the XI Plan target. This is due to decrease in domestic silk production.

14.45 **Export:** Year-wise and variety – wise export details at the end of X Plan (2006-07) and during the first four years of XI plan period are given below:

Table 14.7Year-wise and variety – wise export during XIth Plan **(Amount Crore. Rs.)**

Unit	Natural Silk Yarn & Fabrics	Ready-made Garments	Carpets	Silk waste	Total
2006-07	**2365.34**	**817.87**	**132.36**	**22.78**	**3338.35**
2007-08	1897.06	746.55	72.11	12.15	2727.87
2008-09	2127.72	986.57	58.67	5.23	3178.19
2009-10	1971.98	854.95	40.59	24.92	2892.44
2010-11	2100.00	1070.00	25.00	45.00	3240.00

14.46 Although export earnings reduced a little bit during 2009-10 to Rs.2892.44 crores, the 2010-11 data shows that the export earnings bounced back to Rs.3240 crores due to improved global situations.

Research & Development:

14.47 The output derived from the R&D has translated into productivity improvements in-spite of drastic reduction in host plant cultivation. During the plan period, mulberry raw silk production (kgs) per Ha. has grown at 5% (from 86.2 Kg/Ha to 90.55 Kg/Ha) and renditta (qty of cocoons required to produce 1 kg. raw silk) decreased by 4.5%. The improvements in productivity parameters have helped the industry to attain the growth rate of 4.25% during the Plan period in spite of the fact that the area under mulberry cultivation remained practically stagnant during the assessed period.

14.48 The major achievements in R&D sector are; developed new mulberry varieties; Anantha and Vishala, 18 new silkworm hybrids were authorised, 16 new technologies

commercialized, a tetraploid genotype of *Terminalia arjuna* having succulent lamina and shorter internodal length developed, a semi-synthetic diet for tasar was developed and patented, developed solar powered spinning machine for eri , a box type mountage has been fabricated for cocooning of muga, power operated muga reeling machine (BANI) developed , a high yielding eri silkworm breed C2 evolved, 8-end multiend reeling machine developed, sorting machine for grading of tasar cocoons was designed, a low cost electronic jacquard was designed for handlooms, developed a process to produce anti-crease finishing in silk fabrics, developed a process for improving dimensional stability in eri fabrics, developed techniques for flock printing on muga and mulberry fabrics, developed technique for printing of silk fabrics with coloured mud as a pigment and developed dye extraction technique for neem and its application on silk textiles.

Seed Sector

14.49 The introduction of ISO certification in mulberry seed production centers of CSB has created the "search good" factor among farmers to look for quality silkworm seed for better yield and generated competition among private seed producers. The implementation of Silkworm Seed Act is expected to open up the seed sector for a barrier free developmental regime and at the same time enforcing quality standards and transparency in all stages of seed production chain and supply. Along with producing the basic seeds required for the vanya sector, the BTSSO, MSSO and ESSO units have also supported the seed production centers of State and private sector for maintaining quality standards, improving seed production techniques, and training to technicians and skilled workers.

14.50 The overall progress of the seed sector in DFL production during XI Plan is given below:

Table 14.8 Progress of seed sector in DFL production during XIthPlan

(Unit: Lakh Nos)

Variety	2007-08		2008-09		2009-10		2010-11		2011-12
	Target	Achmt	Target	Achmt	Target	Achmt	Target	Achmt.	Target
Mulberry	269	284	286	280	298	283	310	293	315
Tasar	25.04	32.07	30.01	34.04	35.04	31.43	32.10	31.91	32.59
Muga	2.72	1.36	3.24	1.14	1.74	1.48	2.57	2.74	2.55
Eri	2.50	2.50	2.65	1.62	2.50	1.95	2.50	2.59	2.80

Quality Certification System

14.51 Around 1200 awareness programmes were conducted so far for the consumer groups, women clubs and others for creating awareness about the importance and relevance of Silk Mark. Around 90 lakhs of silk mark labeled products were made available for silk consumers through Authorized Users. 17 Cocoon and Raw Silk Testing Units were established for the benefit of cocoon growers in the country. The introduction of "Silk Mark" by CSB has generated the "Search good" factor among the consumers.

Catalytic Development Programme

14.52 Overall analysis suggests that CDP scheme has been very successful in the country. The schemes which have direct bearing on improvements in food plant development, irrigation, rearing houses, equipment supply, chawki rearing, private graineurs under vanya silk sector and cocoon storage houses for tasar are found to be in much demand. Investments in these critical areas could improve the overall productivity. Some of the post cocoon sector schemes on reeling, handlooms, spinning etc were also quiet helpful to the beneficiaries. The initiative taken to improve the social security through the Health Insurance Programme for women sericulturists and workers are very useful to ensure steady supply of family labour to the industry. CDP also played a vital role in establishing large scale infrastructure under private sector such as Eri Spun Silk Mills and Automatic Reeling Units with improved machineries.

14.53 An extensive impact assessment study on the CDP was undertaken by the National Productivity Council (NPC) which has recommended to continue the programme with certain modifications like; special attention to Vanya sector, more investment for effective transfer of technology, increased skill developmental programmes, promote rain-fed sericulture, and involve community based organizations like NGOs/SHGs for CDP implementation. The States have also suggested for certain measures like; revision in unit cost, zonal approach, timely release of funds, reducing the beneficiary share, instituting a price support systems and to strengthen the extension machinery.

14.54 The financial progress of CDP during the last 2 plan periods and XI Plan, by including the anticipated expenditure of 2011-12, is given below:

Table 14.9 Financial Progress of CDP during Plan Periods

(Amount: Cr.Rs)

Plan / Year	No. of Schemes	Outlay	Expenditure/ Revised Outlay	% of increase over previous plan periods
IX PLAN	36	89.27	47.56	--
X PLAN	28 + 12 additional Schemes sanctioned by EFC	244.47	264.34	455.80%
XI PLAN	5 packages	661.62	821.74	210.86%

14.55 Indian Silk Industry is passing through a period of sustainability and growth momentum. While the industry has been clocking with the growth rate of 4 to 4.5% during last one and half decade, the current plan period witnessed some spectacular growth in Vanya silks. This is very significant because most of the beneficiaries associated with vanya sericulture are the tribal and other downtrodden people of the country. For the mulberry sericulture, it is high time to slightly deviate from the path travelled so far to a more realistic and need based path evolved from the ground realities. It is also critically important to ensure equitable and inclusive growth among the stakeholders covering the entire silk production chain as sericulture can substantially improve the economic conditions of the rural people of the country.

Approach to the XII Plan

Vision

14.56 The long term vision of the Government of India for the sericulture and silk industry should be as follows:

- India to become self sufficient in silk production by the year 2030 by narrowing down the demand supply gap,
- Transform the Indian silk industry from the subsistence level of production to a vibrant competitive commercial production base for the entire value chain,
- Achieve a pre-eminent global standing in manufacturing and export of India branded silk products,

- Develop a vibrant and sustainable farmer base for the production of silk cocoons matching international standards,
- Promote and modernize silk industry to become a credible option for rural employment, poverty alleviation and a sustainable enterprise providing reasonable returns for the investment made, and
- Maintain and carry forward the richness and aesthetic value of Indian silk for the generations to come and give prominent status to silk and silk products as the vehicle of India's culture and civilization.

Objectives

14.57 The XII Plan objectives of the Ministry would be as follows:

- To facilitate and create conducive conditions for achieving the targeted silk production of 32,000 M.T. by the terminal year of the XII Plan through intensive efforts in research and development, technology transfer and enterprise development,
- Create an inbuilt pyramid structure of federated farmers and farmer associations to synergize and synchronize the production processes;
- Micro level shift in the production strategies of bivoltine and multivoltine silks to increase production, productivity and sustain to carry forward the existing growth momentum in non-mulberry sector;
- Reorganize and strengthen the delivery mechanism to effectively implement the policies and programmes of the government aiming towards employment generation, technology absorption, productivity improvement and investment generation;
- Inclusive development of rural population, especially women and tribal, by creating greater opportunities for gainful employment through practicing sericulture;
- To develop 3rd Generation multivoltine crossbreeds to increase production and matching quality parameters of bivoltine silk;
- Foster research cooperation with other Indian and foreign institutions to evolve bivoltine breeds suitable to tropical conditions;
- Enhanced private or PPP model investments in on-farm development, seed production and processing industry;
- Institute Distress Relief Measures (DRM) to tide over the market volatility and policy changes;
- Accelerate the growth in vanya silk production and explore better value realization in domestic and international markets; and

- Generic promotion of Indian Silk to eradicate the spurious silk products and ensure flow of higher value realization to the primary producers, and brand promotion of Indian Silk in the international market.

Setting for the XII Plan and Targets

14.58 The XII plan approach is to create a launch pad to purse the long term vision for the sector, while achieving the medium term targets evolved in the process taking into account the potential and other enabling conditions for the sector.

14.59 National Fibre Policy has projected the short term and long term outlook for the silk industry based on the growth in production of raw silk between 2001-02 and 2009-10. As per this projection, domestic production of raw silk is projected to record a growth of 4.5% per annum during FY10 – FY15 and 5.0% per annum during FY15 – FY20, as the area under cultivation is expected to increase the overall silk production. It is also expected for a better price scenario in the global and domestic market due to improvement in quality of silk produced. The productivity is also expected to improve with the support of R&D efforts and new technologies. Domestic consumption of raw silk is estimated to increase at 3.5% per annum during the period between FY10 to FY15 and 4.0% per annum during FY16 to FY20. This would be achieved on the back of 9-9.5% growth in consumption of man-made fibres, 6-7% increase in private final consumption expenditure on clothing, and 4% growth in world GDP. Demand and supply position of raw silk during the last 15 years has been shown in table below:

Table 14.10 Silk Production, demand, import and export trends

Year	Total Raw silk Production (MT)	Imports of Raw silk (MT)	Demand of Raw silk (MT)
FY 00	15,214	9,060	24,274
FY 01	15,857	8,406	24,263
FY 02	17,351	10,316	27,667
FY 03	16,319	12,354	28,673
FY 04	15,742	13,444	29,186
FY 05	16,500	13,120	29,620
FY 06	17,305	13,965	31,270
FY 07	18,475	10,104	28,579
FY 08	18,320	13,061	31,381

FY 09	18,370	13,038	31,408
FY 10	19,690	12,462	32,152
FY 11 *	21005	9,934	30,939
Source: Central Silk Board, (*) Provisional			

14.60 During the first four years of the plan period Mulberry silk is expected to achieve a CAGR of 4.25% and Vanya Silk sectors, which has shown a spectacular performance in last two years is likely to achieve a CAGR of over 22% in the XI Plan period. The demand for silk goods in domestic and global market is also likely to remain robust and grow over 4-5% during the XII plan period. However, the demand supply gap is likely to continue in the medium term unless a serious attempt is made to narrow down this gap through intensive programmes for (a) increasing area under cultivation for both multi and bi-voltine silks; (b) increasing productivity; (c) introducing new and improved varieties; (d) improving extension work; and (e) providing market linkage and support.

14.61 Considering the impetus proposed in the R&D and extension activities of both Mulberry and Non-Mulberry sectors in the XII plan and the growth momentum existing in the Vanya silk sector, the following silk production targets are proposed:

Table 14.11 Silk production targets for XIIth Plan

Variety	Production in MT	Projected Annual Growth rate (%)
Mulberry - Bivoltine	3000	14.10
Mulberry - Cross Breed	20000	4.20
Mulberry total	**23000**	**5.22**
Tasar	4562	20.78
Eri	4238	7.70
Muga	200	9.53
Vanya total	9000	**13.30**
Grand Total	**32000**	**7.14**

14.62 Bi-voltine mulberry silk is required to be put on higher growth trajectory in order to reduce dependence of India on imports for high quality silk. Therefore, XII plan target would be to double the production of bivoltine silk production from the present level of 1450 MT to 3000 MT by the terminal year of the XII Plan. The multivoltine mulberry silk, which is the main stay of Indian silk production is projected to grow at a rate of 4.20% per annum considering the fact that incremental area for sericulture for mulberry is not likely to grow significantly due to pressure of urbanization. However, effort should be made to relocate

multivoltine sericulture to new areas in traditional and non-traditional states as has been done by China successfully by moving sericulture from developed eastern sector to western sector in a short time. A detailed study on this would be carried out for effective implementation.

Biovoltine Cocoons

14.63 Though Vanya silk showed higher growth momentum during XI plan period, the growth was on a low base. Therefore, the growth projectile of this sector has been moderated to 13.30% for the XII plan to double the production level in the terminal year of the plan period. Year wise phasing of raw silk production for all the four varieties of silks during XII Plan is given below:

Table 14.12 Yearwise phasing of raw silk production during XIIth Plan

(Unit: MT)

Year	Total Raw Silk Production	Mulberry		Vanya Silk		
		BV	MV	Tasar	Eri	Muga
2011-12	22671	1557	16281	1780	2926	127
2012-13	23855	1850	16885	1830	3160	130
2013-14	25480	2065	17620	2310	3345	140
2014-15	27210	2270	18415	2785	3590	150
2015-16	29425	2500	19225	3620	3920	160
2016-17	32000	3000	20000	4562	4238	200

Targets for Area expansion:

14.64 **Mulberry:** The production target of mulberry silks as laid down above is based on the following incremental addition of mulberry plantation planned during the XII plan period:

Table 14.13 Incremental addition of mulberry plantation during the XII plan period:

Year	Area (Ha.)	Incremental addition of area (Ha.)	Growth Rate (%)
2011-12	1,97,388		
2012-13	2,05,019	7,631	3.87 %
2013-14	2,15,017	9,998	4.88 %
2014-15	2,21,700	6,683	3.11 %
2015-16	2,31,388	9,688	4.37 %
2016-17	2,40,420	9,032	3.90 %
Total		**43032**	**4.02 %**

14.65 The mulberry area, which is expected to reach to the level of 1,97,388 Ha during the terminal year of XI Plan, is proposed to be increased to the level of 2,40,420 Ha. at the end of XII Plan period. It is projected that there will be an incremental addition of mulberry area to the tune of 43,032 Ha. with an annual average growth rate of 4.02%. Strategically, these additional areas will be developed through thrust area approach, shifting of production bases to recoup the lost mulberry areas, development of clusters in potential areas etc. About 26316 Ha. will be developed through plantation development programmes under CDP. The remaining areas will be developed through other programmes of Govt. of India like RKVY, MGNRGES etc. Full productivity of the additionally planted mulberry areas will be reached only from the 3rd year of planting.

14.66 **Vanya food plants:** Most of the non-mulberry silks are produced from the food plants naturally available in the forest and forest reserve areas. It is estimated that about 111.68 lakh Ha. of tasar food plants, mainly Sal, is available in the forest areas of Jharkhand, M.P., Chhattisgarh, Orissa, West Bengal, Andhra Pradesh, Maharashtra and Uttar Pradesh. However, the concept of raising systematic plantations for silkworm rearing introduced two decades back has proved to be very useful to enhance the production and productivity.

Keeping this in mind, systematic plantation for all the three varieties of Vanya silks as detailed below is suggested for XII Plan:

Table 14.14 Variety-wise plantation of Vanya silk during XIIth Plan

#	Food plant variety	Area (Ha.)
1	Tropical tasar – *Arjuna*	30,000
2	Oak tasar – *Qurcus seratta*	500
3	Eri – *Caster (annual)*	4,000
4	Eri - *Kesseru (perennial)*	6,000
5	Muga – *Som, & Soalu*	4,000
	Total	**44,500**

Projected Exports and Employment

14.67 Export earning is expected to register an annual growth rate of 12% due to a number of programmes envisaged during the XII Plan period. Regarding employment generation, 3895 man-days could be generated from 1 Ha. of mulberry plantation, from cultivation to finished products. In case of Vanya silks, 117500 man-days for tasar, 152500 man-days for Eri and 132500 man-days for Muga can be generated from one MT of vanya silk products. Employment generation is projected to reach from the present level of 7.25 million to 9.24 million persons at the end of the XII Plan. Overall annual growth rate for employment is expected to be 4.14% during the Plan period.

Table 14.15 Projected Exports and Employment

Year	Export of Silk Goods (Cr. Rs.)	Growth rate	Employment Generation (Million)	Growth rate
2012-13	4065.00	11.98%	7.90	4.50 %
2013-14	4550.00	11.93%	8.22	4.05 %
2014-15	5098.00	12.04%	8.55	4.01 %
2015-16	5709.00	11.99%	8.89	3.98 %
2016-17	6394.00	12.00%	9.24	3.94 %
Average growth for XII Plan		**11.99%**		**4.14.%**

APPROACH OF XII PLAN TO ACHIEVE THE TARGETS

14.68 The programmes envisaged under the XII Plan for achieving the above targets are;

a. Research and Development

- Continued R&D efforts to evolve Bivoltine hybrids suitable for tropical conditions and 3rd Generation multivoltine Cross Breeds (3G-CB) for increasing silk production, and
- Fostering R&D programmes with reputed institutions in India, and abroad for the above.

b. Policy Options

14.69 There need to be a balanced approach for the development of both bivoltine and multivoltine varieties of mulberry sericulture and non-mulberry sericulture in different regions of the country. It must also be realized that in order to develop a commercially viable and sustainable sericulture and silk industry in India, the policy intervention should encourage gradual improvement of sericulture practices and post cocoon activities from the current sustenance based activity to a commercial activity. Therefore, in addition to this farmer based approach, efforts will also be made to encourage corporate farming for bivoltine sericulture in PPP mode to achieve economy of scale and commercial production of large quantity of quality silk with linkage to high speed reeling facility. Therefore, it is proposed to adopt the following policy approach for the XII Plan:

- Equitable support to bivoltine, multivoltine and Vanya silks,
- Enhanced private participation or PPP model investments in on-farm development, seed production and processing industry,
- Recouping the lost mulberry areas by shifting the production bases in the same State
- Implementation of “Silkworm Seed Act” on priority basis to bring in quality standards in silkworm seed production,
- Credit facilitation through credit linked subsidy in certain components of the CDP, and introduction of Credit Guarantee Fund for sericulture in financial institutions,
- Instituting Distress Relief Measures to tide over the distress market situations,
- Strengthen the extension machinery through para-extension workers,
- Special support to women, SC, ST and landless farmers, and

- Reorganize and strengthen the delivery mechanism to make CSB as a vibrant organization.

c. Macro level production strategies:

- Federating sericulture farmers through Clusters and Community Based Organizations (CBOs), for increasing productivity and quality, synchronization of rearing activities, strengthening extension, and increasing credit flow,
- Support to develop 100 clusters for increasing silk production through integrated approach,
- Zone – wise approach for neutralizing regional variations in unit cost and agro-climatic conditions, and effective monitoring of developmental programmes,
- Thrust area approach in identified areas for horizontal expansion,
- Sustain and carry forward the growth momentum in Vanya silk industry,
- Creating new units in critical areas under Central sector, and support under CDP to create infrastructure facilities in State and private sectors,
- Dovetailing the provisions in other programmes of governments to sericulture,
- Intensified skill development programmes in all disciplines of the silk industry, and
- Revision of unit cost in respect of the CDP schemes based on prevailing markets rates.

d. Vertical and horizontal growth:

- Productivity improvement from 90.55 kgs per Ha. to 95.83 kgs, through R&D intervention,
- Area expansion covering 43,032 Ha under mulberry, 44,500 ha under vanya food plants, and utilizing the large tracts of naturally grown tasar food plants including *Sal* trees for tasar silkworm rearing, besides improving the existing plantations, and
- Improving the rain-fed mulberry plantation through water conservation techniques.

e. Quality improvement and Brand promotion

- Thrust on post cocoon and post yarn sectors for better value addition,
- New strategies for introducing Quality Based Pricing System, and

- Generic promotion of Indian Silk to eradicate spurious silk products and ensure flow of higher value realization to the primary producers.

f. Micro level production Strategies – Mulberry

Mulberry Silk

- Field penetration of improved mulberry varieties is only to the level of 11%. Hence, replacement of existing mulberry varieties in farmers fields and using only these varieties in the new areas by supplying planting materials/samplings and other financial assistance for plantation development in association with the DoSs. This measure alone could trigger the growth substantially,
- Enhance the flow of institutional credit to sericulture for building infrastructure facilities and sericulture activities,
- Support the farmers for setting up irrigation facilities, equipments, rearing houses, crop protection measures, crop insurance and other support services to increase the production and productivity,
- Setting-up 70 bivoltine clusters through States,
- Introduce agri-buisness in sericulture sector for promoting bivoltine,
- Social security support to the family members engaged in sericulture,
- Distress Relief Measures (DRM) to tide over market volatility and supporting the beneficiaries during distress situations,
- Providing improved post cocoon technologies and machineries at affordable cost,

- Better coordination with the Departments of Sericulture , Forest Departments, Rural Departments, Agriculture Departments etc. for synchronizing the available programmes for long term sustainability of sericulture industry, and
- Revising and intensifying the activities of the extension system to develop the interface among the take holders.

g. Non-mulberry:

- Enhanced R&D support,
- Seed is the vital link for the success of non-mulberry silk industry. Therefore, other than producing nucleus and basic seeds, support the States to strengthen seed production units and encourage private participation through different programmes.,
- Support to create food plants in own land and forest lands and foster cooperation with the forest department to facilitate utilization of natural food plants,
- In-situ multiplication of tasar eco races feeding on Sal trees in natural forest areas,
- Intensive promotional activities to tag non-mulberry silk as a “Green Fibre” in the national and international markets,
- Popularization of improved reeling and weaving machines to increase productivity and reduce drudgery of associated workers,
- Foster the formation of “CBOs” for increasing silk production,
- Facilitate to utilize the untapped natural plantations for vanya silkworm rearing,
- Innovative crop protection measures at the door step of the farmers,
- Price support system to protect the primary producers from exploitation by middlemen through Raw Material Banks.

h. General:

- Ensuring to make available quality silkworm seed to the famers at affordable rate, and meeting the nucleus and basic seed requirement of the country through the regulatory frame work,
- Institution of a quality based pricing mechanism in cocoon and raw silk trade,
- Capacity building exercise in the various phases of the industry involving all the stake holders in the entire production chain,
- Generic promotion of Indian silks for better value realization for all the stakeholders associated with the silk production chain.

Strategy:

14.70 Accordingly, the following strategic approach is needed for development and propagation of sericulture activities in the country:

Scaling up BivoltineSericulture

14.71 The bivoltine mulberry sericulture will be popularized in two ways; (1) Developing "Bivoltine Clusters" in potential thrust areas, where the entire operations, from pruning to mounting, are synchronized to produce certain minimum quantity of good quality cocoons. Resources from the government agencies and linkage with a reeling operator would be the pre-requisite for this arrangement. Replicating the work done by Japan International Cooperation Agency (JICA) in bivoltine clusters will be the role model for this programme. (2) Developing a typical **Farm Model** approach, taking the lead by large farmers to act as lead farmer with resources and technical support pooled from government agencies. In addition to this, effort will also be made to attract corporate participation for large scale commercial bivoltine farming in private sector or in PPP model.

Consolidating and expanding multivoltine Sericulture

14.72 Multivoltine mulberry silk is the main stay of sericulture activity in India. But this segment has shown a slow pace of growth in the last plan period. Time has come now to launch the multivoltine to the next level of development by evolving 3rd Generation Cross Breed (3G-CB) varieties matching with the silk quality parameters of bivoltine silk and expand the area of cultivation to new areas.

Zonal approach for production planning and other interventions

14.73 Considering the agro-climatic variations of sericultural areas in the country, it is essential to plan the R&D and field extension activities based on the local conditions rather than adopting a 'one size fits all' approach. Therefore, various schemes and programmes for development of sericulture and silk industry will be designed taking into regional variations for which the entire country shall be divided into **5 Seri-Zones** as detailed below:

Table 14.16 Zonal approach for production

#	Name of zone	States covered
1	North-Western Region (5 States)	J&K, Himachal Pradesh, Uttarakhand, Haryana & Punjab
2	Central & Western Region (5 States)	Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Rajasthan &

		Gujarat
3	Eastern Region (4 States)	West Bengal, Bihar, Jharkhand & Orissa
4	North-Eastern Region (8 States)	Assam (Including BTC & other Autonomous Councils), Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim & Tripura
5	Southern Region (5 States)	Karnataka, Andhra Pradesh,Tamilnadu, Kerala, Maharashtra,
	Total	**27 States**

14.74 Within the above zones, **thrust areas** will be identified for development of specific types of sericulture practices depending upon the agro-climatic conditions and potential of the area. Sericulture will be made an attractive and sustainable economic activity in these thrust areas by creating the required support mechanism and linkages. The identified States for various sericulture activities are:

Multivoltine Mulberry Silk	Tamil Nadu, Andhra Pradesh and Karnataka
Bivoltine Mulberry Silk	Tanil Nadu, Madhya Pradesh, Karnataka, Maharashtra , Himachal Pradesh, and Jammu & Kashmir
Tasar Silk	Jharkhand, Orissa, Chhattisgarh , West Bengal
Eri Silk	Nagaland
Muga Silk	Assam

Cluster approachfor intensive interventionand support services

14.75 As far as possible, the entire sericulture activities would be developed through clusters because cluster-based initiatives provide better perspective of economic reality as well as essential support services required for sericulture activities. The experience of existing clusters shall be extensively utilized to develop at least 100 clusters across the country with support services and market linkages.

Popularization of Community Based Organizations (CBOs):

14.76 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, training, extension, synchronizing the various activities of the sericulture to produce uniform quality cocoons,

credit facilitation etc. It is proposed to use this concept in the main stream activities in sericulture programmes in a big way. 100 clusters proposed to be promoted in the XII Plan will be set up with 500 Cluster Level Associations (CLAs) under Community Based Organizations (CBOs). Provision will be made to solicit the services of NGOs or lead farmers to organize the farmers for cluster formation. Central Silk Board will ensure to provide direct linkages with seed producers and post cocoon reeling clusters.

Shifting of production bases:

14.77 During the last few years, many of the traditional silk production bases in the country have been lost due to urbanization and taking up of large infrastructure projects. One way of substituting the lost area is to shift the production bases to other potential areas of the same State. This would be a much easier proposition as the existing delivery mechanisms and skills could be easily relocated within the geographical boundaries.

Growth momentum in Vanya Silk Sector:

14.78 To carry forward and sustain the growth momentum in Vanya sector for the coming years by strengthening seed production network and exploring the export market under "**Green Silk**" concept. It is planned to exploit the potential Sal forest for producing tasar silk in its natural habitat.

Quality based pricing and incentive system:

14.79 The existing quality pricing system will be remodelled to put in place an element of incentive for the participating stakeholders to appreciate price for quality products, at the same time encourage the farmers to produce quality cocoons.

Support to large and medium sericulture farms

14.80 There is a need to slowly graduate sericulture from the current level of subsistence activity to an economically viable commercial activity. Therefore, the schemes for this purpose will be remodeled, without compromising the core purposes, to enable and encourage participation of farmers or corporate with large tracks of land to engage in sericulture activities as agri-business models.

Introduction of credit linked subsidy:

14.81 So far, all the programmes in the sericulture and post cocoon activities have been implemented as purely subsidy based schemes to support small and marginal farmers and micro entrepreneurs. There is a need to graduate from the present set up to credit linked subsidy schemes in certain identified areas of the silk value chain, at the same ensure easy accessibility of credit. Financial institutions like NABARD and Nationalized Banks will be involved in this process.

Support to Rain-fed plantations:

14.82 Water scarcity would be a major problem facing the cultivable lands in future. Hence, it is necessary to introduce water conservation techniques in mulberry gardens for increasing production and productivity by dovetailing various schemes of the States under I.R.D.P., etc.

Other interventions:

14.83 Efforts will be made to extend all the benefits of Agriculture and allied activities to sericulture sector and dovetail sericulture with other programmes/ funding agencies to tap resources for expansion of the sector.

14.84 The possibility of extending various schemes to the farmers who are not having cultivable land but undertaking rearing activities by purchasing leaves or producing leaves from leased land would be considered during the XII Plan period, as it would become a viable option for livelihood. Such farmers would be supported by extending certain schemes under CDP under specific conditions, except creation of infrastructure facilities.

Distress Relief Measures (DRM):

14.85 The prices of sericulture commodities are witnessing high volatility due to various reasons, including volatility in global raw silk price and variation in duty structure as general tariff policy. High volatility and competition from other competing cash crops leads to uprooting of mulberry plantation. In order to tide over this seasonal distress situation, a short term Distress Relief Measure, wherein the farmers would be supported to the extent of Rs.50/- per kg of cocoons, depending upon the type and quality of cocoon offered for sale at

a recognized cocoon market, when the price falls below the benchmark support price to be announced from time to time is recommended. The scheme does not offer actual procurement of cocoons by any agency. The support will be available as a temporary measure to stabilize the price in the market. Details of the scheme will be worked out after studying the cocoon pricing and trading mechanism to avoid misuse of the scheme.

Support for Silk Machinery and Quality:

14.86 There is a need to extend duty exemption on imported silk machineries during the XII plan to facilitate establishment of a viable post cocoon industry in the country. Export of silk products needs to be incentivised through various schemes under FTP. To mitigate the threat from spurious products there is a need to ban the use of term "Silk", for products other than pure silk produced from silkworms. 'Silk Mark' needs to be aggressively promoted to establish a brand image for Indian silk.

Support and interventions of the State Governments required:

I. Expeditious implementation of the recently enacted "Silkworm Seed Act" for orderly growth of the industry through free movement of goods and services among stakeholders and across state boundaries,
II. Speedy enforcement of "Handloom Reservation Act"
III. Ban acquiring sericulture farm lands for real estate and other urban development activities,
IV. Strengthen the extension mechanism by utilizing the provisions made under the proposed cluster development programmes and Community Based Organizations (CBOs), besides posting new extension workers,
V. Prioritise to revive the existing private sector facilities for optimum use through appropriate policy measures and also availing facilities offered under CDP,
VI. Removal of tax barriers imposed on sericulture commodities for free movement across the country,
VII. Facilitate tribal and forest dwelling communities for easy access to the natural food plants for rearing Vanya silkworms, and
VIII. Avail the programmes under the XII Plan on a mission mode approach.

Proposed Interventions and Programmes in XII Plan

14.87. The Working Group recommends continuation of the Central Sector and Centrally Sponsored Schemes of Govt. of India for development of sericulture and silk Industry. However, the focus and components of the schemes, mode of implementation, coverage and administrative set up need revision, keeping in view the approach for the XII plan discussed in the previous chapters. These are outlined as below:

Central Sector Plan Programmes

14.88 The current Central Sector schemes aimed at providing research and development, regulation of seed sector, field extension and support services, and quality assurance and marketing support for the cocoon and post cocoon sectors need to be continued through the Central Silk Board with revised focus and implementation guidelines. Scheme – wise plans proposed for the same are given below:

Research and Development:

14.89 R&D programme in the XII plan will lay special emphasis on sectoral requirements, regional differences, emerging problems in host plant and silk worm propagation and other post cocoon activities related to the industry with the objective to improve productivity and quality standards of Indian silk to compete in the global silk market. The broad areas of R&D focus proposed during the XII plan are:

- to develop 3rd generation multivoltine silkworm breeds (3G-CB) in line with the quality parameters of bivoltine silk,
- develop bivoltine hybrids suitable for "tropical conditions" by procuring pure bivoltine races through collaborative research programmes with other countries like China, Brazil, Uzbekistan, Bulgaria, etc.,
- furthering the process of improving the quality of Indian silk to International Standards through post cocoon technology development,
- improve and transfer the protected rearing techniques for young instars of tasar and muga silkworms, conserve the endangered or dwindling eco-races which are not amenable to human handling but used for silk production through people's participation,

- improvement of reeling techniques to increase productivity per unit human power, product development and diversification of non-mulberry, and
- to document and protect the ethnic designs and products of India as geographical indicators and promote their use.

14.90 Separate research projects will be drawn up with the participation of specialized scientists in the respective sector level Institutes. Such programmes will be sanctioned by the Research Coordination Committee (RCC) comprising eminent scientists, technocrats, policy makers etc. The work will be monitored on a continuous basis by the existing monitoring mechanisms of CSB under the Result Framework Document (RFD).

14.91 Some of the new initiatives proposed during the XII Plan are;

- establishment of a Regional Silk Technological Research Station at Varanasi for catering to the need of silk weavers,
- strengthening of Regional Tasar Research Stations (Oak Tasar),
- introducing silkworm seed research for vanya sector,
- support to farmers during pre-authorization trials, and
- establishment of P4 seed production stations for maintaining the hybrid vigour of non-mulberry silkworms and
- manpower strengthening.

14.92 A total amount of **Rs.291.03 crore** is estimated for the R&D, and allied activities during the XII Plan period.

Initiatives in the Seed Sector:

14.93 The intervention in the seed sector would be:

- regulating and facilitating maintenance of nucleus seed source and producing significant portion of basic seed, especially for bivoltine and Vanya silk sector,
- transform and prepare the State owned seed units as basic seed production units, and
- facilitate to generate major portion of the commercial seeds through private participation with required quality control measures.

14.94 **Mulberry Seed**: During XII plan, the Central Silk Board will target producing 11.15% of the total commercial seed and 35.1% of the basic seed requirement of the country. CSB will also be taking up implementation of the recently enacted Seed Act to pave the way for a new era in the seed production scenario of the country. Special initiatives suggested for mulberry seed sector are:

- up-gradation of infrastructure facilities in NSSO units,
- support to Mulberry silkworm seed crop rearers,
- establishment of isolated testing facility at Central Seed Testing Laboratory and other Accredited Laboratories,
- support for Seed Officers and Seed Analysts,
- training programme for silkworm seed producers and chawki rearers, and
- quality awareness programmes, and training of scientific/technical personnel involved in seed quarantine and monitoring programmes .

The total cost estimates under mulberry seed is **Rs. 76.57 crore**.

14.95 Tasar Seed: The entire nucleus seed requirement of the sector would be met by the CSB. For this purpose, apart from the existing one nucleus seed production unit (CTSSS, Kota), all the 21 BSMTCs will be up-graded as nucleus seed production units and produce nucleus seed. Other than the ongoing activities, the special initiatives proposed are renovation of existing buildings in BSMTCs and other nested units, development of infrastructure for technical activities at 5 BSMTCs and CTSSS, Kota, and procurement of grainage and rearing equipments for all the BSMTCs. A total cost of **Rs.40.30 crore** is estimated for tasar seed during the XII Plan.

14.96 **Muga seed:**The basic seed required for the P_4, P_3 and P_2 levels will be augmented by the CSB units, for which another two numbers each of P_3 and P_2 units will be created. Apart from the ongoing activities, the special initiatives proposed are; establishment of MSSO Head Quarters, establishment of 2 Muga P_3 farms, establishment of 2 Model P_2 farm, construction of cocooning hall, construction of grainage hall, construction of testing cum egg preparation room (30'x15'), and installation of water supply system in some units. The total cost estimated for Muga seed activities during the XII Plan is **Rs.32.90 crores.**

14.97 **Eri Seed**: The basic seed at P_2 level will be produced by CSB, besides producing part of the P_1 basic and commercial seeds. The total cost estimated for eri seed is **Rs.13.00 crores.**

14.98 **Manpower strengthening for the seed sector:** For implementation of the Seed Act and Regulations, a number of field officers like seed officers are required to be put in place with proper training and orientation besides strengthening manpower in CSB. An amount of **Rs. 25.58 crore** is estimated for strengthening the manpower requirement of seed sector during the XII Plan period.

Human Resources and Institutional Development (HID):

14.99 There is need to strengthen the human resources of the main implementation agency i.e. CSB to carry out various projects and programmes of the Government of India in the sericulture and silk sector. Under the special initiatives, certain new facilities will have to be created at CSB HQs and Regional offices. R&D institutions, field delivery mechanism and extension workers, raw material banks, quality certification and market development staff and general administration will need further strengthening to cope with the additional work. About 298 new posts are proposed to be created besides up-grading certain cadres in a phased manner. The monitoring and review mechanism of CDP would also be strengthened at national, zonal and regional level to ensure smooth implementation of various programmes. Therefore, the Human and Institutional Development is being carved out as a separate programme for the XII Plan with an estimated outlay of **Rs.99.33 crores**.

Quality Certification Systems & Brand Promotion:

14.100 Major focus of XII plan is quality improvement and brand promotion to establish quality standards of Indian silk and silk products matching with international standards. The States and NGOs will also be roped in for establishing Cocoon Testing Units and Raw Silk Testing Centers (RSTCs) in all seri-zones.

14.101 The existing promotional activities of Silk Mark will be intensified besides taking up the Band Promotion of Indian silk on a big way at national and international level. This would create the “search good” factor among the consumers thereby reduce spreading of spurious silk goods in the market. Support of regulatory mechanisms will be used to ban the use of “silk” that are not produced from silkworm.

14.102 Total estimated cost for creating quality pricing system and brand promotion for the XII Plan is pegged at **Rs.72.57 Crores.**

Total Fund requirement for the Central Sector Programmes

14.103 The fund requirements of Central Sector Schemes proposed for XII Plan along with the allocation and anticipated expenditure for XI Plan are given below:

Table 14.17 Fund requirement for Central Sector Programmes

(Amount in Crore Rs.)

#	Particulars	XI Plan		XII Plan Proposed Outlay
		Approved outlay	Revised Outlay and Expenditure	
1	R&D, Training, TOT& IT	94.71	144.55	291.03
2	Seed Organization	46.50	78.36	188.35
3	HID			99.33
4	QCS & Brand promotion	13.66	14.75	72.57
	TOTAL	**154.87**	**237.66**	**651.28**

Centrally Sponsored Programme

14.104 As noted earlier, the flagship **Catalytic Development Programme** of the Ministry of Textiles, despite moderate shortfall in achieving the XI Plan targets, has significant impact on the overall development of the sericulture and silk industry in India. Therefore, the sub-group recommends continuation of the scheme with certain modifications. The major changes proposed under CDP during XII Plan are;

- identification and implementation of components within the schemes based on zonal/regional/sectoral requirements and neutralizing the regional variations in unit cost by introducing Zonal approach,
- unit cost revision based on prevailing market rate and inflatory factors,
- inclusion of landless farmers under the ambit of CDP benefits with certain conditions; and
- enhanced subsidy for SC/ST and Women beneficiaries,

14.105 Keeping in view of the target set for the production of various varieties of silk during XII Plan and intensified intervention proposed the plan allocation for Catalytic Development Programmes needs substantial enhancement for the XII plan. The justification for enhanced allocation of the scheme for various sub-sectors is as follows:

Mulberry seed sector: -

- The **ongoing programme** of franchise disinfection programme of NSSO will be continued.

- **5 innovative programmes** will be taken up to strengthen the State and private sector seed production units for implementing the Seed Act:

I. Support to 1000 nos. Adopted Seed Rearers (ASRs) of NSSO for constructing specially designed small rearing houses @1.00 lakh per unit.

II. The silkworm seed production centres in DOS and private sector often face difficulty in procuring quality seed cocoons due to shortage of Working Capital Fund. Hence, 500 grainages of State and LSPs will be provided with one time Working Capital support @ Rs. 3.00 lakh per grainage.

III. 800 State and private grainages will be supported @ Rs 2.00 lakh per grainage as assistance for purchasing seed testing equipments for modernizing/developing seed testing labs to supply only disease free layings.

IV. Support to strengthen Basic Seed Farms of States @ Rs.5.00 lakh per seed farm for 40 units to undertake the complex job of basic seed multiplication.

V. 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. The assistance will be for up-gradation of infrastructure, procurement of equipments etc. 800 grainages will be supported @ Rs.2.00 lakh per grainage.

Mulberry Cocoon Sector:- The following 7 popular **ongoing programmes** will be continued during XII Plan:

I. Support for mulberry plantation development

II. Assistance for irrigation and other water conservation & usage techniques,

III. Supply of rearing appliances (including improved mountages) / farm equipments to farmers),

IV. Supply of quality disinfecting materials and other crop protection measures for farmers,

V. Assistance for construction of rearing houses,

VI. Assistance for maintenance of chawki garden, construction of Chawki Rearing Centres (CRCs) building and procurement of chawki rearing equipments, and

VII. Setting up of production units for biological inputs and Door-to-door service agents for disinfection and inputs supply and assistance for sericulture poly-clinics.

Six new innovative programmes are proposed to be introduced for filling gaps in critical areas. They are;

I. **Support for development of private Kissan Nurseries** on a PPP model for propagation of improved varieties of mulberry for plantation and develop 200 Kissan Nurseries during XII Plan with a unit cost of Rs.10.00 lakh per Kissan Nursery.

II. **Maintenance cost for Mulberry plantation raised during X & XI Plan.**During X and 4 years of XI Plan period, a total of 98,044 acres of Mulberry Plantation was supported under CDP, which includes 7,249 acres in NE Region. For want of support to maintain these plantations, unlike Tasar, Eri and Muga, the productivity level has come down from such plantations, especially in NE States. In order to improve the production and productivity, it is proposed to support maintenance of 25,000 acres of such plantations @ Rs.4500/- per acre.

III. **Support for construction of Vermi Compost sheds.**"Vermicompost", promotes faster growth of plants, increases crop yield, increases water-holding capacity of soil, easy to produce and low in cost, reduces salinization, acidification, 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. Hence this component is proposed with a unit cost of Rs.20,000 to cover 35,000 units.

IV. **Assistance towards fencing of mulberry gardens.** There has been a long pending demand from NE States for providing support to fence mulberry plantations as there is an inherent problem of grazing by cattle and other animals resulting in destruction of mulberry plantation. Therefore, it is proposed to support 20,000 acres of mulberry plantation for fencing in XII Plan, including the surviving plantations of earlier Plan periods, with a unit cost of Rs.10,000 per acre.

V. **Assistance towards extension of Rearing Houses for construction of Mounting Halls**. Mounting of silkworms for cocoon formation is one of the crucial aspect in silkworm rearing. Sericulture farmers from North East have their plantations far away from their dwelling houses. The rearing houses have been constructed nearer to the plantation, which do not have any facility for indoor mounting. It is proposed to

support construction of 7,000 mounting halls including the new rearing houses in NE and other hilly States @ Rs.30,000 per unit.

VI. **Support for increasing the yield of existing rainfed garden through water conservation techniques:** It is estimated that about 30% of the sericulturists in India cultivate mulberry in rainfed conditions. With increasing scarcity of water in many areas of the country, it is critically important to introduce innovative technologies to enhance the water conservation ability of the soil. Under this programme, in between rows of mulberry, biomass filled trenches will be made along with planting vegetative trees as live hedge in trench cum bunds. This vegetative bund cum trenches serve as water conservation structures and decomposing biomass will provide necessary nutrients to the mulberry plantations in addition to act as a sponge to absorb maximum water, maintain humidity and curtail soil erosion. Under the scheme, 10,000 farmers will be supported @ Rs.10,000 per farmer to develop water conservation facilities in their gardens.

14.106 The funding pattern and share of the Central Government, States and the beneficiary is proposed to be retained at the present level. Accordingly, total fund requirement for the Mulberry sector (Seed and Cocoon) towards GOI share is estimated at **Rs.1033.98 crore**.

Vanya Silk Sector:

14.107 **Vanya Seed Sector**: **4ongoing programmesunder Tasar, 1 under Eri and 3 under Muga** will be continued. They are: (1) Assistance to Private Tasar Grainuers, (2) Assistance to strengthening of tasar seed multiplication infrastructure, (3) Assistance for strengthening of seed multiplication infrastructure for Oak Tasar, (4) Assistance to tasar seed rearers, (5) Assistance to State Depts. for strengthening of existing Eri farm cum grainages including assistance to Seed Rearer cum Private Graineurs, (6) Assistance to Muga Private Graineurs, (7) Assistance to existing Muga Private Graineurs for up-gradation of seed production capacity, and (8) Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure.

14.108 **Nine innovative programmes**are proposed for Vanya Seed sector, as detailed below:

I. **Assistance for Mobile Van vans** with necessary material and manpower for disease monitoring and seed cocoon testing for tasar to ensure disease freeness of the seed crops: 12 Mobile testing vans in all tasar producing States will be provided @ Rs.11.25 lakh per Van.

II. **Assistance to 500 Private Eri Graineurs** to produce adequate quantity of quality Eri silkworm seed for commercial supply @ 1.40 lakh per graineur.

III. **Assistance to 4,000 Eri Adopted Seed Rearers** forstrengthening and establishment of systematic eri seed production programme @ Rs.15, 500 per rearer.

IV. **Up-gradation of 25 Eri Basic Seed farm cum grainages** functioning in NE States to develop systematic Eri seed production and multiplication system in the country by involving State units in the basic seed multiplication process @ 10.00 lakh per farm cum grainage.

V. **Establishment of Self Help Eri grainages (SHEG):** To develop organized Eri seed supply system, it is proposed to group the rearers of NE region into **"**Self Help Eri Grainages (SHEG)" with the participation of 30-40 farmers per group as a local grainage facility extension. Such 20 SHEGs will be linked toEri Basic Seed Farm cum Ggrainages for technical support and other assistance. 500 SHEGs will be developed during XII Plan with support in kind @ Rs.6, 000 per SHEG.

VI. **25Mobile testing and certification units for Eri** to ensure disease freeness of seed cocoons @ Rs.1.00 lakh per unit.

VII. **Assistance to 8,000Muga Adopted Seed Rearers** for undertaking cultivation 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 @ Rs.72, 000 per rearer.

VIII. **Assistance to P_3 Seed Rearer cum P_2 Muga Seed Producers:** While P_4 and P_3 dfls production will be looked after by Central sector, P_2 dfls production will be gradually shifted to private players by identifying and assisting 25 selected P_3 rearer cum P_2 Seed producers with 10000 P_2 dfls capacity /yr. It is expected that the system will attract more and more private players on long run for sustainable development of muga seed sector. 10 private producers will be supported @ Rs.0.30 Crore.

IX. **Assistance to P_2 Seed Rearers cum Seed Producers:** Linking of Muga Seed sector at P_4 and P_3 level of multiplication under Central Sector has yielded expected results as these units are producing the dfls as per the norms. Similarly at P_2 and P_1 level, the seed production and supply system need to be organized for sustainable development of the sector. Therefore it is proposed to identify and support 100 P_2 Seed Rearer cum Seed Producer underPrivate sector @ Rs.0.30 crore per unit.

14.109 **Vanya Cocoon Sector:** Three **ongoing programmes** each under tasar and eri and 1 under muga will be continued during XII Plan programmes. They are; (1) Support to rearers for augmentation of Tasar host plantation including maintenance, (2) Assistance for raising and maintenance of systematic plantation of Oak Tasar plantations, (3) Assistance for construction of Cocoon Storage Houses in Tasar Sector, (4) Rising of Castor plantation and maintenance with Start-up tools, (5) Construction of Eri Rearing houses, (6) Augmentation of Kesseru plantation and maintenance with start-up tools, and (7) Augmentation of Muga food plant and maintenance with start-up tools.

14.110 **Twelve new Innovative programmes** will be undertaken under this category, the details of which are briefly given below:

1) **Assistance to beneficiaries for raising Tasar food plant saplings.** Support will be extended to 30,000 farmers to raise saplings in their own land @ Rs.11000/- per farmer.

2) **Assistance to Tasar commercial rearers for development of Chawkie garden.** Support will be extended to raise chwaki garden among 25,000 rearers @ Rs.4,000 per rearer.

3) **Assistance to Tasar rearers for maintenance of existing chawkie plantation.** 5,000 rearers will be supported to maintain existing chawki garden @ Rs.1200 per farmer.

4) **Assistance to Tasar rearers for maintenance of existing Tasar plantation.** Support will be extended to maintain20,000 ha. of systematic Tasar host plantation established in earlier plan periods, @ Rs.10,800/- per Ha. limited to 1 Ha. per farmer.

5) **Supply of Jeevan Dhara for control of Virosis disease.** Jeevan Dhara kit will be supplied to 50,000 farmers @ Rs.80 per farmer.

6) **Leaf Surface Microbes (LCM) for control of Viral and bacterial diseases in Tasar Silkworm.** 50,000 rearers will be supported with LCM worth Rs.40/- per farmer.

7) **Scheme for conservation and utilization of Sal based Tasar ecoraces.** The naturally available Sal forest will be exploited by in-situ conservation of Tasar silkworms like; Laria, Sarihan, Modal and Raily. 100 clusters will be brought under the conservation programme @ Rs.3.28 crore per cluster. Total cost of this

programme is expected to be Rs.328 crore for the XII plan out of which GoI share will be Rs.82.00 crore (25% share).

8) **Assistance to beneficiaries for raising Kesseru food plant saplings:**. 15.000 eri beneficiaries will be assisted to raise Kessaru plant sapling @ Rs.10,000 per farmer.

9) **Assistance for intercropping (Ginger, Turmeric and Clocasia) in between existing Kesseru plantation:** 5000 farmers would be supported for intercropping @ Rs.10,000/- per farmer limited to 1 acre.

10) **Assistance to beneficiaries for raising Som food plant saplings.** 10,000 farmers will be supported to raise som saplings @ Rs.10,000 per acre, limited to 1 acre per farmer.

11) **Maintenance of existing muga plantation:** 10,000 rearers would be supported to maintain the existing muga plantation established in earlier plan periods @ Rs.6200 per acre per farmer.

12) Assistance for intercropping (Ginger, turmeric and Colocasia) in between existing Som plantation: 5000 farmers would be supported for intercropping @ Rs.10,000/- per farmer, limited to 1 acre.

14.111 **Vanya Marketing sector:** The **ongoing programme** of "Vanya Silk Marketing Promotion Cell" at CSB Hqs will be continued during XII plan with a cost of Rs.6.00 crore**.**

Under the **innovative programme**; "Organization of Muga cocoon marketing outlets" will be implemented to draw the primary muga producers to sell the muga cocoons in organized markets. An amount of Rs.0.90 crore is earmarked for this purpose as GoI share.

14.112 The total estimated cost to be met by GOI for the Vanya Sector CDPis **Rs. 713.22 crores.**

Post Cocoon Sector

14.113 **17 ongoing programmes** will be continued during XII Plan. They are; (1) Support for establishment of Multi-end Reeling units, (2) Support for existing Charka Reeling Units to dissuade child labour (Motorization of Charkas), (3) Support for establishment of Automatic Reeling Machine (ARM) units, (4) Support for establishment of Improved Cottage

Basin Reeling Units, (5) Support for setting up of Hot Air Driers, (6) Assistance for Twisting Units, (7) Incentive for production of bivoltine raw silk, (8) Incentive for production of Bivoltine Cocoons, (9) Assistance to States for providing marketing support for cocoons and raw silk, (10) Providing services of Master Reelers to Reeling units, (11) Support for Handloom Sector, (12) Providing services of Master Weavers / Master Designer to Weaving units, (13) Support for the Establishment of Shuttleless Looms, (14) Support for setting up of Common Facility Centres for Yarn Dyeing, (15) Support for setting up of Common Facility Centres for Fabric processing, (16) Providing services of Master Dyer, and (17) Support for Vanya Reeling / Spinning sector.

14.114 **7 innovative programmes** have been drawn for implementation during XII Plan, as detailed below:

I. **Support for Construction of Reeling Group Sheds:** The reeling segment continues to be the weakest link in silk value chain. The reeling units are usually situated within the dwelling premises affecting the health and hygiene and working condition. It is therefore, proposed to re-organize these units in various reeling clusters in group sheds with common facilities in identified Reeling Park / industrial areas with subsidy support for the construction of such sheds and common facilities for cottage basins, multi end and automatic reeling units. Support will be extended for the construction of 380 reeling sheds for cottage basin, multiend, and ARMs.

II. **Support for establishment of Automatic Dupion Silk Reeling units:** With a view to provide better value addition to inferior quality cocoons, it is proposed to support establishment of 10 automatic dupion reeling units with imported machinery.

III. **Support for establishment of Bisu Plant & Pupa Drying:** It is proposed to support the establishment of 50 Bisu plants as common facility in big reeling clusters along with a set of machinery for cleaning & drying of pupa.

IV. **Support to introduce Wet Reeling/ spinning machines:** In order to popularize the newly developed tasar wet reeling and spinning machine to field, support will be extended to establish 500 wet reeling/spinning units.

V. **Interest subsidy on Working Capital to Reelers:** 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 provide 50% of the interest charged by the financial institution as subsidy subject to an upper limit; covering 50 Cottage basins, 160 Multiend and 10

Automatic Reeling units established under CDP. Support will be extended to these units during the entire 5 years of XII Plan.

VI. **Support for the establishment of modern power looms:** It is proposed to support the establishment and modernization of 200 power loom units for silk fabric production consisting of at least four modern looms per unit during the XII Plan.

VII. **Support for establishment of Silk Screen printing units:** It is proposed to extend support to 20 silk screen printing units with modern screen printing facilities to print around 300 mtrs of silk fabric per day.

VIII. **Support to Machinery Manufacturing Sector:** The silk machinery manufacturing sector in comparison with general textile machinery sector is not developed at the expected level. Unless adequate infrastructure and capabilities are built within the country, it will be difficult to be competitive and fulfill local demand. In-house R&D is largely absent on developing improved machineries. Capability for undertaking R&D projects in the area to provide appropriate technology needs to be fostered and some form of support to encourage machinery manufacturers in this direction needs to be extended. It is proposed to provide support for the domestic machinery manufacturing sector to take up collaborative R&D efforts to design and develop machinery to suit the requirements of the Indian silk industry. The programme will be implemented directly by CSTRI, Bangalore.

14.115 Accordingly, GOI's share for programme for Post Cocoon Technology is estimated at **Rs.227.24 crore.**

Support Service Sector:

14.116 Some of the programmes conceived for the XII Plan are applicable for all sectors of the industry. Hence, these programmes are grouped under "Support Service Sector". **7 ongoing programmes** will be continued with slight modifications. The cluster development programmes will be taken up through the States and the Health Insurance Programme will be made applicable for all beneficiaries, irrespective of the gender. The other ongoing programmes that will be continued during plan period are; Crop Insurance Support, Publicity programmes, Support for Studies/consultancies, surveys organized by

CSB and State, Product Design Development and Diversification, and Capacity building for sericulture Sector.

14.117 In addition to the existing programmes, following **3 innovative programmes** are proposed to be taken up during XII Plan:

1) **Enhanced subsidy to SC / ST / Women beneficiary to take up sericulture.** There are many farmers belonging to SC / ST and Women who practices sericulture other than Special Status States, but get subsidy on par with General Category farmers. These farmers are unable to mobilize beneficiary share (up to 50% of the unit cost) for availing benefits under many components under CDP. It is therefore, proposed to extend the sharing pattern of 80:10:10 by GOI, State and Beneficiary available to the sericulturists in Special Status States to the farmers belonging to SC / ST and Women who practices sericulture in all States.

2) **Distress Relief Measures (DRM) for mulberry silkworm cocoons:**High level price volatility is being experienced in mulberry cocoons sector across the country. The price realization of the produce is not in conformity with the input cost and inflationary factors. As a result of this, mulberry cocoon farmers are resorting to distress sale and many of them are beginning to look for other crops for stable income. There is a need to insulate farmers from such distress situations as there is a livelihood issue involved. Therefore, it is proposed to institute a **Distress Relief Fund** in the Ministry of Textiles to be used as an emergency relief measure to stabilize the cocoon price in the market during high volatility of prices.

   The scheme will be operated in the cocoon markets of all mulberry cocoons producing States. The distress condition will be assessed by the Central Government on the basis of inputs received from the cocoon markets on continuous basis and intervention may be required if price depression is noticed for a period over at least a fortnight. Central Govt. will also determine the floor price of various types of cocoons take into account the quarterly price band of respective grades of cocoons per kg for a reasonable period and cost of production data. The floor price will be fixed Zone-wise based on the moving average prices of cocoon in the markets within the zone and cost of production prevailing in the area. Central Government may set up a standing

committee to go into the pricing issues and distress conditions. The support price will be the difference between the floor price and distress sale price limited to a maximum extent of Rs.50/- per kg of good cocoons. No procurement by any agency is envisaged under this scheme. The farmer will be compensated for the quantity of cocoon sold at distressed price in a given period of time based on the above formulation. Distress relief measure will be a temporary measure and will be withdrawn once a pre-determined price level is achieved in the market.

The State governments will share 50% of the cost of this scheme under a 50: 50 arrangement. Detailed modalities of the scheme and other operational details will be worked out in consultation with the stakeholders including States. It is expected that 10% of the total transacted quantity may come under the distress situation every year. With the estimated level of transaction, an amount of Rs.40.00 crore per year will be required to operate the scheme. Thus the estimate for 12th Plan period is Rs.200 Crore out of which GOI share would be **Rs.100 Crore**.

3) **Developing Community Based Organizations (CBOs):** 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, strengthening the much needed extension network system, credit facilitation etc. An amount of **Rs. 47.40 Crores** is estimated for this purpose for the XII plan. **CBOs to act as Joint Liability Group (JLG)**: The SHGs (micro cluster groups) under CBOs would act as the Joint Liability Groups (JLGs) for the purposes of availing bank loan either singly or through the group mechanism against mutual guarantee. The JLG members would offer a joint undertaking to the bank that enables them to avail loans. The JLG members are expected to engage in similar type of economic activities like cultivation, rearing, reeling etc. The management of the JLG will be kept simple with little or no financial administration within the group. JLGs will be formed primarily consisting of tenant farmers, small farmers cultivating land without possessing proper title of their land, reelers, weavers etc. Members should be of similar socio economic status and background carrying out farming

activities and who agree to function as a joint liability group. The groups would be organized under CBOs, a separate programme for which is already included in the XII Plan proposal.

Other Initiatives: Encouraging Institutional Credit and Credit Linked subsidy:

14.118 Keeping in view the objective of improving the credit linkage to the sector and graduating to credit linked subsidy regime for some of the capital intensive components of the programmes, subsidy to these components will be back-ended and linked to credit component. Out of the total beneficiary share of **Rs.777.10 crore** estimated for the CDP components**,** the quantum of credit needs to be sourced from banks and other financial institutions will be approximately **Rs.635 crore**.

14.119 Majority of the special SGSY and RKVY sponsored sericulture projects being implemented during XI plan are credit linked. It is therefore planned to link identified CDP schemes mainly in the industry sector to augment for equity participation. Successful implementation of these programmes calls for timely credit and there is a strong need for establishing linkages between the beneficiaries, developmental agencies and the Banks / FIs to facilitate flow of credit to the beneficiaries.

14.120 Most of the CDP schemes are beneficiary specific with Central & State subsidy ranging from 50% to 80% of the unit cost and the balance is required to be borne by the beneficiaries. By and large, the beneficiaries are marginal farmers or reelers usually source finance from other sources enabling to avail the benefit of CDP schemes. However, about 24 schemes have been identified for credit support from the financial institutions.

14.121 The CBOs proposed during XII Plan will be effectively used as delivery channels for transfer of technology thereby improving productivity and quality in all areas of sericulture and silk industry. Sustainability of these CBOs is an important issue for consideration in all the States. Financial dynamics in CBOs with respect to pattern of thrift, investment and linkages to Banks and Financial Institutions needs to be strengthened. It is necessary for SHGs to involve local banks / FIs right from the beginning so that these institutions are aware of the developments. This would also help in building linkages between SHGs/CLAs and the Banks / FIs.

14.122 During the XI Plan period, while implementing bigger projects like Shuttle-less looms and Automatic Reeling Units, subsidy component (Central & State) was deposited with the banks which financed the projects. This measure could create considerable confidence among the banks in extending required credit support. The methodology has worked out well and such efforts need to be replicated during XII Plan. Hence, during the XII Plan period, the loan availed from financial institutions for the components under CDP would be linked for availing subsidy. Lead Bankers in all the States, NABARD etc. would be informed about this policy change. Necessary modalities shall be worked out for this arrangement taking into consideration of the view points of the financial institutions and other stakeholders.

14.123 It is planned to avail the benefits of tribal development through NABARD. Kisan Credit Card will be introduced to sericulturists to improve the credit flow.

14.124 **Creation of Credit Guarantee Fund:** There is a need for creating a Credit Guarantee Fund for sericulture in NABARD and other financial institutions to increase the flow of credit to sericulture. The Credit Guarantee Fund ensures guaranteed loans with zero risk weight and no provision needs to be made for the guaranteed portion, in case the advances become NPAs.

14.125 **Tribal Development Fund:** Taking cue from NABARD initiative for supporting tribal communities for sustainable livelihood, the Working Group recommends creation of a Sericulture Development Fund for Tribals to support sericultural activities in the entire silk production chain. The pilot projects on sericulture initiated during XI Plan utilizing Tribal Development Fund is encouraging. It is planned to take up projects on similar lines in tribal dominated States in Vanya silk sector.

The total fund requirement for Support Service Sector is **Rs.288.64 cores.**

Total Fund requirement for CDP

14.126 The total fund requirement for implementing the Catalytic Development programmee in the modified form including the new initiatives for XII Plan along with the expenditures during the last two Plan periods (X & XI) are given below:

Table 1 4.18 Fund requirement for Catalytic Development Programmee during XII Plan and expenditures during the last two Plan periods

(Amount in Cr.Rs.)

#	Category	X Plan	XI Plan	XII Plan proposal			
				GOI share	State share	Beneficiary share	Total cost
1	Mulberry Sector (seed, and pre-cocoon, for Bivoltine, and Multivoltine)		451.93	1033.98	575.56	630.81	2240.35
2	Vanya sector (seed, and pre-cocoon, for Tasar, Eri, & Muga)		185.41	713.23	358.32	84.34	1155.88
3	Post Cocoon Sector (applicable for all sectors)		111.97	227.24	78.51	50.31	356.05
4	Support Services (applicable for all sectors)		72.43	288.64	153.30	11.65	453.59
	TOTAL	**264.34**	**821.74**	**2263.07**	**1165.69**	**777.11**	**4205.87**
	Average share %			53.81 %	27.72 %	18.47 %	100 %

Schemes for Export Promotion, Brand Building of Indian Silk and Technology Up-gradation/ Capacity Building in Processing and Finishing sector

14.127 While silk produced in China and Thailand etc are well known in the international market by their name as Chinese silk and Thai Silk etc., in spite of being the second largest producer of silk in the world the silk produced and marketed in the world market is not known by its own name. Currently, Indian silk products were sourced by large international chains and are being sold under their own brand names and identity of brand image of Indian silk is totally lost. There is a need to establish the brand image of the Indian Silk through improvement in quality of silk and silk products and aggressive positioning in global market. During the XII Plan period concerted effort will be made to position Indian Silk as a brand in the global market for which a two pronged approach will be adopted. Firstly, Indian silk will be globally positioned so that it is recognized by its origin. Secondly, the silk products that are designed using the Indian traditional designs woven for the choice of the international consumers will be popularized aggressively. The eco-friendly nature of the vanya silk products and exquisite nature of Indian silk would be the focal point of promotion.

14.128 In order to achieve this (1) the production and processing facilities for silk goods needs significant upgradation in terms of technology and human resources; (2) aggressive campaign would be required through overseas media advertisement, symbiotic promotions, road shows, support to silk exporters to participate in exhibitions in India and abroad, etc,.

Export Promotion and Brand Building of Indian Silk

Silk Sarees

14.129 During the 12th Plan period, concerted effort would be made by the Ministry to promote and position 'Indian Silk' as a brand in the global market and enhance the export of value added silk goods to established and new market through several innovative actions. In this regard the Indian Silk Export Promotion Council (ISEPC) will be strengthened and its activities would be intensified in the following strategic areas:

a) Upgrading the facilities of ISEPC to create data base and provide commercially useful information and assistance to its members in product and design development; adoption of new fashions and designs for global market using Indian Silk; quality improvement and innovation; compliance to standards and specifications; and establishing Indian silk as a brand;

b) Organizing exclusive shows for Indian Silk and silk products in important global markets with a focus to increase visibility of Indian silk as an exclusive product;

c) Organize technical delegations, trade fairs, exhibitions, buyer seller's meets and other trade delegations to promote Indian silk and explore overseas market opportunities.

d) Promote "Silk Mark" label by mandatory tagging for all pure silk goods to export market to ensure purity of silk.

The estimated cost of the programme is **Rs.20.00 crores** for the XII Plan period

Technology Up-gradation/ Capacity Building in Processing and Finishing sector

14.130 As far as export market is concerned, technological gap and facilities for processing and finishing of silk fabrics, printing and garmenting have made the silk goods export from India uncompetitive in global market. Therefore, there is a need to focus on these areas to achieve higher value realization for Indian silk goods in the global market. Therefore, XII Plan focus for the exports ector would be to

I. Establish high end silk fabric dyeing, processing and finishing units in different silk export manufacturing clusters which will make these facilities easily accessible and help them value add. It will also help the exporters to innovate, standardize and disseminate the processing technologies. An amount of **Rs.30.00 Crore** is estimated to establish common facilities in major export manufacturing centres.

II. As it is known, there are thousands of fantastic and unmatched silk designs known only to the traditional artisans and are located uniquely in different geographical regions of the country. Many of these designs are becoming extinct due to shifting of jobs by the artisans and rapid industrialization of the country. Hence, it is necessary to preserve and popularize these unique designs for further use. Samples along with necessary technical data of each design would be documented by appropriate means and preserved for popularizing and further remodeling with the popular products endemic to the consumer countries. For this purpose, A "**Design Bank**" will be established at an estimated cost of **Rs.15.00 crores**. Services of foreign professionals would be solicited for this purpose.

III. One of the major problems attributed to the silk export is lack of proper market information and absence of systematic market intelligence system. In order to meet the information needs of the exporters and foreign clients alike, it is proposed to

establish a **National Market Information Service on Silk and Silk Products** (NMISS) with an estimated total cost of **Rs.20. 00 crores**.

IV. The silk exporters are mostly in SME sector and do not have adequate information and knowledge on emerging global issues concerning the trade. Therefore, seminars and workshops on issues like; REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) compliance, Technology Up-gradation Fund Scheme (TUF) of MoT, , schemes under ECGC, export market strategy, foreign exchange management, Social and Environmental Compliance and issues arising out of international agreements, etc. will be organized in a concerted manner for which an estimated amount of **Rs.10.00 crores** is proposed to be earmarked in the XII Plan period.

V. It is proposed to provide training programmes to artisans, weavers, and other textiles workers for using modern facilities such as CAD/CAM, design development, export management in order to improve the human resources of the sector at an estimated cost of **Rs.5.00 crore** during the plan period.

14.131 The total cost estimated of the Programme is **Rs.100 crore** during the XII Plan and shall be implemented by the Ministry of Textiles, through the Indian Silk Export promotion Council and Silk Mark Organization.

Total Central XII Plan Outlay for the sector

14.132 Considering the high growth rate of **7.14%** projected for XII Plan, from the existing level of 4.25%, and intensification of programmes required to achieve these higher targets, the plan outlay for the sector needs significant enhancement as outlined in the foregoing sections. The higher target of producing 32000 MT during XII Plan necessitates creation of additional facilities in R&D and higher investments in seed sector to meet the additional seed requirement.

14.133 Allocation for sericulture under State Plan programme has been on the downward trend during the last three Plan periods. Hence, the States are increasingly depending on central funds for taking up developmental activities. Some non-traditional States and NE States are solely depending on central funds, particularly under CDP for any developmental works under sericulture sector. Consequently, allocations for CDP have been increasing steadily during the last three Plan periods. This trend is likely to intensify further during the

XII Plan period because of the higher growth rate of 13.30% proposed in Vaya silk sector, wherein the GOI's share in CDP is 80%. Thus the total financial requirements for the Plan programs charted out earlier are as follows:

Table 14.19Total Central XII Plan Outlay

(Amount in Crore. Rs.)

#	Plan programmes	XII proposed Outlay (Rs. Crore)
1	Central Sector Schemes	651.28
2	Centrally Sponsored Schemes	2263.07
3	Export Promotion, Brand Building of Indian silk, Technology Up-gradation/ capacity building in Processing and finishing of silk goods	100.00
	TOTAL	**3014.35**

State Plan Outlays for the programme

14.134 The States are in the process of finalizing the programs for XII Plan. Hence the outlay for XII Plan is not immediately available. However, as per the first three years of State plan expenditures during XI Plan , it is noticed that bulk of the State Plan activities are based on the fund sourced from CDP. For the purpose of arriving the estimated outlay of States, the average annual expenditure between 2007-2008 and 2009-10 has been taken as a base and assuming an annual growth of 10%, the allocation for the XII Plan under State plan is estimated to be Rs.1690.00 Crore.

Total States and Central Sector Programmes during XII Plan

14.135 Overall allocation worked out for States and Central Sector Programmes during XII Plan is as follows:

Table14.20 Total States and Central Sector Programmes during XII Plan

#	Particulars	Amount (Rs. In Crore)
I	STATE PLAN PROGRAMMES (estimated)	1690.00
II	CENTRAL SECTOR PLAN	
a	Central Sector Programme (4 Schemes)	651.28
b	Centrally sponsored scheme – CDP	2263.07
c	Export Promotion, Brand Promotion and Technology Up-gradation by ISEPC	100.00

	TOTAL CENTRAL SECTOR PLAN	**3014.35**
TOTAL FOR SERICULTURE SECTOR (I + II)		***4704.35***

The component wise details of the Central Sector Schemes and the Centrally Sponsored Scheme – CDP; are given at **Annexure – I** of this report.

Estimated output from the XII Plan Programmes

14.136 Estimated socio-economic impacts and physical output of the programmes to be undertaken during the XII Plan for development of sericulture and silk industry are as follows:

- Mulberry Raw Silk production to reach the level of 23,000 MT by the end of XII Plan with cumulative production of 121668 MT valued at Rs 30400 Crores,
- Vanya Silk production to reach 9000 MT in the terminal year with a cumulative production of 39000 MT valued at Rs 9700 crores,
- Export earnings per year is expected to rise to the level of Rs 6394 crores in the terminal year.
- Employment generation to reach 9.24 million covering mainly rural population including 60% rural women and 20% tribal communities,
- Poverty alleviation and contribute significantly to the inclusive development of the country, and
- 43,032 Ha of additional area to be covered under mulberry plantation and 44,500 Ha under vanya silk host plantation.

Chapter – 15

JUTE INDUSTRY

- GOALS OF THE SECTOR
- ANALYSIS OF THE PRESENT SITUATION AND IDENTIFICATION OF THE MAIN CONSTRAINTS TO GROWTH
- THE GLOBAL SCENARIO
- RAW JUTE IN INDIA
- REVIEW OF PERFORMANCE OF JUTE SECTOR DURING THE XI PLAN
- APPROACH FOR ADDRESSING THE ISSUES IN XII PLAN
- STRATEGY FOR XIIthPLAN

Marketing and Promotion of Jute Products

Chapter – 15

JUTE INDUSTRY

Jute is a natural and eco-friendly vegetable- based fibre extracted from plants whose stems are used as renewable energy resource and for other diversified uses. Its products are re-usable, sustainable and bio-degradable and with environmental protection becoming a non-negotiable issue, jute is fast becoming a preferred fibre across the world.

15.2 The Jute Industry is one of the oldest industries in India and a mainstay of the economy in the eastern region, particularly in West Bengal. It supports nearly 40 lakh farm families, provides direct employment to about 2.6 lakh industrial workers and livelihood to another 1.4 lakh persons in the tertiary sector and allied activities. The production process in the jute industry comprises a wide range of activities from cultivation of raw jute, processing of jute fibres, spinning, weaving, bleaching, dyeing, finishing and marketing of jute products. In 2010-11 the jute industry produced goods worth Rs. 7500 crore and had export earnings of nearly Rs. 1350 crore. The jute industry is labour intensive, thus requiring a large number of people in the value chain.

15.3 GOALS OF THE SECTOR

The mid-term goals of the jute sector were laid out in the National Jute Policy, 2005 and in the Jute Technology Mission document, 2006-07. The macro objectives include higher productivity of raw jute and a higher level of production; greater product diversification (from traditional sacking / packaging to newer uses) so that the product mix stands at roughly 65:35 and a higher share of exports in the total production (35% as against the present 22%) could be achieved.

The jute sector’s long-term goal should be to transform this sector from a traditional labour-intensive industry dependent on one main product (sacking) to a self-sufficient modern industry with up-to-date technology and a wide range of products that will have sustained demand in a modern global market. In the present scenario, the strength, versatility and above all the eco-friendliness of jute fibre must be leveraged for development and survival of the industry.

15.4 **ANALYSIS OF THE PRESENT SITUATION AND IDENTIFICATION OF THE MAIN CONSTRAINTS TO GROWTH**

At present India has the highest area under jute cultivation and is the largest producer of raw jute.

Table -15.1 World Production of Jute, Kenaf & Allied Fibres

('000 tones)

	2005-06	2006-07	2007-08	2008-09	2009-10
World	**2895.6**	**3217.2**	**3238.3**	**2596.6**	**2883.9**
Developing Countries	**2888.6**	**3210.2**	**3231.3**	**2589.6**	**2876.9**
Far East**	**2832.3**	**3153.3**	**3175.2**	**2534.2**	**2821.4**
Bangladesh	1138.7	1186.4	1236.8	931.0	1080.0
China	82.8	86.8	86.8	80.0	80.0
India	***1530.0***	***1800.0***	***1782.0***	***1476.0***	***1620.0***
Indonesia	7.0	3.1	4.00	3.8	3.8
Myanmar	36.9	43.6	19.1	12.9	8.0
Nepal	17.7	17.1	16.8	17.0	17.0
Thailand	4.6	3.6	2.2	2.9	1.8
Vietnam	12.6	10.6	25.7	8.8	9.0
Others	2.1	2.2	1.8	1.8	1.8
Latin America &Caribbean	**39.4**	**39.9**	**39.1**	**38.5**	**38.5**
Africa	**13.2**	**13.3**	**13.3**	**13.3**	**13.3**
Near East*	**3.7**	**3.7**	**3.7**	**3.7**	**3.7**
Developed Countries	**7.0**	**7.0**	**7.0**	**7.0**	**7.0**

* Near East refers to Middle East countries of Egypt, Saudi Arabia, Syria, Turkey and others.

Table-15.2 Area Under Jute, Kenaf & Allied Fibre Cultivation In Major Producing Countries. ('000 Hectares)

	Bangladesh	China	India	Myanmar	Nepal	Thailand
2005-06	485.6	31.1	931.0	41.0	12.2	3.1
2006-07	533.4	31.0	931.0	46.5	12.0	2.3
2007-08	500.0	33.0	952.0	20.4	11.7	1.2
2008-09	408.1	30.0	785.6	14.3	11.6	1.5
2009-10	485.8	30.0	773.7	8.9	11.6	1.5

Source: FAO, June, 2010

Closer examination reveals that the agricultural yield of raw jute in India has improved in the XIth Plan period but is still much less than in the two largest competing countries viz. Bangladesh and China.

Table-15.3 Yield of Jute, Kenaf & Allied Fibre in major producing countries.

(tonnes per hectare)

	Bangladesh	China	***India***	Myanmar	Nepal	Thailand
2005-06	2.34	2.66	***1.64***	0.90	1.45	1.51
2006-07	2.22	2.80	***1.93***	0.94	1.43	1.55
2007-08	2.47	2.63	***1.87***	0.94	1.43	1.79
2008-09	2.28	2.67	***1.88***	0.90	1.47	1.93
2009-10	2.22	2.67	***2.09***	0.90	1.47	1.20

Source: FAO, June, 2010

The Indian jute industry is also affected because the quality of the raw fibre is better in Bangladesh. Therefore the Bangladeshi jute farmer gets much better returns per acre than the average Indian jute farmer. There are also reports that China is aggressively developing jute cultivation and processing. The Indian jute industry needs to proactively develop both agricultural practices and processing methods to survive increasingly intense global competition.

Jute being a strong, versatile, eco friendly & highly spinnable fibre, its potential in the world market is very good. The industry however has slow technological progress, besides low initiative in adapting processes and products and in developing its market. To survive in the 21st century, the major issues that the jute industry must face are:

1. Need for stability in supply and price of raw jute
2. Improvement is agricultural practices including retting
3. Upgradation of technology in the mill sector to improve quality and productivity
4. Compliance with social and environmental benchmarks in the production process
5. Upgradation of skilled labour both in the mill sector and the unorganized sector
6. Systematic R&D for process and product development
7. Retention of existing markets and opening up of new markets both within the country and abroad.

The bulk of the jute mills depend on Government orders for sacks for foodgrains, which are mandatory under the Jute Mandatory Packaging Act. This dependence is one of the major barriers to modernization and product diversification within the industry. The jute sector must plan for a gradual phasing out of this order and more self-reliance through modernization and diversification.

15.5 THE GLOBAL SCENARIO

The global market for jute has grown over the years but India's share in global exports of jute goods is still around 27%. The share of Indian exports in World trade has decreased over the years. The growing global market present a huge opportunity for the jute sector. This document envisages both growth of the world jute industry in absolute terms as well as a greater share of the world market for India (42% as against the present 27%)

Table-15.4 World Apparent Consumption of Jute, Kenaf and Allied Fibres

('000 Tonnes)

	2005	2006	2007	2008	2009
Developing Countries					
Africa	64.83	80.33	69.28	75.49	68.07
Latin America	57.28	60.65	58.86	59.49	55.18
Near East *	265.60	261.47	276.78	295.05	281.31
Far East**	2118.40	2008.70	2353.20	2258.60	2059.30
Total Developing Countries	**2506.11**	**2411.15**	**2758.12**	**2688.63**	**2463.86**
Developed Countries					
North America	69.40	58.80	55.30	49.40	34.10
Europe	102.30	103.20	99.70	130.00	77.50
Former USSR	12.20	16.30	26.50	31.00	14.40
Oceania	40.70	31.80	30.80	30.50	29.50
Other Developed Countries	22.90	20.80	19.80	18.70	17.80
Total Developed Countries	**247.50**	**230.90**	**232.10**	**259.60**	**173.30**
WORLD	**2753.61**	**2642.05**	**2990.22**	**2948.23**	**2637.16**

*Near East refers to Middle East countries of Egypt, Saudi Arabia, Syria, Turkey and others.
**Far East includes Bangladesh, India, Pakistan, Nepal, Indonesia, Thailand as well as China.
Source: FAO, June, 2010

The most promising new application of jute, with potential for bulk use, is Jute Geo-Textiles. These fabrics have the advantage of (a) not requiring significant changes in the production line and (b) having great market potential since they now account for only 1% of the world market. Natural fibres account for 6% of the total geo-textiles market out of which jute accounts for about 1%. Presently the global demand for geo-synthetics is about 2.5 billion sq. metre and the demand for jute geo-textiles is estimated at around 400 million sq. metre. This huge opportunity for jute is addressed in the jute sector's proposals for the XIIth Plan.

15.6. RAW JUTE IN INDIA

Raw jute crop is an important cash crop to the farmers. Cultivation of raw jute crop provides not only fibre which has industrial uses beyond fibre and sacking, but also jute sticks which are used as fuel and building material by the farming community. The following table shows the supply demand position of raw jute including *mesta* for the period from 2005-06 to 2011-12 (estimated):-

Table-15.5 Raw Jute Balance Sheet

(Qty: In lakh bales - 180 Kg per bale)

This balance sheet of raw jute including mesta *has been made on the basis of Decisions of Jute Advisory Board.*

	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12 (Estimated)**
(A)SUPPLY							
i) Opening stock	14.00	8.00	23.00	22.00	8.00	12.00	18.00
ii) Jute and Mesta crop	85.00	100.00	99.00	82.00	90.00	100.00	110.00
iii)Import	7.00	4.00	8.00	2.00	3.00	6.00	5.00
Total :	**106.00**	**112.00**	**130.00**	**106.00**	**101.00**	118.00	**133.00**
(B)DISTRIBUTION							
iv)Mill consumption	90.00	81.00	99.00	89.00	77.00	90.00	95.00
v)Domestic/industrial consumption	8.00	8.00	9.00	9.00	10.00	10.00	10.00
vi)Export	Neg	Neg	Neg	Neg	2.00	Neg	**1.00**
Total:	**98.00**	**89.00**	**108.00**	**98.00**	**89.00**	100.00	106.00
(C)CLOSING STOCK	8.00	23.00	22.00	8.00	12.00	18.00	27.00

Neg: Negligible

15.7 EXPORT OF RAW JUTE

In the year 2009-10, raw jute exports from India have met the demand of raw jute in countries like Pakistan, China, Vietnam, etc. as Bangladesh banned export of raw jute. India started exporting raw jute after nearly 20 years. However, now that the Government of Bangladesh has withdrawn the ban on export of raw jute, there seems little potential of export of raw jute from India. If, however, there is a bumper crop and the price remains low, there is a possibility of export of 1.0 to 2.0 lakh bales of raw jute each year. This document envisages production of raw jute at levels above the industrial off-take, so that there would be surplus to provide (a) a buffer stock within the country and (b) provision for some exports.

15.8 JUTE GOODS PRODUCTION IN INDIA

Of the 80 composite jute mills in India, 62 jute mills are located in West Bengal, 3 each in Bihar and U.P., 7 in Andhra Pradesh, 2 in Assam and one each in Orissa, Tripura and Chhattisgarh. Six mills are under Government of India's P.S.U., 2 mills - Tripura (Tripura) & Konark (Orissa) are under State Government, 2 mills (Assam & New Central) are in the co-operative sector and 71 are privately owned mills.

As on 01-12-2010 there were 48,138 looms installed in jute mills, with 23,372 Hessian looms, 22,148 sacking looms, 1,052 C.B.C looms and 1,566 others. 731,512 spindles were installed in jute mills (other than 100% export oriented units) with 624,236 fine spindles and 107,276 coarse spindles. As on 01-06-2009, 100% export oriented units had 13,840 spindles installed with 11,332 fine spindles and 2508 coarse spindles. The maximum installed capacity in jute mills other than 100% export oriented units (on the basis of 320 working days per year) is estimated at 2.617 million tonnes per annum.

15.9 Production and Export of Jute Goods (2006-2011)

Demand of jute products in domestic & export markets and production of jute goods during the 11th Five Year Plan upto 2011-12(Projected) are given below:-

Table-15. 6Domestic Consumption of Jute Goods

Qty '000 M.T.

(April-March)	Hessian	Sacking	CBC	Others	*Total*
2006-07	209.1	854.4	0.4	152.5	1216.4
2007-08	271.4	1101.9	1.4	168.6	1543.3
2008-09	249.8	1013.0	2.5	170.9	1436.2
2009-10	182.4	879.6	3.2	140.0	1205.2
2010-11	182.1	1032.8	3.6	130.8	1349.3
2011-12 (Projected)	191.0	1083.0	3.5	137.5	1415.0

Table-15.7 Export of Jute Products

(Quantity in '000'MT Value Rs. in Crore)

2006-07 to 2010-11 & 2011-12 (estimated)

(Apr-Mar)	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12 (ESTIMATED)	
ITEM	**Qty**	**Value**	**Qty**	**Value**	Qty	**Value**	**Qty**	**Value**	**Qty**	**Value**	**Qty**	**Value**
Hessian	122.2	376.12	67.8	299.83	31.3	174.19	53.0	419.53	54.0	266.0	50.0	245.0
Sacking	31.6	103.25	30.0	91.38	26.5	100.38	53.2	209.54	43.0	179.0	35.0	145.0
Yarn	78.3	273.15	92.1	285.18	44.4	179.34	82.9	216.92	94.0	495.0	85.0	450.0
JDP	-	256.48	-	402.55	-	343.40	-	294.53	-	339.0	-	400.0
Others	10.7	46.16	14.4	64.63	8.3	47.39	10.7	75.64	10.0	71.0	40.0	110.0
TOTAL	**242.8**	**1055.16**	**204.3**	**1143.57**	**110.5**	**844.70**	**199.8**	**1216.16**	**201.0**	**1350.0**	**210.0**	**1350.0**
In Million Dollar (mln $)		**241**		**293**		**238**		**189**		**299**		**300**

CAGR: 5.6% over 5 years

Table-15.8 Production of Jute Goods:

(Qty. in'000' MT)

(April-March)	Hessian	Sacking	CBC	Others	Total
2006-07*	250.3	874.7	2.9	228.4	1356.3
2007-08	350.3	1143.0	6.0	276.7	1776.0
2008-09*	297.8	1071.4	4.1	260.4	1633.7
2009-10*	206.5	921.6	3.6	191.6	1323.3
2010-11	244.3	1084.0	3.4	241.0	1572.7
2011-12 (Projected)	256.0	1138.0	4.0	253.0	1651.0

**The unusual fall in production during 2006-07 and 2009-10 was due to the strikes in jute mills in West Bengal during 05-01-2007 to 08-03-2007 and 14-12-2009 to 12-02-2010*

respectively. In 2008-09, there was strike for a short period in jute mills in West Bengal, from 01-12-2008 to 18-12-2008.

DOMESTIC CONSUMPTION OF JUTE GOODS

(Apr-Mar)	Domestic Consumption (In '000 MT)
2007-08	1543
2008-09#	1436
2009-10##	1207
2010-11	1351

 # All jute mills in WB were under strike from 1st December'08 to 18th December'08
All jute mills except 3 in WB were strike bound from 14th December'09 to 13th February'10

REVIEW OF PERFORMANCE OF THE JUTE SECTOR DURING THE XI PLAN

15.10 The Jute Technology Mission:

The Jute Technology Mission (JTM) spanning a period of 5 years has commenced in April 2007, i.e. the last month of the fiscal 2006-07. The Jute Technology Mission with a total outlay of Rs. 355.5 crore had four Mini Missions pertaining to agriculture research and seed development, agronomic practices, harvest and post harvest techniques, primary and secondary processing of raw jute, diversified product development and marketing and distribution.

The Jute Technology Mission has been divided into four Mini Missions and the implementing agencies of each Mission are given below:-

Table-15.9 Jute Technology Mission

Mission	Implementing Agencies	Fund Allotted (Rs. Crores)
Mini Mission-I	Ministry of Agriculture(ICAR)	7.06
Mini Mission-II	Ministry of Agriculture (DARE)	49.90
Mini Mission-III	Ministry of Textiles (JCI)	64.58
Mini Mission-IV	Ministry of Textiles (JMDC/ NJB)	234.02
Total -		**355.56**

The activities of the four Mini Missions –

Mini Mission-I:

In order to increase the yield of jute and mesta, some new breeding methods and techniques have been adopted as under:-

i) Plant type breeding, ii) Heterosis breeding, iii) Resistance breeding & iv) Quality breeding.

In addition to conventional breeding, mutation breeding, inter-specific crosses and biotechnological approaches will also be explored. The following activities will also be undertaken:-

Low cost Technology for development of suitable agronomic practices for maximizing income from jute vis-à-vis other crops in the cropping system as a whole.

Bio-mass level- while developing the technology, the biomass level of the crop should be kept in mind so as to ensure growth with stability of the micro-economy of the farmer.

The total funds allotted for MM-I are Rs. 705.78 lakhs.

Mini Mission-II:

In order to achieve best of production and management of technologies for jute and allied fibres crop and their post-harvest technology to accelerate the production and quality improvement of the crops the following activities have been adopted:-

i) System approach, ii) Adaptive Research of Farm Trials, iii) Strengthening Research – Extension Linkage, iv) Frontline Demonstration, v) On Farm Package Demonstration, vi) Industry-Agriculture Linkage, vii) Application of Bio-technology tools to improving retting efficiency, viii) Planning and Implementation of Development Programme,ix) Special Programme for finer fibre and x) Integrated Jute Cultivation. The total funds allotted for MM-II are Rs. 4990.00 lakhs.

Mini Mission-III:

Construction of 12 APMCs @ Rs.110 lakh each, 40 DPCs at the cost of Rs.110 lakh each and 50 Retting Tanks at a cost of Rs. 10 lakh each Organizational infrastructure: i) Market linkages, ii) Market information system, iii) Bankcredit option to prevent distress sale.

Upgradation of infrastructure for: i) Weighment facility, ii) Sale within Market facilities, iii) Auction/Sale Platforms, sheds, Assortment sheds, Baling Presses, Bale Godown, etc..

The total funds allotted for MM-III is Rs. 6,458.00 lakhs.

Table -15.10 Scheme –wise Status of Projects under Jute Technology Mission (Mini Mission III) as on 31.03.2011

Scheme I : Development of Market Yards:

Physical Target: 12
Project Outlay: Rs. 12.20 Crore (`7.98 crore Central Govt. : `4.22 crore State Govt.)

State	Physical Target	Work Completed	Work in Progress	Names of Completed sites	Names of Sites for work in progress
West Bengal	8	6	2	Champadanga, Karimpur, Dhupguri, Toofanganj, Tulsihata, Bethuadahari.	Setai, Englishbazar,
Assam (NER)	3	1	2	Kharupetia	Baharihat, Gouripur
A.P.	1	-	1		Parvathipuram
Total	**12**	**7**	**5**		

Scheme II Construction of Departmental Purchase Centers:

Physical Target: 40
Project Outlay: ` 44.00 Crore (100% Central Govt.)

State	Physical Target	Work Completed	Work in Progress	Names of completed sites	Sites in Progress
West Bengal	22	13	09	Karnojora, Mathabhanga, Kalna, Katwa, Harirampur, Talmahat, Islampur, Alipurduar, Jangipur, Kaladanga, Pandua, Panjipara, Patiram.	Rezinangar – I, Rezinagar – II, Palassypara, Dhulian, Lalbagh –I, Lalbagh –II, Paccamati, Andhi, Dudhkumrahat,
Assam (NER)	10	07	03	Kaliabor, Nizdhing, Dalgaon, Abhayapuri, Barpeta, Goalpara, Bilashipara	Juria, Dhing, Bhuragaon,
Bihar	5	01	04	Gulabbagh	Forbeshganj, Thakurganj, Kishanganj, Bahadurganj
A.P.	1	-	1		Bobbili
Orissa	2	-	2		Bhadrak, Kendupatna
Total	**40**	**21**	**19**		

Scheme III : Construction of Retting Tank:

Physical Target: 50

Project Outlay: ` 5 Crore (90% Central Govt. : 10% Beneficiary)

State	Physical Target	Work Completed	Work in Progress
West Bengal	30	20	10
Assam (NER)	10	05	05
Bihar	05	01	04
A.P.	03	-	03
Orissa	02	-	02
Total	**50**	**26**	**24**

Scheme IV Demonstration of Retting Technology:

Physical Target: 40 Demonstrations per year
Project Outlay: `2.00 Crore (100% Central Govt)

State	Physical Target	Work Completed	To be completed in 2011-12
West Bengal	120	100	20
Assam (NER)	40	30	10
Bihar	20	15	05
A.P.	10	08	02
Orissa	10	07	03
Total	**200**	**160**	**40**

Scheme-V: Development of high speed Ribboners

Project Outlay: `1.60 Crore (100% Central Govt.)

PROJECT SANCTIONED	COST	PROGRESS
Jadavpur University Phase-I & II	Rs. 95 lacs	Completed work of Ph-I. Developed 1 ribboning machine which is placed under Champadanga, Hooghly for demonstration. **Ph-II :** JU has developed 2 more ribboning machines. The field trial run is in progress.
CRIJAF (Barrackpore)	Rs. 40 lacs	Project for development of High Speed Ribboner (1st Phase) sanctioned to CRIJAF on Feb'09 with an advance of 50% of the Project cost. The project is still under progress.

Table – 15.11 Expenditure in the Plan Project Jute Technology Mission (Mini Mission III) till 31.03.2011

Name of Scheme	Budget	Expenditur	Expenditur	Expenditure

JTM MINI MISSION-III		allocation Five year Plan (2007-12)	e incurred up to 31.3.2010	e incurred up to 31.03.2011	incurred from 31.03.2010 to 31.03.2011
		Rupees in Crore			
1	Developments of Market Yards	12.20	6.00	6.00	0.00
2	Construction of DPCs in JCI	44.00	16.50	27.57	11.07
3	Construction of Retting Tanks in JCI	5.00	2.52	3.60	1.08
4	Demonstration of Retting	2.00	1.20	1.60	0.40
5	Developments of Jute Ribboners	1.60	1.60	1.60	0.00
	Total	**64.80**	**27.82**	**40.37**	**12.55**

Mini Mission –IV:

i) Modernization & Technological upgradation, ii) Improve productivity of the industry, iii) Develop human resources for the jute industry, iv) Design & Development of JDPs, v) Help NGOs for JDP development, vi) Commercializing to Technology for JDP and vii) Jute parks. The total funds allotted for MM-IV are Rs. 23,402.00 lakh.

PHYSICAL PROGRESS OF JTM – MINI-MISSION IV

The physical progress of all the schemes under MM IV since inception till 31st March 2011 are as follows:

Sustainable Human Resource Development in Jute Mill Sector (Scheme No.6.1)

Since inception, training has been imparted to 12671 Master trainers, Supervisors, Maintenance Workers and other Workers in 39 jute mills. The Master Trainers and Supervisors have already trained a further 7620 workers in 16 mills. Institute of Jute Technology has developed 21 audio-visual modules on different process of production as training aid for sustainable training in the jute mills.

Development of Jute Mill Machinery (Scheme No.6.2)

A state-of-art Centre for Jute Machinery Development (CJMD) under PPP mode has been established. 5 identified machines viz. Spreader, Carding, Drawing, Spinning and Shuttleless looms for the jute industry are being developed in the CJMD. Development of Electronic and Microprocessor based integrated Instrumentation for Jute Grading System by NIRJAFT under ISMDCP.

Productivity Improvement & TQM Facilitation (Scheme No.6.3)

The scheme to improve productivity and to establish Total Quality Management (TQM) facilities in the jute industry has been provided under Mini Mission – IV of the JTM with NJB as facilitating agency of the scheme. The identified areas of operation of Productivity Improvement & TQM Facilitation are

(i) Total Quality Management,
(ii) Energy Management
(iii) Waste Management
(iv) Maintenance Management
(v) Work Study & Ergonomics.

To facilitate these studies, NJB engaged 4 National level reputed Agencies / Institutions to conduct the studies under the scheme and implement recommendations in selected 6 jute mills. After completion of diagnostic studies, corrective implementation plans have been finalized in consultation with the respective jute mill sand have been started in the 5 Jute Mills.

In addition, TQM studies have been completed in 6 mills in Kerala producing and exporting floor covering.

Modernisation and Upgradation of Technology in Jute Mills – Capital Subsidy (Scheme No.6.4):

- The upper limit of the subsidy has been raised to Rs. 350 lakhs per mill for the existing units and Rs.400 lakhs per mill in North Eastern States and for setting up new units.
- Since inception (1st March, 2007), 166 claims have been settled and subsidy of Rs.45.62 crore has been released against investment for modernization of Rs.228.09 crore all over India.
- 75.93% of the investments have been for Mill-side machinery meant for preparatory to spinning and winding processes. 17.74% of the investments have been for weaving to finishing processes of manufacturing. Remaining 6.33% was for Material handling and other miscellaneous machinery.
- 70 units have so far availed the benefits under the scheme, which includes 54 composite jute mills, 13 yarn & twine mills, 2 diversified jute product units and 1 weaving unit.
- State-wise – West Bengal 50 units, Andhra Pradesh 7 units, Bihar 2 units, Haryana 2 units, Kerala 1 unit, Orissa 2 and NER (Assam) 6 units availed the benefits.
- The evaluation of the applications for further enlistment of vendors assigned to IJT has since been completed. They have recommended 10 out of the 12 applications for enlistment.

Design and Development of Jute Diversified Products JDPs (Scheme No.7.1)

Total 20 market driven R&D Studies on different aspects have been awarded to the following institutions

- Indian Institute of Technology, Kharagpur – 7 studies
- South India Textile Research Association, Coimbatore – 2 studies
- National Institute of Research on Jute and Allied Fibre Technology, Kolkata – 1 study.
- Indian Jute Industries Research Association, Kolkata – 6 studies
- Institute of Jute Technology, Kolkata – 4 studies

The studies range between 36-60 months each. NJB monitors the progress and marketability of the products and process under development by organizing seminars / workshops / meetings regularly with the stakeholders.

In addition, NJB engaged 11 agencies (designers, institutes, entrepreneurs) for undertaking need based design development projects of jute diversified products.

Helping NGOs and Women Self Help Groups (WSHGs) for developing jute diversified products (Scheme No.7.2):

- 46 NGOs have been identified
- 258 Clusters developed
- 872 Women Self Help Groups in 88 districts of 18 States imparted training to 13950 artisans on production of JDPs
- 531 machines were distributed to 260 Women Self Help Groups.

Scheme for Promotion of Jute Diversification (Scheme No.7.3)

- 36 Jute Service Centres have been established
- 30 Jute Raw Material Banks have been established
- 1373 training programmes were organized by Jute Service Centres benefiting 26,459 artisans.
- 301 JDP, SHG units were setup.
- 138 machines were distributed to the JSC developed units.

Setting up of Jute Parks (Scheme No.7.5)

9 JutePark proposals (6 in WB, 1 in Bihar & 2 in NER) are being promoted. Constructions in 4 Jute parks have commenced (2 in WB, 1 in Bihar & 1 in NER).

Table-15.12
Schemes – Wise performance of Mini Mission IV

Sl. No.	SCHEMES	MISSION TARGET	PERFORMANCE TILL 2010-11				
		Fund for Total Mission Period (2007-12)	2007-08	2008-09	2009-10	2010-11 (provisional)	Cumulative TOTALupto 2010-11
1	2	3	4	5	6	7	8=(4+5+6+7)
6	SCHEMES FOR MODERNISATION OF ORGANISED JUTE MILLS						
6.1	Training of Workers & Supervisors	***4.50***	2.00	0.77	0.50	1.00	4.27
6.2	Machinery Development	***28.00***	0.08	5.75	7.62	5.38	18.83
6.3	Productivity Improvement & TQM Facilitation	***6.00***	0.04	0.12	1.00	2.95	4.11
6.4	Acquisition of Machinery and Plant (subsidy)	***80.00***	5.86	7.46	11.24	21.75	46.31
	TOTAL (6)	***118.50***	**7.98**	**14.10**	**20.36**	**31.08**	**73.52**
7	SCHEMES FOR PROMOTION OF JUTE DIVERSIFICATION						
7.1	Design and Development of JDP	***14.00***	2.20	2.56	1.52	1.98	8.26
7.2	For helping NGOs and Women Self Help Groups (WSHGs) for developing JDPs	***17.00***	0.38	1.52	1.79	3.15	6.84
7.3	Scheme for Promotion of Jute Diversification:	***23.52***	1.97	5.21	4.91	4.79	16.88
7.4	Scheme for Commercialisation of Technology	***1.00***	0.00	0.00	0.00	0.00	0.00
7.5	Scheme for setting up Jute Parks for the Diversified sector	***60.00***	0.06	0.83	1.50	13.31	15.70
	TOTAL (7)	***115.52***	**4.61**	**10.12**	**9.72**	**23.23**	**47.68**
	Total Mini Mission-IV (Schemes)	***234.02***	**12.59**	**24.22**	**30.08**	**54.31**	**121.20**
	Administrative / Monitoring Expenses		**0.35**	**0.97**	**1.58**	**2.03**	**4.93**
	Total Mini Mission-IV	***234.02***	**12.94**	**25.19**	**31.66**	**56.34**	**126.13**

15.11 Other Schemes:

Technology Upgradation Fund Scheme

The objective of the scheme is to sustain and improve the competitiveness of the textiles/jute industry and overall long-term viability through technology up gradation. The cumulative position of sanction and disbursement under TUFS as on 30-06-2010 may be seen in the following table **15.13**:-

Table :15.13 Cumulative position of sanction and disbursement under TUFS

Rs in Crore

No of Applications received	Cost of Projects	Amount of Loan required	No of beneficiaries to whom loan is disbursed	Loan Disbursed
53	535.62	405.89	53	390.69

APPROACH FOR ADDRESSING THE ISSUES IN XII PLAN

The Working Group identified ten broad issues related to the jute sector for strategy formulation, target fixing and action plan. The objectives, strategy and budget of the identified issues are stated below:

15.12 Raw jute production:

Objectives –

- Direct Govt. intervention in the production & distribution of Certified Jute Seeds so as to ensure 100% utilization of certified seeds by the end of the XII plan period.
- Set direction for new seed development & involve reputed international companies
- Increase penetration of new developments in seed & farm techniques by conducting awareness programme
- To achieve a target of increasing raw jute production by 25% (over 2010) to around 135-140 lakh bales

Table -15. 14 Area of Cultivation, Productivity and Production of Jute & Mesta crop in different situations (Present Status)

Situation	Variety	Area under cultivation (Ha)	Productivity (Kg / Ha)	Estimated Production (Lakh B/S)	Total Production (Lakh B/S)
1	Jute	8.0 Lakh Ha	2012 Kg / Ha	89 Lakh B/S	96 Lakh B/S

(Normal)	Mesta	1.2 Lakh Ha	1090 Kg / Ha	7 Lakh B/S	
2	Jute	8.5 Lakh Ha	2500 Kg / Ha	118 Lakh B/S	128 Lakh B/S
	Mesta	1.5 Lakh Ha	1200 Kg / Ha	10 Lakh B/S	
3	Jute	8.5 Lakh Ha	3000 Kg / Ha	141 Lakh B/S	151 Lakh B/S
	Mesta	1.5 Lakh Ha	1200 Kg / Ha	10 Lakh B/S	
2010-11	Jute	8.0 Lakh Ha	2100 Kg / Ha	93 Lakh B/S	**100 Lakh B/S**
(Estimated)	Mesta	1.2 Lakh Ha	1090 Kg / Ha	7 Lakh B/S	
2011 - 12	Jute	8.5 Lakh Ha	2200 Kg / Ha	104 Lakh B/S	**114 Lakh B/S**
(Projected)	Mesta	1.5 Lakh Ha	1200 Kg / Ha	10 Lakh B/S	

Table-15.15 Seed Availability Situations

Situation	Variety	Total Seed Requirement	Certified Seed Availability	Other Seed
1	Jute	50,000 Qtl	15,000 Qtl (30%)	45,000 Qtl (70%)
Normal)	Mesta	2,500 Qtl	NIL	2,500 Qtl (100%)
2	Jute	50,000 Qtl	30,000 Qtl (60%)	20,000 Qtl (40%)
	Mesta	2,500 Qtl	NIL	2,500 Qtl (100%)
3	Jute	37,500 Qtl (25 % Less)	30,000 Qtl (80 %)	7,500 Qtl (20 %)
(Use of Seed drill M/C)	Mesta	1,875 Qtl (25 % Less)	1,000 Qtl (53 %)	875 Qtl (47 %)

Table-15.16 Estimation of Area of Cultivation, Productivity and Production of Jute & Mesta crop during XIIth Plan period

	Jute				Mesta				Total		
YEAR	**area**	**yeild**	**Prod.**	**Prod.**	**area**	**yeild**	**Prod.**	**Prod.**	**area**	**Prod.**	**Prod.**
	lakh Ha	**MT**	**Lakh B/s**	**Lakh MT**	**lakh Ha**	**MT**	**Lakh B/s**	**Lakh MT**	**lakh Ha**	**Lakh B/s**	**Lakh MT**
XI th Plan											
2011-12	8.5	2.20	104	18.70	1.5	1.2	10	1.80	10.0	114	20.50
XII th Plan											
2012-13	8.4	2.25	105	18.90	1.5	1.20	10	1.80	9.9	115	20.70
2013-14	8.2	2.41	110	19.80	1.5	1.32	11	1.98	9.7	121	21.78
2014-15	8.1	2.60	117	21.06	1.5	1.44	12	2.16	9.6	129	23.22
2015-16	7.8	2.82	122	21.96	1.5	1.56	13	2.34	9.3	135	24.30
2016-17	7.5	3.02	126	22.68	1.5	1.68	14	2.52	9.0	140	25.20

Table-15.17
Projections for the requirement and availability of raw jute during 2012-2017:

Qty: In lakh bales

(July-June)	Requirement	Availability
2012-13	103.50	115.0
2013-14	105.50	121.0
2014-15	108.50	129.0
2015-16	112.50	135.0
2016-17	117.50	140.0

Table-15.18
Plan of JCI to Introduce New High Yielding Variety of Seed during 12th Plan

Year	Free distribution of New Variety (MT)	Sale of new varieties at subsidized rate (MT)	Sale of JRO 524 at subsidized rate (MT)	Total (MT)
2012-13	60	0	1360	1360
2013-14	60	300	1200	1500
2014-15	50	600	1100	1700
2015-16	50	900	1000	1900
2016-17	40	1200	800	2000

Objective is to gradually replace the present JRO-524 variety with higher yielding certified seed which are presently developed/under development

Suggestions for promotion and development of new variety.

- To promote the newly developed varieties of high-yielding and insect / weed resistant jute seeds;
- A Joint Committee (between Agriculture and Textiles) to monitor the promotional and other activities;
- Demonstration of new variety;
- 500 fields to be identified throughout the country for demonstration;
- Generation of Security Fund for compensation to farmer (if any) ;
- Integrated programmes with Jute Research Institute (CRIJAF), NJB & Private sector pioneers in jute seed production and distribution

- Collaborative study tours are to be organized for understanding the technologies producing high yieldingResearch & Hybrid Seed in the countries like China, so far 2 trips have been organised (2 trips).
- The use of certified seeds must be increased to ensure that by the end of plan period, 100% of the seeds to be used by the farmers in India are certified seeds only. The seed producers must be incentivized to produce certified seeds and the certified seeds are to be made available to the farmers at some subsidized rate. A fund of **Rs. 38.50 crore** is proposed for the same. Further to ensure availability of 100% certified seeds, all truthfully labeled (TL) and uncertified seeds will be mopped up by the Govt. in the first two years.**Rs. 15 crore** is budgeted to stop usage of all seeds other than the certified seeds. However, a salvage value of 10% is expected to be recovered by using the mopped up seeds as bio-fuel. An amount of **Rs. 13.50 crore** is therefore provided.
- The scheme of jute farmers information and training centers to make the farmers aware of the availability of HYV and certified seeds, newer farming techniques, etc. so long funded from the non-plan outlay of NJB will be covered under plan in the XII Plan period. An outlay of **Rs. 10.50 crore** is proposed for the purpose

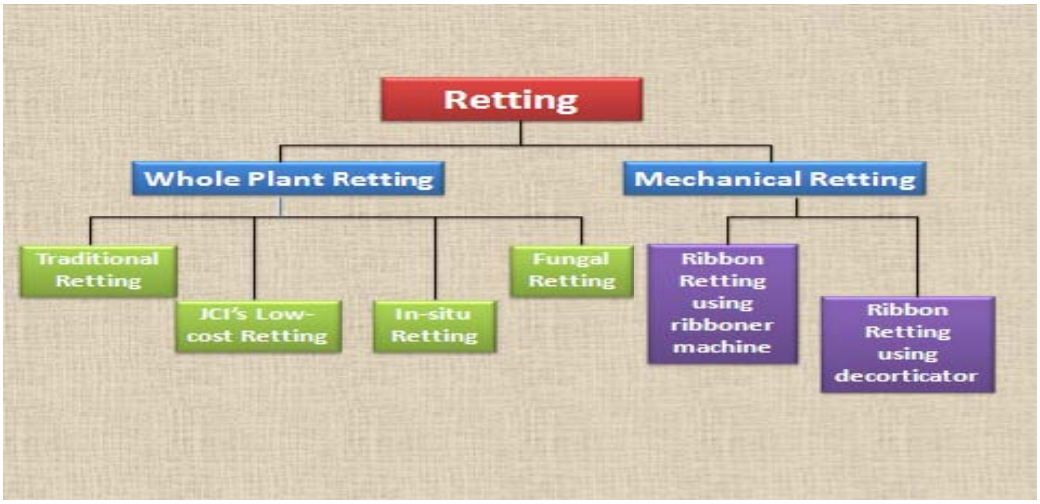
Extension of JTM (MM III) activities in the XII Plan

JCI proposes extension of only one activity/ scheme in the XII plan i.e., the scheme for construction of DPCs. **Sixty DPCs** are to be constructed by JCI at a cost of **Rs 100 Crore**. These DPCS will replace the existing DPCs, which are presently rented by JCI. Thus the total number of DPCs will remain at 171. The DPCs will have all facilities like weighing and testing equipments, farmers information centre. The cost of developing farmers group and conducting motivational / training programme are covered within the proposed financial allocation.

- China has stated to have developed 5 Jute varieties classified as State Key Variety and 7 Kenaf varieties that obtained national approval. High-yield, Good-quality and Resistant Jute Variety-Meifeng-4 and Jute179 have average raw fiber yield of 7000kg/ha with anthracnose resistance. High Yield Kenaf Variety-Fuhong992 / Jinguang-1 have average fiber output of 4000-3624kg/ha.
- We need to have collaborative research in jute breeding / seed production technology with some selected seed research centres in China like Fujian Agriculture and Forestry University (FAFU), Fuzhou Province, China. A fund of **Rs. 10 crore** for the purpose is proposed to be funded through the Minitry of Agriculture.

15.13 Retting

Retting is the most important post-harvesting operation to improve production and quality. Use of improved retting technology helps to improve quality by 2 grades, reduces man-power requirement and also insulates against inadequate water availability.



Above 90% of Jute growers today use the traditional Whole Plant Jute Retting whose efficacy is almost totally dependent on monsoon conditions.

Present Status	Objective
About 5-10% of jute growers are aware/using JCI's **low-cost retting** process.	Another 30-40% of jute growers will be habituated with low-cost retting process with the help of JCI's activities.
Fungal & In-situ retting are in R&D stage.	Fungal & In-situ retting will be popularized with the help of demonstration as much as possible, subject to the availability of material and technology.
Though the technology of **Power driven ribboner** is developed but its acceptability to the farmers is yet to be established.	More R&D is required to make it farmers' friendly.
One of the successful technology, direct fibre extraction for 'Kenaf' is successfully being used in Malaysia. This type of technology/machine is not used for jute fibre extraction in India.	A few such "Fibre Extractor Machine" may be imported from Malaysia and used for jute fibre extraction. A technical collaboration with Malaysia may also be considered.

An equally important objective is to improve the overall quality of raw jute produced by popularizing the improved retting methods.

Grade	Present Output Composition	Objective / Target
Upto TD3	12-13%	18-20%
TD4 & TD5	50-60%	60-70%
TD6 and below	30-35%	15-20%

Research work for proving all the retting processes mentioned-except the established JCI's Low cost Retting technique- may be continued at this stage. In course of time one or more of the above methods may be popularized depending on:

i) Success rate of its application.

ii) Ease of adaptability.

iii) Economic factors.

iv) Appropriateness to the physical and cultural environment in the specific location.

The total cost estimate for developing and demonstrating the four techniques is **Rs. 16.50 Crore (Approx).** For the time being, the concentration will be on popularizing the *Low-cost Retting* for which the estimated cost will be **Rs 9.50 Crore**. During the Plan period provisions have been proposed for Fungal and In-situ retting **(Rs. 3.00 crore),** power driven ribboner **(Rs. 2.00crore).** All these will be funded as an element of JTM. Further, provision for development of a Decorticator as a method of direct fibre exraction is also proposed under Plan. A budget of **Rs. 2.00 crore** has been provided for its operation. By this method fibre grade improvement will be 1½ -2 grades. **[Total Rs. 16.50 crore]**

15.14 Marketing of Raw Jute & Price Stabilization

Objectives

- Improvement of existing market infrastructure
- Formulation of Strategy for institutionalizing appropriate method of proper price discovery of raw jute and institutional arrangement for dissemination of price information to all stakeholders.
- Development of long term sustainability policy mechanism for removing price volatility in raw jute and removing influence of any particular player in determining the price of raw jute.
- To review the present grading system and weightage given on fibre characteristics in the BIS standard

- Expansion of activities of JCI and facilitating setting up of jute growers co-operatives in the jute growing districts.
- Development of appropriate mechanism for fixation of realistic Minimum Support Price

Current Scenario:

- Large number of production or supply points scattered over a large area as compared to the concentrated one or two consumption points or terminal markets;
- The large distance between the points of production and the points of consumption;
- The entire crop of raw jute equivalent to 12 months' consumption of mills being taken out of the fields in 3 to 4 months' period and marketed in a short span of 4-5 months by the majority producers belonging to small and marginal category. The staggering of sale is resorted to only by the affluent growers and grower-cum-stockiest;
- There is un-assorted and un-graded sale of the produce at the growers level while sale effected in a graded form from the secondary stage;
- The produce being bulky and highly inflammable, the carrying and storage pose a problem;
- The jute growers are characterized by their small land holdings and large families with low capacity of investment, low bargaining and poor holding power. This economic weakness of jute growers set the pace of arrival which has a bearing on price.

From the categorization point of view, the jute markets may be divided as

(i) Village / Doorstep,
(ii) Primary market / haat,
(iii) Secondary market, and
(iv) Terminal market.

Strategy:

1) Realistic computation of Minimum Support Price
2) Till the MSP is fixed at a realistic level, JCI may be allowed for Commercial Operations whenever prices are showing a rapid declining trend
3) Creation of jute bank
4) Creation of a buffer stock
5) Strengthening the organizational/functional efficiency of the market structure
6) Forging a direct linkage between the end user and the farmer

7) Institutional Credit to Farmers

Methodology:

1. MSP may be computed by professional agency outside the ambit of the Government taking into account all socio-economic factors.

2. The Jute Advisory Board with Farmers representatives, JCI, NJB, IJMA as members and headed by the Jute Commissioner may decide at the stage where JCI should undertake commercial operation.

3. The Jute bank scheme will have following basic features:

   I) JCI will hold stock of jute of farmers and pay them loan equivalent to MSP price of the produce

   II) JCI sorts & grades the jute and keeps in insured godowns

   III) Farmers can buy back after paying nominal interest/ service charges and sell at a remunerative price

4. If farmer does not buy back within a certain period, JCI will treat the stock as MSP Purchases.

The Jute Buffer stock scheme will have following features:

I) Buffer Stock would be created out of a part of the stock procured by JCI under MSP operation.

II) To start with the size of the buffer stock may be 5 lakh bales. The stock level could be maintained around this limit more or less on a permanent basis through a system of rotation on “first-in-first-out” principle.

III) The timing of rotation and/or release of stock will be so regulated as to prevent any market disruption.

IV) JCI will administer the jute buffer stock scheme in participation with the Industry.

V) All mills will be eligible for participation in the scheme. The stock to be kept in buffer may be distributed to the mills on pro-rata basis in relation to the current level of consumption of each. The on mills participating in the scheme will have to agree to the following:

   a) To provide security & storage space for the stock allocated to each free of cost.

   b) To accept the stock at an entry price from a date to be appointed.

c) To pay monthly interest, insurance and supervision cost as also the JCI's service charge and all such monthly expenses shall be payable at the time of release of stock.

d) To settle claim on quality, condition, short weight at the time of entry of the stock into the Mills godown and

e) To accept the stock for consumption as when rotated and/or release on payment of the release price.

VI) The stock shall remain under the custody, control and ownership of the JCI till it is released to the Mills. Each Mill will be required to enter into an agreement with the JCI, which will set out clearly terms and conditions relating to entry, release, payment etc. of the stock.

VII) The fund required to finance the stock may be made available by one or more Commercial Banks, on pledge of stock, backed by a guarantee for the margin money to be given by the Govt. of India. For this purpose, a separate line of credit may be made available to the JCI.

VIII) Cost of interest, insurance and supervision as also the services charge of the JCI shall be borne by NJB and Industry in the ratio of 50:50.

IX) The Profit and/or loss, if any, will be shared by the Industry and NJB in the ratio of 50:50.

X) In case of default on the part of the participating Mills, the JCI will have the option to withhold the stock and allocate the same to any other eligible Mills.

XI) A Committee consisting of the representatives of the JCI, NJB, the Bank and the Industry headed by the Jute Commissioner may be constituted to run the scheme. The Committee will take decision on the following based on guidelines to be issued by the Govt. of India from time to time:

a) Level of stock to be maintained on the buffer account from time to time;

b) Prices at which purchases are to be made;

c) Allocation of stock to the participating Mills;

d) Timing of rotation and/or release of the stock and its pricing;

e) Procedure to be followed for collection of sale and other dues from the participating Mills, and

f) All other matters pertaining to the implementation of the buffer stock scheme.

The decision of the Committee will be binding on both the JCI and participating Mills.

5. Under the Jute Technology Mission the infrastructure of JCI is being upgraded and 12 market Yards and 40 DPCs are being constructed. In the next Plan period another 100 DPCs may be constructed by JCI which would replace the existing DPCs (presently rented) with upgraded facilities. The new DPCs will have all necessary equipments for weighing and testing, will have a larger storage space, farmers information centre etc.

6. Formation of farmers group will be an important area and such groups will be formed by developing Cooperatives, SHGs etc or merging with similar schemes of NABARD and exploring the possibility of Contact Farming – a fund of **Rs. 2.50 crore** is provided for the price, discovery, dissemination of price information, MSP, etc.

7. A study would be made so that a suitable mechanism is in place for extending institutional credit/ microfinance scheme for jute farmers after the groups are formed.

15.15 Jute Goods Production

The following objectives and strategies for the XIIth plan period are envisaged:

- Product mix is reoriented from Sacking : Hessian = 70% : 30% to 65% : 35%
- The growth of production by 25% from the present level along with thrust for Jute Diversified Products (JDP) and Jute Geo Textiles (JGT).
- Establishment of trade channels for promotion of JDP.
- Highlighting/creating more awareness for Jute products on the merit of environment related issues.
- Development of New JDP and new markets by TRAs.
- Continuation of JPM Act, 1987 for 3 more years with provision for extension by another year, for mills to make appropriate plans for modernization.

Table-15.19 PROJECTED PRODUCTION FOR XII PLAN PERIOD

(Apr-Mar)	Total Production [in '000 MT]
2012-13	1655
2013-14	1685
2014-15	1750
2015-16	1880
2016-17	2000

Table-15.20 Gradewise Requirment of Raw Jute(2012- 2017)

GRADE	HESSIAN	SACKING	YARN	GeoTex	JDP	TOTAL (Quantity)	
						in '000 MT	in Lakh Bales
TD3	32	9	30	1	160	**232**	**13.29**
TD4	218	323	90	30	40	**701**	**40.14**
TD5	0	541	0	57	0	**598**	**34.24**
TD6	0	210	0	31	0	**241**	**13.78**
TD7	0	136	0	30	0	**166**	**9.48**
TD8	0	6	0	1	0	**7**	**0.40**
Mesta	0	57	0	0	0	**57**	**3.27**
TOTAL	**250**	**1280**	**120**	**150**	**200**	**2000**	**115**
Lakh Bales	**14.325**	**73.344**	**6.876**	**8.595**	**11.46**	**115**	
Home consumption						**15**	
Note – *The gradation is based on* ***Desi*** *or its equivalent of other states*							

PROMOTION OF EXPORTS

- Present ratio between Domestic Sales: Exports is 86:14 (by quantity). Projected at the end of XII Plan - 75:25
- Export targeted at 5 lakh MT by quantity and Rs 3000 crore by the end of the XIIth Plan period (2016-17) against the present level of 210MT and Rs1350 crore.
- Adequate export market assistance to compete with international market
- Adequate initiative for development/promotion of JGT/JDP by National Jute Board(NJB)
- Thrust for eco-labeling of jute products is necessary even to make traditional products accepted to foreign buyers.

Table-15.21 PROJECTION OF EXPORT-MIX AT THE END OF XIITH PLAN PERIOD (2016-17)

Product	Tonnage (lakh MT)
JDP	1.50
Hessian	1.00
Sacking	0.75
Yarn	1.00
Geotextiles	0.75
Total	5.00

Table-15.22 PROJECTION OF EXPORT- DURING XIITH PLAN PERIOD (2012-17)

YEAR	IN INR CRORE	IN MLN $	% OF GROWTH
2012-13	1575	350	10%
2013-14	1750	392	12%
2014-15	2200	484	23%
2015-16	2600	575	19%
2016-17	3000	667	16%

	By the end of XI th Plan (2011-12)	By the end of XII th Plan (2016-17)
Likely Global market Size of Jute trade	7.80 Lakh MT	12 lakh MT
Projected Export from India	2.10 lakh MT	5 lakh MT
% of Global Trade	27%	42%

STRATEGY FOR XIIthPLAN

JDP sector development

- Organising International Standard Trade exhibitions in India and abroad
- Right communication strategy for brand building
- Setting up of fabric/yarn bank on SPV model
- Establish Trade channels like foreign trade/liaison officer/contacts.
- An outlay of **Rs. 15 crore** has been proposed under 7.1 of Mini Mission IV of JTM for development of JDPs including non-wovens and composites.

Policy for North-East Region

- Identification of prominent jute growing areas in this region
- Establish Jute Parks integrated with raw jute growing areas

- Set up commercially viable Jute-Ramie/Jute-Silk blending unit
- Set up JDP training centres

Scheme for Growth & Development of Jute Industry

Adequate and appropriate Government assistance in the following areas of activities would provide timely support to Jute industry

- Maintenance of Raw jute Buffer Stock by JCI
- Re-introduction of Export Market Assistance
- Scheme for development of commercially viable jute composites and non-woven products
- JDP buffer stock bank for development and growth of the product by NJB
- Introduction of **Jute-Geotextile development fund – Rs. 12 crore** to be provided for the plan period.
- Schemes for Jute Particle Board manufacturing units near the modern jute retting centre, when commercialized
- Infrastructure development fund for jute industry to improve the existing old/ dilapidated facilities at the mills
- Continuation of Jute Packaging Mandatory Act 1987 for the period of 5 to 10 years with periodic review and lesser dependence on reservation.
- Promotional Scheme for development and growth of JDP both in domestic and international market and establishment of **trade channel**. An outlay of **Rs. 5 crore** has been proposed under 7.3 of Mini Mission IV of JTM.

15.16 Modernization

Major goals, objectives and thrust areas for XII Five Year Plan for production of jute goods

a) Based upon the prospective upward pattern of consumption of three principal categories of jute-based products at the end of XIIth Plan Period, viz., (i) conventional jute products, viz., sacking, hessian and sale yarn, (ii) Jute Geotextiles (JGT) and (iii) Jute diversified products (JDPs) modernization in jute processing machinery.

b) Presently annual production of jute goods is approximately 16 lakh MT. By utilizing higher raw jute production and modern jute processing machinery, the production capacity is targeted to be increased by 25 %. The target production has been set at ***20 lakh MT by 2017***.

c) The present product mix ratio of sacking : hessian is 80:20. The ratio needs be changed to 65: 35 in the next five years. According to the National Fibre Policy 2010 by Ministry of Textiles (MoT), there should be increase in thrust on production of JDPs and Jute Technical Textiles (e.g. JGTs) by reducing absolute dependence on conventional products. Related R&D exercises for improving existing products and development of new JDPs are to be continued for collaboration by industry and R&D organizations.

d) As per NJB's report based on Pricewaterhouse Coopers Pvt. Ltd. study, the predicted demand for entire range of natural geotextiles would be of the order of 400 million m^2 by the end of XIIth Five Year Plan period (by 2017) equivalent to around 2.80 lakh MT. Presuming that 90 % of this value would be the demand for JGT only, 2.5 lakh MT would be the demand of JGT by the end of 2017.

e) NJB suggested giving emphasis on increased production of other jute technical textiles and JDPs.

f) To achieve the above targets and to meet the suggestions stated in NFP 2010, thrust has to be given on modernization of jute processing machinery and development and adoption of new appropriate technologies in Jute Industry.

Gap analysis: Strategies

a) Standardization of machinery and products by adopting modern technologies

b) Eco-labeling of jute and jute products: NJB has undertaken this exercise by outsourcing.

c) HS codes for export promotion of JGT to precisely monitor its production.

d) Realistic assessment of the status of the units for unit-wise study on modernization to be undertaken.

A. For organized sector

To make various segments of domestic Jute industry globally competitive, the entire range of jute processing machinery needs to be customized under Indian conditions and standardization of the existing and upcoming jute products is an imperative necessity.

(a) <u>Methods for modernization of jute machinery</u>

(i) Modernization in preparatory and yarn manufacturing sections

Modernization of the yarn manufacturing section of jute mills is necessary not only to enhance production capacity but also to produce better quality yarn to meet the necessities of

the high-speed shuttle-less looms in the later stages of fabric manufacture. Additionally, this exercise is essential for production of finer quality yarns required for JDPs. The following steps have been identified:

- Yarn count 9 lb/ spindle or below have to be spun on Ring spinning frame having target spindle speed of 7000 to 8000 RPM instead of the present speed of 4000 RPM only on Baxter flyer spinning frame.
- To change 100 spindle to 110 spindle 4 ¼ ” slip draft machine for hessian, sacking warp and sale yarns. For sacking weft quality (i.e. heavier count), it is advised to adopt 104 spindle 4 ¾” slip draft spinning frame in place of 80 spindle 5 ½ ” and 96 spindle 4 ¾” spinning frame to increase productivity per machine and per workman employed.
- To run spinning frames at 8000 RPM, good quality uniform sliver is required. Such sliver quality may be achieved by using a four passage drawing system with conventional screw gill process or with introduction of an intersecting gill frame between two conventional drawing frames in three passage system or an altogether intersecting gill drawing as suggested by N.Schlumberger.
- Improved auto-leveller must be developed and installed at Finisher Card to achieve the sliver CV below 2.5 %.
- Use of Jute goods spreader has to be encouraged at the back process to ensure lesser requirement of manpower and improved yarn quality and production.

(ii) Modernization in fabric manufacturing section

- **Weaving machinery**

The following steps should be adopted by the Jute Industry:

a. 2 m wide jute shuttle-less looms for manufacture of all woven JGTs.
b. Modern version of some typical shuttle-less looms like, S4 loom, Projectile loom, Rapier loom (e.g. Canvas loom), Onemack loom, etc. should be incorporated on large scale basis for substantially higher production per machine and per manpower employed.

- **Non-woven machinery**

In Jute Industry, limited application of non-woven machinery with mechanical bonding (i.e. needle-punching system) system has been continuing for the last 10 years approximately for production of composite pre-pegs for automobile applications (Good quality batch, TD4 and above) and geotextile for road drainage applications (inferior quality batch consisting of

wastage). Non-woven jute products have good prospects in Technical Textiles. The possibilities are worth exploring

In general, mills use pre-used machinery which does not yield quality product at the desired production rate. This area needs to be enhanced by adopting modern version machinery (if possible, exclusively engineered for jute) to ensure consistent quality product supply to the consumers. It would help in retaining as well as augmenting existing market demand of these jute diversified products. Additionally, R&D exercises need be carried out for incorporating other types of non-woven machinery under jute industry's umbrella, including, thermal bonding (hot air/ or hot roller system) non-woven system, lighter web formation from air/ or aqueous-laying technique, etc. for manufacturing products, like, shopping bags/ carry-bags and Technical Textiles.

- Braiding machinery

There is potential scope for braiding technology to be adopted in jute industry for producing certain JDPs for Agrotech, Geotech, Buildtech and Packtech applications. It is simple, single-stage and hence low-cost technology vis-à-vis weaving. The project is aimed at to deliver cost-effective jute sapling bags for nursery use (Agrotextile) and low-cost jute packaging products.

(iii) Bag preparation section

A combined system of calendaring, lapping-cum-cutting and stitching system is suggested. Stitching system should consist of hemming and herackle stitching arrangement and synchronized LHS and RHS bag-side sewing facility.

(iv) Modernization in chemical processing section

The following textile chemical processing machinery can be adopted in Jute Industry for producing value-added JDPs and affluent customers and rot-proofing/ chemical treatment of JGT:

- Two bowl padding mangle with Stenter
- Super Jumbo Jigger JT-10 (approx. Price Rs. 15 to 30 lakh, Capacity: 1000kg)
- For scouring, bleaching and dyeing treatments

- Multi-colour digital printing machine
- Calendaring-cum-drying range (Cylinder drying range) with Stenter
- Coating/ laminating machine: As coating substrate natural or synthetic material can be used
- Vertical heat chambers for coating jute fabrics with natural additives

The pilot plant of any one of the TRAs may be up-graded for undertaking R & D exercises on machinery development vis-à-vis production improvement. A single line commercial scale modern machinery of European / Indian / Chinese make is suggested to be installed in Pilot Plant of a suitable TRA for woven fabric production from raw jute fibre. It is also suggested that two different lines, one each for Chinese and European make machinery at Pilot Plant of the TRA/ or floor level of any suitable composite mill may be installed on cost-benefit analysis with respect to production and quality exercised. This would help to judiciously select the right line of machinery to be adopted in Jute Industry in near future. In this regard, a fresh project proposal will be submitted to the MoT.

(b) Modernization in material handling

-Mechanized trolleys (i.e., pallet trucks, forklifts and rider trucks) should be incorporated in jute mills for better material handling along with lesser time requirement, lesser work load as well as WMSDs. But these equipments should be used with proper care. The handlers should be trained thoroughly in the daily handling of such equipment because a haphazard handling style can be dangerous to the package and the operating agent.
-Floor level of mill blocks should be smoothened and maintained clean to ensure trouble free material handling
-Standardization of spares of different machinery and their maintenance
-Generation, maintenance and regular up-dating of online computerized data-base for different product category

(c) Environment modernization

-Adoption of dust extraction system starting from batching & selection section at least up to carding section

-Incorporation of humidification plant/ system to avail trouble-free spinning and weaving and comfort of mill workers

-Adoption of shuttle-less looms on almost 100% basis to reduce the noise level in weaving section

-Providing ear-plugs to the mill-shed workers and suitable gloves to the workers handling chemicals

-Use of proper lighting arrangement which utilize non-conventional source of energy inside and outside the mill sheds

B. For Decentralized Sector

Decentralized sector should concentrate on manufacture of different value-added JDPs. The entrepreneurs/ small-scale producers should adopt the same modern machinery for processing of their raw materials, e.g., fibre, yarn and fabrics as provided in "modernization in chemical processing section".

To enhance this sector, a centre of excellence (CoE) should be created by conferring responsibility upon a suitable TRA. Besides carrying related R&D works, this centre would provide necessary training to the interested and upcoming entrepreneurs. Other training centres may be established in different parts of the country under the umbrella of this CoE.

C. Policy for North East Region

As suggested by the Working Group on Jute for the XIIth plan in their first meeting on 1st June 2011 that other jute allied fibres may be included in this Working Group as these fibres are not yet incorporated in other Working Groups of the National Fibre Policy 2010. Blended value-added jute products manufactured from these fibres by blending with jute employing jute processing machinery/ or slightly modified jute machinery are likely to improve the marketability of jute. Assam is the main producer of ramie fibre in India. Additionally, this state produces substantial amount of jute along with plenty of bamboo plants.

Other two ramie producing NE states are Arunachal Pradesh and Nagaland. In this context, one on-going JTM project on ramie fibre processing and diversified products at IJIRA is aimed at up-gradation of economical status of farmers and decentralized sectors in NE regions. R&D activities on composites from jute and bamboo strips (woven/ or braided) are currently in progress at IJIRA, Kolkata under a JTM project. To this end, a mini-Pilot Plant

consisting of related machinery for processing jute and ramie may be installed at a suitable location.

B. Issues on resource estimation

Mobilization of resources in the jute industry

Distribution of subsidy

The present uniform rate of subsidy of 20 % of basic cost of the installation of modern machinery need to be reviewed. The distribution of subsidy in different sectors of machinery modernization in jute industry is suggested as follows:

i. The rate of subsidy is proposed uniformly at 25% of the basic cost of machinery.

ii. A total amount of **Rs. 240 crore** would be provided as support for machinery acquisition during the plan period for the mill sector. For the **MSME sector** further provision of **Rs. 50 crore** has been proposed. There would be no subsidy cap for investment in machinery acquisition. This will be covered under JTM MM IV – scheme no.6.4

iii. For R&D on machinery development and testing equipment, the amount of support is proposed at **Rs. 25** crore under 6.2 of MM IV of JTM.

15.17 Skill Upgradation

Objectives

Requirement of technical personnel in jute mills every year

- The recommended technical manpower for a standard mill having 100 metric tones production capacity (daily) should be 70 (which includes managerial & Sr. and Jr. supervisory personnel, technicians, engineers etc).
- Assuming an annual production of 15-18 lakhs metric tons per year in India , the total technical personnel required in Indian Jute Industry is estimated to be around 3500 (considering 320 working days in a year)
- Assuming that around 3-5% of the technical personnel are expected to disassociate /superannuateed every year which shall create a requirement between 105-175 new entrant technical personnel every year in large scale Indian jute industry.
- The jute industry is labour intensive and employs 2.6 lakh workers across different functions. Another 1.8 lakh workers are associated with decentralised jute sector

Challenges of jute industry on two fronts with regard to HRD people aspects

- Technical personnel: Address the challenge of succession by employing the right people and providing necessary training/education to people not fitting the necessary requirements for the particular position
- Others (Workers, Sardars, Fitters & Helpers): Address the issue of skill development for new entrants (considering the fact that absenteeism shall be a regular feature in the industry), for improving the skills of semi-skilled people and develop new skill sets for unskilled people

TARGET MANPOWER UPGRADATION DURING 12th FIVE YEAR PLAN PERIOD

- To develop Human resources (all category) working or new entrants for Jute Mills (total 2,90,000).
- To develop Human resources for decentralised (JDP) Jute Sector in India (Total 2,60,000).
- To generate Master Trainers to conduct training at different sectors.
- To conduct short refresher courses, workshops for personnel engaged in R & D, planning, inspections and other areas in jute sector.
- To establish/develop existing/additional training centres to achieve the objectives.
- Special thrust to create training centres in North East Zone for women, and economically backward classes.
- Special thrust to create training centres for women, SC, ST and economically backward classes.
- Special provisions to be kept for handicapped persons.
- Gap between the recommended and the available Technically qualified staff in the jute mills of 100 mt capacity

Technical Staff	Recommended	Available	Gap
Technically qualified (Jute + Other Engg.)	70	43	27 (39%)
Technically qualified (Jute)	42	24	18 (42%)

Table-15.23 Year Wise Manpower Requirement During 12th Five Year Plan Period

	Year	2012-13	2013-14	2014-15	2015-16	2016-17
Mill Sector	Technical Personnel	3290	3401	3500	3720	3940
	Workers/sardars/helpers/fitters	250000	265000	270000	276000	290000
MSME Sector	Craftsmen/Artisan/ Operators/Workers, Supervisor/Manager, Entrepreneur	180000	200000	216000	233000	260000

RECOMMENDATIONS

1. To continue the sustainable HRD services presently being provided by IJT, for Degree (B Tech), Diploma (PG Dip In Jute & management) and Certificate (Jr. Level Supervisory courses in Spinning and weaving side) level Courses for formal training courses for preparing Technical manpower for centralized jute sector.

2. Various need based short and refresher courses are to be continued by IJT with Govt Support to improve the knowledge of Existing Mill Personnel, Staff of Jute Organisations Like JCI, NJMC and R & D and Technical personnel engaged in R&D or related work for improving their Knowledge and Understanding on the subject.

3. To continue Training programme under Integrated Skill Development Scheme (ISDS) for jute sector (both centralized and decentralized Jute Sector) by IJT, IJIRA, NJMC and other suitable organizations for next five years for developing suitable new entrant trained workforce for jute sector, as planned by Ministry of Textiles, GOI.

4. To establish separate Vocational Training Institute for Training of workers under IJMA/Private Jute Mills for centralized and similar Training Institute under JDPEC for decentralized Jute sector, having zone wise few separate centers for specific skill development set up under the Guidance of Institute like IJT / IJIRA/ NIRJAFT as a lead Institute in this sector.

5. Special provisions are to be created to increase the number of trained women, SC, ST, OBC and other backward communities participation in both organized and decentralized sector.

6. At least two Vocational Training Centres for Jute Diversified products should be established in the North East Region.

7. Motivation and behavioral aspect to trainees should be given importance.

Table-15.24 FINANCIAL ESTIMATE (under ISDS)

Srl	Type of Programme	Cost (Crore)
1	Establishing New Vocational Training Institutes for Centralised Jute Sector in PPP mode	**5.00**
2	Establishing New Product Design and Training Centre for JDP Sector with Govt Support (Including Two Centres at North East Zone)	**10.00**
3	Continuation of JTM 6.1 on HRD for Jute Sector	**6.00**
4	Training for New Entrants in Jute Sector under ISDS	**20.00**
	Total	**91.00**

15.18 . Labour Welfare & Social Inclusion

Objectives

- Improve working conditions at the shop floor, develop better work culture and adopt better maintenance practices.
- Provide basic sanitary facilities to the workers through a suitable scheme.
- Rehabilitating sick workers through compensation and medical assistance.
- Support the SHGs and WSGHs
- Empowerment of weaker and marginal section in the rural and semi-urban areas.
- Generation of employment.
- R & D for product development.
- Promoting PPP model for the development and support of informal groups like SHGs.

1. Ways and means for enlarging the scope of productive employment in various segments of the jute sector.

- Locate and install high productive machines in replacement of existing low productive machines. Incentive/ subsidy may be provided as per existing GOI schemes.
- Manual handling of materials to be minimized for effective increase in productivity.
- Multiple nomenclatures of workers needs to be reduced / or clubbed.
- Wage anomalies across the industry to be corrected.
- Linking of productivity to full wage including D.A.
- Encourage workers' participation in strategic planning for higher productivity.

2. Suggest ways and means for ensuring proper working environment and easy access to health care facilities and insurance cover to workers and artisans particularly for disadvantage section of the population such as SC & ST.

- Setting up of Worker Welfare Scheme on PPP model for Low Cost Housing for mill workers
- Health facilities Sanitation
- Jute Mills and JDP units to be encouraged to avail the facilities of Worker Welfare Scheme of National Jute Board on health facilities and sanitation and the scope of the scheme to be broadend.
- Basic standard of facilities / amenities to be examined and norms to be set up by a Committee.
- Quantum of facilities / amenities to be determined on the basis of production capacity of each mill.
- Introduce scheme for workers' education on health and safety issues.
- Failure on the part of the beneficiary mills to augment the facilities / amenities to the determined level within 3 years from the date of implementation of the scheme would make them liable for debarring them from any incentive from Government from any other scheme.

NJB SCHEME FOR WORKERS' WELFARE IN JUTE SECTOR

Component	Subject	Scheme	Proposed budget for plan period
Sanitation	Construction of sanitary facilities in mill quarters and in the working areas.	Cost to be initially borne by the mill. NJB will subsidize 90 % of the cost incurred, subject to a maximum of Rs. 40 lakh per annum. Assistance to 12 mills per year.	**Rs. 21.60 crore**

15.19 Environment and Quality Compliance (Process and Product)

Objectives

- To promote jute internationally as a natural and environmentally friendly product.

- Eco-labeling of jute products.
- Review the disposal protocol issue.
- Awareness on impact of global warming to environment must be effectively leveraged.

Traditionally Jute has been used as a packaging material and is one of the oldest industries in India. The Government of India has approved the Jute Technology Mission (JTM) for overall development of the jute sector in the country. An urgent need is felt for productivity improvement in the jute industry and to establish Total Quality Management (TQM).

The importance of Jute has increased significantly amidst the world opinion on global environmental issues like Climate Change and Environmental Sustainability. The emerging environmental considerations and consumer preferences need to be taken advantage of for promoting new and diversified products. Among these products, jute and jute blended fabrics, natural fibre floor coverings, ropes and cords, non-woven, composites, pulp and paper, geo-textiles, building and insulation material are key items.

The following developments have been experienced in the recent years,

- Inconsistency in quality and uncertainty in market prices have led some of the customers to switch to alternate products globally.
- Use of pesticides in cultivation, water pollution in retting, use of mineral oil, dyes and other toxic chemicals and use of large amounts of energy and water are viewed as life cycle environmental impacts of jute by buyers.
- Occupational health in terms of dust and heat are a concern and regulatory compliance as well as quality and environmental management systems lack implementation in the sector.

Existing schemes & implementation system and Impact of XI Plan interventions

Improvement in productivity in the existing factories has been a key area of intervention, along with maintenance and improvement of quality. In this context, the Jute Technology Mission (JTM), under the XIth 5 year plan is most relevant and timely in addressing the issues of Productivity Improvement and Total Quality Management (TQM) at individual Jute Mills. This study is being implemented through the Scheme No. 6.3 Productivity Improvement & TQM facilitation of Mini Mission IV under the JTM. The TQM study

appropriately identified five areas of operation as areas of improvement under this study. These are Total Quality Management, Energy Management, Waste Management, Maintenance Management, Work Study and Ergonomics Study. By addressing these five critical areas in an integrated manner the study is contributing towards the improvement of productivity, quality and reduction in costs and wastes.

Similarly understanding of international market for geotextiles, quality assurance for food grade jute products for export promotion and the eco-labeling of jute in EU, USA and other countries based on a life cycle assessment have been the other initiatives.

Strategy for XIIth plan

For Raw Jute Sector:

Assessment of Environmental implications of cultivation and of processing jute fibre through participatory approach has to be done. Steps should be taken for promotion of environment friendly packages of practices for jute cultivation and environment friendly industrial processes for making jute products and byproducts. During the XIIth Plan, establishment of networking system amongst different level of stakeholders through information and communication technology (ICT) will be done. Quality mapping of fibres in different agricultural zones, environmental implications of jute growing and fibre extractions in each zone through participatory approach will be taken up. The process will include environment friendly and improved agronomical practices (including retting) and organic practices.

10 jute growing districts of the country will be taken-up for such mapping and study and pilot studies will be carried out **in 5 blocks** in each of these districts covering **500 hectares**. Environment friendly practices will be developed in these areas through physical applications in **three jute seasons**. The implementation of the practices so developed will be implemented and multiplied in other blocks in the **last two years** of the plan. Government will support the cost of the studies and additional costs involved in making the fibre eco-compliant in these selected areas. An outlay of **Rs. 5 crore** is estimated for the entire plan period.

For organized sector:

A. Occupational health and safety in the jute industry is closely linked with the productivity, quality and growth of the sector and the well-being of the shop floor employees. A widely noted situation in the sector is that the working conditions, in particular with regard to the **noise & sound**

pollution, dust generation during the process up to spinning, **heat generation** &**improper air circulation** in the factories, **low illumination and occupational health hazards**, have major implications on retention and recruitment of employees. Since Jute is a manpower intensive sector, lack of skilled manpower is of essence. Inadequate working environment has led to reduction in skilled labour joining the sector in recent times. The following interventions are necessary to correct the situation:

- Dust: Mechanical suction of dust (Section/ zone wise) by dust catcher. Use of waste dust for energy recovery.
- Heat & Air circulation: Introduction of air changing device which will lead to better air circulation and also reduce the heat.
- Illumination: existing illumination is very poor. Introduction of CFL or solar panel based lamps to enhance illumination at working floor in jute mills.
- Steps to remove the occupational health hazards associated with the jute processing and provision for medical and other supports in-built in the factory premises.

Mills implementing the above said capital intensive processes to improve the working environment of jute mill floor need to be subsidized.

A national index of all the jute producing units covering their status and compliance to the requirements in respect of the following areas will be prepared:

- **noise & sound pollution,**
- **dust generation** during the process up to spinning, **heat generation** &**improper air circulation** in the factories,
- **low illumination and**
- **occupational health hazards**

The units which are compliant to the relevant national and international standards of all the above 4 elements will be indexed as “A”. Similarly, those which are compliant to the relevant national and international standards in at least 2 of the above 4 elements and started the process of other 2 will be indexed as “B”. Those who have achieved in less than 2 elements and/or started the process for all the 4 elements will be categorized as “C” and the remaining as “D”. The target of the plan period would be place at least 25% of the factories in category A, 25% in category “B” and 50% under category “C” by the end of the plan period.

It is estimated that the jute industry would benefit through the compliance in achieving higher respect in marketing their products. Against an estimated fund requirement of Rs. 100 crore

for such initiative, the industry would have to provide 50% of the investment. Government support of **Rs. 50 crore** in the 12th plan period is estimated.

B. The **low carbon strategy** for the sector has looked at reducing energy consumption through rigorous energy audits, improved equipment maintenance and energy efficiency practices. Some mills have used increasing quantities of jute waste for boiler feed, which is a renewable source of carbon neutral fuel. One of the jute mills is a UNFCCC registered carbon credit project earning CERs through the use of jute caddies and rice husk. Lighting is another area of improvement where projected lux levels are now being met through low energy consuming CFLs rather than ICLs. In addition to biomass, utilization of the large rooftop of the jute mills and abundant grounds for solar energy (water heating or photo-voltaic) can further reduce the carbon footprint and hasten the low carbon future for the industry. In addition to the finance provided by the MNRE under the National Solar mission, the 12th plan period may fund **INR 20 crore** to enhance the adoption of solar, rice husk biomass and CFLs in the industry.

For unorganized sector*:*

The products manufactured in the unorganized sector lack standardization and environmental and other social compliance certifications. Considering the increasing demand for eco and social compliant products in the international market, the jute products have a huge prospect. The sector is required to be made aware of the practices leading to eco-compliance, establishing carbon and water footprints, setting eco-labels and disposal protocols of the products, organic and fair-trade certifications, etc. Efforts shall be made to make the sector aware of the norms and procedures for making the sector compliant of these environment and quality parameters both in their process and product.

Other recommendations

The industry also needs to develop “standards” for jute products and strengthen analytical capabilities in its research institutions. Modern analytical equipment for measuring environmental and quality parameters would be needed by the research institutions and funds to develop standards needed. Accordingly, the following steps are proposed for the next five year plan:

(a) **All support schemes of the Govt. will be linked to the level of compliance of the environment , eco, social and labour welfare parametres.**

(i) Steps will be taken for establishing life cycle analysis based ecolabel for jute products and a road map for an internationally accepted certification process sand will include:

(ii) Setting up institutional modalities for establishing the Eco-labelling body.

a.ii.1. Positioning the Jute Eco-label in the Global Market through Mutual Recognition Agreements.

(iii) Attain compliance for getting jute goods included in the Eco-product Directory of the National Productivity Council.

(b) Establishment of National level Eco-testing Laboratory

(c) Obtaining accreditation of NABL for existing testing facilities

An amount of **INR 5 crore** may be provided for this purpose during the next plan period.

Table-15.25 Scheme wise year wise budget requirement in XII Plan Period:

Sl	Scheme Details	2012-13	2013-14	2014-15	2015-16	2016-17	Total
		Rs. crore					
1.	Pilot project on quality mapping on environment and other parameters of cultivated land: 10 Districts X 5 Blocks X 10 hectare = 500 hectare	1.00	1.00	1.00	1.00	1.00	5.00
2.	(a) National Index of Jute mills on environment & quality compliance	5.00	-	-	-	-	5.00
	(b) 50% GoI support on investments for environment & quality compliance	5.00	10.00	10.00	10.00	10.00	45.00
3.	Support for eco labeling and for environment & quality compliance	4.00	4.00	4.00	4.00	4.00	20.00
4	Support for NABL accreditations for R&D laboratories in Jute Sectors	1.00	1.00	1.00	1.00	1.00	5.00
	TOTAL	**16.00**	**16.00**	**16.00**	**16.00**	**16.00**	**80.00**

15.20 Knowledge Management

Objectives:

- A single portal based KMS with e-governance
- Create Centralized e-Library Facility
- Centralized Publication at regular interval
- Initiate Technology interactions.

Strategy for implementation

- Develop a portal with e-governance
- The portal will have the facility of archiving, MIS & dynamic technical data updating for related information
- The portal search engine equipped to gather updates globally
- A facilitation of relevant decision support system
- Self-sustenance of the system with private sector investment

Strategy for North-East Region

- Development of Location based Knowledge Advisory System (KAS) i.e. (*A broadcast network for selectively transmitting individualized knowledge output signals to remote communicator devices e.g. input quires from remote farmers processed under e-advisory board & broadcasted quickly)*
- Interactive DSS i.e. (*interactive software-based system intended to help decision makers to compile useful information from combination of raw data, documents, personal knowledge, or business models to identify and solve problems and make decisions)*outlet (by KIOSK)
- Leverage of Central Service Centre (CSC) for Knowledge Dissemination
- Knowledge networking for other natural fibres
- Popularize through alerts & campaign

Table-15.26 Estimated provision for support for Knowledge Mangement in XIIth plan

Component	Budget
Portal Development	Rs 2 crore
ICT Budget for North-east	Rs. 2 crore
e-Library	Rs. 5 crore
ICT with all R &D & other Institutions	Rs. 5 crore
Total	**Rs. 14 crore**

15.21 Communication Strategy

Objectives:

- Increasing awareness of the negative impact of global warming to environment must be effectively leveraged.
- Jute must be promoted as a Green fibre brand.

- Highlight the impact of Jute Sector on the socio-economic situation of the marginalized sections of the society in the developing world.
- For the field level communication for the jute agricultural sector, namely new variety of seeds, pre and post-harvesting agronomical practices, etc. a fund of Rs. 4crore has been proposed for the plan period. A fund of **Rs. 45 crore** for international campaign and **Rs. 15 crore** for domestic campaign is proposed.
- Dissemination of the Govt. initiatives and outcome of the different R&D activities to create awareness amongst the stakeholders. A fund of **Rs. 3.5 crore** is proposed for the plan period.
- Field level extension / communication Rs. 4.00 crore.

Extension of Jute Technology Mission to run co-terminous with the XIIth Five Year Plan:

The Jute Technology Mission was nominally launched in March 2007 i.e at the end of the fiscal year 2006-07. Therefore it should run at least till the end of 2011-12. The first three years of the JTM saw slow progress, primarily because (a) a large fund was devoted to R&D both in products and in machinery and (b) the largest single component, for acquisition of machinery under JTM/MM-IV/6.4, did not pick up until the cap on subsidy was raised to Rs. 3.5 crore per mill. In the last fiscal, with the required modifications in its implementation, the physical progress and fund utilisation under the JTM has improved significantly. Where 29% of the funds for MM-IV were utilised in the first 3 years, in the last fiscal (2010-11) alone 24% of the funds were utilised.

A proposal has therefore been moved for carrying over *for one fiscal year* the funds expected to remain unutilized at the end of the 2011-12 fiscal. This document now proposes that **a second phase of the Jute Technology Mission** should run for the period of the XII Five Year Plan, extending some of the schemes extant in JTM-I and also incorporating new schemes as outlined in this document. The year–wise requirement of Fund for the XII Five Year Plan is also annexed.

MM I & II to be provided by Ministry of Agriculture (MoA).

Mini-Mission III

Extension of the following Schemes under MM III and the requirement of funds are being proposed.

Mini-Mission IV

Mini-Mission IV of Jute Technology Mission under XIth Plan period progressed in the right direction. Though the progress of the schemes was very slow during the initial 2-3 years, the schemes have taken off in the last 2-3 years after some modifications under the schemes. Due to late start of the schemes, the targeted activities would complete by 2011-12 or 2012-13 and their payments can be disbursed only by 2012-13. Therefore, there will be some carry forward of funds from the XIth Plan period to XIIth Plan period for the MM IV activities undertaken in the XIth Plan.

Further, the recommendations of the third party evaluation of the progress of the MM III & IV schemes [draft report] suggest that to sustain the results of the schemes in the XIth Plan, it is essential to run these schemes for some more time. Accordingly a scheme-wise review has been done and placed as **Annexure**, on the basis of which continuation of most of the schemes under MM IV has been recommended.

JTM MINI-MISSION IV - CARRY OVER FROM XITH PLAN IN 2012-13

(see Appendix 11)

Sl. No.	SCHEMES	Carry over from XIth plan
		2012-13
6	**SCHEMES FOR MODERNISATION OF ORGANISED JUTE MILLS**	
6.1	Training of Workers & Supervisors	1.00
6.2	Machinery Development	2.00
6.3	Productivity Improvement & TQM Facilitation	1.00
6.4	Acquisition of Machinery and Plant (subsidy)	15.00
	TOTAL (6)	**19.00**
7	**SCHEMES FOR PROMOTION OF JUTE DIVERSIFICATION**	
7.1	Design and Development of JDP	2.00
7.2	For helping the NGOs and Women Self Help Groups (WSHGs) for developing JDPs	6.00

7.3	Scheme for Promotion of Jute Diversification:	2.00
7.4	Scheme for Commercialisation of Technology	0.00
7.5	Scheme for setting up Jute Parks for the Diversified sector	19.30
	TOTAL (7)	**29.30**
	Monitoring Exp	**2.50**
	Total Carry forward from Mini Mission-IV	***50.80***

The total fund requirements for the activities of XIIth Plan activities are summarized as follows:

(see Appendix 12)

	Scheme	Rs. Crore
	Mini- Mission III	
1	Production & distribution of Certified Jute Seeds	38.50
2	**Mopping up of other certified seeds**	**13.50**
3	Awareness programmes for new seed & farm techniques	10.50
4	Demonstration of retting technology	9.50
5	Fungal & In-situ retting	3.00
6	Developing ribboner	2.00
7	Direct fibre extraction – Decorticator	2.00
8	Improvement of existing market infrastructure	100.00
9	Price discovery, dissemination of price information, MSP	2.50
	Subtotal MM III	**181.50**
	Mini- Mission IV	Direct fibre extraction – Decorticator2.00
10	Development of New JDPs incl non-wovens and composites	15.00
11	Establishment of trade channels	5.00
12	Jute-Geotextile development fund	12.00
13	Modernization of jute processing machinery – acquisition	240.00
14	Modernization of jute processing machinery - R&D	25.00
15	JDP sector modernisation including centre of excellence)	50.00
16	Eco-labeling	20.00
17	Environment & social compliance:	
	(a) Raw Jute Sector - pilot project on 500 hectares	5.00
	(b) Investment for environment	50.00

	& quality compliance in Jute Mills and JDP sector (50% Govt. Support)	
	(c) Support for NABL accreditations of R&D laboratories in Jute Sector	5.00
18	Sanitation facilities for workers	21.60
19	Jute Portal	2.00
20	e-Library	5.00
21	ICT for NER	2.00
22	ICT with R &D & other Institutions	5.00
23	Field level extension / communication	4.00
24	International Promotion	45.00
25	Domestic promotion	15.00
26	Stakeholder communications	3.50
	Subtotal MM IV	**530.10**
27	**MM IV:(carry over from XIth Plan)**	**50.80**
	TOTAL XIITH PLAN	**762.40**

YEAR WISE PROJECTION OF JUTE SECTOR DURING XIITH PLAN PERIOD – AT A GLANCE

(see Appendix 13)

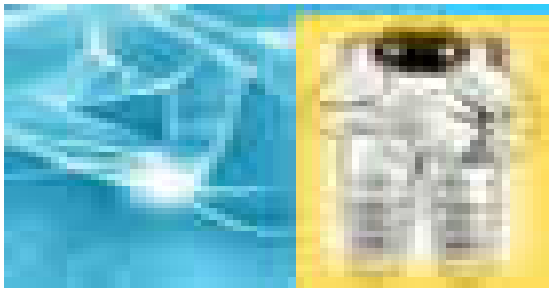
Sl.	Particulars	Unit	LAST YEAR OF XTH	PROJECTIONS OF XII TH PLAN PERIOD				
			Status as on 2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	**Seed Production:**							
	For Domestic use : Of which: **Certified** **Uncertified**	 MT MT	 2000 4000	 2500 3500	 3000 3000	 4000 2000	 5000 1000	 6000 0
		MT	**6000**	**6000**	**6000**	**6000**	**6000**	**6000**
	For Export	MT	4000	4000	4000	4000	4000	4000
2	**Raw Jute Availability**: (Jute+Mesta)							

	Area	Lakh	10	9.9	9.7	9.6	9.3	9.00
	Production	Lakh	114	115	121	129	135	140
		Lakh	20.50	20.70	21.78	23.22	24.30	25.20
3	**Raw jute &mesta requirement for**	Lakh Bales	107 19.26	100 18.00	99 17.82	105 18.91	108 19.48	111 20.06
4	**Production of jute goods**	**'000 MT**	**1651**	**1685**	**1750**	**1825**	**1900**	**2000**
	% of increase			*2.06*	*3.86*	*4.29*	*4.11*	*5.26*
5	**Domestic consumption of jute goods**	**'000 MT**	**1450**	**1430**	**1445**	**1462**	**1483**	**1500**
	% of increase			*-1.38*	*1.05*	*1.18*	*1.44*	*1.15*
6	**Export of jute goods**	**'000**	**210**	**255**	**305**	**363**	**417**	**500**
	% of increase			*21.42*	*19.61*	*19.02*	*14.88*	*19.90*
		RsCror	**1350**	**1575**	**1750**	**2200**	**2600**	**3000**
	% of increase			*16.67*	*11.11*	*25.71*	*18.18*	*15.38*
		Mln $	**300**	**350**	**392**	**484**	**575**	**667**
	% of increase			*16.67*	*12.00*	*23.47*	*18.80*	*16.00*
7	**Manpower Requirement**							
	Mill Sector	No.	250000	250000	265000	270000	276000	29000
	% of increase			0.00	6.00	1.89	2.22	5.07
	MSME Sector	No.	180000	200000	216000	233000	245000	26000
	% of increase			11.11	8.00	7.87	5.15	6.12

Chapter - 16

TECHNICAL TEXTILES

- SWOT ANALYSIS OF THE TECHNICAL TEXTILE INDUSTRY
- PERFORMANCE DURING ELEVENTH FIVE YEAR PLAN
- STRATEGY FOR THE TWELFTH FIVE YEAR PLAN
- PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN
- RECOMMENDATIONS FOR THE 12TH FIVE YEAR PLAN



Chapter - 16

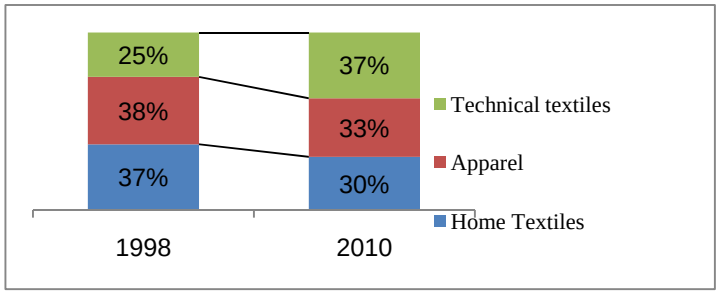
TECHNICAL TEXTILES

Technical textiles are textile materials and products used primarily for their technical performance and functional properties rather than their aesthetic or decorative characteristics. These are basically industrial textiles, functional textiles, performance textiles, engineering textiles, invisible textiles and hi-tech textiles. Technical textiles are used individually or as a component/part of another product to enhance its functional properties. The examples of technical textiles used individually to satisfy specific functions are fire retardant fabric for uniforms of firemen, coated fabric as awnings, airbags, carpets etc.

16.2. Technical textiles is a knowledge based research oriented industry and has been slowly but steadily gaining ground due to its functional requirement, health & safety compliance; cost effectiveness; durability; high strength; light weight; versatility; customization; user friendliness; eco friendliness; logistic convenience etc. The main users of technical textiles are industries like, automobile, railways, garments, medical, sports, protective clothing, packaging, construction etc. The general public also uses technical textiles particularly disposable technical textile products.

16.3. The global technical textile consumption in 2010 stood at 23 million MT, which has grown at a Compounded Annual Growth Rate (CAGR) of 3% since 2007. Global textile consumption has shifted from the conventional textiles to technical textiles as depicted below:

Figure 16.1: Changing Global TextileConsumption



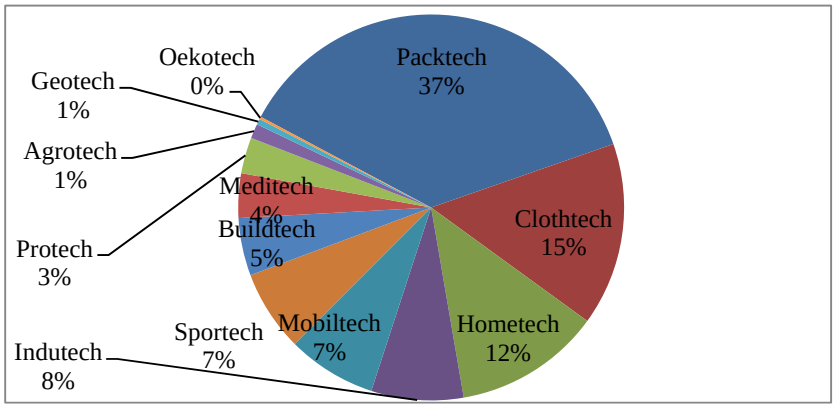
Data source: Industrial Fabrics Association International (IFAI)

16.4. Though, India is the second largest textile economy in the World after China, its contribution in the global technical textile industry is comparatively insignificant. The maximum consumption of technical textiles is in USA, Western Europe and Japan, which together account for 65% of the world consumption of technical textiles. China has also

increased its consumption to over *15%,* whereas India accounts for only 8.6%to the total global consumption. The potential of technical textiles in India is obviously still untapped.

16.5. As per the baseline survey report of ICRA, The Indian Technical Textiles market is estimated at Rs. 57,000 Crores in 2010-11, up from Rs. 42,000 crores in 2007-08, registering a CAGR of ~11%. The largest segments produced in India are Packtech, Clothtech, Hometech and Sportech. Manufacturing activity in these segments is mostly in the small scale, unorganized units. These segments primarily include commodity products and are not very R&D intensive. Most of the products in other segments are imported, as the SMEs do not have wherewithal to invest in product innovation and R&D, which are the key success factors for high tech products. In the overall market, segments of Packtech, Clothtech and Hometech are the largest. They contribute to nearly 2/3rdof the market size, while the share of segments of Oekotech, Geotech, and Agrotech is almost negligible.

Figure 16.**2: Distribution of Indian Technical Textiles market (2010-11)**



Data source: Baseline Survey of Technical Textile industry in India, IMaCS

16.6. At the outset, the working group decided to carry out a SWOT analysis of the technical textile industry to examine issues in a proper prospective and make appropriate recommendations.

SWOT ANALYSIS OF THE TECHNICAL TEXTILE INDUSTRY

STRENGTH

- Textile industry has a strong base in terms of raw materials, skilled man power, low wages and entrepreneurial talent which can be leveraged to boost the technical textile sector.
- Presence of TRAs with strong expertise in technical textiles can contribute to R&D.
- Proactive approach of Govt. for boosting the technical textile sector through schemes like Scheme for Growth and development of technical textiles (SGDTT) and Technology Mission on Technical Textiles (TMTT).
- Presence of IITS/Textiles Institutes and eight Centres of Excellences (COEs) i.e. COE: Geotech(BTRA), COE:Agrotech(SASMIRA), COE:Meditech(SITRA) & COE:Protech(NITRA),COE:Composite (ATIRA),COE:Non-Woven(DKTE), COE:Indutech(PSG College) and COE: Sportech.

OPPORTUNITIES

- Huge Market potential of technical textiles in the country.
- Huge potential for usage of technical textiles by institutional buyers like Defence, Security, Space & Marine, Health, Roads and Infrastructure, Medical and Health etc.
- Huge export potential of technical textiles.

WEAKNESS

- Dependence on import of technology and machinery for most of the high-end technical textiles products.
- Available resources have not been augmented and updated with changing trend in application of textiles with particular reference to technical textiles.
- Non-availability of skilled man power for technical textiles.
- Production capacity is primarily focused on commodity products/not very R&D intensive.
- Lack of expert consultants for technical textiles for guiding entrepreneurs.
- Absence of regulatory measures for usage of technical textiles.
- Lack of support for export promotional activities.
- Lack of support for contract R&D.
- Non-availability of indigenous high performance speciality fibres for manufacture of technical textiles.

THREATS

- Cheap imports of technical textile items from countries like China.
- Bilateral and multilateral agreements particularly with developed countries like USA and EU.

16.7. The Competitive assessment of India vis-à-vis other countries reveals that for labour intensive technical textiles products, India has the advantage of cost competitiveness over the major industrialised countries like US, Germany, UK, etc. However, India lacks competitive advantage vis-à-vis other South Asian countries like China, primarily on account of higher cost of power, poor infrastructure resulting in higher cost of logistics, higher interest rates and taxes (including indirect taxes with anomalies on account of CST and VAT).

The following table benchmarks India's overall position in terms of competitiveness in manufacturing technical textiles:-

Table-16.1 Cost Competitiveness of India vis-a-vis US, Europe and China

	India	**US**	**Europe**	**China**
Overall Cost	Least competitive	More competitive than India by around 5.5-6%	More competitive than India by around 5.5-6%	More competitive than India by around 9%
Labour cost (including the impact of productivity)	Strong labour cost advantage primarily in labour intensive technical textiles products	Labour cost disadvantage of around 8% as compared to India	Labour cost disadvantage of around 7% as compared to India	At par with India
Technology	Dependent on import of technology and machinery for most of the high-end technical textiles products (incl. Non-woven)	Strong	Extremely strong	Availability of low-cost machinery and technology (quality of products manufactured is not very good if cheaper technology is used)

16.8. The cost disadvantage is higher for India for various high-end technical textiles products as compared to US and Europe, which have the advantage of large economies of scale. The lower scale of production and consequent higher fixed cost per unit of production, combined with the shortage / unavailability of specialised raw-materials in India account for

this cost disadvantage in various high end technical textiles. On the other hand, for labour intensive technical textile products (like surgical sutures, surgical dressings, seat covers, nylon tyre cord, insulation felts, footwear components, etc), the total cost advantage from the labour cost in India outweighs the negative impact of the other cost factors; this is especially so for the labour intensive technical textiles products where labour cost accounts for15% to 20% of the total cost

PERFORMANCE DURING ELEVENTH FIVE YEAR PLAN

Production

16.9. The market size of the technical textile industry increased at the rate of 11% CAGR during the Eleventh Five Year Plan.

Table16.2 Estimated segment-wise market size of technical textiles during XIth plan

(Rs. crore)

Segment	2007-08	2011-12	Growth Rate % (CAGR)
Clothtech	6,908	9,454	8.16
Packtech	1,302	23,710	12.83
Sporttech	2,851	4,297	10.8
Mobiltech	2,851	4,689	10.17
Buildtech	2,157	2,980	8.42
Hometech	5,025	7,831	11.73
Indutech	3,206	4,892	11.14
Meditech	1,669	2,298	8.33
Protech	1,302	1,890	9.77
Geotech	272	410	10.79
Agrotech	553	751	7.96
Oekotech*	68	135	18.66
Total	**41,756**	**63,202**	**11.00**

** Oekotech size has already been considered as a part of geotech*

Source: ICRA baseline survey report.

Progress of the Schemes during Eleventh Five Year Plan

Scheme for Growth and Development of Technical Textiles (SGDTT):

16.10. A Scheme for Growth and Development of Technical Textiles (SGDTT) was launched during 2007-08 comprising of 3 components, a) Baseline Survey of Technical

Textile Industry, b) Creation of Awareness, and c) Setting up of four Centres of Excellence with total fund allocation of Rs. 46.609 crore.

16.11. As per the first component of SGDTT, the baseline survey of technical textile industry was carried out through ICRA Management Consultancy Services (IMaCS). The IMaCS report contains details on raw material, technology, machinery for technical textiles and details on all the producers, importers and exporters of all categories of Technical Textiles. Under the second component of creation of awareness, more than 60 no. of Seminars/ workshops /Training programmes were organized by Office of the Textile Commissioner across the country. Under the third component, 4 Centres of Excellence (COEs) were set up, i.e., BTRA for COE Geotech, SASMIRA for COE Agrotech, NITRA for COE Protech and SITRA for COE Meditech. The total fund allocation of Rs. 46.609 crore has been released under SGDTT. The impact of the scheme has been positive, with the industry witnessing a CAGR of 11% during Eleventh Five Year Plan.

Technology Mission on Technical Textiles (TMTT)

16.12. Govt. has recently launched TMTT with two mini missions for a period of five years (from 2010-11 to 2014-15). The aim of TMTT is to address the identified gaps like lack of basic infrastructure in terms of testing facilities, lack of market development support, skilled manpower, lack of R & D, absence of regulatory measures, absence of specifications and standards for technical textiles etc. The total fund outlay for TMTT is Rs 200 Crore.

16.13. Mini Mission I of TMTT is aimed at standardization, creating common testing facilities with national /international accreditation, indigenous development of prototypes and resource center with I.T. infrastructure, incubation centre by establishing four new Centers of Excellence (COEs) and upgradation of existing four COEs.

16.14. Mini Mission II of TMTT is to provide support under 5 components, i.e., a) Support for business start-up; b) Providing fund support for organizing workshops; c) Social compliance through standardization, regulatory measures; d) Market Development Support for marketing support to bulk and institutional buyers; e) Market Development Support for export sales and f) Contract Research and Development through IITs/TRAs/Textile Institutes. The activities under both the Mini-Missions are already underway.

16.15. Under MM I of TMTT, apart from the upgradation of the 4 existing COEs, 4 new COEs (i.e., DKTE Engineering College for Nonwovens, ATIRA for composites, PSG College of Engineering for Indutech and ICT for Sportech) have already been selected and they are in the process of setting up of facilities.

Standards

16.16. One of the most critical areas for the successful propogation of technical textiles usage is the setting up of standards. To expedite the process of notification of standards by BIS, Office of Textile Commissioner has constituted four committees on standards for Protech, Agrotech, Geotech and Meditech to formulate draft standards for these segments. Further, three committee for the new area of Composites, Non-Wovens and Indutech have also been identified. The committees comprise of experts from industry, technical institutions, Govt. bodies etc with director of respective COE as convenor. Besides this, a committee for formulation of standards on Meditech and Geotech was constituted in year 2006 with Director BTRA as convenor. All these committees have submitted some 40 draft standards to BIS for notification. BIS has published two standards, three standards are under print and remaining standards are at various stages of notification at BIS. A monitoring committee to review the progress of standards and adherence to the time schedule for notification of standards is also being constituted.

R&D Projects by Textile Research Associations (TRAs):

16.17. During the Eleventh Five Year Plan, the TRAs have completed some R&D projects on technical textiles while some more are in the process of development. The list of R&D projects undertaken during Eleventh Five Year Plan are at **Appendix** – 16.

STRATEGY FOR THE TWELFTH FIVE YEAR PLAN

16.18. Technical textiles is an important part of the textile industry and its potential is still largely untapped. The accelerated growth of the Indian economy would favourably impact the growth of the technical textiles. With increase in disposable income, the consumption of technical textiles is expected to increase, and to exploit the opportunities, the following approach is proposed during the 12th Five Year Plan period:-:

- Intensive implementation of Technology Mission on Technical Textiles
- Formulation and notifications of standards by BIS
- Implementation of regulatory framework in specified areas
- Encouraging indigenous production of specialty fibres and yarns
- Encouraging indigenous production of technical textile machinery

- Encouraging investment in high end technical textile products including FDI
- Strengthening database and export market intelligence
- Special focus on usage of technical textiles in NER(North East Regions)

PROJECTIONS FOR THE TWELFTH FIVE YEAR PLAN

16.19. Based on the past trend of growth and estimated end user segment growth, the growth rates for different segments of the technical textile industry have been projected. It is estimated that the overall growth in technical textile industry will be about 20%. The segment wise growth is given below:

Table-16.3 Growth rates and estimated market size of technical textiles during 2012-17

(Rs. crore)

Sl. No	T. T. Sector and its products	Estimated market size during 2011-12 as per ICRA report	Assumed growth rate during 12th Plan	2012-13	2013-14	2014-15	2015-16	2016-17
1	**Clothtech**: Shoe laces, Interlinings, Zips, Narrow fabrics, Taffeta fabric.	9454	22	11345	13614	16337	19604	23525
2	**Packtech**: Polyolefin woven sacks including FIBC, Soft luggage products, Food grade jute bags, Jute sacks / Hessian.	23710	22	28927	35291	43055	52527	64083
3	**Sporttech**: Shoe Component, Sports Composites, Sleeping bags, Artificial Turf, Balloon & Parachute fabrics.	4297	17	5027	5882	6882	8052	9421

Sl. No	T. T. Sector and its products	Estimated market size during 2011-12 as per ICRA report	Assumed growth rate during 12th Plan	2012-13	2013-14	2014-15	2015-16	2016-17
4	**Mobiltech**: Seat belts, Nylon tyre cord fabric, Seat covers, carpets, Helmets, Headliners, Insulation felts.	4689	17	5486	6419	7510	8787	10281
5	**Buildtech**: Hoardings / Signages, Scaffolding nets, Awnings and canopies, Tarpaulins.	2980	17	3487	4080	4774	5585	6535
6	**Hometech**: Fiberfill, Jute Carpet backing cloth, Stuffed toys, Blinds.	7831	20	9397	11277	13532	16238	19486
7	**Indutech**: Conveyor belts, Hoses, Ropes, Computer ribbons, Battery separators, Filtration products, Decatising cloth, Bolting cloth.	4892	18	5772	6811	8037	9484	11191
8	**Meditech**: Sanitary napkins, Incontinence diapers, Baby diapers, Surgical dressings, Healthcare textiles, Sutures, Medical devices & implants.	2298	20	2758	3310	3972	4766	5719
9	**Protech**: Fire retardant textiles, Ballistic protective clothing etc.	1890	23	2325	2860	3518	4327	5322

Sl. No	T. T. Sector and its products	Estimated market size during 2011-12 as per ICRA report	Assumed growth rate during 12th Plan	2012-13	2013-14	2014-15	2015-16	2016-17
10	**Geotech**: Geotextiles, geomembrane, Civil / Geotechnical engineering.	410	22	500	610	744	908	1108
11	**Agrotech**: Fishing nets & Fishline, Shade fabrics, Woven and non woven covers for crops, Mulch mat.	751	20	901	1082	1298	1558	1869
12	***Oekotech**: Environment Control: Municipal solid Waste, Industrial hazardous waste etc.	135	22	164	201	245	299	364
	Total	**63202**	**20**	**75925**	**91236**	**109659**	**131836**	**158540**

** Oekotech size has already been considered as a part of geotech*

RECOMMENDATIONS FOR THE 12TH FIVE YEAR PLAN

16.20. To enable the technical textile sector to achieve the targeted growth, the schemes / incentives are proposed as below:

PROPOSED 12TH PLAN OUTLAY

Sr. No.	Items	Outlay (Rs. crore)
1	**Special Incentive Package Scheme for speciality fibres**	**200**
2	**Identification of HS codes for technical textile items**	**1**
3	**Strengthening of database of technical textile industry**	**1**
4	**Standards for technical textiles:**	**3**
5	**Export Market Intelligence**	**5**

6	**Scheme for Usage of Geotextiles in North Eastern Region**	**500 ***
7	**Scheme for promoting Agro textiles in North East**	**55**
8	**Setting –up of revolving funds for providing assistance to entrepreneurs for R & D**	**50**
9	**Study to generate data on hospital related infections.**	**0.25**
10	**Balance requirement for TMTT**	**106.6****
	Total	**921.85**

*Note 1: Rs 500 crores proposed for Geotextiles in NER (Sl 6 above) would be utilized from the overall

**Note 2: Rs.93.391 crore has already been allocated during the year 2010-11 & 2011-12 out of Rs.200 crore total outlay for TMTT.

Special Incentive Package Scheme for speciality fibres:

16.21. The introduction of a special incentive package for enabling Indian or foreign companies to set up manufacturing facilities for speciality fibres, thereby strengthening the raw material base for Indian technical textile industry. Such an incentive package will help in bridging the viability gap due to lack of adequate infrastructure. While this will involve an initial cost to the government, the return on investments in the form of contribution to GDP will justify the incentives planned.

The special incentive package scheme for speciality fibres should include the following provisions:

i) The scheme should cover all **identified speciality fibres**. (A list is at **Appendix** – 17)

ii) A unit can claim incentives from the government in the form of **capital subsidy** or **equity participation,** as follows:

a. Equity in project, not exceeding 26%

b. Capital subsidy in the form of investment grant and interest subsidy, as detailed below:

The Central government or any of its agencies should provide an incentive of 20% of capital expenditure during the first 5 years for the units in SEZs and 25% of capital expenditure for non SEZ units. Capital expenditure can be the total capital expenditure in plant and machinery and technology, including R&D

iii) The special incentive package should be available for 5 years from the launch of the scheme.

iv) Depending on the feasibility, the scheme may perhaps be operationalised in the cluster/park format

The fund requirement for this purpose is estimated at Rs. 200 crore

Identification of HS codes for technical textile items:

16.22. Technical textile items are not limited to Chapters 50 to 63 of HSN Codes pertaining to conventional textiles, but are covered under the HSN Codes spread over Chapter 1 to 99. In order to compile the data on export and import and also provide fiscal support, it is necessary to identify the HSN Codes of all the technical textile items. Also, some of the technical textile items do not fall under any exclusive HSN heading, and there is a need to suggest a separate exclusive HSN codes for such items.

16.23. A study may be conducted through an independent agency to compile the information on HSN Codes for all the technical textile products and also suggest exclusive HSN Codes for the items which are clubbed along with other items. **The fund requirement for the study is estimated to be Rs. 1 crore.**

Strengthening of database of technical textile industry

16.24. Integrity and accuracy of data is critical to policy fromualtion and decision making. In order to make policy decisions, it is of utmost importance to have comprehensive information on all aspects of technical textile industry. A study was conducted during the year 2009 which compiled information on the market size, domestic consumption, exports, number of units, type of units, type of products produced, investment, turnover etc. However, this is a dynamic sector and in the fast changing scenario, it is essential to ensure regular data updates.. It is thus recommended that the baseline survey and manufacturer database listing has to be done once in every two years by involving a reputed consulting organization. **The fund requirement for 2 surveys during the Twelfth Five Year Plan is estimated to be Rs. 1 crore**.

Standards for technical textiles:

16.25. Technical textiles are functional textiles, therefore, stringent performance parameters are required to be met by the products. For most of the technical textile products, standards are not available. Therefore, standard committees have been constituted by the Office of the

Textile Commissioner for formulation of standards for technical textile products for consideration by BIS. However, BIS has a shortage of experts for prescribing standards and have suggested appointment of consultants to expedite the process. Given the vital need for quick notification of standards across a gamut of technical textiles products and applications, appointment of consultants for technical textile products on contract basis is essential. **The fund requirement for this purpose is estimated at Rs. 3 crore.**

Export Market Intelligence

16.26. Technical textile products have immense potential for exports. Technical textile manufacturers, however, do not have information about potential products and export market across the globe. Therefore, a study on export market has to be carried out which may provide details regarding country-wise product-wise potential and also the specifications and other requirements of those countries. This will help Indian technical textile manufacturers to export their products. **The fund requirement for the study is estimated at Rs. 5 crore.**

Scheme for Usage of Geotextiles in North Eastern Region

16.27. Geotextiles, a class of Technical Textiles, is gaining increasing acceptability both in the domestic as well as in the overseas market in view of its special technical attributes such as eco-compliance, drapability, initial strength, fineness, low extensibility and commercial advantages such as easy availability of customized fabric and comparative economy. Geotextiles are poised to command a big domestic market if sustained efforts to popularize it are continued.

16.28. The north-eastern sector in general is yet to adopt this innovative technology, barring a couple of roads in Assam which were taken up under PMGSY under the pilot project. DPRs of the pilot project spread over five states were prepared by CRRI, the premier road research institute in the country under CSIR. It is worthwhile to promote Geotextiles in north-eastern states for introducing modern cost effective technology in the NE and also to boost the economy of the states in this region.

Aim of the project

16.29. It is proposed to introduce a plan scheme for promotion and application of Geo-textiles in the North Eastern Region. The aim is to utilize geo-textiles in the development of NER infrastructure through pilot projects initially, with the ultimate objective of ensuring use of modern cost effective technology in the NER and other regions of the country on a large

scale. Potential areas where geo-textiles can be used are New Roads; River Bank Erosion Control; Slope Erosion Control in Hills and Embankments. With increasing acceptability of Geotextiles, entrepreneurs are expected to set up Geotextiles production units in the country. The ultimate objective is to introduce Modern cost-effective technology in the NE development initiatives and also give a boost to the economy of the country. The Ministry of Textiles proposes to provide technological and financial support to enable use of geo-textiles in such projects, and to fund the increment on account of increase in project cost due to the use of geotextiles, in place of conventional materials.

Expected outcome & benefits of the project

16.30. Expansion of the sustainable market of geo-textiles in soil erosion control, river embankments and road construction in NE India.

Project objectives:

- To assess market needs and potential of geo-textiles for the specific end-uses, and formulate strategies for enhancing market and improving supply chain mechanism especially timely supply of materials in accordance with the requirement of end-users.
- Development of potentially important geo-textiles with improved technical properties for use in soil erosion control & road construction.
- Study on the performance of various types of geo-textiles through field trials complemented by laboratory tests and simulation modelling, development of specifications and design methodologies for field application in the areas of soil erosion control (river bank protection and hill slope management) and road construction.
- Enhancement of production capacity of the industries in India for manufacturing geo-textiles as per specifications and quality.
- Preparations of standards/ manual to be approved by appropriate authorities i.e. for global acceptance.
- Develop Capacities amongst the State Governments (& other agencies) and Dissemination of project results to the end users and the stakeholders.

16.31. Technology pertaining to Geotextiles is new. The majority of technical institutes and Engineers of the States are not fully conversant with the technology. As a result, engineers do not get any exposure to the theory, design, testing and installation techniques pertaining to Geotextiles. If local engineering students get the desired exposure through this project,

propagation of technology in the N-E states will be easier through them in coming years. It is felt it will be worthwhile to involve final year students of local engineering institutions in the project.

Organisation & management

16.32. Textiles Commissioner will act as the Implementing Agency (IA) for the Project. It will engage a Project Coordinating Agency (PCA) for the project. PCA will play a supportive role to State Governments & other Stakeholders especially on the technical aspects of the project and will liaise with and ensure co-ordination among partners to the project.

16.33. Partners of the project:

- N E Council, Shillong;
- DONER
- Respective State Governments under N-E region
- IIT, Guwahati and any other suitable technical institute
- Indian Jute Industries' Research Association (IJIRA)
- Engineering Institutes in the NE
- Manufacturers of Geo Textiles
- Suitable Institute (preferably in Germany/USA/UK) for training Engineers in the Stakeholder agencies. (To be identified/selected)

16.34. N E Council will have a pivotal role for overall control over the project. 35. It is proposed that in the project period (5 years), **1000 kms** of roads in the NE may be constructed with Geotextiles. Similarly, **100 kms** of vulnerable river banks may be protected by Geotextiles. **50 kms** of hill slope/embankment slope spread over the N-E region may be taken up for stabilization with Geotextiles. The Projects would be identified in consultation with the State-Governments & concerned Stakeholder Agencies. The fund outlay for the project is estimated at Rs. 500 crore. (@Rs. 100 crore per year)

Scheme for usage of Agrotextiles in North-Eastern Region

16.35. A large number of horticultural crops are grown in the north eastern region, many of them are native to this region like banana, mango, a large number citrus species, flowers, etc. Among the states of the NER, in terms of fruit production and area, Assam produces the highest followed by Arunachal Pradesh and Tripura. Similarly, in vegetable production

Assam has maximum production and covered area under the crop . The varied climate, altitude, etc. leads to enriched biodiversity in the region.

16.36. Agrotextiles are textiles used in farming, animal husbandry and horticulture to control environment for crop production and cattle, eliminate the variations in climate and hazards associated with weather changes, regulate nutrient level uptake by plants and also assist in the process and post harvest operations. Presently, common Agrotextile products like mulch mats, shade nets, soil covers, and protective nets are being used in various states all over the world. The cultivation of horticultural crops, floriculture crops can be further enhanced with use of protective Agrotextiles.

Aim of the project

16.37. The aim is to utilize Agrotextiles in improving the horticulture and floricultural produce of the N-E states. With increasing acceptability of Agroextiles, entrepreneurship in the area of agrotextiles production in the country will get an impetus. The growth of usage of Agrotextile products in the country will thus benefit both agriculturists as well as textile entrepreneurs in the country.

Expected outcome & benefits of the project

16.38. Improved yield of horticulture and floriculture produce from the North- East region of the country in terms of Quantity as well as Quality of produce, increased consumption of Agrotextile products in the country and awareness on use of quality certified agrotextile products in the country.

16.39. **Project objectives:**

- To create awareness on usage of Agrotextile products in the North-East region of the country through a series of awareness programmes and media publicity.
- Creating demonstration set-up depicting the benefit of usage of Agrotextile products suitable for the region
- Development of identified Agrotextile products suitably customized for use in the North-Eastern region
- Study on the performance of various types of agrotextiles, laboratory tests and simulation modeling for their influence on control of environmental factors like soil, temperature, heat and light and also the plant growth.

- Providing cost-benefit analysis to the cultivators on usage of these products.
- Preparations of standards/ manual to be approved by appropriate authorities i.e. for global acceptance.
- Suggestions on improvement of subsidy schemes for usage of these products by the cultivators.
- Develop Capacities amongst the State Governments and other agencies like Krishi Vigyan Kendras and Dissemination of project results to the end users and the stakeholders.

Organisation & management

16.40. Textiles Commissioner will be the Nodal agency for the scheme and an Implemeting Agency would be appointed.A Project Coordinating Agency (PCA) will play a supportive role to State Governments & other Stakeholders, especially on the technical aspects of the project and will liaise with and ensure co-ordination among partners to the project

Partners of the project:

- N E Council, Shillong;
- Ministry of development of North- Eastern Region, DONER
- Respective State Governments under N-E region
- Assam Agriculture University and any other suitable technical institute
- Krishi Vigyan Kendras
- National Horticulture Board, state level
- NABARD
- Indian Jute Industries' Research Association (IJIRA)
- Manufacturers of Agrotextiles
- Suitable Institute (preferably in Germany/USA/UK) for training Engineers in the Stakeholder agencies. (To be identified/selected)

16.41. N E Council will have a pivotal role for overall control over the project.

The fund outlay for the project is estimated at Rs. 55 crore.

Setting –Up of Revolving Funds for Providing Assistance to Entrepreneurs for R & D:

16.42. In the area of Technical Textiles, the manufacturers need to concentrate more on innovative technological development to support the indigenization of the technical textile industry in terms of raw material and machinery for manufacture of technical textile products. A collaborative programme is proposed to be launched in association with Financing Agency like SIDBI etc for funding development and commercialization of innovative technology

projects for new product / processes / application development or for adapting imported technology to wider domestic applications in order to encourage and promote innovation capabilities in industries and to bring high-risk innovations to the market for opening up opportunities to commercialize technology innovations.

16.43. An indicative list of projects addressing the following issues can be considered for funding:

i) Commercialization of a new product / process / application developed through an indigenous technology
ii) Significant improvements / modifications in the existing product / process / application.
iii) Substantial upgradation in product quality, reduction of raw material consumption, reduction in process steps, reduction of energy consumption, reduction in GHG emission, reduction in cost, improvement in process efficiency and yield etc.
iv) Adaptation / modification in imported technology to make it suitable for wider domestic application.
v) Indigenization of imported raw materials / components
vi) Design, development and commercialization of innovative products / processes / applications based on new / advanced / renewable materials.

16.44. A Revolving Fund would be set up to provide loans on soft terms & conditions..

16.45. The assistance from the Revolving Fund will be limited to maximum 90% of the estimated approved project cost and the promoter has to contribute minimum 10% of the estimated approved project cost. The interest on loan shall be not more than five percent (5%) per annum (simple interest). Loan assistance would normally be not more than Rs.100 lakhs for each project. The repayment of loan, together with interest shall commence within one year after the project completion and shall be repaid in five years.

16.46. **Activities / expenditures to be covered under the total project cost:**

- Costs of technology know-how / licensing where “proof-of-concept” established at lab / semi-commercial stage and requiring substantial technology development for commercialization.
- Construction / augmentation / modification of work shed required for the project implementation
- Design, fabrication and procurement of capital equipment, plants & machinery

- Procurement of testing and quality control equipment for evaluation of standards / quality of product, process or application
- Procurement of utilities and services required for commercial scale production
- Cost of raw materials for commissioning of plant for making products towards evaluation and initial marketing
- Field trials towards limited market development
- Cost of manpower required for the project implementation period

The fund outlay for the project is estimated at Rs. 50 crore.

Study to generate data on hospital related infections.

16.47. A study can be commissioned to generaate data on hospital related infections; such data is available for advanced countries and the information can be useful in promoting medical textiles.

The fund outlay for the project is estimated at Rs.25 Lakhs

Balance requirement under TMTT

16.48. Out of the Rs 200 crores approved under TMTT, the balance amount of Rs 106.6 crores would be utilised during thr 12th Five Year Plan period to bring the Scheme to fruition.

Thus the total outlay proposed during the 12th Five Year Plan for Technical Textiles is Rs 921.85 crores.

Chapter – 17

WOOL AND WOOLLEN TEXTILES

- PERFORMANCE OF CWDB DURING THE 11TH FIVE YEAR PLAN
- SETTING FOR THE TWELFTH FIVE YEAR PLAN (2012-2017)
- PROJECTION FOR THE TWELFTH PLAN
- TWELFTH FIVE-YEAR PLAN APPROACH
- RECOMMENDATIONS

Knitwear and Processing Unit

Chapter – 17

WOOL AND WOOLLEN TEXTILES

Woollen textiles and clothing industry is relatively small compared to the cotton and man made fibre based textiles and clothing industry however the woollen sector plays an important role in linking the rural economy with the manufacturing industry, represented by small, medium and large scale units. The product portfolio is equally divergent from textile intermediaries to finished textiles, garments, knitwears, blankets, carpets and an incipient presence in technical textiles. Wool industry is a rural based export oriented industry and caters to civil and defence requirements for warmer clothing.

India is the 3rd largest sheep population country in the world having 6.40 crores sheep producing 43.30 million kg of raw wool. Out of this about 85% is carpet grade wool, 5% apparel grade and remaining 10% coarser grade wool for making rough Kambals etc. Average annual yield per sheep in India is 0.9 Kg. against the world average of 2.4 kg. per sheep per year. A small quantity of specialty fibre is obtained from Pashmina goats and Angora rabbits.

The woollen industry in the country is of the size of Rs. 10,000 Crore and broadly divided & scattered between the organized and decentralized sectors: The organized sector consists of: Composite mills, Combing units, Worsted and non worsted spinning units, Kintwears and Woven Garments units and Machine made carpets manufacturing units. Decentralize Sector includes Hosiery and knitting, Power-looms, Hand knotted carpets, Druggets, Namadahs and Independent dyeing, Process houses and Woollen Handloom Sector.

There are around 958 woollen units in the country, majority of which are in the small scale sector. The industry has the potential to generate employment in far-flung and diverse regions and at present provides employment in the organised wool sector to about 12 lakh persons, with an additional 12 lakh persons associated in the sheep rearing and farming sector. Further, there are 3.2 lakh weavers in the carpet sector.

Table-17.1 Installed Capacity and Employment:

i)	(a) Wool Combing (b) Synthetic fibre combing	30 Million Kg 3.57 Million Kg
ii)	Worsted spindles	6.04 Lakh
iii)	Non Worsted spindles	4.37 Lakh
iv)	Power looms	7228
v)	(a) Machine made carpets (b) Hand-made carpets	0.50 Mn Sq.Meter 9 Mn. Sq. Meter
vi)	Total number of units	958
vii)	Total Employment	27.2 lakh

17.2 WOOL PRODUCTION & CONSUMPTION

The total wool production in India is not enough to meet the total requirement of raw wool for woolen industry. The bulk of Indian wool is of coarse quality and is used mostly in the hand-made carpet industry. Since Indigenous production of fine quality wool required by the organized mills and decentralized hosiery sector is very limited, India depends almost exclusively on import.

Table-17.2 Production of Indigenous wool:

Year	Production Quantity (in million kg.)
2004-05	44.60 Mn Kg.
2005-06	44.90 Mn Kg.
2006-07	45.10 Mn Kg.
2007-08	44.00 Mn Kg.
2008-09	42.90 Mn Kg.
2009-10	43.20 Mn Kg.
2010-11 (Anticipated)	43.30 Mn. Kg.

(Source: Ministry of Agriculture)

Table-17.3 Production of Woollen Items:

Production of woollen items	HS Code	Unit	2008-09	2009-10	2010-11
Worsted yarn	5107	Mil. Kgs	60.00	61.00	62.00
Woollen yarn	5107	Mil. Kgs	30.00	30.00	30.50
Wool tops	5105	Mil. Kgs	37.00	38.00	38.50
Fabrics (Woollen/worsted)	5112	Mil. Mtrs	85.00	87.00	88.00
Shoddy yarn	5106	Mil. Kgs	40.00	42.00	43.00
Blankets (Shoddy/Woollen)	6301	Mil. Pcs	18.00	20.00	22.00
Shoddy fabrics	5103	Mil. Mtrs	30.00	31.00	32.00
Knitted goods	6001	Mil. Kgs	19.00	20.00	21.00
Hand made carpets	5701	Mil.Sq.Mtrs	10.00	10.00	10.00
Machine made carpets	5702	Mil.Sq.Mtrs	00.40	0.40	0.45

(Source: IWMF, Mumbai)

As per recent report of 'National Fibre Policy' (MOT), in the next one decade, consumption (production & imports) of raw wool is estimated to double from 114.2 million Kg in 2008-09 to 260.8 million Kg by 2019-20. During the period between 2009-10 and 2016-17 raw wool consumption is to grow at a CAGR of 7.8% and will be approximately 208 Million Kg by the end of 12th Plan i.e. year 2016-17. As per past trends Wool production in the country is to remain constant at approx. 44 Million Kg and thus India will Import nearly **164** million Kg wool at the end of 12th Plan. Around **12,600** container of wool will be imported to India in a year by the end of 12th Plan. One container of **20 ft**. contains **13 tons of wool.** Concentration on export should be stressed to achieve exports of around Rs.4 billion at the end of 12th Plan.

17.3 PROCESSING

The Woollen industry suffers from inadequate and outdated processing facilities. The pre-loom and post-loom facilities are required to be modernized for ensuring quality finished product. Quality finishing of the woollen products will not only increase use of indigenous wool but will also make the product more competitive in the international market. It will also assist in procuring better price for wool growers and will make quality raw material available to the Khadi and Handloom sector.

Owing to overall size of the woollen industry and specialized nature of equipments required for processing, the industry has been dependent on imported plant and machinery except for few complimentary equipments from local sources. Machinery required for processing from raw wool fibre to fabrics followed by knitting and garmenting is mostly imported from European countries, USA and Japan. The industry may need an investment of Rs.5,000 to 10,000 crores worth of plant and equipments in the course of next 5 years for modernization and capacity expansion.

Our main focus should be to concentrate on processing and get expertise from Italian finishers and train our artisans / processors since they are the pioneers in the finishing technology. We should project Indian woollen /worsted industry as a brand where our products should get premium over their products as Italian products which is of the same blend and composition but because of better branding / finishing attracts more price than Indian woollen products.

17.4 IMPORT

The production of wool in the country is not sufficient to meet the demand of the wool industry particularly of apparel sector and most of it is being imported from Australia, New Zealand and many other countries. The present requirement of different segments of Indian woollen industry is likely to grow further because of higher domestic as well as export need of woollen items. The country which had strong position in quality carpet wool production is becoming dependent on import, as requirement is growing at higher pace as compared to growth in production.

There has been a shift from imports of fine quality wool to low quality wool in recent years. This is on account of consumer preference for hand tufted carpets in the US and other western markets. Cheap wool import from the Middle East is also constantly growing and mixed with indigenous wool to make hand tufted carpets. Import of raw wool from Australia, New Zealand and many other countries are as under:

Table-17.4 Import of Raw Wool

Year	Qty. (in million kgs.)	Value (Rs. in crore)
2003-04	84.61	870.61
2004-05	80.47	825.95
2005-06	91.22	885.81
2006-07	99.56	1077.45
2007-08	93.07	1089.51

2008-09	65.73	1031.86
2009-10	68.26	1000.77
2010-11 (upto Dec.,10)	65.65	1031.86

(Source: DGCI&S, Calcutta)

Besides it, we are also importing woollen and synthetic rags for our shoddy sector. The import figures of last years are as under:

Table-17.5 Import of Woollen and Synthetic Rags for Shoddy Sector

Years	Qty. (in million kgs.)	Value (Rs. in crore)
2003-04	82.64	134.28
2004-05	73.01	108.18
2005-06	121.41	197.67
2006-07	110.12	153.41
2007-08	91.81	96.03
2008-09	85.30	90.61
2009-10	82.65	89.67
2010-11 (upto Dec.,10)	75.58	91.07

(Source: DGCI&S, Calcutta)

The import of raw material required by the woollen industry i.e. raw wool and woollen/synthetic rags is under Open General License (OGL).

As per recent report of 'National Fibre Policy' (MOT), imports of raw wool are expected to increase significantly in coming years. From a level of 65.7 million kg in 2008-09, it is expected to increase to 206.7 million kg by 2019-20. During the period between 2009-10 and 2014-15, imports are estimated to grow at a CAGR of 11.7% and for the period between 2015-16 and 2019-20, they are estimated to grow at a CAGR of 10.1%.

17.5 EXPORT

India exports various woollen products like tops, yarn, fabrics, Ready Made Garments and carpets. Carpet enjoys maximum share of total export. The aggregate export of woollen

items from wool tops to finished products like textiles, clothing, blankets and carpets is currently estimated around Rs. 7000 Crs.

During the 11th Plan period, the growth was hindered owing to variety of factors, however there are good opportunities for export growth. Primary sectors which can look forward for export growth are textiles, woven clothings, knitwears and carpets. In order to build growth tempo, the action for reform should be expedited which may also attract FDI to reinforce export outlook through joint ventures for better access to major markets.

To achieve woollen exports target of 4 Billion Dollar (Rs. 18,000 Crs), in addition to improved processing we have to increase our export promotion activities also. We should penentrate into newer markets, concentrate on branding of our products and hold numerous shows in different platforms to showcase our products.

Item Wise Statement of Exports is as under:

Table-17.6 Export of woolen Item

Value (Rs. Crores)

Year	**Woolen Yarn, fabrics, Made ups**	**Ready Made Garments**	**Carpet (Excluding silk) Handmade**	**Total**
2006-07	379.28	1636.54	3891.47	5907.30
2007-08	373.57	1409.54	3725.79	5508.90
2008-09	456.51	1742.97	3505.37	5704.85
2009-10	424.63	1838.09	3442.93	5705.65
2010-11 (Up to Jan-11)	376.64	1272.90	4184.21	5833.75

(Source : DGCI&S, Kolkata)

As per recent report of 'National Fibre Policy' (MOT), exports of woollen products will continue with their strong growth. During the period between 2009-10 and 2014-15, exports of woollen yarn, fabrics and made-ups are expected to record a CAGR of 11.6%, while during the period between 2015-16 and 2019-20, exports are likely to post higher CAGR of 13.9%. As per policy report, the exports of readymade wool garments would post a CAGR of 19.1% during 2009-10 to 2014-15. The growth momentum is expected to accelerate during the following five years, and exports are projected to record CAGR of 21.5% during the period between 2015-16 and 2019-20.

17.6 RESEARCH & DEVELOPMENT

Research & Development activities should be promoted in the country to help the wool industry to adopt regular system of quality control and maintain the quality of products, to render technical and trouble shooting services with reference to selection of raw material, controlling various adjusting equipments and reducing the cost of production and improving the quality of product.

Wool Research Association, Thane (Mumbai) may need upgradation of existing laboratories and equipments to meet global standards and bring together a pool of technical talents to make it an institution with international competence and full-fledged modern facilities. This will lead to its developing into a "Centre of Excellence for Wool" acting as a resource for the Government and the industry. This upgradation may involve a capital outlay of Rs 10 – 15 crores.

The Wool Research Association (WRA) has to provide latest technological support to the woollen industry in the following fields:

- Development of new products based on latest techniques in mechanical and chemical processing of wool and transfer the knowhow to the industry.

- Study and provide Research & Development facilities for testing of properties of various products like fiber, yarn and fabric stages including intermediate stages.

- The provision of services in quality assurance and testing to the organized sector.

- The provision of services to the decentralized industry, which uses significant Australian wool in small enterprises where the sophistication of equipment and machinery is much lower than that of the "organized" sector.

- Offer technical training and suitable courses to support industry's need of technological/supervisory training for constant upgradation of technical knowhow.

- Organizing regularly, workshops and seminars with the participation of industry experts from India as well as overseas in the field of wool technology for the dissemination of the latest development.

17.7. HUMAN RESOURCE DEVELOPMENT PROGRAMME

It has been felt that human resources development aspects have rather been neglected in the wool sector. Since the Government has recognized the wool industry as thrust area, it is necessary to make all out efforts for development of human resource to meet the requirements of wool industry.

The woollen industry employs a workforce of 1.7 million and 30,000 technical supervisory level personnel. With the spurt of the textile activity and the projected target growth, while 5 million direct jobs are likely to be created in the textile industry with another 7 million jobs in allied sectors, it is safe to estimate the requirement of about 2 lac new jobs in the woollen sector consisting of skilled and semi-skilled workforce; in addition to trained /qualified supervisory personnel & managers.

CWDB may play a greater role in providing skilled manpower to industry by starting skill development training at major woollen industry centre such as Panipat, Jaipur, Bikaner, Amritsar, Srinagar etc.

17.8 STRENGTHING OF CENTRAL WOOL DEVELOPMENT BOARD

The Central wool Development Board has been assigned the functions of promoting growth and development of wool and woolen products, market intelligence, marketing of wool & woolens, price stabilization, standardization of wool and woolen products, quality control, dissemination of information, product diversification, advise to government on policy matters, coordination etc.

The Board had started effectively since the year 1993-94 with the barest minimum staff strength to discharge its functions though its jurisdiction is spread over whole country. The Board has not been provided with technical officers which has affected monitoring and evaluation of the schemes, most of which are of technical nature. The location of the headquarter of the Board has also created logistic problems in maintaining effective coordination with the various State Governments and concerned department of the Central Government.

To enable the Board to discharge its function effectively, it has to be suitably strengthened with sufficient technical man power with its expansion at the State level for better monitoring & regular evaluation of the schemes.

17.9 PREPARATION OF PROPER DATA BASE OF ENTIRE WOOLLEN SECTOR

Presently there exist serious information gap in the wool sector. There is no central point in the Government where consolidated statistics and information on wool sector is available. The wool industry in the country has various segments. The every segment functions almost independently and there is no coordination and interaction between one segment to another. The worsted sector, knitting sector, carpet sector, woolen handloom sector, woolen khadi sector, shoddy sector have their own different problems with regards to raw material and technology used.

There is need to evolve a system in which regular information regarding production, consumption, export and import of wool and woolen products is regularly flowed to the Central Wool Development Board which can be further compiled, analyzed and disseminated.

17.10 CONSTRAINS FACED BY WOOL SECTOR: -

17.10.1 Raw Wool Production

- Low priority of State Governments in development of wool sector.
- Lack of awareness, traditional management practices, and lack of education and poor economic conditions of woolgrowers.
- Shortage of pasture land which force breeders to migrate their flock from one area to another throughout the year.
- Uneconomical return of the produces to sheep breeders i.e. sale of raw wool, live sheep, manure, milk, skin etc.
- Lack of motivation for adopting modern methods of sheep management, machine shearing of sheep, washing & grading of raw wool etc.
- Inadequate production and processing facilities of specialty fibres i.e. Pashmina goat and Angora rabbit wool.

17.10.2 Marketing of Raw Wool

- Inadequate marketing facilities and infrastructure.
- Ineffective role of state wool marketing organizations in wool producing states.
- Absence of organized marketing and minimum support price system for ensuring remunerative return.

- Minimum return earned from sale of wool by wool growers.

17.10.3 Processing of Wool

- Inadequate quantity of quality raw wool.
- Out dated and inadequate pre-loom & post-loom processing facilities.
- Inadequate dyeing facilities in wool potential areas.
- Need of designing & diversification of woolen handloom products.
- Dearth of technicians & trained manpower.
- Inadequate testing facilities and quality control measures.
- Transfer of technology is inadequate.
- Lack of operational and technical bench marks.

17.10.4 Education, Research & Development, Human Resource Development

- No educational institute for wool technology resulting lack of expertise in wool sector.
- Inadequate database.
- Need of R&D work on blending of raw wool with other fibres & diversification of woollen products.
- Lack of R&D work for value addition to Deccani wool produced in Southern region.

17.11 PERFORMANCE OF CWDB DURING THE 11TH FIVE YEAR PLAN

For the 11th Five Year Plan, the Board was allocated Rs. 67.16 Crore by the Ministry of Textiles for implementation of various schemes under fully funded Central Sector Scheme and the Board utilized Rs. 54 Crore during first four years of 11th Plan and implemented various schemes and projects in all major wool producing States.

The Board has taken up different schemes with following objectives:

To provide support to the entire chain from shepherd to the end consumer so that the industry both apparel and carpet, can upgrade itself in terms of quality of product for a larger international market by accessing technology and recent technological advances that it cannot afford on its own.

To get domestic wool producers better returns for their products by intensifying inputs and organizational effort for improving the quality of their wool and its reach to the user.

Schemes of the CWDB and achievements made during first four years (2007-11) of 11th Five Year Plan are as under:

17.11.1 Integrated Wool Improvement and Development Programme (IWIDP):

i. Sheep and Wool Improvement Scheme. (SWIS)
ii. Angora Wool Development Scheme. (AWDS)
iii. Pashmina Wool Development Scheme. (PWDS)
iv. Human Resource Development & Promotional activities.

Under SWIS, the Boardprovided health coverage to 38lakh sheep, established 10 Ram Rearing Farms, sanctioned 100 Sheep Pens, established 3 Multiple Facility Centres, Created Revolving fund for marketing of 10 lakh Kg. wool &provided 'Feed Supplement' to 80,000 eligible sheep (weak, pregnant/ breedable ewes).

Benefited 320 Angora wool grower families and 2400 Pashmina wool families under different components of scheme and provided employment opportunity in remote hilly areas by encouraging Angora rabbit and Pashmina goat rearing activities. Provided training to nearly 1000 wool growers and weavers/artisans in latest sheep farming, weaving, designing etc. To provide skilled manpower for wool sector, the Board imparted training in collaboration with various reputed organizations and R&D Institutions.

CWDB also organized 61 Woollen Expos (exhibition-cum-sale of woollen products) at different important places in the country to promote sale of woollen products, to increase awareness in favour of woollen products, to expose weavers/ manufacturers to new woollen markets and to launch new woollen products/ designs for trial and promotions. CWDB also finances different R&D projects for development of Sheep and wool.

17.11.2 Quality Processing of Wool and Woollen Products:

A. Setting up of Common Facility Centre for wool scouring, carbonizing, Carding, Dyeing, Spinning (Pre-loom processing activity)

B. Setting up of Woollen Shawl/Carpet Finishing Centre (Post-loom processing activity)

Established 14 Common Facility Centres under pre-loom processing activities at different wool potential areas with aims to provide value addition to indigenous wool by improving quality and to attract the wool spinners/industrialists to replace/modernize their obsolete and outdated manufacturing units on CFC pattern.

17.11.3 Social Security Scheme for Sheep Breeders:

A. Sheep Breeders Insurance Scheme (Kendriya Bhed Palak Bima Yojana)

B. Sheep Insurance Scheme (Kendriya Bhed Bima Yojana)

Covered about 5 lakh sheep and 77,000 shepherds under Sheep Insurance Scheme and Sheep Breeders Insurance Scheme respectively in major wool producing States.

17.12 SETTING FOR THE TWELFTH FIVE YEAR PLAN (2012-2017)

17.12.1. Policy Environment:

The Ministry of Textiles constituted a Working Group in 2009 for formulation of a "National Fibre Policy" with a view to strengthen the fibre economy of the country, to make Indian textiles and garments sector (Including Woollen Industry) competitive in the long-term and to steer towards a sustained growth. The policy recommendations for the woollen industry are broadly classified into two categories.

a. **Fiscal Measures**: It mainly includes rationalization of the import duty structure in wool and woollen products. Duty rationalization is looked from the perspective to encourage value addition by the domestic industry by importing quality raw material to export woollen products, and in the process earn valuable foreign exchange for the country and generate sustainable employment too.

b. **Non-Fiscal Measures**: It mainly includes measures required for improving the quantity and quality of wool and woolen products in India. Non-fiscal measures for wool sector recommended under National Fibre Policy are as under:

Approach	Recommended measures
Short term	Rationalization of import duties Support for setting up of processing facilities Subsidy grants for supply of nutritious fodder Awareness and training camps for sheep breeders
Medium term	Grading system Marketing support Strengthening CWDB Database building Selective and/or cross breeding programme, in conjunction with state Animal Husbandry Departments.
Long term	Agency on PPP model for procurement of wool in Country Collaborative research projects Focus on high land wool, deccani wool and speciality fibres

The National Fibre Policy shows the direction in which the development of the Wool Sector must be steered. This emphasizes:

- To improve quality and quantity of wool (carpet grade, highland and Deccani wool, apparel grade wool & specialily wool fibres such as Angora & Pashmina)
- Check sheep mortality rate; to bring down mortality rate from current 12-15% to 2-3 %,
- To undertake collaborative research projects with leading wool producing countries in the world,
- Database building,
- Setting up Common Facility Centers (CFCs) for processing of wool and woolens.
- Introduction of grading system & marketing support.
- Strengthening the Central Wool Development Board.

17.12.2 PROJECTION FOR THE TWELFTH PLAN:

In the context of the emerging domestic and international scenario, needs of the growing population and keeping in view the production trends in the past, the targets for the XII Plan have been projected as under:

Table-17.7 Projection for the Twelfth Plan

Sr. No.	Items	HS Code	Unit	Achieve-ments (2010-11)	Assumed growth rate during the 12th Plan (2017-18)	Terminal year of the 12th Plan (2017-18)
01.	Apparel grade raw wool (clean) (consumption)	5101	Mil. Kgs.	47.00	12%	92.67
02.	Carpet Grade raw wool (consumption)	5101	Mil. Kgs.	35.00	13%	72.08
03	Woollen/Synthetic/Cotton rags (consumption)	6310	Mil. Kgs.	100.00	10%	161.00
04	Wool Tops	5105	Mill. Kgs.	38.50	5%	49.00
05	Worsted Yarn	5107	Mil. Kgs.	62.00	6%	83.00
06	Woollen Yarn	5107	Mil. Kgs.	30.50	5%	39.00
07	Fabrics (Woollen/worsted)	5112	Mil. Mtrs.	88.00	20%	219.00
08	Shoddy yarn	5106	Mil. Kgs.	43.00	5%	55.00
09	Blankets (Shoddy/woollen)	6301	Mil. Pcs.	22.00	6%	29.00
10	Shoddy fabrics		Mil.Mtrs.	32.00	5%	41.00
11	Knitted Goods	6001	Mil. Kgs.	21.00	20%	52.00
12	Handmade Carpets	5701	Mil.Sq.Mtrs.	10.00	5%	13.00
13	Machine-made carpets	5702	Mil.Sq.Mtrs.	0.45	1%	0.47

(Source: Indian Woollen Mills Federation/ Mumbai)

The above targets can be achieved partly, by modernization i.e. by adding and replacing worsted/ woollen/ shoddy yarn spindles with modern spindles and by installing improved wool processing facility both under pre loom and post loom activity.

Indigenous wool is mostly suitable for carpet manufacturing and its production has remained stagnant at around 43-44 million kg. with no improvement in quantity and quality since last 20 years. In spite of continuous efforts, there has been no success in developing good quality apparel grade wool indigenously. Therefore, instead of wasting further effort and resources in that direction, concerted efforts should be made during the Twelfth Five Year Plan to improve woollen products by improved manufacturing and processing facility in the woollen sector and by increased marketing of woollen & worsted items to increase exports.

17.12.3 TWELFTH FIVE-YEAR PLAN APPROACH

The approach for promotion and growth of the woollen industry during the 12th Five Year Plan shall be on the following lines:

- Mapping out the existing and potential wool producing areas in the country for different types of wool. Schemes will be formulated in a focused way, based on local needs and potential to increase wool production and improvement in quality in the country by area specific approach.
- Global availability of fine wool is reducing progressively during last two decades, therefore, production of fine apparel grade wool has to be focused programs in North Temperate Region i.e. Jammu and Kashmir, Himachal Pradesh and Uttrakhand. North-Western region of the country produces best quality of carpet grade wool. Hence activities on production of carpet wool in the region will be intensified by focused programs on quality carpet producing sheep breeds viz. Magra, Nali, Marwari, Bikaneri-Choklla etc.
- The policy planning and implementation of wool production programs is with state Sheep husbandry Department under Ministry of Agriculture/Department of animal husbandry and a number of schemes are being implemented by these agencies for development of Sheep and Wool. It is however a reality that sheep production is not a priority area in these schemes as most of their schemes are oriented towards dairy sector. Hence CWDB should be proactive to supplement state Animal husbandry department's effort in this direction with essential backward and forward linkages with collaboration of CSWRI Avikanagar.
- There is a need for interventions at the organizational level of sheep breeders in the form of co-operative societies or self help groups. The breeding and rearing activities shall be supplemented with Common Facility Centers for grading and scouring activities, so that sheep breeders realize remunerative price for wool in the market. The role of State Wool Boards/ Corporations/Directorates and CWDB may be crucial in this regard. Area specific schemes in this direction shall be taken up by state Wool Boards/ Sheep Boards/ Federations/ Directorates etc. CWDB shall continue to provide financial assistance for these ventures.
- In order to minimize the risk factors under the evident climate change scenario, some kind of insurance scheme has to be worked out for the sheep breeders/shepherds. Since a large number of casualties occur in sheep and small ruminants sector also,

insurance for these animals can further intensified and CWDB should continue its ongoing Social Security Schemes.

- The existing marketing structure of wool has long chain of intermediaries as a result the realization by the farmers of their produce is reduced. It is accepted that marketing is critical as well as a weak link in the sector due to which the wool has always been treated as a by product in sheep rearing activity and never been tried as primary economic activity. To overcome this, Wool marketing is to be strengthened by the intervention of State Wool Boards, Corporations and Federations so that the interest of wool producer is protected. CWDB should continue its ongoing scheme in the form of a revolving fund for Marketing of raw wool.
- Processing and finishing of wool and Woollen Product is one of the weakest link as it uses traditional and outdated machinery and due to which woolen products are not competitive in the international market. In order to increase export of Woollen products, there is an urgent need to replace existing outdated machinery with most modern, state of the art and specialized machineries which require huge capital investment particularly in the organized sector. New scheme shall be launched to finance partial cost involved in procurement/installation of these modern and specialized machineries.
- Desired emphasis has not been given to change old designs meeting the emerging market trends in wool sector. The industry has to be familiar with fashion trends continuously to evolve the new pattern in vogue in the world of fashion today. Use of Computer Aided Designs for making new designs should also be encouraged. Moreover there is a need to explore possibilities of the diversification of existing products either by change in the existing products or though blending with synthetic/specialty fibers such as Angora, Mohair, Pashmina, silk etc for better consumer acceptance. This will increase the domestic consumption and export of such products. CWDB shall initiate and finance activities in this direction in association with Woolen Industry, National Institute of Fashion Technology (NIFT), National Institute of Design (NID), WRA etc.

- Research and Development activities shall be promoted in the country to help the woolen industry for adopting quality control measures for maintaining quality of the products, to render technical and troubleshooting services with reference to selection of raw material thus reducing the cost of production and improving the quality of products.

- There is a strong need to market worsted/woolen products of the small and medium scale industry in the international market to provide maximum benefit to this segment and to increase the export further. CWDB is providing marketing platform to this segment through its woolen expo schemes in India. CWDB shall take initiative to provide marketing platform in the international level also by organizing identical schemes in potential market abroad or by providing financial assistance for these stake holders to participate in the event organized at international level under proposed schemes.
- Technical qualified human resource is essential to keep the pace with newer technology. Therefore, there is an urgent need for human resource development (HRD) in respect of Shepherds and also for development of technical manpower in the industry. This can be done by propagating appropriate technology to stake-holders through organizing short course using modern techniques of films and also by formal and informal training programs at notified institutes in India and abroad.
- Sheep and woollen sector is scattered all over the country. CWDB is only body for the development of wool and woollen products by implementing its various schemes in all wool producing states. However, CWDB is having very limited staff and lacking in specially qualified veterinary and textile experts hence, these schemes/programs are unable to yield the desired results. Restructuring of the CWDB in lines with the Central Silk Board, Bangalore will facilitate it to implement the various schemes and policies in an effective manner and to achieve the desired objectives.

17.13 RECOMMENDATIONS :

Working Group has recommended following Fiscal and non fiscal measures to achieve the targets sets for the 12th Plan

a. Fiscal Measures

Recommendations for changes in Duty Structure on Raw Materials

Each Item of Raw Material on which duty concessions are being sought is explained in detail.

a.1 Abolition of custom duty on Raw Wool (Chapter 51.01) & Fine Animal Hair (Chapter 51.02)

- As apparel grade wool of fine micron (24 micron and finer) and other fine animal hair are not indigenously available. Woollen industry is 100% dependent on imports of

this basic raw material which is sourced from countries viz., Australia, New Zealand, Uruguay, South Africa, etc. **There is no indigenous angle to availability of Apparel Grade wool.**

- Coarse quality wool is also procured from New Zealand for blending with indigenous wool to make it suitable for high quality carpets meant for exports. Nearly 95% of carpets produced are exported.
- The case of abolishing import duty on wool fibre is justified as country's requirement is fully import dependent. Industry's case is further supported in line with recent abolition of import duty on cotton.

a.2 Abolition of basic custom duty on wool waste (Chapter 51.03) from 10% to 0% alongwith woollen rags (Chapter 63.10) from 5 % to 0%:

- Small and medium scale units engaged in the production of low cost woollen fabrics and blankets are mostly located in Northern India. This industry for raw materials is entirely dependent on wool waste, woollen and synthetic rags for regeneration into spinable fibre.
- Wool waste is used for manufacture of low value fabrics and made ups like blankets for the common people living in the hilly areas and cold regions. Wool waste is an important major raw material, however **there is no indigenous angle**. The present duty at 10% is inconsistent and unjustified in terms of its usage for production of low value products. Wool waste imports is around 100 million kgs annually, which is actually carding waste, combing waste (i.e. noils) spinning waste, weaving waste. The clusters of this sector is mostly in Panipat, Gujarat, Amritsar, Kashmir and mostly women folk are employed in the sector.
- Similarly, woollen and synthetics rags are regenerated into spinable fibre, which constitutes major raw-material input for shoddy industry in the small to medium size sector.
- This is unique in the woollen sector that a natural fibre is economically recycled for production of warm clothing affordable to the weaker section of the society.
- In the earlier times, old woollen clothings were recycled in large quantity by manufacturers in Italy to produce cheaper woollen clothing, however, due to high labour cost this industry has migrated to low cost economies. Unfortunately, due to fiscal burden on import of the wool waste in India we are fast loosing our share to other countries which have zero level duty.

- Unless steps are taken to abolish the duty, on these low value inputs, India's supremancy in export of blankets made out of recycled fibre will erode.

a.3 **<u>Reduction of basic custom duty on wool tops 15.6 Microns & Coarser (Chapter 51.05.29.10) from 20% to 10% & Abolition of custom duty on wool top of 15.5 micron and finer varieties (Chapter 51.05.29.10):</u>**

Wool top is a first stage product manufactured out of raw wool and many textile units import wool tops as a first input item of raw material. Further there are no facilities to convert raw greasy wool of ultra fine microns of 15.5 and finer. Since the quantity available of such fine micron wool is very limited (many times less than 200 kgs) it makes commercial sense to import Wool Tops of 15.5 micron and finer variety instead of raw greasy wool.

Our recommendations, therefore, are in two stages –

- For reduction of duty to 10% on wool tops of 15.6 microns & coarser where facilities are available in the country for processing Raw wool for making wool tops, which is the first stage of input for the industry and
- The total abolition of import duties on wool tops of 15.5 microns and finer varieties because these wool (of such fine microns) cannot be processed in India to convert into Wool Tops and the Industry is fully dependent on imports of such qualities for making ultra fine fabrics to compete with leading manufacturers of countries like Italy.

a.4 **<u>Abolition of 10% basic custom duty on Nylon staple fibre (Chapter 55.06.10) and Polypropylene staple fibre (Chapter 55.03.40):</u>**

Nylon staple fibre and polypropylene staple fibre are also important components for blending with woollen fibre to produce yarn required by Carpet Weaving Industry, which is primarily in Cottage Industry Sector. Nylon Staple Fibre is also blended with wool to produce suitable yarn for weaving of apparel fabrics. **There is no indigenous angle to this raw material.**

a.5 Abolition of import duty on Machinery and spares

Abolition of custom duty on:

Specified textile and garment machinery (including woollen machinery) (Tariff Heading No.84, 85 & 90) covered by list Nos. 30, 31 & 46(D) of Notification No.21/2002-Cus. Dated 1-3-2002; &

Textile and garment machinery (Tariff Heading No.84) falling under Chapter Heading 84.44 to 84.49, 84.51 & 84.52 (except 84.52.10, 84.52.30.10 and 84.52.90.10) and Spare Parts for general textile machinery and also for machinery covered under List No.46(D) (Tariff Heading No.84, 85 & 90):

Machinery required for the Woollen Industry is not available indigenously,hence the custom duty on woollen machinery and spare parts should be abolished. The current burden is as per table given below:

Table-17.8 Custom Duty on Woollen Machinery and Spare Parts

Sr. No.	Item Description	Tariff Heading No.	PRESENT DUTY (2011-12)				
			Basic Duty	C.V. Duty Ad. Val.	Edu. Cess 3%	Special Addl. CVD @ 4%	Total Duty Ad.Val.
	Machinery						
01)	Specified textile and garment Machinery (Including woollen Machinery) covered by list Nos.30, 31 & 46(D) of Notification No.21/2002-Cus. Dated 1-3-2002	84, 85 & 90	5.00%	10.30%	0.47%	4.65%	20.43%

b. <u>Non Fiscal Meaaures</u>

Under Non-Fiscal Measures working group recommend following schmes outlays for the Twelfth Plan

Sr. No.	Scheme	Component	XII Plan Proposed Outlay (Rs. in Crs.)
1.	**Wool Improvement and Development Programme**		**119.50**
		Health care for 50.0 Lakhs Sheep @ Rs. 32 per sheep per year for 3 years	48.00
		Feed supplement to sheep/Pashmina goat (Weak / Pregnant ewes) @ Rs. 5 per day per sheep for 90 days in a year (Total 1 lakhs sheep per year)	22.50
		Schemes for Angora Wool Development	3.00
		Schemes for Pashmina Wool Development	6.00
		State specific Schemes as submitted by State Govt. (Rs. 2 Crs. per year)	10.00
		R& D activities related to wool & woolen.	10.00
		To set up ' Centre of Excellence at WRA- Thane (Mumbai) for state of the art testing facility, quality control, certification, training & R&D for wool and allied industry.	10.00
		Social Security Scheme for sheep breeders.	5.00
		Other Misc. activities like Publicity, Consultancies, Evaluation & Monitoring of Schemes. (Rs. 1 Crs. per year)	5.00
2.	**Marketing of Raw wool including Pashmina & Angora fiber.**		**14.00**
		Revolving fund for marketing of Raw wool @ Rs. 50 per kg for 15 Lakhs kg Wool.	7.50
		Revolving fund for Marketing of Pashmina Wool @ Rs. 2000 per kg for 15000 Kg of Pashmina Wool	3.00
		Revolving fund for Marketing of Angora Wool @ Rs. 1000 per kg for 10,000 Kg of Pashmina Wool	1.00
		Marketing Incentive to Sheep Breeder/ Implementing Agency @ Rs. 5 per kg for 10 Lakhs kg Wool per year. (For Rajasthan)	2.50
3	**Marketing**		**25.00**

	and Export Promotion Scheme.		
		Marketing of Wool & Woollen in India @ Rs. 25 lakhs per Woollen Expo. Total 10 Woollen Expo per year. 12.5	
		Marketing of Wool & Woollen and other Export promotion activities. Rs. 2.5 Crs per year through wooltexpro 12.50	
4	**Human Resource Development**		**17.5**
		Training in Sheep Husbandry Practices in reputed Institutions (India and abroad) or by Organizing Camps / Workshop/ seminars etc. (Rs. 1 Crs per year.)	5.00.
		Training in Wool and Woollen Processing machineries. (India & abroad)(Rs. 50 Lakhs per year.)	2.50.
		Skill Development & Up-gradation (Rs. 1 Crs. per year)	5.00
		Strengthening of Infrastructure for Training including Technical Manpower.	5.00
5	**Modernization and strengthening of processing facilities**		**125.00**
		Common Facility Centre @ Rs. 100 Lakhs per CFC for 25 CFC	25.00
		Financial assistance for modernization/ replacement of existing machineries. Maximum subsidy @ Rs. 5 Crs or 20 % of the total machinery cost which ever is lower. Total 20 centres in 5 year.	100.00

3.5. PROJECTED OUTCOME OF THE TWELFTH PLAN

Name of the scheme	Expected Impact and outcome
Wool Improvement and Development Programme	IMPACT • Enhancement in Qualitative and Quantitative production of Wool fibre.(Exploitation of Import substitution, Export and Economic potential) • Availability of Graded and certified Wool • Significant Societal impact OUTCOMES ❖ Programme will help in reducing import hence saving in foreign currency and step toward self reliance.

	❖ Production of Angora and Pashmina Speciality fiber will increase by 50 % at the end of 12th Plan enabling promoting more value added production ❖ Bring down mortality rate of sheep from current 12-15% to 3-5% facilitating Quantitave and Qualitative production. ❖ 1 Lakhs Sheep Breeders will be benifited in getting enhanced Quality of Work Life(QWL) ❖ Feed Supplement to 5 lakh sheep/pashmina goat remove existing weaknesses. ❖ Gradation of International level will result arrest of rejection and better Quality Assurance. ❖ Research and Development projects relating to wool and woollen development will ensure value added blending, Yarn fabrics and carpet production resulting increased Unit value Realisation (UVR) which is the ultimate bottom line
Marketing of Raw wool including Pashmina & Angora fiber.	IMPACT • Remunerative price of wool will be paid to Wool Growers. OUTCOMES ❖ Will increase their income by 20 to 30 % which may motivate wool growers to make more investment in this sector will help in stabilizing the price of wool in the market. ❖ Fair return of their produce. ❖ Increasing the procurement by Government organization to a reasonable capacity State wool marketing organization will be revitalized and will lead to optimum utilization of available infrastructure.
Marketing and Export Promotion Scheme	IMPACT • This will increase awareness in favour of woollen products and will expose weavers/ manufacturer to new woollen markets. • Will help in launching new woollen products / designs for trial and promotion. OUTCOMES ❖ Enhanced demand and per capita consumption ❖ Enhanced UVR resulting avenue for benefit by all stakeholders
Human Resource Development	IMPACT • Establishment of new training centres at potential place to provide 500 Skilled man power / resource persons including shepherds will be made available every year to organized and decentralized sector including to fulfill requirement of skilled manpower. Shall ensure Training in improved processing to stake holders / Industrialists which is likely to lead to further investment. OUTCOMES ❖ Will increase employment in wool and allied industry. ❖ Will increase Qualitative and Quanitative production ❖ Will reduce cost of production ❖ Will enhance UVR ❖ Will enhance QWL of all concerned

Modernization and Strengthening of Processing Facilities.	IMPACT • Will bring additional 500 Crs. improved processing facility for the Industry.25 Common Facility Centres for pre-loom and post-loom processing facilities will be established. 20 Units will be modernized/replaced the existing machineries. Comprehensive services for wool Grading, scouring, deburring, carding, dying and spinning etc. OUTCOMES ❖ Existing units for wool processing both for domestic production and export purposes will get strengthened to International level through benchmarking in an appropriate manner ❖ Enhanced UVR by wool growers by availing primary processing facilities at minimal cost. ❖ Enhanced UVR and market due to higher productivity and level of quality of woolen Products. ❖ Positive impact on environment leading to Carbon credit can also be attained
Overall	IMPACT • Enhanced Domestic and global trade • Demographic dividend: Employability and Employment. • Societal, Environmental & Economical OUTCOMES ❖ Increased Export : Value and Volume term ❖ Increased Terminal competency :Qualitative and Quantitative production ❖ Increased employment : Contribution to Demography as dividend ❖ Increased per capita trade : Contribution to GDP ❖ Fair working conditions / wages : Contribution to Human Development Index ❖ Enhanced protection of Energy and environment: Societal and environmental upliftment.

CHAPTER - 18

FASHION AND TEXTILE EDUCATION.

- CONTEXT OF FASHION AND TEXTILES EDUCATION
- GAPS AND CHALLENGES IN HIGHER EDUCATION IN FASHION AND TEXTILES
- INDUSTRY REQUIREMENTS VIS-A-VIS FASHION AND TEXTILES EDUCATION
- APPROACH AND RECOMMENDATIONS FOR THE 12TH FIVE YEAR PLAN

Training at NIFT

CHAPTER - 18

FASHION AND TEXTILE EDUCATION

The purpose of education is to initiate a human mind into building of a perspective, by collating different patterns of the information into harmony, so that knowledge is constructed and created. The core philosophy of higher education in India is guided by the National Policy of Education 1986/92 which has enunciated that higher education provides people with an opportunity to reflect on the critical social, economic, cultural, moral and spiritual issues facing humanity. It contributes to national development through dissemination of specialized knowledge and skills. It is, therefore, a crucial factor for survival. Being at the apex of the educational pyramid, it has also a key role in producing teachers for the education system.

18.2 The higher education acts as a catalyst for knowledge creation which should be not just for the learner but for the society as a whole. If students are to play a transformative role, the institutes that offer higher education have to adhere to the highest standards. The institute should provide ample opportunities to creative minds to converge, pursue and create knowledge with freedom and to interpret old knowledge and beliefs in the light of new needs and discoveries in a sustainable manner. The Institute should be able to provide society with competent men and women trained in various professions who, as cultivated individuals, are inclined with a sense of social purpose. The institutes should not only offer regular degree courses but should also provide for continuing education, extension education and field outreach activities. They should work in close collaboration with the community through extension of knowledge and its applications for problem-solving.

18.3 There has been a criticism particularly, from the industry, on the general ability and skills of fresh graduates in transiting from place of learning to a place of work. The drawbacks which fresh graduates suffer are inability to analyze or solve problems, relate problems to different contexts, communicate clearly and develop an integrated understanding of different branches of knowledge. The National Policy on Education 1986 underlines the importance of industry in professional education and states that the curricula or technical and management programme will be targeted on current as well as the projected needs of industry or user systems. Active interaction between technical or management institutions and industry will be promoted in programme planning and implementation, exchange of personnel, training facilities and resources, research and consultancy and other areas of

mutual interest. Therefore, it is important that the professional education needs to bridge current gap of skills acquired to skills required.

18.4 These are the debates apart from many others in higher education that will need introspection during the 12th Plan. The debates in fashion and textile education are not any different from those in higher education, but before they are discussed threadbare, it is important that context of fashion and textile education is elaborated upon.

CONTEXT OF FASHION AND TEXTILES EDUCATION

18.5 Although, fashion is a general term for a currently popular style or practice, especially in clothing, foot wear or accessories, yet its history is as old as the history of mankind. Earliest of civilizations provide distinct glimpses on ornamental, dressing styles across the people of different classes and regions. Fashion has been influenced by religious practices, political systems, social groups and scientific advancement of a particular region and periods. It encompasses every aspect of society including culture, behaviour, technology, clothing, architecture, food-habits, and lifestyle. Fashion today encompasses popular trends or a lifestyle, specially in styles of dress, ornament and behaviour, this has influenced the business of creating, promoting or studying styles in vogue or the designing, production and marketing of new styles of goods such as, clothing, accessories, craft and cosmetics, thus adding tremendous value to diverse industries and businesses. Therefore, fashion education, cannot be confined to providing education only in certain narrow confines of a particular stream (apparel designing) of a highly diverse area of knowledge. Inspite of all this, it needs to be underlined that institutionalization of specific degree courses, relevant to fashion design are relatively of recent nature. Albeit, textiles education dates back to later years of 19th century.

18.6 When we look at fashion and textiles together, it is evidently about fashion in clothing, accessories, footwear etc. The fashion and textile requires high order of specialization and specific skills conjoining upon creativity and technical knowledge. The education in various aspects of fashion and textiles will help the students gain very specialized knowledge and enter into the professional world of fashion and textiles industry. Therefore, fashion and textile education should be categorized as a professional education, differentiating it from the general education.

18.7 It is important to underline, that mere purpose of higher education is not to develop professionals with technical skills, but also develop a person with a sense of social responsibility. The students should also have the ability to perceive the problems as a whole

and not merely in its fragmented technical phases. Therefore, it is important that institutes offering courses in fashion and textile education should transmit technical understanding, skill and method, not as an isolated discipline, but in its total human and social setting.

18.8 India has the largest textile and garment industry with high spindling and weaving capacity, the textiles sector provides direct employment to almost 35 million people in India. The country's competitive edge in exports of textiles and clothing and the growing domestic consumption of textiles, clothing and fashion products offers immense opportunity. In value terms, industry is estimated to be of Rs. 3,58,800 crore of which Rs. 22,419 crore were exports in 2009-10. There is a move to further rejuvenate the industry which will have a bearing on the employment requirement at various levels. There will be a need of educated and skilled manpower at various levels including at graduate and postgraduate levels, to cater to attrition as well as future growth of the industry.

Current Scenario of Higher Education in Fashion and Textiles

18.9 In India, the first educational institute having a dedicated textile faculty was set up in Mumbai in 1887. Many more institutes initiated education and training in textiles in the early 20th century, covering spinning, weaving, dyeing etc. Three clear trends were visible during first 100 years of education; firstly scope of study was restricted upto fabric manufacturing (hence the degree nomenclature was Bachelor of Textiles and clothing word was missing). Secondly, emphasis was more on technology and design orientation was completely missing. Last but not the least these efforts were more focused at job oriented training and less of wholesome education involving research and development. It was only in the last quarter of 20th century that more concerted efforts were made to provide more educated and skilled manpower for fashion and textile industry by opening up more specialized degree awarding institutes and courses.

18.10 The University Grants Commission (UGC) through an Act of Parliament coordinates, determines and maintains standards of university education in India. It is the body that frames regulations on minimum standard of education and also the body that specifies degrees at undergraduate or graduate level. Besides UGC, there are 14 professional councils such as All India Council of Technical Education (AICTE), Indian Council of Agricultural Research (ICAR), and National Council of Teacher Education (NCTE) that cater to various professional courses.

18.11 In the 11th Plan a lot of emphasis was laid by MHRD on improving the technical education within the ambit of the higher education. However, nothing is found in its approach

about fashion and textile education, in particular. The UGC or AICTE also could not provide any tangible insight on fashion and textile education. It only reinforces the view that there is a limited deliberation on lateral creative sciences in general and studies of design in particular. Due to limited creative space, Department of Industrial Policy & Promotion, Ministry of Commerce & Industry and Ministry of Textiles, both have founded educational institutes to provide deeper insight into study of designs through National Institute of Design (NID) and National Institute of Fashion Technology (NIFT), respectively.

18.12 There are no separate statistics either with UGC or AICTE that may inform us reliably on number of colleges and students that are pursuing courses in fashion and textile education. The other sources of the information is the Nodal Centre for Upgradation of Textiles Education (NCUTE) which has classified, fashion and textiles education as (a) Industry specific training programmes (customized and generic) (b) Certificate programmes (1-year duration) (c) Diploma programmes (3 years after secondary school certificate education) (d) Degree programmes (4 years after senior secondary school certificate education) (e) Masters programme in technology and business administration (2 years after degree education) and (f) Doctoral programme (after Master's degree)

18.13 The institutes offering fashion and textile education could be broadly classified as:

a) Textile technology institutes under two categories, viz. institutes offering only undergraduate courses and institutes offering both undergraduate as well as post graduate courses; and at degree and diploma levels;

b) Fashion technology institutes which are offering Doctoral Degrees in the area of Fashion; Masters Degree or diploma of the level of PG of 1 to 2 years of duration; Institutes offering Bachelors Degree / Diploma / Affiliated Programmes of 1 to 4 years duration some of which also award degrees in affiliation to National or Foreign universities; Vocational/ Certificate / Other programmes which conduct Vocational Training programmes, professional courses and award certificates for the programmes ranging from 4 weeks to 2 years duration as well as conduct certificate/job oriented courses; and Distance Education Courses which award Masters Degree/ Bachelors Degree/PG Diploma/Diploma independently and / or run in collaboration with other fashion institutes.

18.14 Based on available information, following is the status of institutes offering fashion and textile education at degree / diploma level:-

- The first educational Institute with a dedicated textile faculty was set up in Mumbai in 1887.

- The National Institute of Fashion Technology (NIFT) was set up in 1986 and Sardar Vallabhbhai Patel Institute of Textile Management (SVPITM) was set up in 2002, under the aegis of the Ministry of Textiles.
- There are 350 odd colleges/ universities across India offering fashion /design or fashion/ textiles technology as a major stream catering to almost 1,00,000 students.
- There are more than 100 diploma, degree and postgraduate level institutes in garmenting.
- There are more than 100 polytechnics, graduate and post graduate level textile institutes in the country. These Institutes prepare approximately 5000 students every year.
- There are about 35 engineering colleges (including IIT Delhi) awarding B.Tech; B.E; and B. Text; in textiles specialization.
- About 25 colleges of university department of home sciences offer B.Sc., M.Sc, home science degree in textiles and clothing.
- There are other specialized institutes such as Indian Institute of Handloom Technology; Textiles Research Associations; Powerloom Service Centres; Weavers Service Centres; Industrial Training Institutes offering trades in fashion and textiles; Apparel Training and Design Institutes for specialized sectors e.g. MANTRA, SASMIRA for MMF; Institute for Knitting Technology and Indian Institute of Carpet Technology.

GAPS AND CHALLENGES IN HIGHER EDUCATION IN FASHION AND TEXTILES

18.15 The UGC Act, 1956 is categorical in its section 22 that the right of conferring or granting degrees shall be exercised only by a University established or incorporated by or under a Central Act, a Provincial Act or a State Act or an institution deemed to be a University under section 3 or an institution specially empowered by an Act of Parliament to confer or grant degrees. The degree in this regard is the one that with the previous approval of the Central Government is specified by the Commission through a notification in the official Gazette. The information from UGC reveals that while it specifies undergraduate and post graduate degrees in Fine Arts, Music and Dance, there are no specified degrees in design. However, UGC categorically specifies degree in textiles as Bachelor of Textiles. Although, there is a specified degree as Bachelor of Technology, but it is not evidently extendable to Bachelor of Fashion Technology. Most of the courses that are offered by the university affiliated colleges are B.A/ M.A. or B.Sc. / M.Sc. with specialization in textiles and fashion.

18.16 The UGC is a body that prepares model curriculum for adaptation, in the absence of recognized degrees and courses, it has not attempted development of a model curriculum in design, fashion technology and fashion management. There is no updated model curriculum in textile education. Absence of model curriculum has led to wide variation in the course content and classroom transactions between institutes.

18.17 Further, it is almost impossible not to be aware that the fashion industry has a significant sustainability 'footprint', wages, excessive hours, use of fuel in transportation and operations, mistreatment of animals, water pollution and heavy chemical use are important concerns. The global industry is responding to these issues, through direct dealing with the farmers, seeking products that are with zero carbon prints, bereft of child labour, organic in nature etc. However, these concerns and changes are not reflected in courses offered with curriculum, current methods of imparting education.

18.18 There is alarmingly wide difference in infrastructure and faculty competency between different institutes. Lack of standardization in eligibility criteria for faculty, infrastructure, instruction days, course delivery between institutes is a concern. In the absence of a strong dialogue mechanism between Ministry of Textiles, MHRD, UGC and AICTE, these issues remain unaddressed.

18.19 Many a times unrecognized degrees and institutes, severely limit opportunities of a student. Currently, as degrees in fashion education are not specified, it impedes the growth of stand alone new institutes offering courses in fashion and textile education. The AICTE does not recognize stand alone technical institutes, if the degrees are not specified under section 22 of the UGC Act, 1956 and institutes are not affiliated to a university. In view of this gap private institutes have responded by getting affiliated to some foreign colleges and tying up with open universities for awarding degrees to its students. The dual degree programme becomes a burden to its students who have to take up two disparate examinations for acquiring recognized qualifications or even pay for two sets of degrees, making education expensive and out of the reach of many students. Further, there is no listing of the foreign universities published by any regulator/recognized body to check the status of these universities / institutes. Another perspective is that, fashion and textile education is more about creative sciences, therefore, AICTE is not a best suited body for regulating these institutes and courses. Instead there may be a need to address this issue by UGC.

18.20 Another challenge is to provide equitable access to the students to the institutes of their choice. Once a student qualifies to enter an institution of his/her choice, he/she should

not be deprived of education for want of money. One of the key barriers is high cost of education in this field.

18.21 In the global scenario, especially in the context of new trade regimes, the demand for trained manpower, competent to manufacture quality products with high productivity and to handle sophisticated machines, has been increasing rapidly. Conventional production techniques like ring spinning, weaving looms, have been supplemented, strengthened or supplanted with newer production technologies with higher speed and automation. Many new emerging technologies have been introduced in the form of technical textiles, phase changed material, smart textiles, etc. These rapidly changing technologies have created difficulties for the institutes in keeping pace with the latest technological developments. Laboratories with their outdated machines and equipment often fail to present the essence of latest technological tools to the students.

18.22 Funds received by most of the textile institutes from different sources are meager as compared to their financial need in fashion and textile education, most of the colleges are facing acute crisis in terms of infrastructural facilities and quality human resources. The area of these institutes range from 500 sq. feet to a few acres of land. Some of these institutes do not meet essential infrastructure requirements such as laboratories for skill based subjects, machinery for teaching resource materials and are being run from residential flats or commercial areas, thereby offering poor experiential learning environment to the students.

18.23 With the exception of few, most of these institutes are finding it difficult to attract and retain quality faculty members resulting in vacant faculty positions. Hence, they are unable to comply with prescribed student teacher ratio, thereby adversely affecting the quality of education. The proportion of faculty with Ph.D. degree in textile institutes is negligible (just around 30%). Some colleges have a number of faculties with only a B.Tech degree teaching at undergraduate level. As far as fashion education is concerned there is no specific information available regarding faculty resource and competency of such faculty. There are faculty members who are educationally qualified (Doctoral/Masters/Bachelors), have work experience and further trained to teach such fashion related courses. However, there are faculty members at institutes who either don’t possess any professional degree to teach related subjects or have done short-term certificate/vocational/diploma courses are teaching. The enhancement of skills and qualification of the faculty is a major shortcoming. The faculty members rarely get an opportunity to attend conferences, workshops, seminars and refresher courses. Another stumbling block faced by today’s educators is changing student behavior, shaped by the new media and information overload. Also, there is a digital

divide between students hailing from rural regions. There is a clear lack of understanding on adult learning process and addressing diversity in the class room.

18.24 Although there has been a growing trend amongst the institutes to offer postgraduate textile courses, in most cases the institutes are unable to attract sufficient number of students for these courses. In some institutes the PG courses are being run with only a meager number of students. The reason may be attributed to the lack of value addition at the PG level courses and unattractive job prospects for the PG students because of limited space for research and innovation provided by the industry.

18.25 A recent study by (TIFAC 2009) about scientific manpower details in textile research shows there are about 12 research institutes with approximately 250 researchers, of these researchers only 20% have industrial experience. The analysis of the data of the last five years from these institutes also suggests that the number of projects done annually by every research institute is paltry 6.4 and number of consultancy project is 9.5. This only reinforces severe disconnect between institute and industry. In addition, research is given limited space in the industry and education system both.

INDUSTRY REQUIREMENTS VIS-A-VIS FASHION AND TEXTILES EDUCATION

18.26 The report on the rejuvenation of higher education has delved in detail on the divide between theory and practice. It has emphasized on the relationship of the institutes of higher learning with the world outside and to create an environment of learning without the constrains of free flow knowledge between the various disciplines. The report clearly articulates the interface between the students and industry i.e. "*This can be done by exposing students to the world of work plays two related and essential roles. First, by helping them to understand the reality of different kinds of work, and those who perform this work, ranging from manual labour to intellectual tasks, it sensitizes them to the conditions of a universe of persons outside of their own. Second, it allows them to apply what they have learnt in the classroom to real-world situations, and in doing so not only makes them better prepared for their own entry into the world of profession but also strengthens their understanding of the underlying concepts they are supposed to have learnt.*'

18.27 The employability as defined by ILO is *'Individual's ability of gaining initial employment, maintaining employment and making progress in employment to deal with changes in work & life'*. However, variety of factors such as lack of general skills like teamwork or lack of specific skills like communication, usage of modern tools & technologies, need for specific, occupational & technical skills owing to inability in

application of the technology breed education – employability gap. The industry often laments the lack of required skills among fresh graduates as the skills acquired by the students are becoming outdated by the time they are graduating. The over emphasis on the technological learning many a times has adverse impact on the graduates, as they are not able to adapt to the changing technology in work situation.

18.28 India is a growing market with increasing domestic consumption. The Free Trade Agreements with various regions of the world are leading to removal of barriers, thereby accelerating both imports and exports. The changes are bringing in the demand for hitherto, less ventured areas of fashion and lifestyle design, apparel merchandising and management, apparel technology and supply chain management, retail and brand management, and e-commerce. These can only be catered by the specialization which may not be currently available and requires new electives or even new degree courses developed for emerging areas. As the curriculum and syllabus do not undergo regular modifications, there is a critical gap in availability of courses that are offered by the institutes.

18.29 Today industry requires professionals who are able to connect ends and integrate skills with business realities. Hence, fashion and textiles sector too requires professionals of different kinds:

- *Strategic Professionals*: - Who are able to connect design & technology with business environment.
- *Integrated Professionals: -* Who have global orientation in technology & markets.
- *Innovators and Entrepreneurs* – Professionals who have capacity to innovate products & processes with entrepreneurial qualities.
- *Specialists-* At post-graduate level by “diving deep” and undertaking research.

18.30 The NCAER report (2009) mentions gap in availability of skilled manpower and requirement of industry, however while elaborating, it mentions strengthening the curriculum, infrastructure of ITI and polytechnics of the country. The report articulated the gap at operative level and need for strengthening of vocational training institutes like ITI, ATDC, etc. The Ministry of Textiles (2005) reported constraints like infrastructure and labour to achieve 5-year target but nowhere mentioned lack of trained manpower at managerial level. Both N.K. Singh Committee report and CRISIL report suggests creation of new jobs, but mostly at the bottom of the skill pyramid.

18.31 A report by NSDC has projected that over all employment in Textile and Clothing sector will increase from about 33 million to 62 million by 2022. This increase of about 25 million additional workforce will need to be trained and educated. In the textile

sector human resource requirement would be about 17.8 millions of which 11 million would be required in the mainstream T & C sector. The IMaCs study pegs the requirement of graduates and management professionals including CAs at 2.6 lakh. The skill pyramid that almost 4% of manpower requirement will be at managerial level, it is felt that the current number of graduates from NIFT/NID and current Government/ private institutes should be sufficient to cater to this demand, for now. The growth of courses in private institutes will help to cater to the increase in demand of professionals.

18.32 The education up to diploma level generally caters for technical and supervisory positions in the industry. The education from degree level generally caters for middle management and graduates are usually recruited as Executive Trainee (ET) or Management Trainee (MT) in the industry. The degree and higher degree education provided by Government and private institutes produces middle and higher management level persons in design, production, technology, engineering and marketing functions of fashion and textile industry and there is apparently no dearth of trained professional in this segment. However, the diploma and certificate level courses are probably off the mark, necessitating requirement for augmenting and appropriating the curriculum and infrastructure to increase the employability of the segment.

18.33 The current Institute-Industry interaction include inter alia providing curricular input while courses are modified or providing real projects as design examples, case studies or case histories; serving as guest speakers; serving as mentors to students on professional licensure, professional societies, and other issues; providing internship opportunities and field visits; providing real life projects and opportunities to finding solutions to industry problems. Academia-industry collaboration has always been a thorny issue on both the sides. On the one hand, industry laments of lack of skills among the new entrants in the workforce and inability of curricula in tackling the practical issues. It expects the Institute to train future employees with the latest technologies and want them more as a hand on ready made personnel. On the other hand, institutes reiterate that it is not a training centre and feels that industry has very lackadaisical attitude towards students' internships and graduation projects, as they don't see value in it. Academia feels that the myopic view of industry towards short term gain dwarfs the long term and sustainable improvement towards any interface.

PROGRESS DURING THE 11TH FIVE YEAR PLAN

18.34 The Ministry of Textiles supports National Institute of Fashion Technology and Sardar Vallabhbhai Patel International School of Textiles & Management under the Plan funds. During the 11th Five Year Plan both these institutes have expanded capacity and enhanced their scope. The progress made by the two Institutes is discussed in this Chapter.

National Institute of Fashion Technology (NIFT)

18.35 The NIFT was set up in 1986 as an autonomous Society in collaboration with the Fashion Institute of Technology (FIT), New York, to train professionals to meet the requirements of the textiles industry under the aegis of the MoT. The National Institute of Fashion Technology Act, 2006 came into effect from 1st April, 2007 providing statutory status to the institute, formally recognizing its leadership in fashion technology sector, and empowering it to award degrees to its students. The institute has pioneered the evolution of fashion business education across the country through its network of fifteen centres at New Delhi, Bengaluru, Chennai, Gandhinagar, Hyderabad, Kolkata, Mumbai, Rae Bareli, Patna, Bhopal, Shillong, Kangra, Kannur, Jodhpur and Bhubaneswar.

18.36 The NIFT has been instrumental in bringing about a paradigm shift in the perception of 'fashion' in India, with its connotation extending beyond the conventional apparel, to integrate with every aspect of today's lifestyle. In the face of liberalization and globalization of the economy, it has pioneered significant changes in the industry in strategy, approach, technology upgradation, design intervention and management practices. It awards Undergraduate and Post Graduate Degrees in the field of Design, Management and Technology. The Degree programmes offered by NIFT at Undergraduate level (4 years) are Bachelor of Design in Fashion; Leather; Accessory, Textile and Knitwear Design and Fashion Communication, Bachelor of Fashion Technology in Apparel Production. It also offers three programmes at postgraduate level Master of Design, Master of Fashion Technology, Master of Fashion Management and also Doctor of Philosophy. It has also initiated programme to enhance the skills and upgrading qualifications of the faculty through Faculty Development Programme. During the 11th Five Year Plan, the NIFT has started awarding degrees at postgraduate and undergraduate level instead of earlier practice of giving diplomas. To overcome the barriers for the former NIFT graduates, it has introduced a bridge programme that would allow them to enhance diplomas into degrees. It also offers short duration part-time courses under Continuing Education (CE) Programmes.

18.37 The NIFT has made concerted efforts to mainstream the craft tradition of the country as an integral component of the curriculum of all programmes. It focuses on training, design intervention, technology up-gradation, establishing market linkages and promotion. Integration of craft cluster project into academic curriculum provides entrepreneurial experience, holistic learning and real life case studies to students and faculty. The NIFT has revised its curriculum recently and has further strengthened its interface with the industry. The linkage with the industry helps in keeping the current curriculum relevant for the purpose of employability. The NIFT faculty publishes and presents papers extensively engaging itself in research and innovation.

18.38 The 11th Plan is a period of expansion for NIFT by the MoT. It offers about 10 courses at undergraduate and postgraduate level. It has grown in terms of both, the number of centres as well as the number of students.

Table- 18.1 Expansion of NIFT in the 11th Plan

Year	No of centres	No of students at entry level	No. of faculty
2007-08	8	1410	200
2008-09	12	1557	203
2009-10	13	1868	274
2010-11	15	2116	366
2011-12	15	2120	381

18.39 The 11th FYP has been a period of expansion for the NIFT which has increased number of centres from 7 to 15 and students intake by almost 50%. The period of expansion has come with different kinds of challenges that needs to be addressed during the 12th Plan. These challenges emanate from the lack of adequate infrastructure, laboratories, technology and unavailability qualified faculty. The current infrastructure of NIFT requires upgradation in the wake of rapid expansion which will include research labs, trained technical staff, buildings, machinery, journals, publications books etc. However, availability of the faculty would remain an issue, as qualified eligible faculty is normally not keen to join remote and smaller centres.

18.40 The Budget Provision made by Ministry of Textiles to NIFT during the XIth Five Year Plan is as follows:

Table 18.2 Budget Provision for NIFT during XIth Five Year Plan

(Rs. in crore)

Year	Budget Provision
2007-08	9.00
2008-09	78.25
2009-10	136.52
2010-11	245.00
2011-12	128.00
Total	**596.77**

18.41 Each of the NIFT centre needs to develop into an institute of excellence and national importance. To grow into institute of such a stature, autonomy is a prerequisite. Experiences of IITs and IIMs have shown that although they are bound by the same nomenclature and a single Act; each of them is an independent unit. This autonomy has helped each of the IITs and IIMs to developing into institutes of excellence. The NIFT has grown from one centre to 15 centres in the last 25 years. It has expanded so rapidly that deliberation to autonomy and academic excellence took a backseat which will need to be addressed in the 12th Plan.

SARDAR VALLABHBHAI PATEL INTERNATIONAL SCHOOL OF TEXTILES & MANAGEMENT (SVPISTM)

18.42 Sardar Vallabhbhai Patel International School of Textiles and Management, Coimbatore, Tamil Nadu, was initially set up as a national level institute for Textile Management to prepare the Indian Textile Industry to face the challenges of Post-MFA era and enable it to establish itself as a leader in the global textiles trade and the textiles Industry on December, 2002. It caters to the long-felt need for management courses specialising in textiles, including research in textiles management. Recognising the emerging areas in textiles, especially technical textiles, and the greater role the Institute has to play for the benefit of the textiles sector, the Institute was upgraded as Sardar Vallabhbhai Patel International School of Textiles and Management (SPVISTM) on July 7, 2010 after signing of MOU with IGNOU on July 7, 2010.

18.43 The Institute offers full time two year programmes, namely, (a) Post Graduate Diploma in Management (Textiles) and (b) Post Graduate Diploma in management (Apparel) with 60 seats which is approved by AICTE, (c) IGNOU- SVPISTM collaborative MBA

programmes in Textile Management. It has recently started two more programmes and Post Graduate Diploma in Management Retail Management, and Graduate Certificate in Management (Home Textile Management).

Table-18.3 Programme wise student intake capacity during the 11th Five Year Plan

Year	Programme	Duration in years	Sanctioned strength	Students Strength
2006-2007	PGDTM	2 Years	40	74
	PGDAM	1 Year	40	
	PGHTM	1 Year	40	
		Total	**120**	
2007-2008	PGDTM	2 Years	40	76
	PGDAM	1 Year	40	
	PGHTM	1 Year	40	
		Total	**120**	
2008-2009	PGDTM (T)	2 Years	40	65
	PGDAM (A)	1 Year	40	
	PGHTM	1 Year	40	
		Total	**120**	
2009-2010	PGDM (T)	2 Years	40	61
	PGDM (A)	2 Years	40	
		Total	**80**	
2010-2011	PGDM (T)	2 Years	60	87
	PGDM (A)	2 Years	60	
	MBA (T)	2 Years	30	
		Total	**150**	

18.44 The year-wise funds released to the SVPISTM by the Government of India in the 11th Plan period is as follows:

Table 18.4 Fund released to the SVPISTM during 11th Plan

Year	Rs. in crore
2006 –07	5.00

2007-08	9.18
2008 -09	4.28
2009 -10	3.57
2010-11	17.78
Total	**39.81**

18.45 The challenges faced by SVPISTM to make it a world class Institute are not only inadequacy of infrastructure and faculty but also that of designing relevant programmes. It is evident that although large number of seats is offered they remain vacant due to various reasons particularly, the academic programmes that are currently offered, both in areas of technology and management do not satisfy the need of industry in terms of number as well as quality. The infrastructure is inadequate, shortage of qualified faculty; and limitations in the current curriculum do not allow creating conducive environment for learning.

Nodal Centre for Upgradation of Textile Education (NCUTE)

18.46 NCUTE was established with the broad objective of enhancing textile education through improved training of teachers to meet the challenges of emerging technology and quality of input and to establish dynamic system for reform of textile education. SVPISTM is the current custodian of NCUTE.

18.47 Although about Rs. 50 lakhs are earmarked for the various activities of the NCUTE during the financial year 2011-12, yet steps are needed for full fledged operationalisation of this Centre. Currently, the Centre is being run in an adhoc manner without a full time Coordinator and support staff. The NCUTE will be fully functional by the end of current financial year.

APPROACH AND RECOMMENDATIONS FOR THE 12TH FIVE YEAR PLAN

Guiding Principles for the 12th Five Year Plan

18.48 The draft approach paper of the Planning Commission for the 12th Plan has emphasized on inclusive growth strategy. The key instruments for making growth faster, more inclusive and sustainable include inter-alia (a) faster creation of jobs especially in manufacturing (d) stronger efforts at health, education and skill development; and (c) special programmes for socially vulnerable groups and disadvantaged / backward regions. The emphasis of the Planning Commission is on growth in manufacturing to 11-12% per year in

the 12th Plan from the estimated current level of 8%. This will aid in creating more jobs particularly in textiles & garments, leather & footwear and gems and jewels, as they can create large scale employment and faster growth.

18.49 The Planning Commission has advised that during the 12th Plan efforts in education should be aimed atmore students accessing higher education; focus on quality of education; investment in faculty development and teachers' training; setting targets for reduction in social, gender and regional gaps; curriculum reforms in vocational/skill development to ensure employability in response to changing market needs; development and operationalisation of PPP models in accordance with the needs of a fast growing economy and encouraging research & innovation with cross-linkages between institutions and industry. Various measures will need to be taken to further promote private initiatives in higher education while addressing the concerns about equity and quality.

18.50 The strategic plan of the Ministry of Textiles, in its mission has laid out that, "it *shall promote creation of new employment opportunities and development of new designs to make the textiles sector economically sustainable. It will also promote exports of all types of textiles & handicrafts and increase India's share of world exports in these sectors"*. It would mean that educated and skilled manpower will be required to satisfy the additional demand at various levels of skill pyramid.

Capacity Enhancement and Establishing Standards

18.51 The degree education produces middle and higher management level persons whereas the diploma offered by polytechnics produces technical and supervisory level persons. The analysis of various studies stated in Para-, reveals that additional demand of skilled manpower would be mainly at the supervisory level. Therefore**, efforts should be directed towards creating and expanding facilities in the existing polytechnics or opening new polytechnics with facilities for fashion and textiles courses.** During the 11th Plan, NIFT has started conferring degrees instead of diplomas, it has also increased both number of centres and student intake. Similarly, most of the universities and colleges have undertaken capacity expansion by almost 50%. The current penetration of the Government institutes at degree level seems adequate. Any other emerging demand at degree level should be catered by introduction of new courses in the existing institutes or propelled by the growth of private institutes offering degree courses. Therefore, **at degree level efforts should be towards consolidation of created facilities including substituting existing courses with the new courses and improvement of quality in the existing institutes.**

18.52 In order to increase the higher education capacity in fashion and textiles from the present level, particularly at certification and diploma level, it will be necessary to encourage participation of the private sector and provide positive and conductive environment for their growth. At the same time MoT may initiate a dialogue with the respective departments in the State Governments for introducing these courses in the State Government run institutes. In order to make various institutes function efficiently and serve overall national goals, framing of rational and consistent ground rules overseen by a transparent regulatory mechanism should be developed. The Knowledge Commission Report has suggested promotion of quality and accountability through strongest disclosure norms. **Initiatives should be taken in consulting UGC/AICTE through MHRD to standardize disclosures by all institutes, Government or private, offering fashion and textiles courses.**

18.53 The fashion and textiles education is interdisciplinary, there is a need to streamline and set benchmarks in this ever emerging discipline. Institutes differ widely on curriculum, duration of programmes, academic infrastructure, qualifications of faculty. The current regulatory mechanism of opening new courses/institutes for higher education is governed through UGC/AICTE, which may not have expertise in particular aspects of fashion and textile education. **Therefore, benchmarking, standardization accreditation and regulatory mechanism for safeguarding interests of the students should be undertaken during the 12th Five Year Plan.**

18.54 It has been long debated that recognition of stand alone institutes and approval of courses in fashion and textile education is an area in which the MoT should intervene. However, likelihood of stand alone colleges in fashion and textile education will be limited to a very small numbers. Largely, courses in fashion and textile are introduced in existing professional colleges or polytechnics as additional set of courses, these institutes are as such regulated through existing mechanism of the UGC/AICTE. Since most of the colleges and polytechnics will remain with UGC/AICTE of colleges therefore, creating an autonomous body by MoT for fashion & textile education would only serve limited purpose. To avoid the potential overlaps, the MoT should collaborate through MHRD with UGC/AICTE, to establish an institutional mechanism that will enable in resolving pending as well as emerging issues in fashion and textile education. The deliberations should also cover the perspective, whether it is advisable to be regulated by UGC instead of AICTE, if so then what are the strategies that need to be drawn in. **As an institutional mechanism, the MoT should seek to nominate experts in the relevant committees of MHRD for voicing its views and outlook pertaining to fashion and textile education.** Another important task is removal of

anomalies regarding recognition of degrees in design fashion technology & fashion management which affects the horizontal and vertical mobility of the students adversely.**The process of awarding for degrees for various courses in fashion and textile education needs to be initiated at the earliest with the UGC.**

18.55 In view of the expertise of MoT pertaining to fashion and textiles including education, it should develop standards for infrastructure, laboratory, faculty and curriculum. To safeguard interest of the students, it should be made mandatory for any institute offering courses in fashion and textile education to adhere to these scheduled standards. **Therefore, during the 12th Plan the MoT should create an autonomous body that will develop standards and processes for courses in fashion and textile education and will collaborate and liaison with UGC/AICTE to resolve various issues.**

Promoting Quality & Equitable Access

Curricular Reforms

18.56 There is a genuine concern that technical education tends to confine itself to a narrow definition of imparting technical knowledge and skills. Unless the spirit and habit of seeing the total problem, professional, human and social, are in the very spirit and texture of professional teaching itself, human and social considerations will tend to fade into the background. The exposure to work and imbibing skills of doing the same may give education a greater relevance. However, it is equally true that responding only to the current requirements of job skills, it will be a grave injustice to the students. In today's very dynamic global world, technology replaces itself so rapidly that if a professional student has not acquired basic knowledge, developed critical thinking and working with representative increments of particular knowledge he/she may not be able to grow in the job market. The skills like leadership, innovations, initiatives, team building and decision making must be imbibed by each. **The professional education should be relevant to the society and fulfill its need of experienced, intellectually inclined, skilled manpower. While formulating or revising the curriculum there should be identification of requisite skills and those should found space in the curriculum**.

18.57 The development of model curriculum should reflect the changing scenario, including issues of sustainability, carbon footprints, intellectual property. The MoT through the proposed autonomous body should institutionalize a mechanism in consultation with the MHRD, UGC/ AICTE for development of a model curriculum. **The proposed autonomous body should review such a curriculum, once every 4 years in consultation with UGC/**

AICTE industry and other experts. Each institute should take steps to adapt the model curriculum & develop syllabus on the basis of adapted curriculum.

18.58 In a changing global scenario of new trade regimes and various regulations the textile and fashion education in India **should also focus on developing new coursesthat would enable students to acquire updated knowledge and skills in the emerging areas of textile & fashion value chain extending right from the production to distribution and retail of all lifestyle products has emerged as an area for growth.** New courses on green fashion, sustainability, business ethics, corporate social responsibility, cosmetics and crafts should be introduced to cater to emerging demands and address growth in these areas.

Upgradation of Infrastructure

18.59 In a global scenario, demand for trained manpower competent to manufacture quality products with high productivity and to handle sophisticated machines, has been increasing rapidly. Conventional production techniques like ring spinning, weaving looms, have been supplemented, strengthened or supplanted with newer production technologies with high speed and automation. Introduction of new technologies for CAD/CAM, IT solutions, technical textiles, has led to need of highly skilled manpower. There are newer application domains of technical textiles, nanotechnology/ biotechnology/ plasma technology based textiles, smart textiles, high performance textiles, etc. These technologies need to be brought inside the institutes for reducing skill gap. In view of these changes, there **is a need to upgrade the infrastructure for new courses, improve laboratories and develop smart and emerging technologies**. **A programme for upgradation of infrastructure including laboratories, machines, equipments and e-class rooms should be undertaken in all existing Government and aided institutes**. Higher education should also conduct research and impart education on futuristic technologies (which may not be available with industry at present) to stay ahead of the competition and steer country's competitive edge.

Faculty Development and Teacher Training

18.60 The existing knowledge must be used appropriately to instill the desire of deeper learning in the scholar. There must, of course, be experienced teachers with the ability to guide and train students. Since, fashion education is a relatively new discipline in India, it's important in view of future growth that faculty development and teacher education should be taken up with utmost sincerity. **To ensure accountability of the faculty, through proposed autonomous body, standardization of eligibility, peer evaluation and teaching hours should be done. Steps should be taken to retain good faculty in the Government**

Institutes. Towards this, salaries offered in NIFT and SVPITM should be brought at par with the UGC in terms of qualifications and pay scales of the faculty.

18.61 The upgradation of skills of the faculty to continuously adapt to newer technologies is necessary. A programme for faculty development should be undertaken with various modes such as (a) training of trainers by senior faculty; (b) training of trainers by institutes of repute both at national and international level; (c) short term industry internship (d) faculty development by upgrading their qualifications (e) research (f) exposures through seminars/conferences/fairs, etc. (g) participation in national & international competitions in related fields (h) faculty development by attending both short and long term courses at national and international institutes; towards it provision for study leave and finances needs to be done. **Through the proposed body a wholesome Faculty Development Programme should be developed for the teachers in the Government Institutes. The approach and training design should be developed by training imparting institutes in greater detail. It should facilitate each institute to develop a mechanism, whereby every teacher is continuously upgrading his/her knowledge, skills and faculties over a period of time. The NIFT / NCUTE / SVPISTM could also become academic training centres for the faculty.** However, training would be provided not only by their faculty but experts from industry and peer institutes would be invited for providing inputs. It should also make provision for identifying Resource Persons for faculty training from amongst other national and international experts.

Equitable Access

18.62 Another challenge is to provide equitable access to the students to the institutes of their choice. Once a student qualifies to enter an institution of his/her choice, he/she should not be deprived of education for want of money. Each institute should take steps to establish a scholarship scheme for the eligible students, pursuing education in fashion and textile education alongwith a new scholarship scheme for SC/ST/OBC(non-creamy) students who otherwise do not get any scholarship under the existing central or state Government schemes. The MoT within a new scheme should provide grants to the institutes for providing scholarships, wherever, they cannot be supported by the existing Government schemes.

Training at NIFT

Academia – Industry Collaboration

18.63 There is a deep chasm between the requirements of industry and the skills that an educational institute offers to the fresh graduates. Many approaches have been used for narrowing this chasm and blending the academic rigidity with the industrial relevance. These range from internship, consultation with industry experts, to special courses for industry. Our students should have global perspectives, industrial preparedness and relevance. **There should be adequate representation of industry in the proposed autonomous body for fashion and textile education. While developing the curriculum, the inputs from the industry should be sought. The faculty should familiarize themselves with industrial practices and share the same with the students in the form of case studies to make teaching-learning interesting.**

18.64 The institute – Industry gap is due to little academia-industry interactions which is limited to very little consultancy work in textile institutes. **To increase the interaction and improving course- work relevance, in the 12th Plan each institute should strive for active industry academia interaction.** The collaboration should be of such nature that it is a beneficial relationship wherein all stakeholders benefit from such arrangements. It should be able to complement each other's strength and strive to achieve results. The various areas in which academia industry collaboration can work are given in **Appendix 18.**

Research and Innovation

18.65 The research, development and innovation need to be an integral part of textile and fashion education with a specific target of five to ten years.

The focus should be from fibers to the finished product, processes and practices followed in the textile and garment industry in keeping with international trends and with an eye on the emerging areas. The global focus is on protection of human health and the environment. In keeping with such trends the focus should be in the use of biotechnology, biopolymers, and environment friendly processes in the processing of textiles. Other areas of research could be smart colorants and application on various textile substrates, use of nanotechnology in the field of dyeing, finishing for smart textiles and textile chemical processing. The infrastructure needed for research in terms of laboratories and equipment in the present set of institutes is inadequate, this should be supplemented. The NIFT and SVPISTM should be made the hub of research and faculty development for the same in their respective core areas. **Research, Development and Innovation should be given a primacy in fashion and textile education, for this dedicated resources should be created which should also be supplemented through simultaneous laboratory upgradation**. **In addition, new guidelines should be framed for the 12th Plan period**.

18.66 A scheme for granting recognition to in-house R&D units in industrial sector was started in 1973 by Government to augment industrial research in industry. Several fiscal incentives and other support measures have been provided which encourage and make it financially attractive for industrial units to establish their own in-house R&D units. The scheme is being operated by the Department of Scientific & Industrial Research (DSIR) in the Ministry of Science & Technology. As on 30th November 2010, there are 1378 in-house R&D units having valid recognition, of these nearly 1250 are in private sector and the remaining are in public/joint sector. Unfortunately, there are only 2 units which belong to sewn product sector. The absence of in-house R&D is another reason why Masters and Ph.D in Fashion and Textile does not find suitable openings in industry and come back to academics. In comparison to other industry sector, textile and apparel sector employs least number of master's degree holders. There should be a dialogue with MoS&T for modifying DSIR scheme to include a clause to the effect that to avail the benefit under the scheme the organization should employ certain number of post graduates, which will encourage inclusive research within the organization and add value to the organization and society at large.

Plan Schemes

18.67 Currently, the MoT provides financial support to the NIFT and SVPISTM through Plan funds. It is proposed that this financial support be enhanced during the 12th Plan. In addition, new schemes are also proposed for upgradation of fashion and textiles education.

National Institute of Fashion Technology

18.68 The NIFT during the 12th Plan should focus to project fashion & education as a tool for blending of art, science and technology; to make it serve the needs across the wide sections of the society; protection and understanding of the IPR; and integration of IT with technology education. There should be adequate grant for improving infrastructure and upgrading laboratories with latest machines and equipments. It should undertake craft cluster programmes to strengthen linkages with handlooms and handicrafts of the country. It should also create good design studios in each NIFT Centre for usage of craft clusters initiatives, resource centres should be developed with best books, journals, compendiums, resource material and softwares for the usage of the students in each of its centre. It is proposed that annual grants provided to NIFT both in plan and non plan may be increased. **These funds should be utilized for leveraging technology by upgrading current ones and introducing VSAT facilities plus e-class rooms.** The details along with the rationale plan are given in **Appendix 19.**

18.69 It is often repeated that institutes become great places not only because they provide good instructions but spaces to nurture creative minds. Strength of all IITS, IIMs or Central Universities has been not only the institutes but the campus life, including residential and recreational facilities. Therefore, all campuses which are created under NIFT need to have 100% residential and recreational facilities. The current Delhi campus of NIFT is constrained due to the severe shortage of space for further expansion. It was created in 1986 for 180 students, today it houses 1215 students. **There should be adequate resources for these updations, funds for decongestion of the Delhi Centre by developing new campus for the NIFT. Similarly, there is a need to create adequate recreational and residential facilities across all centres.**

18.70 The present structure of NIFT, created by an Act of Parliament, places it as an statutory institution under the Ministry of Textiles, with the governance of the Institution along with all 15 Centres under single Board of Governors. This model has met the needs of the growing institution, specially in view of the rapid expansion during the 11th Plan. The new Centres have had the support of the NIFT HO in the establishment phase, and the

advantage of academic hand-holding by the older Centres through faculty and training inputs. It is time that consolidation of the new centres should be taken up in true earnest. For the future growth focus should be on introduction of new courses in the existing centres. For new centres due diligence parameters need to be identified and without satisfying these parameters no new centre should be opened. As the older Centres of NIFT have now become more established and have developed niche specializations, the future plans should include providing the Centres more autonomy, moving towards the models adopted by the IITs, and move towards academic and financial autonomy. The approach could be of making centres independent and autonomous that are more than10 years old, offer at least 7 course and have been financially self sufficient in the last 3 years. Also, these Centres would then have to assume the responsibility of supporting the newer and future Centres in the region, so that there is a sustained movement towards bridging the demand-supply gap in terms of professionals for the Industry and that there is no compromise in the standards of academic and practical inputs. **Decentralization and autonomy should therefore need to be considered and implemented in a phased manner, allowing the Centres to prepare for their increased responsibility taking into account that autonomy and accountability must go hand in hand.**

SardarVallabhbhaiPatelInternationalSchoolofTextiles&Management

18.71 In consonance with the desire to make SVPISTM a world class institute for teaching and research in different areas of textile and apparel technology and management, in the 12th Plan focus should be on new courses such as offering (i) 5 year integrated programmes producing technical and managerial manpower for textile and related industries (ii) 2 year Master of Technology degree in different areas of technology for textiles industry (iii) 2 year Master of Business Administration degree in different areas of textiles management (iv) offer research degrees based on research work carried out by scholars registered for research and become a hub for textiles research and (v) to serve as a study center for Continuing Education Programmes in various cutting-edge areas in the domain of the textile and garment sector for working professionals, in both the contact and technology-mediated distance learning mode of course delivery, as per market demand. To achieve the above goals the SVPISTM will need to upgrade & improve the infrastructure, recruit new faculty, train existing faculty. Since new courses will be offered there will be an increase in the students intake. The details for the 12th Plan are given in **Appendix 20.**

National Centre for Upgradation of Textile Education

18.72 The NCUTE will focus on enhancing the overall quality of textile education particularly in the areas such as academic evaluation system, promoting students to publish during research training, industrial training projects, develop new journals in electronic sources, develop faculty development programmes, and promote competitive grants/awards for academic achievements. It will also help in development of new curriculum and guidelines; upgradation of source books and publications in modern concepts. It will act as a consortium to develop textiles learning software. It will be a centre for faculty development programmes and textiles education. NCUTE will also be a custodian of central database on fashion & textiles education. It will develop such a data base and update it from time to time. Some of the functions pertaining to assessment and curriculum, will be in latter year of 12th Plan to be shifted to proposed autonomous council for fashion and textile education. For undertaking various functions of the NCUTE, additional resources will be required, the details of these are given in **Appendix 21.**

Fashion and Textiles Education Council

18.73 The Ministry of Textiles should create an autonomous bodythat may be called Fashion and Textiles Education Council (FTEC) with responsibilities such as (a) collaborating with AICTE/ UGC from time to time with regard to fashion and textile education (b) coordinating with the various institutions for fashion and textile education to adapt model, (c) develop model curriculum for institutes and syllabus for various courses and revise it periodically. (d) prescribing minimum standards for institutes (e) prescribing the standards including faculty eligibility, instruction hours, additional skills, teaching area, infrastructure, laboratories, machines, equipment, IT and classrooms. (f) disseminating knowledge and information pertaining to fashion and textiles education by developing course materials (g) instituting awards and research to encourage faculty members to improve the quality of teaching and researchers to undertake significant research work; (h) liaison with industry and institute by facilitating interaction through seminars, workshops, conferences, (i) creating a central pool of skill sets available and database of opportunities for apprenticeship/ projects/ placements which will benefit students from various institutions; and (j) issuing guidelines for rationalizing the fee structure. This Council may be created through an Act. It will facilitate in establishing standards in fashion and textile education.

Scheme for Fashion and Textile Education

18.74 To undertake improvement in the fashion and textile education, it is proposed that a new scheme titled "Scheme for Fashion and Textile Education" is launched. This scheme is proposed as a new scheme for improving fashion and textiles education. The scheme should be designed to select and fund 25 to 35 institutes instead of spreading meager resources among all 350 odd institutes. These institutes should be selected on the basis of recommendations of the State Government for state university level institutes and UGC/AICTE for central institutes. These 25 to 35 institutes should be supported to become institutes of excellence and act as model institutes for other institutes in that state. These could be either degree or diploma awarding institutes. This scheme will have various components i.e. (i) upgradation of laboratories including machines and equipments in Government and Government aided institutes (ii) introduction of new technologies such as CAD/CAM, e-class rooms etc. (iii) enhancement of infrastructure for initiating new courses (iv) faculty development programmes (v) scholarship to needy students not covered under the existing schemes of other Ministries and (vi) development of resource centres & libraries (vii) undertaking research & development in fashion and textiles. The funds will be provided to institutes through a grant on demand basis. A budget provision of Rs. 50 crores is required under this scheme during the 12th Plan.

Financial Outlays:

(Rs. in crore)

Sl. No.	**Scheme**	**Amount proposed in 12th Plan**
1	National Institute of Fashion Technology	325.00
2	Sardar Vallabhbhai Patel International School of Textiles & Management	375.00
3	Nodal Centre for Upgradation of Textiles Education	5.50
4	Scheme for Fashion & Textile Education	50.00
	Total	**755.50**

Chapter – 19
Schemes and Proposed Outlays

- 11th Plan Outlays and Expenditure
- Proposed Outlays for the 12th Plan
- New Schemes
- Summary of Proposed Outlay

Chapter – 19
Schemes and Proposed Outlays

11th Plan Outlays and Expenditure

As against the total 11th Plan approved outlay of Rs. 14,000 crore at current prices, the total expenditure as on 1.8.2011 is Rs. 16060.94 crore. The Annual Plan-wise outlays (B.E.) and expenditure are as follows:-

Annual Plan	Outlay	Expenditure (Rs. in crore)
2007-08	2243.00	2211.27
2008-09	2500.00	3824.67
2009-10	4500.00	4221.70
2010-11	4725.00	4241.72
2011-12	5000.00	------
Total	**18968.00**	**14499.56**

The expected expenditure during the 11th Plan period is about Rs. 19,000.00 crore. The Scheme-wise details of outlays and expenditure during the 11th Plan Period is at **Appendix** 3-A.

Proposed Outlays for the 12th Plan

The overall outlay proposed for the 12th Plan is Rs. 49651.69 crore including Rs. 10464.07 crore for Handlooms and Rs. 4,519.06 crore for Handicrafts. The total outlay proposed for industry sector schemes excluding handlooms and handicrafts adds up to Rs. 34668.56 crore.

The major outlay of Rs. 15,886.00 crore has been proposed for the Technology Upgradation Fund Scheme. Out of this, Rs. 4648.00 crore is for meeting the committed liabilities for projects sanctioned till June 28, 2010. Rs. 4,725.00 crore has been proposed for meeting the projected liability for new projects to be sanctioned during the remaining period of the 11th Plan and Rs. 6,513 crore has been proposed for meeting the liability for new cases that will be sanctioned during the 12th Plan.

New Schemes

The new schemes proposed for the 12th Plan and the proposed outlays are as follows:-

S.No	Schemes	Proposed outlays (Rs. in crores)
1	Processing and Finishing	2800.00
2	Strengthening of data base	10.00
3	Development of Machinery	525.00
4	Setting up of Product Innovation Centres/ Design Studio	25.00
5	Anthropometric Study of Indian Population.	8.88
6	Incentivising Production of ELS Cotton	30.00
7	Green Development Fund	50.00
8	Support for Design, Quality and Compliances	150.00
9	Integrated Apparel Cluster	1000
10	Wovenwear Technology Mission	30:57
	Total	**4629.45**

The Scheme-wise details of proposed outlay for the 12th Plan under the industry sector are given below:-

Proposed XIIth Plan Outlay (Scheme-wise) for Textiles and Jute Industry

Sl No.	Name of Sector/Scheme	XIIth Plan outlay for Schemes as proposed by Sub-groups (in Rs crore)
	2	3
1	**Sericulture**	
	Ceneral Sector Schemes	651.28
	Centraly Sponsord Scheme	2263.07
	Export Promotion, Brand Building of Indian silk, Technology Up-gradation/ capacity building in Processing and finishing of silk goods	100.00

	Sub Total	**3014.35**
2	**Powerlooms**	
	Infrasucture suport	250.01
	Cluster specific infrastructure funding	277.43
	Market development support funding	16.75
	Technology up-gradation / modernization	355.00
	Group Insurance Scheme	20.50
	Health Insurance Scheme	7.69
	PL weavers distress relief fund scheme	33.02
	Comprehensive welfare scheme	160.00
	Improving hygienic behavior and to construct sanitation facility	120.00
	Sub Total	**1240.40**
3	**Wool & Woollens**	
	Wool Improvement and Development Programme	119.50
	Marketing of Raw wool including Pashmina & Angora fibre.	14.00
	Marketing and Export Promotion Scheme.	25.00
	Human Resource Development	17.50
	Modernization and strengthening of processing facilities	125.00
	Sub Total	**301.00**
4	**Development of Mega Cluster**	
	Development of Mega Cluster	1261.00
	Sub Total	**1261.00**
5	**Fashion & Textiles Education**	
	National Institute of Fashion Technology (NIFT)	325.00
	Sardar Vallabhbhai Patel Institute of Textile Management Coimbatore	375.00
	Nodal Centre for Upgradation of Textiles Education	5.50
	Schemes for Fashion & Textile Education	50.00
	Sub Total	**755.50**
6	**R & D including Textiles Research Association (TRAs)**	

	Strengthening of R&D capabilities and laboratories of TRAs - one time support	105.00
	Project Related R&D activities	40.00
	Training / Skill Upgradation for TRAs	15.00
	Success incentives	12.50
	Centre of Excellence for MMF Textiles	50.00
	Green Development Fund	50.00
	Support for design, quality and compliances(i) Testing and design support Rs.100 crore(ii) Accredition / certification support Rs.50 crore	150.00
	Sub Total	**422.50**
7	**Technology Upgradation Fund Scheme (TUFS)**	
	TUFS	15886.00
	Sub Total	**15886.00**
8	**Scheme for Integrated Textile Parks (SITP)**	
	SITP	1400.00
	Sub Total	**1400.00**
9	**Jute Technology Mission**	
	MM-III	181.50
	MM-IV	530.10
	MM-IV (carryover from 11th Plan)	50.80
	Sub Total	**762.40**
10	**Exports & building excellence in domestic market**	
	Brand Promotion Fund	10.00
	Export Market Support Scheme	25.00
	Export Promotion Studies	20.00
	Sub Total	**55.00**
11	**Clothing, Apparel & Madeups**	
	Common Compliance Code	36.70
	Scheme for setting up Center of Excellence/ Product InnovationCenter/ Design Studio	25.00
	Size India : Anthropometric Study	8.88
	Knitwear Technology Mission	40.00
	Integrated Apparel cluster	1000.00
	Wovenwear Technology Mission	30.57

	Sub Total	**1141.15**
12	**Technical Textiles**	
	Special Incentive Package Scheme for speciality fibres	200.00
	Identification of HS codes for technical textile items	1.00
	Strengthening of database of technical textile industry	1.00
	Standards for technical textiles	3.00
	Export Market Intelligence	5.00
	Scheme for Usage of Geotextiles in North Eastern Region *	500.00
	Scheme for promoting Agro textiles in North East	55.00
	Setting –up of revolving funds for providing assistance to entrepreneurs for R & D	50.00
	Study to generate data on hospital related infections.	0.25
	Balance requirement for TMTT **	106.60
	Sub Total	**921.85**
13	**Raw materials**	
	Cotton Technology Mission (CSS)	250.00
	Incenttivizing production of ELS Cotton	30.00
	Providing assistance for initiating Anti Dumping proceedings	10.00
	Sub Total	**290.00**
14	**Processing & Finishing**	
	Scheme for Common Effluent Treatment Plant with Marine Outfall (CETPMO)	1400.00
	Setting -up of new processing Parks	1400.00
	Sub Total	**2800.00**
15	**Development of Machinery**	
	Capital incentive for manufacture of first 10 machines of each category (new technilogy)	200.00
	Establishment of 3 nos. Research centre	75.00
	Technology upgradation fund for TEI	250.00
	Sub Total	**525.00**

16	**Strengthening of Database**	
	Strengthening of Database	10.00
	Sub Total	**10.00**
17	**Human Resources Development**	
	HRD & Skill Development	3882.41
	Sub Total	**3882.41**
	Grand Total for Textiles and Jute Sector	**34668.56**

*Note 1: Rs 500 crores proposed for Geotextiles in NER (Sl 15.vi above) would be utilized from the overall NER Budget; **Note 2: Rs.93.391 crore has already been allocated during the year 2010-11 & 2011-12 out of Rs.200 crore total outlays for TMTT.

Summary of Proposed Outlay

The sector/scheme wise outlay as proposed by various sub-groups is given as under. However, taking into consideration the likely resource constraints, the Working Group has prioritized the schemes and outlays which are also given in the table below.

Proposed Outlay (Rs crore)

Sl No.	Name of Sector	As proposed by Sub-groups	Prioritised outlay by Working Group
	1	2	3
1	**Sericulture**	**3014.35**	**2500.00**
2	**Powerlooms**	**1240.40**	**604.03**
3	**Wool & Woollens**	**301.00**	**200.00**
4	**Development of Mega Cluster**	**1261.00**	**700.00**
5	**Fashion & Textiles Education**	**755.50**	**755.50**
6	**R & D including TRAs**	**422.50**	**422.50**
7	**Technology Upgradation Fund Schmes (TUFS)**	**15886.00**	**15886.00**

8	**Scheme for Integrated Textile Park (SITP)**	**1400.00**	**1400.00**
			(Rs 1400 crore outlay includes Processing Parks)
9	**Jute Technology Mission**	**762.40**	**762.40**
10	**Exports & building excellence in domestic market**	**55.00**	**55.00**
11	**Human Resources Development**	**3882.41**	**3882.41**
12	**Technical Textiles**	**921.85**	**921.85**
13	**Clothing, Apparel & Madeups**	**1141.15**	**1141.15**
14	**Raw materials**	**290.00**	**290.00**
15	**Processing & Finishing**	**2800.00**	**900.00**
16	**Development of Machinery**	**525.00**	**525.00**
17	**Strenthing of Database**	**10.00**	**10.00**
	Grand Total	**34668.56**	**30955.84**

Chapter – 20
SUMMARY OF RECOMMENDATIONS

- Review of Policies
- New Policies
- Institutional changes
- New Initiatives
- Fiscal & Monetary Interventions
- Other Areas requiring Interventions
- Continuation of ongoing schemes
- New Schemes
- Compliance related interventions
- Miscellaneous Recommendations

Chapter – 20

SUMMARY OF RECOMMENDATIONS

As the Textile Sector is one of the most employment – intensive segments of India's manufacturing sector, the growth of this sector is crucial to the realization of targets relating to overall output and employment. The Working Group on Textiles and Jute, therefore, has set ambitious growth rates for the textile sector during the 12th Plan. Cloth Production is envisaged to grow at a CAGR of 11.5%, exports at 15% and employment is projected to increase by 15.81 million jobs. In order to achieve these targets, there is a need to review and rectify deficiencies, if any, of the current policies, introduce new policy initiatives, carry out institutional changes, execute fiscal and monetary interventions and introduce new schemes that would address the emerging needs of the sector. Main recommendations of the Working Group are summarized below:

A. Review of Policies

Handloom Reservation Order 1985

A high-level committee may be constituted comprising all the stakeholders to review the Handloom Reservation Order with a view to redefining reserved items more scientifically and precisely to avoid misinterpretation at the operating level, and to exempt such items in which powerlooms and mills have a distinct potential and competitiveness in the international market for export production.

Hank Yarn Obligation Scheme

A high level committee may be constituted with all the stakeholders to assess the exact requirement of the hank yarn by the handloom weavers and suggest modification in the obligation. The possibility of evolving an alternative mechanism to ensure the supply of adequate quantity of hank yarn to the handloom weavers may also be considered.

B. New Policies

Fibre - neutral excise policy

A fibre - neutral excise policy is recommended i.e. all textiles and fibres should attract the same excise duty i.e. 5% optional. While cotton is exempt from excise duty, MMF attracts excise duty of 10%. Further, while MMF textiles attract a mandatory CENVAT of 10%, cotton textiles have an optional CENVAT of 5%. Any reduction in excise duties on MMF and MMF textiles will have a highly positive impact on the growth of MMF consumption.

C. Institutional changes

- A Man Made Fibre(MMF) advisory council with all the stakeholders may be set up to note, advice and also to take an integrated approach to solving the problems of MMF producers and users of MMF and to accelerate their growth.

- As an institutional mechanism, the MoT may seek to nominate experts in the relevant committees of MHRD for voicing its views and outlook pertaining to fashion and textile education.

- Decentralization and autonomy of NIFT Centres need to be considered and implemented in a phased manner, allowing the Centres to prepare for their increased responsibility taking into account that autonomy and accountability must go hand in hand.

- The Sardar Vallabhbhai Patel International School of Textiles & Management needs to be strengthened. Infrastructure and faculty development should be given focus.
- The Ministry of Textiles should create an autonomous body that may be called Fashion and Textiles Education Council (FTEC) for setting standards and developing model curricula for various institutes.

D. New Initiatives

Financing of consolidation

For organized mill industry, consolidating fragmented textile units into organized industrial units would need substantial investment in land, building and machinery. Liberal term loans and working capital at affordable interest cost would be a positive encouragement. For establishment of large production facilities, some kind of investment allowance needs to be introduced for projects beyond a stipulated size. The Working Group recommends accelerated depreciation for encouraging consolidation.

Contract Farming

Contract farming, which provides downstream linkages to spinning industry for unmixed quality cotton and to cotton growers in increasing profitability of cultivation, may be given boost in the Twelfth five year plan with suitable financial incentives through cheaper credit to farmers for quality inputs.

Coverage of synthetic fibre and yarn under TUFS

Synthetic fibres should be covered under TUFS with fund support from their administrative Ministry i.e. Department of Chemicals and Petrochemicals.

Strengthening Database of Textile Industry

A Directorate of Textile Intelligence functioning under the Ministry of Textiles with its presence in the major domestic production centres and ports may be established to provide reliable production and trade data on real time basis.

Re-structured Jute Technology Mission

Interventions in the jute sector are sought to be implemented through the medium of a **restructured Jute Technology Mission** which will allow for sufficient autonomy to field units for effective implementation at the ground level within the broad framework of the Mission.

Award of Degrees for Fashion Education

The process for awarding degrees for various courses in fashion and textile education needs to be initiated at the earliest with the UGC.

New Initiative under Fashion & Textiles Education

- During the 12th Plan, the MoT may create an autonomous body that will develop standards and processes for courses in fashion and textile education and will collaborate and liaison with UGC/AICTE to resolve various issues. The body should have industry participation.

- The proposed autonomous body should review curriculum, once every 4 years in consultation with UGC/ AICTE industry and other experts. Each institute should take steps to adapt the model curriculum & develop syllabus on the basis of adapted curriculum.

- Focus on Faculty Development and Teacher Training – NIFT & SVPITM, salaries to be at par with UGC Scale.

- The research, development and innovation need to be an integral part of textile and fashion education with a specific target of five to ten years.
- There should be a dialogue with MoS&T for modifying DSIR scheme to make employing postgraduates mandatory for availing the scheme.

E. Fiscal & Monetary Interventions

- Indian T&C industry is highly dependent on cotton - 60% share against less than 40% share globally. Calibrated cotton exports can sustain cotton availability for domestic consumption with minimum disturbance to trade and ensure adequate stock-to-use ratio. Bank limits for cotton purchase need to be enhanced to cover increasing prices, loans need to be provided at reasonable interest rates for a period of at least 9 months and

against margin money of 10%. Warehousing finance for cotton is currently available at around 13% interest. This needs to be reduced**.**

- Reduction in Import duty and Excise duty on Machinery.

- Import duty should be reduced from 7.5 percent to 5 percent on all machines. The list of machines which are not indigenously available may be compiled and made eligible for zero duty imports.

- To motivate larger investments by textiles units, the excise duty rate on textiles machinery should be scaled down from 16 to 8 percent. This measure will help textiles units in bringing down their cost of investment, and indigenous textiles machinery manufacturers to expand their capacities.

Antidumping duty on man-made fibres

- Introduction of anti-dumping duties on man-made fibres must involve consultation with the Ministry of textiles to truly reflect the concerns of the user industry. At present this is restricted to Department of Chemicals and Petrochemicals.

- There is a need for introduction of an institutional mechanism to provide support (financial and other) to industry associations to initiate and defend the anti-dumping proceedings / safe guard duties.

Removal of restrictions on Sericulture Products

- Tax barriers imposed on sericulture commodities for free movement across the country may be removed.

Fiscal Measures for Wool

- Abolition of custom duty on Raw Wool & Fine Animal Hair
- Abolition of basic custom duty on wool waste from 10% to 0% alongwith woollen rags from 5 % to 0%:

- Reduction of basic custom duty on wool tops 15.6 Microns & Coarser from 20% to 10% & Abolition of custom duty on wool top of 15.5 micron and finer varieties
- Abolition of 10% basic custom duty on Nylon staple fibre and Polypropylene staple fibre
- Abolition of import duty on Machinery and spares

F. Other Areas requiring Interventions

Flexibility in Labour Laws

Our labour laws prohibit deployment of women in night shift, working factories for more than 48 hours a week and temporary employment of workers for seasonal jobs. These provisions hurt both employees and employers and therefore, needs to be liberalized.

Flexible labour policy will also help in consolidation and merger of the units to achieve economies of scale and become internationally cost competitive in the globalised scenario.

Price Stabilization

The cotton prices depend on the demand and supply position domestically and internationally for cotton and yarn, fabrics and made-ups. Therefore, there is need to balance the demand and supply position from time to time to stabilize cotton prices for the benefit of all the stakeholders.

Adequate supply of natural gas to process houses.

A policy should be devised to ensure adequate supply of natural gas to the existing process houses.

Measures for Export Growth

To achieve the export target of US $ 65.41 billion by the end of the Twelfth five year plan, the policy framework needs to focus on inter- alia ensuring stability in Export Policies, continuation of present level of incentives, full reimbursement of all taxes and levies, reduction in transaction costs, strengthening of trade related infrastructure,

availability of export finance on easy terms, market strategy, brand image building and negotiating preferential access to prospective markets.

Textiles Engineering Industry

Under Textiles Engineering Industry (TEI), constitution of a dedicated Cell at MoT for TEI, extension of TUFS to textile machinery manufacturing business, cluster development/ Common Facility Centres for TEI in southern, western and eastern regions, capital assistance for development of machinery and support for R&D are recommended.

Recommendations under Powerloom

The interventions required for powerloom sector development during 12th plan period include Powerloom Cluster Development Programme (PCDP), setting up of Common facility centers, Yarn Bank , setting up of design development centres in clusters,conducting awareness programme / Seminar / Workshop / Pilot activities and Cluster publicity, Setting up of new Powerloom Service Centres.

G. Continuation of ongoing schemes

The Working Group recommends continuation of all the 11th Plan schemes, viz:

- R&D/Transfer of Technology/Training & IT initiatives, Seed Organization/HRD, Quality Certification Systems and Catalytic Development Programme under Sericulture
- Group Insurance Scheme, Group Workshed Scheme and Integrated Powerloom Cluster Development under Powerloom
- Integrated Wool Improvement & Development Programmes, Quality Processing of Wool &Woolens and Social Security Scheme
- Development of Mega cluster
- NIFT
- R & D including TRAs
- TUFS
- Scheme for Integrated Textile Parks
- Jute Technology Mission

- Export Promotion Studies
- Sardar Vallabhbhai Patel Institute of Textile management
- Common Compliance Code
- Human Resource Development
- Textile Engineering
- Technical Textiles
- Cotton Technology Mission

Under Skill Development, the following recommendations are made:

- Strengthening, of existing institutions with the Ministry of Textiles.
- Infrastructure upgradation in the existing ITIs and polytechnics.
- Setting up of training centre on Public Private Partnership (PPP) mode.
- Continuation of Empowered Committee (EC).
- Creating entrepreneurs in the jute sector through training the rural poor, particularly women, in the production and marketing of JDPs.

H. New Schemes

To increase domestic value addition and technological depth in the manufacturing of textile products so as to enhance global competitiveness of Indian Textiles products through appropriate policy support, following new schemes are proposed

(i) Promotion of ELS Cotton

A scheme may be devised for providing special subsidy package to sustain long duration crop and keep alive the interest of cotton growers of ELS cotton.

(ii) Integrated Apparel Clusters

The clusters would provide employment opportunities in some of the selected villages / cities of the States, to be identified by the State Govts. The identified industrial areas by the State, where sufficient industrial activity has not taken place, the same can also be considered under Integrated Apparel Clusters

(iii) Wovenwear Technology Mission(WTM)

The Wovenwear Technology Mission (WTM) would provide various support services to the industry including knowledge service (market information about wovenwear), testing & certification, research, training & education, design services and investor facilitation services like technology selection etc. to produce and development of new woven blend.

(iv) Size India: Anthropometric Study of the Indian Population

Objective of this scheme is to carry out a scientific, systematic anthropometric study of the Indian population for the purpose of developing a sizing system for readymade garments. India is such a large country with several hetrogenous population groups that one size / fit is not suitable across the board. The high cost of sizing activity on a large scale prevents brands / retailers to do that on their own.

(v) Scheme for setting up Center of Excellence Product Innovation Center/Design Studio

The market expansion and increase in product portfolio is possible through design and product development. At present there is no such facility/service available which exclusively targets the Indian market.

(vi) Green Development Fund

It is proposed to lay special emphasis on textile production technologies with reduced carbon foot print and adopting cleaner technologies R & D and product Development projects related to development of green product or green process should be allocated a separate fund for R & D.

(vii) Setting up of a Directorate of Textile Intelligence

A Directorate of Textile Intelligence functioning under the Ministry of Textiles with its presence in the major domestic production centres and ports is proposed to be created which should be able to provide reliable production and trade data on real time basis

(viii) Common Effluent Treatment Plants with Marine Outfall

Textile Effluent Treatment with Marine Discharge facilities for four major textile wet processing clusters (Tirupur, Surat, Ahmedabad and Navi Mumbai) may be implemented during the Twelfth Plan.

(ix) Processing Parks

New processing parks based on Public Private Partnership (PPP) model should be created in coastal areas to facilitate setting up of CETP with marine outfall technology. For this, State Government may identify appropriate location having sufficient land area of 300-500 acres for developing the processing parks along the coastal line. These parks can be covered under SITP.

I. Compliance related interventions

The working Group recommends the following compliance related interventions:

- Standardization of jute products to access niche markets both domestic and international.
- Eco-labelling of Jute products so that compliant products are easily recognized and therefore easily stored.
- Helping & incentivizing the jute industry and small producers to achieve environmental and social compliance norms, particularly for export, by providing them with the know how.
- Positioning jute as an ecologically sound and viable alternative through analysis of carbon and water footprint, creating an internationally recognized brand.

Miscellaneous Recommendations

A study need to be carried out to assess the requirements for the launch of a brand, brand acquisition and brand promotion.

Appendices

Appendix A

F.No. I&M-3(17)/2011
Planning Commission
(Industries Division)

Yojana Bhavan, Sansad Marg,
New Delhi, the 28th April, 2011.

OFFICE MEMORANDUM

Subject: Constitution of a Working Group on textiles and Jute Industry (excluding Handloom and Handicraft Segments) for formulation of the 12th Five Year Plan (2012-17).

In the context of preparation of the 12th Five Year Plan (2012-2017), it has been decided to set up a Working Group on Textiles & Jute Industry (excluding Handloom and Handicraft Segments). The Terms of Reference and Composition are:

1. Terms of Reference:

1. To articulate the mid and long term goals of the sector.

2. To review the current status of the textile industry in the global context identifying the strengths, weaknesses, opportunities and threats with particular focus on Organized Mill Industry, Jute Industry, Wool and Woolen Textiles, Processing and Finishing, Clothing and Apparels.

3. To review the achievements during the 11th Five Year Plan with respect to technology upgradation, capacity addition, production, export, social compliance issues and other relevant performance indicators.

4. To review the 11th Plan schemes in the light of the findings of evaluation studies and suggest modification if any in the schemes to improve their efficacy and impact.

5. To specifically review the performance and impact of the Technology Upgradation Fund Scheme (TUFS) in the 11th Plan and to consider whether the Scheme is to be continued in the 12th Plan.

6. To examine the supply chain of the textile industry including jute, silk, wool and technical textiles, identify the supply constraints and suggest policy options for effective supply chain management that will ensure raw material security for all the segments of the textile industry.

7. To assess the requirements of skilled labour, segment-wise and skill-wise, during the next 10 years and suggest models/policy options for skill development as per industry requirements.

8. To review the current status of social and environmental compliance in the textile industry and suggest the required policy options and interventions for improving such compliance.

9. To review the present infrastructure development schemes for the textiles and apparel segments and suggest ways and means to achieve world class infrastructure in order to be globally competitive.

10. To make assessment of the current models of clustering across various sectors and suggest appropriate interventions for achieving economies of scale, technology upgradation and product improvement.

11. To review the efficacy of the ongoing schemes/programmes and suggest appropriate policy options for textile sector development in the North East Region.

12. To assess the status of the R & D programmes and technology transfer and suggest ways for encouraging R & D including design development in the textile sector.

13. To outline clear strategies and programmes for the 12th five Year plan indicating investment requirements and quantum of year-wise plan allocation.

14. To assess the indigenous machinery manufacturing capability and their technological status and suggest appropriate methods for the development of textile machinery as per needs of the textile industry.

15. To make such other recommendations as may be appropriate.

2. Composition:

1.	**Smt. Rita Menon, Secretary, Ministry of Textiles**	**Chairperson**
2.	Joint secretary, Ministry of Chemicals & Petro-Chemicals Shastri Bhavan, New Delhi	Member
3.	Joint Secretary, Ministry of Agriculture, Krishi Bhavan, New Delhi	Member
4.	Dr. (Smt.) Renu S. Parmar, Adviser, Planning Commission (I&VSE), Yojana Bhavan, New Delhi	Member
5.	Joint Secretary, Ministry of DoNER, Vigyan Bhawan, Annexe, New Delhi	Member
6.	Joint Secretary, Ministry of Tribal Affairs, Shastri Bhavan, New Delhi	Member
7.	Joint Secretary, Ministry of Labour, Shram Shakti Bhavan, New Delhi	Member
8.	Sh. V. Srinivas, Joint Secretary (M/o Textiles)	Member
9.	Sh. Sujit Gulati, Joint Secretary (M/o Textiles)	Member
10.	Smt. Monika S. Garg, Joint Secretary (Silk) (M/o Textiles)	Member
11.	Smt. Monika S. Garg, Director General (NIFT)	Member
12.	Sh. A.B. Joshi, Textile Commissioner, Mumbai	Member

13.	Sh. R.N. Choubey, Development Commissioner (Handlooms)	Member
14.	Sh. S.S. Gupta, Development Commissioner (Handicraft)	Member
15.	Smt. M. Sathiavathy, Member Secretary, Central Silk Board, Bangalore	Member
16.	Chairman, Confederation of Indian Textiles Industry	Member
17.	Chairman, Apparel Export promotion Council	Member
18.	Chairman, Textile Association of India (Regd.)	Member
19.	President, Association of Synthetic Fibre Industry of India, Mumbai	Member
20.	Chairman, Powerloom Development Exp. Promotion Council	Member
21.	President, All India Hosiery Manufacturers' Association	Member
22.	President, Indian Woolen Mills Federation, Mumbai	Member
23.	Chairman, Textile Machinery Manufacturers Association, Mumbai	Member
24.	Chairman, Federation of Indian Textiles Engg. Industry	Member
25.	Director, Central Wool Development Board	Member
26.	Shri Himmat Singka Seide, 10/24, Kumara Krupa Road, High Grounds, Bangalore - 560001, Karnataka, India	Member
27.	Shri Manohar Samuel, Jt President, Grasim Industries Ltd. Century Bhawan Worli,Mumbai	Member
28.	Shri Sashi Jaipuria, Chairman, Confederation of Indian Textile Industry (CITI), New Delhi	Member
29.	Shri Subhash Chander Grover, Ex CMD,CCI	Member
30.	Shri Suresh Kotak, Chairman, Cotaap Research Foundation of EICA, Mumbai	Member
31.	Shri S.P. Oswal, Chairman cum Managing Director, Verdhman Textiles Ltd, Chandigarh, Punjab	Member
32.	Shri Alok Jiwrajka, Chairman, Alok Industries Ltd., Board Member, Peninsula Tower, Lower Parel, Mumbai	Member
33.	Shri J.V.Rao, Director, North India Textile Research Association, Rajnagar, Ghaziabad.	Member
34.	Shri D.C.Bahati, Executive Director,Golster Jute Mills,Kolkata	Member
35.	Shri Mohan Kavri, Managing Director, Non Woven, Chembur, Mumbai	Member
36.	Shri Girish Luthara, Gujarat Enviro Protection & Infrastructure Ltd Pansara, Gujarat	Member

37.	Shri Vinu Sudan, Director, Brandix India Apparel City Pvt Ltd, 502, Apurupa Classic, Banjara Hills, Road No 1, Hydrabad-500	Member
38.	Shri N.D.George,Economic Adviser (M/o Textiles)	**Member –Secy.**

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3. The Chairperson of the Working Group may include additional Term(s) of Reference in consultation with Chairman of the Steering Committee on Industry.

4. The Chairperson of the Working Group may constitute separate Sub Groups on or any other aspect as may be considered necessary. She may also co-opt any other Experts as Members of this Working Group.

5. The Working Group will submit its report by 31st August, 2011 to the Chairman of the Steering Committee on Industry. The Working Group will be serviced by the Ministry of Textiles.

6. The expenditure on TA/DA of official members in connection with the meetings of the Working Group will be borne by their parent Department/Ministry to which the official belongs as per the rules of entitlement applicable to them. The non-official Members of the Working Group will be entitled to TA/DA as permissible to Grade I officers of the Government of India under SRI 90(a) and this expenditure will be borne by the Ministry of Textiles Air Travel is to be under taken on Air India/Indian Airlinces(Economy Class) only.

7. Handloom & Handicraft Segments are being addressed through a separate similar Working Group under the Steering Committee on Handloom & Handicrafts Chaired by Dr. (Ms) Syeda Hameed, Planning Commission.

8. Shri A.K. Khullar, Joint Adviser (VSI), Planning Commission, {Room No.346, Yojana Bhawan, New Delhi- Telephone No.23753166, e-mail: akkhullar@nic.in} will act as Nodal Officer for this Working Group and any further query/communication in this regard may be made with the Nodal Officer.

(Dr, Renu S. Parmar)
Adviser(I&VSE)
Telefax 23096605

To

Chairperson and all the Members (including Member-Secretary) of the Working Group.

Copy to

1. PSs to DCH/MOS (Planning) / Members/Member-Secretary, Planning Commission.
2. Prime Minister's Office, South Block, New Delhi.
3. Cabinet Secretariat, Rashtrapati Bhavan, New Delhi.
4. All Ministries/Departments of the Government of India.
5. All Principal Advisers/Advisers/HODs in Planning Commission.
6. Director (PC), Planning Commission.
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8. Accounts-I, Planning Commission.
9. Information Officer, Planning Commission-**for uploading in the website of Planning Commission**.
10. Library, Planning Commission.

(Dr. Renu S. Parmar)
Adviser(I & VSE)

Telefax 23096605

Appendix –B

(i) Composition and Terms of Reference of Sub – Group on Textiles and Apparel Industry

Composition

1.	Joint Secretary (Cotton),Shri V.Srinivas	Chairman
2.	Textile Commissioner, Shri A.B.Joshi	Co Chairman
3.	Economic Adviser, Ministry of Textiles	Member
4.	Director (Cotton), Smt. Madhavi Das	Member
5.	Director (Exports), Shri S.S. Das	Member
6.	Director (SITP), Smt Mukta Nidhi Samnotra	Member
7.	Chairman, Confederation of Indian Textile Industry (CITI)	Member
8.	President, South India Mills Association (SIMA)	Member
9.	Chairman, Clothing Manufacturing Association of India (CMAI)	Member
10.	Chairman, Federation of Indian Art Silk Weaving Industry (FIASWI)	Member
11.	Chairman, Textiles Machinery Manufactureres Association	Member
12.	Chairman, Tirupur Exporters Association (TEA)	Member
13.	President, Northern India Textile Mills Association (NITMA)	Member
14.	Chairman, AEPC	Member
15.	Chairman, SRTEPC	Member
16.	Chairman, TEXPROCIL	Member
17.	Chairman, Association of Synthetic Fibre Industry (ASFI)	Member
18.	Chairman, Association of Manmade Fibre Industry (AMFI)	Member
19.	Shri S.P. Oswal, CMD, Vardhaman Group	Member
20.	Shri Dilip Jivrajkar, CMD, Alok Industries	Member
21.	Shri Suresh Kotak, Chairman, Kotak & Co.Ltd	Member
22.	Shri S.C. Grover, Ex. CMD, CCI	Member
23.	Shri Girish Luthra, Chairman Gujarat Eco-Textiles Park	Member
24.	Shri Vinu Sudan, Director, Brandix India Apparel City Pvt.Ltd	Member
25.	Shri Manohar Samuel, Sr. Vice President (Bus. Dev.), Grasim Industries	Member
26.	Chairman, SRTEPC	Member
27.	Director, NITRA	Member
28.	Director, SITRA	Member
29.	G.M. from IDBI (dealing with TUFS)	Member
30.	G.M. from SIDBI (dealing with FUFS)	Member
31.	Joint Textile Commissioner (Economic)	Member Secretary.
32.	CMD –CCI	Invitee
33.	Renu S. Parmar, Adviser, Industry & VSE , or representative of Planning Commission	Member

Terms of Reference

A. Traditional Issues:

1.Macro Strategy for growth of the segment

1.1 Gap Analysis- Analysing the long term goals for different segments (Viz ginning & pressing, spinning, weaving, processing, knitting, garmenting and made-up) vis-à-vis the present position and growth projections in each segment.
1.2 . Strategy to bridge gaps- To propose detailed strategies in each segment to bridge the gaps so identified.
1.3 Balanced growth across value chain- To suggest methods to improve and integrate various segments in the total value chain for the manufacturing sector viz ginning and pressing, spinning, weaving, processing, knitting, garmenting and made-ups in order to ensure balanced development. To suggest strategies for development of domestic Apparel secor.
1.4 Impetus to Processing: As processing continues to be one of the weakest links in the textiles value chain, to suggest measures for its promotion and development.

2.Strategy on fundamental inputs (including infrastructure, machinery, labour and fiscal issues)

2.1 Infrastructure development- To review the present infrastructure development schemes for the textiles and apparel segments and suggest ways and means to achieve world class infrastructure to ensure global competitiveness.
2.2. Textile Machinery Manufacturing development- To assess the indigenous machinery manufacturing capabilities and suggest appropriate measures for the development and availability of textile machinery as per the needs of the textile industry.
2.3 Labour issues- To review comprehensively all labour related issues which affect the growth of the textile sector including labour laws, rationalization etc.
2.4 Fiscal roadmap- To recommend a roadmap for growth oriented duty structure.

3. Promotion of Exports and FDI

3.1. Export Promotion- To suggest ways and means including export promotion measures for increasing India's share in global trade commensurate with its inherent strengths and potential.
3.2. Promotion of FDI. To review the present status of Foreign Direct Investment (FDI) for the Textiles Industry and suggest ways to attract FDI in specific areas requiring investment such textiles machinery manufacturing sector, apparel manufacturers, synthetic fabrics and technical textiles etc.
3.2. Global challenges- To identify the threats and constraints restricting the demand including anti dumping as well as WTO issues.
3.3 Benchmarking: :To benchmark various segments of domestic industry against the global industry in terms of technology, productivity, quality, labour standards and labour productivity and suggest ways and means to make all sections of domestic industry internationally competitive.
3.4. Common Compliance Code:- for promoting exports, to examine the need for a Common Compliance Code and suggest a strategy for its implementation.

4. **Review of 11th Five Year Plan performance**

4.1. Macro level achievements: To review the likely achievement of levels of demand, capacity, production etc. by the end of 2011-12 in relation to targets fixed for the 11th Five year Plan, analysis reasons for shortfalls and suggest appropriate strategies for future.
4.2 Review of Existing Scheme. To examine the effectiveness of various plan schemes such as TUFS, SITP, Mega Clusters etc. with a view to enhancing the scope and coverage; focusing on slow growing segments; merger of schemes into integrated schemes; improving delivery mechanism and ensuring greater accountability.

B. Emerging Issues.

1. Raw Material Security and supply chain management

1.1 Raw material security- to examine availability of raw materials for the textile and apparel industry (including cotton fibre, manmade fibre and manmade filament yarn) and suggest suitable measures for augmentation thereof, keeping in view the assessed requirement.
1.2 Price stabilization: To study the problems of fluctuations in the supply and prices of cotton, cotton yarn etc. and suggest long term sustainable policy mechanisms for ensuring smooth supply lines and price stabilization.
1.3 Domestic requirements vis a vis exports: To arrive at realistic estimates of production of raw material in the organized sector and the decentralized sector, sector-wise and variety-wise between 2012-2017, to ensure a balancing of domestic requirements vis-a-vis exports.

2. **Environmental Issues**:

To review the mandatory standards of environmental compliance in the textile industry, especially with reference to the processing segment; suggest viable strategies to met the mandatory environmental standards across different States and recommend changes as required.

3. Research and Development (R&D)

To assess the status of R& D programmes and suggest measures for focusing the research efforts in directions which are useful for industry. To suggest strategies for tracking international research, promoting contract research and marketing alliances with international competitors in India.

4. **Other Issues**:

4.1 Data Compilation: To examine the existing system of compilation of data in respect of the textile industry and suggest ways and means for generation, maintenance and strengthening of data base, particularly in respect of decentralized sectors.
4.2 Information Technology: To suggest measures for integration of information technology, automation, net-working for improving overall productivity and quality and products.
4.3 To make such other recommendation as may be appropriate.
4.4 Review the efficacy of the on going schemes/ programmes and suggest appropriate policy option for the Textile sector development in North East Region.

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(ii) Composition and Terms of Reference of Sub Group on HRD & Skill Development

Composition

1.	Sh V. Srinivas, JS	Chairman
2.	Smt. Monika Garg, JS,	Co-Chairperson
3.	Dr. Md. Nazmuddin, ADC (HL)	Member – secretary
4.	Sh Manish Gupta, Director, MoT	Member
5.	Dr. Darlie Koshie, Director ATDC	Member
6.	Dr. A.K. Sharma, Director, ATIRA	Member
7.	Smt M. Sathiyawathy, Member Secretary, CSB,	Member
8.	Sh R.N. Choubey, DC(HL) / Sb. B.B. Paul, Director, WSC, Chennai	Member
9.	Sh S.S. Gupta DC(HC)	Member
10.	Representative of NIFT	Member
11.	Sh Sharda Prasad, DGET	Member
12.	Dr. A. K. Samantha, Principal IJT	Member
13.	Prof Kothari, IIT Delhi	Member
14.	Dr. Pujar, Director SVPISTM	Member
15.	Sh. A.B. Joshi, Textile Commissioner	Member
16.	Shri R.C.M. Reddy, IL&FS	Member
17.	Shri Rahul Mehta, CMAI	Member
18.	Shri D.K. Nair, CITI	Member
19.	Director, IICT, Bhadoi	Member

Terms of Reference

1	**Current Status of Manpower & Human Resources in Textiles sector (including HL & HC)**
i	National Skill Development Corporation has produced a report titled "Human Resource and Skill requirements in Textiles Sector (2022)". The report provides status based on data upto 2007-08. Sub-group may examine the said report, and taking into account the progress made thereafter and likely achievement of various initiatives taken upto 31.3.2012, project the updated current status.
ii	To review the likely achievement of levels of skilled manpower etc. by the end of 2011-12, in relation to the targets fixed for the Eleventh Five Year Plan, and projections made by NSDC for 2012 to analyze the deviations, and shortfalls if any.
iii	Identify challenges, constraints and threats being faced by the industry in getting skilled manpower resources.
iv	To review the roles played by the various Stakeholders/ Agencies in the HRD & skill building such as ITIs, TRAs, Colleges, ATDC, NIFT, SVPISTM, Engineering Colleges, private agencies, NGOs, IICT, CDI etc.
v	To assess the current capacities, capabilities, infrastructure and technological level of such Institutions providing HRD services.
vi	Identify the challenges, constraints and threats faced by Institutions providing skill upgradation services in meeting the manpower demand of the industry.
vii	Review the Quality of the current programmes of the institutions in terms of the employability of the HR produced.
viii	Review the current status of Skill certification mechanism.
ix	Review the institutional arrangement for standardization of Skill Modules / Course Modules, and mechanisms for its updating.
x	Review the institutional arrangements for Skill Exchange and infrastructure available for marketing of skills.
2.	**Impact of XI Plan Interventions**
i	To review and examine the implementation of policies and programmes of the Government in the XI Plan and assess its impact on HRD /Textiles Sector. Examine the likely achievements in relation to the targets fixed for the XI plan in respect of each intervention, analyze reasons for shortfalls, if any.
ii	To critically review the outcomes and efficacy of the ongoing interventions of Ministry of Textiles for Skill Development, such as - a) Integrated Skill Development Scheme, b) Upgradation of SVPISTM c) Non Plan assistance to NIFT for establishing New Centre / Running existing Centre d) Skill Development initiatives supported by DC(HL) & DC(HC) e) NJB support to IJT for running courses in jute sector f) Skill initiatives in Silk sector (CDP and other programmes) g) Other components within schemes of MoT relating to Skill Development. With a special emphasis on the employability of the beneficiaries of the scheme.
3	**Projections for XII Plan**
i	The projected requirement of Manpower by Textiles Industry for 2018 is available in the NSDC report. The Projections to be further fine-tuned on the basis of current data available.
ii	Further detail out the various requirement of manpower in Skill set Level 4 (skills which are highly specialised involving research and design) and Level 3 (skills which require

	long drawn preparation as demonstrated by acquisition of degrees, and involve highly technical or managerial capabilities)
iii	Make an assessment/ projections of HR required for Technical Textiles sector (and its sub-segments) for the XII Plan.
iv	Make projections for the institution-wise capacities required to be developed in the XII plan to meet the manpower requirement of the XII Plan.
v	Make an assessment / projection for skill requirement in unorganized sector.
vi	Make an assessment / projections for requirement of Trainers for meeting the above requirement of capacities.
vii	Make projections / assessments for institutional arrangements required for standardization and updating of skills development programmes based on industry demand.
4.	**Strategy for XII Plan**
i	Identify the major goals, objectives and thrust areas for the 12th Five Year Plan.
ii	To explore the role of the various stakeholders for providing skill development/ HRD services in the XII plan so as to explore possibilities for their harmonious development.
iii	Gap Analysis – To carry out gap analysis of long term goals for different segments vis-à-vis present position in each segment; and explore various strategies to bridge gaps.
iv	Emphasis on Technical Textiles: Considering the growth potential of TT sector, suggest the strategy for meeting the manpower needs of Technical Textiles sector.
v	Suggest means and mechanisms to create/ develop/ promote/ upgrade institutions for meeting the skill requirement of the Textiles sector both in quantity and quality terms.
vi	Suggest a suitable and viable model for Skill development in unorganized sector.
vii	Prepare a strategy for development of Trainers required.
viii	Suggesting a long term policy for positioning of NIFT, SVPISTM, TRAs and other institutions in the skill development space.
ix	Suggest a suitable policy intervention / institutional arrangement for regular updation standard MES modules (on Textiles Sector) to be in tune with the future direction of the Industry.
x	Suggest suitable policy intervention / institutional arrangements for skill certification and marketing of skills.
xi	Suggest suitable mechanisms for targeting the scheme towards underprivileged section of society, i.e. SC, ST and in the NE region.
5	**Existing Schemes & Implementation System**
i	To examine the need for continuation/modification of existing schemes. This would include scope and coverage of schemes especially for reassessing/revamping the schemes to focus on undeserved states, merger of micro schemes into integrated schemes, improving the delivery mechanism etc.
ii	Suggest appropriate strategies for changes in programme implementation mechanism required, if any.
iii	Explore possibilities of implementation of Schemes in PPP mode through Private sector contributions.
iv	Suggest appropriate mechanisms for compilation of data and information for monitoring the schemes and suggest ways for generation, maintenance, integration and strengthening of data-base. Also to suggest measures for introducing IT in data management.
6	**Resource Estimation**
i	To estimate the financial requirements for implementing the proposed strategy and suggest ways for mobilization of resources.
ii	Explore areas where resources can be generated from alternate sources and areas where

	Private sector resources can be tapped.
7	To make such other recommendation as may be appropriate.

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(iii) Composition and Terms of Reference of the Sub – group on Sericulture & Silk Industry

Composition

1.	Mrs. Monika S. Garg Joint Secretary (Silk), Ministry of Textiles	Chairman
2.	Mrs. M. Sathiyawathy, Member Secretary, Central Silk Board,	Co-Chairman
3.	Shri S. S. Das, Director (Silk), Ministry of Textiles	Member
4.	Shri Dinesh Singh, Additional Development Commissioner(Handloom)	Member
5.	Representative Development Commissioner (Handicrafts)	Member
6.	Representative of Planning Commission (VSI)	Member
7.	Commissioner/Secretary/ Director, Govt. of Karnataka / West Bengal/ J&K/ Assam/ Jharkhand or their representatives	Member
8.	Representative from Bio-technology Center, Indian Agriculture Research Institute, New Delhi.	Member
9.	Representative of Indian Council of Forestry Research & Education, (ICFRE), Dehra Dun.	Member
10.	Representative of Managing Director, NABARD	Member
11.	Shri Bimal Mawandia, Chairman, Indian Silk Export Promotion Council	Member
12.	Shri O.P. Garg, Chairman, Carpet Export Promotion Council	Member
13.	Mrs P. V. Leela, Director (Finance), Central Silk Board Bangalore	Member
14.	Dr Arindam basu. Director CSTRI CSB, Bangalore	Member
15.	Shri K.K. Shetty, Deputy Secretary, CSB	Member
16.	Representative of SASMIRA, Mumbai	Member
17.	Mr. Vaibhav Kapoor, representing Weavers' Federation/Associations [Varanasi Silk Weavers & Traders Association]. 13/56, Parpateswar, Varanasi.	Member
18.	Mr. Salim Abrar, representing Multiend Reelers' Associations.	Member
19.	Mr. Bhavani Shankar, Silk Association of India, representing farmers & seed rearers, 1338, 26th Main, 27th Cross, Banashnkari II Stage, Bangalore.	Member
20	Shri K.S. Menon, Joint Director, CSB, Bangalore:	Member Secretary

Terms of Reference

1. To examine the current status of the Sericulture and Silk Industry in India in the global context;
2. To arrive at realistic estimates of production, demand and consumption of various varieties of silk yarn and products in the silk value chain during 2011-12 and 12th Plan period and provide a long term forecast for the sector;
3. To review the ongoing schemes of Government of India for development of sericulture and silk industry in India and their effectiveness and to examine the need for their continuation / modification;
4. To review the existing R&D efforts in Pre-cocoon, Post cocoon segments and to suggest ways and means to strengthen R&D efforts to achieve higher productivity and improving quality of cocoon, raw silk and fabric production.
5. To suggest ways and means, to increase area of cultivation of mulberry and non-mulberry plantation to increase cocoon, yarn and silk cloth production for domestic consumption and export;
6. To examine the existing implementation mechanism, monitoring and evaluation systems for various schemes in Pre and Post Cocoon sectors and suggest improvements, if any;
7. To bench mark various segments of silk industry against the global standards and best practices and suggest ways and means to improve competitiveness of Indian silk industry in the international market;
8. To suggest suitable measures for optimum product mix, so as to achieve maximum benefits from the available resources;
9. To estimate the financial requirements of the sericulture and silk industry, examine the credit flow issues and suggest ways for mobilization of resources in the private, public and cooperative sectors to meet the financial need of this sector;
10. To examine ways and means to achieve vertical integration of various segments of the value chain of silk industry including, product design development and product diversification and market linkages;
11. To review progress of skill development in sericulture, suggest ways and means for further improvement;
12. To examine the potential for development and marketing of Vanya Silk and need for R&D intervention, field extension work and transfer of technology;
13. To suggest measures for brand promotion of Indian Silk and export promotion of all silk goods;
14. To review progress of measures taken for use of Information Technology in the sericulture sector and suggest improvements, if any.
15. To review progress of working of quality certification systems.
16. To suggest ways & means for delivery with SEVOTTAM compliance and transparency in the silk & sericulture sector.
17. To review the issues related to environment and corporate social responsibility, Social security, Gender and SC/ST
18. To make recommendation for ways & means of development of sericulture in North East Region.
19. To make such other recommendations as may be appropriate.

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(iv) Composition and Terms of Reference of Sub – Group on Jute

Composition

1.	Sh Sujit Gulati, JS	Chairman
2.	Shri Binod Kispotta, Jute Commissioner	Co- Chairman
3.	Shri Atri Bhattacharya, Scy. NJB	Member – secretary
4.	Shri A.K Chakraborty MD, Jute Corporation of India (JCI)	Member
5.	Shri Manish Poddar, Chairman, Indian Jute Mills Association (IJMA)	Member
6.	Dr Prabir Roy, Director, Indian Jute Industries Research Association (IJIRA)	Member
7.	Shri S. Khaitan, President, Association of Jute & Handicrafts Entrepreneurs of Eastern India (AJHEEI)	Member
8.	Dr. K.K Satpathy, Director, National Institute of Research on Jute & Allied Fibre Technology (NIRJAFT)	Member
9.	Dr. B.S Mahapatra, Director, Central Research Institute for Jute & Allied Fibres (CRIJAF)	Member
10.	Dr. S.K Biswas, Director, Jute Development, Ministry of Agriculture	Member
11.	Shri N. Pujara, President, Jute Fabrics Shippers Association and President, JPDEPC	Member
12.	Shri Manish Gupta, Director (Jute), MoT	Member
13.	Shri J.V Rao, Director, NITRA	Member
14.	Shri Aniruddh Kajaria, MD, Centre for Jute Machinery Development	Member
15.	Secretary (Agriculture) Govt of WB	Member
16.	Secretary (Agriculture) Govt of Assam	Member
17.	Secretary (Industry), Government of WB	Member

Terms of reference

1	**Current Status of Jute Sector**
i	To examine the current status of the jute industry in the global context.
ii	To review the likely achievement of levels of demand capacity, production, etc. by the end of 2011-12, in relation to the targets fixed for the Eleventh Five Year Plan to analyze the deviations, if any, and to suggest appropriate action for future.
iii	To identify the roles played by the various Stakeholders/ Agencies in the jute value chain, such as farmers, middlemen, state governments, APMCs, organized mill sector, handlooms, powerlooms, handicrafts, Future & Forwards market etc.
iv	To assess the indigenous machinery manufacturing capabilities and their technological status.
v	Identify Domestic & Global challenges, constraints and threats being faced by the jute sector.
2.	**Impact of XI Plan Interventions**
i	To review and examine the implementation of policies and programmes outlined in the National Jute Policy, 2005 and assess its impact on Jute Sector. Examine the likely achievements in relation to the targets fixed for the XI plan in respect of each intervention, analyze reasons for shortfalls, if any.
ii	(a) To critically review the outcomes and efficacy of the ongoing Plan Schemes (Jute Technology Mission, MM-I to MM-IV) being implemented by the Ministry of Textiles through various organizations and their impact on the growth, development and competitiveness of the jute sector. (b) To review the present infrastructure development schemes for the jute sector. (c) To critically review the outcomes and efficacy of the ongoing Non Plan Schemes being implemented by the NJB and also review their impact on the growth, development and competitiveness of the jute sector. (d) To critically review the outputs/ outcomes from the Non-Plan Support to IJIRA, Jute Corporation of India and IJSG and their role in development of Jute sector in the country.
iii	To review the policy interventions taken so far for tackling sickness in the jute industry and to review the existing system of controls and regulations in the jute sector. To review existing policy for reservation of commodities and for determining the prices of jute bags.
iv	To study the problem of fluctuations in the prices of raw jute and assess its impact on jute sector.
v	To assess the role played by of the TRAs and other institutions like the IJIRA and IJT for the development of Jute Sector in the XI plan.
3	**Projections for XII Plan**
i	To arrive at realistic estimates of production in the organized sector and the decentralized sectors, sector-wise and variety-wise in 2012-2017.
ii	To assess the requirement of various jute products for local consumption and export and its break-up in 2012-2017.
iii	To examine the requirements and availability of raw jute during 2012-2017.

iv To identify the manpower and skills requirement of the workforce employed in the jute sector for 2012-17.

v To estimate the level of exports of jute and jute products during 2012-2017 taking into account the past performance, presents trends, pattern of world trade and globalization of textile trade particularly in the post –MFA era.

4. Strategy for XII Plan

i. Identify the major goals, objectives and thrust areas for the 12th Five Year Plan.

ii. To explore the role of the various sectors of the Jute industry, in India, such as handlooms, power-looms, handicrafts, organized mill sector, so as to explore possibilities for their harmonious development.

iii. Gap Analysis – To carry out gap analysis of long term goals for different segments vis-à-vis present position in each segment; and explore various strategies to bridge gaps.

For Organised Sector:

iv. To bench-mark various segments of domestic industry against the global (or ideal) industry and suggest ways and means to make all sections of domestic industry internationally competitive.

v. To suggest appropriate methods for the modernization of Jute Industry as well as development of the jute machinery as per technological need of the jute industry. To suggest suitable measures to make the jute industry competitive in the international and domestic markets.

vi. To suggest ways and means of de-regulating the system of controls and regulations in the jute sector, and suggest changes, wherever necessary, for promoting productivity and encouraging growth while enhancing competitiveness in the jute sector and to make suggestions for improving the economic viability of the industry.

vii. Identification of measures to enhance competitiveness of Indian jute products in the domestic and international markets, and suggest strategy to reduce their dependence on Government support.

viii. Infrastructure Development : To examine requirement of infrastructure for balanced growth of jute sector, particularly for diversified products and suggest means to develop the same.

ix. To suggest ways and means for implementing environmental & social compliance in the jute industry.

For Labour Welfare

x. To suggest ways and means for enlarging the scope of productive employment in various segments of the jute sector.

xi. To suggest ways and means for ensuring proper working environment and easy access to health care facilities and insurance cover to workers and artisans particularly for disadvantage section of the population such as SC & ST.

xii. To suggest methods by which rationalization of labour could be accomplished, so as to achieve maximum labour productivity through scientific workload.

xiii. To evolve a comprehensive strategy for developing human resources in all activities in jute sector including production technologies, designs, marketing skills and information technology.

Development of Raw Jute Sector

xiv. To suggest appropriate methods for the modernization of Farm sector as well as development of the appropriate technology for the growth of jute farming and suggest measures for increasing production, yield and upgradation of quality of raw jute.

xv. To suggest strategy for strengthening the R&D programme in Farm sector, particularly seed development, modern agronomic practices, development of retting technologies etc.

xvi. To suggest strategies for dissemination of technologies to farm sector, improve market linkages and information systems in raw-jute trading.

xvii. Suggest strategy for institutionalizing appropriate method of proper price discovery of raw jute (as in a free market) and institutional arrangement for dissemination of price information to all stakeholders.

xviii. Suggest long term sustainable policy mechanisms (including futures & forwards trading) for removing price volatility in raw-jute and removing influence of any particular player in determining the price of raw jute.

xix. Suggest strategies to bring about synergies in the programme implementation by various agencies such as NJB, JCI, State Government, CRIJAF, NRIJAFT, Directorate of Jute etc.

Increasing Diversification of Jute

xx. To suggest appropriate methods for diversification of usage Jute bags (other than traditional usage in Foodgrain/sugar) and moving away from the current policy of reservation under JPM Act. Suggest measures for upgradation of quality of jute products, increasing jute diversification (instead of being used a packaging material) and exploring possibility of this fiber being use as technical textiles.

xxi. To suggest strategy for strengthening the R&D programmes to bring about synergy between the industry and IJT & TRAs.

xxii. To suggest strategies for development of entrepreneurs for manufacture of jute diversified products.

xxiii. To suggest measures for integration of Information technology, automation, networking for improving overall productivity and quality of products.

xxiv. To suggest strategy for inclusive growth of women, artisans, and socio-economic weaker section of society.

Promotion of Exports

xxv. To suggest appropriate strategy for promotion of exports of jute products and for increasing India’s share in global trade of jute products.

xxvi. Suggest ways and means to tackle the global challenges faced by jute sector for export of jute products.

5 Existing Schemes & Implementation System

i. To examine the need for continuation/modification of existing schemes. This would include scope and coverage of schemes especially for reassessing/revamping the schemes to focus on undeserved states, merger of micro schemes into integrated schemes, improving the delivery mechanism etc.

ii. Suggest appropriate strategies for changes in programme implementation mechanism required, if any.

iii. Explore possibilities of implementation of Schemes in PPP mode through Private sector contributions.

iv. Suggest appropriate mechanisms for compilation of data and information for monitoring the schemes and suggest ways for generation, maintenance, integration and strengthening of data-base. Also to suggest measures for introducing IT in data management.

6 Resource Estimation

i. To estimate the financial requirements for implementing the proposed strategy and suggest ways for mobilization of resources in the Jute industry.

ii. Explore areas where resources can be generated from alternate sources and areas where Private sector resources can be tapped.

7 To make such other recommendation as may be appropriate.

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(iv) Composition and Terms of Reference of Sub Group on Wool & Woolen Textiles

Composition

1.	Joint Secretary(Wool)	Chairman
2.	Textile Commissioner	Co-Chairman
3.	Representative of Planning Commission (VSI Divn)	Member
4.	Representative from D/O Animal Husbandry	Member
5.	President, IWMF	Member
6.	Representative from Shawl Club, Ludhiana	Member
7.	Director, Wool Research Association, Thane	Member
8.	Representative form AWI	Member
9.	Chairman/ED of W&WEPC	Member
10.	Chairman/ED of WOOLTEXPRO	Member
11.	Chairman, Carpet Export Promotion Council	Member
12.	Chairman, All India Carpet Manufacturers Association, Bhadohi	Member
13.	President, Ludhiana Spinners Association	Member
14.	President, Knitwear Club Ludhiana	Member
15.	ED, CWDB	Member Secretary

Terms of Reference

(i) To examine the current status of woolen industry in India in the global context and the impact of liberalization on the Indian Woolen Industry especially the impact of abolition of quotas;

(ii) To review the likely achievement in the level of demand, capacity, production etc. in the woolen industry by the end of 2011-12 in relation to the target fixed for the 11th Five Year Plan and to analyse the variations, if any and to suggest appropriate remedial action for future;

(iii) To assess the requirements of woolen yarn and woolen cloth for local consumption and exports in 2016-17, the concluding year of the 12th Five year Plan.

(iv) To suggest ways and means for increasing the availability and access of woolen clothes to all sections of the population and to increase per capita wool fibre consumption in the country;

(v) To review, enhanced and develop training and skill upgradation programmes to create a skilled work force in the woolen sector;

(vi) To suggest ways and means for enlarging the scope of productive employment in the various sectors of woolen industry;

(vii) Benchmark the various segments of the woolen industry against the global standards and suggest ways and means to make all sections of woolen industry internationally competitive;

(viii) To suggest measures for integration of information technology, automation networking for improving overall productivity and quality of woolen products;

(ix) Strengthening mechanisms for better implementation of schemes for establishing mechanized primary processing facilities and also post loom facilities such as dyeing and finishing in a manner that the environmental compliances are adhered to;

(x) An analysis of the prevailing conditions of primary raw wool producers, reasons for fall in their number as also in the number of sheep in some of the States and suggest remedial measures;

(xi) To suggest measures for utilizing modern blending techniques to blend wool fibre with other man-made and natural fibres so as to maintain and increase the level of consumption of wool within the country and abroad.

To suggest measures for technological upgradation of practices and processes including the upgradation of machinery for improving the quality of woolen products.

(vi) Composition and Terms of Reference of Sub – Group on Powerloom

Composition

1.	**Joint Secretary (Powerloom), Ministry of Textiles**	**Chairman**
2.	**Textile Commissioner, Ministry of Textiles, Mumbai**	**Co- Chairman**
3.	Director (Powerloom), Ministry of Textiles	Member
4.	Representative of Planning Commission	Member
5.	Representative of DONER	Member
6.	Secretary (Textiles), Govt. of Maharastra	Member
7.	Secretary (Textiles), Govt. of Tamil Nadu	Member
8.	Secretary (Textiles), Govt. of Uttar Pradesh	Member
9.	Secretary (Textiles), Govt. of Gujarat	Member
10.	Secretary (Textiles), Govt. of Rajasthan	Member
11.	Director, SASMIRA, Mumbai	Member
12.	Chairman, FIASWI, Mumbai	Member
13.	Chairman, Confederation of Indian Weaving Industries, Tamil Nadu	Member
14.	Chairman, All India Powerloom Federation, Ichlakarnji.	Member
15.	Chairman, Textile Machinery Manufacturers Association (TAMA), Mumbai.	Member
16.	Chairman, PDEXIL, Mumbai.	Member
17.	Additional Textile Commissioner or Joint Textile Commissioner, Office of the Textile Commissioner, Mumbai.	Member Secretary

Terms of Reference

i) To review efficacy of ongoing schemes and examine the need for their continuation/modification. To suggest measures for continuous monitoring and examination of the schemes.

ii) To suggest the modalities of modernization of the decentralized powerloom sector. This should primarily envisage the replacement of the existing traditional looms to high-tech looms and also encourage the entry of new entrepreneurs into the sector who will use current technologies. This will ensure the continued competitiveness of the powerloom sector in the global context.

iii) To project year wise growth in production and the demand of powerloom products and fibre wise requirement.

iv) To recommend the requirement of funds for such replacement as duly assessed and incentives to be offered to the decentralised sector. (The thrust and focus should be to modernise the sector and the sub-group can suggest measures necessary for this endeavour. Powerloom clusters can be developed to remove the current regional imbalance in the country. The scheme-wise/year-wise fund requirement may also be worked out).

v) To formulate a strategy for easy access to the loans from various financial institutions for the sector. The workable strategy should include minimum formalities for getting bank loans by powerloom weavers. The Powerloom sector deserves to be assigned a high priority in the lending sector.

vi) To suggest measures and strategy to ensure market access to powerloom products in the processing, garment and export sectors.

vii) To suggest design & development strategies for the sector by creating computer aided design centres, through diversification and networking with institutes of national repute.

viii) To strategise Marketing linkages by product development, diversification & design development.

ix) To review and recommend the measure for the development of the training infrastructure as per the requirement of powerloom sector.

x) To recommend the measure to be taken for skill development of the powerloom sector/weavers.

xi) To formulate a mechanism to achieve the objectives of the National Textile Policy with regard to cluster development and testing facilities.

xii) To suggest the welfare schemes, in addition to existing schemes. These should include the security of equipments and looms affected during calamities. Insurance policies should address the issues relating to machinery and the health of the weavers and its families.

xiii) To examine the ways and means for development of powerloom sector in the North Eastern Region, working out means of interventions, both in terms of physical and financial, required and to identify channeling the assistance to State Government/weavers of the region.

xiv) Formulating new schemes for powerloom sector including special scheme for SC/ST keeping for utilization of plan funds earmarked for them.

xv) Suggesting constituting of an award like Sarvottam Sewa Puraskar for development/contribution to powerloom sector.

xvi) To make any other recommendation as may be appropriate.

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(vii) Composition and Terms of Reference of Sub – Group on Technical Textiles

Composition

1.	Shri A.B.Joshi, Textile Commissioner	Chairman
2.	Shri Sujit Gulati, JS, Ministry of Textiles	Co- Chairman
3.	Smt. Shashi Singh, Joint Commissioner(E)	Member Secretary
4.	Shri Manish Gupta, Director (A&MMT), MOT	Member
5.	Smt Neelkamal Darbari, JS Mo Chemicals & Petrochemicals	Member
6.	Sh Binod Kispotta, Jute Commissioner	Member
7.	Shri Shishir Jaipuria, Chairman, Committee on Technical Textiles, FICCI	Member
8.	Ms. Sarita Nagpal, Deputy Director General,CII, Gurgaon Branch.	Member
9.	Shri A.N.Jariwala, Chairman, Indian Technical Textiles Association Industry (ITTA), Mumbai	Member
10.	Director, The Bombay Textile Research Association, Mumbai	Member
11.	Director, Synthetic & Art Silk Mills Research Association, Mumbai	Member
12.	Director,South India Textile Research Association, Coimbatore	Member
13.	Director, Northern India Textile Research Association, Ghaziabad	Member
14.	Prof. V.K.Kothari, IIT, New Delhi	Member
15.	Dr H.C. Goyal, Add DGHS, Ministry of Health & FW	Member
16.	Shri. C. Kandasamy, CE(Roads), Mo Surface Transport	Member
17.	Joint Secy (Police Modernisation), Mo Home Affairs	Member

18.	Joint Secretary (NHM), Mo Agriculture	Member
19.	Sh Gyanesh Kumar, JS(Coord), Mo Defense Production	Member
20.	Representative of DG, Bureau of Indian Standards	Member

Terms of Reference

(1) Review of Current Status of the Technical Textiles Sector:

(a) To examine the current status of the technical textiles industry in the global context;
(b) MoT, through ICRA had produced a report "Baseline Survey on Technical Textiles". The report provides status of TT sector based on data of 2007-08. Sub-group may examine the said report, review the likely levels of market size and domestic consumption etc for the year 2011-12 taking into account the progress made thereafter, and likely achievements of various initiatives taken upto 31.3.1012 and project the updated status.
(c) To review the likely achievements of the TT sector with reference to the targets fixed for the Eleventh five Year Plan to analyse the deviations, if any;
(d) To identify the domestic and global challenges, threats and constraints being faced by the technical textile sector, including WTO issues, if any.
(e) Review the present Duty/ Tax structure on the TT sector and identify policy irritants, if any.
(f) To review the role played by various stakeholders, such as COEs, TRAs, consultants, Engineering colleges etc. in the development/ growth of TT sector.
(g) To benchmark the domestic TT industry against the global industry in terms of technology, productivity, quality, labour standards etc.
(h) To examine the current status of educational Institutes imparting education on technical textiles at Vocational, Polytechnic and Higher Education level.
(i) To examine the courses offered in International universities on technical textiles and benchmarking with them.
(j) To review the current status and processes in respect of standardisation of Technical Textiles products, to identify bottlenecks, if any.
(k) To identify the problems and issues faced by Institutional buyers while purchasing from domestic industry

(2) Effect of Eleventh Plan initiatives:

(a) To evaluate the Scheme for Growth in Technical Textiles and review the output/ Outcome of the scheme.
(b) To analyse the performance of the ongoing Scheme i.e.Technology Mission on Technical Textiles (TMTT) through Mini Mission-I and Mini Mission-II (to the extent possible, as the scheme has recently been initiated);
(c) To analyse/ evaluate the role played by and examine performance of other schemes of MoT such as TUFS, SITP, ISDS etc. in the growth & development of Technical Textiles sector.
(d) To analyse & evaluate the performance of TRAs & other institutions in R&D projects on TT.

(3) Projections for 12th Plan:

(a) The projections for the XII Plan in the TT sector are available in the Base-line survey report. Sub-group may further fine-tune the projections on the basis of current data available.
(b) To assess the requirements (demand) of various technical textiles products for domestic consumption in 2012-17; and to project the level of exports of technical textiles products during 12th Plan.
(c) To arrive at realistic estimates of production in the organized sector and the decentralized sectors, sector-wise, for various TT in the year 2012-2017.
(d) To examine the requirements and availability of raw materials for TT during 2012-2017.
(e) To identify the manpower and skill/technical requirements of the workers of the technical textiles sector for 2012-17;
(f) To make an assessment for the investment and infrastructure (and other inputs) requirement for meeting the XII Plan projections.

(4) Strategy for the 12th Plan:

(a) To identify the major targets, objectives and specific thrust areas for the XII Plan.
(b) To conduct a gap analysis of the long term goals of the different segments vis-a-vis present position in each segment and to explore various strategies to bridge the gaps, such as in Raw material, Manpower, Investment, Technologies, Marketing, Infrastructure, R&D etc.
(c) To Identify areas for Government Policy Interventions in terms of Regulations promoting better lifestyle (through use of TT products); and suggest strategy for enactment of such regulations.
(d) To suggest strategy/policy for streamlining the processes for formulation and notification of standards of TT products.
(e) Explore & identify areas having potential for import substitution, and suggest policy measures to exploit the same. Identify policy measures for promoting/ facilitating technological tie-ups.
(f) To recommend a Fiscal Roadmap for growth & development of Technical Textiles Sector.
(g) To recommend appropriate methods for promotion of exports of technical textiles products for increasing our country's share in global trade in the field of technical textiles sector;
(h) To chalk out a comprehensive strategy for developing human resources in all segments of technical textile sector. Viz.-
    a. To suggest ways and means to Government to increase the number of institutes on technical textiles in the Country in accordance with the requirements of the Industry
    b. To facilitate MoUs and tie-ups with foreign Universities
    c. To identify the training requirements of the trainers and suggest measures for the same.
(i) To suggest methods for encouraging research and development activities in the field of technical textiles and to provide financial support for it.
(j) Suggest strategy for mitigating environmental concerns raised over use of TT products as well as address issued faced by institutional buyers in sourcing TT products domestically.

(k) To suggest strategy for creating awareness on technical textiles both domestically and internationally.

5. Existing Scheme & its Implementation Mechanism

(a) To examine the need for continuation/modification of the existing scheme.
(b) To suggest suitable changes in the implementation of the scheme, if required;
(c) To suggest appropriate mechanism for compilation of data and information for monitoring the scheme and to also suggest methods for generation, maintenance, integration and strengthening of data-base with the help of information technology;

6. Resource Assessments

(a) To explore the specific areas from where financial resources could be generated from alternate sources and the areas from where private sector resources can be tapped;
(b) To estimate the financial requirements for the implementation of the proposed strategies and to encourage the existing four Centres of Excellence (COEs) and four new COEs being established in the various segments of technical textiles to become self-reliant and self-sustaining during the 12th Five Year Plan.

7. To make such other recommendations as may be appropriate.

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(vii) Composition and Terms of Reference of Sub – Group on Fashion & Textiles Education

Composition

1.	Mrs. Monika S. Garg, Joint Secretary, Ministry of Textiles, New Delhi	Chairperson
2.	Ms. Renu S. Parmar, Advisor (I&VSE), Planning Commission, New Delhi.	Member
3.	Director General, NIFT, New Delhi	Member
4.	Dr. S.R. Pujar, Director, SVPISTM, Coimbatore	Member
5.	Shri V.K. Kothari, HOD, Deptt. of Textile Technology, IIT, Delhi	Member
6.	Shri Amit Sinha, Coordinator/HOD, Apparel Design, National Institute of Design, Ahmedabad	Member
7.	Shri Rajesh Pratap Singh, Member - AAC, NIFT, Delhi	Member
8.	Shri Sunil Sethi, President, FDCI, Gurgaon	Member
9.	Shri Sudhir Dhingra, Orient Craft Ltd., New Delhi	Member
10.	Dr. K. S. Pratap Kumar, Director, NIFT, Hyderabad	Member
11.	Mrs. Archana S. Awasthi, Director, NIFT, Delhi	Member
12.	Dr. R. Alagirusamy, Professor, Deptt. of Textiles Technology, IIT, Delhi	Member
13.	Dr. Ashok N. Desai, Director, BITRA, Mumbai	Member
14.	Dr. K. Selvaraju, Secretary-General, SIMA, Coimbatore	Member
15.	Shri M. Senthilkumar, Chairman, Palladam High Tech Weaving Park, Palladam, Tamil Nadu	Member
16.	Prof. Rajkumar Ranganatham, Faculty Member, SVPISTM, Coimbatore	Member
17.	Prof. Banhi Jha, Dean (Academic), NIFT, New Delhi	Member
18.	Shri Sibichan K. Matthew, Chairperson, Deptt. of FMS, NIFT, Delhi	Member
19.	Secretary, Technical Education, Govt. of Madhya Pradesh, Bhopal	Member
20.	Secretary, Technical Education, Govt. of Meghalaya, Shillong	Member
21.	Mrs. Neelam S. Rao, Chief Vigilance Officer, NIFT, New Delhi	Member
22.	Dr. K. P. Singh, Joint Secretary, UGC, New Delhi	Member
23.	Dr. Vinod Shanbhag, Advisor (Academics), Pearl Academy of Fashion, New Delhi	Member
24.	Dr. J. Srinivasan, Professor & Head, Deptt. of Fashion and Technology , Kumaraguru College of Technology, Coimbatore	Member
25.	Shri M.A.Chandrasekara Raja, CEO, DJ Academy of Design, Coimbatore	Member
26.	Shri Somesh Singh, Joint Director, Institute of Apparel Management, Gurgaon	Member
27.	Ms. Nidhi Rawat, Deputy Registrar, Apparel Training & Design Centre, Gurgaon	Member
28.	Prof. M.S.Senam Raju, Professor of Commerce and Director (Academic), IGNOU, New Delhi	Member
29.	Shri S.P.Katnauria ,Deputy Secretary, Ministry of Textiles, New Delhi	Member Secretary

Terms of reference

1. To review the current status and future development perspective for the 12th Plan for education in fashion and textile design technology and Management.

2. To critically examine the issues of access, quality and relevance of current courses.

3. To assess the manpower requirements at different levels in the different segments of the textiles and fashion industry in India during 2012-17 (the period) on the basis of emerging trends and technological innovation.

4. To suggest measures for improvement in quality, revamping of courses.

5. To suggest measures for provision of adequately trained faculty.

6. To suggest measures for increased capacity expansion and modernization of current infrastructure including laboratories/ workshops/ libraries/computing facilities/information technology, in all government institutes.

7. To suggest measures for improving domestic and international linkages and providing exposure to the Students and Faculty.

8. To assess the progress and achievements of new institutes set up in the 11th Plan for imparting education in fashion technology.

9. To suggest measures to effectively introduce benchmarking and transparent accreditation of government, government aided and private institutes offering certificate, diploma and degree courses in various areas of fashion and textiles.

10. To suggest policy for promoting and regulating mechanism for private sector participation in education of fashion and textile technology.

11. To suggest measures for bringing equity in accessing education in the area of fashion and textiles.

12. To suggest ways & areas for delivery with Sevottam and transparency.

13. To work out the financial implications for measures recommended by the Sub Group and to suggest how the support may be provided by the Ministry of Textiles.

14. To review the efficacy of the ongoing schemes/programmes and suggest appropriate policy options for the Textiles Sector development in the North East Region.

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Appendix B-1

Schedule of Sub-Groups Meetings held

S. N.	Name of Sub Group	Meetings Held	
		No	Date
1	Textiles & Apparel	2	12 May & 17 June
2	Powerloom	2	12 May & 17 June
3	Wool & woolen Textiles	2	13 May & 13 June
4	Sericulture	2	16 May & 16 June
5	Jute	3	1st June, 16 June & 11 July
6	HRD & Skill Dev.	2	13 May, 27 June
7	Fashion & Textiles edu	2	18 May, 7 June & 5th Aug.
8	Technical Textiles	2	18 May & 24 June

Appendix - 1

Eleventh plan targets and achievements

(Cotton / man-made fibre / yarn & cloth)

Sr. No.	Items	Units	2007-08		2008-09		2009-10		2010-11	
			Target	Achieve-ment	Target	Achieve-ment	Target	Achieve-ment	Target	Achieve-ment
1	**Consumption of fibres**									
(i)	**Cotton**	Mn. Kg	4012	3707	4505	3581	5066	3782	5678	4310
		Lakh Bales (170 kg each)	236	218	265	211	298	222	334	254
(ii)	**Man Made Fibres**									
(a)	Viscose staple fibre	Mn. Kg.	243	250	255	221	267	268	281	256
(b)	Polyester staple fibre	Mn. Kg.	820	739	902	653	994	726	1091	742
(c)	Acrylic staple fibre	Mn. Kg.	156	95	172	89	189	96	208	83
(d)	Polypropylene fibre	Mn. Kg.	2	3	2	3	2	3	3	3
	Sub Total	**Mn. Kg.**	**1221**	**1087**	**1331**	**966**	**1452**	**1093**	**1583**	**1084**
2	**Production of Spun Yarn**									
(i)	Cotton	Mn. Kg.	3187	2948	3633	2896	4138	3079	4712	3443
(ii)	Blended	Mn. Kg.	621	677	654	655	686	707	719	784
(ii)	100% non-cotton.	Mn. Kg	372	378	393	361	416	407	439	420
	Total	**Mn. Kg**	**4180**	**4003**	**4680**	**3912**	**5240**	**4193**	**5870**	**4647**
3	**Production of Filament Yarn**									
(i)	Viscose filament yarn.	Mn. Kg	54	51	55	42	56	43	57	41
(ii)	Nylon filament yarn	Mn. Kg	40	28	42	28	44	30	46	34
(iii)	Polyester filament yarn	Mn. Kg	1347	1420	1482	1332	1631	1435	1794	1461
(iv)	Polypropylene yarn	Mn.Kg	16	11	17	15	17	15	18	13
	Total	**Mn. Kg**	**1457**	**1510**	**1596**	**1417**	**1748**	**1523**	**1915**	**1549**
4	**Production of cloth**									

(i)	Cotton	Mn.Sq Mtr	28810	27196	33026	26898	37869	28914	433 12	31201
(ii)	Blended	MnSq. Mtr	7347	6888	7861	6766	8411	7767	900 0	8135
(iii)	100% non-cotton	Mn.Sq. Mtr	23636	21173	25999	20534	28599	22840	314 59	21663
(iv)	Khadi, wool & silk	Mn.Sq. Mtr	707	768	714	768	721	812	728	812
	Total	**Mn.Sq. Mtr**	**60500**	**56025**	**67600**	**54966**	**75600**	**60333**	**845 00**	**61811**
5	**Per capita availability of cloth**	**Sq.Mtr**	42.84	41.85	46.99	39.01	51.6	43.12	56.6 2	43.25

Appendix 2

Demand for fabric during the Twelfth Five Year Plan

(All figures of GDP, PFCE at 2004-2005 price)

	2010-11	2011-12	CAGR, EST	2012-13	2013-14	2014-15	2015-16	2016-17
(A) Household Demand								
GDP Act/Est. ('000 crore)	5343	5824	9.00	6348	6919	7542	8221	8961
PFCE as a % of GDP	57.6	57.6	0.00	57.6	57.6	57.6	57.6	57.6
PFCE Act/Est. ('000 crore)	3078	3355	9.00	3656	3986	4344	4735	5161
Clothing expenditure as percent of PFCE	6.6	6.7	1.45	6.8	6.9	7.0	7.1	7.2
Clothing expenditure ('000 crore)	203.12	224.75	10.58	248.64	275.00	304.10	336.20	371.62
Derived Demand for fabric from PFCE spent - 12th Estimate								
PFCE spent on clothing (Rs. '000 crore)	203.12	224.75	10.58	248.64	275.00	304.10	336.20	371.62
Approx. Fabric consumption in Household (million square meters)	40,624	44,951	10.58	49,728	55,000	60,819	67,240	74,324
(B) Domestic - Non household Consumption - as Fabrics & Garments/Clothing								
Fabric Demand	10156	10664	5	11197	11757	12345	12962	13610
(C) For Exports - as Fabrics & Garments/Clothing								
Total Demand	12425	13667	10	15034	16537	18191	20010	22011
(D) Total Demand - as Fabrics & Garments/Clothing incl. Household, Non-household & for exports								
Total Demand	63,204	69,282	9.68	75,958	83,294	91,355	1,00,212	1,09,945

PFCE- Private Final Consumption Expenditure

Note :
1. GDP growth estimated for 2011-12 at 9%

2. Average price of fabric considered as Rs. 50 per sq mtr.
3. Non house hold consumption is estimated at 25% of household demand

Appendix- 3

Past trend of production

Sr. No.	Textile items	CAGR (2006-07 to 2010-11)	Year on Year Growth					Assumed growth rate during XI plan
			2006-07	2007-08	2008-09	2009-10	2010-11	
A	*Production of cloth*							
1	Cotton	4.4	9.9	3.7	-1.1	7.5	7.9	12
2	Blended	4.3	9.3	0.1	-1.8	14.8	4.7	11.5
3	100% non-cotton	2.6	4.9	8.3	-3.0	11.2	-5.2	11
4	Khadi, Wool & Silk	2.9	-5.9	6.1	0.0	5.7	0.0	4.5
	Total cloth	**3.7**	**7.7**	**4.9**	**-1.9**	**9.8**	**2.4**	**11.50**
B	***Production of spun yarn***							
1	Cotton	5.1	12.0	4.4	-1.8	6.3	11.8	8
2	Blended	5.4	8.0	6.6	-3.2	7.9	10.9	8
3	100% non-cotton	4.4	1.4	6.8	-4.5	12.7	3.2	8
	Total Spun yarn	**5.1**	**10.3**	**5.0**	**-2.3**	**7.2**	**10.8**	**8**
C	***Production of filament yarn***							
1	Viscose	-6.7	1.7	-5.4	-16.9	0.7	-4.2	9.24
2	Nylon	1.0	-12.5	-14.4	1.6	8.1	10.4	9.6
3	Polyester	3.6	18.1	11.7	-6.2	7.7	1.8	10.76
4	Polypropylene	-0.4	-1.5	-21.4	43.4	-1.9	-11.2	5.64
	Total Filament	**3.1**	**16.2**	**10.1**	**-6.1**	**7.4**	**1.7**	**10.67**
D	***Production of fibres***							
1	Raw Cotton (Cotton year)	2.7	16.2	9.6	-5.5	1.7	5.8	6
2	Man Made Fibre							
a	V.S.F.	5.1	7.8	13.4	-16.8	29.8	-0.1	6.87
b	P.S.F.	3.1	26.1	11.1	-14.7	16.3	2.8	7.78
c	A.S.F.	-4.9	-9.9	-16.4	-2.1	13.8	-12.1	7.65
d	P.P.S.F.	1.6	14.3	-2.6	0.00	-1.7	11.3	5.92
	Total man made fibre	**3.0**	**17.7**	**9.2**	**-14.3**	**19.0**	**1.0**	**7.58**

Appendix 3-A: 11th Plan Outlay and Expenditure - Scheme-wise & Year-wise

Name of Sector/Scheme		11plan outlay	Cumulative Exp from 2007-08 to 2010-11 (upto 31.03.11)	Total BE (2007-08 to 2010-11)	(% over BE)	Total RE (2007-08 to 2010-11)	(% over RE)	Total BE (2007-08 to 2011-12)	Total Exp (2007-08 to 2011-12) (up to 01.08.11)	(% over BE)
Sl No	1	2	15	19	20	21	22	23	24	25
A	**Village & Small Industry**									
1	Handloom	1370.45	1365.48 (96.09)	1421.00	96.09	1455.90	93.79	1881.00	1464.42	77.85
2	Sericulture	472.54	746.40 (113.09)	660.00	113.09	746.40	100.00	973.00	807.80	83.02
3	Handicrafts	975.07	735.78 (77.78)	946.00	77.78	859.38	85.62	1191.00	752.43	63.18
4	Powerlooms	114.78	45.97 (95.77)	48.00	95.77	53.94	85.22	66.00	46.43	70.35
5	Wool & Woolens	67.16	53.59 (89.32)	60.00	89.32	60.00	89.32	73.50	56.22	76.49
6	Development of Mega Cluster		87.71 (43.86)	200.00	43.86	127.62	68.73	315.50	87.71	27.80
	Sub Total(A)	***3000.00***	***3034.93 (91.00)***	***3335.00***	***91.00***	***3503.24***	***91.88***	***4500.00***	***3215.01***	***71.44***
'B	**Industry & Mineral**									
1	*NIFT*	*50.00*	321.89 (97.69)	329.50	97.69	356.89	90.19	457.50	321.89	70.36
2	*R & D including TRAs*	*10.00*	22.90 (95.42)	24.00	95.42	24.00	95.42	33.00	24.40	73.94
3	*TUFS*	*8000.00*	9443.25 (123.85)	7625.00	123.83	10010.17	94.33	10725.00	10788.94	100.60
4	*Scheme for Integrated Textile Park*	*2000.00*	1070.33 (63.07)	1697.00	63.07	1222.00	87.59	2044.00	1093.98	53.52
5	*Jute Technology Mission*	*356.00*	214.29 (69.13)	310.00	69.13	220.50	97.18	364.00	214.29	58.87
6	*Export Promotion Studies*	*5.00*	1.89 (47.25)	4.00	47.25	3.00	63.00	5.00	1.89	37.80
7	*Sardar Vallabhbhai Patel Institute of Textile Management Coimbatore*	*13.00*	36.47 (110.52)	33.00	110.52	37.18	98.09	39.00	36.47	93.51
8	*Market Development Scheme \$*	22.96	5.00 (21.78)	22.96	21.78	7.29	68.59	32.96	5.00	15.17
9	*Foreign Investment Promotion Scheme (FDI) \$*	*5.52*	4.01 (72.64)	5.52	72.64	11.25	35.64	15.52	4.01	25.84
10	*Textipolis \$*	*2.50*	0.00	2.50	0.00	0.02	0.00	2.50	0.00	0.00
11	*Setting up of Fasion Hub \$*	*4.00*	0.00	4.00	0.00	1.00	0.00	4.00	0.00	0.00
12	*Common Compliance Code\$*	*1.03*	0.00	1.03	0.00	0.03	0.00	11.03	3.50	31.73
13	*Human Resources Development \$*	*147.99*	41.72 (28.19)	147.99	28.19	92.82	44.95	257.99	46.58	18.05
14	*Textile Engineering including Jute \$*	*0.50*	0.00	0.50	0.00	0.00	#DIV/0!	0.50	0.00	0.00
15	*Technical Textiles including Jute*	*96.00*	89.98 (85.70)	105.00	85.70	90.00	99.98	155.00	89.98	58.05
16	*Cotton Technology Mission (CSS)*	*241.00*	213.85 (66.62)	321.00	66.62	260.93	81.96	321.00	213.85	66.62
	Sub Total(B)	***11000.00***	***11465.58 (107.831)***	***10633.00***	***107.82***	***12337.08***	***92.93***	***14468.00***	***12844.78***	***88.78***
	Grand Total	***14000.00****	***14500.51 (103.81)***	***13968.00***	***103.80***	***15640.32***	***92.71***	***18968.00***	***16059.79***	***84.67***

(Values in parentheses are % over BE))

$ New Schemes from 2007-08

Based on releases from PAO

** Based on Eleventh Plan Document from Planning Commission

Appendix-4

Employment in Textile and Allied sectors as per Report of Working Group on Textile and Jute Industry for Twelth Five Year Plan.

Sr. No.	Sector / Industry	Employment (In Mn. Nos.)		
		As on March 2011 (Prov)	Projected for the terminal year of the Twelth Plan	Increase
I.	***Textile sector***			
1	Cotton/Man-made Fibre/Yarn Textile/Mill Sector (including SSI spinning & exclusive weaving units)	1.40	1.61	0.21
2	Man-made Fibre/Filament Yarn Industry (including texturising industry)	0.24	0.28	0.04
3	Decentralised Powerlooms Sector	5.08	5.84	0.76
4	Handloom Sector	7.00	8.05	1.05
5	Knitting Sector	0.45	0.52	0.07
6	Processing Sector	0.44	0.51	0.07
7	Woollen Sector	3.20	3.68	0.48
8	Ready Made Garment Sector (including Knitwear Sector)	11.22	12.90	1.68
9	Sericulture	7.70	8.86	1.16
10	Handicraft Sector	8.00	9.20	1.20
11	Jute Industry			
	i) Organised Jute Industry	0.26	0.30	0.04
	ii) Decentralised Jute Industry	0.20	0.23	0.03
	Total (I)	**45.19**	**51.97**	**6.78**
II.	**Allied Sector**			
1	**Cotton**			
	i) Cotton Agriculture	20.0	23.00	3.00
	ii) Cotton Ginning/Pressing	1.30	1.50	0.20
	iii) Cotton Trade	19.0	21.85	2.85
	Sub - Total	**40.30**	**46.35**	6.05
2	Sheep rearing	2.80	3.22	0.42
3	Jute Agriculture	17.0	19.55	2.55
4	Textile machinery industry & accessories	0.10	0.12	0.02
	Total (II)	**60.2**	**69.23**	9.03
	Grand Total (I + II)	**105.40**	**121.20**	15.81

Appendix-5

Year-wise progress of TUFS
(01.04.1999 to 28.06.2010)

(Rs. crore)

Period	Applications received		Applications sanctioned			Applications disbursed	
	No.	Total cost of project	No.	Project Cost	Amount	No.	Amount
1999-2000	407	5771	309	5074	2421	179	746
2000-2001	719	6296	616	4380	2090	494	1863
2001-2002	472	1900	444	1320	630	401	804
2002-2003	494	1835	456	1438	839	411	931
2003-2004	867	3356	884	3289	1341	814	856
2004-2005	986	7941	986	7349	2990	801	1757
2005-2006	1086	16194	1078	15032	6776	993	3962
2006-2007	12336	61063	12589	66233	29073	13168	26605
2007-2008	2408	21254	2260	19917	8058	2207	6854
2008-2009	6113	56542	6072	55707	24007	6111	21826
2009-2010	2384	28005	2352	27611	6612	2361	8140
2010-11 (Upto June, 2010)	256	397	256	397	254	240	282
As on 28.06.2010	**28528**	**210554**	**28302**	**207747**	**85091**	**28180**	**74627**

Appendix – 6

State-wise progress of TUFS
(01.04.1999 to 28.06.2010)

(Rs. crore)

Sr. No.	State / UT	Applications Sanctioned			Applications Disbursed	
		No.	Project Cost	Amount	No.	Amount
1	Maharashtra	2070	51160.87	18974.96	2059	16770.72
2	Tamil Nadu	6089	39240.94	22666.22	6083	20448.68
3	Punjab	2934	34790.78	15507.65	2926	11321.01
4	Rajasthan	1109	27240.24	5808.75	1109	5306.48
5	Gujarat	13155	19294.96	8314.40	13152	6902.46
6	Andhra Pradesh	459	9378.60	2862.76	459	4122.03
7	Karnataka	530	5046.27	2042.77	508	1800.15
8	Uttar Pradesh	195	4502.33	1331.30	192	1231.46
9	Delhi (UT)	497	4401.34	1859.20	497	1761.15
10	Haryana	662	2774.49	1566.86	610	1398.26
11	Madhya Pradesh	96	2505.38	1069.14	96	973.77
12	West Bengal	223	2126.90	679.50	208	522.78
13	Kerala	89	1618.89	561.20	87	477.31
14	Himachal Pradesh	41	853.18	392.75	41	379.17
15	Jammu and Kashmir	30	721.29	543.41	30	418.93
16	Chandigarh (UT)	30	711.26	204.51	30	201.26
17	Dadra and Nagar Haveli (UT)	61	574.26	476.45	61	394.73
18	Daman and Diu (UT)	18	435.09	75.17	18	69.03
19	Uttarakhand	6	269.99	86.26	6	75.20
20	Jharkhand	3	48.50	29.80	3	18.00
21	Pondicherry (UT)	3	45.64	33.70	3	30.33
22	Orissa	2	5.84	4.09	2	3.67
Total		**28302**	**207747.05**	**85090.85**	**28180**	**74626.57**

Appendix – 7

Segment-wise progress of TUFS
(01.04.1999 to 28.06.2010)

(Rs. crore)

Sr. No.	Segment	Applications Sanctioned			Applications Disbursed	
		No.	Project Cost	Amount	No.	Amount
1	Spinning	3320	67821.88	28359.75	3309	25518.62
2	Composite Upgradation	905	36554.42	16317.91	900	14196.36
3	Cotton ginning & pressing	874	27275.52	9387.84	868	8026.77
4	Processing	2236	21907.43	8177.37	2222	6839.08
5	Weaving	3959	16786.13	6773.22	3944	5696.64
6	Garment manufacturing	1982	10045.39	4205.20	1950	3754.55
7	Fabric embroidery	9211	9677.47	3328.82	9184	3019.54
8	Synthetic filament yarn texturising, crimping & twisting	2071	4954.31	2401.29	2068	2049.42
9	Knitting	2003	4348.09	1934.94	1997	1807.08
10	Technical Textiles	250	2526.02	1114.94	250	1043.21
11	Manufacturing Viscose filament yarn	136	2083.63	1069.76	135	938.34
12	Made-up manufacturing	758	1528.85	856.14	757	697.01
13	Jute Industry	56	542.20	405.84	56	395.48
14	Non-Wovens	193	479.11	252.62	193	244.22
15	Silk, reeling & twisting	123	479.05	193.25	122	138.91
16	Independent weaving preparatory	133	391.22	117.10	133	68.67
17	CPP on stand alone basis	31	271.44	144.60	31	143.83
18	Wool scouring and combing	61	74.89	50.27	61	48.84
Total		**28302**	**207747.05**	**85090.85**	**28180**	**74626.57**

Appendix – 8(a)

Year-wise estimated project cost sanctioned, amount sanctioned and amount disbursed under TUFS during Twelfth Five Year Plan

(Rs. Crore)

Year	Project cost sanctioned	Amount sanctioned	Amount disbursed
5% Interest Reimbursement			
2012-13	10544	4323	2594
2013-14	21204	8693	5216
2014-15	26513	10870	6522
2015-16	26513	10870	6522
2016-17	21122	8660	5196
Total	**105895**	**43417**	**26050**
4% Interest Reimbursement			
2012-13	3705	1519	911
2013-14	7450	3054	1833
2014-15	9315	3819	2292
2015-16	9315	3819	2292
2016-17	7421	3043	1826
Total	**37207**	**15255**	**9153**
15% / 20% MMS			
2012-13	200	82	49
2013-14	250	103	62
2014-15	300	123	74
2015-16	300	123	74
2016-17	350	144	86
Total	**1400**	**574**	**344**
25% capital subsidy			
2012-13	10	4	2
2013-14	15	6	4
2014-15	20	8	5
2015-16	20	8	5
2016-17	25	10	6
Total	**90**	**37**	**22**
Total			
2012-13	14460	5929	3557
2013-14	28918	11856	7114
2014-15	36148	14821	8892
2015-16	36148	14821	8892
2016-17	28918	11856	7114
Total	**144592**	**59283**	**35570**

Appendix – 8(b)

Summary of projected subsidy requirement during Twelfth Five Year Plan

(Rs. Crore)

Year	IR*			10% capital subsidy				15% / 20% MMS+	25% capital subsidy	Total
	4%	5%	Total	Processing	Garmenting	Weaving	Technical Textiles			
2012-13	36	130	166	161	30	12	13	16	3	400
2013-14	110	391	501	322	60	24	25	20	4	956
2014-15	197	700	897	403	75	30	31	24	5	1464
2015-16	272	968	1240	403	75	30	31	24	5	1807
2016-17	312	1109	1421	322	60	24	25	28	6	1886
Total	**927**	**3298**	**4225**	**1610**	**300**	**120**	**125**	**110**	**23**	**6513**

Assumptions:

(i) Out of total investment eligible for 5% IR, 26% is for spinning sector for which 4% IR is eligible.

(ii) The eligible investment for 10% capital subsidy for processing sector is Rs.16100 crore (25% of total investment in processing of Rs.64400 crore)

(iii) The eligible investment for 10% capital subsidy for garmenting sector is Rs.3000 crore (25% of total investment in garmenting of Rs.12000 crore)

(iv) The eligible investment for 10% capital subsidy for Weaving sector is Rs.1197 crore (5% of total investment in weaving of Rs.23939 crore)

(v) The eligible investment for 10% capital subsidy for technical textiles is Rs. 1250 crore (25% of total investment in technical textiles of Rs.5000 crore)

(vi) It is assumed that the eligible investment under 15% / 20% MMS will be Rs.630 crore (45% of total investment Rs.1400 crore)

(vii) It is assumed that the eligible investment under 25% capital subsidy for silk and handloom sector will be Rs.90 crore

*

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Appendix – 8(c)

Working sheet giving 5% interest reimbursement calculation for term loan disbursed for sectors eligible for 5% IR (all sectors excluding stand alone spinning and eligible investment in 15% / 20% MMS /25% capital subsidy for silk and handloom sectors

(Rs. Crore)

Year/Quarter		Loan Amount	Amount Repaid	Principal O/s.	Interest reimbursement	
					@ 5% p.a.	Total
I	1	2594	0.00	2594.00	32.43	
	2		0.00	2594.00	32.43	
	3		0.00	2594.00	32.43	
	4		0.00	2594.00	32.43	129.70
II	5	5216	0.00	7810.00	97.63	
	6		0.00	7810.00	97.63	
	7		0.00	7810.00	97.63	
	8		0.00	7810.00	97.63	390.50
III	9	6522	129.70	14202.30	177.53	
	10		129.70	14072.60	175.91	
	11		129.70	13942.90	174.29	
	12		129.70	13813.20	172.67	700.39
IV	13	6522	390.50	19944.70	249.31	
	14		390.50	19554.20	244.43	
	15		390.50	19163.70	239.55	
	16		390.50	18773.20	234.67	967.95
V	17	5196	716.60	23252.60	290.66	
	18		716.60	22536.00	281.70	
	19		716.60	21819.40	272.74	
	20		716.60	21102.80	263.79	1108.89
VI	21		1042.70	20060.10	250.75	
	22		1042.70	19017.40	237.72	
	23		1042.70	17974.70	224.68	
	24		1042.70	16932.00	211.65	924.80
VII	25		1302.50	15629.50	195.37	
	26		1302.50	14327.00	179.09	
	27		1302.50	13024.50	162.81	
	28		1302.50	11722.00	146.53	683.79
VIII	29		1172.80	10549.20	131.87	
	30		1172.80	9376.40	117.21	
	31		1172.80	8203.60	102.55	
	32		1172.80	7030.80	87.89	439.50
IX	33		912.00	6118.80	76.49	
	34		912.00	5206.80	65.09	
	35		912.00	4294.80	53.69	
	36		912.00	3382.80	42.29	237.54
X	37		585.90	2796.90	34.96	
	38		585.90	2211.00	27.64	
	39		585.90	1625.10	20.31	
	40		585.90	1039.20	12.99	95.90
XI	41		259.80	779.40	9.74	
	42		259.80	519.60	6.50	
	43		259.80	259.80	3.25	
	44		259.80	0.00	0.00	19.49
		Total	**26050**			**5698.44**

Appendix –8(d)

Working sheet giving 4% interest reimbursement calculation for term loan disbursed for stand alone spinning sector

(Rs. Crore)

Year/Quarter		Loan Amount	Amount Repaid	Principal O/s.	Interest reimbursement	
					@ 4% p.a.	Total
I	1	911	0.00	911.00	9.11	
	2		0.00	911.00	9.11	
	3		0.00	911.00	9.11	
	4		0.00	911.00	9.11	36.44
II	5	1833	0.00	2744.00	27.44	
	6		0.00	2744.00	27.44	
	7		0.00	2744.00	27.44	
	8		0.00	2744.00	27.44	109.76
III	9	2292	45.55	4990.45	49.90	
	10		45.55	4944.90	49.45	
	11		45.55	4899.35	48.99	
	12		45.55	4853.80	48.54	196.89
IV	13	2292	137.20	7008.60	70.09	
	14		137.20	6871.40	68.71	
	15		137.20	6734.20	67.34	
	16		137.20	6597.00	65.97	272.11
V	17	1826	251.80	8171.20	81.71	
	18		251.80	7919.40	79.19	
	19		251.80	7667.60	76.68	
	20		251.80	7415.80	74.16	311.74
VI	21		366.40	7049.40	70.49	
	22		366.40	6683.00	66.83	
	23		366.40	6316.60	63.17	
	24		366.40	5950.20	59.50	259.99
VII	25		457.70	5492.50	54.93	
	26		457.70	5034.80	50.35	
	27		457.70	4577.10	45.77	
	28		457.70	4119.40	41.19	192.24
VIII	29		412.15	3707.25	37.07	
	30		412.15	3295.10	32.95	
	31		412.15	2882.95	28.83	
	32		412.15	2470.80	24.71	123.56
IX	33		320.50	2150.30	21.50	
	34		320.50	1829.80	18.30	
	35		320.50	1509.30	15.09	
	36		320.50	1188.80	11.89	66.78
X	37		205.90	982.90	9.83	
	38		205.90	777.00	7.77	
	39		205.90	571.10	5.71	
	40		205.90	365.20	3.65	26.96
XI	41		91.30	273.90	2.74	
	42		91.30	182.60	1.83	
	43		91.30	91.30	0.91	
	44		91.30	0.00	0.00	5.48
		Total	**9154**			**1601.95**

Appendix- 9

Progress of the Integrated Skill Development Scheme (ISDS)

(Rs. lakh)

Sl. No.	Organisation	Approved Project Cost	Approved Grant	Grant Disbursed
A	**Sanctioned during 2010-11**			
1	Apparel Design and Training Centre (ATDC)	17814.00	12569.00	5304.00
2	Ahmedabad Textile Industry Research Association (ATIRA)	6081.00	4489.00	2223.00
3	Bombay Textile Research Association (BTRA)	998.00	748.00	569.50
4	Northern India Textile Research Association (NITRA)	2487.00	1257.00	1257.00
5	The South India Textile Research Association (SITRA)	1000.00	740.00	387.00
6	Textile Committee	442.00	330.00	330.00
	Sub Total (A)	**28822.00**	**20133.00**	**10070.50**
B	**Sanctioned during 2011-12 (Till June 2011)**			
1	Indian Institute of Carpet Technology (IICT), Bhadohi	240	175.2	63.54
2	Institute of Jute Technology (JTI)	2587	1929	687.00
3	Indian Jute Industries' Research Association (IJIRA)	285	197.5	70.00
4	Moradabad Handicraft Service Centre (MHSC)	207	161.5	73.10
5	Central Silk Board (CSB)	1043	796	141.00
6	Synthetic and Art Silk Mills' Research Association (SASMIRA)	1390	1042	602.00
7	Man-Made Textiles Research Association (MANTRA)	368.08	209.38	209.38
	Sub Total (B)	**6120.08**	**4510.58**	**1846.02**
	Total Sanctioned (A+B)	**34942.08**	**24643.58**	**11916.52**
C	**Under Consideration**			
1	Indian Institute of Carpet Technology (IICT), Srinagar			
2	Office of Textile Commissioner			
3	National Centre for Design & Product Development (NCDPD)			
4	Office of Development Commissioner for Handlooms (DC Handlooms)			
5	Export Promotion Council for Handicrafts (EPCH)			

Appendix -10

Abstract of fund requirement for Sericulture and Silk Industry for XII Plan

(Rs in crore)

#	Particulars	Amount	Details at
A (Scheme 1 to 4)	**Central Sector Schemes (CS)**		
Scheme - 1	Research & Development, Training, Transfer of Technology, & I.T. Initiatives	291.03	**Anne. – 3.1(a)**
Scheme - 2	Seed Organizations	188.35	
Scheme - 3	Human and Institutional Development (HID)	99.33	
Scheme - 4	Quality Certification Systems & Brand Promotion	72.57	
	Central Sector - Total	**651.28**	
B (Scheme - 5)	**Centrally Sponsored Scheme (CSS) - CDP**		
Component - 1	Mulberry Silk Sector a) Mulberry Seed b) Mulberry Cocoon **Mulberry - Total**	 35.30 998.68 **1033.98**	**Anne. – 3.1(b)**
Component - 2	Vanya Silk Sector a) Vanya Seed b) Vanya Cocoon c) Vanya Marketing **Vanya - Total**	 228.97 477.35 6.90 **713.22**	
Component - 3	Post Cocoon Sector	**227.24**	
Component - 4	Support Services Insurance (crop & health), publicity, surveys and studies, PD3, cluster development, subsidy to women, SC&ST, Distress Relief Measures (DRM), capacity building (training programmes), and developing CBOs	**288.64**	
	CSS - Total	**2263.07**	
Total CS& CSS		**2914.35**	
C (Scheme - 6)	Export Promotion, Brand Promotion and Technology Upgradation	100.00	
	GRAND TOTAL FOR SILK SECTOR	**3014.35**	

Appendix 10(a)

Component wise details of Central Sector Schemes proposed for XII Plan

#	Scheme & Components	Amount (Rs Cr)
Scheme-I	**RESEARCH & DEVELOPMENT, TRAINING, TRANSFER OF TECHNOLOGY, & I.T. INITIATIVES**	
A	Ongoing activities	170.00
B	Special initiatives	
1	Establishment and strengthening of Regional Silk Technology Research Stations (expenses other than infrastructure facilities) (a) Existing RSTRS at Guwahati – Rs.0.25 crore (b) New RSTRS at Varanasi – Rs. 0.50 cr.	0.75
2	Establishment of Regional Eri Research Station at Shadnagar. (expenses other than infrastructure facilities)	0.50
3	Establishment of Soil Science & Agro Chemistry facility	2.00
4	Disease forecasting & Forewarning	1.50
5	Remote Sensing & GIS in Sericulture Development	2.00
6	Training Initiatives	2.00
7	Transfer of Technology (ToT)	10.00
8	IT Initiatives	3.00
9	Enhancing scientific knowledge through training, conferences, workshops in overseas countries	5.00
10	Strengthening of Infrastructure and Equipment for Regional Tasar Research Stations (Oak Tasar):	1.00
11	Fostering scientific collaborations with other institutions in India and abroad	10.00
12	Strengthening of silkworm seed research facilities (expenses other than infrastructure facilities)	1.50
13	Support to farmers during pre-authorization trials.	1.00
14	Establishment of P4 Seed Production Stations for Non-Mulberry Silkworms (expenses other than infrastructure facilities)	2.00
15	R&D infrastructure fund (for creation of new units, renovation of existing units, creating new labs, etc.)	60.00
16	Manpower strengthening	18.78
	SCHEME TOTAL	**291.03**
Scheme - II	**SEED ORGANIZATIONS**	
Component - I	**Mulberry Seed - National Silkworm Seed Organization**	
A	Ongoing activities of NSSO	50.00
B	Special initiatives	
1	Up-gradation of infrastructure facilities in NSSO units.	10.56

#	**Scheme & Components**	**Amount**
2	Support to Mulberry silkworm seed crop rearers (Adopted Seed Rearers) for quality silkworm seed cocoon generation	12.75
3	Establishment of isolated testing facility at Central Seed Testing Laboratory and other Accredited Laboratories.	0.45
4	Support for Seed Officers and Seed Analysts	0.16
5	Training programme for Silkworm Seed Producers and Chawki Rearers	1.50
6	Quality awareness programmes	1.00
7	Training of scientific/technical personnel involved in seed quarantine and monitoring programmes:	0.15
	Mulberry seed - Total	**76.57**
Component - II	**Tasar seed - Basic Tasar Silkworm Seed Organization**	
A	Ongoing activities	29.21
B	Special initiatives	
1	Renovation of existing buildings in BSMTCs and other nested units	1.83
2	Development of infrastructure for technical activities at 5 BSMTCs and CTSSS, Kota.	8.04
3	Procurement of grainage of rearing equipments for all the BSMTCs	1.22
	Tasar seed - Total	**40.30**
Component - III	**Muga Seed - Muga Silkworm Seed Organization**	
A	Ongoing activities	9.35
B	Special initiatives	
1	Establishment of MSSO Head Quarters	5.00
2	Establishment of 2 Muga P3 farms	8.00
3	Establishment of 2 Model P2 farm	8.00
4	Construction of cocooning hall	0.96
5	Construction of grainage hall	0.96
6	Construction of testing room cum egg preparation room (30'x15') Installation of water supply system	0.48 0.15
	Muga Seed - Total	**32.90**
Component - IV	**Eri Seed - Eri Silkworm Seed Organization**	
A	Ongoing activities	8.00
B	Special initiatives	
1	Establishment and strengthening of 2 P2 farms (construction and procurement of equipments.	5.00
	Eri Seed -Total	13.00

#	Scheme & Components	Amount
V	Manpower Strengthening (Common to Seed Sector)	25.58
	SCHEME TOTAL	**188.35**
Scheme -III	**HUMAN AND INSTITUTIONAL DEVELOPMENT (HID)**	
A	Ongoing activities at CSB HQs.	56.25
B	Special initiatives of CSB HQs	
1	Publicity	10.00
2	Construction of Auditorium at CSB HQs:	0.75
3	Constructing additional Floor for CSB Hqs building	1.50
4	Construction of a Silk Museum at CSB Complex:	0.75
5	Maintenance of existing CSB buildings and Quarters in CSB complex	2.00
C	Regional Offices – Ongoing activities	15.00
D	Regional Offices : Special initiative – Construction of Office building for RO, Guwahati	3.00
E	RMBs and Sub-depots – Ongoing activities	1.20
D	Certification Centres – Ongoing activities	0.27
F	Manpower Strengthening	8.61
	SCHEME - TOTAL	**99.33**
Scheme - IV	**QUALITY CERTIFICATION SYSTEMS & BRAND PROMOTION**	
1	Cocoon Testing Units	1.00
2	Raw Silk Testing Centres	0.50
3	Promotion of Silk Mark	
a	Media and publicity	29.60
b	Silk Mark Central Testing Lab	1.50
c	Up-gradation of existing Regional laboratories	0.80
d	Mobile Testing Cum Branding Vehicle	0.50
e	Establishment of SMOI Head Quarters at Bangalore	5.00
f	Engagement of Professionals for SMOI activities	2.61
	Brand promotion of Indian Silk	30.00
5	Manpower strengthening	1.06
	SCHEME - TOTAL	**72.57**
	TOTAL - 4 CENTRAL SECTOR SCHEMES OF CSB	**651.28**

Appendix10(b)

COMPONENT WISE DETAILS OF CATALYTIC DEVELOPMENT PROGRAMME DURING XII PLAN

[Units :Physical - As indicated & Financial - Rs. in crores]

#	Name of the Scheme / Component	XII Plan						
		Unit	Unit Cost (Rs)	Proposed Targets				
				Physical	Financial (in Rs)			
					GOI	State	Bene.	Total cost
A	**MULBERRY SECTOR**							
I	**Mulberry seed sector**							
	Ongoing programmes							
1	Franchise disinfection programme of NSSO	Nos	1,10,000	100	1.10	0.00	0.00	1.10
	Innovative programmes							
2	Support to construct rearing houses for Adopted Seed Rearers (ASRs) of NSSO	Nos	1,00,000	1,000	5.00	0.00	5.00	10.00
3	Revolving Capital fund support for State grainages and LSPs	Nos	3,00,000	500	9.00	3.00	3.00	15.00
4	Assistance for purchasing seed testing equipments for State grainages and LSPs	Nos	2,00,000	800	9.60	3.20	3.20	16.00
5	Support to strengthen basic seed farms of States	Nos	5,00,000	40	1.00	1.00	0.00	2.00
6	Support to upgrade State and private Commercial seed production units.	Nos	2,00,000	800	9.60	3.20	3.20	16.00
	Total mulberry seed				**35.30**	**10.40**	**14.40**	**60.10**

	sector							
II	**Mulberry Cocoon Sector Ongoing programmes**							
1	Support for Mulberry Plantation Development: (Raising of high yielding Mulberry varieties in private lands / raising and maintenance of tree plantations / maintenance of existing mulberry trees / replacement of old mulberry varieties with new varieties)	Acres	12,000	65,000	39.00	19.50	19.50	78.00
2	Assistance for irrigation and other Water Conservation and usage techniques : (To cover all types of irrigation such as drip, tube / open wells, shallow wells, ponds, farm ponds, surface tanks, and similar water harvesting systems including ground level water storage tanks and soil moisture methods) and storage / conservation facilities (for different types of structure for different seri-zones)	Acres	30,000	50,000	75.00	37.50	37.50	150.00
3	Supply of Rearing Appliances	Acres	70,000	80,000	280.00	140.00	140.00	560.00

	(including improved mountages) / farm equipments to farmers)							
4	Supply of quality Disinfecting Materials and other crop protection measures for farmers	No. of Seed Farmers	4,000	2,00,000	40.00	20.00	20.00	80.00
5	Assistance for Construction of Rearing Houses (RH) - Models of	Nos.			(433.75)			
	Rs.2,75,000/-		2,75,000	10,000	68.75	68.75	137.50	275.00
	Rs.1,75,000/- and		1,75,000	20,000	140.00	105.00	105.00	350.00
	Rs.90,000/-		90,000	50,000	225.00	112.50	112.50	450.00
6	Assistance for maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) buildings and procurement of Chawkie Rearing equipments: (Units)	Nos.	5,00,000	1,000	25.00	12.50	12.50	50.00
7 (a)	Setting up of Production units for Bio-logical inputs (Inoculants, Biological control agents etc.)	Units } } }	3,50,000	1,000	17.50	17.50	0.00	35.00
7(b)	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics.	Nos. } } }						
	Total for ongoing programmes	--	--	--	**910.25**	**533.25**	**584.50**	**2,028.00**

	Innovative programmes							
8	Support for development of Kissan Nurseries	Nos.	10,00,000	200	10.00	5.00	5.00	20.00
9	Maintanance Cost for Mulberry plantation raised during X & XI Plan for 3 years.	Acres	4,500	25,000	5.63	2.81	2.81	11.25
10	Support for construction of Vermi Compost Sheds	Nos.	20,000	35,000	35.00	17.50	17.50	70.00
11	Assistance towards fencing of mulberry gardens in NE States	Acres	10,000	20,000	16.00	2.00	2.00	20.00
12	Assistance towards expansion of Rearing Houses to construct Mounting Halls in NE States	Nos.	30,000	7,000	16.80	2.10	2.10	21.00
13	Support for increasing the yield of existing rainfed mulberry garden through water conservation techniques	Acres	10,000	10,000	5.00	2.50	2.50	10.00
	Total for innovative programmes	--	--	--	**88.43**	**31.91**	**31.91**	**152.25**
	Total for Mulberry Cocoon Sector	--	--	--	**998.68**	**565.16**	**616.41**	**2180.25**
	Total for mulberry sector (Seed & cocoon)	--	--	--	**1033.98**	**575.56**	**630.81**	**2240.35**
B	**VANYA SECTOR**							
I	**Vanyaa seed sector**							
	Tasar - Ongoing programmes							
1	Assistance to Private	Graineu	230000	5,000.	82.80	16.10	16.10	115.00

	Tasar Graineurs	r		00				
2	Assistance to strengthening of tasar seed multiplication infrastructure	PPC	384000	120.00	3.23	1.38	0.00	4.61
3	Assistance for strengthening of Seed Multiplication Infrastructure for Oak Tasar in the State	Grainag e	1038000	20.00	1.54	0.54	0.00	2.08
4	Assistance to seed rearers	Rearer	21000	16,000	24.19	4.70	4.70	33.60
5	**Innovative programmes** Assistance for Mobile Van for disease moniotirng and seed cocoon testing	Mobile Van	1125000	12.00	0.99	0.36	0.00	1.35
	Sub-Total for Tasar Seed				112.74	23.09	20.80	156.63
6	**Eri - Ongoing programmes** Assistance to State Depts. For Strengthening of existing Eri farm cum grainages including assistance to Seed Rearer cum Private Graineurs.	Farm cum Grainag e	1500000	100.00	11.70	3.30	0.00	15.00
7	**Eri - innovative programmes** Assistance to Private Eri Graineurs	Graineu r	140000	500.00	5.18	0.91	0.91	7.00
8	Assistance to Eri Adopted Seed Rearers	Rearer	15500	4,000. 00	4.59	0.81	0.81	6.20

9	Upgradation of Eri Basic Seed farm cum grainage	Farm cum Grainage	1000000	25.00	2.25	0.25	0.00	2.50
10	Establishment of Self Help Eri grainages @ 20 SHG per Farm cum Grainage	SHG	6000	500.00	0.24	0.03	0.03	0.30
11	Mobile testing and certification units	No.	100000	25.00	0.23	0.03	0.00	0.25
	Sub-Total for Eri Seed				24.18	5.32	1.75	31.25
	Muga - Ongoing programmes							
12	Assistance to Muga Private Graineurs	Graineur	200000	800.00	12.16	1.92	1.92	16.00
13	Assistance to existing Muga Private Graineurs for upgradation of seed production capacity.	Graineur	60000	800.00	3.65	0.58	0.58	4.80
14	Assistance to State Departments for Strengthening of Muga seed multiplication infrastructure	Farm cum Grainage	3000000	30.00	7.38	1.62	0.00	9.00
	Muga - innovative programmes							
15	Assistance to Muga Adopted Seed Rearers	Rearer	72000	8,000.00	43.78	6.91	6.91	57.60
16	Assistance to P3 Seed Rearers cum Seed Producers	Rearer	3000000	10.00	2.28	0.36	0.36	3.00
17	Assistance to P2 Seed Rearers cum Seed Producers	Rearer	3000000	100.00	22.80	3.60	3.60	30.00
	Sub-Total for Muga Seed				92.04	14.99	12.05	119.08
	Total for Vanya Seed				228.97	43.40	34.60	306.96
II	**Vanya Cocoon Sector**							

	Tasar - Ongoing programmes							
1	Support to rearers for Augmentation of tasar host plantation including maintenace	Ha.	40,000	30,000.00	86.40	16.80	16.80	120.00
2	Assistance for raising and maintenance of systematic plantation of oak tasar plantations	Ha.	30,000	500.00	1.14	0.18	0.18	1.50
3	Assistance for construction of Cocoon Storage Houses in Tasar Sector.	No.	100000	1,500.00	10.80	2.10	2.10	15.00
	Tasar - Innovative programmes							
4	Assistance to beneficiaries for raising Tasar food plant saplings	Rearers	11000	30,000.00	23.76	4.62	4.62	33.00
5	Assistance to Tasar commercial Rearers for development of Chawki garden	Rearers	4000	25,000.00	7.20	1.40	1.40	10.00
6	Assistance to tasar rearers for maintenance of existing chakwie plantation	Rearers	1,200	5,000.00	0.43	0.08	0.08	0.60
7	Assistance to tasar rearers for maintenance of existing tasar plantation	Ha.	10,800	20,000.00	15.55	3.02	3.02	21.60
8	Supply of Jeevan Dhara for control of Virosis disease	No.	80	50,000.00	0.29	0.06	0.06	0.40

9	Leaf Surface Microbes (LCM) for control of Viral and bacterial diseases in Tasar Silkworm	No.	40	50,000.00	0.14	0.03	0.03	0.20
10	Conservation and utilization of Sal based Tasar Eco-races	No. of clusters	32800000	100.00	82.00	246.00	0.00	328.00
	Sub-Total for Tasar Cocoon				227.72	274.29	9.21	511.22
	Eri - Ongoing Programmes							
11	Raising of Castor plantation and maintenance with Start-up tools	Acres	12,000	10,000.00	8.88	1.56	1.56	12.00
12	Augmentation of Kesseru plantation and maintenance with start-up tools	Acres	29,000	15,000.00	34.80	4.35	4.35	43.50
13	Construction of Eri Rearing houses	Acres	1,00,000	20,000.00	148.00	26.00	26.00	200.00
	Eri - Innovative Programmes							
14	Assistance to beneficiaries for raising Kesseru food plant saplings	Rearers	10000	15,000.00	12.00	1.50	1.50	15.00
15	Assistance for intercropping (Ginger, Turmeric & Colocasia) in between existing Kesseru plantation	Acres	10,000	5,000.00	4.00	0.50	0.50	5.00
	Sub-Total for Eri Cocoon				**207.68**	**33.91**	**33.91**	**275.50**
	Muga - Ongoing programmes							
16	Augmentation of Muga food plant and maintenance with start-up tools	Acres	34,000	10,000.00	25.84	4.08	4.08	34.00

	Muga - Innovative programmes							
17	Assistance to beneficiaries for raising Som food plant saplings	Rearers	10,000	10,000.00	7.60	1.20	1.20	10.00
18	Maintenance of existing muga plantation	Acres	6,200	10,000.00	4.71	0.74	0.74	6.20
19	Assistance for intercropping (Ginger, Turmeric & Colocsia) in between existing Som plantation	Acres	10,000	5,000.00	3.80	0.60	0.60	5.00
	Sub-Total for Muga Cocoon				41.95	6.62	6.62	55.20
	Total for Vanya Cocoon				477.35	314.83	49.75	841.92
	Vanya Marketing - Ongoing programmes							
1	Vanya Silk Marketing Promotion	Nos.	--	1.00	6.00	0.00	0.00	6.00
	Vanya Marketing - Innovative programmes							
2	Organization of Muga cocoon marketing outlets	Nos.	1000000	10.00	0.90	0.10	0.00	1.00
	Total for Vanya marketing				6.90	0.10	0.00	7.00
	Total for Vanya Sector				**713.22**	**358.32**	**84.34**	**1155.88**
C	POST COCOON SECTOR							
I	**Silk Reeling & Spinning sector Ongoing Programmes**							

1	Support for establishment of Multi-end Reeling units							
a	6-Basin units	Nos.	7,50,000	50	2.33	0.71	0.71	3.75
b	10-Basin units	Nos.	12,50,000	200	13.44	5.78	5.78	25.00
c	20-Basin units	Nos.	21,25,000	25	2.78	1.26	1.26	5.31
2	Support for establishment of Automatic Reeling units	Nos.	1,25,00,000	5	3.13	1.56	1.56	6.25
3	Support for establishment of improved Cottage Basin Reeling Units	Nos.	3,12,500	100	1.84	0.64	0.64	3.13
4	Support for existing Charkha Reeling units to disuade child labour (Motorisation of Charkas)	Nos.	12,500	1,000	0.72	0.27	0.27	1.25
5	Support for setting up of Hot Air Driers							
a	50 Kg capacity units	Nos.	1,25,000	200	1.72	0.39	0.39	2.50
b	100 Kg capacity units	Nos.	2,18,750	125	1.86	0.44	0.44	2.73
c	500 Kg capacity units	Nos.	10,00,000	10	0.65	0.18	0.18	1.00
6	Assistance for Twisting Units (400 spindles)	Nos.	7,50,000	250	14.25	0.38	4.13	18.75
7	Incentive for production of Bivoltine Silk							
a	Automatic Reeling Units	MTs	1,50,000	1,500	15.00	7.50	0.00	22.50
b	Multiend and Cottage bais units	MTs	1,00,000	1,000	6.00	4.00	0.00	10.00

8	Incentive for production of Bivoltine Cocoons	MTs	25,000	16,250	21.94	18.69	0.00	40.63
9	Assistance to States for providing marketing support for Cocoons and Raw Silk							
a	Upgradation of existing Cocoon Markets / Silk Exchange in Traditional States	Nos.	1,00,00,000	10	7.50	2.50	0.00	10.00
b	Establishment of Cocoon Market / Silk Exchange in non-traditional States	Nos.	1,00,00,000	10	8.10	1.90	0.00	10.00
c	Establishment of Cocoon Banks	Nos.	1,25,00,000	10	11.25	1.25	0.00	12.50
10	Providing services of Master Reelers to Reeling units	Nos.	1,00,000	50	0.50	0.00	0.00	0.50
11	Support for Vanya Reeling / Spinning Sector							
a	Spinning machines	Nos.	4,750	7,000	2.38	0.48	0.48	3.33
b	Reeling-cum-Twisting machines	Nos.	20,000	4,000	5.65	1.18	1.18	8.00
	Total - ongoing programmes				121.03	49.09	17.01	187.12
	Innovative programmes							
1	Support for construction of Reeling Sheds							
a	Cottage Basin units	Nos.	4,00,000	100	2.36	0.82	0.82	4.00
b	6-Basin Multiend Reeling units	Nos.	6,00,000	50	1.86	0.57	0.57	3.00
c	10-Basin Multiend Reeling units	Nos.	7,50,000	200	8.06	3.47	3.47	15.00
d	20-Basin Multiend Reeling units	Nos.	10,00,000	25	1.31	0.60	0.60	2.50
e	Automatic Reeling units	Nos.	20,00,00	5	0.50	0.25	0.25	1.00

			0					
2	Support for establishment of Automatic Dupion Reeling units	Nos.	50,00,000	10	2.50	1.25	1.25	5.00
3	Support for establishment of Bisu Treatment Plant & Pupa Drying	Nos.	7,50,000	50	2.33	0.71	0.71	3.75
4	Support for Vanya Sector - Wet Reeling machines	Nos.	20,000	500	0.65	0.18	0.18	1.00
5	Interest subsidy on working capital to reelers (physical units are cumulative; spread for the plan period)							
a	Cottage Basin units	Nos.	30,000	250	0.75	0.00	0.00	0.75
b	6-Basin Multiend Reeling units	Nos.	30,000	250	0.75	0.00	0.00	0.75
c	10-Basin Multiend Reeling units	Nos.	60,000	500	3.00	0.00	0.00	3.00
d	20-Basin Multiend Reeling units	Nos.	1,00,000	50	0.50	0.00	0.00	0.50
e	Automatic Reeling units	Nos.	3,00,000	50	1.50	0.00	0.00	1.50
	Total for innovative programmes	-	-	-	**26.07**	**7.84**	**7.84**	**41.75**
	Total for Silk Reeling & Spinning sector	-	-	-	**147.09**	**56.93**	**24.85**	**228.87**
II	**Silk Weaving sector Ongoing programmes**							
1	Support for Handloom Sector							
a	Certified Handlooms	Nos.	35,000	6,000	12.60	4.20	4.20	21.00
b	Loom Upgradation through Jacquards & other equipments	Nos.	12,500	10,000	7.38	2.56	2.56	12.50

c	Computer Aided Textile Designing (CATD)	Nos.	6,25,000	150	5.63	1.88	1.88	9.38
d	Pneumatic lifting	Nos.	50,000	5,000	14.00	5.50	5.50	25.00
2	Providing services of Master Weaver/Master designer to Weaving units	Nos.	1,25,000	100	1.25	0.00	0.00	1.25
3	Support for Shuttle less looms	Nos.	20,00,000	50	5.00	2.50	2.50	10.00
	Total for ongoing programmes			**-**	**45.85**	**16.64**	**16.64**	**79.13**
	Innovative programmes							
1	Support for establishment of Modern Powerlooms	Nos.	8,00,000	200	8.48	3.76	3.76	16.00
	Total for innovative programmes			**-**	**8.48**	**3.76**	**3.76**	**16.00**
	Total for Silk Weaving sector			**-**	**54.33**	**20.40**	**20.40**	**95.13**
III	**Silk Processing sector**							
	Ongoing Programmes							
1	Support for setting up of Common Facility Centre for yarn dyeing							
a	50 Kg capacity Yarn Dyeing units	Nos.	12,00,000	50	4.62	0.24	1.14	6.00
b	50 Kg capacity Arm Dyeing units	Nos.	15,00,000	40	4.58	0.15	1.28	6.00
c	100 Kg capacity Arm Dyeing units	Nos.	18,00,000	10	1.37	0.04	0.40	1.80
2	Support for setting up of Common Facility Centre for fabric processing							

a	Fabric Dyeing units	Nos.	6,00,000	50	2.31	0.12	0.57	3.00
b	Fabric Dyeing and Calendering units	Nos.	12,00,000	25	2.31	0.12	0.57	3.00
c	Calendering units	Nos.	8,00,000	50	3.08	0.16	0.76	4.00
3	Providing services of Master Dyers	Nos.	1,25,000	100	1.25	0.00	0.00	1.25
	Total for ongoing programmes	-	-	-	**19.51**	**0.83**	**4.71**	**25.05**
1	**Innovative programmes** Support for establishment of Silk Screen Printing units	Nos.	10,00,000	20	1.30	0.35	0.35	2.00
	Total for Silk Processing sector	-	-	-	20.81	1.18	5.06	27.05
IV	**Silk Machinary Development**							
1	Support to govt. and private agencies for developing machineries for post cocoon sector	-	-	Lumpsum	5.00	0.00	0.00	5.00
Total Post cocoon Sector		-	-	-	227.24	78.51	50.30	356.05
D	SUPPORT SERVICES SECTOR							
	Ongoing programmes							
1	Crop Insurance Support (For all Sectors)	Lakh	Lumpsum	--	7.00	3.50	3.50	14.00
2	Publicity for CDP programmes (Audio visuals / Printing / Exhibitions / BSMs / Awareness programme, Workshops / Seminars, etc. organized by States)	DFLs --	--	--	8.00	--	--	8.00

3	Support for Studies /Consultancies / Surveys organised by CSB and State	--	--	--	5.00	--	--	5.00
4	Product Design, Development, & Diversification				0.94	--	--	0.94
5	Cluster Development Projects by States	No. of Clusters	1500000	100	15.00	--	--	15.00
6	Health Insurance Programme for sericulture farmers and workers	No. of policies	900	5,00,000	36.90	4.95	3.15	45.00
7	Capacity building for sericulture sector (includes all training in CSB and States)	--	--	--	18.40	13.25	--	31.65
	Total for ongoing programmes				**91.24**	**8.45**	**6.65**	**87.94**
B	**Innovative programmes**							
8	Enhanced subsidy to SC / ST / Women beneficiaries to take up sericulture	Nos.	20,000	25,000	50.00	--	--	50.00
9	Distress Relief Measures (DRM) for mulberry silkworm cocoons	kg cocoons	--	10% of traded qty	100.00	100.00	--	200.00
10	Developing Communit Based Organizations (CBOs) in line with Resham Doot Concept	No of CLAs	16,80,000	500	47.40	31.60	5.00	84.00
	Total for innovative programmes		--	--	**197.40**	**131.60**	**5.00**	**334.00**
Total for Support Services sector		--	--	--	**288.64**	**140.05**	**11.65**	**421.94**

	GRAND TOTAL - CDP				**2,263.07**	**1,152.44**	**777.11**	**4,174.22**

Appendix 11

JTM MINI-MISSION IV - CARRY OVER FROM XITH PLAN IN 2012-13

Sl. No.	SCHEMES	Carry over from XIth plan
		2012-13
1	SCHEMES FOR MODERNISATION OF ORGANISED JUTE MILLS	
1.1	Training of Workers & Supervisors	1.00
1.2	Machinery Development	2.00
1.3	Productivity Improvement & TQM Facilitation	1.00
1.4	Acquisition of Machinery and Plant (subsidy)	15.00
	TOTAL (1)	19.00
2	SCHEMES FOR PROMOTION OF JUTE DIVERSIFICATION	
2.1	Design and Development of JDP	2.00
2.2	For helping the NGOs and Women Self Help Groups (WSHGs) for developing JDPs	6.00
2.3	Scheme for Promotion of Jute Diversification:	2.00
2.4	Scheme for Commercialisation of Technology	0.00
2.5	Scheme for setting up Jute Parks for the Diversified sector	19.30
	TOTAL (2)	29.30
	Monitoring Exp	2.50
	Total Carry forward from Mini Mission-IV	*50.80*

Appendix – 12

The total fund requirements for XIIth Plan

	Scheme	Rs. Crore
	Mini- Mission III	
1	Production & distribution of Certified Jute Seeds	38.50
2	Mopping up of other certified seeds	13.50
3	Awareness programmes for new seed & farm techniques	10.50
4	Demonstration of retting technology	9.50
5	Fungal & In-situ retting	3.00
6	Developing ribboner	2.00
7	Direct fibre extraction - Decorticator	2.00
8	Improvement of existing market infrastructure	100.00
9	Price discovery, dissemination of price information, MSP	2.50
	Subtotal MM III	181.50
	Mini- Mission IV	Direct fibre extraction - Decorticator 2.00
10	Development of New JDPs incl non-wovens and composites	15.00
11	Establishment of trade channels	5.00
12	Jute-Geotextile development fund	12.00
13	Modernization of jute processing machinery - acquisition	240.00
14	Modernization of jute processing machinery - R&D	25.00
15	JDP sector modernisation including centre of excellence)	50.00
16	Eco-labeling	20.00
17	Environment & social compliance:	
	(a) Raw Jute Sector - pilot project on 500 hectares	5.00
	(b) Investment for environment & quality compliance in Jute Mills and JDP sector (50% Govt. Support)	50.00
	(c) Support for NABL accreditations of R&D laboratories in Jute Sector	5.00

18	**Sanitation facilities for workers**	**21.60**
19	**Jute Portal**	**2.00**
20	**e-Library**	**5.00**
21	**ICT for NER**	**2.00**
22	**ICT with R &D & other Institutions**	**5.00**
23	**Field level extension / communication**	**4.00**
24	**International Promotion**	**45.00**
25	**Domestic promotion**	**15.00**
26	**Stakeholder communications**	**3.50**
	Subtotal MM IV	**530.10**
27	**MM IV:(carry over from XIth Plan)**	**50.80**
	TOTAL XIITH PLAN	**762.40**

Appendix 13

YEAR WISE PROJECTION OF JUTE SECTOR DURING XIITH PLAN

Sl.	Particulars	Unit	Last Year of XIth Plan	Projections of XIIth Plan Period				
			Status as on 2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	**Seed Production:**							
	For Domestic use : Of which: **Certified** **Uncertified**	 MT MT	 2000 4000	 2500 3500	 3000 3000	 4000 2000	 5000 1000	 6000 0
		MT	**6000**	**6000**	**6000**	**6000**	**6000**	**6000**
	For Export	MT	4000	4000	4000	4000	4000	4000
2	**Raw Jute Availability**: (Jute+Mesta)							
	Area	Lakh Hectare	10	9.9	9.7	9.6	9.3	9.00
	Production	Lakh Bales	114	115	121	129	135	140
		Lakh MT	20.50	20.70	21.78	23.22	24.30	25.20
3	**Raw jute &mesta requirement for Production**	Lakh Bales Lakh MT	107 19.26	100 18.00	99 17.82	105 18.91	108 19.48	111 20.06
4	**Production of jute goods**	**'000 MT**	**1651**	**1685**	**1750**	**1825**	**1900**	**2000**
	% of increase (+)/decrease(-)			*2.06*	*3.86*	*4.29*	*4.11*	*5.26*
5	**Domestic consumption of jute goods**	**'000 MT**	**1450**	**1430**	**1445**	**1462**	**1483**	**1500**
	% of increase (+)/decrease(-)			*-1.38*	*1.05*	*1.18*	*1.44*	*1.15*
6	**Export of jute goods**	**'000 MT**	**210**	**255**	**305**	**363**	**417**	**500**
	% of increase (+)/decrease(-)			*21.42*	*19.61*	*19.02*	*14.88*	*19.90*
		RsCrore	**1350**	**1575**	**1750**	**2200**	**2600**	**3000**
	% of increase			*16.67*	*11.11*	*25.71*	*18.18*	*15.38*
		Mln $	**300**	**350**	**392**	**484**	**575**	**667**
	% of increase			*16.67*	*12.00*	*23.47*	*18.80*	*16.00*
7	**Manpower Requirement**							
	Mill Sector	No.	250000	250000	265000	270000	276000	290000
	% of increase			0.00	6.00	1.89	2.22	5.07
	MSME Sector	No.	180000	200000	216000	233000	245000	260000
	% of increase			11.11	8.00	7.87	5.15	6.12

Appendix 14

Sr. No.	Scheme	Component	XII Plan Proposed Outlay (Rs. in Crs.)
1.	**Wool Improvement and Development Programme**		**119.50**
		Health care for 50.0 Lakhs Sheep @ Rs. 32 per sheep per year for 3 years	48.00
		Feed supplement to sheep/Pashmina goat (Weak / Pregnant ewes) @ Rs. 5 per day per sheep for 90 days in a year (Total 1 lakhs sheep per year)	22.50
		Schemes for Angora Wool Development	3.00
		Schemes for Pashmina Wool Development	6.00
		State specific Schemes as submitted by State Govt. (Rs. 2 Crs. per year)	10.00
		R& D activities related to wool & woolen.	10.00
		To set up ' Centre of Excellence at WRA- Thane (Mumbai) for state of the art testing facility, quality control, certification, training & R&D for wool and allied industry.	10.00
		Social Security Scheme for sheep breeders.	5.00
		Other Misc. activities like Publicity, Consultancies, Evaluation & Monitoring of Schemes . (Rs. 1 Crs. per year)	5.00
2.	**Marketing of Raw wool including Pashmina & Angora fiber.**		**14.00**
		Revolving fund for marketing of Raw wool @ Rs. 50 per kg for 15 Lakhs kg Wool.	7.50
		Revolving fund for Marketing of Pashmina Wool @ Rs. 2000 per kg for 15000 Kg of Pashmina Wool	3.00
		Revolving fund for Marketing of Angora Wool @ Rs. 1000 per kg for 10,000 Kg of Pashmina Wool	1.00
		Marketing Incentive to Sheep Breeder/ Implementing Agency @ Rs. 5 per kg for 10 Lakhs kg Wool per year. (For Rajasthan)	2.50
3	**Marketing and Export Promotion Scheme.**		**25.00**

		Marketing of Wool & Woollen in India @ Rs. 25 lakhs per Woollen Expo. Total 10 Woollen Expo per year.	12.5
		Marketing of Wool & Woollen and other Export promotion activities. Rs. 2.5 Crs per year through wooltexpro	12.50
4	**Human Resource Development**		**17.5**
		Training in Sheep Husbandry Practices in reputed Institutions (India and abroad) or by Organizing Camps / Workshop/ seminars etc. (Rs. 1 Crs per year.)	5.00.
		Training in Wool and Woollen Processing machineries. (India & abroad)(Rs. 50 Lakhs per year.)	2.50.
		Skill Development & Up-gradation (Rs. 1 Crs. per year)	5.00
		Strengthening of Infrastructure for Training including Technical Manpower.	5.00
5	**Modernization and strengthening of processing facilities**		**125.00**
		Common Facility Centre @ Rs. 100 Lakhs per CFC for 25 CFC	25.00
		Financial assistance for modernization/ replacement of existing machineries. Maximum subsidy @ Rs. 5 Crs or 20 % of the total machinery cost which ever is lower. Total 20 centre in 5 year.	100.00

Appendix- 15

Name of the scheme	Expected Impact and outcome
Wool Improvement and Development Programme	IMPACT • Enhancement in Qualitative and Quantitative production of Wool fibre.(Exploitation of Import substitution, Export and ,Economic potential) • Availability of Graded and certified Wool • Significant Societal impact OUTCOMES ❖ Programme will help in reducing import hence saving in foreign currency and step toward self reliance . ❖ Production of Angora and Pashmina Speciality fiber will increase by 50 % at the end of 12th Plan enabling promoting more value added production ❖ Bring down mortality rate of sheep from current 12-15% to 3-5% facilitating Quantitave and Qualitative production. ❖ 1 Lakhs Sheep Breeders will be benifited in getting enhanced Quality of Work Life(QWL) ❖ Feed Supplement to 5 lakh sheep/pashmina goat remove existing weaknesses. ❖ Gradation of International level Will result arrest of rejection and better Quality Assurance. ❖ Research and Development projects relating to wool and woollen development will ensure value added blending, Yarn fabrics and carpet production resulting increased Unit value Realisation (UVR) which is the ultimate bottom line
Marketing of Raw wool including Pashmina & Angora fiber.	IMPACT • Remunerative price of wool will be paid to Wool Growers. OUTCOMES ❖ Will increase their income by 20 to 30 % which may motivate wool growers to make more investment in this sector will help in stabilizing the price of wool in the market. ❖ Fair return of their produce . ❖ Increasing the procurement by Government organization to a reasonable capacity State wool marketing organization will be revitalized and will lead to optimum utilization of available infrastructure.
Marketing and Export Promotion Scheme	IMPACT • This will increase awareness in favour of woollen products and will expose weavers/ manufacturer to new woollen markets. • Will help in launching new woollen products / designs for trial and promotion. OUTCOMES ❖ Enhanced demand and per capita consumption ❖ Enhanced UVR resulting avenue for benefit by all stakeholders
Human Resource	IMPACT

Development	• Establishment of new training centres at potential place to provide ~ 500 Skilled man power / resource persons including shepherds will be made available every year to organized and decentralized sector including to fulfill requirement of skilled manpower. Shall ensure Training in improved processing to stake holders / Industrialists which is likely to lead to further investment. OUTCOMES ❖ Will increase employment in wool and allied industry. ❖ Will increase Qualitative and Quanitative production ❖ Will reduce cost of production ❖ Will enhance UVR ❖ Will enhance QWL of all concerned
Modernization and Strengthening of Processing Facilities.	IMPACT • Will bring additional 500 Crs. improved processing facility for the Industry.25 Common Facility Centres for pre-loom and post-loom processing facilities will be established. 20 Units will be modernized/replaced the existing machineries. Comprehensive services for wool Grading, scouring, deburring, carding, dying and spinning etc. OUTCOMES ❖ Existing units for wool processing both for domestic production and export purposes will get strengthened to International level through benchmarking in an appropriate manner ❖ Enhanced UVR by wool growers by availing primary processing facilities at minimal cost. ❖ Enhanced UVR and market due to higher productivity and level of quality of woolen Products. ❖ Positive impact on environment leading to Carbon credit can also be attained
Overall	IMPACT • Enhanced Domestic and global trade • Demographic dividend: Employability and Employment. • Societal, Environmental & Economical OUTCOMES ❖ Increased Export : Value and Volume term ❖ Increased Terminal competency :Qualitative and Quantitative production ❖ Increased employment : Contribution to Demography as dividend ❖ Increased per capita trade : Contribution to GDP ❖ Fair working conditions / wages : Contribution to Human Development Index ❖ Enhanced protection of Energy and environment : Societal and environmental upliftment.

Appendix –16

R&D projects undertaken by Textile Research Associations during Eleventh Five Year Plan

NITRA

a) Development of NYCO fabric for Paramilitary and Military combat uniforms
b) Development of personal protective textile using noval fibre (Carbyon, x-static)
c) Development of functional fabric to provide bacterial & ultraviolet protection to the skin (bamboo)
d) Optimization of process parameters to produce extra soft knitted fabric for inner wear / kids wear by using "High Performance Modal Fibre

BTRA

The following product development programs have been done in association with user industries:

a) Development of Geotextiles from PP & PES fibres for Ambika Polymers (2008)
b) Development of Non-Wovens PP Carpets for Zenith Fibres (2008)
c) Development of Non-Woven for scouvering (2009)
d) Developments of Non-Woven for Radiation Protection (2009)
e) Development of Non-Woven for Jeevan Products (2010)
f) Development of Non-Woven from Wool Blend for WRA

SASMIRA

a) Development of reflective agrotextiles for sun management
b) Development of specialty fabric for water conservation and soil erosion control used in horticulture application
c) Development of durable, breathable and barrier work wear fabrics for agrotextile applications
d) Development of PET/ nanoclay nanocomposite for barrier packaging
e) Evaluating compatibility & establishing methodology for simultaneous functional finishes for textile
f) Standardisation of norms for agricultural shade net
g) Dyeing of polypropylene using nanotechnology.

MANTRA

MANTRA has just completed a project sponsored by the MOT on 'Development of low-cost greenhouse shade nets for crop protection'. Besides this another project on Banana fabrics is in progress (Development of ecofriendly, recyclable, biodegradable value-added technical textiles from Banana yarns. Other projects on technical textiles are:

a) Development of multilayer fabrics for sportswear (in progress).
b) Smart fabrics/garment products with smart colours for security labeling (completed).
c) Development of innovative fabrics from PTT yarn and to set processing parameters for them.

SITRA

a) Development of Functional Spacer Fabrics for Medical Inlays in Orthopaedic Shoes

b) Development of Speciality 3 D Compression Bandages for Lymphedema

c) Cut-resistance Technical Fabrics Using Spectra Filament Yarns

d) Design and Fabrication of an Instrument to Assess the Barrier Properties of Operation Theatre Surgical Apparels with specific Reference to Blood and Other Body Fluids

e) Development of Spunlaced Non-woven Wound Dressings Using Bamboo Fibres

f) Development of Barbed, bi-directional Surgical Sutures

g) Breathability of Woven Surgical Gowns Treated with Nano Finishes

h) Controlled Drug Release on Chitosan-coated Cotton gauze

i) Design And Fabrication Of An Instrument To Evaluate Resistance Of Medical Face Masks To Penetration By High Velocity Stream Of Blood From A Punctured Blood Vessel

j) Development of special wound care dressing made of PVA / Chitosan and PVA/Silver nitrate nano membrane

Appendix17

Sr No	Name of the Fibre	Properties	Applications
1	Meta Aramids	Meta-aramid fibres are the heat resistant synthetic fibre, having high strength	Flame resistance clothing, helmets, protective vests, bullet proof jackets, body armor, ropes and cables, sporting goods, ballistic body armor, etc.
2	Para Aramids	It is known for its high strength to weight ratio, high modulus, and excellent chemical and thermal stability.	Defence and protective clothing like helmets, bullet proof vests, protective hand gloves, fire resistant equipments, etc. Recently it has also been used in manufacturing of tyres.
3	FR Modacrylic	High resilience, easy to dye to bright shades, abrasion resistant, flame resistant, quick drying, resistant to acid and alkaline, shape retentive, etc.	Manufacturing of apparels such as children wear, wigs, simulated fur, trims and linings, and deep pile coats, blankets, curtains, carpets, etc. Recently this fibre has found its application in manufacturing of flame retardant clothing due to its high heat resistance properties.
4	Superabsorbant Fibre	Super-absorbent fibre absorbs moisture to several thousand times its original weight, undergoing significant expansion, and eventually becoming a gel	Diapers, adult incontinence products, feminine hygiene products,
5.1	High Density Polyethylene (HDPE)	HDPE is a polyethylene thermoplastic made from petroleum. HDPE structure has a little branching, which helps it in giving stronger intermolecular force and high tensile strength.	Wood plastic composites and composite wood, manufacturing of tubes, chemical-resistant barrier
5.2	High Modulus Polyethylene (HMPE)	High impact strength compared to any other thermoplastic. HMPE is highly resistant to corrosive chemicals and has extremely low moisture absorption. It has very low degree of friction and is self-lubricating.	Medical application for manufacturing biometric implants for hip, knee and spine. It is also used in manufacturing of bullet proof vests and industrial applications such as manufacturing of PVC (vinyl) windows and doors.
6	Carbon Fibre	Carbon fibres are extremely thin fibres composed from carbon atoms bonded together in	The inherent strength and light weight, carbon fibres are majorly used in racing cars, aero planes,

		microscopic crystals. Carbon fibre has many different weave patterns and can be combined with plastic resin and can be moulded to form composite materials.	wind energy equipments and infrastructure industry.
7	Polyphenylene sulfide Fibres (PPS)	PPS polymer is formed by reaction of sodium sulfide with pdichlorobenzene. Polyphenylene sulfide is like a high-performance thermoplastic. PPS can be moulded, extruded, or machined to high tolerances.	PPS fibre is used in manufacturing heat resistance application, bag filter, dryer canvas, liquid filtration cloth, parts for electric products, etc, on the basis of its excellent heat and chemical resistance.
8	Glass Fibre	Glass fibres are extremely thin fibres of glass which are used as a reinforcing agent for many polymer products. It is formed when thin strands of silica-based or other formulation glass is extruded into many fibres with small diameters suitable for textile processing. It also has good properties of thermal insulator.	Glass fibre is majorly used in thermal insulation, electrical insulation, reinforcement of various materials, tent poles, sound absorption, heat- and corrosion-resistant fabrics, high-strength fabrics, automobile bodies, surfboards, etc.
9	Flame Retardant (FR) Viscose	FR Viscose is a flame retardant cellulose based fibre which gives high wearing comfort as well as optimum protection.	Protective garments like fire fighting clothing, defence clothing, automotive seat fabrics, construction, upholstery, fire resistant barriers and mattress.
10	Flame Retardant (FR) Polyester	Flame retardant agent is added during polymerization process Hence it is able to withstand very high temperature.	Indoor decoration, automobile upholstery, seat covers, curtains, carpet, tents with hemming-stitch and auxiliary materials, sleeping bags, special working clothes, flame resistance curtains, mattresses used in commercial complexes such as offices, shopping complexes, etc.
11	High Tenacity Nylon	It is a multi-filament polyamide yarns characterized by high tenacity and low shrinkage.	High tenacity nylon filament yarn is used for manufacturing ropes, twines, seat belt webbing, automobile airbags, watch and bag straps, etc.
12	High Tenacity Polyester	Strong, resistant to stretching and shrinking, resistant to most chemicals, quick drying, crisp or resilient when wet or dry, wrinkle resistant, mildew resistant, abrasion resistant.	High tenacity polyester filament yarns used for the manufacture of ropes, twines, seat belt webbing, geo- textiles, etc.

13	High Tenacity Polypropylene	High tenacity polypropylene is high strength fibre having greater stability	Ropes used in different industrial and construction activities.
14	High Tenacity Viscose	Viscose fibre is made from lumber, bulrush, linter or cellolose through a chemical process. Viscose fibre consists of flament and short fibre. Flament is also called rayon or tenasco.	High tenacity viscose fibre in cord thread and ropes used in different industrial and construction applications.
15	Ceramic Fibre	It is manufactured from alumina silicate glass which has high heat resistance properties.	Manufacturing of domestic heating appliances, furnace, insulation for steam and gas turbines. Recently these fibres were observed to be used in aerospace industry due to its inherent strength and light weight.
16	Polytetrafluoroethylene (PTFE)	PTFE has an excellent dielectric property, it has a high melting point	It is used in manufacturing of electrical applications. Recently it has been used in manufacturing of home appliances
17	PBI Fibres	PBI (Polybenzimidazole) stable fibre is an organic fibre that provides thermal stability. PBI fibre does not burn in air, it does not melt or drip, and it will retain its strength and flexibility after exposure to flame.	PBI finds applications in aerospace, bearings, bushings, electrical parts, general purpose high temperature applications, insulation, insulation shield, sealing devices, seals, semiconductor moulding compounds.
18	PBO Fibres	PBO – Fibre Zylon is said to be the strongest fibre that is commercially available. The tensile strength of this fibre is higher than para-aramids like Kevlar and Twaron and high performance polyethylene (Dyneema and Spectra).	Manufacturing of protective clothing such as bullet proof vests, body armour, clothing used for fire fighting, ballistic jackets, etc.
19	Anti-microbial/Anti-fungal/Anti-bacterial Fibres	An anti-microbial and/or anti-fungal and/or anti-bacterial fibre comprises of various thermoplastic polymers and additives in a mono-component or bi-component form. The active agent, incorporated into the fibre, prevents and limits the growth of bacteria/ fungi/ microbes.	These fibres are majorly used in manufacturing of protective clothing for doctors, nurses, care staff, employees in food manufacturing and food processing, etc.
20	Phenolic Fibre	These fibres are manufactured by using compression moulding followed by hand lay-up technique. It has tensile and flexural properties of coir based hybrid composites were	Phenolic fibres are used in manufacturing of automotive and electrical components.

		investigated as a function of fibre content and fibre volume fraction.	
21	Conductive Fibre	These fibres have good properties of carrying electrical signal.	It is used in manufacturing of electromagnetic shielding
22	Fibre for concrete re-enforcement	These fibres can be generally polyester or polypropylene, which have high tensile strength and good heat resistance. Hence it is preferred in concrete re-enforcement.	These fibres are used in concrete re-enforcement, as it prevents premature cracks, prolongs life span, increase impact resistance, etc.
23	Alginate Fibre	Calcium alginate fibres are manufactured from alginate extracted from seaweed. Calcium alginate is used worldwide in the production of wound dressings.	Medical bandages used for wound dressing, food processing industry, etc

Appendix -18

Areas of Institute – Industry Collaboration

i. Collaborating for feedback: In this scenario a mechanism can be built by which the industry may provide inputs back to the academic institutions regarding their perception or evaluation of their products. For this it may be made mandatory to build certain platform at each institute level.

ii. Student Internship: Students spend 2-3 months in between semesters with industry putting the learning into practice. Also students learn peer communication, labour handling, teamwork, time management by associating with an organization. The lament of the industry that students do not have sufficient skills can be resolved by ensuring that during summer vacations student do mandatory placement with the industry. These can be divided into short term industry placements of 3 to 4 weeks to be done during vacations every semester. One of these may be done as a sandwich programme between two semesters, once in a degree/ diploma course.

iii. Field Trip: With the objective of reinforcing topics discussed during the classroom, instruction should be combined with industrial exposure through field trips.

iv. Student project: Students spend 16-22 weeks with industry during last semester, identifying and researching on any topical issue mutually decided between industry and academia.

v. Sabbatical by Academicians in the Industry: An interface should be developed where academicians can take sabbatical and serve industry and contribute in research and development.

vi. Research, Projects & Consultancy by Institutes: There is a serious disconnect between institute and industry. Therefore, proactive policies may be introduced to encourage research amongst industry. The expertise of faculty can be enhanced by undertaking applied research.

vii. Continuing Education: Another possibility is to conduct training in topics of interest for industry by offering continuing education programmes that are designed from the perspective of the industry. Even short term courses may be offered with due certification by the institutes.

Appendix -19

Requirement of NIFT during the 12th Five Year Plan

Construction of new NIFT Delhi campus: It is already argued that NIFT Delhi has expanded from 180 diploma seeking students to almost 1500 students in 10 under/post graduate courses. The current institute campus is bereft of residential and recreational facilities. The erstwhile hostel space is being used for housing teaching space. It is important that during the 12th Plan Delhi Centre is shifted to a new campus that will have complete recreational as well as residential facilities and will also cater to any future requirement. The current building could be used to house autonomous council for fashion and textile education as well as current headquarters of the NIFT centres. Towards this shifting budget of Rs. 250 crores is proposed.

Improvement in Infrastructure and facilities: It is felt that current infrastructure and facilities would require upgradation in many centres. This would mainly be towards upgrading Resource Centres to develop into a state of art library and establishment of National Fashion Information System having facilities like book, journal, e-journals, crafts, database, museum, etc. There will also be a design studio in each centre for integrating with craft cluster projects. Every NIFT centre should have specialized laboratory for cutting edge research at Masters and Ph.D level for design, management and technology. Improvement is needed in the classrooms so that technological tools like overhead projectors, screens etc. are in all the lecture halls. In addition, there should be at least 2 to 3 classroom that have V-SAT facilities to collaborate with distant centres of the NIFT.

Faculty training and development and Research Journals: According to current estimate there is additional requirement of 200 faculty members to maintain the current student-faculty ratio of 12:1. Also the existing faculty base requires continuous upgradation through Institutes of repute both at national and international level. In addition, faculty should be encouraged to undertake research and bring out published work of international standard including creating expression in any form. Being the thought leader in this field, NIFT also should launch an international journal.

Subsidy for economically weaker students for international exposure: The NIFT is currently providing subsidy to the students of weaker sections. However, the reach is restricted; further, students coming from the weaker sections find it difficult to participate in student exchange programmes, because of high costs involved in such programmes. Some earmarked funds for this purpose should be provided by the MoT.

Remuneration for International Experts and visiting Professors: While preparing its own faculty, the institute should also invite international experts from time to time, either as visiting faculty, or in conferences or to train the faculty. Similarly, there should be dedicated programme for sending our faculty to gain insight and get exposure.

Provision for IPR cell: A dedicated unit for focus on IPR issues should be developed. It should develop a full-fledged programme to bring awareness as well as consciousness on these issues.

There should also be adequate funds for sustainability awareness campaign, development of any new courses and programmes as well as revision of the curriculum.

The MoT should provide Rs. 75 crores as Block Grant to NIFT for all the purposes, in addition to Rs. 250 crore for shifting of Delhi Centre.

Annual Requirement of funds are projected as follows:

(Rs. in crore)

S. No.	**Year**	**Financial Requirement**		**Total**
		Delhi	Others	
1	2012-13	1	15	16
2	2013-14	48	15	63
3	2014-15	100	15	115
4	2015-16	100	15	115
5	2016-17	1	15	16
	TOTAL	**250**	**75**	**325**

Appendix- 20

SARDAR VALLABHBHAI PATEL INTERNATIONAL SCHOOL OF TEXTILES & MANAGEMENT

(SVPISTM) Projected cost for 12th Five Year Plan

Sardar Vallabhbhai Patel Institute of Textiles and Management was established by the Government of India, Ministry of Textiles, registered under the Tamil Nadu Societies Registration Act, 1975, to cater to the long-felt need for management courses specializing in textiles. It was upgraded as Sardar Vallabhbhai Patel International School of Textiles & Management (SVPISTM). This is going to be unique and premier Institute offering both Textiles Technology and Textile Management, integrated courses.

Academic Activities

Existing Programmes

The Institute is offering full time two years programmes, namely, (a) Post Graduate Diploma in Management (Textiles) and (b) Post Graduate Diploma in Management (Apparel) with 60 seats each which is approved by AICTE, (c) IGNOU – SVPISTM collaborative MBA programme in Textile Management. These programmes are being continued in the year 2011-12 and in addition to which (d) Post Graduate Diploma in Management (Retail Management), (e) Post Graduate Certificate in Management (Home Textile Management) are also offered in the academic year 2011-12.

Future programmes to be launched

The upgradation of SVPISTM has been divided into two phases viz. Phase-I (2012 – 2017) 12th Plan period and Phase-II (2017 – 2022) 13th Plan period. Integrated 5 year B.Tech with PGDM programme will commence during 12th and 13th plan.

PHASE I – (12TH PLAN PERIOD) – 2012 – 17

a) **2012 -** 5 year integrated B.Tech. - Garment Manufacturing Technology (GMT) + PGDM.
b) **2014 -** 5 year integrated B.Tech. – Technical Textiles + PGDM.
c) **2015 -** 5 year integrated B.Tech. – Textiles Technology + PGDM
d) **2016 -** 5 year integrated B.Tech. – Textiles Processing + PGDM
e) **2017 -** M. Tech course will be on the niche area like Technical Textiles and Nano Technology.
f) **2017 –** Ph.D programme will start with two candidates.

PHASE II – (13TH PLAN PERIOD) – 2017 - 22

a) **2018 -** 5 year integrated B.Tech. - Area of specialisation will be based on demand + PGDM.

The institute will become India's largest one and only unique National Textile University under Institution of National Importance, Government of India by 2020.

International Initiatives

The Institute is expanding its international initiatives by signing MoU in the area of students' exchange, faculty exchange, conducting collaborative research and seminars, sharing of research information and executive training. Along with the above, a new initiation – "Summer Schools" concept is being evolved under which students of SVPISTM would be

sent to International Universities for a short period of three months to study various aspects of Textile Technology, Management, Case Analysis, Team work skills, Strategic Innovation, Operational Excellence, etc.

Details of MoUs are as follows:

1. Technical University of Liberec, Czech Republic – MoU has been signed and is in the operational stage. Students / faculty exchange are planned.
2. CITTA DI BIELLA, Italy
3. University of Bolton, Bolton
4. Federal University of State of RIO Grande Do Nort, Brazil
5. BITEAM, Sweden

Plan Requirements

The Institute has been upgraded to "Sardar Vallabhbhai Patel International School of Textiles and Management (SVPISTM)" on 7th June, 2010. Detailed Project Report is being prepared by Educational Consultant India Limited (EDCIL) Ltd. A preliminary report has been presented before the Steering Committee which has directed EDCIL to submit the final report in May 2011.

Total Requirement for SVPISTM in the 12th Plan is:
EDCIL Projection – Rs. **316 Cr**

I. Non-recurring

(Rs in crores)

S.No.	Details	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total
(a)	Cost of Land and Land Development	26.00	20.00				46.00
(b)	Building & Civil works	10.00	40.00	30.00	20.00	28.00	128.00
(c)	Lab equipments, Teaching Aids & Other assets	25.00	40.00	34.00	21.00	22.00	142.00
(d)	Preliminary expenses	0.10	0.10	0.10	0.10	0.10	0.50
					Sub-Total (I)		**316.50**

II. Recurring

(a)	Employees' Cost	5.00	5.50	6.00	6.50	7.50	30.50
(b)	General Administration	4.50	5.00	5.50	6.00	7.00	28.00
					Sub-Total (II)		**58.50**
					Grand Total (I + II)		**375.00**

Appendix -21

Nodal Centre for Upgradation of Textiles Education

NCUTE Projected Cost for 12th Five Year Plan

NCUTE's first year operation in the SVPISTM is bound to be challenging. The Institute has drawn up strategy by creating a road map for implementation of NCUTE activities in the phased manner. The following are the few challenges that will be addressed during the 12th Plan:

(a) Issues pertaining to quality of textile education include inter alia, lack of comprehensive: evaluation system such as oral assessment for students, lack of publications pertaining to new research; new textile testing/pilot manufacturing equipments, development of faculty and promoting competitive grants for academic achievements.

(b) Lack of common core curriculum and syllabi across the centres.

(c) Inadequacy of publications and source books, catering to Indian fashion & textile scenario.

(d) Need for relevant material in apparel fashion, costume designing, technical textiles, modern spinning technologies, and knitting technology.

I. Non-recurring

(Rs in crores)

S.No.	Details	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total
(a)	Lab facility	0.25	0.30	0.30			0.85
(b)	Other Fixed Assets	0.35	0.40	0.25	0.25		1.25
					Sub-Total (I)		**2.10**

II. Recurring

(a)	Research & Publications	0.20	0.25	0.10	0.15	0.30	1.00
(b)	Seminars & Programmes	0.25	0.40	0.30	0.30	0.38	1.63
(c)	Other activities including travel and Faculty Development	0.10	0.10	0.20	0.15	0.15	0.70
					Sub-Total (II)		**3.33**
					Grand Total (I + II)		**5.43**

Appendix -22

II. Inputs/ Recommendations of Various Expert Groups.

Recommendations of the Prime Minister's Group as contained in their Report.

Consideration for the 12th Plan:

- Textiles & Garments being an employment intensive industry, the policies and support measures to overcome the procedural delays and to have faster implementation of schemes a mechanism should be put in place.
- There is a need to ensure long-term support measures from the Government to mitigate the adverse impact whenever this sector is hit by external factors.
- There is a need to ensure a quick design of instruments for retaining the competitiveness of the Textiles and Garments Sector.
- The capital subsidy for Textiles Industry under the TUFS be restricted for sourcing from domestic sources in order to strengthen the domestic manufacturing of Textiles Machinery and equipments.

Recommendations of the National Strategy or manufacturing (NSM).

- Policies of Government should increase the employment content of growth without sacrificing competitiveness; sub-sectors such as Textiles & Garments etc. are ideal candidates for attention by the Government as they have obvious, competitive advantages in the world market.
- It is necessary to encourage sub-sectors like Textiles & Garments and enable them to move forward on the growth path quickly.

Recommendations of the Study on Productivity and Competitiveness of Indian Manufacturing sector: Textiles & Garments (National Productivity Council (NPC), 2010).

- Cost of power being one of the major components of production cost, to offset this option subsiding unit rates of power or encouraging the use of other viable options such as non-conventional energy sources with available financial and other incentives are to be considered.
- Since the power outages are frequent, encourage setting up of dedicated/captive power generating sources for the Textiles clusters involving State level agencies and private partners as a viable project on a pilot basis.
- Occasional training through ITES, Textiles design and management institutions in apparel, quality control and design areas for development of skilled work force.
- Simplify inter-state tax regime for movement of Textiles goods.
- Modernize units by upgrading technology.
- Timely reimbursement of duty drawback and other market development assistance.

- Focus on the development and growth of apparel export.
- Strengthen the support measures available to Textile garments manufacturers and traders for attending, showcasing and publicizing Indian textiles and garments in International trade fairs.
- Regulate and control raw material export to ensure stable yarn prices.
- Adequate support measures for growth of the handloom sector.
- Encourage more technical innovation through better design, technology, production processes.
- Measures to reduce the transaction cost.
- Promote and encourage lean manufacturing and cost reduction measures.
- Improve export tax structure for making the T&G Sector more competitive.

Recommendations of the Study on Deriving Manufacturing Competitiveness Indices of Key Sectors: Textiles & Garments (ICRA Management consulting services, 2010).

- Steps to be taken to reduce cost disadvantage of T&G Manufacturing, which include higher cost of power (40% higher than that of competing countries), reducing the duties of liquid fuels such as furnace oil, support captive power generation in the regions of power shortage.
- To address labour shortage consider routing the GMNREGA through T&G Industry by committing employment for 100 working days.
- Refund State level taxes and duties.
- Associations should establish skill development centers.

Recommendations of the Study Enhancing Competitiveness of Indian Manufacturing Industry: Assistance in Policy Making (CRISIL, 2009).

- Increased focus for Weaving, Knitting and Processing for investment through TUFS.
- Encourage export of value added product instead of raw material.

Improvements in SITP for strengthening garments through consolidation in weaving, processing segments.

Appendix-23

Minutes of the Working Group meeting

Minutes of the first meeting of the Working Group on Textiles and Jute Industry for the 12th Five Year Plan held on 20th May, 2011

The first meeting of the Working Group on Textiles and Jute Industry for the 12th Five Year Plan held on 20th May, 2011 at 3.00 p.m. in Committee Room No. 47, Udyog Bhavan, New Delhi under the chairpersonship of Secretary (Textiles). List of participants is annexed.

2. Welcoming the members of the Working Group to its first meeting, Chairperson stated that the Ministry hoped to engage indepth with the members over the next 2 to 3 months to formalize ideas for making the 12th Plan of the Ministry of Textiles into a more effective and inclusive Five Year Plan.

3. Chairperson also stated that the Working Group was going into policy areas pertaining to the sectors wherein issues of increasing depth, improving the supply chain management for cotton and other fibres, making clustering/ aggregation more effective and productive needed to be addressed. There were also cross-cutting issues requiring inter-ministerial/ departmental consultation and cooperation for which Planning Commission has constituted Working Groups and officers from our Ministry have been included into such cross-cutting Working Groups. These are:

I) Boosting India's Manufacturing Exports
II) Effective Industrial Growth & Environment Sustainability
III) MSMEs Growth
IV) Business Regulatory Framework
V) Skill Development and Labour Flexibility

4. A Presentation was made by Smt. Ranjana Kale, Additional EA covering the following:

i) Approach to the 12th Plan: The objective of the 12th Five Year Plan is to achieve faster, more inclusive andsustainable growth. It is therefore necessary to identify critical areas where existing policies and programmes are not delivering results, evaluate weaknesses and undertake corrective measures to achieve greater efficiency in programme implementation. We also need to strive to capture new challenges that may have emerged and suggest relevant initiatives/interventions.

ii) Developing the 12th Plan: As per the guidelines of the Steering Committee, Working Groups are one of the 3 pillars to create the Plan and are required to generate content on sectors and cross-cutting issues by analysing the current status of industry and formulate goals for same, devise strategies for achieving the goals set and make recommendations based on the Terms of Reference.

iii) 12th Five Year Manufacturing Plan for Textiles: The manufacturing sector is complex. Not only are there inter-relationships between its sub-sectors, there are several constraints affecting the sector, such as infrastructure, labour institutions,

technology acquisition, trade policies, etc. Three key objectives for the 12th Five year Manufacturing Plan for textiles are to increase "depth" in manufacturing, to enhance global competitiveness and to ensure sustainability of growth with regard to environment.

iv) Current Status and Review of Achievements during 11th Five Year Plan: During the last ten years capacity addition has grown at a CAGR of 7.5% for man-made filament yarn, 5.5% for man-made fibres, 4.4% for rotors, and 3.45% for powerlooms. There was no significant growth in capacity addition in respect of looms in organised sector (where infact there was a decline) and worsted and non-worsted spindles. In the handlooms sector also, the number of units and looms have come down drastically. India's textile exports increased from US$ 12.3 billion in 2004-05 to 24.42 billion in 2010-11 (quick estimates), registering a CAGR of 12.11%. Textile export growth rate is expected to increase in the coming years as it stood at 17.1 % during 2010-11.

5. She further stated that there is a need to focus on overall development of the textiles sector and achieve targets that are laid out in the Strategic Plan of the Ministry of Textiles for the period 2011-16.

6. Shri V. Srinivas, JS and member of the Working Group informed that he was coordinating 4 sub-groups in the Ministry of which the sub-groups on "Powerlooms" has met in Mumbai on 12th May 2011 and the Sub-group on " Textiles & Apparel" met in Delhi on 14th May 2011, where issues concerning the sub-sectors were discussed in detail.

7. Shri A.B.Joshi, Textile Commissioner and member of the Working Group informed that all data and statistics pertaining to the textile industry was being updated. Chairperson desired that TXC may submit three chapters for incorporation in the Report of the Working Group by 8th June 2011. These chapters would be discussed in the next meeting of the Working Group to be held on 20th June, 2011.

8. Chairperson further stated that the Ministry has had the Cotton Technology Mission to which we have to return with renewed energy so as to enhance cotton production further. JS(VS) also stated that under Technology Mission on Cotton, MM I and MM II have already been completed and MM III and MM IV are currently being implemented.

9. Shri H. K. L. Magu, Vice Chairman, AEPC stated that there was need to evolve better criteria for financing the units in the textile industry. He also opined that the incentives given to the export sector also need to be given to the domestic textile sector.

10. Shri Girish Luthra, Gujarat Eco Textiles Park stated that fibre processing being a weak area in the country, needs to be developed.

11. **Powerlooms**

- On Powerlooms, Textile Commissioner & Co-chairman of the Sub-group on powerlooms stated that:

- This sub-sector contributes 67% to the total textiles production. A project cost of Rs. 1,372 crore has been envisaged for modernisation of machinery in the sub-sector through which a big improvement in capacity addition is expected.
- The workshed scheme for powerlooms is in operation since 2002-03 facilitating setting up of world class worksheds.
- Government subsidy of Rs. 16.46 crore has been given to the sub-sector.
- An Integrated Powerloom development Scheme has been drafted including new interventions and a specialised scheme for North Eastern Region.
- Consolidation of the existing powerloom sector is envisaged by a substantial increase in benefits to the sub-sector.

- Dr. Renu Parmar, Adviser (Industry and VSE) from the Planning Commission stated that she was happy to hear that in the 12th Plan, focus would be on the powerloom sector which has enormous potential. However the sector is faced with the problem of access to credit.
- Chairperson desired that the sub-group may track the growth of the powerloom sector and also look into the problem of credit access so that a policy format could be put in place for improving access to credit in the 12th Plan.
- She added that efforts were being made to develop greater awareness about the facilities needed by the sub-sector. Road shows are a means of greater coverage of the schemes in the North East where sufficient awareness does not exist. Therefore a series of road shows are proposed to generate awareness.

12. **Yarn Prices**

Shri R. N. Choubey, DC(HL) and member of the Working Group stated that increase in yarn prices had been a major concern in the recent past. The availability of yarn has to be ensured. Chairperson observed that in this context, CCI can have a renewed role in the 12th Plan towards ensuring better supply chain management.

13. **Handlooms**

Sh. Subrat Das, Deputy Secretary, Ministry of Tribal Affairs pointed out that TRIFED had not been included in the composition of the Working Group on Handlooms and requested that the MD, TRIFED may be added as a member. The suggestion was readily accepted by Chairperson and she further stated that Tribal weaves should also be added to the list of handloom items to be promoted.

14. **Jute**

- On theJutesub-sector, Sh. Sujit Gulati, JS and member stated that:
    - Most concerns of the 11th Plan concerning this sub-sector would continue.
    - Industry wants a 70:30 share of Government and Industry in the size of the projects they propose to implement.
    - Tex-trends held recently was an eye-opener in terms of participation and potential of the sector.
    - The present method of retting is causing environmental concerns. Organized and improved retting arrangements need to be looked at to ensure better quality of jute raw material. He informed that the sub-group on jute is also looking at better organized and intensive cropping of jute.
- Chairperson stated that on matters of quality, innovation and R & D are crucial. The Jute Sector can be 'modelized'. Technology Upgradation and product diversification would help in further developing this sub-sector
- Sh. D. C. Baheti, ED, Gloster Jute Mills, Kolkata stated that the jute industry is gearing up and is also diversifying. Modernisation of the industry is being done through rationalisation of manpower.
- Chairperson stated that for modernization, technical centres exist but they need to become effective.
- Chairperson sought suggestions from Industry on how to have a good model for the jute sector. She also desired that the sub-group may look at these issues.

15. **Silk**

- On the Silk Sector, Smt. Monika Garg, JS and Member of the Working Group stated that the first meeting of the sub-group on Sericulture and Silk was held on 16th May, 2011 in which gaps in the sector have been identified. It was felt that focus needed to continue on better technology and also schemes for Vanya and Mulberry silk.
- Member Secretary, Central Silk Board(CSB) and member of the Working Group made the following points:
    - Price Stabilization scheme would be introduced during XII Plan to ensure remunerative price to farmers and reelers which will also help to reduce shortage of yarn as there was a 30% shortage of silk yarn in the concluded year.
    - A production target of 32,000 tonnes of silk yarn is proposed for the next year.
    - Ways and means are required for the horizontal and vertical growth of the silk industry covering different plan activities such as R & D, Seed, Quality improvement, skill development, extension mechanism, capacity building, development schemes. In Research and Development, thrust is to improve productivity and quality both in pre and post cocoon stages with particular attention on bi-voltine production.
    - A mechanism to protect farmers in the case of crop failure needs to be put in place.

- Self Help Groups (SHGs) have been quite successful in Jharkhand, so this experience could be replicated in other States both in mulberry and non – mulberry sector. The concept of 'Resham Sathi', progressive farmers and farmer field school could also be further developed in various states.
- The Sericulture clusters organized by CSB in different states during XI Plan have shown encouraging results, justifying their continuation on larger scale during XII Plan. Since the crop-pattern, agro-climatic conditions, sector priority and input requirements differ zone wise; hence Zone-wise schemes would be worked out by the CSB.
- Sericulture also suffers from credit access problems. She therefore proposed that if sericulture can be included in agriculture, then credit benefits available to the agriculture sector would automatically be available to the sericulture sector and the credit access issue may get addressed.
- Sericulture sector is divided into three sub-sectors namely Bivoltine, Multivoltine and Vanya silk:
  * Bivoltine sub sector requires intensive R & D in specific areas of J&K,Uttarakhand, Himachal and Manipur.
  * Multivoltine sector requires extensive technology dissemination and effective extension work.
  * Vanya Silk requires R & D in the processing sector, product development and product diversification.

16. **Apparel**

Sh. J.V Rao, Director, NITRA stated that Trimmings and Embellishments can contribute to the value addition in the apparel sector but sufficient focus has not been given to these so far. Chairperson stated that the Department of MSME could be asked to sponsor workshops on this subject.

17. **Fashion & Textiles Education**

JS (MG) informed that the sub-group on Fashion and Textile education held its first meeting on 18th May 2011 in which the demand for such education and institutions was discussed. It was felt that the curriculum needs to be reviewed and for that she sought suggestions of industry. Gaps in terms of courses, curriculum and number of institutions need to be identified. It is felt necessary to enhance the competence of faculty by providing refresher courses on a regular basis. Research cannot be delinked with fashion education and so there is need to focus on R & D. She informed that the sub-group will prepare a strategy paper for this sub-sector for the 12th Plan covering all these areas.

18. **Technical Textiles/Speciality fibres**

- On the subject of Technical textiles, Textile Commissioner stated that this sub-sector witnessed a growth of 15% with Government Regulatory. The sub-group on technical textiles intends to set ambitious targets for the 12th Plan. There exists demand for Speciality Fibres but entrepreneurs are not forthcoming to set up

manufacturing units for Speciality Fibres. It was also noted that even though there is sufficient international demand, sufficient domestic demand does not exist as of now.

- Chairperson stated that the Government is pro-active in this sub-sector and the 12th Plan envisages a high growth in technical textiles.
- JS (MG) pointed out that HS codes do not exist for products of technical textiles. Chairperson desired that JS (SG) may look into the HS Codes issue.

19. **Wool and Woollen Textiles**

JS (VS) stated that it is proposed to scale up the Integrated Sheep Development Programme (ISDP) by Rs. 2000 crores in the 12th Plan. Formulating a Wool Development Programme is also proposed.

20. Concluding the meeting Chairperson desired that all members of the Working Group bring in their suggestions and recommendations which will form a part of the report of this working group. She also exhorted members of the Textile Industry to participate and give their suggestions in the sub-groups.

She thanked all the members for their participation and suggestions.

The meeting ended with a vote of thanks to the chair.

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Annexure

List of Participants

SL. No.	Names and Designation	Ministry /Department / Organisation
1.	Ms Rita Menon Secretary (Textiles)	In chair
2	Shri V. Srinivas, Joint Secretary	Ministry of Textiles
3	Shri Sujit Gulati, Joint Secretary	Ministry of Textiles
4	Smt. Monika S. Garg, Joint Secretary	Ministry of Textiles
5	Ms. Ranjana Kale Addl. Eco. Advisor	Ministry of Textiles
6	Dr.(Smt.) Renu S. Parmar Economic Advisor(I&M)	Planning Commission
7	Mr Subrat Das, Deputy Secretary	Ministry of Tribal Affairs
8	Sh A B Joshi Textile Commissioner	Textiles Commissioner, Mumbai
9	Sh R.N. Chowbey, DC(Handlooms)	O/o Development Commissioner (Handlooms)
10	Sh S S Gupta DC(Handicrafts)	O/o Development Commissioner (Handicrafts)
11	Ms. Sathyavathi, Member Secretary	Central Silk Board, Bangalore
12	Sh H.K.L. Magu, Vice Chairman	Apparel Export Promotion Council
13	Sh S.C. Kapoor, D.G.	Association of Synthetic Fibre Industry of India
14	Shri S.P. Chakarvorty, Secretary General	Textile Machinery Manufacturers Association (India)
15	Sh. B. K. Mishra CMD	The Cotton Corporation of India Ltd.,
16	Sh. Jeevan Shareen, Regional Executive	**Cotton Association Of India**
17	**Shri. J.V. Rao** **Director**	**North India Textile Research Association, Rajnagar, Ghaziabad.**
19	Shri Mohan Kavrie, Managing Director	Supreme non woven India Pvt. Ltd
20	Sh. Girish Luthra	Gujarat Eco Textile Park, Pandesara, Surat

21	Mr. C. Bose, President	Textile Association of India, Mumbai
22	Manohar Samuel, Jt President	Birla Cellulose (Grasim)
23	Sh. Mahesh Nsanl	SG(IWMF) Mumbai
24	Ms Jalaj Menon	ASFI, South Extension, New Delhi.
25	Shri Rajeev Kumar, Asst. Director	Ministry of Textiles, Economic Division
26	Ms Mamta, Asst. Director	Ministry of Textiles, Economic Division

Minutes of the Second Meeting of the Working Group on Textiles and Jute Industry for the 12th Five Year Plan held on 4th July, 2011

The Second meeting of the Working Group on Textiles and Jute Industry for the 12th Five Year Plan was held on 4th July, 2011 at 3.30 p.m. in Committee Room No. 162, Udyog Bhavan, New Delhi under the chairpersonship of Secretary (Textiles). List of participants is annexed.

Welcoming the participants, Chairperson reiterated that all the members of the Working Groups/Sub groups are aware of the revised timelines for the Working Groups /Sub groups for the 12th Five Year Plan (2012-17) and these need to be adhered to. She further desired that chairpersons of Sub groups may e-mail their presentations to all the members and that the reports of the Working Groups/Sub groups would also be circulated by e-mail for their perusal and suggestions. This was followed by presentations of the following Sub groups:

- Textiles & Apparel
- Technical Textiles
- Powerlooms
- Sericulture
- Jute
- Fashion & Textiles Education
- HRD & Skill Development
- Wool & Woolen Textiles

1. Textiles & Apparels

- Sh V. Srinivas, JS, in his presentation stated that:
  - Secretary (T) had indepth interaction with the textiles industry on 17th June 2011.
  - It was noted that the 11th Plan Performance was disappointing where most of the targets relating to production of spun yarn, cloth and textile exports were missed. Therefore outdated policies need a relook so that this sunset sector can be turned around to a sunrise sector.
  - For formulation of 12th Plan proposals, 19 meetings have been held so far.
  - There is a target of 8% increase in cotton consumption, 15% increase in cotton exports with focus on country-based targets; share of cotton yarn in exports is proposed to be increased from 20% to 26%.

- Tremendous efforts would be required to breach the world market, so there is need to create a framework in which focus would be on liberalising rigid labour laws and have more relaxed rules.
- As we are contributing less than 12% to world cotton production, additional spindlage is required to raise this share.
- Industry Profits are very important and TUFS has to play an important role in facilitating it.

- Sh H.K.L. Magu, Vice Chairman, AEPC stated that in the 11th Plan only Rs 5000 crore was spent by government for boosting exports and even less is forthcoming now. He further stated that strong emphasis needs to be laid on increasing exports of textiles and apparels.
- Chairperson stated that Green Technology is required for environmental sustainability and the 'Green Plan' drawn up by Sh. Girish Luthra of Gujarat Eco. Textile Park is a very ambitious plan. She further stated that the exports division needs to take care of increase in capacity in other sectors like handlooms also, in addition to textiles & apparels.
  - Chairperson further enquired about the baseline in case of Spun Yarn and whether the policies proposed would take care of the high rate of change taking place in the sector and if 'Export Excellence' was being aimed at.
  - JS(VS) informed that a scheme for raising exports to $ 30 billion has been formulated. However, as of now, breakthrough has only been achieved in manmade and woollen textiles; it has not come about in Jute, coir & Handicrafts.

- Sh Alok Jiwarajka, Chairman, AIL observed that blends and non cottons need to grow faster, which will require focused efforts. The present targets are low and must be revised. TUFS should have a Plan provision of Rs 15000 to Rs 18000 for the 12th Plan.
- Sh A. K. Khullar, Joint Adviser(Industries), Planning commission said that Planning Commission would take a view on continuation of TUFS.
- Sh Mukund Choudhary, VITMA stated that Cotton can be blended with non cotton. Further, as GDP is expected to grow by 12% in 12th Five Year Plan, 5 to 6% growth proposed in Spun Yarn does not fit into the Plan and needs to be revised.
- Chairperson stated that for growth rates we should go with industry. Some sectors like leather have raised the bar unrealistically high so we should be realistic in our targets. She also said that special focus should be laid on R & D and innovation during the 12th Plan.

2. Technical Textiles

- A presentation on Technical Textiles was made by Sh Sujit Gulati, JS wherein he stated that :
  - During 11th plan a CAGR of 11% was achieved and for 12th plan, it has been revised to 16%. This would also require increasing the production of technical textiles machinery indigenously.
  - For the scheme for 'Identification of H.S. codes for Technical Textiles', Rs 50 lakhs are being proposed and Rs 3 crore would be required for 'Standardisation of Technical Textiles'.
  - Agro – Textiles could be a focus area for the North-East in the 12th Plan.
  - The Technical Textiles (TT) sub-sector would have a total plan fund requirement of Rs 800 crores.

- JS(VS) observed that standards for TT can be fixed but mandation may not be feasible.
- Shri Mohan Kavrie, MD., SNWIPL (Supreme non woven India Pvt. Ltd) stated that a growth rate of 16% is conservative and can be achieved. We need to be more aggressive in Technical Textiles and aim at a higher target. He also added that industry availing of financial assistance from the Govt under govt schemes should be accountable for the funds so granted.
- Chairperson made the following observations:
  i) Technical Textiles is too exciting sector to leave at 16% growth rate - it should be revised to 18 – 20%.
  ii) We have the advantage of being early movers and we have got a Technology Mission very early in the development of the sector. A separate line item called "TT" needs to be brought in upfront.
  iii) Top Up Schemes in North East should be undertaken, for which we should collaborate with DONER.
  iv) As for Textiles machinery, on our persuasion, a study has been commissioned by Ministry of Heavy Industries. Therefore, for technical textiles machinery, our requirements should be conveyed to them so that they are factored in the study and industry may also approach the Department of Heavy Industry for their requirements.

- Sh A. B. Joshi, Textile Commissioner added that following Strategies should be adopted for growth of Technical Textiles in 12th Five Year Plan:
  - Aggressive implementation of Technology Mission on Technical Textiles.
  - Formulation & Notification of spenders by BIS.
  - Implementation of regulatory framework in specified areas.
  - Encouraging eco-friendly indigenous production of Technical Textiles machinery.
  - 15% target for exports.
  - Modernisation of existing machinery.

3 Powerloom

- Textile Commissioner made a presentation on the Powerloom sub-sector wherein he stated that a scheme was proposed for Scrapping of existing looms and making financial provision for paying the loom owners for the same.
- JS(VS) stated that Group Insurance Scheme for powerloom workers and TUFS will be continued in 12th Five Year Plan. Inspite of assistance provided to the powerloom sector during the past plan period, it still faces problem like abysmal level of technology, fragmentation of loom holding size, lack of economies of scale, poor product quality. These problems would be tackled in Mission Mode in the 12th Five Year Plan and provision of funds in TUFS for powerloom workers would be made.
- Sh A. K. Khullar, Joint Adviser, Planning Commission proposed a "Distress relief fund" for powerloom weavers.
- Chairperson made the following observations:
  i) Costing of looms in the clusters should be very realistic where under-costing of looms should be avoided. Costing of shuttle less looms also needs to be taken care of.
  ii) Mission mode for the sub-sector is not necessary. Instead, the sector should have three good and well thought out schemes.
  iii) Schemes may be reformulated as per industry need.
  iv) Scrapping of looms is not a good idea and if at all, it may be done on demand basis with some justification.

4. Sericulture

- Smt Monika S. Garg, Joint Secretary stated that:
  - During 12th Plan, zonal approach is proposed for production strategies, with particular emphasis on J & K, Manipur and Uttarakhand, and the unit cost is to be calculated on zonal base.
  - Multivoltine would remain mainstay of Indian Silk Production. We need to develop better breeds of silkworm i.e. third generation of cross –breeds. Extension support for multivoltine seed for farmers is necessary.
  - Bivoltine is to be practised on cluster basis through linkages among CSB, State and Private sector, for which intensive R & D is required.
  - For Vanya Silk we need to carry forward the growth momentum through R &D and product diversification. Vanya Silk has to be popularised as "Green silk" in the export market through brand promotion strategies.
  - Extension of CDP benefits to landless farmers is proposed to be done subject to some conditions.
  - Special focus is intended the on the Post cocoon sector.
  - Scheme for interest subsidy to weavers is being planned as weavers are badly in need of working capital. Target for credit disbursement in the sector is a new initiative being proposed.

- A presentation on Sericulture was made by Sh S.S. Das, Director and he stated that Community based Organization in C.D.P. is new thinking, in it 20 farmers forms Cluster Group(SCGs), 10 SCGs form Cluster Level Associations(CLA), CLAs federate at Taluka and District Level. Basically thrust is on polling resources, to federate farmers through clusters, extension and credit facilitation.
- Chairperson observed that interest subsidy scheme in sericulture would have to be in line with interest subsidy scheme for the Handloom sector, otherwise it may not be implementable.

5. Jute

- A presentation on Jute was made by JS(SG), wherein he stated that:

  - Approach for 12th five year Plan would be to ensure stability in supply, quality and price of raw jute, maximize the use of better technology, compliance with social and

environmental standards, integratation with the developments in other fibres in and other countries.

- In China the jute sector is growing very fast giving intense competition to us as productivity in China is 7000 to 11000/per hectare, whereas in India it is only 1.8 tuns per hectare
- The sub-group on jute has had 3 meetings and 10 sub-areas have been identified for focus.
- Production of better jute seed, raw Jute & jute goods, better retting technology, modernization, skill upgradation, labour welfare, environment & quality compliance and Knowledge management are areas that need critical intervention.

- Chairperson stated that we cannot keep waiting for better "retting" arrangements for a long time. This needs to be done within the next 2 years.

6. Fashion & Textiles Education

- A presentation on Fashion & Textiles Education was made by JS(MSG) wherein she stated that during 12th Plan the focus would be on quality of education, faculty development, teachers' training and curriculum reforms in vocational & skill development, to ensure employability in response to changing marketing needs, encouragement of research & innovation and cross- linkages between institutions & industry.
- JS(VS) stated that collaboration with Textile Committee will help in upgradation of skills of faculty and students.
- Dr J. V. Rao, NITRA stated that gap in the curriculum of Textile Institutions and skill demanded in the market will be met in the 12th Plan.
- Chairperson made the following observations:
  i) NEPCDC may be taken on board for the sub group on this sub sector
  ii) Sh Vijay Kumar, Secretary, AEPC may send his suggestions to the Sub-Group Chairperson.
  iii) A modus operandi is required to develop faculty in Fashion Institutions. Dedicated Centres of Excellence need to be developed under NIFT and the approach for this should be qualitative.

7. HRD & Skill Development

- A presentation on HRD & Skill development was made by JS(VS) wherein he stated that approach for the 12th Plan is to involve Industry in vocational training, management of vocational education and effective coordination among institutes.

8. Wool & Woolen Textiles

- A presentation on Wool & Woolen Textiles was made by JS(VS) wherein he stated that:

  - Approach for the 12th Plan is strengthening of Wool marketing by the intervention of State Wool Boards, Corporations and Federations so as to pay remunerative price to farmers.

  - R & D activities shall be promoted in the country to help the woollen industry to adopt quality control so as to improve quality of products alongwith reduction in cost.

9. Economic Adviser requested all the Sub groups to submit their reports by 20th July with soft copies of the reports to be submitted as per prescribed standard format circulated in the meeting(also enclosed).

10. Concluding the meeting Chairperson thanked all the members for their participation and suggestions.

The meeting ended with a vote of thanks to the chair.

Annexure

List of Participant

Sl. No.	Name of Participant	Ministry/Department/Organisation
1	Secretary(Textiles)	In chair
2	Sh Sujit Gulati, JS	M/o Textiles
3	Sh V. Srinivas, JS	M/o Textiles
4	Smt. M.S.Garg, JS	M/o Textiles
5	Sh N.D.George, EA	M/o Textiles
6	Sh A.B.Joshi,Textile Commissioner	M/o Textiles
7	Sh R.N. Chaubey, DC(Handlooms)	M/o Textiles
8	Sh S.S. Gupta, DC(Handicrafts)	M/o Textiles
9	Sh A. Bhattacharya, Jute Commissioner	M/o Textiles
10	Smt. Ranjana Kale, AEA	M/o Textiles
11	Sh S.S. Dass, Director	M/o Textiles
12	Sh Dilip Kumar, CCA & Director	M/o Textiles
13	Sh A.K. Khullar, Joint Advisor	Planning Commission
14	Sh B.K. Mishra, CMD	Cotton Corporation of India Ltd
15	Sh R.N. Bandyopadyay, Jt. Director	DGE&T,M/o Labour & Empl.
16	Sh Deepak Saluja	Sr. Group Manager, SNWIP Ltd.
17	Sh Mukund Choudhry	Vitma fentex
18	Sh B.K. Patodia, Chairman	GTN Textiles
19	Sh S.Chakraborty, Secy. General	TMMA, Mumbai
20	Sh S.P. Oswal	Vardhman Textile Ltd.
21	Sh Girish Luthra	Gujrat Eco. Textile Park, Surat
22	Sh D.K. Nair, Sr. GM	Confed. of Indian Textile Ind.
23	Sh Shishir Jaipuria, Chairman	Confed. of Indian Textile Ind.
24	Sh H.K.L. Magu , Vice-Chairman	Apparel Export Promotion Council
25	Sh Vijay Kumar, Acting Secy	Apparel Export Promotion Council
26	Sh Manohar Samuel, Jt. President	Birla Cellulose(Grasim)
27	Sh Mohan Kavrie, MD	Supreme Nonwoven India Pvt Ltd
28	Sh J.V. Rao, Director	NITRA, Ghaziabad
29	Sh Alok Jiwrajka, Chairman	Alok Industires
30.	Ms Mamta, AD	M/o Textiles
31	Sh Rajeev Kumar, AD	M/o Textiles
30	Sh A. K. Palit, AD	M/o Textiles