

# DETAILED PROJECT REPORT VIJAYANAGARAM COIR CLUSTER

*Submitted to*



**Coir Board  
Kochi**



*Prepared by*



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# INDEX

## **Project Summary**

### **Chapter 1: Cluster Profile**

- 1.1 Background
- 1.2. District Profile
- 1.3. Geography
- 1.4. Demographics
- 1.5. Cluster Location
- 1.6. Coir Activity in Vijayanagaram
- 1.7 Cluster Enterprises

### **Chapter 2: Production Process and Cluster Products**

- 2.1 Raw Materials
- 2.2 Cluster Products
- 2.3 Manufacturing Process
- 2.4. Marketing
- 2.5 Cluster Map
- 2.6 Support Institutions
- 2.7 Value Chain Analysis
- 2.8 Opportunities & Challenges

### **Chapter 3: Market Assessment and Demand Analysis**

- 3.1 Global Scenario
- 3.2 National Scenario
- 3.3 Coir Sector in Andhra Pradesh

### **Chapter 4: SWOT and Gap Analysis**

- 4.1 SWOT analysis
- 4.2 Need Gap analysis

### **Chapter 5: Profile of Implementing Agency**

### **Chapter 6: Project Concept and Strategy Framework**

- 6.1 Project Rationale
- 6.2 Project Objectives
- 6.3 Focus Products/ Services
- 6.4 Project Strategy

### **Chapter 7: Project Interventions**

- 7.1 Soft Interventions
- 7.2 Hard Interventions
- 7.3 Cost of Technical Agency
- 7.4. Cost of Implementing Agency

### **Chapter 8: Project cost and Means of Finance**

- 8.1 Project Cost
- 8.2 Means of Finance

**Chapter 9: Plan for Convergence Initiatives**

**Chapter 10: Project Planning and Monitoring**

10.1 Project Planning

10.2 Implementation, Monitoring & Evaluation

**Chapter 11: Project Time Line**

11.1 Soft Interventions

11.2 Hard Interventions

**Chapter 12: Business Plan**

12.1 Introduction

12.2. Market

12.3 Manufacturing Process

12.4. Capacity of the plant

12.5 Process Flow Chart – Production Process

12.6 Process Flow Chart – Technical Perspective

12.7 Raw Material

12.8 Marketing Arrangements

12.0 Project Financials

**Chapter 13**

Expected Outcome

## PROJECT SUMMARY

- 1. Cluster Category:** Major
- 2. Name of Cluster:** Vijayanagaram Coir Cluster
- 3. Location**
- State: Andhra Pradesh
- District: Vijayanagaram
- Blocks: Bhogapuram,  
Pusapatirega, Denkada,  
S.Kota, Kottavalasa
- Villages: Tudem, Kowluvada,  
Gudepuvalasa,  
R.Kancheru, Ravada,  
Manjeru, Veluduru,  
Konda, Katchenu,  
Kollayyavalasa,  
Govindapuram,  
Chintapalli, Chowdudada,  
Kumili, Denkada, S.Kota,  
Kottavalasa
- 4. Craft/ Industry:** Coir
- 5. Current Product Portfolio:** Coir fibre and curled coir
- 6. Name of IA:** APITCO Ltd, Hyderabad
- 7. Project Objectives:**
- To produce coir fibre to meet the requirement of micro and household enterprises
  - To produce value added coir products like coir fibre, coir fleece and coir pith compost
  - To enhance production level at least by 40%
  - To increase profitability at least by 30%
  - To enhance turnover by 50%

- To create networks for marketing

## **8. Key Gaps Identified**

### **Technology related:**

- No Technology related issues in the cluster. But there is good scope for value addition and making innovative coir products.

### **Input related:**

- Adequate power supply is not available in the state. Irregular supply and power cut by the electricity authorities resulting in low production of the coir products

### **Market related:**

- Entrepreneurs of Tamilnadu are the main contenders for the marketing of the products manufactured and they are deciding the price for the products of the Andhra Pradesh.

### **Labour related:**

- Insufficient labour availability during agriculture season and also in other seasons due to implementation of Mahatma Gandhi National Rural Employment Guarantee scheme in the Rural Areas of the state resulting limited availability of labour for the Industry.

### **Infrastructure related:**

- Coir industrial units are located in own lands of the entrepreneurs and no infrastructure facilities like roads and drainage facilities in the cluster.

**Finance:**

- Banks are not willing to finance the principle firms due to their unorganized nature of operations and any expansion/modernization plans by entrepreneurs are thus affected. The awareness of entrepreneurs on schemes like NMCP, SFURTI, MSECDP, CLCSS, and PMEGP is limited.

**Others:**

- Lack of a formal cluster level association, limited contact with BDS providers and technical institutions are other issues hindering the growth of the cluster. The entrepreneurs requesting frequent visit of Coir Board and DIC officials.

**9. Proposed Interventions****Soft Interventions**

- Exposure visits – Central Coir Research Institute (CCRI), Kalavoor and Central Institute of Coir Technology (CICT), Bangalore
- Visit to Coir Fleece manufacturing units and other innovative product manufacturers as per the interest of SPV members and other micro enterprises
- Design of publicity and packaging materials including Product logo design, Company logo branding, brochure, leaflet, advertising/ display material
- Design of New coir fleece products
- Participation in trade fairs
- BDS for Market Research, marketing and sales

## Hard Interventions

- Manufacturing of Coir Fibre, Coir fleece and coir pith compost by creating common facility centre

## 10. Project cost & Means of Finance

S. No.	Intervention	Total cost	SPV	NA
1	Soft intervention	25.00	0	25.00
2	Hard Intervention Including 20% of working capital	271.10	67.78	203.32
3	Technical Agency fee	18.26	0	18.26
4	Remuneration of CDE and other expenses for three years	20.00	0	20.00
Total		334.36	67.78	266.58

## 12. Means of Finance

Particulars	Amount in Rs. Lakhs
SPV contribution (25% of the project cost- hard intervention)	67.78
GoI Grant (75% of the project cost) under SFURTI	266.58
Total	334.36

### 13. Scheduling

#### Soft Interventions

S.No	Activity	2015-2016				2016-2017			
1	Awareness Programmes at Village Level (6 Nos.)								
2	Training of micro enterprises and women artisans on making coir crafts, coir pith compost for two months (75 artisans)								
3	Exposure visits to Coir Research Institutes ,CCRI & CICT (10 Nos for 5 days)								
4	Visit to Coir Fleece manufacturing units and other innovative product manufacturers (10 Nos for 5 days)								
5	Product promotional activities such as Branding – Product logo design, Company logo branding, process improvement, brochure, leaflet, advertising/ display material								
6	Participation in Trade fairs								
7	Launching Website								



## Hard Interventions

Financial Year		2015-16				2016-17				2017-18			
S. No	Activity	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Civil works												
3	Bidding process for machinery												
4	Electrical works												
5	Installation of Machinery & commissioning												
6	Trial production												
7	Commercial Production												

### 12. Scope for convergence

Potential convergence initiatives could be with

1. Corporate CSRs of Vizag steel plant (VSP), GMR, GVK, Coromandal Fertilizers, Vizag Port Trust.,
2. Ramakrishna Mission and
3. District Rural Development Authority

- Creation of infrastructure for assembly unit for making various kinds of rubberized mattresses
- Supply of RCM for hospitals, student hostels, railway restaurants and lower income groups at discounted price.
- Coconut nursery for saplings and plantations in Hudood affected coconut belt which benefits the menial farmer and sustains study demand for coco products and derivatives.
- Skill Development and Training of unemployed youth in coir activities
- Human Excellence Programme by Ramakrishna mission
- Mechanization of coir processing at remote women artisans

- Promotion of terrace gardening using coir products in corporate

### **13. Proposed SPV**

A society is formed representing entrepreneurs and workers from various villages of the cluster in the name of, East Coast Coir Cluster located at Pusapatirega, Vijayanagaram which acts as SPV and takes the initiatives to establish and manage CFC.

### **14. Key impact**

- There will be a perceptible improvement in the quality of life of the coir workers/ artisans thus improving their socio - economic conditions.
- CFC will act as an agent of change in the individual cluster units operations, as CFC produces products that yield higher returns and thus ensures better financial position to all cluster members both financially & socially .
- This improvement in financials will provide better turnovers and dispensable income for improving individual units, production processes and thus improves quality of its output.
- Value addition in raw material to finished goods cycle resulting in higher turnovers, profits, and improvement in quality.

In conclusion, the proposed Coir Mattress plant at Vijayanagaram will be financially viable and facilitate the cluster members. They can get better margins and improve socially and economically to a new level by involving in learning the skills of Marketing Positioning and trading. Become more leaning towards sales, collection and quality improvements of products without compromising on Manufacturing and systems.

### **1.1. Background**

India is endowed with more than one million traditional manufacturing enterprises which are micro in nature and fall under unorganized sector. Since ages the artisans are producing handlooms, handicrafts and coir products across the country especially in rural areas. Due to reasons like availability of skilled manpower, raw materials, these enterprises are concentrated in clusters across the country. These clusters are playing an important role in providing employment opportunities in rural areas and even exporting to global markets due to uniqueness of the products. However issues like labour intensive nature, low volumes of production, limited focus on value addition are hindering their growth and make them incompatible with countries like Indonesia, China and Malaysia.

In recent times, Cluster approach has become one of the important tools for micro enterprise development in the country. The Cluster strategy is expected to help the micro enterprises to enhance their productivity and develop new innovative products through cooperative mode. In fact development of clusters as a tool for increasing production, triggering economic growth, alleviating poverty and removing regional economic imbalances is gaining momentum in both the developed and developing countries.

With a view to make the traditional industries more productive, competitive and facilitate their sustainable growth, the Government of India has launched a Scheme in the year 2005 called SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Union Ministry of Micro, Small and Medium Enterprises and its organizations and institutions, in collaboration with State Governments, their organizations concerned, non-Governmental organizations, etc, are implementing the Scheme.

The SFURTI Scheme takes a holistic approach for cluster development and includes an initial diagnostic study and trust building exercise, based on which assistance is provided for infrastructure development, skill development, technology upgradation of the enterprises, marketing, product development and setting up of common facility centres, etc.

During 11th Plan, Coir Board has implemented SFURTI scheme successfully in 26 clusters. Now Coir board proposes to implement said scheme in the 12th plan period because of its impact in terms of employment creation, new enterprise creation, improved quality and productivity to name a few. Coir Board has entrusted National Institute for Micro, Small and Medium Enterprises (**ni-msme**) to prepare Detailed Project Report (DPR) of Vizianagaram Coir Cluster.

## **1.2. District Profile**

Vizianagaram is the main city of the Vizianagaram District of North Eastern Andhra Pradesh in Southern India. Vizianagaram district was formed on 1 June 1979, with some parts carved from the neighbouring districts of Srikakulam and Visakhapatnam. It is, at present, the largest municipality of Andhra Pradesh in terms of population. It is located about 18 km inland from the Bay of Bengal, and 52 km northeast of Visakhapatnam.

It bounded on the East by Srikakulam district, on the West and South by Visakhapatnam district, on the South-East by Bay of Bengal and North-West by Orissa State. The district was formed with 9 taluks viz., Vizianagaram, Gajapathinagaram, Srungavarapukota and Bhogapuram taluks from Visakhapatnam district, Bobbili, Parvathipuram, Saluru, Kurupam and Cheepurupalli from Srikakulam district. In December 1979, 3 more taluks were added by creating Nellimarla, Viyyampeta and Badangi duly bifurcating the taluks of Vizianagaram, Srugavarapukota and Bobbili respectively making the total taluks to 12 and these taluks have been further sub divided into 52 Firkas. For administrative

convenience, the district is divided into 2 Revenue Divisions viz., Vizianagaram and Parvathipuram.

### **1.3. Geography**

It is situated within the geographical co-ordinates of 17- 15' and 19 – 15' of the northern latitudes and 83 – 00' and 83-45'' of the eastern longitudes. Vizianagaram district occupies an area of 6,539 square kilometres. The district can be divided into two distinct natural divisions i.e. plains and hilly regions. The hilly agency area covers Pachipenta and Gummalaxmipuram mandals fully and Salur, Makkuva, Ramabhadrapuram, Parvathipuram and Komarada mandals partly. Rest of the area is plain. The agency region mostly consists of hills covered by the Eastern Ghats which run parallel to the Coast from the North-East to South-West. The average height of these hills is over 914 meters, although there are several peaks of 1,219 meters high. In Parvathipuram division, the hills are lower than elsewhere and consists of steep and rugged lines devoid of plateaus. The main towns of Vizianagaram district was Parvathipuram on the north, Cheepurupalli on the east, Vizianagaram on the south and S.Kota on the west. Remaining main towns Bobbili and Salur in the center of the district. The principal rivers flowing in the district are River Nagavali, Suvarnamukhi, Vegavathi, River Champavathi, River Gosthani and Kandivalasa. The main soils are red soils, sandy loams and sandy clay, which constitute 96% of the total area. The predominant soils are loamy with medium fertility. There are red loamy soils in dry lands and clay loamy in wet lands. The soils at some places are as thick as 4 meters, probably represents alluvium along the valleys. The total geographical area of the district is 6300.38 km<sup>2</sup>. About 51.1% of the land area is sown for agriculture and another 12.3% land is put to non-agricultural uses. The forest covers about 17.8% of the land. About 12.3% of the land is Barren and uncultivable. About 4% land is current and other Fallow lands. There is a coast line of 28 kilometers in the district on the east facing Bay of Bengal. There are 8 villages and 16 hamlets consisting of 6,993 fishermen. They are situated in Pusapatirega and Bhogapuram mandals.

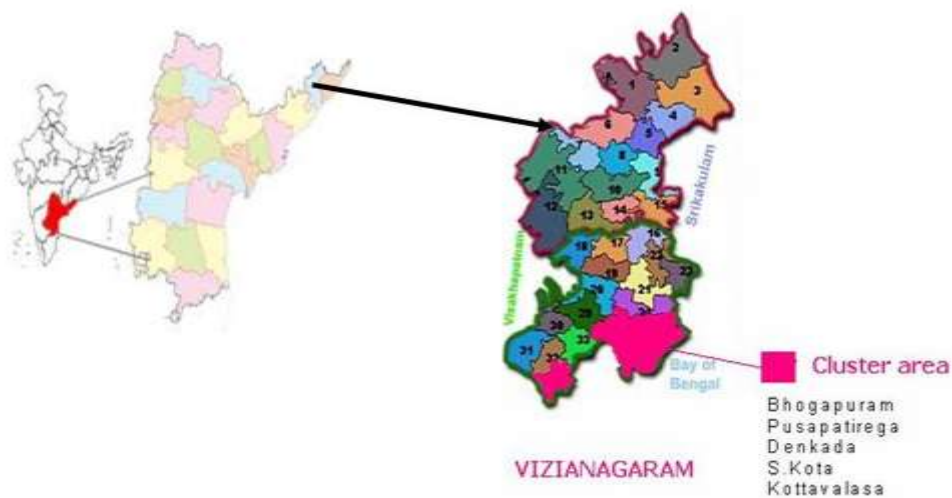
#### 1.4. Demographics

Vizianagaram district has a population of 2,342,868 according to the 2011 census. The district has a population density of 358 inhabitants per square kilometre (930/sq mi). Vizianagaram has a sex ratio of 1016 females for every 1000 males, and a literacy rate of 59.49%.

The total population of district increased to 22,49,254 as per 2001 census. They consists of 11,19,541 males and 11,29,713 females. There are 1009 females per 1000 males in the district. The total area is 6,539 square kilometres. The population density is 344 persons per km<sup>2</sup>. The Scheduled Caste population is 2,38,023 and Scheduled Tribe population is 2,14,839 which comes to 10.58% and 9.55% respectively to the total population of the district.

The rural population of the district is 18.37 lakhs which comes to 82% of the total population and the urban population is 4.12 lakhs which comes to 18% of the total population. Vizianagaram Town with a population of 1,95,801 is the only Class-I town in the district.

#### 1.5. Cluster Location



In Vizianagaram district coconut cultivation has been mainly spread in the mandals namely Poosapatirega and Bhogapuram. Coconut crop is being cultivated in about 7900 hectares approximately.

### 1.6. Coir Activity in Vijayanagaram

Vizianagaram coir cluster is one of the emerging coir clusters and there is tremendous scope for development of coir industry. The cluster is spread over 60 kms and active for the last ten years. It is estimated that the cluster turn over is around Rs 20.00 crores.

Average production from the coir units will be 1700 MTs per annum and providing employment to 1000 persons. In addition there are two coir cooperative societies working in the district

The coir activity in the following villages is observed.

Name of the district	Name of the block/mandals	Villages
Vizianagaram	Bhogapuram	Tudem, Kowluvada, Gudupuvalasa R.Kancheru, ravada, manjeru
	Pusapatirega	Veluduru, Konda, Katchenu, Kollayyavalasa Govindapuram, Chintapalli, Chowduvada, Kumili
	Denkada	Denkada
	S.kota	S.kota
	Kottavalasa	Kottavalasa

## 1.7 Cluster Enterprises

There are ten micro enterprises, five small enterprises and four medium enterprises in the cluster area. Another five units have come up recently and one new proposal is under process. In addition, around 10 unregistered coir fibre and curled coir manufacturing units are working in the above cluster for which details of employment and other details are not available.

The average wage of male worker is Rs 220/- per day and that of female worker is Rs 120/-. All the workers are casual and they are getting only daily wages for the days of work. The estimated income of the units varies from Rs 2.60 lakhs to Rs 3.8 lakhs per annum. The income of micro unit is Rs.2.6 lakhs, small unit is Rs.3.4 lakhs and medium unit is Rs. 3.8 Lakhs.

Steps are being taken by DIC to impart training to 100 artisans to upgrade their skills. They are also proposing EDP programmes and workshops for creating awareness among the entrepreneurs and also for dissemination of modern technology. Further it is also proposed to organize buyer-seller meet for better marketing the coir products.

Coir pith is a by-product in most of the coir industries. They are proposing demonstration of coir pith composting by using the latest technology. There is scope to encourage 5 coir fibre units and 10 coir yarn units per annum at Poosapatirega and Bhogapuram mandals where raw material is abundantly available.

Some of the active enterprises are mentioned below:

- 1 Vasavi Industries, Gumpam, Pusapatirega Mandal
- 2 Sai Lakshmi Industries, Gumpam, Pusapatirega Mandal.
- 3 Balaji coir industries, Gumpam, Pusapatirega Mandal
- 4 Ramu coir Industries, Gumpam, Pusapatirega Mandal
- 5 Sankar coir Industries, Gumpam, Pusapatirega Mandal



- 6 Srinivasa coir Industries, Gumpam, Pusapatirega Mandal.
- 7 Bhanu coir Industries, Gumpam, Pusapatirega Mandal
- 8 Siva Coir Industries, Gumpam, Pusapatirega Mandal
- 9 Sakthi coir Industries, Gumpam, Pusapatirega Mandal
- 10 Venkatesh coir Industries, Gumpam, Pusapatirega Mandal
- 11 A.R.Coir Industries, Gumapm, Pusapatirega Mandal
- 12 BBC mills, Chintapalli, Pusapatirega Mandal

Competition among the cluster manufacturing units is with regards to purchase of coir husk since adequate raw material is not available in the area. Hence, entrepreneurs are purchasing the coir husk at competitive price resulting higher cost of raw material.

## **Chapter: 2**

### **Production Process and Cluster Products**

#### **2.1 Raw Materials**

The vizianagram is a naturally developed cluster concentrated mainly in five mandals viz. Bhogapuram, Pursapathirega, Denkada, S.kota, Kottavalsas mandals. The coconut crop is grown in 7000 ha with an average yield of around 12000nuts per hectare. Sufficient quantity of raw material (Coir Husk) though produced in the cluster is diverted as fuel in the brick manufacturing units and electricity generation(Thermal) power plants using coir husk as fuel along with firewood. There are two major raw material suppliers in the cluster namely Coasta coir rope industry located at Gumpam village and the Chintapalli coirs of Chintapalli village of Poosapatirega mandal. The average cost of one tonne of husk is Rs 750/-.

#### **2.2 Cluster Products**

The main cluster products include coir fibre and curled coir.

##### **a) Coir Fibre**

Coir fibre is extracted from the fibrous outer cover of the fruit of the coconut palm, with or without retting. Coir fibre is graded based on its nature of extraction, colour, presence of long and short fibres, impurities etc.

##### **b) Curled Coir**

Curled Coir is mainly used for manufacturing rubberized mattresses, pillows and cushions.

#### **2.3 Manufacturing Process**

Majority entrepreneurs are adopting traditional technology for manufacturing coir fibre, curled coir in their units and some of the entrepreneurs are adopting available latest technology in their units. All the units in the cluster have regular production through out the year and for some units the Coconut Husk (Raw material) is not available during rainy season for two months i.e. from July to August every year.

## **Coir Fibre extraction**

The coconut husk collected from the farms is first fed in to the disintegrator where it is crushed. The crushed husk is soaked in water for one Week. The soaked material is fed into the decorticator to separate fibre and pith. The fibre is dried in the sunlight and is pressed in the form of 35-Kg bundles by using balling press. The bales are sold to the coir products manufacturers based at near by Districts & States.

## **Automatic two ply yarn Spinning**

Coir yarn spinning is similar to cotton yarn spinning. The processes involved given here under:

- a. Willowing
- b. Slivering
- c. Spinning
- d. Winding

Coir fibre obtained from fibre extraction units is wetted by spraying water. After 2-3 hours the wetted fibre is passed through the willowing machine to remove the impurities and the place the fibre and parallel to each other. The fibre is then fed in to slivering machine wherein it is converted in to sliver form. The slivers are spun into yarn as per specifications in the spinning machine. The yarn is then cleaned and wound in to rolls and is now ready for the market.

## **Curled coir**

Coir fibre obtained from fibre extraction units is wetted by spraying water. Then the fibre was cleaned by using of Turbo cleaner. The fibre is then fed in to curling machine wherein it is converted into curled rope. The curled rope is then rolled by using of winding machine. Finally it is dispatched into manufacturing of coir bed units.

Presently the units are working with traditional manufacturing techniques that are obsolete. Practically the tiny units of this cluster are not using any machinery and all operations are carried out by hand by the artisans.

Now-a-days everything has got mechanized in several areas. These machines will be made popular through the cluster development program to make this cluster to convert into mechanization and value addition. The machineries widely used for fibre extraction is Decorticator. The Spinning process is mostly done by Automatic Yarn Spinning Machine. (Single headed machine & Double headed machine).

#### **2.4. Marketing**

Like in other Coir clusters of Andhra Pradesh, the entrepreneurs of Tamilnadu are the main contenders for the marketing of the products manufactured in the cluster and they are deciding the price for the products. At present the finished products are marketed in Tamilnadu and some quantity has been exported to China from Chennai port. The domination of agents is observed and they are commanding the entrepreneurs in fixation of price of the product resulting in low profit margins. The present manual processing of products with obsolete procedures are the reasons for inconsistent product quality and low productivity. The products are of non uniform quality, technology upgradation addresses all above shortcomings. There is large scope for developing value added products and introducing latest technologies for manufacturing of coir products. Further there is scope for developing high valued down stream products like curled coir. The cluster can be benefited through collective efforts and marketing network and business promotional activities. Presently, most of the marketing is done mainly by a few traders. Due to the dependency on few channels of marketing, the price fixation is done largely by the traders. The intervention helps to overcome this problem. There is huge market for coir yarn, ropes and fiber and various other coir Products in the eastern and north eastern states of the country, which can be exploited. Moreover, its nearness to Vishakhapatnam port, hence the export potential can be harnessed.

## **2.6 Support Institutions**

The Support Institutions / Public and Private Service Providers in the cluster are:

### **Coir Board**

Coir Board is the Nodal Agency for the SFURTI scheme. The Coir Board was set up by the Government of India under an act of parliament the Coir Industry act 1953. Coir Board provides financial, market development, skill training assistance for the development of Coir Industry and also extends the technical guidance and advice for setting up of new units as well as for renewal/ modernization of existing units for development and increasing productivity, quality up-gradation etc.

### **ni-msme**

National Institute for Micro, Small and Medium Enterprises (ni-msme) is a reputed national level entrepreneurship development institute with expertise in cluster development methodology. ni-msme helps the practicing entrepreneurs through a host of services like research, consultancy, information, training, education and extension. It is the technical agency for the clusters approved under the SFURTI scheme. The institute assists the nodal agency in training of the cluster development agents, the implementing agency, validation of cluster action plans, monitoring, and evaluation etc.

### **District Industries Center:**

The 'District Industries Centre' (DIC) was started by the central government in 1978 with the objective of promoting micro, small, and medium industries in a particular area and to make available all necessary services and facilities at one place. DIC acts as the focal point of the industrialization of the district, prepares the industrial profile of the district, counsel and assists entrepreneurs in selection of business ideas; provide information about local sources of raw materials and their availability, manpower assessment with respect to skilled, semi-skilled

workers. DIC organizes entrepreneurship development training programs, provides information about various government schemes, subsidies, grants and assistance available from the other corporations set up for promotion of industries, assessment of availability of infrastructure facilities, gives SSI registration and prepares techno-economic feasibility report.

The entrepreneurs expressed that DIC is providing techno-managerial services for the cluster enterprises. Steps are being taken by DIC to impart training to 100 artisans to upgrade their skills. They are also proposing EDP programmes and workshops for creating awareness among the entrepreneurs and also for dissemination of modern technology. Further it is also proposed to organize buyer-seller meet for better marketing the coir products.

Coir pith is a by-product in most of the coir industries. They are proposing demonstration of coir pith composting by using the latest technology

#### **APITCO Ltd**

APITCO, incorporated in 1976, is a premier Technical Consultancy Organisation promoted jointly by all-India financial institutions (IDBI, IFCI, ICICI), industry development corporations in Andhra Pradesh (APIDC, APSFC) and Commercial Banks (Andhra Bank, Indian Bank, State Bank of India, Syndicate Bank).

APITCO provides a wide range of consulting services, especially to SMEs in project identification, project counselling, pre-feasibility reports, detailed project feasibility studies, infrastructure planning, market assessment, expansion, diversification and turnaround strategies, energy audits, waste minimisation, environment impact assessment, valuation of fixed assets, skill development etc. Extending handholding to micro entrepreneurs through its 'escort services' is APITCO's USP.

APITCO has been actively engaged in the development of fruit processing, foundry, readymade garments, handloom cotton durries and mango jelly clusters in Andhra Pradesh. During 11th five years plan, APITCO has successfully implemented SFURTI programme in Rajamundry and Srikakulam Coir Clusters

### **R&D, Testing & Training Institutions**

Testing of the quality of the Products manufactured by the units located in the cluster is done by the enterprises like Kozilon Industries Ltd, Kurlon Industries Ltd, and Century coir mattresses ltd etc before they purchase the product and also providing guidance for manufacturing the products.

### **Commercial banks & Micro finance institutions**

Entrepreneurs are getting finance mainly from State Bank of India, Andhra Bank, and Indian overseas Bank.

### **Machinery Suppliers:**

There is good number of machinery suppliers supporting the cluster enterprises. Some of them are mentioned below:

1. 2M Engineering Company, Bangalore for manufacturing of Coir Fibre process
2. S.G. Engineering Company, Tirunalveli for manufacturing of coir rope
3. Balu Engineering Company, Tirunalveli for manufacturing of coir rope
4. Venkateswara Engg. Works, Yelamanchili for manufacturing of coir fibre
5. Indira Industries, Coimbatore for loading of materials and manufacturing of fibre

## 2.7 Value Chain Analysis

### Value addition by Cluster value chain

Activity of product value chain	Input price(Rs)	Output price(Rs)	Value addition(Rs)
Raw Husk	0	2	2
Fibre extracted from Raw husk and baled	2	10	8
Coir Bale-willowing- clearing- conversion to Curl Yarn	10	16	6
Curl Yarn to coir fleece (sheet) to Rubberized coir mattress	76	120	104

## 2.8 Opportunities & Challenges

### Opportunities:

- Strategic location in the eastern part of the country and the nearness to Vizag port.
- Availability of skilled work force
- Relatively cheap manpower
- Better productivity of fiber
- Congenial state government policies
- Opportunity to exploit 70% available coir pith which presently goes unutilized

### Challenges

- Irregular power supply
- Utilization of husk to making of brick lead to shortage of raw material to coir industries.
- Reduction of plantation is lead to raw material shortage.



## Chapter -3

### Market Assessment and Demand Analysis

#### 3.1 Global Scenario

Pollachi and the coastal region of Kerala State, produces 20% of the total world supply of white coir fibre. Sri Lanka produces 36% of the total brown fibre output. Over 50% of the coir fibre produced annually throughout the world is consumed in the countries of origin, mainly India. Together, India and Sri Lanka produce 90% of the coir produced every year.

In the recent past, countries such as Mexico, Indonesia, Vietnam and certain Caribbean countries have started to supply to the global market in large scale.

The production of coir fibre is given in following table 1.

**Table 1: Production of coir fiber**

	1996	1997 (000 tones)	1998 (000 tones)	1999 (000 tones)	2000 (000 tones)	2001 (000 tones)
India(Brown fiber)	149.1	169.0	210.0	236.0	246.0	251.0
Srilanka	55.8	58.3	62.4	55.2	55.1	52.2
Thailand	4.2	60	6.4	8.6	8.7	9.0
Other Countries	4.0	4.5	5.0	6.1	5.6	5.1
Total Countries	213.1	237.8	283.8	305.9	315.4	317.3
India(White fiber for yarn production)	127.7	127.0	124.0	120.0	120.0	110.0

**(Source: FAO Statistics, December, 2001)**

The above table shows that India and Sri Lanka together contribute almost 90% of the global coir production. Of the total annual production of coconuts, only 10% of the coconut husk is being used for fibre extraction amounting to an estimated 0.5 million MT of coir. Out of this only about 30% enters the world trade. The export in the form of fibre and yarn from producing countries is used for value addition in the importing countries. Sri Lanka is the largest exporter of fibre followed by Thailand and India. However in export of coir products, India tops the list followed by Philippines and Sri Lanka, in the form of mats, mattings, rugs, carpets , needle felt rubberized coir , geo-textiles etc. The export of coir mats, matting & rugs are shown in the following table 2.

**Table 2: Export of Coir mats, Matting's & Rugs**

	1996 (000 tones)	1997 (000 tones)	1998 (000 tones)	1999 (000 tones)	2000 (000 tones)	2001 (000 tones)
<b>India</b>	24.70	26.58	30.62	36.96	41.36	
<b>Sri Lanka</b>	0.69	0.34	0.78	0.78	0.90	1.27
<b>China</b>	0.63	0.98	1.00	0.97	0.97	0.60
<b>Philippines</b>	1.70	2.10	3.62	3.95	3.44	2.50
<b>Austria</b>	0.05	0.05	0.05	0.01	0.06	
<b>Belgium/Lux</b>	0.96	0.20	0.24	0.24	0.17	
<b>Demark</b>	0.34	0.07	0.07	0.13	0.13	
<b>France</b>	0.23	0.28	1.06	2.24	0.50	
<b>Germany</b>	0.69	0.77	0.77	0.64	0.66	
<b>Italy</b>	0.68	0.77	0.77	0.64	0.66	
<b>Netherlands</b>	3.18	0.42	0.27	0.28	0.29	
<b>Portugal</b>	1.42	1.76	0.03	0.08	0.11	
<b>Spain</b>	0.14	0.01	0.01	0.00	0.03	
<b>Sweden</b>	0.42	0.48	0.29	0.28	0.31	

<b>United Kingdom</b>	0.17	0.11	0.12	0.14	0.11	
<b>Total EC(15)</b>	8.26	4.96	3.97	4.60	3.21	3.00
<b>Total</b>	35.18	33.08	35.95	40.92	45.47	48.73

*(Source: - FAO Statistics, December 2001)*

### **3.2 National Scenario**

The Coir Industry in India has a strong position in the export orientation since the early days, when trade was dominated by European companies. Structure of production and relations has changed significantly since then. The pattern of exports and product mix has also changed drastically. With the level of fiber and yarn exports, India is an exporter of goods with added value, which in turn led to a significant change in total volume and value of exports. Coir Export in India fetched around Rs 1116 cr in 2012-13 as against Rs 1052 crore in the last fiscal. There is a huge market for Indian Coir products abroad and at present exports are being done to more than 112 countries. More than 40 per cent of the production is being exported. At present domestic sale is about Rs 3000 crores. The exports had grown by 30 per cent in value and 28 per cent in the current financial year. Coir exports from India had maintained a continuous growth trajectory even during the global economic crisis. For the Indian coir exports the US is the largest market accounting for 37 per cent.

Coir exports from India now have new markets such as Russia and Latin America. The state of Kerala is responsible for about 80% of India's coir exports. Exports have risen at healthy rate of more than 20% during the last nine months of this fiscal.

**Export of Coir & Coir Products from India  
(April 2008 to March 2013)**

**Q=Quality in tones  
(lakhs)**

**V=Value in Rs**

PRODUCT NAME	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013	
	Q	V	Q	V	Q	V	Q	V	Q	V
CURLED COIR	1438.38	223.85	3365.7	668.33	5527.08	1056.52	11855.97	3171.30	8883.14	2112.46
COIR FIBER	19443.54	2390.89	73074.93	9742.03	83393.01	12148.55	119684.54	20323.98	140692.93	20707.66
COIR RUGS	63.83	67.63	46.17	45.38	1146.81	826.22	191.00	185.55	94.83	133.37
COIR PITH	96996.32	8462.30	131916.67	12347.06	157854.93	14829.02	206424.57	22150.70	208399.28	24727.61
COIR ROPE	370.28	164.60	430.56	165.92	211.56	86.72	792.82	340.99	419.62	282.41
COIR OTHERS OR TS	50.50	19.03	55.04	28.52	45.96	35.84	58.36	68.75	30.36	39.33
COIR YARN	5335.09	1925.92	6108.35	2461.21	5021.96	2685.34	5562.87	3140.70	42002.30	2387.22
GEO-TEXTILES	3251.52	1591.05	375.44	2023.77	3266.63	1823.05	3680.91	2433.12	3597.30	2628.74
HANDLOOM MATS	35553.43	23537.53	36297.71	25428.01	29409	21525.8	27656.17	23545.00	24150.93	22810.10
HANDLOOM MATTING	2368.45	1716.56	1832.24	1425.28	1406.49	1244.72	1473.78	1582.83	1418.31	1702.76
POWERLOOM MATS	54.21	40.06	2.84	2.03	0.00	0.00	36.14	24.56	1.94	3.15
POWERLOOM MATTING	87.52	85.09	2.41	3.04	0.00	0.00	0.00	0.00	0.00	0.00
RUBBERISED COIR	1222.59	1174.77	629.78	713.39	383.39	476.89	415.60	549.80	321.47	495.02
TUFTED MATS	33689.27	22598.15	36991.21	25351.24	33349.2	23968.41	33021.17	27745.26	37288.51	33572.91
TOTAL	199924.93	63997.4	294508.05	80405.2	321016.02	80707.1	410853.90	105262.54	429500.92	111602.74

### **3.3 Coir Sector in Andhra Pradesh**

Andhra Pradesh is the largest state in the southern peninsular region, with an area of 2,75,100 sq. kms and a coastal line of 974 kms. Its capital is Hyderabad. Out of 2.75 lakhs Sq. Kms of the State, 14.5 Lakhs hectares are under cultivation. 1.02 lakhs hectares are under coconut cultivation. Annually Andhra Pradesh produces around 110 crores of coconuts. These are predominantly in the coastal districts of Srikakulam, Vijayanagaram, East Godavari, West Godavari and Krishna.

Andhra Pradesh is the fourth largest producer of coir with an output of 28,900 tonnes of coir fibre. The utilization of husk being 31 per cent of the total production of coconuts in the State, there is still plenty of scope for coir production. In Andhra Pradesh, around 41,000 people are employed in this sector and 80 per cent of them being women. There are good export opportunities for coir and coir pith and it can be taken up on large scale as the product is available aplenty. To satisfy the needs of the local Coir Industry, the Coir Board established one of its regional offices at Visakhapatnam in Andhra Pradesh and later on it was shifted to Rajahmundry, East Godavari District to make approachable to the larger number of beneficiaries.

### **2.4 Analysis of global and national scenario**

*The domestic market in India, although very vast with good potential, still remains unexploited. At present organized marketing of coir in the country is being undertaken by the Coir Board, Coir Marketing Federations of the State Governments, State Coir Corporations and State Coir Development Agencies besides the manufacturers in the private sector. It is a fact that organized selling channels of coir products in the country at present are not sufficient to tap the unexploited household sector in India. The private sector efforts in this field are to be given a boost to expand the market network in the country. The Indian domestic market is expanding and the spent up domestic demand is getting unleashed. Whether it is for domestic or export purposes, the sector haven't developed the requisite market orientation and produce marketable products at competitive*

*prices. The biggest challenge before the coir industry in the new era of open market will be to keep the quality of their products and service high and their cost low.*

#### Demand analysis:

Unexploited local markets, lower end product cost (as raw materials and market are in a near proximity, resulting in reduced production costs and transportation costs) will further reduce product costs and thus spur demand for the RCM as a new product, which would be well accepted by local markets, with higher disposable incomes, a ideal match for business opportunity.

#### Renewed Importance after State Reorganization:

With rapidly growing city (Vishakhapatnam) and increased job opportunities and large movement of officials back to Andhra after the formation of Telangana state would further create demand for real estate, building of flats and it trickles down to demand in products like RCM market. As the overall Vishakhapatnam economy is picking up it will create a larger economic framework and this economic strength will trickle down to lower economic strata and thus Higher, Middle and lower income groups improved purchasing power, drives demand for RCM.

Thus the cluster will be most benefited by either offering products at a reasonable price & sell higher volumes(volume business) or by offering at higher prices and make higher profits(value business).

Having good transport system via NH 5 and by Rail, products can be merchandized in markets of Rajahmundry and Vijayawada this can further boost this clusters strengths and financials thus viability to this project and improve each cluster members financially.

Vishakhapatnam being a port city and in close proximity to this cluster a huge potential awaits this cluster once a product standardization is achieved and state governments thrust for creating a huge port

improvements will have a multiplier effect on exporting to Far East markets – and other foreign markets and thus improve this clusters ability to grow from present volume to higher volume to meet the export demand, second tier of growth for this cluster, which impacts the cluster units financial strength and a higher viability to this CFC.

Also, higher awareness in healthy habit of sleeping on coir mattress is increasing; many families are aspiring for such a comfort. It is estimated that during the last marriage season 20,000 new families are formed and as a wedding present a custom of offering a Bed & mattress and kitchen items which is a part of the culture in the state, found that most mattresses were of Rubberized coir mattress is a clear indicator of its popularity as a safe and in giving comfort for better sleep and thus better health and free from spine inducing pains etc.

People with Non coir mattress do not change and only change with the health problems mounting with innovative marketing targeted with medical practitioners /doctors aligning with corporate ,who can be motivated to give mattress as gifts along with year-end incentives will help a large section of market free from sleep disorders and spine related difficulties spurring demand.

Info on current market trends and demand patterns –data potential size of project and financial viability of the CFC project.

### **4.1 SWOT analysis**

#### Opportunities:

- Strategic location in the eastern part of the country and the nearness to Vizag port.
- Availability of skilled work force
- Relatively cheap manpower
- Better productivity of fiber
- Congenial state government policies
- Opportunity to exploit 70% available coir pith which presently goes unutilized

#### Challenges

- Irregular power supply
- Utilization of husk to making of brick lead to shortage of raw material to coir industries.
- Reduction of plantation is lead to raw material shortage.

### **4.2 Need Gap analysis**

Presently there is scarcity of raw material in the cluster. Some of the units procure raw material from Srikakulam District. It is mentioned that the coir husk is used as fuel along with firewood in thermal power generation plants and also by the brick manufacturing units in the nearby areas. The entrepreneurs have suggested that like the Government of Kerala, the Government of Andhra Pradesh should issue an order for not to use coconut husk as fuel by brick manufacturing units and / or by Power generation plants.

The units are happy with the present market for their products but not focusing on emerging technologies and opportunities available for production and marketing of innovative coir products. Lack of awareness



on latest technologies, new products, Government schemes and scarcity of raw material are some of the reasons for the same.

As the cluster enterprises are producing traditional products, Coir Board has to take lead to provide information about latest technology and innovative coir products for the benefit of the entrepreneurs. It is observed and also opinion of some of the entrepreneurs that there is scope for manufacturing the new products likes coir mattresses.

Less availability of labour during agriculture season and also in other seasons due to implementation of Mahatma Gandhi National Rural Employment Guarantee scheme in the Rural Areas resulting in limited availability of labour for coir Industry.

**Technology related:**

- No Technology related issues in the cluster. But there is good scope for value addition and making innovative coir products.

**Input related:**

- Adequate power supply is not available in the state. Irregular supply and power cut by the electricity authorities resulting in low production of the coir products

**Market related:**

- Entrepreneurs of Tamilnadu are the main contenders for the marketing of the products manufactured and they are deciding the price for the products of the Andhra Pradesh.

**Labour related:**

- Insufficient labour availability during agriculture season and also in other seasons due to implementation of Mahatma Gandhi National Rural Employment Guarantee scheme in the Rural Areas of the state resulting limited availability of labour for the Industry.

**Infrastructure related:**

- Coir industrial units are located in own lands of the entrepreneurs and no infrastructure facilities like roads and drainage facilities in the cluster.

**Finance:**

- Banks are not willing to finance the principle firms due to their unorganized nature of operations and any expansion/modernization plans by entrepreneurs are thus affected. The awareness of entrepreneurs on schemes like NMCP, SFURTI, MSECDP, CLCSS, PMEGP is limited.

**Others:**

- Lack of a formal cluster level association, limited contact with BDS providers and technical institutions are other issues hindering the growth of the cluster. The entrepreneurs requesting frequent visit of Coir Board and DIC officials.

## Chapter - 5

### Profile of the Implementing Agency

APITCO, incorporated in 1976, is a premier Technical Consultancy Organisation promoted jointly by all-India financial institutions (IDBI, IFCI, ICICI), industry development corporations in Andhra Pradesh (APIDC, APSFC) and Commercial Banks (Andhra Bank, Indian Bank, State Bank of India, Syndicate Bank).

APITCO provides a wide range of consulting services, especially to SMEs in project identification, project counselling, pre-feasibility reports, detailed project feasibility studies, infrastructure planning, market assessment, expansion, diversification and turnaround strategies, energy audits, waste minimisation, environment impact assessment, valuation of fixed assets, skill development etc. Extending handholding to micro entrepreneurs through its 'escort services' is APITCO's USP.

APITCO has been actively engaged in the development of fruit processing, foundry, readymade garments, handloom cotton durries and mango jelly clusters in Andhra Pradesh. During 11th five years plan, APITCO has successfully implemented SFURTI programme in Rajahmundry and Srikakulam Coir Clusters.

#### **5.1 Institutional Structure:**

APITCO was established in the year 1976 with IDBI as the lead promoter. The shareholding of IDBI was subsequently transferred to SIDBI.

APITCO is one of the 18 TCOs formed by the key national level financial institutions in association with state level institutions and banks.

All India financial institutions, nationalized commercial banks, state level industrial development bodies & financial institutions and employees are the shareholders of APITCO. The registered corporate office is located in

Hyderabad, Telangana, with a wide spread network of offices set up in all the districts of Telangana and Andhra Pradesh States.

APITCO also has offices in Orissa, Chattisgarh, Kerala, West Bengal and Karnataka and has provided its consulting services across the Country. The Organisation has also handled International Assignments in Middle East, South Africa and South Asia.

## **5.2 Governance Structure**

The strategic team of APITCO consists of qualified professionals as board of directors headed by Managing Director. Executive leadership team takes care of functional aspects, which reports to MD.

## **5.3 Operational Profile**

The operational team consists of 13 branches located in 8 states headed by Regional managers. The activities undertaken by APITCO includes- asset reconstruction & management, energy & power management, entrepreneurship development, environment & resources management, food & agri business management, human resource consulting, industrial cluster development, project management consulting, skill development training, tourism infrastructure development. APITCO has professional team with the respective domain skills to handle the above activities.

## **5.4 Management Profile**

The BOD comprises of totally 10 directors including Chairman and Managing Director. Managing Director is in-charge of the executive team to functionally co- ordinate the activities of the operations team to achieve the corporate goals.

## **5.5 Financial Position**

APITCO's consultancy revenues have reached the level of Rs.1330.41 lakhs during 2013-14.

### **Key financials: (in INR Lacs):**

Particulars	2013-14	2012-13
Gross Income	1330.41	1447.16
Profit after tax	104.21	193.48
Net worth	2250.00	2169.00



### 6.1 Project Rationale

In Vizianagaram district coconut cultivation has been mainly spread in the mandals namely Poosapatirega and Bhogapuram. Coconut crop is being cultivated in about 7900 hectares approximately.

Vizianagaram coir cluster is one of the emerging coir clusters and there is tremendous scope for development of coir industry. The cluster is spread over 60 kms and active for the last ten years. It is estimated that the cluster turn over is around Rs 20.00 crores.

There are ten micro enterprises, five small enterprises and four medium enterprises in the cluster area. Another five units have come up recently and one new proposal is under process. Average production from the coir units will be 1700 MTs per annum and providing employment to 1000 persons. In addition there are two coir cooperative societies working in the district.

The average wage of male worker is Rs 250/- per day and that of female worker is Rs 160/-. All the workers are casual and they are getting only daily wages for the days of work. The estimated income of the units varies from Rs 2.60 lakhs to Rs 3.8 lakhs per annum. The income of micro unit is Rs.2.6 lakhs, small unit is Rs.3.4 lakhs and medium unit is Rs. 3.8 Lakhs.

The following enterprises have come forward to take cluster interventions

- Vasavi Industries, Gumpam, Pusapatirega Mandal
- Sai Lakshmi Industries, Gumpam, Pusapatirega Mandal.
- Balaji coir industries, Gumpam, Pusapatirega Mandal
- Ramu coir Industries, Gumpam, Pusapatirega Mandal
- Sankar coir Industries, Gumpam, Pusapatirega Mandal

- Srinivasa coir Industries, Gumpam, Pusapatirega Mandal.
- Bhanu coir Industries, Gumpam, Pusapatirega Mandal
- Siva Coir Industries, Gumpam, Pusapatirega Mandal
- Sakthi coir Industries, Gumpam, Pusapatirega Mandal
- Venkatesh coir Industries, Gumpam, Pusapatirega Mandal
- A.R.Coir Industries, Gumapm, Pusapatirega Mandal
- BBC mills, Chintapalli, Pusapatirega Mandal

<b>No of Units:</b>	<b>24</b>
<b>Society:</b>	<b>Chintapally coir workers industrial cooperative Society (ind/w/39/1988)</b>
<b>Turnover:</b>	<b>Rs 15 crores</b>
<b>Wages:</b>	<b>Rs 250/- per day (Man)</b> <b>Rs 160/- per day (Women)</b>
<b>No of Artisans:</b>	<b>Around 1600</b>
<b>Crop:</b>	<b>4000 ha (Bogapuram and Pusapatirega mandals)</b>
<b>Yield:</b>	<b>Average 12000 nuts per hectare</b>

## **6.2 Project Objectives**

- To produce coir fibre to meet the requirement of micro and household enterprises
- To produce value added coir products like coir fleece and coir pith compost
- To enhance production level at least by 40%
- To increase profitability at least by 30%
- To enhance turnover by 50%
- To create networks for marketing

### **6.3 Focus Products/ Services**

- Coir Fibre
- Coir pith compost
- Coir flees/ sheets from curled coir

### **6.4. Strategy**

- Creating awareness on innovative coir products & manufacturing methods through exposure visits and interactions with machinery suppliers, entrepreneurs and coir board officials.
- Market survey for product diversification & identifying new markets and marketing channels.
- Motivating and constituting special purpose vehicle (SPV) for establishment of CFC
- Preparation of DPR
- Production of Coir fibre, pith compost and coir fleece



## Chapter - 7 Project Interventions

The interventions under the SFURTI have been proposed keeping in view the awareness of the entrepreneurs about the activity, capacity building of the entrepreneurs for bringing them together for common activities in future so that in future clusters of coir making should be promoted by the members.

The proposals for financial assistance from the Ministry in this regard are as under:

### **7.1. Soft Interventions**

The soft interventions for capacity building are proposed within the limit of Rs. 25 lakhs proposed under SFURTI scheme. The details are given below. This support will be one time recurring grant from Government of India. The estimated expenditure suggested is based on the needs of the project and prevailing cost of the related items.

- Exposure visits – Central Coir Research Institute (CCRI), Kalavoor and Central Institute of Coir Technology (CICT), Bangalore
- Visit to Coir Fleece manufacturing units and other innovative product manufacturers as per the interest of SPV members and other micro enterprises
- Design of publicity and packaging materials including Product logo design, Company logo branding, brochure, leaflet, advertising/display material
- Design of New coir fleece products
- Participation in trade fairs
- BDS for Market Research, marketing and sales

<b>S.No</b>	<b>Activity</b>	<b>Amount in Lakhs (Rs.)</b>
1	Awareness Programmes at Village Level (6 Nos.)	4.50
2	Training of micro enterprises and women artisans on making coir crafts, coir pith compost for two months (75 artisans)	6.00
3	Exposure visits to Coir Research Institutes ,CCRI & CICT (10 Nos for 5 days)	2.50
4	Visit to Coir Fleece manufacturing units and other innovative product manufacturers (10 Nos for 5 days)	2.50
5	Product promotional activities such as Branding – Product logo design, Company logo branding, process improvement, brochure, leaflet, advertising/ display material	5.00
6	Participation in Trade fairs	3.50
7	Launching Website	1.00
Total		25.00

## 7.2. Hard Interventions

SPV, a representative of the cluster will facilitate by allotting required Land for CFC. CFC will be equipped with - required machines and process instruments along with industrial shed.

Land	0.00
Building	40.00
Machinery & Equipment	146.50
Furniture and Fixtures	10.00
Transportation and Installation /erection	25.00
Preliminary and Pre operative expenses	6.00
Miscellaneous	11.38
	238.88
20% of Working Capital	32.23
Hard Intervention	271.10
SFURTI grant @ 75%	203.33
SPV contribution 25%	67.78

The construction cost for civil work is also taken into account. The components of hard intervention and estimated cost will be as under:

Of the total, 25% of the total cost will be the contribution of SPV and remaining will be the grant from Government of India under SFURTI.

## 7.3. Cost for Technical Agency

The project involves the preparation of project report and guidance for identification of suitable machines from the approved panels of Coir Board. For imparting the training and devising the training programme, experts in designing, conduct and evaluation of programmes will be taken up through professionals. Construction work is involved and services of an Architect, structural Engineers will be required.

The remuneration to be paid to the technical agency **ni-msme** to provide above services is 8% of the project cost covering the cost of soft intervention and hard intervention.

#### **7.4. Implementing Agency / CDE Cost**

As per the provision made under the scheme, Cluster Development Executive will be engaged in executing the programme. The remuneration of the CDE, administrative expenses of the IA will be within the overall limit provided for the purpose will be Rs. 20.00 lakh.

#### **7.5 Financial assistance from Govt. under SFURTI**

The assistance required under SFURTI from Govt. of India will be as under:

S. No.	Intervention	Total cost	SPV	NA
1	Soft intervention	25.00	0	25.00
2	Hard Intervention Including 20% of working capital	271.10	67.78	203.32
3	Technical Agency fee	18.26	0	18.26
4	Remuneration of CDE and other expenses for three years	20.00	0	20.00
Total		334.36	67.78	266.58

## Chapter 8

### Project cost and Means of Finance

#### 8.1. Project cost

The project cost including the grant, support for soft and hard interventions, remuneration to technical agency, implementing agency and CDE will be as under:

S. No.	Intervention	Total cost	SPV	NA
1	Soft intervention	25.00	0	25.00
2	Hard Intervention Including 20% of working capital	271.10	67.78	203.32
3	Technical Agency fee	18.26	0	18.26
4	Remuneration of CDE and other expenses for three years	20.00	0	20.00
Total		334.36	67.78	266.58

#### 8.2: Means of Finance for hard intervention

Particulars	Amount in Rs. Lakhs
SPV contribution (25% of the project cost- hard intervention)	67.78
Gol Grant( 75% of the project cost) Under SFURTI	266.58
Total	334.36

## Chapter 9

### Plan for Convergence Initiatives

Potential convergence initiatives could be

1. Corporate CSR funds of Vizag steel plant (VSP), GMR, GVK, Coromandal Fertilizers, Vizag Port Trust.
2. Ramakrishna Mission
3. District Rural Development Authority

#### **Proposed activities:**

1. Creation of infrastructure for assembly unit for making various kinds of rubberized mattresses
2. Supply of RCM for hospitals, student hostels, railway restaurants and lower income groups at discounted price.
3. Coconut nursery for saplings and plantations in Hudood affected coconut belt which benefits the menial farmer and sustains study demand for coco products and derivatives.
4. Skill Development and Training of unemployed youth in coir activities
5. Human Excellence Programme by Ramakrishna mission
6. Mechanization of coir processing at remote women artisans
7. Promotion of terrace gardening using coir products in corporate

## Chapter 10

# Project Planning, Implementation and Monitoring

### 10.1 Project Planning

During preparation of Detailed Project report (DPR), the Technical Agency, **ni-msme** had discussed with the implementing agency and proposed SPV members to be associated in the project on critical problems, suitable interventions to overcome the problem areas including soft and hard interventions.

The management representatives from implementing agency and entrepreneurs have given their views and suggestions and accordingly suitable interventions were designed. The details of soft interventions are mentioned in earlier report.

- Exposure visits – Central Coir Research Institute (CCRI), Kalavoor and Central Institute of Coir Technology (CICT), Bangalore
- Visit to Coir Fleece manufacturing units and other innovative product manufacturers as per the interest of SPV members and other micro enterprises
- Design of publicity and packaging materials including Product logo design, Company logo branding, brochure, leaflet, advertising/display material
- Design of New coir fleece products
- Participation in trade fairs
- BDS for Market Research, marketing and sales

With respect to the hard interventions, the following are finalized:

### **Coir fibre making**

- Buster/ Disintegrator (1)
- Beater/ Decorticator (2)
- Screener (1)
- Conveyor
- Bailing Press

### **Coir fleece**

- Sheet Plant 1.5m
- Uncurling unit
- Latex tank
- Drum Press Conveyor
- Sheet Cutting Machine
- Sheet vulcanizing
- Rope Drier
- Hydraulic Press
- Thermo Fluid Heater/boiler
- Ball mill
- Air Compressor Screw Type
- Panel Board
- Other miscellaneous machinery

### **Coir Pith Unit**

Two sheds of 4500 sq ft area are to be constructed to install the machinery.

The proposed SPV members have agreed to invest the contribution of 25% as per the project requirement.



The following important tasks are required to be completed during establishment of the above infrastructure at Common Facilities Centre (CFC).

- Formation of purchase committee with representation from IA, NA, TA, CDE, Financial Institution (or Financial expert), Technical Institution (or Technical Expert) and entrepreneurs
- Identification and selection of machinery suppliers
- Procurement of machinery
- Construction of sheds
- Installation & Electrification
- Trial production
- Commercial production

The successful implementation of above activities will depend on the following aspects:

- Scheduling of above activities to implement within the time frame
- Regular follow-up with NA & TA supervision of project progress and managing the same
- Undertaking work as per the defined time frame in the schedule
- Regular review of project by NA at State level

In order to implement the project successfully, the SPV, NA (Cair Board), IA (APITCO Ltd), TA (**ni-msme**), and CDE need to work as a team and coordinate each other from time to time. At the same time it is suggested to carry out these activities simultaneously to reduce the time. All the concerned agencies have to play their role at the appropriate time for successful implementation of the project. It's the responsibility of IA to regularly interact with NA and TA for their requirements and also to attend or solve any issues.

Some important activities of the above agencies are outlined in the following:

#### **10.1.1. Field office, Coir Board**

The Regional Office, Coir Board at Rajamundry is local office of the nodal agency. The nodal agency facilitates IA in smooth implementation of the project and monitors the progress of proposed CFC in addition to appraising implementation and progress of the CFC to the head office at Kochi.

#### **10.1.2. District Industries Centre, Vijayanagaram District**

On behalf of the Government of Andhra Pradesh, the District Industries Centre plays an important role in successful implementation of the project. The DIC also acts as one of the facilitator in smooth functioning of CFC in long run and also helps in fulfilling requirements of IA/SPV for successful operation of CFC.

#### **10.1.3. National Institute for Micro, Small & Medium Enterprises (ni-msme):**

The Technical Agency, ni-msme monitors the cluster on regular basis, and reports to the field office of Nodal Agency, and assists Nodal agency in disbursement of funds.

#### **10.1.4. APITCO Ltd (IA):**

The IA would facilitate SPV in identification of suitable land for the project, undertake procurement and appointment of contractors, and operates and maintains common facilities in association with SPV members.

#### **10.1.5. Special Purpose Vehicle (SPV):**

A total of 20 micro enterprises have agreed to contribute 25% of creation of CFC as part of the project under SFURTI by initially forming a cooperative society which acts as SPV. All the SPV members together manage the common facilities. The CFC produces coir sheets of various thickness and markets to make profit. The SPV has been registered in the name of East Coast Coir Cluster.

## **10.2. Implementation, Monitoring & Evaluation:**

As mentioned above IA plays vital role in implementation of the project. After receiving final approval of the project from Scheme Steering Committee (SSC), the Implementing Agency establishes Cluster Advisory Group headed by District Magistrate and Working Committee for regular monitoring of the project apart from a purchase committee for procurement of machinery for CFC, looms and machinery.

### **10.2.1. Cluster Advisory Group**

The Cluster Advisory Group is to be established under the chairmanship of District Magistrate with representation from District Rural Development Authority, Educational Institution, Lead Bank, with the objective of fostering increased level of involvement of various cluster stakeholders and strengthening the implementation of the project.

### **10.2.2. Working Committee:**

The working committee is to be formed having nominated members from State Office, Coir Board, Implementing Agency, Technical Agency, District Industries Centre, District Rural Development Authority, Commercial Bank/ Lead Bank Manager, Technical Institution and also Cluster Development Executive & senior entrepreneurs from SPV.

The Working Committee will be chaired by representative not below the rank of Assistant Director of the State/ Divisional office of the Nodal Agency and will meet at least once in a month to review the operational and maintenance aspects of the CFC and decide about the user charges. The IA will open and maintain a corpus fund for maintenance of the CFC. The user charges will go to the corpus. The IA on the basis of recommendation of Working Committee may incur expenditure towards maintenance/ augmentation of the CFC.

### **10.2.3. Purchase Committee**

Facilitating the IA in identification of suitable suppliers of machinery, inviting tenders, bid processing and finalizing tenders are some of the important functions of purchase committee. The Committee will be formed for short term duration at the time of purchase of plant and machinery. The Nodal officer of Coir Board, nominated members from a technical institution, TA, IA, DIC, and senior entrepreneurs will be the members in the committee and the committee is to be chaired by the Nodal Officer.

Chapter 11  
Project Time Line

**11.1. Soft Interventions**

S.No	Activity	2015-2016				2016-2017			
1	Awareness Programmes at Village Level (6 Nos.)								
2	Training of micro enterprises and women artisans on making coir crafts, coir pith compost for two months (75 artisans)								
3	Exposure visits to Coir Research Institutes ,CCRI & CICT (10 Nos for 5 days)								
4	Visit to Coir Fleece manufacturing units and other innovative product manufacturers (10 Nos for 5 days)								
5	Product promotional activities such as Branding – Product logo design, Company logo branding, process improvement, brochure, leaflet, advertising/ display material								
6	Participation in Trade fairs								
7	Launching Website								

## 11.2. Hard Interventions

Financial Year		2015-16				2016-17				2017-18			
S. No	Activity	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Civil works												
3	Bidding process for machinery												
4	Electrical works												
5	Installation of Machinery & commissioning												
6	Trial production												
7	Commercial Production												

## Chapter 12 Business Plan

### **12.1. Introduction:**

The Common Facility Centre (CFC) provided an opportunity for the cluster entrepreneurs to manufacture high value added products with collective and collaborative efforts which in turn will help benefit individual unit's profitability.

The birth of rubberised coir industry is Unique. Prior to the year 1960 people hardly had any idea of this novel and high utility product in those days the world famous car manufacturers of Volkswagen were using horse hair as cushion filling material for their car seats as their production increasing there was dearth of this material , this necessitated a suitable alternate product for Rubberization which would suit to their specifications of various alternative like sisal fibre, jute fibre, the coir fibre was incidentally found to be the best. This was the beginning of the rubberised coir industry.

In 1960s two renowned manufacturers Ms Dr Fahrer and Dr Otto Angliether (DOA) they were competing with each other to supply modern machines to manufacture rubberised coir product, the design and the material of construction was so excellent we find some of their plants are still working well over a period of four decades.

In Indian rubber sided coir industry is nearly four decades old it was in 1964 that m/s Bharat motors of Chennai established its manufacturing unit and many others industries came up.

In the global market the importance rubberised coir has been in the Automobile industry for seating in Trucks Buses Railway and subway coaches.

It has the potential for replacing polyurethane foam in inner spring mattress the competitor for rubberised coir industry is being poly urethane foil. The demand for the rubberised coir mattresses has been increasing as it gives Comfort in sleep and also good insulation ventilation and work together to build up the supportive body of the mattresses for healthy sleep.

## **12.2. Market:**

There is a good demand for the rubberised coir mattress within the country and good scope for export also to the countries where coconut cultivation is not there. In view of the demand the production of Rubberised coir mattress has to be increased .The unit can be established near a Big Market centre with an access to other Market centres also. The potential clientele for the cluster coir sheets will be:

1. Industrial Clientele/ Bulk: Hospitals, Hotels, Student hostels, Railway restaurants, Educational Institutions, Automobile seating, Old age homes
2. Households: High, Middle and Lower income groups

Market Segmentation:

1. Newly married/ New house holds
2. Health Industry (conversion from cotton to coir)
3. Kids
4. Senior citizens
5. Corporate usage
6. Super luxury households



### **12.3. Manufacturing process:**

The curled coir is treated with steam and is fed into untwisting machine to untwist the ropes throughout the curled fibres into coded form .The untwisted is then fed into a sheet machine ,this machine further cords to fibre and puts it on a conveyer belt and required width and thickness, the sheet is now sprayed with a rubber latex compounded with chemicals and the conveyer is passed through successive drying chambers where the water content in the latex is evaporated and the fibres get bonded with a rubber and the continuous bonded sheet of required width comes out from the machine. The sheet is then cut to pieces of required length .The laminated sheets are fed into Hydraulic steam heated press for 10 to 15 minutes to obtain required thickness of the mattresses.

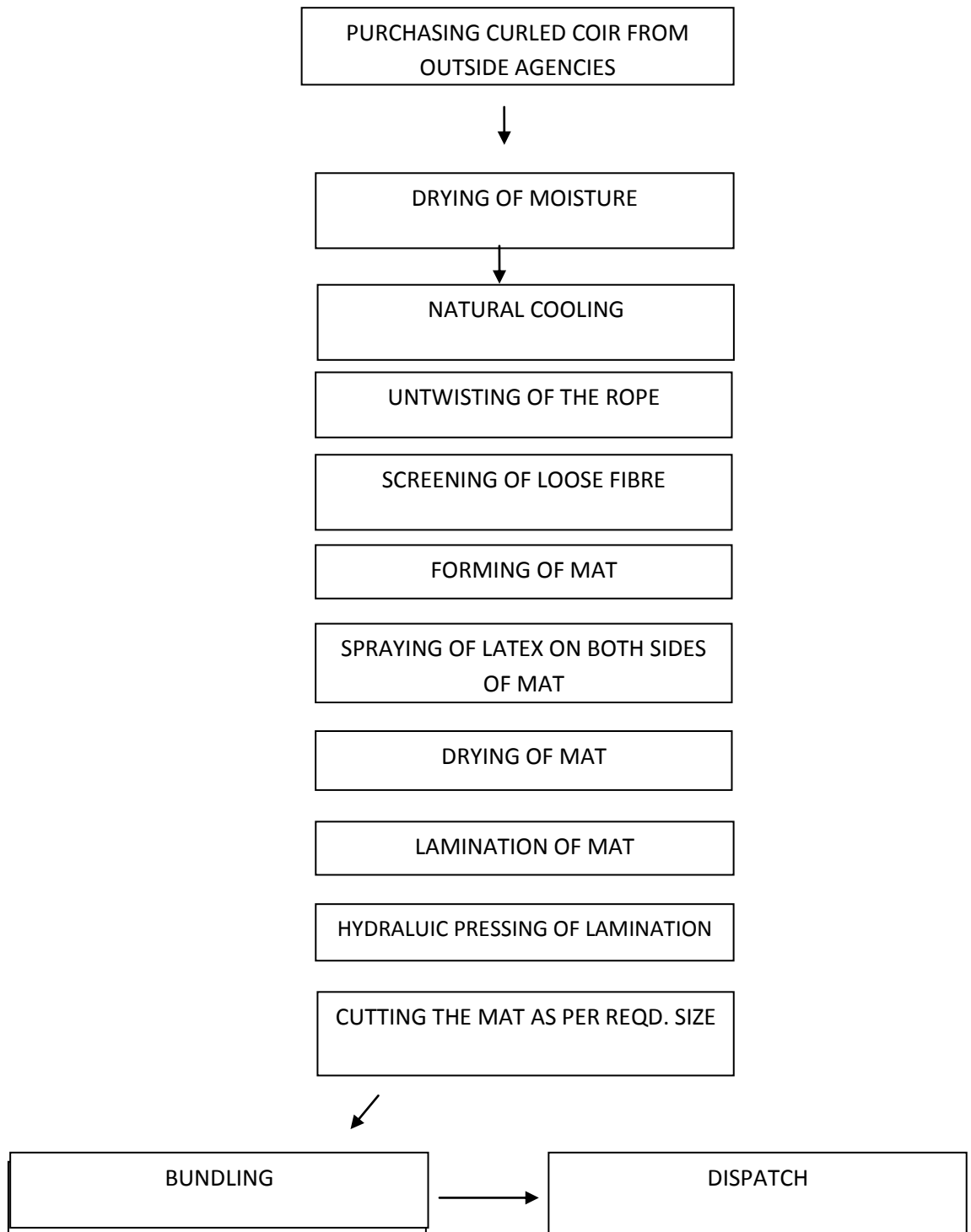
These are then loaded into a hot air chamber where they get vulcanized the vulcanized mattresses are then trimmed using suitable machine. The mattresses are then cover with hessian cloth strip to give it a longer life.

### **12.4. Capacity of the plant:**

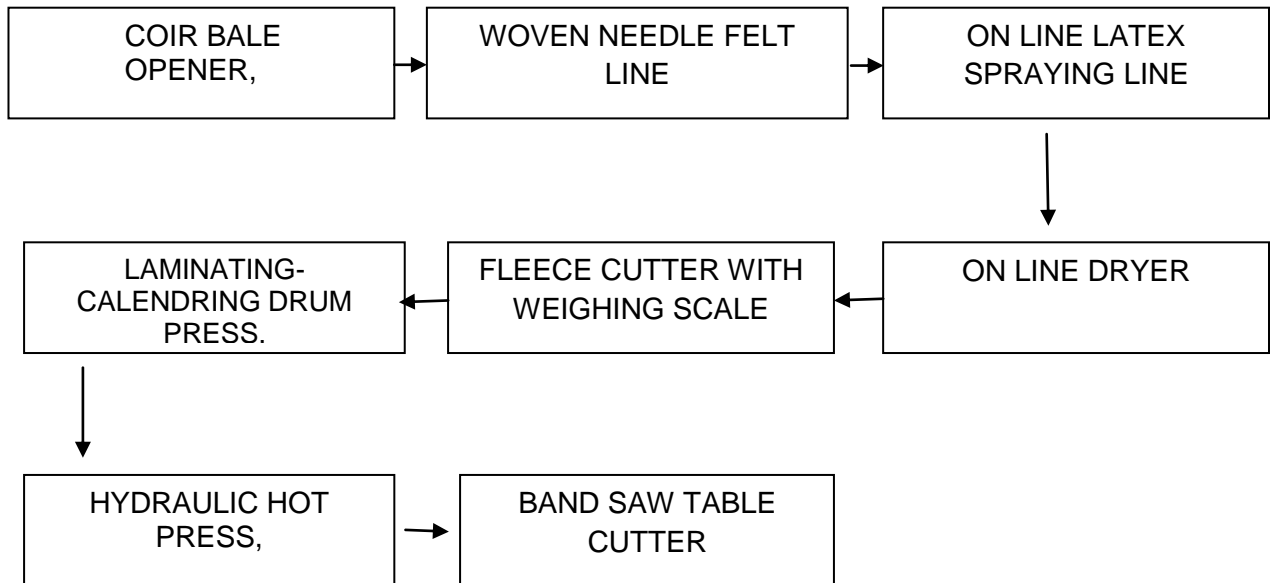
The production capacity of the unit is estimated 3 Metric tons per of 8 hours in a single shift, approx 300 mattress per shift -10-12 kgs per mattress. The annual capacity is thus assessed 900 Mt per 300 working days .According to the demand, the company runs the unit for even two shifts as the unit has a provision for running of two shifts without any difficulty.



## 12.5. Process flow Chart: Simple Production Process



## 12.6. Process Flow Chart: Technical Perspective



**FLEECE PRODUCTION LINE**



[Click to Zoom](#)



### **VULCANIZATION**

#### **12.7. Raw Material**

Rubberised coir, mattresses and sheet are made out of curled coir and natural latex compounded with additives. The following is the combination of raw materials, their mix for manufacture of one Mt of the end product and the supplier details.

In a coir mattress approximate input materials and their percentage:

Curled coir            80 99.45 %

Natural Latex + Additives    19.01%

S.No	Description of Raw Materials	Supplier of Raw Materials and address
1	Curled coir	Sourcing from Cluster Units
2	Natural Latex	1.Munoor Rubbers, Dhakshina Kannada 2.Wynad Resins, Kerala 3.Kuttiy Nickal Rubbers Pvt Ltd., Kerala 4.Kollamkulam Agencies Pvt Ltd., Kerala
3	Additives: KOH, Genosul, Oil, ZDEC, ZNO, ZMBT, TQ, Sulphur, China clay, DF and DM water.	1.Siri Chemical Pvt Ltd., Hyderabad 2.Poornima Traders, Hyderabad 3.GS Associates, Hyderabad 4.Chetty & Co., VSP

Coconut husk is the basic raw material for curled coir. On an average, 50% of the available coconut husk is used to produce coir and coir products and the remaining quantity being used as fuel in rural areas. That is to say, our export quantity during 9 months period (April – December 2007) is 133772 Mt which is derived from 50% of coconut husk utilization in coir industry. On an average, another 133772 Mt of coir can be produced from available coconut husk being used as fire in rural areas. Hence there is a tremendous growth in coir industry as the principal raw material is available abundantly.

Conclusion: From the above discussion and facts it can be understood there will be no shortage of raw materials in the near future up to 1.5 lakh tons.

### **12.8. Marketing Arrangements:**

Initially, the company proposes to sell their products to the existing dealers for India and abroad to get market reputation. After getting clear way about export possibilities, the company will definitely export its end products directly.

The following are the 17 identified potential dealers and suppliers for marketing the end products with which the company proposes to made long term contracts.

- Rich Foam India, Hyderabad

- Rixin Land, Hyderabad
- Sony Rexins, Nirmal
- Kiran Enterprises, VSP
- Chiranjeevi Enterprises, Warangal
- Sai Rixin Sales, Hyderabad
- Agarwal Brothers, Hyderabad
- Chandrakanth & Company, Hyderabad
- Janata Leathers, Warangal
- Manohar & Company, Hyderabad
- Sarvani Industries, Nalgonda
- Sri Chaitanya Enterprises, Hyderabad
- Mata Furniture, Hyderabad
- Rajya Laxmi Enterprises, Vijayawada
- Sri Jagadamba Enterprises, Vijayawada
- MS Masood, Jagityala, Devadatta Enterprises, Orissa

**Project at a Glance:**

- |                       |   |   |
|-----------------------|---|---|
| 1. Activity :         | : | Manufacturing<br>Rubberized Coir Mattress               |
| 2. Products           | : | Mattress  |
| Name and Address      | : | East Coast Coir Cluster,<br>Pusapatirega, Vijayanagaram |
| 3. Legal Constitution | : | SPV entity formed part of<br>SFURTI scheme              |
| 4. Estimated Capacity | : | 3 tons per day coir plant                               |

5. Estimated working days month)	:	300 (8 hours /day,25 days a
6. No of cluster artisans		1600
7. No of units in cluster		19
8. No of employees in unit		35
9. Land:		69 cents (0.69 acre)
10. Area of the shed:		4500 Sqft (built up Area)
11. Project cost:		Rs 271.10 lakhs



<b>Cost of the Project</b>	<b>Amount Rs. In lakhs</b>
Land	0.00
Building	40.00
Machinery & Equipment	146.50
Furniture and Fixtures	10.00
Transportation and Installation /erection	25.00
Preliminary and Pre opr. Expenses	6.00
Miscellaneous	11.38
	<b>238.88</b>
20% of Working Capital	32.23
<b>Hard Intervention</b>	<b>271.10</b>
Sfurti grant @ 75%	203.33
SPV contribution 25%	67.78
	<b>Amount Rs. In lakhs</b>
<b>Machinery and Equipment</b>	
Sheet Plant 1.5m	35.00
Multi Meter	3.60
Latex tank	2.35
Drum Press Conveyor	1.90
Sheet Cutting Machine	1.50
sheet vulcanizing	3.75
Rope Drier	3.50
Hydraulic Press	14.50

Thermo Fluid Heater	18.50
Air Compressor Screw Type	3.50
Panel Board	6.60
Water opening	0.80
fibre Extraction machinery	51.00
	<b>146.50</b>
<b>Furniture and Fixtures</b>	<b>Amount Rs. In lakhs</b>
Storage Facilities and others	10
<b>Capital Investment</b>	<b>Amount Rs. In lakhs</b>
Land	0.00
Civil - Building	40.00
Machinery & Equipment	146.50
Furniture & Fixtures	10.00
	196.50
<b>Transportation and Installation /others</b>	<b>Amount Rs. In lakhs</b>
freight ,Insurance	8
,Installation & Erection charges	25
	33

<b>Preliminary and Pre Operative Expenses</b>	<b>Amount Rs. In lakhs</b>
Registration and Documentation	0.35
Project Preparation works	2.65
Travelling Expenses	3
	6
<b>Means of Finance</b>	<b>Amount Rs. In lakhs</b>
Promoters/Clusters via SPV (25%)	67.78
SFURTI Grant (75%)	203.325
<b>Fixed Capital (Assets)</b>	<b>Amount Rs. In lakhs</b>
Land	0
Building	40.00
Machinery & Equipment	146.50
Furniture and Fixtures	10
Transportation and others	33
Preliminary and Pre opr. Expenses	6
	235.5
<b>Raw Materials</b>	<b>Amount Rs. In lakhs</b>
Curled Coir	108

Latex Rubber	216
Additives	18
Chemicals + fibre rawmaterial	108
	450
<b>Utilities</b>	<b>Yearly Amount Rs. In lakhs</b>
Power 140 HP	27
Water	2.7
	29.7
<b>Salaries and Wages</b>	<b>Yearly Amount Rs. In lakhs</b>
unit in charge(unit1 & 2) (1)	6.6
Skilled ( Manager, Accountant, Supervisor) (8)	18
Semi Skilled (Jr. Supervisor, Foreman, Jr. Foreman) (14)	25.2
Unskilled (Helpers, Workers, Security) (30)	38.7
	88.5
<b>Other Expenses</b>	<b>Yearly Amount Rs. In lakhs</b>
Stationery, telephone, phone and postage	9
Consumables	15.3

Advertising	20
Conveyance and Transport	30
	74.3
<b>Total Working Capital</b>	<b>Yearly Amount Rs. In lakhs</b>
Raw Materials	450
Utilities	29.7
Salaries and Wages	88.5
Other	74.3
Rent for Leased Land	2
pa	644.5
pm	53.71
3mnths	161.125
<b>Total Capital Investment</b>	<b>Amount Rs. In lakhs</b>
Fixed Assets	235.5
Working Capital for one month	53.71
	289.21
<b>Cost of Production</b>	<b>Yearly Amount Rs. In lakhs</b>
Total working Capital	644.5
Depreciation on Machinery	21.975

Depreciation Furniture and Fixtures	1.5
Depreciation on Building	4.00
Interest on total investment	8.133
	680.108
<b>Sales Turnover</b>	<b>Yearly Amount Rs. In lakhs</b>
Flees MFG+ Fibre Ext +Pith	1190.25
<b>Fixed Cost per annum</b>	<b>Yearly Amount Rs. In lakhs</b>
Depreciation on Machinery	21.975
Depreciation Furniture and Fixtures	1.5
Depreciation on Building	4.00
Interest on total investment	8.133
Salaries and Wages - 40%	35.4
Utilities - 40%	11.88
Other expenses 40%	29.72
	<b>112.608</b>
<b>Variable Cost</b>	<b>Yearly Amount Rs. In lakhs</b>

Cost of Production	680.108
Less : Fixed Cost	112.608
	<b>567.5</b>
<b>Profit</b>	<b>Yearly Amount Rs. In lakhs</b>
Sales	1190.25
Cost of Production	680.108
<b>Gross profit</b>	<b>510.142</b>
Less : Selling and Admn. Expenses (10% of sales)	119.025
<b>Net Profit</b>	<b>391.117</b>

<b>Projected - Break Even Analysis</b>					
Particulars	1 <sup>st</sup> Year	2nd Year	3rd Year	4th Year	5th Year
Sales	833.18	916.49	1008.14	1108.96	1219.85
Variable Cost	612.90	674.19	741.61	815.77	897.35
Contribution--(sales-VC)	220.28	242.30	266.53	293.19	322.50
Fixed Cost	112.61	112.61	112.61	112.61	112.61
profit = Contribution -fixed cost	107.67	129.69	153.92	180.58	209.90
<b>BEP -Fc/contr</b>	<b>0.51</b>	<b>0.46</b>	<b>0.42</b>	<b>0.38</b>	<b>0.35</b>
<b>Estimated Annual Cost of Production</b>					
Particulars	1st Year	2nd Year	3rd Year	4th Year	5th Year
Raw Materials	450	495	544.50	598.95	658.85
Utilities	29.7	32.67	35.94	39.53	43.48
Salaries & Wages	88.5	97.35	107.09	117.79	129.57
Other Expenses	74.3	81.73	89.90	98.89	108.78
Depreciation on Machinery	21.98	18.68	15.88	13.50	11.47
Depreciation on Furniture	1.5	1.275	1.08	0.92	0.78
Depreciation on Building	4.00	3.8	3.61	3.43	3.26
Interest on Investment	8.13	7.81	6.48	5.18	3.27
Total	678.11	738.31	804.48	878.20	959.46



<b>Key Financial Indicators</b>					
BEP	0.51	0.46	0.42	0.38	0.35
Return On Investment = Return /Investment (with working capital )	0.40	0.48	0.57	0.67	0.77
Return On Investment = Return /Investment (without working capital )	0.45	0.54	0.64	0.76	0.88
<b>% of profit over sales</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>

### Expected Impact

- There will be a perceptible improvement in the quality of life of the coir workers/ artisans thus improving their socio - economic conditions.
- CFC will act as an agent of change in the individual cluster units operations, as CFC produces products that yield higher returns and thus ensures better financial position to all cluster members both financially & socially .
- This improvement in financials will provide better turnovers and dispensable income for improving individual units, production processes and thus improves quality of its output.
- Value addition in raw material to finished goods cycle resulting in higher turnovers, profits, and improvement in quality.

In conclusion, the proposed Coir Mattress plant at Vijayanagaram will be financially viable and facilitate the cluster members. They can get better margins and improve socially and economically to a new level by involving in learning the skills of Marketing Positioning and trading. Become more leaning towards sales, collection and quality improvements of products without compromising on Manufacturing and systems.