

DETAILED PROJECT REPORT

Cluster Location: OMALUR, SALEM
(Salem Coir Plyboard Cluster, Omalur, Salem)



Submitted to
Coir Board, Kochi

PREPARED BY

ITCOT CONSULTANCY AND SERVICES LIMITED

Joint venture of SIDBI, IFCI, SIPCOT, TIIC, SIDCO and BANKS,

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Executive Summary

Name of the cluster	Salem Coir Ply Board Cluster, Omalur																						
Type of cluster	Major cluster																						
Location & Spread of the cluster	The cluster area is located in Salem district extends over 7 Blocks viz. Omalur, Ayothiyapattinam, Salem, Veerapandi, Kadaiapatty, Panaimarathupatti, and Vazhapadi. The cluster spread includes 23 Village Panchayats in Salem District. The Geographical spread of the cluster measures about 25-30 Km radius.																						
Product range	<p>The following products are produced in the cluster presently.</p> <ul style="list-style-type: none"> • Coir Fibre • Coir Yarn • Curled Coir 																						
Size of cluster & Type of units	The total number of coir units available in the cluster area is 183 units of which 55 Nos. are engaged in Fibre Extraction, 126 Nos. engaged in Yarn Spinning and 2 Nos engaged in Curled coir manufacturing. The total number of beneficiaries estimated to be around 960 members which includes the labor force in the cluster.																						
Production & Turnover of Coir products in the cluster	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #d9d9d9;"> <th>Product</th> <th>No. of units</th> <th>Production</th> <th>Turnover</th> </tr> </thead> <tbody> <tr> <td>Coir Fibre</td> <td>55</td> <td>27500 MT</td> <td>Rs.41.25 Crores</td> </tr> <tr> <td>Coir Yarn</td> <td>126</td> <td>6300MT</td> <td>Rs. 22.05 Crores</td> </tr> <tr> <td>Curled coir</td> <td>2</td> <td>37.50 MT</td> <td>Rs. 0.08 Crores</td> </tr> <tr> <td>Total</td> <td>183</td> <td>-</td> <td>Rs.63.38 Crores</td> </tr> </tbody> </table>			Product	No. of units	Production	Turnover	Coir Fibre	55	27500 MT	Rs.41.25 Crores	Coir Yarn	126	6300MT	Rs. 22.05 Crores	Curled coir	2	37.50 MT	Rs. 0.08 Crores	Total	183	-	Rs.63.38 Crores
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Employment & Income level	<table border="1" data-bbox="711 237 1362 495"> <thead> <tr> <th>Activity</th> <th>Male</th> <th>Female</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Fibre Extraction</td> <td>110</td> <td>330</td> <td>440</td> </tr> <tr> <td>Yarn Spinning</td> <td>84</td> <td>420</td> <td>504</td> </tr> <tr> <td>Curled coir</td> <td>6</td> <td>10</td> <td>16</td> </tr> <tr> <td>Total</td> <td>200</td> <td>760</td> <td>960</td> </tr> </tbody> </table> <p data-bbox="651 539 1390 667">The income level for the labours in the cluster is Rs.400/- for male workers and Rs.300/- for female workers</p>	Activity	Male	Female	Total	Fibre Extraction	110	330	440	Yarn Spinning	84	420	504	Curled coir	6	10	16	Total	200	760	960
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Key concern areas	<ul style="list-style-type: none"> • Cluster's present production is limited to intermediate products such as fibre, yarn etc., which fetches reduced margin only. • Limited awareness on the benefits of graduating to production of value added finished products. • No direct link with domestic as well as export buyers. Total distribution is through local dealers only • Weak linkages with BDS providers and Technical institutions • Lack of formal network for marketing and input procurement • Weak linkages with banks and financial institutions • Absence of collective/collaborative efforts to address common problems 																				
Proposed Strategic Interventions	<p data-bbox="651 1485 935 1518">Soft Interventions:</p> <ul style="list-style-type: none"> • Capacity Building initiatives • Market Promotion initiatives <p data-bbox="651 1675 1345 1709">Hard Interventions (Common facility creation):</p> <ul style="list-style-type: none"> • Building for Common facility • Common facilities proposed: <ul style="list-style-type: none"> I) Coir Needled Felt Manufacturing II) Coir Ply Board Manufacturing 																				

	<p>Thematic Interventions:</p> <p>Participation in activities such as national and international level brand promotion campaigns, New Media marketing, E-commerce initiatives etc., as detailed in the SFURTI implementation guidelines</p>																																							
Budget for Soft interventions	Rs. 20.00 lakhs																																							
Budget for Hard interventions	Rs. 359.00 lakhs																																							
Total Project Cost including Agencies cost	Rs. 541.50 lakhs																																							
Means of Finance	Grant under SFURTI scheme : Rs. 494.35 lakhs IA/SPV share : Rs. 47.15 lakhs																																							
Post Intervention Scenario (Expected Impact)	<table border="1"> <thead> <tr> <th rowspan="2">S. No</th> <th rowspan="2">Parameter</th> <th rowspan="2">Pre-Inter-vention</th> <th colspan="3">Post-intervention</th> </tr> <tr> <th>Y 1</th> <th>Y 5</th> <th>Y 10</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Cluster Turnover (Rs. Lakhs)</td> <td>6338</td> <td>9320</td> <td>11650</td> <td>14560</td> </tr> <tr> <td>2</td> <td>Investment (Rs. Lakhs)</td> <td>1591</td> <td>2448</td> <td>3060</td> <td>3825</td> </tr> <tr> <td>3</td> <td>Employment(Nos)</td> <td>960</td> <td>1180</td> <td>1475</td> <td>1840</td> </tr> <tr> <td>4</td> <td>Wages / day (Rs.)</td> <td>400</td> <td>520</td> <td>675</td> <td>750</td> </tr> <tr> <td>5</td> <td>Profitability (%)</td> <td>8-10%</td> <td>22%</td> <td>25%</td> <td>25%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ➤ Strong linkages among the Cluster members and actors in all levels of the value chain and an established Collaborative setup in place to undertake development initiatives & address common issues. ➤ Emergence of specialized support service providers and their active involvement in the development process ➤ Establishment of new units by converging various schemes of State and Central Governments (such as Coir Udyami Yojana, NEEDS, PMEGP etc.) 	S. No	Parameter	Pre-Inter-vention	Post-intervention			Y 1	Y 5	Y 10	1	Cluster Turnover (Rs. Lakhs)	6338	9320	11650	14560	2	Investment (Rs. Lakhs)	1591	2448	3060	3825	3	Employment(Nos)	960	1180	1475	1840	4	Wages / day (Rs.)	400	520	675	750	5	Profitability (%)	8-10%	22%	25%	25%
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	<p>resulting in additional investments and employment in Coir sector by the cluster members</p> <ul style="list-style-type: none"> ➤ Improved access to financial capital for cluster members ➤ 100% Coverage of cluster artisans under social security schemes
<p>Cluster Management - Post interventions</p>	<p>The cluster is proposed to be developed under SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Coir Board is the Nodal agency (NA) and ITCOT Consultancy and Services Limited is the Technical Agency(TA) appointed by Coir Board. Aakkam Social Welfare Trust, C/o.Tirupur Thozhil Pathukappu Kuzhu (TTPK), having its Head office at Tirupur and Project office at Aatur, Salem is proposed as the Implementing Agency.</p> <p>A Special Purpose Vehicle (SPV) is formed and registered as Private Limited Company under sub-section (2) of section 7 of the Companies Act 2013 and rule 8 of the Companies (Incorporation) Rules, 2014 in the name of "KURINJI COIR CONSORTIUM PRIVATE LIMITED" as per the Certificate of Incorporation issued by Registrar of Companies, Coimbatore dated 14.12.15. The CIN of the company is U36104TZ2015PTC02 2062. The registration has been carried out with 7 members as Directors and 18 additional members, who have evinced interest are proposed to be included as shareholders. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over.</p>

1 Preamble

The Coir industry has to its credit a tradition and heritage of centuries. But development of Coir industry in India has begun in an organized way only in 1959. Ever since this humble beginning, Coir products have been improving in quality, quantity and variety. For historical reasons, cultivation of coconuts and extraction of Coir fibre and its further processing have taken deep roots in the state of Kerala. The rapid expansion of coconut cultivation in non-traditional areas increased the production of coconut and the industry has also developed gradually in the states of Tamil Nadu, Karnataka, Andhra Pradesh and Orissa. Coir industry in India is one of the important rural industries. It provides source of income to about 5 lakhs artisans in rural areas. Women constitute about 80% of the work force in coir industry.

Coir has come a long way from the ancient uses. It is still used for agricultural and domestic purposes. It has also become an article of use in modern life either as garden article, as bags for the tea leaves, for training hops, as brush mats at the door steps, as long-wearing carpets in the corridors of the bungalow veranda, as tastefully planned floor coverings in the drawing room or as the runner on the staircase, as geo-fabric for controlling landslide or soil erosion, for protection of embankments of roads, railway and canals.

With a view to making the traditional coir industries more productive and competitive and facilitating their sustainable development, the Central government has announced Scheme of Fund for Regeneration of Traditional Industries (SFURTI). ITCOT Consultancy and Services Ltd. (ITCOT) has been appointed as Technical Agency by Coir Board for SFURTI Coir clusters in Tamilnadu.

Coir Board has entrusted the task of preparation of Diagnostic Study Report (DSR) of the Coir Ply board cluster located in Salem District, Tamilnadu to M/s.ITCOT Consultancy and Services Limited, Chennai. The DSR was prepared and submitted to Coir Board. Subsequently, Coir Board entrusted the task of preparation of Detailed Project Report for the Coir Ply board cluster, Salem District. Accordingly, ITCOT has prepared the Detailed Project Report (DPR) for submitting the same for seeking final approval from the Scheme Steering Committee (SSC).

This report is prepared based on interaction with coir industrialists in the clusters, coir industry workers, industry association members, NGO's and support

institutions in the district, Informal interviews with industry participants, machinery suppliers and experienced entrepreneurs, collection of secondary information etc.

The Chapter scheme of the Detailed Project Report is as follows:

Cluster Profile is given in Chapter 1. Cluster Value Chain mapping is given in Chapter 2. Market assessment and Demand Analysis is given in Chapter 3. SWOT and Need Gap Analysis is given in Chapter 4. Profile of the Implementing Agency in Chapter 5. Project Concept and Strategy Framework are detailed in Chapter 6. Core SFURTI Project Interventions are given in Chapter 7. Detailed analysis of Soft Interventions is given in Chapter 8 and analysis of Hard Interventions is given in Chapter 9. Project Cost and Means of Finance is given in Chapter 10. Plan for Convergence Initiatives are given in Chapter 11. Enhanced Project Cost and Means of Finance are given in Chapter 12. Project Timeline is illustrated in Chapter 13. Detailed Business Plan is given in Chapter 14. Proposed Implementation Framework is given in Chapter 15. Expected Impact is detailed in Chapter 16.

2 Cluster Profile

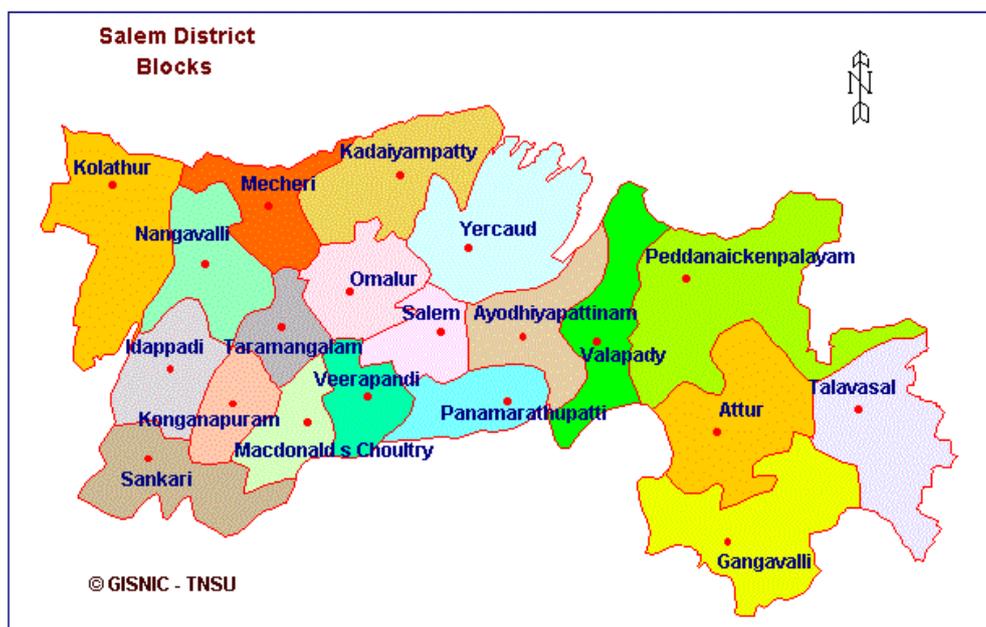
2.1 Background

Salem District of the State Tamil Nadu, and other major towns in the district include Mettur, Omalur and Attur. Salem is surrounded by hills and the landscape dotted with hillocks. Salem has a vibrant culture dating back to the ancient Kongu Nadu. As a district, Salem has its significance in various aspects; it is known for mango cultivation, silver ornaments, textile, sago industries and steel production. In Salem town, a Coir cluster has already been developed under SFURTI scheme - Phase I and a Common facility center has been established for the production of Needled Felt Garden Articles and Semi automatic Geo-Textiles.

2.2 Regional setting of the Cluster

The regional setting of the cluster extends over 7 Blocks viz. Salem, Omalur, Ayodhiyapattinam, Veerapandi, Kadaiampatty, Panaimarathupatti, and Vazhapadi.

The block map of Salem district is given below:



2.3 Location

The cluster spread includes 23 Village Panchayats in Salem District. The Geographical spread of the cluster measures about 20-30 Km radius.

2.4 Evolution of the Cluster

The Cluster is naturally evolved one. The total coconut cultivation area of Salem district is 14590 hectares (36052 Acres). The number of trees cultivated per acre is estimated as 65 Nos. The total coconut trees available in the cluster are estimated 23.43 Lakh Nos. The coconut yield per tree is estimated as 120 nuts per year. Thus 281.16 Million nuts are produced per year in the district. Coir, being the natural fibre extracted from the husk of Coconut, Coir industries started flourishing in the district owing to the local availability of raw material and naturally the cluster evolved.

2.5 Demography and Growth trends

The statistical data of Salem district as per Census 2011 and the growth aspects with respect to Census 2001 is given below:

Description	2011	2001
Actual Population	3,482,056	3,016,346
Male	1,781,571	1,563,633
Female	1,700,485	1,452,713
Population Growth	15.44%	17.20%
Area Sq. Km	5,237	5,237
Density/km ²	665	575
Proportion to Tamil Nadu Population	4.83%	4.83%

2.6 Socio-economic aspects

The significance of coir industry arises primarily from the fact that a large number of people from the economically weaker sections of the society depends on this industry at the current level of production of coir, the industry utilizes about 40% of the annual yield of coconut husk in the country. There is possibility to increase the utilization to at least 60% of husk production. Therefore, there exists vast potential for stepping up of production of coir in India. The increased utilization of coconut husk abundantly available in the coconut growing states of India provides scope for development of fibre processing sector and thereby augmenting rural employment.

2.7 Human Development Aspects

The total number of workers engaged in the Coir activity gender wise is given below:

Activity	Male	Female	Total
Fibre Extraction	110	330	440
Yarn Spinning	84	420	504
Curled coir	6	10	16
Total	200	760	960

The existing income level of the labour force in the Coir sector of the district is given below:

Activity	Wages per day	
	Male	Female
Fibre Extraction	400	300
Yarn Spinning	400	300
Curled coir	400	300

It is observed that the income level for all activities is same for male as well as for female workers. Among these workers, 80% belongs to OBC category, 10% SC category and remaining 10% belongs to other categories.

2.8 Key Economic Activities in the region

Salem District of the State Tamil Nadu, and other major towns in the district include Mettur, Omalur and Attur. Salem is surrounded by hills and the landscape dotted with hillocks. Salem has a vibrant culture dating back to the ancient Kongu Nadu. As a district, Salem has its significance in various aspects; it is known for mango cultivation, silver ornaments, textile, sago industries and steel production. In Salem town, a Coir cluster has already been developed under SFURTI scheme - Phase I and a Common facility center has been established for the production of Needled Felt Garden Articles. In SFURTI Phase II, Mettur Coir Cluster has been approved and the CFC for the production of PVC tufted mats from Coir yarn has been established and commenced operations in November 2017.

Salem is easily accessible from Bangalore, Coimbatore, Trichy, Madurai & Chennai. It also has rich Industrial base with Salem steel plant, SISCOL, MALCO, CHEMPLAST & with regard to power generation also, the Thermal & Hydel power plant in Mettur contribute towards power supply to the state.

Salem is the National Centre for sago and starch products. The Salem region also houses the Tamil Nadu largest number of Sago industries which are engaged in the production Sago Foods and Starch. In Salem District alone, 34000 hectares of land is under tapioca cultivation which is the raw material for the sago industries and there are 650 units engaged in tapioca processing. In 1981, Salem Starch and Sago Manufacturers Service Industrial Co-operative Society Ltd (popularly called as SAGOSERVE) was established to promote the growth of sago industries. Nearly 80% of the national demand for Sago and Starch is being met by the Sagoserv.

Salem Steel Plant, a special steel unit of Steel Authority of India Ltd have their plant located in Salem which produces Cold rolled stainless steel and Hot rolled stainless steel/carbon steel. The plant can produce austenitic, ferritic, martensitic and low-nickel stainless steel in the form of coils and sheets with an installed capacity of 70,000 tonnes/year in Cold Rolling Mill and 1,86,000 tonnes/year in Hot Rolling Mill. In addition, the plant has country's first top-of-the-line stainless steel blanking facility with a capacity of 3,600 tonnes/year of coin blanks and utility blanks/circles.

2.9 Existing Coir activities:

Coir Fibre extraction and Yarn spinning are major activities undertaken in the district. In the cluster, there are about 55 units engaged in coir fibre extraction in the cluster. The current output of coir fibre is estimated at 27500 MT per annum. The Annual turnover out of coir fibre production in the cluster is estimated at Rs.41.25 Crores. There are about 126 units engaged in coir yarn spinning in the cluster. The current output of coir yarn is estimated at 6300 MT per annum. The Annual turnover out of coir yarn spinning in the cluster is estimated at Rs.22.05 Crores. There are about 2 units engaged in curled coir in the cluster. The current output of curled coir is estimated at 37.50 MT per annum. The Annual turnover out of Curled coir production in the cluster is estimated at Rs.0.08 Crores.

The existing investment in Coir units in the cluster area is given below:

Activity	No. of units	Per unit (Rs.Lakhs)	Total (Rs.Lakhs)
Coir Fibre Extraction	55	15	825
Coir Yarn (Two Ply)	126	6	756
Curled Coir	2	5	10
Total	183		1591

The village wise distribution of units is given below:

S.No	Village	Coir Fibre units	Coir Yarn units	Others (Curled Coir units)
1	Ayothiyapattinam	5	6	-
2	Thailanoor	2	4	-
3	Udayapaati	3	7	-
4	Anupur	3	5	-
5	Karipatti	3	4	-
6	Suramangalam	-	8	1
7	S.Kollapatti	3	10	-
8	Poolavari	2	4	-
9	Veerapandi	2	6	-
10	Keerapappambadi	2	5	-
11	Maramangalathupatti	1	5	-
12	Ariyagoundampatti	-	5	1
13	Muthampatti	2	4	-
14	Neermullikuttai	2	4	-
15	Karuppur	2	4	-
16	Vellalapatti	2	5	-
17	Muthunaickenpatti	8	8	-
18	Pagalpatti	2	4	-
19	M. Chettipatii	2	7	-
20	Mallikarai	1	4	-
21	Thennakudipalayam	1	6	-
22	Belur	3	5	-
23	Thammampatti	4	6	-
Total		55	126	2

2.10 Infrastructure - social, physical, financial and production related

The infrastructure details of Salem district is tabulated as below:

1.	Area	:	5237 Sq.K.M.			
2.	Population (as per Provisional 2011 Census)	:	3,482,056			
			Male	Female	Others	Total
			1,781,571	1,700,485	0	3,482,056
			Rural	Urban	Total	
		1,707,934	1,774,122	3,482,056		

3.	No.of Revenue Divisions	:	4												
4.	No.of Taluks	:	11												
5.	No.of Revenue Villages	:	655												
6.	No.of Panchayat Unions	:	20												
7.	No.of Village Panchayats	:	385												
8.	No.of Town Panchayats	:	33												
9.	No.of Municipalities	:	4												
10.	No.of Corporation	:	1 - Salem												
11.	No.of Parliamentary constituencies	:	1												
12.	No.of Assembly constituencies	:	12												
13.	Irrigation		<p><u>Rivers</u> : Cauveri, Sarabanga : Nathi, Vasista Nathi and Suvetha Nathi</p> <p><u>Lakes</u> : Govindavadi Eri, Ayyanar Koil Eri, Mookaneri Eri, Attur Pudu Eri, Umayalpuram Eri, Thedavoor Eri, Arangaloor Eri, Sendarapatty Eri, Naduvalur Eri, Sarvoy Perioya Eri and Vadaman Eri.</p>												
14.	Road(KM)	:	<table border="1"> <tr> <td>National Highways</td> <td>194.658</td> </tr> <tr> <td>State Highways & Rural Roads</td> <td>2458.456</td> </tr> <tr> <td>Corporation & Municipalities Road</td> <td>1185.632</td> </tr> <tr> <td>Panchayat Union & Panchayat Road</td> <td>5642.780</td> </tr> <tr> <td>Town Panchayat Township Road</td> <td>1184.980</td> </tr> <tr> <td>Others (Forest Roads)</td> <td>201.167</td> </tr> </table>	National Highways	194.658	State Highways & Rural Roads	2458.456	Corporation & Municipalities Road	1185.632	Panchayat Union & Panchayat Road	5642.780	Town Panchayat Township Road	1184.980	Others (Forest Roads)	201.167
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Others (Forest Roads)	201.167														

The following industrial estates are located in Salem District.

- SIDCO, Five roads, Salem.
- Women SIDCO, Karupur, Salem & SIDCO, Veerapandi, Salem.

The following Coir societies are located in Salem District.

- Banapuram Coir Society, Banapuram, Mettur TK
- Azagusamuthram Coir society, Azagusamuthram, Steelplant road
- Central Coir society, Suramangalam
- Vellalagundam Coir society, Veeranam
- Chinnakrishnapuram coir society, Vazhapaddy.

There are totally 7323 registered Small scale industries and 43 Medium scale industries in Salem district.

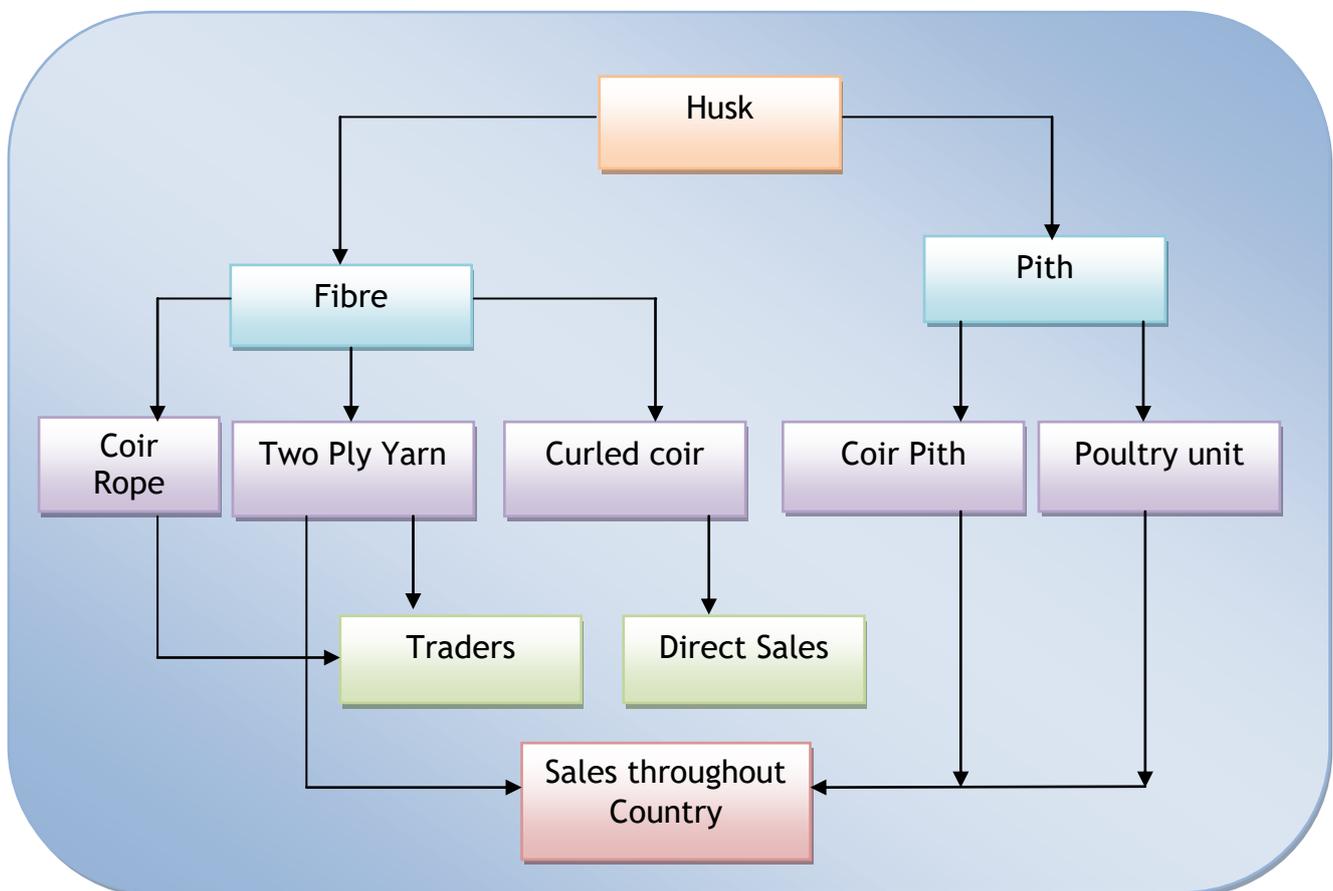
3 Cluster Value Chain Mapping

3.1. Product Profile

The following products are produced in the cluster presently.

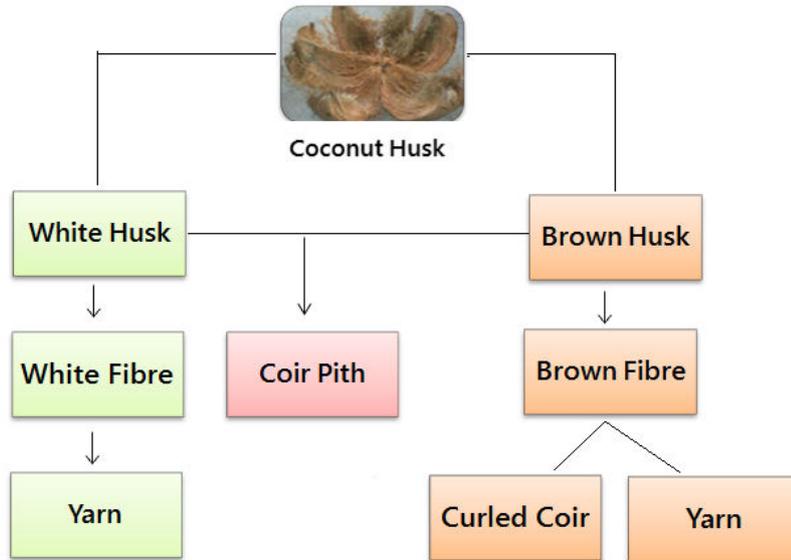
- Coir Fibre
- Coir Yarn
- Curled Coir

The Product flow from the raw material is depicted in the chart below:



3.2. Production Process

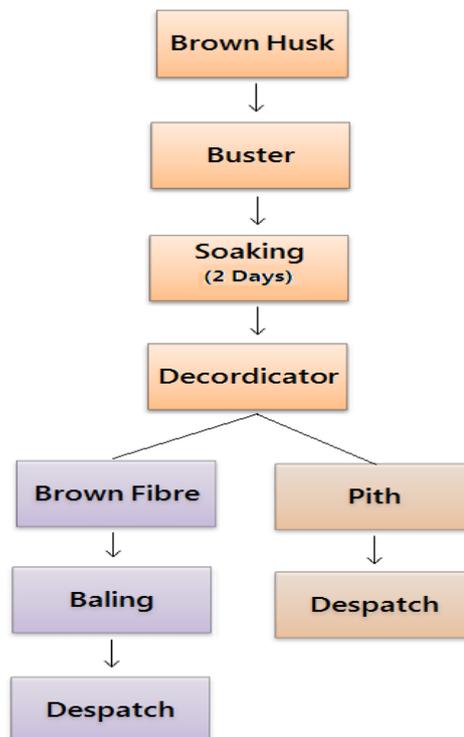
The existing product line of the cluster is given below:



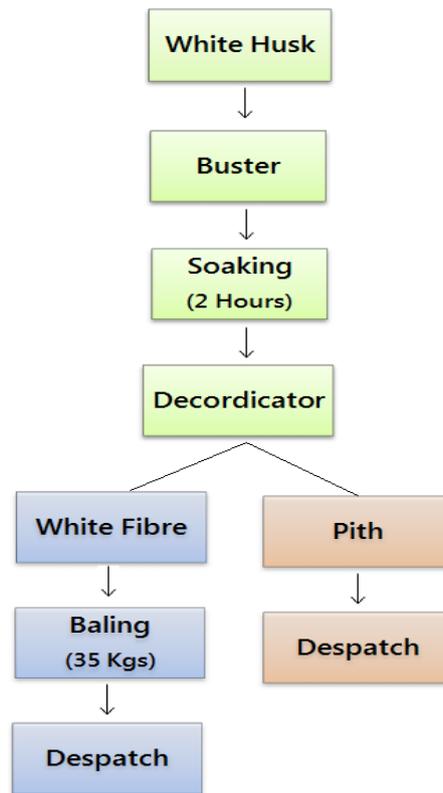
a) Coir Fibre:

The coconut husk (raw material) is collected from the farms and stored. The collected husk is soaked in water. Then soaked material is fed into the decorticator wherein the fibre and pith are separated. The fibre is dried in the sunlight and is pressed in the form of 35-Kg bundles by using balling press and dispatched for sales.

The process flow of fibre extraction from Brown husk is given below:



The process flow of fibre extraction from Green husk is given below:



b) Coir Yarn:

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

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

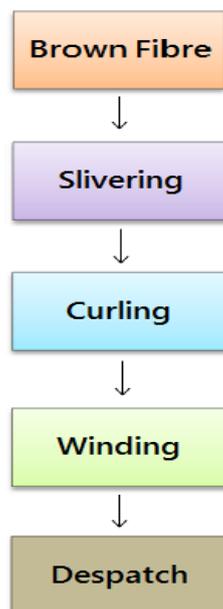
Coir fibre obtained from fibre extraction units and is wetted by spraying water. After 2-3 hours, the wetted fibre is passed through the willowing machine to remove the impurities and the place the fibre and parallel to each other. The fibre is then fed in to slivering machine wherein it is converted 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.

The process flow chart for Coir yarn spinning is given below:



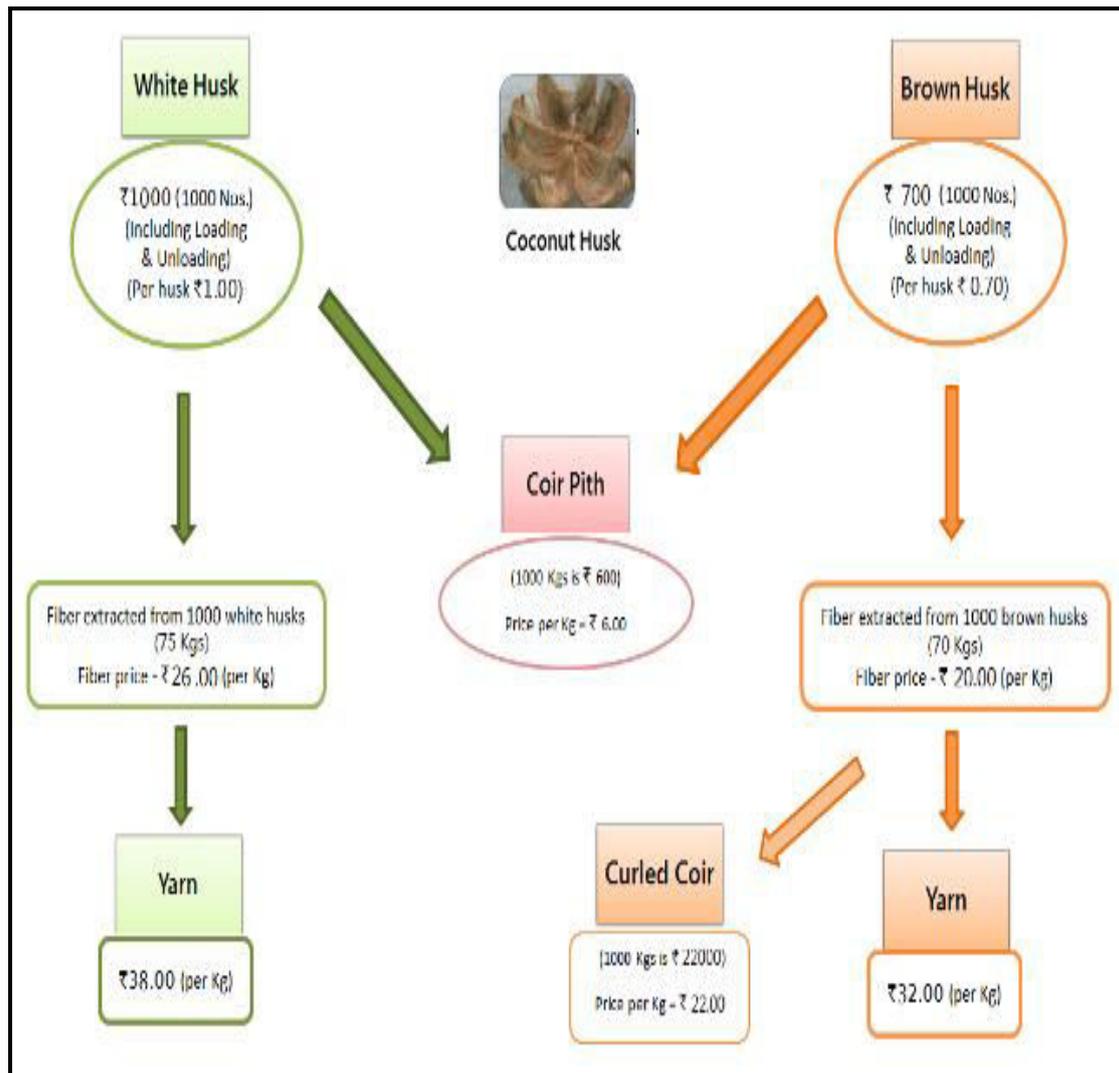
c) Curled coir:

The manufacturing of Curled coir involves slivering and curling processes, the stage wise flow chart is given below:



3.3. Value Chain Analysis

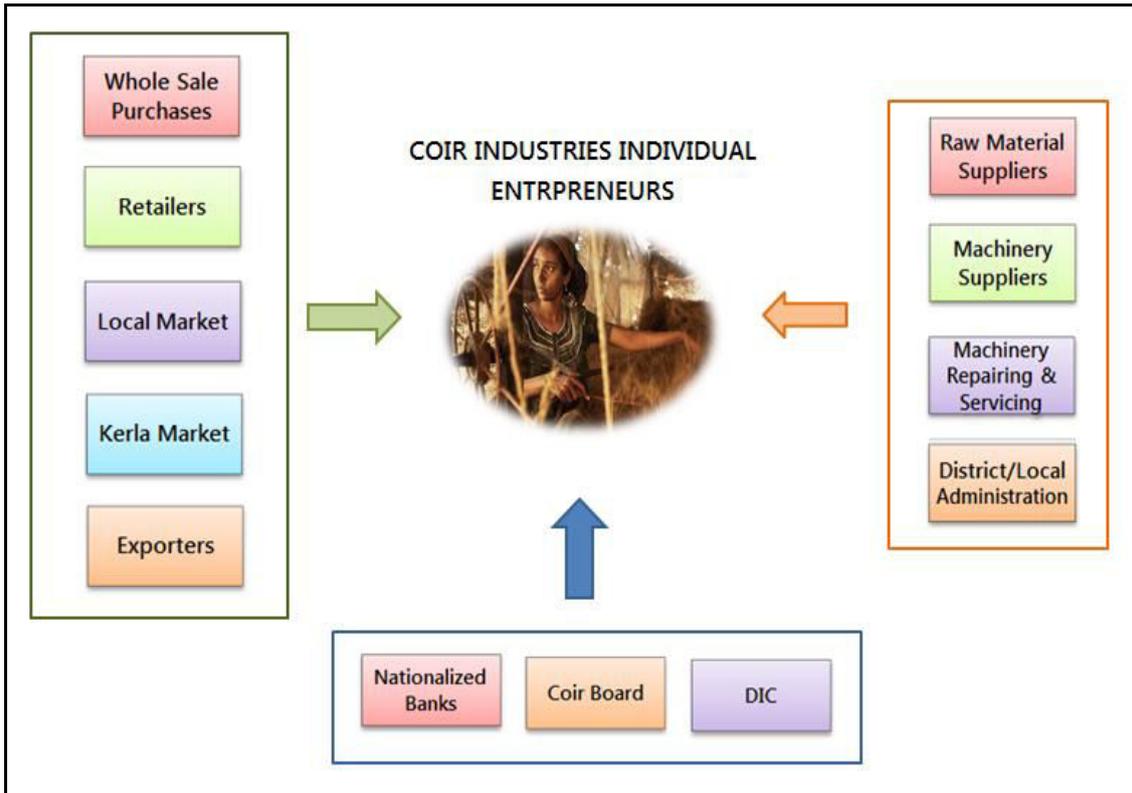
The incremental value of the cluster products from the basic raw material to the final product manufactured in the cluster is given below:



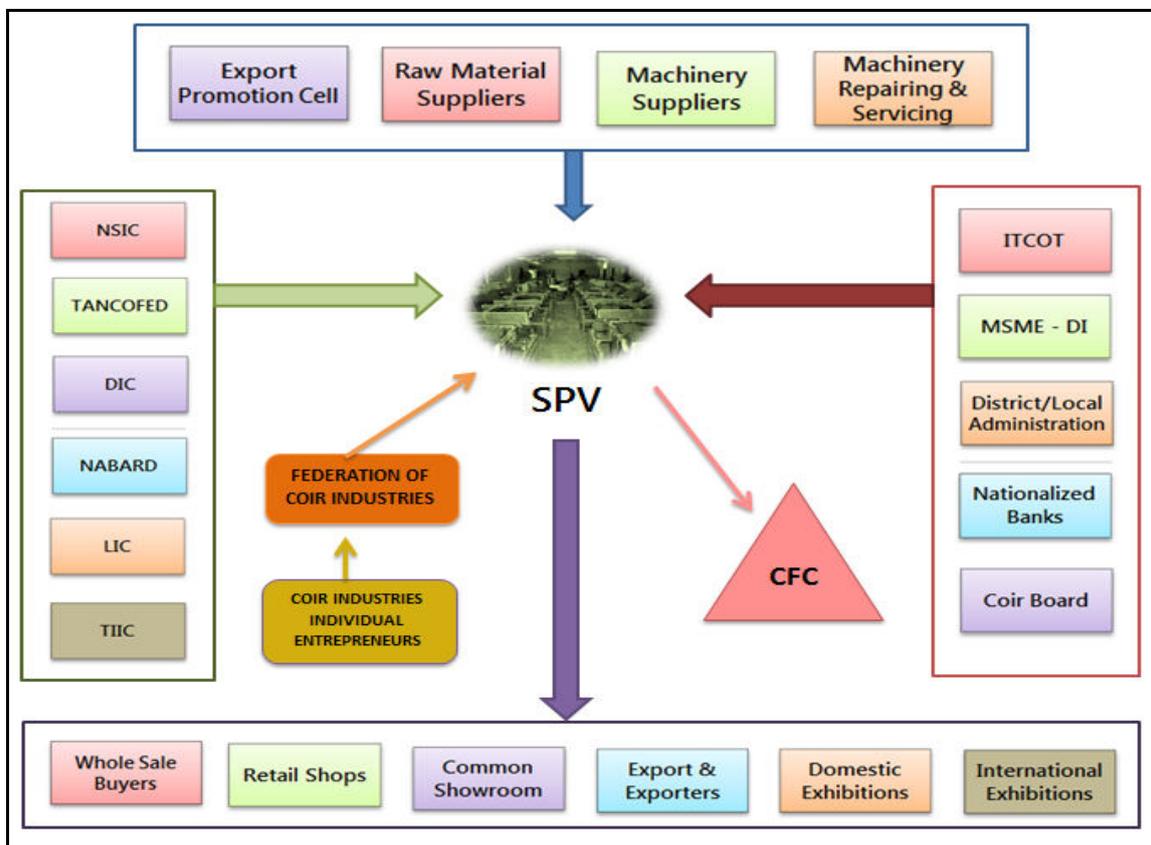
It is observed that the value addition in the cluster is limited to intermediate product level and the need and scope for value addition for coir sector in the cluster is considered significant. The cost of Green husk including loading and unloading is valued at Rs.1.00, which is incremented to Rs.26.00 per Kg. of fibre, which is further incremented to Rs.38.00 per Kg. of Yarn. The cost of Brown husk including loading and unloading is valued at Rs.0.70, which is incremented to Rs.20.00 per Kg. of fibre, which is further incremented to Rs.32.00 per Kg. of Yarn. The brown fibre is the raw material for Curled coir and the value of brown fibre (at Rs.20.00 per Kgs.) is incremented to Rs.22.00 per Kg. of Curled coir.

3.4. Cluster Map

The **Pre-intervention Cluster map** depicting the existing linkages of the cluster is given below:



The **Post-interventions Cluster map** depicting the linkages after the implementation of cluster development initiatives is given below:



3.5. Principal Stakeholders

COIR BOARD

Coir Board is the Nodal Agency for the SFURTI scheme. The coir Board 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.

The Regional Office of Coir Board is located at Pollachi which is near about 150 kms from the cluster area.

DISTRICT INDUSTRIES CENTRE (DIC)

The District Industries Centre, located in all district headquarters, is the State government body functioning under the aegis of department of industries and commerce. DIC implements various schemes (UYEGP, NEEDS, PMEGP etc.,) to promote MSME sector.

TAMILNADU CORP. FOR DEVELOPMENT OF WOMEN (TNCDW)

TNCDW is one of the government agencies implementing many schemes for Self Help Groups. They also implement Tamil Nadu State Rural Livelihood Mission (TNSRLM) towards poverty eradication.

NABARD

NABARD is the financial institution focusing on Agriculture and Rural Development activities. Presently, they are also focusing on artisan cluster development.

LEAD BANK

Indian Bank is the lead bank in Salem district. Lead bank will do the role of that for financial assistance to be availed in the cluster.

ITCOT Consultancy and Services Limited (ITCOT)

ITCOT Consultancy and Services Limited, popularly known as ITCOT, is the state technical consultancy organization, promoted by all India financial institutions, State Development Corporations and Commercial Banks. ITCOT has wide experience in providing support services to micro and small enterprises under various government schemes. ITCOT, having its head office at Chennai, has project offices at Erode and Salem involved in enterprise promotion and development. ITCOT has been empanelled as Technical Agency under SFURTI scheme by KVIC and Coir Board.

Commercial & Cooperative Banks

There is a good network of commercial Cooperative banks in the cluster. They offer both cash credit and term loan facilities to the coir industry. However, institutional finance for coir industry is limited and there is a large gap between the need for the credit and its availability.

4 Market Assessment and Demand Analysis

Coir industry is of great importance to the coconut producing states in India, as it contributes significantly to the economy of rural areas. Kerala is the largest producer of coconut, contributing as much as 45% of country's total production, whereas Tamilnadu stands second in cultivation of coconut and first in production of brown coir fibre in the country. The State wise potential for production of Coir Fibre is given below:

S.No	State/UT'S	Area ('000 Ha)	Production (Million Nuts)	Productivity (Nuts/Ha)
	2016 - 2017			
1	Andhra Pradesh	115.21	1377.53	11957
2	Assam	20.60	153.27	7440
3	Bihar	14.90	141.09	9469
4	Chhattisgarh	01.48	08.77	5926
5	Gujarat	24.44	336.65	13775
6	Karnataka	513.85	6773.05	13181
7	Kerala	770.79	7448.65	9664
8	Maharashtra	20.90	198.85	9514
9	Nagaland	00.47	02.67	5681
10	Odisha	50.91	341.68	6711
11	Others	52.76	142.38	2699
12	Tamil Nadu	461.06	6570.63	14251
13	Telengana	00.50	02.09	4180
14	Tripura	04.61	32.23	6991
15	West Bengal	29.63	374.56	12641
	All India	2082.11	23904.10	11481

(Data source: Coconut development board)

The export of coir products are in the increasing trend during the last 10 years as illustrated in the graph below:

**COMPARITIVE STATEMENT OF EXPORT OF COIR PRODUCTS
(2017-18 and 2016-17)**

Item	Q=Quantity in MT		V=Value in Rs.Lakhs		% Growth	
	April 2017 - March2018		April 2016- March2017		Q	V
	Q	V	Q	V		
Coir Pith	548479	101846.82	490552	90539.11	11.8	12.5
Coir Fibre	374320	70177.88	370357	53913.63	1.1	30.2
Tufted Mat	54279	49591.41	51718	48442.83	5.0	2.4
Handloom Mat	18277	18613.96	20143	21316.31	-9.3	-12.7
Geo textiles	5845	3996.59	6219	4481.04	-6.0	-10.8
Coir Yarn	3328	2457.66	4426	2948.32	-24.8	-16.6
Curled Coir	8800	2316.26	10356	2419.30	-15.0	-4.3
Handloom Mattings	1117	1394.79	1272	1535.25	-12.2	-9.1
Rubberized Coir	900	1388.64	888	1295.64	1.4	7.2
Coir Other Sorts	306	498.29	256	416.59	19.4	19.6
Coir Rope	491	401.72	484	388.50	1.4	3.4
Coir Rugs & Carpet	254	269.58	205	271.92	24.0	-0.9
Powerloom Mat	37	57.75	166	196.38	-77.8	-70.6
Powerloom Matting	131	216.49	0	0.00	-	-
Total	1016564	253227.84	957045	228164.82	6.2	11.0

Subject to E & O.E

The major products that are exported are Coir fibre, Coir pith and Mats. It has been observed that the percentage growth in value of export of Coir fibre has been 30.2% in 2017-18 compared to the previous year. Also the percentage growth in value of export of Coir pith has been 12.50% in 2017-18 compared to the previous year. The Product wise export details of coir products in 2017-18 is given below:

EXPORT OF COIR & COIR PRODUCTS (2017 - 18)

Item	Q= Quantity in MT		V= Value in Rs Lakhs	
	2017-18		Export Composition%	
	Q	V	Q	V
Coir Pith	548479	101846.82	54.0	40.2
Coir Fibre	374320	70177.88	36.8	27.7
Tufted Mat	54279	49591.41	5.3	19.6
Handloom Mat	18277	18613.96	1.8	7.4
Geo textiles	5845	3996.59	0.6	1.6
Coir Yarn	3328	2457.66	0.3	1.0
Curled Coir	8800	2316.26	0.9	0.9
Handloom Mattings	1117	1394.79	0.1	0.6
Rubberized Coir	900	1388.64	0.1	0.5
Coir Other Sorts	306	498.29	0.0	0.2
Coir Rope	491	401.72	0.0	0.2
Coir Rugs & Carpet	254	269.58	0.0	0.1
Powerloom Mat	37	57.75	0.0	0.0
Powerloom Matting	131	216.49	0.0	0.1
Total	1016564	253227.84	100.0	100.0

Subject to E & O.E

The Top five Country wise Exports of Coir and Coir products in the year 2016-17:

S.No.	Country	Quantity (in MTs)	Value (Rs.Lakhs)	Quantity (%)	Value (%)
1	China	439884.57	66655.52	45.96	29.21
2	USA	133536.72	53286.56	13.95	23.35
3	Netherlands	82487.53	18148.78	8.62	7.95
4	UK	17668.15	11076.22	1.85	4.85
5	South Korea	57545.12	9486.28	6.01	4.16

As far as the cluster is concerned, Salem district is the significant market place for Coir yarn. The product line is limited to mainly Coir Fibre and Coir Yarn. Coir Fibre produced in the cluster is mostly utilized by the coir yarn units in the cluster. The Coir yarn produced in the cluster is marketed to northern states of the country.

5 SWOT and Need Gap Analysis

5.1. SWOT Analysis

In order to understand the Strength and Weakness of the cluster and also emerging opportunities and threats, SWOT analysis has been done. The highlights are depicted under:

Strengths

- Existence of well functioning industrial co-operative service society at Salem called “Salem central Coir Marketing Industrial Co-operative Society” and “Veeranam Coir Society” at Ayothiyapattinam, within the cluster area
- Well established intermediations for sourcing of raw material.
- Existence of well established marketing centre for Coir fibre, yarn and ropes.
- Availability of local machines, engineering workshops and lathes.
- The cluster has got all necessary infrastructure facilities like rail and road links.
- Existence of functioning “Tamilnadu coir rope manufacturers association” and “Salem coir fibre & Coir rope Traders association” at Salem.
- Presence of Support institutions such as Coir Board, District Industries Centre, Commercial banks, Technical consultancy organization etc.

Weaknesses

- Lack of Knowledge on manufacturing of value added/diversified products ie. , Matts & Mattings, Rubberised coir, Geo-textiles, Coir ply boards etc.
- Adoption of traditional technology and lack of awareness of the modern Technology.
- Absence of collective/collaborative efforts to address common problems.
- Lack of formal networks for marketing and input procurement
- Limited contact with BDS providers and Technical Institutions
- Weak linkages with banks and financial institutions
- Over dependence on local Traders.

Opportunities

- Potential for product diversification and value addition from existing products.

- Increasing Domestic and Export market for coir products.
- Good scope for manufacturing of value added /diversified products viz: Tufted mats, Garden Articles, Geo textiles, Rubberized coir, Matts & Mattings, Coir ply board etc.
- Common procurement of raw material for availing price benefits.
- Implementation of SFURTI Scheme for focused development of the cluster.

Threats

- Competition from products such as Nylon, Jute Sisal fibre etc.
- Competition from coconut growing country viz.: Sri Lanka, Indonesia & Philippines etc.
- Utilization of husk for fuel purposes

5.2. Need Gap Analysis

- Cluster's present production is limited to intermediate products such as fibre, yarn etc., which fetches reduced margin only.
- Limited awareness on the benefits of graduating to production of value added finished products.
- No direct link with domestic as well as export buyers. Total distribution is through local dealers only
- Weak linkages with BDS providers and Technical institutions
- Lack of formal network for marketing and input procurement
- Weak linkages with banks and financial institutions
- Absence of collective/collaborative efforts to address common problems

6 Profile of the Implementing Agency

Aakkam Social Welfare Trust, C/o.TIRUPUR THOZHIL PATHUKAPPU KULU (TTPK), an NGO registered as Trust, having its registered office at Tirupur and project office at Aatur, Salem District, about 50 Kms. from the Cluster is proposed as the Implementing Agency of this cluster. The details of the agency are given below:

Institutional Structure / Registration Details	Aakkam Social Welfare Trust, C/o.Tirupur Thozhil Pathukappu Kulu
Legal Status	Registered as TRUST
Date of Incorporation / Registration	11.08.2011
Registered Address	No.9, Selvi Complex, Dharapuram Road, Tirupur Tamilnadu
Office Address / Location	Project Office (Salem) Aakkam Social Welfare Trust, 38/90a,Thayumanavar Street, Attur - 636102,Salem District
Affiliated to KVIC	No

Governance structure	#	Name of the Member	Designation	Back Ground / Profile	Contact Number	Email id
Composition of the executive Board / Trustees /Governing Body /ManagingCommittee and Back ground of the Memebers	1	C.Subramaniam	Trustee	Social worker	0421-4252909	info@ttpk.in
	2	T.R.Vijayakumar	Managing trustee	Entrepreneur	9894671005	vijay@cbc.co.in
	3	R.Annadurai	Trustee	Entrepreneur	9363011783	-
	4	K.Mohanasundaram	Trustee	Entrepreneur	9944933466	-
	5	C.Chandrasekaran	Trustee	Entrepreneur	-	-

Operational Profile	
Major Objectives - Vision, Mission, Goal of the Organisation	To promote the Economic, Social, Cultural , Business interest of the MSME Industry
What are the focus areas of Operations	<ul style="list-style-type: none"> • MSME Enterprise Promotion • Cluster Development for Lean Implementation of MSME units • Labour / Artisan Welfare Initiatives • General Charitable Activities
Provide Key Projects / Activities being undertaken by the IA - Brief Description including the project scope, size , duration (mention specific experience in the area / sector of the proposed project	Conducted Various Awareness and Welfare Programmes for the entrepreneurs, labours and General Public for the Last 3 Years as given in the Extra Sheet
Mention Key Clients / Donors associated with for Project implementation along with details on the nature of association	Associated with MSME Development Institute, Chennai and Quality Council of India, New Delhi, etc

Management Profile			
Background of Key Personal (Professionals and others) with brief profile of the Senior Management Personnel			
No	Name	Designation	Responsibilities
1	T.R.VIJAYAKUMAR	MANAGING TRUSTEE	Head of the Institution & Authorised Signatory
2	Mr.S.Sivaraman	Legal Advisor	Advising Members on Legal Procedures and Guidance on MSME / Export Promotional Schemes and Cluster Development Initiatives
3	Mr.S.Thirugnanasambandam	Manager	Office Administration Communication with members Event Organising & Public Relations
4	Mr.V.Sekar	Technical Advisor	Advising Members on Technical Issues and Quality Management

Bank Account Details	
Name of the Bank	State Bank of Patiala
Branch Name	Dharapuram Road, Tirupur
Account Number	65129490665

Contact Details	
Name of the Contact Person	Mr.S.SIVARAMAN
Designation of Contact Person	Project Head & Legal advisor
Correspondence Address	Project Office (Salem) Aakkam Social Welfare Trust, 38/90A,Thayumanavar Street, Attur - 636102, Salem District
CONTACT NUMBER	9840471561
E-MAIL ADDRESS	sivaraman.sla@gmail.com

7 Project Concept & Strategy Framework

7.1 Project Rationale

The existing product range in the cluster is limited to intermediate products such as Coir Fibre, yarn and curled coir. The value addition undertaken in the cluster is very limited. Hence production of Value added competitive product is perceived to be a requirement of the cluster to boost up the cluster turnover, which would result in enhanced value chain on the whole.

The Cluster has appreciable number of Coir Fibre units (about 55 units) and the scope for further value addition to diversified products such as Coir Plyboard is immense. In order to directly benefit the Coir fibre extraction units in the cluster, value addition of coir fibre is considered an apt infrastructure for the cluster.

An upgraded full-fledged infrastructure for the manufacture of Coir Composite panels, also termed as Coir wood, being the environment friendly value added product of fibre, is proposed as the Common facility center.

Project justification:

The Coir wood, the new entrant to the end uses of coir is a prospective wood substitute. The combination of coir with resin and subsequent processing shall definitely preserve the natural forests and saves the trees from cutting for wood.

One unit of coir ply with a production capacity of 40 cubic metres a day would be able to save about 22 trees per day which means 6,600 trees per year. Assuming that one such tree requires 40 sq.metre, then it would be 25 trees in one acre so that a coir ply unit could save about 264 acres of tropical forest in every year. If 10 % of coir fibre produced is utilized in the manufacture of coir ply, it would save about 8, 80,000 tropical trees per year which corresponds to 8,800 acres of tropical forests per year.

A tropical tree, which is 90 years old, would achieve a height of 15 metres with 0.5 meters width and 0.5 meters depth gives about 3.75 cubic meters of lumber. Timber recovery at 60% would yield about 2.25 meters of planks and sheets. When converted

in to a finished product there is a further wastage of 20%. Hence the total recovery would only be about 1.80 cubic metres.

Coir wood made from coir fibre and phenol formaldehyde resin is an innovative wood substitute. It is a composite board and other hard fibres such as sisal and jute etc. and pre-treated plantation rubber wood veneers could be incorporated. The diversified new uses of coir composite will save the tropical forests, increase rural employment opportunities and also promote agriculture leading to sustainable development.

7.2 Project Objective

- To engage in production of value added competitive products to increase the cluster turnover substantially and to enhance the value chain of the cluster
- Production of Environment friendly value added products and to attain an equilibrium with environment and sustainable development
- Eco production of products that augment the income level of huge number of employees/ artisans engaged coir yarn spinning

7.3 Focus Products/Services

- Coir Needled Felt - Standalone product, also raw material for Coir Plyboard
- Coir Ply Board - Environment friendly competitive value added product

7.4 Conceptual Framework / Project Strategy

- Strengthen linkages within the cluster - with other SMEs, larger enterprises, support institutions, banks etc. At times such linkages are also created with important organizations (private/public) outside the cluster;
- Assist cluster stakeholders to develop a consensus-based vision for the cluster as a whole;
- Help stakeholders to coordinate their actions and pool their resources to move towards a shared vision for the cluster as a whole; and
- Create an autonomous governance framework, in a step-by-step process that will sustain dynamism and change in the cluster after the withdrawal of the implementing agency

8 Project Interventions (Core SFURTI)

8.1 SOFT INTERVENTIONS

a) CAPACITY BUILDING:

- + Trust Building: For strong association among cluster members to address common problems.
- + Entrepreneurship Development Programme: To foster entrepreneurship among cluster members.
- + Skill Upgradation Programme: To increase the skilled labour force in the cluster to address the problem of limited skilled labour availability.
- + Exposure Visit: Visit to other vibrant cluster, research institutions etc. to understand the synergic effect and dynamics of vibrant clusters and to demonstrate the technology and marketability for value added products.

b) MARKET PROMOTIONAL ACTIVITIES:

- + Market Study Tour: To enable the cluster members to gain a deeper understanding of the business environment and market dynamics in Coir sector.
- + Participation in Trade Fairs: To conduct business, cultivate cluster's image and to examine the market. The main objectives of participation of trade fairs are:
 - Increased Sales
 - Product showcasing for enhanced product visibility
 - Establish qualified leads
- + Buyer Seller Meet: To meet various players in the value chain for building business contacts and enhance marketability

8.2 HARD INTERVENTIONS:

CREATION OF COMMON FACILITY CENTRE:

The following common facilities are proposed for the Ayothiyapattinam Coir Cluster to enhance raw material utility, marketability and profitability.

- I) Coir Needled Felt Manufacturing
- II) Coir Ply Board Manufacturing

8.3 THEMATIC INTERVENTIONS

Cluster's active involvement and participation in activities such as national and international level brand promotion campaigns, New Media marketing, E-commerce initiatives etc. as proposed under the SFURTI implementation guidelines is projected as part of thematic interventions.

9 Soft Interventions

9.1 Capacity Building

S. No	Particulars	
1	Proposed Programme / Intervention	Trust Building and awareness programme
2	Target group	Cluster members
3	No. of Batches	2
4	Batch size	50 nos
5	Training content	Self & Group motivation
6	Trainer / Training Institution	ITCOT Consultancy and Services Limited
7	Cost of Training programme	Rs. 1,00,000/-
8	Implementation timeline	Year I Quarter I

S. No	Particulars	
1	Proposed Programme / Intervention	Entrepreneurship Development Programme
2	Target group	Coir Entrepreneurs
3	No. of Batches	1
4	Batch size	25 nos
5	Training content	Motivation, Govt Subsidy Schemes, Banker role in Industries, Government statutory approvals, Marketing
6	Trainer / Training Institution	ITCOT Consultancy and Services Limited
7	Cost of Training programme	Rs. 1,00,000/-
8	Implementation timeline	Year I Quarter II

S. No	Particulars	
1	Proposed Programme / Intervention	Skill upgradation Programme
2	Target group	Coir workers
3	No. of Batches	2

4	Batch size	25 nos
5	Training content	Skill Training for Needle felt / Panel board manufacturing
6	Trainer / Training Institution	Coir Board (at CICT, Bengaluru)
7	Cost of Training programme	Rs. 2,00,000/-
8	Implementation timeline	Year I Quarter III & Quarter IV

S. No	Particulars	
1	Proposed Programme / Intervention	Exposure tours
2	Target group	Coir Entrepreneurs
3	No. of batches	As per requirement
4	Programme content	Visiting research institutions, other Coir clusters to understand cluster dynamics and technology update
5	Coordinating Institution	ITCOT Consultancy and Services Limited
6	Cost of programme	Rs. 3,00,000/-
7	Implementation timeline	Year I Quarter III

9.2 Market Promotion

S. No	Particulars	
1	Proposed Programme / Intervention	Market study tours
2	Target group	Coir Entrepreneurs
3	No. of Batches	As per requirement
4	Programme content	To understand market dynamics, To interact with market intermediaries to understand the product wise market potential in potential market centers
5	Coordinating Institution	IA & TA
6	Cost of programme	Rs. 4,00,000/-
7	Implementation timeline	Year II Quarter I / Quarter II

S. No	Particulars	
1	Proposed Programme / Intervention	Participation in Trade fairs
2	Target group	SPV members
3	No. of Batches	As per requirement
4	Training content	Participation & Exhibit cluster products
5	Trainer / Training Institution	Coir Board
6	Cost of Training programme	Rs. 5,00,000/-
7	Implementation timeline	Year II - Quarter III / Quarter IV

S. No	Particulars	
1	Proposed Programme / Intervention	Buyer Seller Meet
2	Target group	SPV members
3	No. of Batches	As per requirement
4	Training content	Direct Contact with Buyers
5	Trainer / Training Institution	IA, TA & Coir Board
6	Cost of Training programme	Rs. 2,00,000/-
7	Implementation timeline	Year II - Quarter IV

S. No	Particulars	
1	Proposed Programme / Intervention	Tie up with Business Development service(BDS) providers
2	Target group	SPV members
3	No. of Batches	As per requirement
4	Training content	New Product development New design development
5	Trainer / Training Institution	BDS Providers
6	Cost of Training programme	Rs. 2,00,000/-
7	Implementation timeline	Year II - Quarter I / Quarter II

10 Hard Interventions

10.1. Creation of common facility centre:

a) Land and building

The land to an extent of 1.50 acres is proposed to be taken for lease by the SPV for a period of 15 years. The land identified is located at Mascinaickenpatty, Ayodhyapattinam village, Salem District. The location has other infrastructural facilities such as road, power etc. and is suitable for the proposed CFC.

Cost & Area of Building works

CFC activities	Built up Area (in Sq.ft)	Rate/Sq.ft. (in Rs.)	Cost of Building (Rs. in Lakhs)
Composite Panel with Needled Felt production	15000	Rs.750/-	Rs. 112.50 lakhs
Total			Rs.112.50 lakhs

The following common facilities are proposed for the Coir Ply board Cluster at Salem to enhance value addition of coir fibre & coir yarn in the cluster.

b) Needle Felt based Composite Panels - Process

Coir fibers are rolled into sheets to form Coir Needle Felt Material. This material has wide range of applications. Coir needle felt is generally used as mattress material, plant liners and other high end garden articles. This is also being used as insulation pads, geo textiles and organic mulch. Coir geo textiles are used in different forms like woven, non-woven, stitched blankets etc. for various soil bioengineering applications. They also used in erosion control of soil.

The R&D efforts of the Coir Board were successful in developing coir composite that can substitute wood, plywood and MDF (Medium Density Fibre) boards. The composites are made out of a combination of two or more materials to achieve superior properties than that of its components. Here coir fiber and phenolic resoles are used to make the ply of any desired density. Based on the density the ply can replace plastic boards, MDF boards, or hard board made out of wood. The coir ply can be reinforced with plantation wood like rubber wood veneer, for

better properties without destroying natural forests. They are resistant to termite and borer attacks. Flame retardant, boiling water resistant, and free from fungal growth. The nail holding properties are better than MDF, because of the long staple fiber and normal carpentry tools are good enough to work with.

Coir medium density fibre board is a panel product manufactured from coir combined with synthetic resin. The panels are manufactured to a specific gravity of 0.5 to 0.9 by the application of heat and pressure by a process in which the inter fibre bond is substantially created by the added binder. In general, this indigenous technology utilized to manufacture of coir medium density fibre board is an improvised combination of that used in the existing medium fibre board and particleboard industry and the one used in the cardboard industry. Coir fibres manufactured by mechanical process are processed through needled felt plant (Non-woven system) to make uniform mat in different densities according to the requirement.

These fibre mats thus produced are impregnated with resin. The impregnated fibre mats are pressed into panels by passing into press under controlled temperature, pressure and time. An Indian standard specification has brought out with bureau of Indian standards on coir medium density fibre board IS 15491:2004 specification for coir medium density fibre board for general purposes.

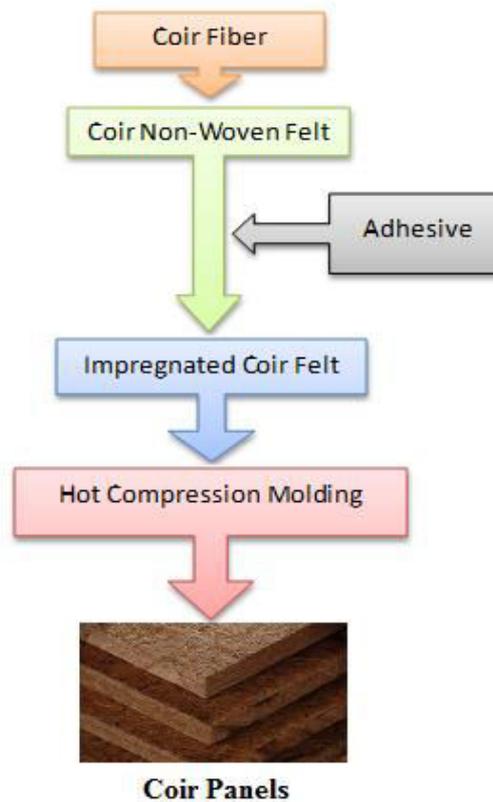
Manufacturing Process

The coir fibres which are stored as bales are opened out and passed through the fibre cleaning machine. During this process the hard bits coir pith and other foreign particles are removed. Cleaned and opened coir fibre is passed into a sheet forming machine by air laying process to form a uniform web. The density is adjusted to get continuous and even distribution for the uniform web formation.

The Web thus formed is passed through needling loom. During this process needles will interlock coir fibre mechanically. The needles pattern and the depth of penetration are positioned to suit the required interlocked coir needle felt. These interlocked needle felt are edge trimmed through the longitudinal cutter and made into required rolls. The edge trimmed rolls are taken into the impregnation section where thermosetting adhesive is impregnated on to the non-woven sheet. These impregnated non-wovensheets are dried to remove the excess moisture to form prepregs. These prepregs are cut to required length and kept ready for assembling. The coir prepregs thus formed are laminated as per the required thickness and strength characteristics and then loaded on to the compression

moulding machine. The assemblies thus placed between the moulds of the machine are cured with specific pressure, temperature and time. The cured panel is taken out and conditioned. Each panel is then inspected and checked for quality for maintaining standards.

From the supreme quality panels variety of furniture can be made on par with conventional plywood industry. The process flow chart for Coir Composite Panels is given below:



Project justification

Coir Composite panels, being the environment friendly value added product of fibre, are proposed to rejuvenate the cluster product mix and to introduce manufacturing of value added finished product in the cluster, which has good market prospects. Moreover, the coir fibre produced in the cluster is utilized for value addition and hence the existing coir fibre extraction unit holders are benefitted.

c) Plant and Machinery

The technical specification of the proposed machinery is given below:

1	Hammer Mill	1 no	<ul style="list-style-type: none"> • The machine is intended to make small wood branches or wood veneers or tuft wastes or coconut leaf stem in to particles of size 3 to 10 mm • Capacity of 350 kgs per hour • Run by three phase electric motor of 15 hp. • Main shaft speed - 1800 to 2000 rpm • Feeding material - branches of wood and coconut leaf stem • Desired output (particle) size - 3 to 20 mm, with bottom perforation of 20mm
2	Mixing machine	1 no	<ul style="list-style-type: none"> • The machine is intended to mix the coir pith, wood waste/coconut leaf stem/tuft waste particles along with the adhesive of required quantity. The ingredients are put in the top opening of a mixer and the blade mixes the materials homogeneously. • Capacity of 350 kgs per hour of four batches • Run by three phase electric motor of 10 hp • Provision for the removal of the mixed material at the bottom of the machine.
3	Hot Compression Moulding Machine (Hydraulic Hot Press)	1 no.	<ul style="list-style-type: none"> • 1500 tonne capacity • 6 day light • Day light gap of 200 mm • Finished size of the material is 8 ft x 4 ft • Platen size 8 ft 4 in x 4 ft 4in • Provision for keeping spacer bars of different thickness • Complete with power pack and fittings. • Provision in platens for thermic fluid heating oil flow
4	Wood fired thermic fluid boiler	1 no	<ul style="list-style-type: none"> • 10 lakh kilo cals • To be coupled with the online drier and hot press with piping system • Complete with all safety accessories

			<ul style="list-style-type: none"> The hot press temperature is about 140 degree centigrade and of the drier is about 100 degree centigrade
5	<p>Coir Sheet Making Plant comprising of following Machine</p> <ol style="list-style-type: none"> 1. Coir Bale Opener 2. Non woven coir needle felt machine 3. ON line Resin Spraying both top and bottom side(In 2 stages) 4. 3 Pass Online Drier 5. Online Cutting System (both cross & side cutting) 6. Drum press 7. Pressure tank for resin spray (1000 Ltrs capacity) 	1 no	<ul style="list-style-type: none"> Width 2.6 meters Output 2.5 to 3.0 meters per minute Density of the material should be varied from 300 gsm to 700 gsm Punching with single or double punching system Online spray arrangement for the felt on both sides with drier of 5 meters and three pass with rod conveyors. Adjustment of drier temperature from 70 to 120 degree centigrade. Variable speed arrangements for the drier conveyors Cutting of fleece to make the fleece of 8 ft x 4 ft with cutting allowances. Drum press for laminating 2 or more pieces
6	Edge trimming machine	1 no.	<ul style="list-style-type: none"> Double cutter Cutting size of the board is 8 ft x 4 ft One fixed cutter and one movable cutter wherein the cutter adjustment should be from 2 ft to 8 ft. Machine should be complete in all respects with motor and cutter and ready for operation.
7	RESIN REACTOR TANK WITH	1 no	<ul style="list-style-type: none"> 500 Kgs capacity Suitable to manufacture PF & UF Resin S.S. Body With Pump, Cooling Tower, Piping Ready for running
8	Other accessories		<ul style="list-style-type: none"> Scissor lift Aluminum caul plates 3 mm thickness, 8ft 4

			in x 4 ft 4 in - 50 nos <ul style="list-style-type: none"> • Double dimension saw :1 no • Cooling rack - 1 set • Weighing machine • Assembly tables - 2sets
--	--	--	--

The estimated cost of the proposed machineries for the Needle felt based Composite panel manufacturing is given below:

Coir Needle felt based Coir Composite Panel manufacturing plant with supporting machineries	1 set	Rs.288.00 lakhs
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d) Production capacity

The installed production capacity of Needle felt plant and the Composite board plant of the proposed CFC are given below:

Needle felt production:

Installed Capacity of Needled Felt	160.00	meters per hour
Maximum width	2.50	meters
No. of operational hours per shift	8	per shift
Installed Production Capacity per shift	3200.00	Sq.M. per shift
Density	0.80	Kg.
Installed Production Capacity per shift	2560.00	Kgs. per shift
Number of Shifts	1	Shifts per day

Composite board production:

Installed production capacity per hour	20	sheets
No. of hours per shift	8	hours
Number of shifts	2	Shifts per day
Installed production capacity per day	320	boards per day

e) Raw material

Coir Fibre is the raw material utilized for the production of Needle felt and Needle felt is the raw material for the Composite panels manufacturing. Coir Fibre requirement for the proposed project is estimated at about 920 MTs per annum for the installed capacity of Needle felt production.

The Felt requirement per board is estimated as below:

Felt requirement per board	6.25	Sq.m. per board (2.5m x 1.25m)
Felt requirement for 2 shifts (in Sq.m.)	2,000.00	Sq.m. per day
Felt requirement for 2 shifts (in Kgs.)	1,600.00	Kgs. per day

There are about 55 Coir fibre extraction units with the production capacity of about 27,500 MTs per annum within the cluster area. Coir Fibre, the raw material is proposed to be sourced from within the cluster.

f) Marketing Strategy

M/s.Kurinji Coir Consortium Private Limited intends to adopt an insightful, intensive and innovative marketing approach. Apart from conventional marketing strategies, the proposed marketing programme includes the following initiatives:

- **Partner with allies** - Marketing partnerships have a number of benefits to push a marketing campaign. For starters, when you collaborate with someone else, you tend to deliver better content. On top of that, marketing partnerships are cheaper to create, see success more quickly, and expose your brand to a new audience.
- **Collaborate with influencers** - Another way to gain new audience and extend brand awareness is by collaborating with the top influencers in the industry.
- **Experiment with new channels and platforms** - Building a brand needs new ways of looking at how to communicate with the customer across multiple digital and traditional channels. Eco friendly products & Handicraft products offers immense scope to experiment with new channels and platforms
- **Use big data to target customers** - big data can be used to predict purchasing trends get in touch with consumers before they search for our products or services.

The marketing plan for the CFC products includes the following initiatives:

- a. Promotion of the **brand “KURINJI”** aggressively through multiple channels and media.
- b. Engaging Business Development Service providers to enhance the cluster market share in both domestic and export market for the products.
- c. Appointment of dealers in potential market centres in south india and establishment of effective dealer network
- d. Establishing linkages with retail showrooms (including Coir Board showrooms) in Chennai, Bangalore, Mumbai & Delhi

- e. SPV has already identified **potential buyers** for the products viz. Natura India, Hosur.
- f. The SPV lead members have already established linkages with lead wood furniture manufacturers to include Coir Composite panels in their product mix and enhance the market prospects of the proposed eco friendly product.
- g. The Company also propose to establish tie-up with lead builders in Salem district to promote Coir Composite panels for varied utilities such as Modular Kitchen, other interior design applications etc., apart from common plyboard applications. Based on the informal study undertaken by the SPV lead members, it is ascertained that the consumer buying decision rests with the type of building as follows:
 - While decorating a NEW residence:
 - Buying Decision rests with Builder/Architect or the owner.
 - While RENOVATING a Residence:
 - Buying Decision is made by an Interior Designer or by the owner.
 - While furnishing a commercial complex:
 - Buying Decision is made by the Builder/Architect/Interior Designer.

The SPV has proposed to establish linkages with lead builders / Architects & Interior designers to promote Coir Composite panels for home furnishing applications.

g) Implementation timeline:

Year I - Quarter I - IV (Total Project timeline is given in Chapter 13)

11 Project Cost & Means of Finance

The estimated project cost based on the computations of the project interventions and the means of finance for the project is given below:

S.No.	Proposed Interventions	Project Cost (Rs.Lakhs)	GOI Share (Rs.Lakhs)	SPV Share (Rs.Lakhs)
1	SOFT INTERVENTIONS			
1.1	Capacity Building			
1.1.1	Trust building and awareness programme	1.00	1.00	--
1.1.2	Entrepreneurship Development Programme	1.00	1.00	--
1.1.3	Skill Upgradation Programme	2.00	2.00	--
1.1.4	Exposure Tour	3.00	3.00	--
	Total Capacity Building cost	7.00	7.00	--
1.2	Market Promotion			
1.2.1	Market Study Tour	4.00	4.00	--
1.2.2	Participation in Trade fairs	5.00	5.00	--
1.2.3	Buyer Seller Meet	2.00	2.00	--
1.2.4	Tie up with Business Development Service (BDS) providers	2.00	2.00	--
	Total Market Promotion cost	13.00	13.00	--
	Total Soft Interventions Cost	20.00	20.00	--

Contd...

S.No.	Proposed Interventions	Project Cost (Rs.Lakhs)	GOI Share (Rs.Lakhs)	SPV Share (Rs.Lakhs)
2	HARD INTERVENTIONS			
2.1	Building for CFC (15,000 Sq.ft. @ Rs.750/- per Sq.ft.)	112.50	101.25	11.25
2.2	Machinery & other components of Hard Interventions			
2.2.1	Coir Needle Felt and Coir Composite panel production setup	288.00	259.20	28.80
2.2.2	Electricals and accessories	6.00	5.40	0.60
2.2.3	Handling infrastructure (Bull loader, Trolleys)	5.00	4.50	0.50
2.2.4	Working Capital (for one cycle of operation)	60.00	54.00	6.00
	Total - Machinery & other components of Hard Interventions	359.00	323.10	35.90
	Total Hard Interventions Cost (2.1 + 2.2)	471.50	424.35	47.15
	TOTAL INTERVENTIONS COST (SOFT & HARD)	491.50	444.35	47.15
3	Cost of TA	30.00	30.00	-
4	Cost of IA/SPV including CDE	20.00	20.00	-
	TOTAL PROJECT COST	541.50	494.35	47.15

11.1 Cost of Establishment & Operation Common Facility Center

The project components and the cost thereof are mentioned below:

(Rs.Lakhs)

Cost Of Project	Total	SPV Share	Gol Grant
Hard Interventions - Grant Components			
Building & Civil works	112.50	11.25	101.25
Plant and Machinery	288.00	28.80	259.20
Electricals & accessories	6.00	0.60	5.40
Handling infrastructure	5.00	0.50	4.50
Working Capital	60.00	6.00	54.00
<i>Total</i>	<i>471.50</i>	<i>47.15</i>	<i>424.35</i>
Other Non-Grant components			
Contingencies (2.00%)	6.01	6.01	-
Deposits	2.23	2.23	-
Prel. & Pre-operative Expenses	2.26	2.26	-
<i>Total</i>	<i>10.50</i>	<i>10.50</i>	<i>-</i>
Total	482.00	57.65	424.32

The CFC cost of establishment and operation works out to Rs.482.00 Lakhs, of which Rs.57.65 lakhs will be the SPV share and Rs.424.32 lakhs will be the Grant component under SFURTI from the Government of India. The above project cost includes **Hard interventions viz. Building and Core machinery components and Working capital amounting to Rs.471.50 lakhs**, which are to be contributed by SPV and Gol in 10:90 ratio and also includes the lateral components viz. Contingencies, Deposits, Prel. & Preop. Expenses & Working capital, which amounts to Rs.10.50 lakhs, for which Gol Grant is not applicable and the cost would be borne by the SPV separately.

11.2 Working Capital

Working capital gap for the first year of operation works out to Rs.60.00 lakhs. This is based on 18 days stock of Consumables, 2 days work-in-progress, 8 days finished goods stock and receivables for 8 days. The SPV would contribute 10% of the total working capital requirement and Rs.54.00 lakhs would be met by the Gol grant under SFURTI. The increase in working capital in the subsequent years of operation will be met by internal generation. The details are provided in **Financial Statement-2**.

12 Plan for Convergence of Initiatives

The initiatives for convergence of schemes and leveraging of resources from various sources are under exploration viz.

- Dovetailing the benefits of other Coir Board schemes such as Coir Udyami Yojana, Export market promotion scheme etc. and also from other MSME schemes such as NEEDS, Capital subsidy scheme etc. to cluster members
- Exploring the opportunities for private sector participation in the cluster development project
- Exploring Corporate Social Responsibility (CSR) foundations with proven track record for additional funding.
- Exploring the possibilities to dovetail funds from various state and central government schemes over and above the funds sanctioned for SFURTI scheme (without duplication of funding for a specific project component).

The above initiatives would be undertaken with the participation of stakeholders on approval of the project. Notwithstanding the above initiatives, it is expected that the benefits of various other schemes such as Coir Udyami Yojana, PMEGP etc. for individual cluster members are foreseen as below:

Scheme	No. of beneficiaries/ Activity	Cost of project	Scheme Funding	Bank Loan	Promoter Contribution
NEEDS	5 (Coir Fibre Extraction units)	5 members x Rs.50.00 lakhs = Rs.250.00 lakhs	Rs.62.50 Lakhs	Rs.175.00 Lakhs	Rs.12.50 Lakhs
PMEGP	5 (Coir Fibre Extraction units)	5 members x Rs.25.00 lakhs = Rs.125.00 lakhs	Rs.43.75 Lakhs	Rs.75.00 Lakhs	Rs.6.25 Lakhs
	Total	Rs.375.00 lakhs	106.25	250.00	18.75

The additional investment estimated in the cluster is Rs.375.00 Lakhs with the scheme funding of Rs.106.25 lakhs, bank credit of Rs.250.00 lakhs and the promoter's contribution of Rs.18.75 lakhs.

13 Enhanced Project Cost & Means of Finance

The Project cost and Means of Finance of CORE SFURTI project is illustrated in **Chapter 8**. Convergence of initiatives would be undertaken to improve the viability of projects, strengthening the value chains and market linkages and to enable the overall improvement of the level of human development in the area.

Considering the convergence of other scheme benefits for individual cluster members, as foreseen in Chapter 11, the enhanced project cost and means of finance is given below:

(Rs.Lakhs)

S.No.	Component	Total Cost	Grant Component	Promoter's Contribution & Bank Loan
1	Core SFURTI	546.50	499.35	47.15
2	Convergence initiatives (Establishment of individual units under various schemes)	375.00	106.25	268.75
	Total	921.50	605.60	315.90

The enhanced project cost including the Core SFURTI and other convergence initiatives works out to Rs.921.50 lakhs, whereas the corresponding Grant component is Rs.605.60 lakhs and that of Contribution and bank loan is Rs.315.90 lakhs.

14 Project Timeline

The project implementation schedule with details of the activities to be undertaken and the expected time frame (quarter wise) for each activity is given below:

S.No.	Proposed Interventions	Period	
		Year	Quarter
1	SOFT INTERVENTIONS		
1.1	Capacity Building		
1.1.1	Trust building and motivational programme	I	Q1
1.1.3	Entrepreneurship Development Programme	I	Q2
1.1.4	Skill Upgradation Programme	I	Q3, Q4
1.1.5	Exposure Tour	II	Q2, Q3
1.2	Market Promotion		
1.2.1	Market Study Tour	II	Q1/Q2
1.2.2	Participation in Trade fairs	II	Q2/Q3
1.2.3	Buyer Seller Meet	II	Q3/Q4
1.2.4	Tie up with Business Development Service (BDS) providers	II	Q2/Q3
2	HARD INTERVENTIONS		
2.1	Land Lease (15 years lease)	I	Q1
2.2	Building for CFC	I	Q1, Q2
2.3	Machinery for Common Facility Proposed		
2.3.1	Coir Needled Felt	I	Q3
2.3.2	Coir Composite Panels	I	Q4

15 Detailed Business Plan

The cost of production and profitability projection are presented in Statement-3. The assumptions for working the cost of production & profitability are given below:

Needle Felt Section:		
Installed Capacity of Needled Felt	160.00	meters per hour
Maximum width	2.50	meters
No. of operational hours per shift	8	per shift
Installed Production Capacity per shift	3200.00	Sq.M. per shift
Density	0.80	Kg.
Installed Production Capacity per shift	2560.00	Kgs. per shift
Number of Shifts	1	Shifts per day
Capacity Utilisation		
- First year	70%	
- Second year	80%	
- Third year onwards	90%	
Raw material requirement (Coir Fibre)	120%	of Production Quantity (i.e. Yield wastage: 20%)
Coir Fibre requirement for entire felt production	3,072.00	Kgs. per day for the installed capacity
Cost of raw material (Coir Fibre)	Rs. 16,000.00	per ton
Coir Composite Panel Section:		
Installed production capacity per hour	20	sheets
No. of hours per shift	8	hours
Number of shifts	2	Shifts per day
Capacity Utilisation		
- First year	70%	
- Second year	80%	
- Third year onwards	90%	
Panel size	8 ft. x 4 ft.	
Selling Price	Rs. 1,350.00	per board
Selling price	Rs.42.18	per Sq.ft.

Felt requirement per board	6.25	Sq.m. per board (2.5m x 1.25m)
Felt requirement for 2 shifts (in Sq.m.)	2,000.00	Sq.m. per day
Felt requirement for 2 shifts (in Kgs.)	1,600.00	Kgs. per day
Coir Fibre requirement (for board production)	120%	of Needle felt output
Coir Fibre requirement (for board production)	1,920.00	Kgs. per shift for installed capacity
Resin requirement	35%	of Coir Fibre requirement
Cost of Resin	Rs.80,000	per ton
BOPP Film requirement	2	sheets per board
Cost of BOPP Film	Rs.40	per sheet of board size
Particle board requirement	1	per panel
Cost of Particle board	Rs.640	per board of 8ft. X 4 ft. size.
Cost of consumables (Chemicals)	Rs.25	per board of 8ft. X 4 ft. size.
Cost of fuel (Panel section)	Rs.20	per board of 8ft. X 4 ft. size.
Power Cost	Rs.6.50	per KWH
Repairs & Maintenance	1.50%	Of plant and machinery cost in the first year of
		operation and 10% increase in every subsequent years
Administrative Expenses	0.50%	Of sales realisation
Selling Expenses	1.00%	Of sales realisation

The Sales Realization, Profitability and Break Even point worked out on the above said assumptions are given below:

(Rs.lakhs)

Year	1	2	3	4	5
Annual Sales Realization	972.72	1111.68	1250.64	1250.64	1250.64
Profit Bef. Tax	141.83	170.59	199.19	196.34	193.32
Provision for taxation	28.15	45.30	60.69	63.77	65.83
Profit after Tax	113.69	125.29	138.51	132.57	127.49
Break Even Point	34%	31%	28%	29%	30%

Net Present Value (NPV) : Rs.207.89 lakhs

Internal Rate of Return (IRR) : 22.48 %

Project Financials:

The project financials comprises the following statements, which are enclosed in the Annexure separately:

Statement 1: Cost of Project and Means of Finance

Statement 1.1: Estimation of Deposits / Advances

Statement 1.2: Preliminary and Preoperative Expenses

Statement 2: Assessment of Working Capital

Statement 3: Cost of Production & Profitability

Statement 4: Assumptions for Cost of Production and Profitability

Statement 5: Calculation of Income Tax

Statement 6: Estimation of Power Cost

Statement 7: Manpower Requirement and Estimation of Cost

Statement 8: Estimation of Depreciation

Statement 9: Projected Cash-Flow Statement

Statement 10: Projected Balance Sheet

Statement 11: Estimation of Break-Even Point

Statement 12: Estimation of Net Present Value and Internal Rate of Return

Statement 13: Sensitivity analysis

16 Proposed Implementation Framework

16.1 Role of Implementing Agency

The role and responsibility of the IA includes the following:

- a) Recruit a full time CDE preferably one amongst the stakeholders who has the desired knowledge and capability in order to ensure efficient implementation of the project
- b) The IA would implement various interventions as outlined in the approved DPR
- c) Undertake procurement and appointment of contractors, when required, in a fair and transparent manner
- d) The IA will enter into an agreement with the Nodal Agency for timely completion on cluster intervention and proper utilization of Government Grants
- e) Operation & Maintenance (O&M) of assets created under the project by way of user-fee based model
- f) Responsible for furnishing Utilization Certificates (UCs) and regular Progress reports to Nodal Agency in the prescribed formats.

16.2 Details of Strategic Partners

The cluster is proposed to be developed under SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Coir Board is the Nodal agency(NA) and ITCOT Consultancy and Services Limited is the Technical Agency(TA) appointed by Coir Board. The Technical agency will identify a potential Implementing agency (IA) for the cluster. The Implementing agency is **Aakkam Social Welfare Trust**, C/o.Tirupur Thozhil Pathukappu Kuzhu (TTPK), the Non Government Organization, having its registered office at Tirupur and project office at Aatur, Salem District. The above agencies work in tandem towards the successful implementation of the project in a sustainable manner.

16.3 Structure of the SPV

A Special Purpose Vehicle (SPV) is formed and registered as Private Limited Company under sub-section (2) of section 7 of the Companies Act 2013 and rule 8

of the Companies (Incorporation) Rules, 2014 in the name of "KURINJI COIR CONSORTIUM PRIVATE LIMITED" as per the Certificate of Incorporation issued by Registrar of Companies, Coimbatore dated 14.12.15. The CIN of the company is U36104TZ2015PTC022062. The registration has been carried out with 7 members as Directors and 18 additional members, who have evinced interest are proposed to be included as shareholders. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over.

16.4 Composition of the SPV

An SPV is formed with 25 members with 7 Directors and the list is given below:

S.No.	Name	Designation	Present Activity
1	A.Mohamed Yasar Arafath	Director	Coir Yarn Manufacturing
2	S.Tariq ali	Director	Coir Fibre & Yarn manufacturing
3	K Amanulla	Director	Coir Fibre Manufacturing
4	A.Kamaru Zaman	Director	Coir Fibre Manufacturing
5	A.Badru Zaman	Director	Yarn trading
6	K.Vishal	Director	Coir Yarn Manufacturing
7	H.Zakir hussain	Director	Coir Fibre & Yarn manufacturing
8	M.Nizar Ahamed	Shareholder	Coir Yarn Manufacturing
9	A.Venkatesh	Shareholder	Coir Yarn Manufacturing
10	J Mohan	Shareholder	Coir Yarn Manufacturing
11	A.Nazeer ahamed	Shareholder	Coir Yarn Manufacturing
12	N.Nizar Ahamed	Shareholder	Yarn manufacturing
13	M.Sohail	Shareholder	Coir Fibre Manufacturing
14	SNJ.Noourl Ameen	Shareholder	Coir Fibre Manufacturing
15	M.Anand Mariappan	Shareholder	Coir Fibre & Yarn manufacturing
16	ASN.Sahatab	Shareholder	Curled Coir & Yarn manufacturing
17	I.Sohail Ahamed	Shareholder	Coir Fibre & Yarn manufacturing
18	A.Riyaz Ahamed	Shareholder	Coir Fibre & Yarn manufacturing
19	M.Tariq	Shareholder	Coir Fibre Manufacturing
20	A.Kandasamy	Shareholder	Coconut Merchant
21	A.Noorudeen	Shareholder	Coir Fibre Manufacturing
22	M.Jaffer	Shareholder	Coir Fibre & Yarn manufacturing
23	ASN.Kirmani	Shareholder	Curled Coir & Yarn manufacturing
24	P.Kumar	Shareholder	Coir Fibre Manufacturing
25	H.Noorul Haq	Shareholder	Coir Yarn Manufacturing

17 Expected Impact

The pre-intervention & post-intervention scenario of the cluster is given below:

S. No.	Parameter	Pre-Intervention	Post-intervention					
			Y 1	Y2	Y3	Y4	Y 5	Y 10
1	Cluster Turnover (Rs. Lakhs)	6338	9320	9880	10438	10998	11650	14560
2	Investment (Rs. Lakhs)	1591	2448	2594	2742	2888	3060	3825
3	Employment (Nos.)	960	1180	1250	1321	1392	1475	1840
4	Wages per day (Rs.)	400	520	570	600	625	675	750
5	Profitability (%)	8-10%	22%	24%	25%	25%	25%	25%

- Strong linkages among the Cluster members and actors in all levels of the value chain and an established Collaborative setup in place to undertake development initiatives & address common issues.
- Emergence of specialized support service providers and their active involvement in the development process
- Establishment of new units by converging various schemes of State and Central Governments (such as Coir Udyami Yojana, NEEDS, PMEGP etc.) resulting in additional investments and employment in Coir sector by the cluster members
- Improved access to financial capital for cluster members
- 100% Coverage of cluster artisans under social security schemes

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

			Statement	1			
COST OF PROJECT AND MEANS OF FINANCE							
Cost Of Project		RS.LAKHS		SPV Share	GoI Grant		
Land		Leased					
Building & Civil works		112.50		11.25	101.25		
Plant and Machinery		288.00		28.80	259.20		
Electricals and accessories		6.00		0.60	5.40		
Handling equipments (Bull loader, trolley etc.)		5.00		0.50	4.50		
Contingencies	1.50%	6.01		6.01	0.00		
Deposits (as per statement 1.1)		2.23		2.23	0.00		
Prel. & Pre-operative Expenses		2.26		2.26	0.00		
Working Capital (as per statement-2)		60.00		6.00	54.00		
Total		482.00		57.65	424.35		
Means of Finance							
SPV Contribution		57.65					
Grant under SFURTI Scheme		424.35					
Total		482.00					

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

		Statement-1.1					
DEPOSITS							
Deposits payable to TNEB for	120	KVA Power Connection					
	Amount	Total					
Details	Per KVA	(Rs.Lakhs)					
Development Charges	Rs.200	0.24					
Earnest Money Deposits	Rs.600	0.72					
Security Deposit	Rs.600	0.72					
		1.68					
Other Deposits / Advances		0.55					
Total		2.23	say	Rs.2.23	Lakhs		
		Statement-1.2					
PRELIMINARY AND PREOPERATIVE EXPENSES							
Statutory fees (RoC, CTO etc.)	0.46						
Trial run expenses	1.80						
	2.26						

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

ASSESSMENT OF WORKING CAPITAL							Statement-2
Current Assets	Days	1	2	3	4	5	
Coir Fibre stock	18	6.19	7.08	7.96	7.96	7.96	
Work in Process	2	5.26	5.99	6.71	6.73	6.75	
Finished products	8	21.06	23.94	26.83	26.90	26.98	
Receivables	8	25.94	29.64	33.35	33.35	33.35	
Cash for expenses		4.00	4.40	4.84	5.32	5.86	
Other current assets		1.85	1.94	2.04	2.14	2.25	
Total		64.30	72.99	81.73	82.41	83.15	
Current Liabilities							
Sundry creditors for R.M	10	3.44	3.93	4.42	4.42	4.42	
Other Current Liabilities		0.86	0.95	1.04	1.14	1.26	
Total		4.30	4.88	5.46	5.57	5.68	
Working Capital Gap		60.00	68.11	76.26	76.84	77.47	

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement-3 contd...		
COST OF PRODUCTION							
Needle felt							
Coir Fibre requirement		645.12	737.28	829.44	829.44	829.44	
Cost of Coir fibre	Rs. 16,000.00	103.22	117.96	132.71	132.71	132.71	
Composite boards							
Felt requirement for boards	Sq.M.	420000.00	480000.00	540000.00	540000.00	540000.00	
Felt requirement boards	Tons	336.00	384.00	432.00	432.00	432.00	
Coir Fibre requirement for Felt production	Tons	403.20	460.80	518.40	518.40	518.40	
Resin requirement		141.12	161.28	181.44	181.44	181.44	
Cost of Resin	Rs. 80,000.00	112.90	129.02	145.15	145.15	145.15	
BOPP requirement	No.of Sheets	134400	153600	172800	172800	172800	
Cost of BOPP	Rs. 40.00	53.76	61.44	69.12	69.12	69.12	
Particle Board requirement	Nos.	67200	76800	86400	86400	86400	
Cost of Particle board	Rs. 640.00	430.08	491.52	552.96	552.96	552.96	
Cost of Consumables - Chemicals, Binders, Stabilizer etc.	Rs. 25.00	16.80	19.20	21.60	21.60	21.60	
Cost of Fuel	Rs. 20.00	13.44	15.36	17.28	17.28	17.28	
COST OF RAW MATERIAL - COMPOSITE BOARDS		730.20	834.51	938.82	938.82	938.82	
Cost of RM & Cons.- Composite boards		730.20	834.51	938.82	938.82	938.82	
TOTAL COST OF RAW MATERIAL & CONSUMABLES		730.20	834.51	938.82	938.82	938.82	
						Contd...	

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement-3 contd...		
Cost Of Power	Statement 6	12.88	14.14	15.40	15.40	15.40	
Salary & Wages	Statement 7	42.24	44.35	46.57	48.90	51.34	
Repairs & Maintenance	1.50%	4.32	4.75	5.23	5.75	6.32	
		789.63	897.75	1006.02	1008.87	1011.89	
Administrative Expenses	0.50%	4.86	5.56	6.25	6.25	6.25	
Selling Expenses	1.00%	9.73	11.12	12.51	12.51	12.51	
Prel. & Preop. Expenses (w/o)	10.00%	0.23	0.23	0.23	0.23	0.23	
Depreciation	Statement 8	26.44	26.44	26.44	26.44	26.44	
Total		830.89	941.09	1051.45	1054.30	1057.32	
Profit Bef. Tax		141.83	170.59	199.19	196.34	193.32	
Provision for taxation		28.15	45.30	60.69	63.77	65.83	
Profit after Tax		113.69	125.29	138.51	132.57	127.49	

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

			Statement	4			
Assumptions For Cost Of Production And Profitability							
Needle Felt Section:							
Installed Capacity of Needled Felt	160.00	meters per hour					
Maximum width	2.50	meters					
No. of operational hours per shift	8	per shift					
Installed Production Capacity per shift	3200.00	Sq.M. per shift					
Density	0.80	Kg.					
Installed Production Capacity per shift	2560.00	Kgs. per shift					
Number of Shifts	1	Shifts per day					
Capacity Utilisation							
- First year	70%						
- Second year	80%						
-Third year onwards	90%						
Raw material requirement (Coir Fibre)	120%	of Production Quantity (i.e. Yield wastage: 20%)					
Coir Fibre requirement for entire felt production	3,072.00	Kgs. per day for the installed capacity					
Cost of raw material (Coir Fibre)	Rs. 16,000.00	per ton					
Coir Composite Panel Section:							
Installed production capacity per hour	20	sheets					
No. of hours per shift	8	hours					
Number of shifts	2	Shifts per day					
Capacity Utilisation							
- First year	70%						
- Second year	80%						
-Third year onwards	90%						
Panel size	8 ft. x 4 ft.						
Selling Price	Rs. 1,350.00	per board					
						contd...	

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

			Statement 4 contd...			
Felt requirement per board	6.25	Sq.m. per board (2.5m x 1.25m)				
Felt requirement for 2 shifts (in Sq.m.)	2,000.00	Sq.m. per day				
Felt requirement for 2 shifts (in Kgs.)	1,600.00	Kgs. per day				
Coir Fibre requirement (for board production)	120%	of Needle felt output				
Coir Fibre requirement (for board production)	1,920.00	Kgs. per shift for installed capacity				
Resin requirement	35%	of Coir Fibre requirement				
Cost of Resin	Rs.80,000	per ton				
BOPP Film requirement	2	sheets per board				
Cost of BOPP Film	Rs.40	per sheet of board size				
Particle board requirement	1	per panel				
Cost of Particle board	Rs.640	per board of 8ft. X 4 ft. size.				
Cost of consumables (Chemicals)	Rs.25	per board of 8ft. X 4 ft. size.				
Cost of fuel (Panel section)	Rs.20	per board of 8ft. X 4 ft. size.				
Power Cost	Rs.6.50	per KWH				
Repairs & Maintenance	1.50%	Of plant and machinery cost in the first year of operation and 10% increase in every subsequent years				
Administrative Expenses	0.50%	Of sales realisation				
Selling Expenses	1.00%	Of sales realisation				

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement	5	
CALCULATION OF INCOME TAX							
				RS.LAKHS			
Years		1	2	3	4	5	
Net Profit		141.83	170.59	199.19	196.34	193.32	
Add: Straight Line Dep.		26.44	26.44	26.44	26.44	26.44	
Less: Wdv Depreciation		87.86	67.60	52.24	40.57	31.68	
Total		80.42	129.42	173.39	182.21	188.08	
Income Bef. Incentives		80.42	129.42	173.39	182.21	188.08	
Less: Deductions	0%	0.00	0.00	0.00	0.00	0.00	
Taxable Income		80.42	129.42	173.39	182.21	188.08	
Income Tax	35%	28.15	45.30	60.69	63.77	65.83	
Loss C/F		0.00	0.00	0.00	0.00	0.00	
Profit After Tax		113.69	125.29	138.51	132.57	127.49	

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement	6	
ESTIMATION OF POWER COST							
					RS.LAKHS		
Connected Load	120.00	KVA					
Maximum Demand	96.00	KVA					
		ANNUAL POWER COST					
Years		1	2	3	4	5	
Working Days		300	300	300	300	300	
Capacity Utilisation		70%	80%	90%	90%	90%	
Power consumption per annum (KWH)		136080	155520	174960	174960	174960	
Current Consumption Charges	Rs. 6.50	8.85	10.11	11.37	11.37	11.37	
Max. Demand Charges	Rs.350.00	4.03	4.03	4.03	4.03	4.03	
Annual Power Bill		12.88	14.14	15.40	15.40	15.40	
Assumptions:							
Power Factor	0.90						
Average Load Factor	0.75						
Average Power Cost/K W H	Rs.6.50						
No. of working hours per shift	8.00						
No. of shifts per day	1						

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

				Statement	7		
MANPOWER REQUIREMENT AND ESTIMATION OF COST							
			RS.LAKHS				
Description	Nos.	Salary	Annual				
		per month	Salary				
Managers	2	20000	480000				
Supervisors	3	10000	360000				
Male Workers	12	7500	1080000				
Female workers (Semi/Unskilled)	20	6000	1440000				
Admin and Accounts	5	8000	480000				
	Total	42		3840000			
	Add: Benefits	10%	384000				
	Grant Total		4224000				

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement	8	
ESTIMATION OF DEPRECIATION							
			RS.LAKHS				
Straight Line Method	VALUE	DEP. RATE	1	2	3	4	5
Building & Civil works	114.19	3.34%	3.81	3.81	3.81	3.81	3.81
Plant & Machinery	294.58	7.40%	21.80	21.80	21.80	21.80	21.80
Electricals & Accessories	6.09	7.40%	0.45	0.45	0.45	0.45	0.45
Handling infrastructure	5.08	7.40%	0.38	0.38	0.38	0.38	0.38
Total	419.93		26.44	26.44	26.44	26.44	26.44
WDV Method							
Building & Civil works		10.00%	11.42	10.28	9.25	8.32	7.49
WDV	114.19		102.77	92.49	83.24	74.92	67.43
Plant & Machinery		25.00%	73.65	55.23	41.43	31.07	23.30
WDV	294.58		220.94	165.70	124.28	93.21	69.91
Electricals & Accessories		25.00%	1.52	1.14	0.86	0.64	0.48
WDV	6.09		4.57	3.43	2.57	1.93	1.45
Handling infrastructure		25.00%	1.27	0.95	0.71	0.54	0.40
WDV	5.08		3.81	2.85	2.14	1.61	1.20
Total	419.93		87.86	67.60	52.24	40.57	31.68
Note: Contingency & Pre-operatives are apportioned with the cost of assets.							

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

PROJECTED CASH-FLOW STATEMENT						
					Statement	9
				RS.LAKHS		
Years		1	2	3	4	5
Source Of Funds						
Promoters Capital	57.65					
SFURTI Grant	424.35					
Profit Before Int.,Dep. & Tax		168.27	197.03	225.63	222.78	219.76
Increase in W.C.Loan		0.00	0.00	0.00	0.00	0.00
Total	482.00	168.27	197.03	225.63	222.78	219.76
Uses						
Inc. in Capital Expenditure	419.77					
Deposits (as per statement 1.1)	2.23					
Increase in W.Capital		60.00	8.11	8.15	0.58	0.63
Provision For Taxation		28.15	45.30	60.69	63.77	65.83
Total	422.00	88.15	53.41	68.84	64.35	66.45
Surplus	60.00	80.12	143.62	156.80	158.43	153.30
Opening Balance	0.00	60.00	140.13	283.74	440.54	598.97
Closing Balance	60.00	140.13	283.74	440.54	598.97	752.27

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

PROJECTED BALANCE SHEET							Statement	10
							RS.LAKHS	
Years	PR. PERIOD	1	2	3	4	5		
Liabilities								
Promoters Capital	57.65	57.65	57.65	57.65	57.65	57.65		
SFURTI Grant	424.35	424.35	424.35	424.35	424.35	424.35		
Reserves & Surplus		113.69	238.98	377.48	510.05	637.54		
W.C.Borrowings		0.00	0.00	0.00	0.00	0.00		
Current liabilities		4.30	4.88	5.46	5.57	5.68		
Total	482.00	599.99	725.85	864.95	997.62	1125.22		
Assets								
Gross Block	419.77	419.77	419.77	419.77	419.77	419.77		
Less: Accu. Depreciation		26.44	52.88	79.32	105.76	132.19		
Net Block	419.77	393.33	366.89	340.45	314.01	287.57		
Deposits	2.23	2.23	2.23	2.23	2.23	2.23		
Current Assets		64.30	72.99	81.73	82.41	83.15		
Closing Balance	60.00	140.13	283.74	440.54	598.97	752.27		
Total	482.00	599.99	725.85	864.95	997.62	1125.22		
	0.00	0.00	0.00	0.00	0.00	0.00		

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

						Statement	11
ESTIMATION OF BREAK-EVEN POINT							
				RS.LAKHS			
Years	1	2	3	4	5		
Fixed Expenses							
Salary & Wages	42.24	44.35	46.57	48.90	51.34		
Repairs & Maintenance	4.32	4.75	5.23	5.75	6.32		
Preliminary expenses	0.23	0.23	0.23	0.23	0.23		
Depreciation	26.44	26.44	26.44	26.44	26.44		
Total(A)	73.22	75.77	78.46	81.31	84.33		
Variable Expenses							
Total Cost Of Raw Material & Consumables	730.20	834.51	938.82	938.82	938.82		
Cost Of Power	12.88	14.14	15.40	15.40	15.40		
Administrative Expenses	4.86	5.56	6.25	6.25	6.25		
Selling Expenses	9.73	11.12	12.51	12.51	12.51		
Total(B)	757.66	865.32	972.99	972.99	972.99		
Sales Realisation	972.72	1111.68	1250.64	1250.64	1250.64		
Break Even Point	34%	31%	28%	29%	30%		

DETAILED PROJECT REPORT ON SALEM COIR PLY BOARD CLUSTER (OMALUR) DEVELOPMENT UNDER SFURTI SCHEME

					Statement	12	
ESTIMATION OF NET PRESENT VALUE AND INTERNAL RATE OF RETURN							
					RS.LAKHS		
Years	PR. PERIOD	1	2	3	4	5	
Cash Out Flow							
Capital Expenditure	419.77						
Preliminary & Preoperative Expenses	2.23						
Technical Know-How	0.00						
Working Capital Margin	60.00						
Total	482.00	0.00	0.00	0.00	0.00	0.00	
Cash Inflow							
Profit After Tax		113.69	125.29	138.51	132.57	127.49	
Depreciation		26.44	26.44	26.44	26.44	26.44	
W.C.Margin						33.35	
Residual Value Of F.Assets						104.94	
Total	0.00	140.13	151.73	164.95	159.01	292.22	
Net Cash Flow	-482.00	140.13	151.73	164.95	159.01	292.22	
Net Present Value	Rs.207.89	lakhs					
at 8% discount rate							
Internal Rate of Return	22.48%						