

DETAILED PROJECT REPORT

Cluster Location: Pakkam, Vellore
(Pakkam Coir Cluster, Vellore District)



SUBMITTED TO
COIR BOARD, KOCHI



PREPARED BY

ITCOT CONSULTANCY AND SERVICES LIMITED

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Executive Summary

Name of the cluster	Pakkam Coir Cluster, Vellore District																																						
Type of cluster	Major cluster																																						
Location & Spread of the cluster	The cluster area is located in Vellore district extends over 5 Blocks viz. K.V.Kuppam, Gudiyatham, Pernampet, Katpadi and Mathanur. The cluster spread includes 28 Village Panchayats in Vellore 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 • Pith block • Hand Ratt coir rope 																																						
Size of cluster & Type of units	The total number of coir units available in the cluster area is around 212 units of which 42 Nos. are engaged in Fibre Extraction, 58 Nos. engaged in Yarn Spinning, 3 Nos. engaged in manufacturing of curled coir, 7 Nos. engaged in manufacturing of coir pith block and 102 Nos. engaged in Hand ratt production. The total number of beneficiaries estimated to be around 866 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;"> <thead> <tr> <th style="background-color: #d9d9e3;">S.No</th> <th style="background-color: #d9d9e3;">Name of the Activity</th> <th style="background-color: #d9d9e3;">No.of units</th> <th style="background-color: #d9d9e3;">Production Per Year (in MT)</th> <th style="background-color: #d9d9e3;">Annual Turnover (Rs. in lakhs)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Coir Fibre Extraction</td> <td style="text-align: center;">42</td> <td style="text-align: center;">21000</td> <td style="text-align: center;">33.60</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Coir Yarn (Two Ply)</td> <td style="text-align: center;">58</td> <td style="text-align: center;">2500</td> <td style="text-align: center;">8.75</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Curled Coir</td> <td style="text-align: center;">3</td> <td style="text-align: center;">56.25</td> <td style="text-align: center;">12.66</td> </tr> <tr> <td style="text-align: center;">4.</td> <td>Pith Block</td> <td style="text-align: center;">7</td> <td style="text-align: center;">7000</td> <td style="text-align: center;">9.10</td> </tr> <tr> <td style="text-align: center;">5.</td> <td>Hand Ratt</td> <td style="text-align: center;">102</td> <td style="text-align: center;">255</td> <td style="text-align: center;">1.28</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> <td style="text-align: center;">212</td> <td></td> <td style="text-align: center;">65.39</td> </tr> </tbody> </table>				S.No	Name of the Activity	No.of units	Production Per Year (in MT)	Annual Turnover (Rs. in lakhs)	1.	Coir Fibre Extraction	42	21000	33.60	2.	Coir Yarn (Two Ply)	58	2500	8.75	3.	Curled Coir	3	56.25	12.66	4.	Pith Block	7	7000	9.10	5.	Hand Ratt	102	255	1.28	Total		212		65.39
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Key concern areas	<ul data-bbox="702 819 1425 1973" style="list-style-type: none"> • Vellore district characterizes with the high production of Coconuts and thereby features abundant availability of Coconut husks. The advantage of local availability of basic raw material (husks) has not been exploited properly. • Huge Fibre production within the cluster and very limited value addition of fibre within the cluster resulting in distress selling of Coir Fibre. • Cluster's present production is limited to regular products such as Coir fibre, Coir yarn, 5 Kg. pith block and Curled coir. Lack of common initiatives among the entrepreneurs in the cluster so far, to venture into the production of value added finished products of high market value. • Limited awareness on the benefits of graduating to production of value added finished products. • Purely depends on the local trader / marketer to sell their products even through there is huge scope for export market. • Absence of collective/collaborative efforts to address common problems 																												

Proposed Strategic Interventions	<p>Soft Interventions:</p> <ul style="list-style-type: none"> • Capacity Building initiatives • Market Promotion initiatives <p>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 Two ply yarn spinning with Four Headed Coir yarn Spooling facility II) Coir PVC Tufted Mat Production facility <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. 15.00 lakhs																																							
Budget for Hard interventions	Rs. 473.87 lakhs																																							
Total Project Cost including Agencies cost	Rs. 538.87 lakhs																																							
Means of Finance	Grant under SFURTI scheme : Rs. 491.48 lakhs IA/SPV share : Rs. 47.39 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>6539</td> <td>9366</td> <td>11240</td> <td>13480</td> </tr> <tr> <td>2</td> <td>Investment (Rs. Lakhs)</td> <td>1550</td> <td>2479</td> <td>2975</td> <td>3570</td> </tr> <tr> <td>3</td> <td>Employment (Nos.)</td> <td>866</td> <td>1168</td> <td>1402</td> <td>1682</td> </tr> <tr> <td>4</td> <td>Wages per day (Rs.)</td> <td>300</td> <td>400</td> <td>560</td> <td>680</td> </tr> <tr> <td>5</td> <td>Profitability (%)</td> <td>8-10%</td> <td>18%</td> <td>24%</td> <td>24%</td> </tr> </tbody> </table>	S. No.	Parameter	Pre-Inter-vention	Post-intervention			Y 1	Y 5	Y 10	1	Cluster Turnover (Rs. Lakhs)	6539	9366	11240	13480	2	Investment (Rs. Lakhs)	1550	2479	2975	3570	3	Employment (Nos.)	866	1168	1402	1682	4	Wages per day (Rs.)	300	400	560	680	5	Profitability (%)	8-10%	18%	24%	24%
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	<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 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
<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. The Matha Educational Trust, an NGO registered as Trust, having its registered office at No.1.Matha Nagar, Thirunagar (West), Vellore - 632006 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 "PAKKAM COIR CLUSTER PRIVATE LIMITED" as per the Certificate of Incorporation issued by Registrar of Companies dated 13.11.18. The CIN of the company is U74999TN2018PTC125771. The SPV has been</p>

	<p>proposed with 28 members with one Chairman, one Managing Director and 5 Directors. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over.</p>
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1 Preamble

India is the largest coir producer in the world accounting for more than 80 per cent of the total world production of coir fibre. Coir is popularly known as the 'golden fibre.' It is a natural fibre extracted from fibrous husk of the coconut shell and is used to make a wide range of products such as ropes, mats, mattresses, baskets, brushes, brooms etc.

Coir's global production is about 350,000 tonnes. India and Sri Lanka being the major producers of coir, account for 90 per cent of the world production. Coir industry in India is an important cottage industry contributing significantly to the economy of the major coconut growing States and Union Territories, i.e., Tamilnadu, Kerala, Orissa, Andhra Pradesh, Karnataka, Maharashtra, Assam, Goa, Andaman & Nicobar, Lakshadweep and Pondicherry. About 5.5 lakh get employment, mostly part time, from this industry. Exports from the coir industry are around Rs 70 crore. Coconut husk is the basic raw material for coir products. At least 50 per cent of the available coir husk is used to produce coir products. The rest is used as fuel in rural areas.

India has made unprecedented progress in coconut cultivation from mid 2014 to 2018 and now it has become the leading country in coconut production and productivity. Productivity increased to 11516 fruits per hectare in 2017-18 as compared to 10122 in 2013-14. Between 2014 and 2018, 13,117 hectare was brought under new plantation as compared to 9,561 hectare during 2010-2014. The coconut production in Odisha was 341.68 million nuts in 2016-17. It increased by 13.98 million nuts as compared to the year 2015-16.

The Industrial utilization of coconut husk was very low in India. With the implementation of various schemes of the Coir Board the Industrial use of coconut husk has picked up in the non-traditional areas such as Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, Gujarat, Maharashtra, West Bengal, Assam, Tripura, Andaman Nicobar Islands, Lakshadweep islands etc.

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). Coir Board has entrusted the task of preparation of Detailed Project Report (DPR) for the Coir Cluster located at Pakkam, Vellore District to

ITCOT Consultancy and Services Ltd. Accordingly, ITCOT has prepared the 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 Diagnostic Study Report is as follows:

Cluster Profile is given in Chapter 2. Cluster Value Chain mapping is given in Chapter 3. Market assessment and Demand Analysis is given in Chapter 4. SWOT and Need Gap Analysis is given in Chapter 5. Profile of the Implementing Agency is given in Chapter 6. Project Concept and Strategy Framework are detailed in Chapter 7. Core SFURTI Project Interventions are given in Chapter 8. Detailed analysis of Soft Interventions is given in Chapter 9 and analysis of Hard Interventions is given in Chapter 10. Project Cost and Means of Finance is given in Chapter 11. Plan for Convergence Initiatives are given in Chapter 12. Enhanced Project Cost and Means of Finance are given in Chapter 13. Project Timeline is illustrated in Chapter 14. Detailed Business Plan is given in Chapter 15. Proposed Implementation Framework is given in Chapter 16. Expected Impact is detailed in Chapter 17.

2 Cluster Profile

2.1 Background

Vellore district, carved out of North Arcot district, came into being on 30th September 1989. It is one of the six districts that from North region of Tamil Nadu and it is one of the biggest districts in Tamil Nadu. The district is bounded by Kancheepuram District in the east, Tiruvannamalai and Dharmapuri districts in the south and State of Andhra Pradesh in the North. The geographical area of Vellore District is 5920.18 Sq.Km. The district is primarily agrarian with a majority of its population involved in agriculture. Vellore is one of the top producers of coconut and sugarcane in the state.

In Vellore 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 and Garden Articles.

2.2 Regional setting of the Cluster

The regional setting of the cluster extends over 5 Blocks in Vellore district viz. K.V.Kuppam, Gudiyatham, Pernampet, Katpadi and Mathanur.

The block map of Vellore district is given below:



2.3 Location

The cluster spread includes 28 Village Panchayats in Vellore District. The Geographical spread of the cluster measures about 25-30 Km radius.

2.4 Evolution of the Cluster

The Cluster is naturally evolved one. Vellore is one of the major coconut producing districts in the state of Tamilnadu. The total coconut cultivation area of Vellore district in 2016-17 is 20,523 hectares, coconut production is 2,904 lakh nuts and the productivity is 14,150 nuts per hectare.

The details of area of cultivation, production and productivity of Coconuts in Vellore district is given below:

Year	Area (Ha)	Production (Lakh Nuts)	Productivity (Nuts/Ha)
2010 - 2011	22292.00	2081.00	9335.00
2011 - 2012	22680.00	2985.00	13161.00
2012 - 2013	22720.00	1258.00	5537.00
2013 - 2014	21512.00	2330.00	10831.00
2014 - 2015	21328.00	1923.00	9016.00
2015 - 2016	20805.00	2448.00	11766.00
2016 - 2017	20523.00	2904.00	14150.00
Average (2010-17)	21694.29	2275.57	10489.00

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 Vellore district as per Census 2011 and the growth aspects with respect to Census 2001 is given below:

Description	2011	2001
Actual Population	3,936,331	3,477,317
Male	1,961,688	1,741,083
Female	1,974,643	1,736,234

Description	2011	2001
Population Growth	13.20%	14.90%
Area Sq. Km	6,075	6,075
Density/km2	648	572
Proportion to Tamil Nadu Population	5.46%	5.57%

According to 2011 census, Vellore district had a population of 3,936,331 with a sex ratio of 1,007 females for every 1,000 males, much above the national average of 929. The decadal population growth of the district during 2001-2011 is 13.20%. Scheduled Castes and Scheduled Tribes accounted for 21.85% and 1.85% of the population respectively. The average literacy of the district was 70.47%, compared to the national average of 72.99%.

2.6 Socio-economic aspects

The significance of coir industry arises primarily from the fact that a large a 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

Vellore District ranked 3rd place in terms of population size in the State. As per the census 2011, the district had 929,281 households. The total workforce of the district is 16,89,330 of which 13,60,185 (34.55%) are main workers and 3,29,145 (8.36%) are marginal workers. It accounts for 42.91% of the total population of Vellore district. The non-workers to the total population were 57.08% in 2011. The district has recorded 3rd highest percentage of household industry workers to total workers of 8.1% among the districts. The total number of workers engaged in the Coir activity gender wise is given below:

Activity	Male	Female	Total
Fibre Extraction	40	296	336
Yarn Spinning	25	207	232

Curled coir	10	14	24
Pith Block	20	50	70
Hand Ratt	24	180	204
Total	119	747	866

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	300	200
Yarn Spinning	300	200
Curled coir	300	200
Pith Block	300	200
Hand Ratt	300	150

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

Vellore District is one of the most vital and vibrant Districts in terms of industrial development in the State. Vellore is among the top 10 contributors to GDP of the State, it contributes USD 3.8 billion in GDP of Tamil Nadu. Service industry has been playing a vital role in the economy of this district.

Micro & small Enterprises in Vellore District:

- The district has seen significant growth in the past few years with around 3000 units established with an investment of \$ 51 Million.
- The district is vibrant in terms of economic activity with leather and leather based industrial activity being the prominent ones. The district accounts for more than 37% of the country's leather export leather and leather related products such as finished leather, shoe uppers, shoes, garments, gloves and so on. There are 1,226 leather units spread over in the district mainly in Alangayam, Madhanur and Wallajah blocks.
- Textile mills are concentrated in Sholinger, Gudiyatham , Kaveripakkam, and Arakkonam blocks and are manufacturing Cotton Lungi, Cotton Cloth,

Towel, Dhoti and Silk sarees. These traditional units are clustered in Gudiyatham, Sholinghur and Arakkonam blocks. There are 1200 textile based enterprises in this district.

- Safety match is an important consumer product and it is being manufactured by cottage industries, small scale industries and mechanized industries in the district. Majority of safety match units are located at Gudiyatham blocks. About 110 safety match enterprises situated in Vellore district.

Large & Medium Scale Industries:

- There are 12 large and about 300 medium scale industries functioning in Vellore District. The Brakes India Ltd. and EID Parry Ltd, are one of the important and oldest industry located in Sholinger and Walajah blocks.
- Asia's biggest explosives manufacturing company, Tamil Nadu Explosives Limited (TEL), is in Vellore at Katpadi. This is India's only government explosives company with more than a thousand employees. The products are NG explosives, Surry explosives and Emulsion explosives, Detonators and Detonating fuses. This industry exports its items to Maldives, Ethiopia, Sri Lanka, Indonesia, Syria and Egypt.
- The Bharat Heavy Electrical Ltd, is located at Ranipet with production capacity of 57,000 MT and manufacturing of Boilers. It has generated nearly 2,500 employment opportunities and also patronizing series of ancillary units. A separate industrial complex has been created to facilitate to support ancillary units at Muntharayapuram Ranipet.
- There are three sugar mills in the district at Ambur, Thirupathur and Vellore. The Ambur Co-operative Sugar mills Ltd, invested Rs. 772.19 lakhs with installed capacity of 1400 TCD and generated employment of 620 people.
- There are three industrial estates: SIDCO at Katpadi & Arakkonam, SIPCOT at Ranipet.

2.9 Existing Coir activities:

The total number of coir units available in the cluster area is around 212 units of which 42 Nos. are engaged in Fibre Extraction, 58 Nos. engaged in Yarn Spinning, 3 Nos. engaged in manufacturing of curled coir, 7 Nos. engaged in manufacturing of coir pith block and 102 Nos. engaged in Hand ratt production. Coir Fibre extraction and Yarn spinning are major activities undertaken in the cluster. The current output and annual turnover of the cluster is given below:

S.No	Name of the Activity	No.of units	Production Per Year (in MT)	Annual Turnover (Rs. in lakhs)
1.	Coir Fibre Extraction	42	21000	33.60
2.	Coir Yarn (Two Ply)	58	2500	8.75
3.	Curled Coir	3	56.25	12.66
4.	Pith Block	7	7000	9.10
5.	Hand Ratt	102	255	1.28
Total		212		65.39

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 Extr.	42	20	840.00
Coir Yarn (Two Ply)	58	10	580.00
Curled Coir	3	5	15.00
Coir Pith block	7	15	105.00
Hand ratts	102	0.10	10.20
Total			1550.20

The village wise distribution of units is given below:

S.No	Village	Coir Fibre units	Coir Yarn units	Curled Coir units	Pith Block	Others (Hand Ratt)	Total
1	Karthikapuram	8	2	1	2	-	13
2	Melathur	9	1	-	1	-	11
3	Sundarakuttai	-	4	-	-	-	4
4	Vellathur	-	4	-	-	-	4
5	Perumpadi	1	-	-	-	-	1
6	Chithur Gate	7	6	-	2	-	15
7	Indra Nagar	-	-	2	-	-	2
8	Kaliyammanpettai	1	1	-	1	-	3
9	Pakkam Venkatapuram	2	1	-	-	-	3
10	Mel Mathanr	-	1	-	-	-	1
11	Kuda Nagaram	1	5	-	-	-	6
12	Alingkuppam	4	10	-	-	-	14
13	Aragaram	-	2	-	-	-	2
14	Sengundram	-	7	-	-	-	7

S.No	Village	Coir Fibre units	Coir Yarn units	Curled Coir units	Pith Block	Others (Hand Ratt)	Total
15	Chetikuppam	-	5	-	1	-	6
16	Ethangal	-	2	-	-	-	2
17	Eruganpatti	-	2	-	-	-	2
18	Karunesasamutharam	-	1	-	-	-	1
19	Kothamarikuppam	1	1	-	-	-	2
20	Valathur	1	2	-	-	-	3
21	Palur	-	-	-	-	54	54
22	Kovalur	2	-	-	-	-	2
23	Erugampatti	2	-	-	-	-	2
24	Pernampet	1	-	-	-	-	1
25	Veppur	-	1	-	-	-	1
26	Keerthanampettai	-	-	-	-	48	48
27	Jamin	1	-	-	-	-	1
28	Madhanur	1	-	-	-	-	1
Total		42	58	3	7	102	212

2.10 Infrastructure - social, physical, financial and production related

The infrastructure details of Vellore district is tabulated as below:

S.No	Indicator	Details	
1.	Total Geographical Area	6075 Sq.Km.	
2.	Population	3,936,331	
		Male	Female
		1,961,688	1,974,643
		Rural	Urban
		2,234,344	1,701,987
3.	Population Growth	13.20%	
4.	Sex Ratio (per 1000 males)	1007 females	
5.	Literacy rate	79.17%	
		Male	Female
		86.50%	71.95%
6.	Administrative Setup		
	No. of Revenue Divisions	3	
	No. of Taluks	9	
	No. of Revenue Villages	843	

S.No	Indicator	Details	
	No. of Panchayat Unions	20	
	No. of Village Panchayats	753	
	No. of Town Panchayats	22	
	No. of Municipalities	13	
7.	Agriculture		
	Total cultivated area	185013 Ha	
	Net sown area	155398 Ha	
	Area Sown more than once	29615 Ha	
	Net area irrigated	94826 Ha	
	No. of Agricultural enterprises	Rural	Urban
		21941	2299
8.	Forest	162286.41 Ha	
9.	Transport Infrastructure		
	Road length (NH, SH, Rural roads etc)	1530.38 Kms.	
	Registered Motor Vehicles	27774 Nos.	
	No. of Railway Stations	28 Nos.	
	Commercial Banks	175 Nos.	
10.	Education		
	Universities	2 Nos.	
	Primary Schools	2094 Nos.	
	High Schools	194 Nos.	
	Arts & Science Colleges	22 Nos.	
	Engineering colleges	19 Nos.	
11.	Veterinary Hospitals	8 nos.	
12.	Veterinary Dispensaries	118 Nos.	
13.	No. of Hospitals	13 Nos.	
14.	Primary Health centres	101 nos.	
15.	Health sub centres	454 Nos.	

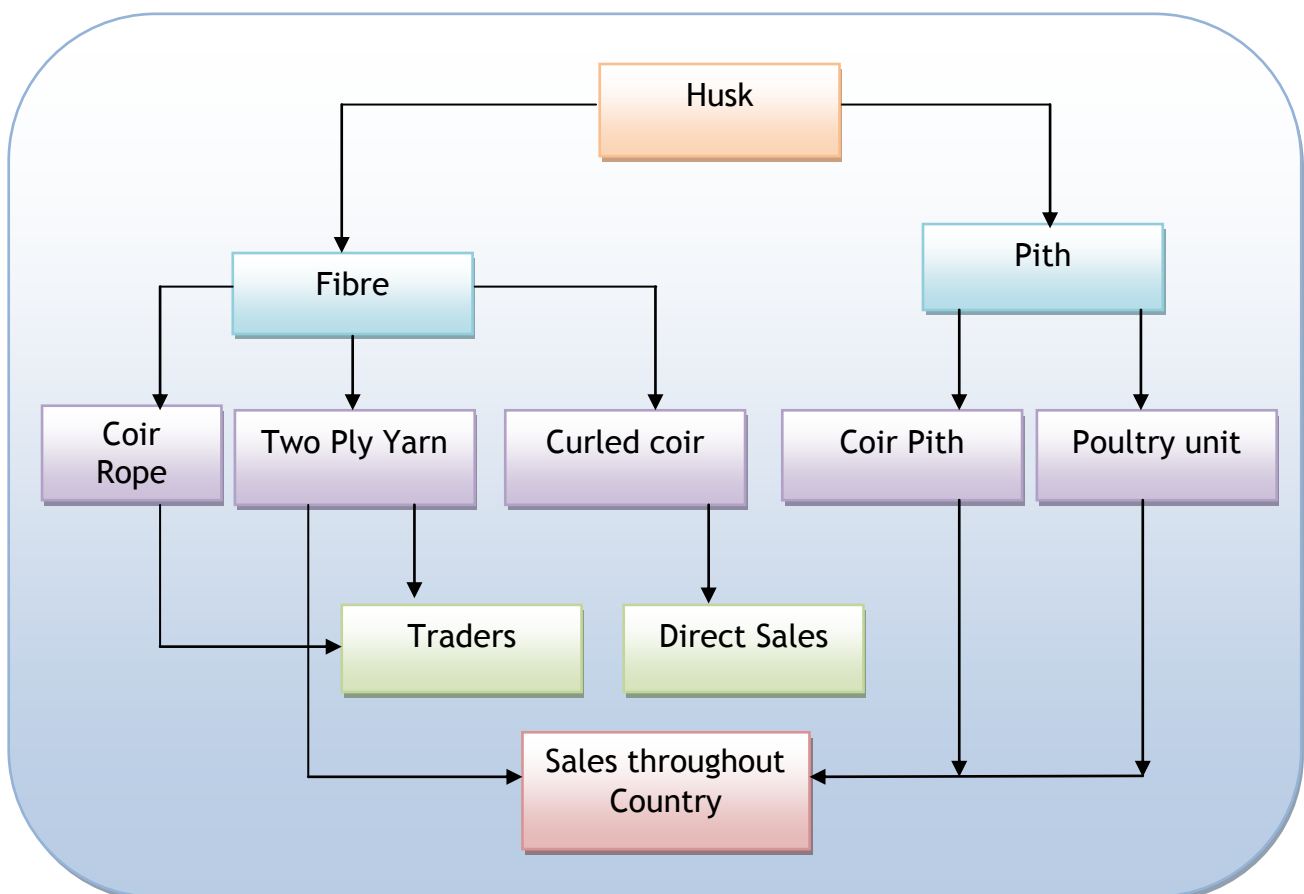
3 Cluster Value Chain Mapping

3.1. Product Profile

The following products are produced in the cluster presently.

- Coir Fibre
- Coir Yarn
- Curled Coir
- Hand Ratt coir rope
- Pith block

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

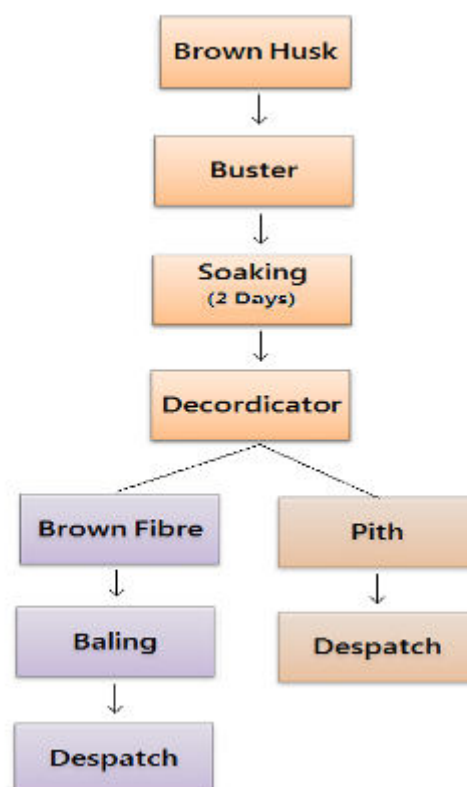


3.2. Production Process

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:



b) Coir Yarn:

Coir yarn spinning is similar to cotton yarn spinning. Coir fibre obtained from fibre extraction units and is wetted by spraying water. After 2-3 hours, the wetted fibre is passé 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:



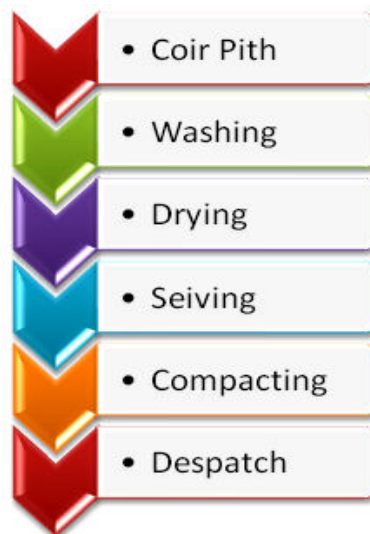
d) **Hand Ratt coir rope:**

The twine is made traditionally using Hand Ratt by the people of Vellore. The coir rope is prepared in different thicknesses as per the requirement and demands of the market.

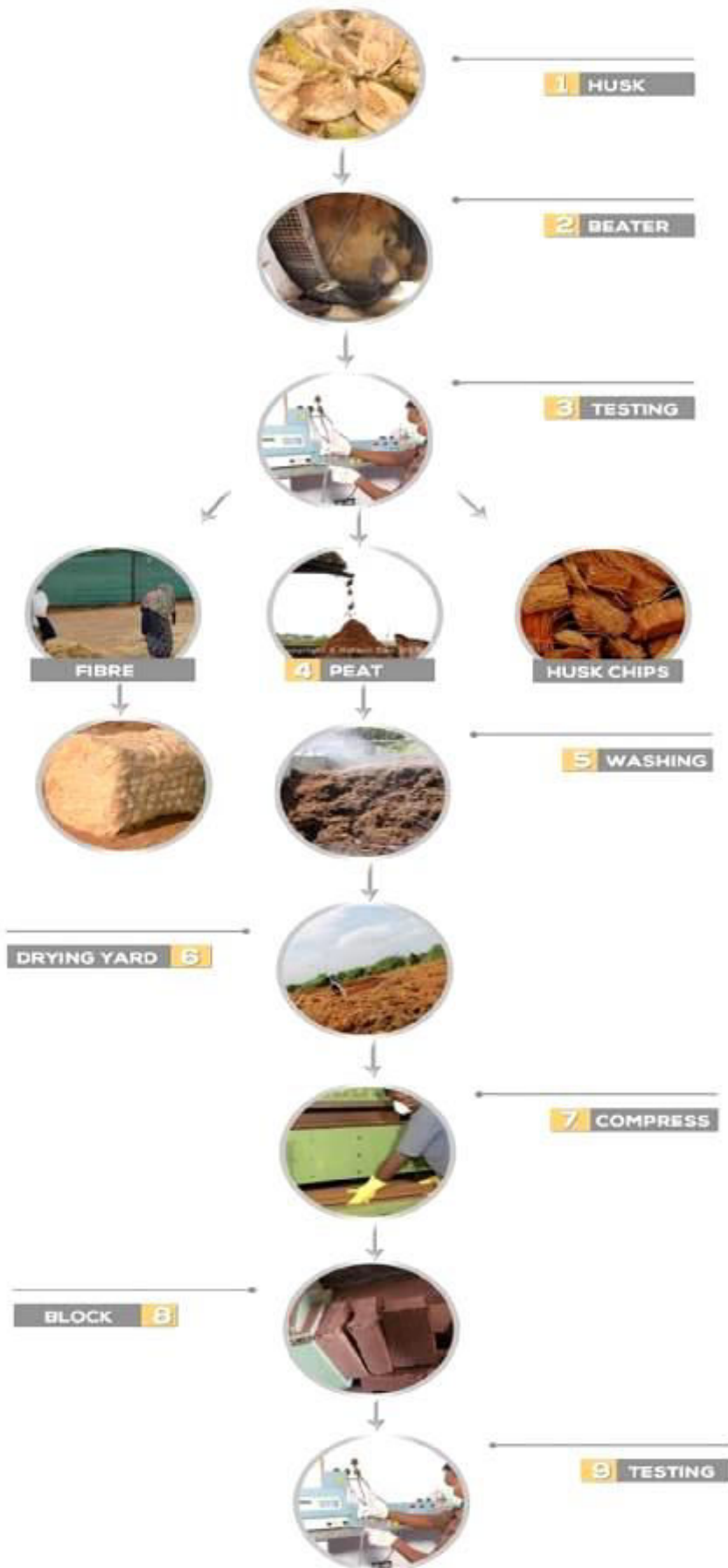
The traditional twine making is done manually using spinning wheel. The process of making the twine is widely carried on by the women, whereas, the men folk mainly work on the machinery, transportation and weaving process. Initially, the small quantity of coir is attached to the hook in spinning wheel which is in motion. Then the formed rope is held in the hands and the loop is continued by adding coir to it. The artisan maintains the uniform thickness by walking backwards. The prepared coir rope is again twisted to obtain the thickness by adding two single twines. Finally the two ply coir rope is ready for marketing.

e) Coir Pith Block:

The by-product obtained during the process of Coir Fibre Extraction is Coir Pith. The raw coir pith (high EC) is received and washed in the soft water to reduce the EC. The low EC pith is dried in the yard and the dried pith is subjected to sieving / mixing process. The resultant pith is fed into the compacting machine in which the pith is converted into blocks. Then the blocks are packed and then dispatched to sales. The process flow chart for the Coir pith block making is given below:

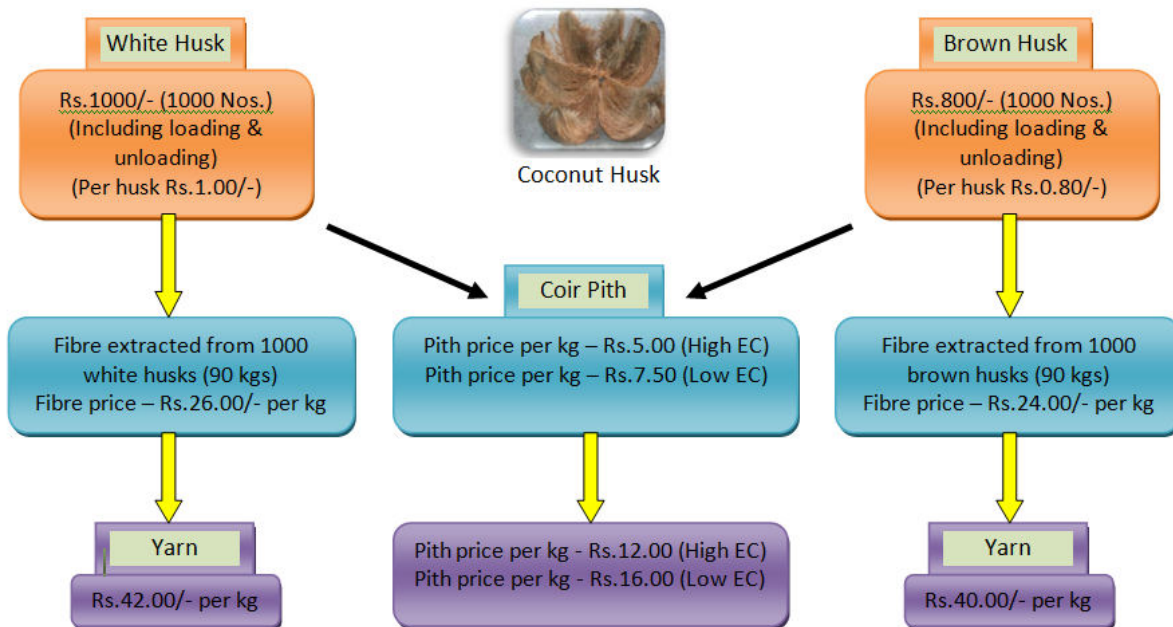


High electrical conductivity (EC) of coir pith is the major constraint in using it as growing medium. The higher level of EC in pith is rectified by washing it with good quality fresh water. Hence washing is the significant stage in the process. The picture shows the process of Pith block making.



3.3. Value Chain Analysis

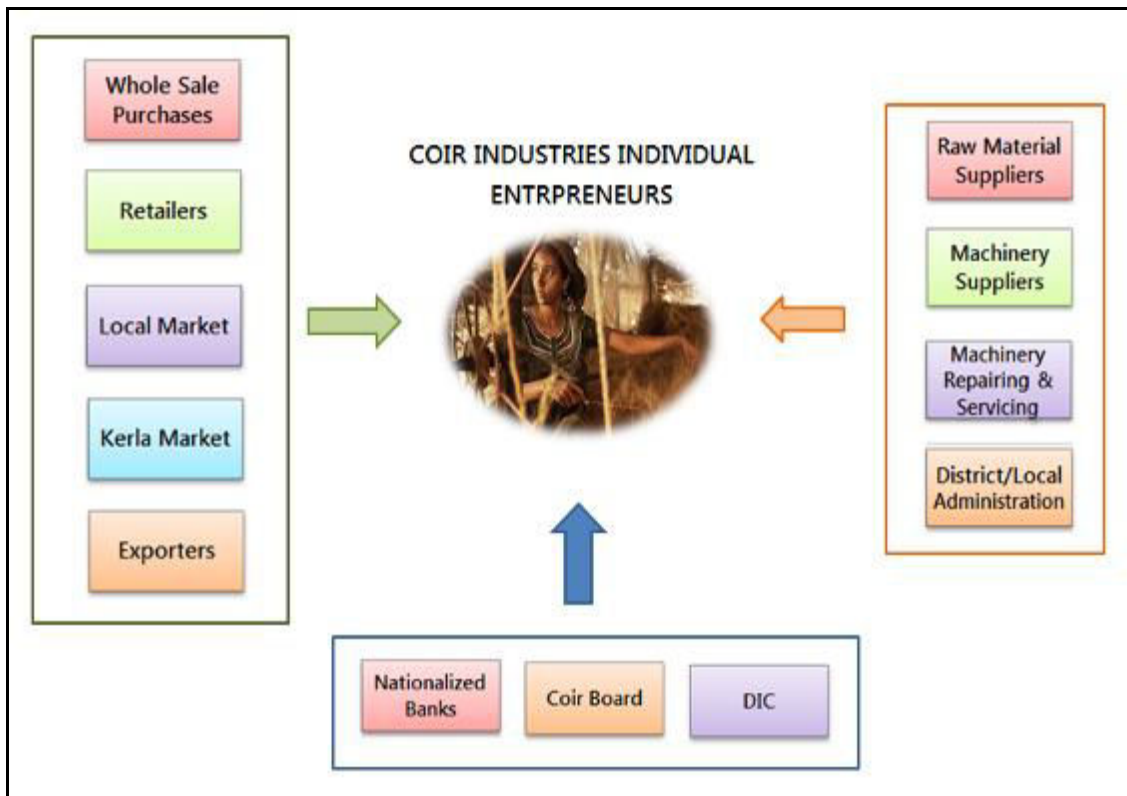
The incremental value of the cluster products from the basic raw material to the final product manufactured in the cluster is given below:



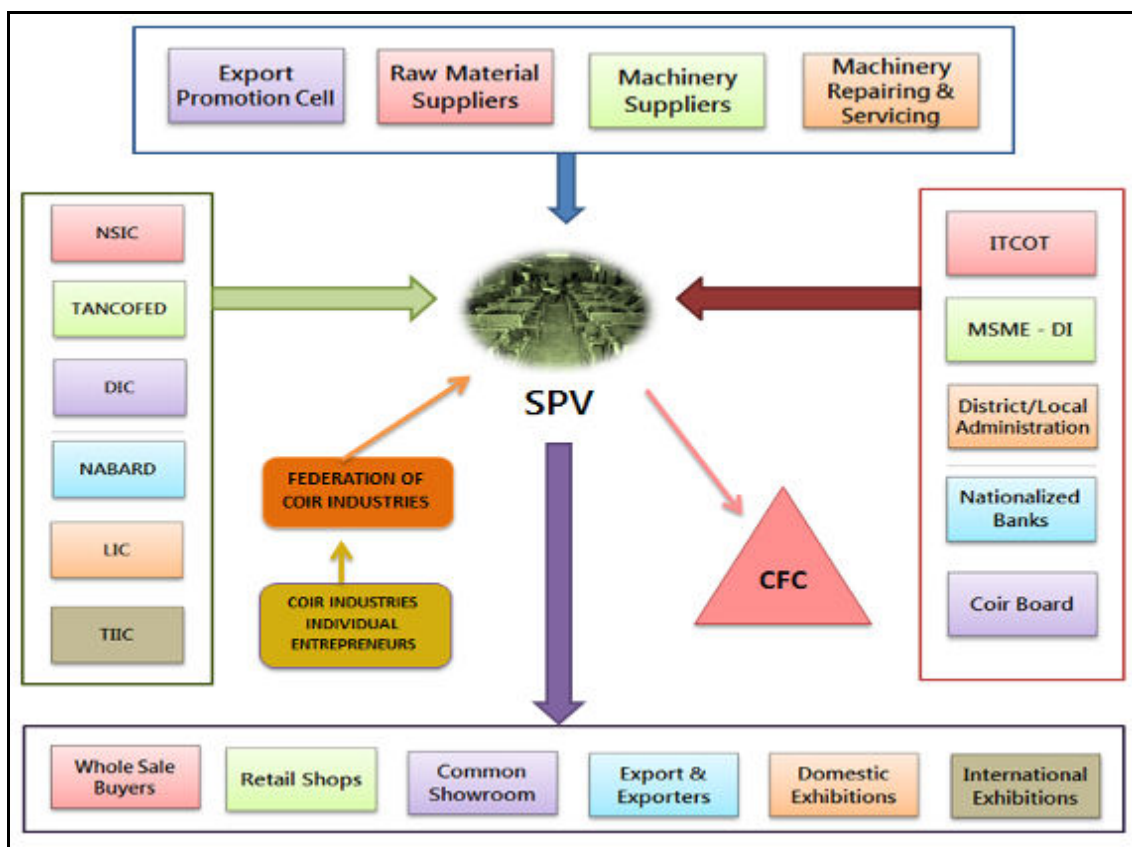
It is observed that the cost of white husk including loading and unloading is valued at Rs.1.00 and that of Coir fibre is Rs.26.00 per Kg. of fibre, which is further value added to Rs.42.00 per Kg. of yarn. Similarly the cost of Brown husk including loading and unloading is valued at Rs.0.80, and that of Coir fibre is Rs.24.00 per Kg. of fibre, which is further value added to Rs.40.00 per Kg. of yarn. The cost of Coir pith, extracted during Fibre extraction, is Rs.5.00 (High EC) and Rs.7.50 (Low EC) is further value added to Rs.12.00 (High EC) and Rs.16.00 (Low EC) per Kgs., when converted to Coir Pith 5 Kgs. blocks.

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 Vellore 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

The Indian coir industry is an important cottage industry contributing significantly to the economy of the major coconut-growing States and Union Territories such as Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Goa, Orissa, Assam, Andaman & Nicobar, Lakshadweep and Puducherry.

About 5.5 lakh get employment, mostly part time, from this industry. Coconut husk is the basic raw material for coir products. At least 50 per cent of the available coir husk is used to produce coir products. The rest is used as fuel in rural areas. Hence, there is scope for growth of coir industry.

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 35% 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 area and production of coconut is given below:

S.No.	State	Area ('000 Ha)	Production (in million nuts)	Productivity (Nuts/ha)
1.	Kerala	770.62	7429.39	9641
2.	Tamil Nadu	459.74	6171.06	13423
3.	Karnataka	526.38	5128.84	9744
4.	Andhra Pradesh	103.95	1427.46	13732
5.	West Bengal	29.51	373.58	12658
6.	Odisha	50.91	328.38	6451
7.	Gujarat	22.81	312.68	13706
8.	Maharashtra	22.75	271.24	9775
9.	Bihar	14.9	141.38	9489
10.	Assam	19.73	132.59	6720
11.	Chhattisgarh	1.85	30.54	16508
12.	Tripura	7.2	29.51	4097
13.	Nagaland	0.33	2.67	8091
14.	Others	52.8	388.13	7351
	All India	2088.47	22167.45	10614

Coir Board has targeted to double the export of coir and coir products from India within the next three years. During 2015-16, the growth of exports, compared to the previous year, was 20% in terms of quantity and 16.6% in terms of value. During 2016-17 the growth was increased to 27.3% in terms of quantity and 20% in terms of value. There has been an increasing trend in the exports of coir and coir products year to year, it is expected that the trend will continue during the coming years also. The total export of coir and coir products during the last three years are as under:

Years	2014-15	2015-16	2016-17
Quantity (In Metric Tonnes)	626666	752020	957045
Value (Rs. in lakhs)	163033.77	190142.52	228164.82

The major products that are exported are Coir pith, Coir fibre and Tufted Mats. It has been observed that the percentage growth in value of export of Coir pith has been 31.60% in 2016-17 compared to the previous year. Also the percentage growth in value of export of Coir fibre has been 29.10% in 2016-17 compared to the previous year. The data on export of Coir products from India in FY 2015-16 & 2016-17, as per Coir Board, are given below:

Item	April 2016- March2017		April 2015- March2016		% Growth	
	Q	V	Q	V	Q	V
Coir Pith	490552	90539.11	408897	68808.56	20.0	31.6
Coir Fibre	370357	53913.63	255293	41767.11	45.1	29.1
Tufted Mat	51718	48442.83	45770	44316.03	13.0	9.3
Handloom Mat	20143	21316.31	20386	22279.96	-1.2	-4.3
Geo textiles	6219	4481.04	4520	3531.72	37.6	26.9
Coir Yarn	4426	2948.32	4134	2820.82	7.1	4.5
Curled Coir	10356	2419.30	9470	2510.07	9.4	-3.6
Handloom Mattings	1272	1535.25	1706	1968.78	-25.4	-22.0
Rubberized Coir	888	1295.64	678	971.74	30.9	33.3
Coir Other Sorts	256	416.59	46	94.79	451.9	339.5
Coir Rope	484	388.50	517	396.61	-6.3	-2.0
Coir Rugs & Carpet	205	271.92	307	282.5	-33.1	-3.7
Powerloom Mat	166	196.38	280	367.35	-40.5	-46.5
Powerloom Matting	0	0.00	16	26.48	-	-
Total	957045	228164.82	752020	190142.52	27.3	20.0

* Q=Quantity in MT, V=Value in Rs.Lakhs

The percentage of share of each product with respect to total exports, both in Quantity and Value for the year 2016-17 is given below:

Item	2016-17		Export Composition %	
	Q	V	Q	V
Coir Pith	490552	90539.11	51.26	39.68
Coir Fibre	370357	53913.63	38.70	23.63
Tufted Mat	51718	48442.83	5.40	21.23
Handloom Mat	20143	21316.31	2.10	9.34
Geo textiles	6219	4481.04	0.65	1.96
Coir Yarn	4426	2948.32	0.46	1.29
Curled Coir	10356	2419.30	1.08	1.06
Handloom Mattings	1272	1535.25	0.13	0.67
Rubberized Coir	888	1295.64	0.09	0.57
Coir Other Sorts	256	416.59	0.03	0.18
Coir Rope	484	388.50	0.05	0.17
Coir Rugs & Carpet	205	271.92	0.02	0.12
Powerloom Mat	166	196.38	0.02	0.09
Total	957045	228164.82	100.00	100.00

* Q=Quantity in MT, V=Value in Rs.Lakhs

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

It is observed that the growth in coir product exported from India in 2016-17 has increased 27.30% in terms of quantity and 20% in terms of value compared to the previous year of 2015-16.

Existing Marketing Setup in the Cluster

As far as the cluster is concerned the product line is limited to Coir Fibre, Coir Yarn and Pith blocks and Curled Coir. The Coir Fibre produced in the cluster is utilized for yarn production and curled coir production within the cluster and also marketed through local dealers outside the cluster. The Coir yarn produced in the

cluster is directly marketed mainly to Salem yarn market. Curled coir produced in the cluster is marketed to Allepey, Kerala. Coir Pith block produced in the cluster is marketed through dealers for both domestic and export market. It is observed that the export potential for value added products are not at all tapped by the cluster with its current products and hence value added products having good export market potential needs to be identified to tap the existing market potential.

Proposed Marketing Strategy for CFC Product:

a) SPV propose to focus on Export market for the tufted mats. The following prospective overseas buyers are identified:

- 🚩 Haylays Exports Limited, Elakaja, Srilanka.
- 🚩 Navimpex, DiDier Bou Geard, Paris, France
- 🚩 Euro Carpet By, Moses traat, Netherlands

b) Establishing Dealer network & linkages with retail showrooms in Chennai, Bangalore, Mumbai & Delhi with attractive discount schemes

c) The segment wise market share for the sales of tufted mats manufactured in the CFC is given below:

S.No	Proposed Market Segment	Anticipated Sales percentage from each Segment	Corresponding Sales Value per annum
1	Direct sales to retail outlets in major cities	30%	Rs.120.00 lakhs
2	Thro' Dealer network for domestic sales	30%	Rs.120.00 lakhs
3	Overseas marketing	20%	Rs.80.00 lakhs
4	Online marketing (thro' Web portal)	20%	Rs.80.00 lakhs

d) Online marketing of cluster product is expected to capture around 20% of the total production.

e) Engaging Business Development Service providers to enhance the cluster market share in both domestic and export market for the product.

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

- Sufficient availability of coconut husk (basic raw material) provides scope for development of coir sector in the cluster.
- Existence of Fibre Extraction units and two ply yarn units in the cluster providing scope for value addition.
- Availability of relatively cheap manpower.
- Well established intermediations for sourcing of raw material.
- Existence of well established marketing centre for Coir fibre, yarn and ropes.
- Existence of functioning “Gudiyathma coir rope association” and “Thirupathur coir association” at Vellore District.
- The cluster has got all necessary infrastructure facilities like rail and road links.
- Presence of Support institutions such as Coir Board, District Industries Centre, Commercial banks, Technical consultancy organization etc.

Weaknesses

- Use of obsolete ratts resulting in limited production with poor quality yarn
- Production of value added finished products is very minimal when compared to the resources available in the cluster
- Lack of awareness on the incremental benefits of manufacturing of value added finished products such as Matts & Mattings, Rubberized coir, 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

Opportunities

- Potential for product diversification and value addition from existing products.
- Presence of coir specific Technical Institutions like Central Coir Research Institute (CCRI), Kerala.
- Availability of advanced machinery in spinning and tufted mat making in the market at reasonable prices.
- Being natural and eco-friendly, acceptable to even developed market and Increasing Domestic and Export market for coir products is foreseen as a bright opportunity.
- Cluster development schemes like SFURTI, soft credit etc., would open new opportunities for the development of coir sector in the region
- Willingness of entrepreneurs for associating in the scheme and hence share beneficiary contribution can be mobilized.

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

- Vellore district characterizes with the high production of Coconuts and thereby features abundant availability of Coconut husks. The advantage of local availability of basic raw material (husks) has not been exploited properly.
- Huge Fibre production within the cluster and very limited value addition of fibre within the cluster resulting in distress selling of Coir Fibre.
- Cluster's present production is limited to regular products such as Coir fibre, Coir yarn, 5 Kg. pith block and Curled coir. Lack of common initiatives among the entrepreneurs in the cluster so far, to venture into the production of value added finished products of high market value.
- Limited awareness on the benefits of graduating to production of value added finished products.
- Purely depends on the local trader / marketer to sell their products even through there is huge scope for export market.
- Weak linkages with banks and financial institutions

- Absence of collective/collaborative efforts to address common problems


Based on the need gap assessment, an integrated coir processing unit consisting of coir yarn spinning with spooling facility and coir PVC tufted making facilities are proposed.

6 Profile of the Implementing Agency

MATHA EDUCATIONAL TRUST, an NGO registered as Trust in the year 2001, having its registered office at No.1.Matha Nagar, Thirunagar (West), Vellore - 632006, about 30 Kms. from the Cluster is proposed as the Implementing Agency of this cluster. The trust was started to empower the illiterate, develop the undeveloped economically backward people to improve their social status through skill training. The details of the trust are given below:

Institutional Structure / Registration Details	Matha Educational Trust is a Non-Profit organization registered as Trust with registration no: 29/2001
Legal Status	Trust
Date of Incorporation / Registration	05.01.2001
Registered Address	No.1.Matha Nagar, Thirunagar (West), Vellore - 632006
Office Address / Location	Admin Office- No.22, 22 nd East Cross, Gandhi Nagar, Vellore-632006 Branch office - 24, 2 nd floor, East Marat Street, Madurai District
Affiliated to KVIC	No

Governance structure	Sl. No	Name of the Member	Designation	Contact Number	Email id
Composition of the executive Board / Trustees / Governing Body / Managing Committee & Background of the Members	1	M.Gunasekaran	Director	9367778111	Matha.vellore@gmail.com
	2	J.Kanagamanisat hiaseeli	Principal/ Secretary	9367779111	Sathya.sharon@gmail.com
	3	J.Logamatha	Treasurer	9566438111	-
	4	B.Balaji	Trustee	8667607872	-

Operational Profile	
Major Objectives - Vision, Mission, Goal of the Organisation	Main Objective of the Trust:  Its main aim is to educate the uneducated at least in the base level.

	<ul style="list-style-type: none"> ✚ To help to improve the life style of youth group through education. ✚ To educate the vulnerable group (pregnant, lactating and children) for healthy life. ✚ To uplift the poor people (under poverty life) through self employment ✚ Employment through technical and vocational education ✚ Motivation of women entrepreneurs through Self Help Groups ✚ Cluster development activities <p>Vision: To be an exclusive women development organization of excellence in</p> <ul style="list-style-type: none"> ✚ Development of suppressed (SC/ST) women. ✚ Poverty reduction through economic development ✚ Change powerless to power through education. ✚ Skill assessment and training need. ✚ Social factor. ✚ Collective efficiency.
<p>What are the focus areas of Operations</p>	<ul style="list-style-type: none"> ✚ Women Development Programs ✚ Educational Trainings ✚ Improving the lifestyle of youth through education ✚ To uplift the poor people through self employment ✚ To educate the vulnerable group for healthy life. ✚ Employment through technical and vocational education
<p>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</p>	<p>Major Activities undertaken so far:</p> <p>Workshops</p> <ul style="list-style-type: none"> • Entrepreneur Development Program through SSI, Guindy, Chennai • Management Development Program

<p>proposed project</p>	<p>through SSI, Guindy, Chennai</p> <ul style="list-style-type: none"> • Inplant Training for Telecom Products (Rajiv Gandhi Engineering College, Pondicherry) • Skill Development Program at Kattupudur, Vellore District. <p>Seminars</p> <ul style="list-style-type: none"> • Seminar at Oscar Business School on Nov'2008 • Seminar on Campus Abroad at Abdul Hakeem Engineering College in Melvisharam on Nov' 2008 & 2009 • Spoken English Seminars at various institutes • Personality Development Program for public and student of Hope International School <p>Training</p> <ul style="list-style-type: none"> • Health Training at head office. • Practical Nurse Training at head office • Short Term Training Programs for beautician • Short Term Training Program for low cost food preparation • Short Term Training for cake, biscuit, pickle, jam preparation
<p>Mention Key Clients / Donors associated with for Project implementation along with details on the nature of association</p>	<ul style="list-style-type: none"> • Entrepreneurship Development Institute of India (EDII), Ahmedabad. • Entrepreneurship Development Institute of Innovation (EDII) - MEDP, Bangalore. • National Bank for Agriculture and Rural Development (NABARD) • National Institute for Micro, Small and medium Enterprises (NI-MSME) • Development commissioner (handicrafts), Ministry of textiles, Govt. of India • Tamil Nadu State Rural Livelihood Mission (TNSRLM), Govt. of Tamil Nadu.

Management Profile			
Background of Key Personal (Professionals and others) with brief profile of the Senior Management Personnel			
No	Name	Designation	Responsibilities
1	M.Gunasekaran	Director	Over all executive work especially from the sponsoring to beneficiaries.
2	J.Kanagamanisa -thiaseeli	Principal/ Secretary	Implementing the projects, and over all administration
3	J.Logamatha	Treasurer	In charge of Accounts maintenance of all income and expenditure.
4	B.Balaji	Trustee	To help the secretary to implementing the projects

Bank Account Details	
Name of the Bank	HDFC BANK LTD
Branch Name	East Gandhi Nagar
Account Holder Name	Matha Educational Trust
Account Number	12451450000080
Contact Details	
Name of the Contact Person	M.Gunasekaran
Designation of Contact Person	Director
Correspondence Address	No.22, 22 nd East Cross,Gandhi Nagar Vellore-632006.Tamil Nadu
Contact Number	9367778111
E-Mail Address	director.mathaeducationaltrust@gmail.com matha.vellore@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 etc. 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 is concentrated with Coir yarn units and the scope for further value addition of Coir yarn is immense. In order to directly benefit the coir yarn units in the cluster, value addition of coir yarn is considered an apt infrastructure for the cluster.

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
- Creation of additional employment opportunities in the cluster
- Improve quality and standard of life of the people working in the cluster
- To create suitable infrastructure for substantial increase of cluster turnover
- Production of value added commercial products that augment the income level of huge number of employees/ artisans engaged coir fibre extraction & yarn spinning
- Eco production of products that augment the income level of huge number of employees/ artisans engaged coir fibre extraction & yarn spinning

7.3 Focus Products/Services

In addition to the Soft interventions for Capacity building and Market promotion initiatives, the following facilities are proposed as interventions for the development of the cluster:

- Coir Two ply yarn spinning facility and Four Headed Coir yarn Spooling facility
- Coir PVC Tufted Mat facility

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
- + **Engagement of Business Development Service Providers:** To improve the performance of the enterprise, its access to markets, and its ability to compete.

8.2 HARD INTERVENTIONS:

CREATION OF COMMON FACILITY CENTRE:

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

- I) Coir Two ply yarn spinning facility and Four Headed Coir yarn Spooling facility
- II) Coir PVC Tufted Mat Production facility

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	2
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. 2,00,000/-
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 Coir PVC Tufting Mat, Yarn spinning etc
6	Trainer / Training Institution	Coir Board (at CCRI, Alleppey)
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. 2,00,000/-
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. 2,00,000/-
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. 3,00,000/-
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 III - Quarter I

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. 1,00,000/-
7	Implementation timeline	Year III - Quarter II / Quarter III

10 Hard Interventions

10.1. Creation of common facility centre:

a) Proposed Interventions

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

- ✚ Coir Two ply yarn spinning facility and Four Headed Coir yarn Spooling facility
- ✚ Coir PVC Tufted Mat Production facility

b) Land

The land for Common Facility Center (CFC) has been taken for lease by the SPV, the lease period being 15 years and the extent of land is 1.84 acres. The land identified is located at SF.No.6/1A, 6/1B, 6/2A, 6/5A, 6/5B and 6/6Aa at Pakkam village in Vellore District. The location has other infrastructural facilities such as road, power etc. and is suitable for the proposed CFC. The land identified by the SPV is given below:



c) Building and Civil works

The total extent of building for the proposed Common Facility Center is estimated at around 18,150 Sq.ft. and the section wise extent is given below:

CFC activities	Built up Area (in Sq.ft)	Rate/Sq.ft. (in Rs.)	Cost of Building (Rs. in Lakhs)
Work shed for 12 Nos. of Automatic Yarn Spinning & Four Head Spooling Machine	5000	750	37.50
Work shed for Coir Tufted Mat Production	12500	750	93.75
Power room	150	750	1.12
Administration office	500	1200	6.00
Total	18150		Rs.138.37 lakhs

The estimate of building and civil works proposed has been worked out to Rs.138.37 lakhs as mentioned above. The building construction of Common Facility Center shall be in accordance with the Tamilnadu Transparency in Tender Act 1998 & The Tamil Nadu Transparency in Tender Rules, 2000.

10.2. Product & Process

a) Coir Two Ply Yarn spinning with four headed spooling facility

Coir Yarn is generally of two ply, spun from coir fibre with fully automatic spinning machines. The Coir yarn is of different qualities/grades based on the quality of fibre used, the nature of twist, presence of impurities etc.

Coir yarn, being an intermediate product is consumed for varied uses. For the proposed Tufted Coir mat manufacturing facility in the cluster, spinning facility is created to strengthen the backward linkage i.e. ensured raw material resource. The need for this facility is to ensure uniform quality of raw material, which is mandatory for Coir mats and also to ensure uninterrupted supply & stable price.

Proposed Machineries

S.No	Name of the Machineries & Specifications	Qty
1.	Turbo Willowing Machine - 3 HP	1
2.	Double Head Double Combing 2 Ply Coir Yarn Spinning Machine - 1.5 HP, 1440 RPM	12

S.No	Name of the Machineries & Specifications	Qty
	Motor	
3.	Auto Feed For Double Head Spinning Machine With 0.5 HP Motor 1440 RPM and Gear Box coupled with 0.5 HP Motor	12
4.	Auto Rewinding Machine	1

Production Process:

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



Two Ply Yarn Spinning Machine



Coir Two Ply Yarn

The automatic spinning machine units are capable of production of yarns of runnage varying from 50 to 300 meters/kg and twists from 10 to 30 twists/feet.

Four Head spooling facility

The spooling machines are required to make yarn spools to feed the autolooms for the manufacture of Coir tufted mats, which is part of the CFC. Four head spooling machine offered find usage in wounding yarns evenly on bobbins in a way to provide for easy unwinding during manufacturing process of Coir Tufted Mats.

Specification of Four Headed Spooling Machine:

S.No	Description	Specification
1.	Spooling	4 headed
2.	Power	3 HP
3.	Capacity	1000kg/ 8 hour
4.	Operation type	Automatic
5.	Size (l x b x h)	3750 mm x 900 mm x 1000 mm

Production Process:

Hanks of coir yarn are wound into spools by using this machine. Hanks are placed on the flyers supplied with this machine and yarn is threaded through yarn tensioners and attached to the empty spools on the winding drum. When the machines start the winding drum rotates and the yarn is wound into spools.



Project justification

Coir yarn, being an intermediate product is consumed for varied uses. For the proposed Coir Tufted Mat manufacturing facility in the cluster, spinning facility is created to strengthen the backward linkage i.e. ensured raw material resource.

The need for this facility is to ensure uniform quality of raw material, which is mandatory for Coir mat and also to ensure uninterrupted supply & stable price.

The estimated cost of Coir Spinning and four headed spooling unit machinery and accessories is Rs.50.50 Lakhs.

b) Coir PVC Tufted Mats

Coir mats formed by the bonding to the compounded rubber sheet base by vulcanising process. The brush portion of the mats is embedded over the rubber sheets and designs are produced on the surface of the mats.



The advantage is that these mats can be easily cut to any size or shape providing a completely clean and safe edge that will not fray. **PVC Rolls** are also available with a maximum width of 2mtr, can be produced in varying thickness of 15mm, 17mm, 20 mm, 23 mm & 28 MM. The rolls are cut and spray painted onto the mats for required design through stencils.

Proposed Machineries

The list of machineries proposed for the PVC Tufted Coir Mat production is given below:

S.No	Machinery / Equipments	Qty
1	Cutting head complete with Drive motor, Gear box and all accessories with Heating and Cooling panels, Conveyor with Head drum and Tail drum, belt aligner with all accessories	1 set
2	Tufted plant consisting Creel stand, Yarn dryer, Slitting & Cross cutting station, Rolling machine, PVC mixer, Shearing machine with dust collection system, Circular knife grinding machine set	1 set

S.No	Machinery / Equipments	Qty
3	Thermic fluid heater with capacity 6 lac/Kcal/hr. complete with chimney, thermic fluid pump, valves etc.	1 set
4.	Chilling plant with all accessories	1 No.
5.	Compressor with all accessories	1 No.
6.	Long knife grinding machine	1 No.
7.	Stenciling and online bleaching machine	1 No.
8.	Stretch wrapping and carton sealing machines	1 No.

The estimated cost of Coir PVC Tufted Mat unit machinery and accessories is Rs.270.00 Lakhs.

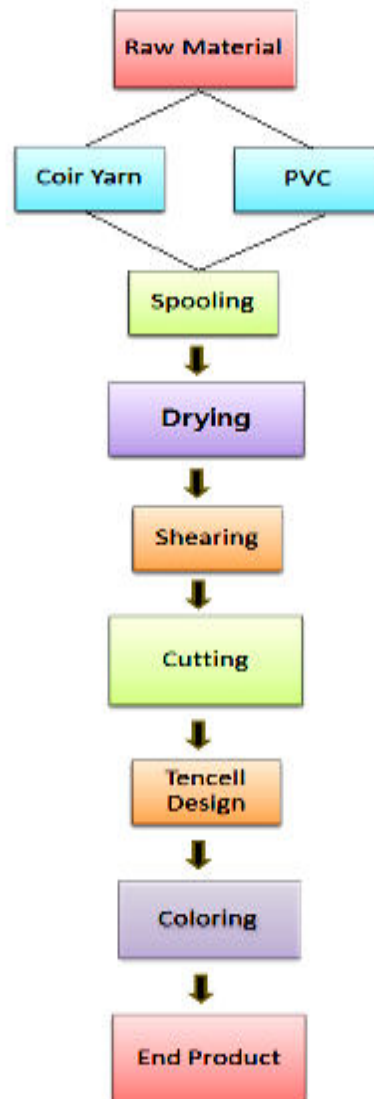
Production process:

PVC tufting (backed) mats and rolls are made by tufting high quality coir yarn into PVC backing. The product is formed by Tufting Coir Yarn over PVC back using the coir tufting machine. The vinyl backing provides anti slipping and ensures very low fibre shredding properties. Finally the mats are spray painted for required designs through stencils.



Tufting of coir yarn over the PVC base using automatic device forms the brush pile of the mat. Mats with varying brush pile can be produced and the mats can be cut into any shape, size and in rolls are used as wall-to-wall carpeting material. Shaped mats, stencilled designs and flocked designs are available. This Coco Mat is bleached and designs are made using Azo Free water based acrylic paint. Coir Tufted Door Mats are very much in use throughout the world because of its

versatility, durability, eco friendly nature, finishing and competitive costing. The finished bleached mat is colorful, brighter, long lasted and very effective in dirt trapping. The process flow chart for PVC Tufting Mat is given below:



The BIS Standard for Coir Mats is IS 11420-1985. This standard specifies requirements for various varieties of mats.

Project justification

Coir PVC tufted mats manufacturing is proposed as part of the CFC to effect value addition of Coir yarn within the cluster itself and also to exploit the good market prospects for Geo textiles, both nationally and internationally. In addition, the project would result in increased cluster turnover, enhanced employment and income level for the workers in fibre extraction and yarn spinning units.

10.3. Plant and Machinery

The estimated cost of the proposed machineries for the proposed activities is given below:

Name of the Machinery	Quantity	Amount Rs. in lakhs
Double headed spinning machine with Auto feeding facility	12 Nos.	48.00
Four Head Spooling Machine	1 No.	2.50
PVC Tufting Machine with complete setup	1 No.	270.00
Total	14 Nos.	320.50

All the machineries for the Common Facility Center are to be procured through transparent tender process in accordance with the Tamilnadu Tender Transparency in Tender Act 1998 & The Tamilnadu Transparency in Tender Rules, 2000.

10.4. Proposed Capacity

a) Coir Two Ply Yarn Spinning

The installed capacity of the proposed Coir yarn spinning unit is 80 kgs per shift. It has been proposed to purchase 12 Nos. of yarn spinning machine. On single shift operation for 300 working days per annum, the installed capacity is worked out to 288 tons per annum

Capacity per machine per shift	80 kgs
Number of machines	12
Number of shifts per day	1
Number of days per annum	300 days
Installed Capacity per annum	288 tons

The capacity utilization has been proposed at 70%, 80% and 90% in the first, second and subsequent years respectively.

b) PVC Tufted Coir Mat

The installed capacity of the proposed PVC Tufted Coir Mat production unit is 800 Sq.M. per shift. On one shift operations for 300 working days per annum, the installed capacity is worked out to 2,40,000 Sq.M. per annum.

Installed Capacity per shift	800 Sq.M. (of 2 M width)
Number of machines	1
Number of shifts per day	1
No. of operational hours per shift	8 Hours per shift
Number of working days per annum	300
Installed Capacity per annum	240,000 Sq.M. (of 2 M width)

The capacity utilization has been proposed at 70%, 80% and 90% in the first, second and subsequent years respectively.

10.5. Raw material Availability

The raw material (Coir Yarn and PVC) required for Tufting mat is estimated to be 3.50 Kgs of Coir yarn and 2.50 Kgs of PVC resin per Sq.M. of output. Coir yarn required will be supplied within the cluster. PVC/Rubber materials are to be sourced from Bangalore & Kerala. An agreement will be executed with the yarn units in the cluster to ensure uninterrupted supply.

10.6. Power

The connected load requirement estimated for the project is 140 KVA. The power connection could be availed through Single window scheme of District Industries Center.

10.7. Water

The water requirement for the unit is estimated at 10,000 litres per day. The water for the project is to be sourced from the borewells. The ground water level in the location is considered good and the water availability for the project could be met from the proposed borewells.

10.8. Manpower

The required manpower would be sourced from within the cluster villages. The manpower requirement estimated for the project is given hereunder:

Description	Nos.
Manager	2
Supervisors (Electrical & Mechanical)	3
Male Workers	5
Female workers (Unskilled)	15
Admin and Accounts	2
Security	3
Total	30

10.9. Operation and Maintenance

The SPV is responsible for the operation and maintenance of the project assets and the SPV has to manage the entire operation on its own. The IA will periodically monitor the expenditure incurred towards operation and maintenance. The operation and maintenance cost of the project is proposed to be managed with the income from commercial operations of the project.

10.10. Statutory Approvals

Statutory compliances include local body clearance, Fire, Health, Inspector of factories, GST Registration etc. The same may be applied for Single window clearance through District Industries Center.

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	2.00	2.00	--
1.1.3	Skill Upgradation Programme	2.00	2.00	--
1.1.4	Exposure Tour	2.00	2.00	--
	Total Capacity Building cost	7.00	7.00	--
1.2	Market Promotion			
1.2.1	Market Study Tour	2.00	2.00	--
1.2.2	Participation in Trade fairs	3.00	3.00	--
1.2.3	Buyer Seller Meet	2.00	2.00	--
1.2.4	Tie up with Business Development Service (BDS) providers	1.00	1.00	--
	Total Market Promotion cost	8.00	8.00	--
	Total Soft Interventions Cost	15.00	15.00	--

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	138.37	124.53	13.84
2.2	Automatic Yarn Spinning (12 Nos.) with 4 Head spooling m/c.	50.50	45.45	5.05
2.2.1	PVC Tufted Coir Mat manufacturing plant	270.00	243.00	27.00
2.2.2	Electricals & accessories	3.00	2.70	0.30
2.2.3	Handling equipments (Forklift, Trolleys etc.)	12.00	10.80	1.20
	Total - Machinery & other components of Hard Interventions	335.50	301.95	33.55
	Total Hard Interventions Cost (2.1 + 2.2)	473.87	426.48	47.39
	TOTAL INTERVENTIONS COST (SOFT & HARD)	488.87	441.48	47.39
3	Cost of TA	30.00	30.00	-
4	Cost of IA/SPV including CDE	20.00	20.00	-
	TOTAL PROJECT COST	538.87	491.48	47.39

11.1 Cost of Establishment & Operation Common Facility Center

The project components and the cost thereof is mentioned below:

(Rs.Lakhs)

Cost Of Project	Total	SPV Share	Gol Grant
Hard Interventions - Grant Components			
Building & Civil works	138.37	13.84	124.53
Plant and Machinery	320.50	32.05	288.45
Electricals & accessories	3.00	0.30	2.70
Handling infrastructure	12.00	1.20	10.80
<i>Total</i>	<i>473.87</i>	<i>47.39</i>	<i>426.48</i>
Other Non-Grant components			
Contingencies (2.00%)	9.48	9.48	0.00
Deposits	3.80	3.80	0.00
Prel. & Pre-operative Expenses	1.85	1.85	0.00
Working Capital margin	35.00	35.00	0.00
<i>Total</i>	<i>50.13</i>	<i>50.13</i>	<i>0.00</i>
Total	524.00	97.52	426.48

The CFC cost of establishment and operation works out to Rs.524.00 Lakhs, of which Rs.97.52 lakhs will be the SPV share and Rs.426.48 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 amounting to Rs.473.87 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.50.13 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.35.00 lakhs. This is based on 18 days stock of Consumables, 3 days work-in-progress, 6 days finished goods stock and receivables for 10 days. The SPV proposes to bring Rs.35.00 lakhs towards working capital in the first year. 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 PMEGP, 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 NEEDS, 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	10 (Coir Yarn spinning units)	10 members x Rs.15.00 lakhs = Rs.150.00 lakhs	Rs.52.50 Lakhs	Rs.90.00 Lakhs	Rs.7.50 Lakhs
	Total	Rs.400.00 lakhs	115.00	265.00	20.00

The additional investment estimated in the cluster is Rs.400.00 Lakhs with the scheme funding of Rs.115.00 lakhs, bank credit of Rs.265.00 lakhs and the promoter's contribution of Rs.20.00 lakhs.

13 Enhanced Project Cost & Means of Finance

The Project cost and Means of Finance of CORE SFURTI project is illustrated in Chapter 11. 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 12, 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	543.87	495.98	47.89
2	Convergence initiatives (Establishment of individual units under various schemes)	400.00	115.00	285.00
	Total	943.87	610.98	332.89

The enhanced project cost including the Core SFURTI and other convergence initiatives works out to Rs.943.87 lakhs, whereas the corresponding Grant component is Rs.610.98 lakhs and that of Contribution and bank loan is Rs.332.89 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	I	Q3
1.2	Market Promotion		
1.2.1	Market Study Tour	II	Q1/Q2
1.2.2	Participation in Trade fairs	II	Q3/Q4
1.2.3	Buyer Seller Meet	III	Q1
1.2.4	Tie up with Business Development Service (BDS) providers	III	Q2/Q3
2	HARD INTERVENTIONS		
2.1	Land Lease (15 years lease)	I	Q1
2.2	Building for CFC	II	Q1, Q2
2.3	Machinery for Common Facility Proposed		
2.3.1	Coir Auto yarn Spinning & Four Head Spooling Machine	II	Q2/Q3
2.3.2	Coir PVC Tufted Mat	II	Q2/Q3

Project activity	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SOFT INTERVENTIONS												
Capacity Building												
Trust building and motivational programme	■											
Entrepreneurship Development Programme		■										
Skill Upgradation Programme			■	■								
Exposure Tour			■									
Market Study Tour					■	■						
Participation in Trade fairs							■	■				
Buyer Seller Meet									■			
Tie up with Business Development Service (BDS) Providers										■	■	
HARD INTERVENTIONS												
Land Lease (15 years lease)	■											
Building for CFC					■	■						
Automatic Coir yarn Spinning & Four Head Spooling Machine						■	■					
Coir PVC Tufted Mat						■	■					

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:

a) Automatic Coir Yarn Spinning	
Capacity per machine per shift	80 kgs
Number of machines	12
Number of shifts per day	1
Number of working days per annum	300
Installed Capacity per annum	288.00 tons
Coir Fibre to Yarn (Yield wastage)	10%
Charges on User fee basis	Rs. 18 per Kg. of output
b) PVC Tufted Coir Mat	
Installed Capacity per shift	800.00 Sq.M. (of 2 M width)
Number of machines	1
Number of shifts per day	1
Number of working days per annum	300
Installed Capacity per annum	240,000 Sq.M. (of 2 M width)
Consumable (PVC resin) reqt. per Sq.M.	2.50 Kgs.
Cost of PVC resin	45.00 per Kg.
Charges on User fee basis	Rs. 200.00 per Sq.M. of output
Capacity Utilisation	
- First year	70%
- Second year	80%
- Third year onwards	90%
Interest On W.Capital	13.00% Per annum
Power Cost	Rs.6.50 per KWH
Administrative & Marketing Expenses	1.00% Of sales realisation
Repairs & Maintenance: 2.00%Of plant and machinery cost in the first year of operation and 10% increase in every subsequent years	

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	372.29	425.47	478.66	478.66	478.66
Profit Bef. Tax	75.94	94.81	113.57	110.73	107.72
Provision for taxation	2.19	16.77	29.40	33.02	35.48
Profit after Tax	73.75	78.04	84.17	77.71	72.24
Break Even Point	29%	24%	21%	22%	22%

Net Present Value (NPV) : Rs.252.75 lakhs

Internal Rate of Return (IRR) : 17.50 %

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: Estimation of Power Cost

Statement 6: Manpower Requirement and Estimation of Cost

Statement 7: Estimation of Depreciation

Statement 8: Calculation of Income Tax

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

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 has identified the potential Implementing agency (IA) for the cluster. The Implementing agency proposed is 'The Matha Educational Trust', an NGO registered as Trust, having its registered office at Vellore. 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 "PAKKAM COIR CLUSTER PRIVATE LIMITED" as per the Certificate of Incorporation issued by Registrar of Companies dated 13.11.18. The CIN of the company is U74999TN2018PTC125771. The SPV has been proposed with 28 members with one Chairman, one Managing Director and 5 Directors. 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

The SPV has been proposed with 28 members with one Chairman, one Managing Director and 5 Directors and the list is given below:

S.No.	Name	Designation	Present Activity
1	C.Sivakumar	Chairman	Coir Fibre Manufacturing
2	S.Thondral nayagan	Managing Director	Coir Fibre Manufacturing
3	C.Karthikeyan	Director	2ply Coir works
4	D.Rajeshkumar	Director	Coir Fibre Manufacturing
5	A.Thenmozhi	Director	Coconut Merchant
6	D.Manimegalai	Director	Coconut Farmer
7	S.Amul	Director	2ply Coir works
8	S.Parameshwari	Share holder	Husk Supplier
9	D.Mithra	Share holder	Husk Supplier
10	K.P.Senthilkumar	Share holder	2ply Coir works
11	A.Punitha	Share holder	Coconut Merchant
12	T.Sridhar	Share holder	2ply Coir works
13	A.Yogeshwari	Share holder	Artisan
14	P.Saravanan	Share holder	Artisan
15	N.Karthi	Share holder	2ply Coir works
16	M.Manjula	Share holder	2ply Coir works
17	G.Anandhan	Share holder	Husk Supplier
18	S.M.Dharani	Share holder	2ply Coir works
19	M.Gajendiran	Share holder	Artisan
20	B.Sripriya	Share holder	Artisan
21	D.Kumar	Share holder	Artisan
22	L.Raghu	Share holder	Coconut Farmer
23	R.Baskar	Share holder	Artisan
24	N.Parthasarathy	Share holder	Coconut Merchant
25	C.Krishnan	Share holder	Coconut Merchant
26	J.Karthikeyan	Share holder	Artisan
27	U.Jeevanantham	Share holder	Coconut Merchant
28	S.Prakash	Share holder	Coconut Merchant

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)	6539	9366	9834	10303	11077	11240	13480
2	Investment (Rs. Lakhs)	1550	2479	2602	2726	2850	2975	3570
3	Employment (Nos.)	866	1168	1226	1284	1343	1402	1682
4	Wages per day (Rs.)	300	400	440	480	520	560	680
5	Profitability (%)	8-10%	18%	20%	22%	24%	24%	24%

- 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 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

Financial Statements

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

			Statement	1				
COST OF CFC PROJECT AND MEANS OF FINANCE								
Cost Of Project		Rs.Lakhs		SPV Share	GoI Grant			
Land		Leased						
Building & Civil works		138.37		13.84	124.53			
Plant and Machinery (incl. Trans., Erec. & Comm.)		320.50		32.05	288.45			
Electricals & accessories		3.00		0.30	2.70			
Handling infrastructure		12.00		1.20	10.80			
Office equipments and furnitures		0.00		0.00	0.00			
Fire fighting equipments		0.00		0.00	0.00			
Contingencies	2.00%	9.48		9.48	0.00			
Deposits (as per Statement 1.1)		3.80		3.80	0.00			
Prel. & Pre-operative Expenses (Stmt. 1.2)		1.85		1.85	0.00			
Working Capital Margin (as per Statement-2)		35.00		35.00	0.00			
Total		524.00		97.52	426.48			
Means of Finance								
SPV Share		97.52						
SFURTI Grant		426.48						
Total		524.00						

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

		Statement-1.1						
DEPOSITS								
Deposits payable to TNEB for	140	KVA Power Connection						
	Amount	Total						
Details	Per KVA	(Rs.Lakhs)						
Meter Caution Deposit		0.40						
Development Charges	Rs.350	0.49						
Earnest Money Deposit	Rs.800	1.12						
Security Deposit	Rs.800	1.12						
		3.13						
Other Deposits / Advances		0.67						
Total		3.80	say	Rs.3.80	Lakhs			
		Statement-1.2						
PRELIMINARY AND PREOPERATIVE EXPENSES								
Statutory fees (RoC, CTO, Regn. etc.)	0.60							
Trial run expenses	1.25							
	1.85							

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

ASSESSMENT OF WORKING CAPITAL							Statement-2
Current Assets	Days	1	2	3	4	5	
Stock of Consumables	18	12.46	14.24	16.02	16.02	16.02	
Work in process	3	2.62	2.96	3.30	3.33	3.36	
Finished products	6	5.25	5.92	6.60	6.66	6.72	
Receivables	10	12.41	14.18	15.96	15.96	15.96	
Cash and bank balance		2.00	2.29	2.57	2.57	2.57	
Other current assets		1.08	1.23	1.39	1.39	1.39	
Total		35.82	40.82	45.84	45.93	46.02	
Current Liabilities							
Other Current Liabilities		0.82	0.90	0.99	1.09	1.20	
Total		0.82	0.90	0.99	1.09	1.20	
Working Capital Gap		35.00	39.92	44.85	44.84	44.82	

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

Cost Of Production				Statement-3 contd...				
Cost of Consumables								
Cost of PVC resin-Tufted mat		189.00	216.00	243.00	243.00	243.00		
Cost of other consumables	5.00%	18.61	21.27	23.93	23.93	23.93		
Cost Of Power	Statement 5	10.99	12.61	14.17	14.17	14.17		
Salary & Wages	Statement 6	37.29	39.15	41.11	43.17	45.33		
Repairs & Maintenance	2.00%	6.41	7.05	7.76	8.54	9.39		
		262.30	296.08	329.97	332.81	335.82		
Administration & Marketing Expenses	1.00%	3.72	4.25	4.79	4.79	4.79		
Prel. & Preop. Expenses (w/o)	10.00%	0.19	0.19	0.19	0.19	0.19		
Depreciation	Statement 7	30.14	30.14	30.14	30.14	30.14		
Total		296.35	330.66	365.09	367.93	370.94		
Profit Bef. Tax		75.94	94.81	113.57	110.73	107.72		
Provision for taxation	Statement 8	2.19	16.77	29.40	33.02	35.48		
Profit after Tax		73.75	78.04	84.17	77.71	72.24		

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

					Statement	4		
Assumptions For Cost Of Production And Profitability								
b. Automatic Coir Yarn Spinning								
Capacity per machine per shift	80	kgs						
Number of machines	12							
Number of shifts per day	1							
Number of working days per annum	300							
Installed Capacity per annum	288.00	tons						
Coir Fibre to Yarn (Yield wastage)	10%							
Charges on User fee basis	Rs. 18	per Kg. of output						
c. PVC Tufted Coir Mat								
Installed Capacity per shift	800.00	Sq.M. (of 2 M width)						
Number of machines	1							
Number of shifts per day	1							
Number of working days per annum	300							
Installed Capacity per annum	240,000	Sq.M. (of 2 M width)						
Consumable (PVC resin) reqt. per Sq.M.	2.50	Kgs.						
Cost of PVC resin	45.00	per Kg.						
Charges on User fee basis	Rs. 200.00	per Sq.M. of output						
					contd...			

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

Capacity Utilisation								
- First year	70%							
- Second year	80%							
-Third year onwards	90%							
Interest On W.Capital	13.00%	Per annum						
Power Cost	Rs.6.50	per KWH						
Repairs & Maintenance	2.00%	Of plant and machinery cost in the first year of operation and 10% increase in every subsequent years						
Administrative & Marketing Expenses	1.00%	Of sales realisation						

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

ESTIMATION OF POWER REQUIREMENT & COST					Statement-5		
Total Connected Load	140	KVA		RS.LAKHS			
Max. Demand	126	kVA					
		ANNUAL POWER COST					
		1	2	3	4	5	
Working Days		300	300	300	300	300	
Capacity Utilization		70%	80%	90%	90%	90%	
Power Consumption	Lakhs Kwh	1.69	1.94	2.18	2.18	2.18	
Current Consumption Charges	Rs.6.50	10.99	12.61	14.17	14.17	14.17	
		10.99	12.61	14.17	14.17	14.17	
Assumptions:							
Power Factor	90%						
Plant Running time	8	hours per day					
Average Load Factor	80%						
Power Cost / Kwh	Rs.6.50						

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

				Statement	6			
MANPOWER REQUIREMENT AND ESTIMATION OF COST								
			RS.LAKHS					
Description	Nos.	Salary	Annual					
		per month	Salary					
Manager	2	20000	480000					
Supervisors (Electrical & Mechanical)	3	15000	540000					
Male Workers	5	10000	600000					
Female workers (Unskilled)	15	7500	1350000					
Admin and Accounts	2	10000	240000					
Security	3	5000	180000					
Total	30		3390000					
	Add: Benefits	10%	339000					
	Grant Total		3729000					

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

					Statement	7		
ESTIMATION OF DEPRECIATION								
			RS.LAKHS					
Straight Line Method	VALUE	DEP. RATE	1	2	3	4	5	
Building & Civil works	141.14	3.34%	4.71	4.71	4.71	4.71	4.71	
Plant & Machinery	328.76	7.40%	24.33	24.33	24.33	24.33	24.33	
Electricals	3.06	6.33%	0.19	0.19	0.19	0.19	0.19	
Handling Equipments	12.24	7.40%	0.91	0.91	0.91	0.91	0.91	
Total	485.20		30.14	30.14	30.14	30.14	30.14	
WDV Method								
Building & Civil works		10.00%	14.11	12.70	11.43	10.29	9.26	
WDV	141.14		127.03	114.33	102.90	92.61	83.35	
Plant & Machinery		25.00%	82.19	61.64	46.23	34.68	26.01	
WDV	328.76		246.57	184.93	138.70	104.02	78.01	
Electricals		15.00%	0.46	0.39	0.33	0.28	0.24	
WDV	3.06		2.60	2.21	1.88	1.60	1.36	
Handling Equipments		25%	3.06	2.30	1.72	1.29	0.97	
WDV	12.24		9.18	6.88	5.16	3.87	2.90	
Total	485.20		99.82	77.03	59.71	46.54	36.48	
Note: Contingency & Pre-operatives are apportioned with the cost of assets.								

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

					Statement	8		
CALCULATION OF INCOME TAX								
					RS.LAKHS			
Years		1	2	3	4	5		
Net Profit		75.94	94.81	113.57	110.73	107.72		
Add: Straight Line Dep.		30.14	30.14	30.14	30.14	30.14		
Less: Wdv Depreciation		99.82	77.03	59.71	46.54	36.48		
Total		6.26	47.92	84.00	94.33	101.38		
Income Bef. Incentives		6.26	47.92	84.00	94.33	101.38		
Less: Deductions	0%	0.00	0.00	0.00	0.00	0.00		
Taxable Income		6.26	47.92	84.00	94.33	101.38		
Income Tax	35%	2.19	16.77	29.40	33.02	35.48		
Loss C/F		0.00	0.00	0.00	0.00	0.00		
Profit After Tax		73.75	78.04	84.17	77.71	72.24		

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

PROJECTED CASH-FLOW STATEMENT							Statement	9
							RS.LAKHS	
Years		1	2	3	4	5		
Source Of Funds								
SPV Share	97.52							
State Govt. Grant	426.48							
Profit Before Int.,Dep. & Tax		106.08	124.95	143.71	140.87	137.86		
Total	524.00	106.08	124.95	143.71	140.87	137.86		
Uses								
Inc. in Capital Expenditure	485.20							
Deposits (as per Statement 1.1)	3.80							
Increase in W.Capital		35.00	4.92	4.93	-0.01	-0.02		
Provision For Taxation		2.19	16.77	29.40	33.02	35.48		
Total	489.00	37.19	21.69	34.33	33.01	35.46		
Surplus	35.00	68.89	103.26	109.38	107.86	102.40		
Opening Balance	0.00	35.00	103.89	207.15	316.53	424.39		
Closing Balance	35.00	103.89	207.15	316.53	424.39	526.79		

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

PROJECTED BALANCE SHEET							Statement	10
							RS.LAKHS	
Years	PR. PERIOD	1	2	3	4	5		
Liabilities								
SPV Share	97.52	97.52	97.52	97.52	97.52	97.52		
State Govt. Grant	426.48	426.48	426.48	426.48	426.48	426.48		
Reserves & Surplus		73.75	151.79	235.96	313.67	385.91		
Current liabilities		0.82	0.90	0.99	1.09	1.20		
Total	524.00	598.57	676.69	760.95	838.76	911.11		
Assets								
Gross Block	485.20	485.20	485.20	485.20	485.20	485.20		
Less: Accu. Depreciation		30.14	60.28	90.42	120.56	150.70		
Net Block	485.20	455.06	424.92	394.78	364.64	334.50		
Deposits	3.80	3.80	3.80	3.80	3.80	3.80		
Current Assets		35.82	40.82	45.84	45.93	46.02		
Closing Balance	35.00	103.89	207.15	316.53	424.39	526.79		
Total	524.00	598.57	676.69	760.95	838.76	911.11		
	0.00	0.00	0.00	0.00	0.00	0.00		

DETAILED PROJECT REPORT ON PAKKAM (VELLORE) COIR CLUSTER DEVELOPMENT UNDER THE SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES

					Statement	12		
ESTIMATION OF NET PRESENT VALUE AND INTERNAL RATE OF RETURN								
					RS.LAKHS			
Years	PR. PERIOD	1	2	3	4	5	6	7
Cash Out Flow								
Capital Expenditure	485.20							
Preliminary & Preoperative Expenses	1.85							
Working Capital Margin	35.00							
Total	522.05	0.00	0.00	0.00	0.00	0.00		
Cash Inflow								
Profit After Tax		73.75	78.04	84.17	77.71	72.24	72.24	72.24
Depreciation		30.14	30.14	30.14	30.14	30.14	30.14	30.14
W.C.Margin								
Residual Value Of F.Assets								
Total	0.00	103.89	108.18	114.31	107.85	102.38	102.38	102.38
Net Cash Flow	-522.05	103.89	108.18	114.31	107.85	102.38	102.38	102.38
Net Present Value	Rs.252.75	lakhs						
at 8% discount rate								
Internal Rate of Return	17.50%							

MACHINERY AND ACCESSORIES - ESTIMATED COST

S.No.	Activity	MACHINERY & ACCESSORIES		
		Qty	Rate (Rs.Lakhs)	Amount (Rs.Lakhs)
1	Coir Fibre Baling (120 Kgs.)	1	45.00	45.00
2	Coir Yarn Spinning with 4 Spooling M/c.	10		60.00
3	Geo-textiles - Autolooms with roll tightner	3	38.50	118.75
4	Coir PVC Tufted mat manufacturing	1	270.00	270.00
5	Coco Logs	3	0.75	2.25
6	Lab Equipments			3.00
7	ETP Equipments			5.00
8	Weigh bridge equipments (100 T Cap.)			11.00
9	Handling Infrastructure (Bull Loader, Tractor & Forklift)			35.00
10	Electricals & accessories (HT)			40.00
11	Genset & Borewell			8.00
12	Office Equipments & Funitures			5.00
13	Fire Fighting Equipments			10.00
	TOTAL			613.00

NOYYAL COIR CLUSTER - BUILDING EXTENT

S.No.	Building component	Extent (Sq.ft.)	Rate / Sq.ft.	Total cost
1	Workshed - Yarn spinning -1	2400	800	19.20
2	Workshed - Yarn spinning-2	2400	800	19.20
3	Workshed - Tufted Mats	13800	800	110.40
4	Concrete yard	3600	300	10.80
5	Tufted mat stock room	2400	800	19.20
6	Workshed - Autolooms	9000	800	72.00
7	Workshed - Coco logs	1600	800	12.80
8	Workshed - Baling machine	7200	800	57.60
9	Office, Lab., Meeting hall	2000	1250	25.00
10	Power room, Genset room	200	800	1.60
13	Labour hall/room (100 x 16)	1600	800	12.80
14	Toilet (6 x 4 - 9 Nos.)	216	800	1.73
15	OHT (30,000 LTS) 12m Ht.			8.00
17	Weigh bridge - Civil works & Security room	160	1250	2.00
	Total	46576		372.33

(say)

372.00