DETAILED PROJECT REPORT

Cluster Location: TIRUNELVELI, TAMILNADU

(Tenkaasi Podhigai Coir Consortium (P) Ltd.,)

Submitted to

Coir Board, Kochi

Prepared by:

ITCOT CONSULTANCY AND SERVICES LTD.

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The average income level for male workers is Rs.300/-per day and that of female workers is from Rs.200/- to Rs.250/- per day
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Cluster’s present production is limited to intermediate products such as fibre, yarn, pith etc., which fetches reduced margin only.
Coir Pith, generated during fibre production (2 Tons of Coir pith generated in 1 Ton production of Coir fibre), is not being exploited by the Cluster, eventhough scope for value addition of Coir pith is enormous and excellent market potential exists for value added coir pith products.
In spite of good market prospects for value added products, enhanced production infrastructure within the cluster is not realized, due to limited individual investment potential.
No common marketing platform, resulting in over dependence of intermediaries/ agents /traders.

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<tr><td>09.</td><td>Proposed Strategic Interventions</td><td>
Soft Interventions:

Capacity Building Initiatives
Market Promotional Activities

Hard Interventions (Common facilities proposed):

Two Ply Yarn Spinning facility
Geo Textiles facility
Grow Bag manufacturing facility
5 kg. Pith Block making facility
650 gm. Pith briquette making
Coco Chips Cutting
Coco log making facility

</td></tr>
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		• Coir Pith Compost prod. facility **Thematic Interventions:** Participation in activities such as brand promotion campaigns, New Media marketing, E-commerce initiatives etc., as detailed in the SFURTI implementation guidelines
10.	**Budget for Soft interventions**	Rs. 25.00 lakhs
11.	**Budget for Hard interventions**	Rs.279.90 lakhs
12.	**Total Project cost (incl. Agencies cost)**	Rs.351.09 lakhs
13.	**Means of Finance**	SPV Contribution : Rs. 77.38 lakhs SFURTI Grant : Rs. 273.71 lakhs
14.	**Post Intervention Scenario (Expected Impact)**	• Well established management team in place under the strengthened SPV to excel in all the functional operations of the CFC established. • Production of value added competitive products and marketing through strengthened marketing linkages (both domestic and export) • Increase in the overall turnover of the cluster by 20%, including the output of new enterprises established due to convergence of cluster initiatives. • Post interventions, the Cluster's export earnings increase by 40% • Employment generation of additional 20% (minimum 300 persons) is foreseen, considering the establishment of CFC & establishment of new enterprises due to convergence of cluster initiatives. • Due to value addition and effective utilization of Coir pith, increase in the income level of labour work force in fibre extraction units by 10 – 15% is expected. • Emergence of specialized support service providers and their active involvement in the development process

		• Establishment of new units by converging various schemes of State and Central Governments (such as Coir Udyami Yojana, NEEDS, PMEGP, UYEGP, etc.) resulting in additional investments in Coir sector by the cluster members • 100% Coverage of cluster artisans under social security schemes • Improved access to financial capital for cluster members
15.	**Cluster Management**	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 SPV is formed with 20 members and registered as Private Limited Company under Companies Act 2013 in the name of 'TENKAASI PODHIGAI COIR CONSORTIUM PRIVATE LIMITED' as per the Certificate of Incorporation issued by Registrar of Companies, Chennai dated 17.08.2015. The CIN of the company is U36104TN2015PTC101837. Considering the knowledge base, experience and managerial capacity of the lead SPV members, the SPV, 'TENKAASI PODHIGAI COIR CONSORTIUM PRIVATE LIMITED' is proposed as the Implementing Agency for this cluster.

PREAMBLE

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

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

With a view to making the traditional coir industries more productive and competitive and facilitating their sustainable development, the Central government has announced Scheme of Fund for Regeneration of Traditional Industries (SFURTI). ITCOT Consultancy and Services Ltd. (ITCOT) has been appointed as Technical Agency by Coir Board for SFURTI Coir clusters in Tamilnadu. Subsequently, Coir Board has entrusted the task of preparation of Detailed Project Report for the Coir Cluster located at Tenkasi to M/s. ITCOT Consultancy and Services Limited, Chennai. Accordingly, ITCOT has prepared the Detailed Project Report (DPR) for submitting the same for seeking approval from the Scheme Steering Committee (SSC).

This report is prepared based on interaction with coir industrialists in the clusters, coir industry workers, industry association members, NGO's and support institutions in the district, Informal interviews with industry participants, machinery suppliers and experienced entrepreneurs, collection of secondary information etc.

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

1. CLUSTER PROFILE

1.1 BACKGROUND

Tirunelveli is about 2000 years old town with old tradition is the head quarters of Tirunelveli District of the state Tamil Nadu in India. Tirunelveli District is one of the districts. The district is located in the southern part of Tamil Nadu and surrounded by Virudhunagar District on the north, Western Ghats on the West, Kanniyakumari District on the south, Tuticorin District on the East. The lifeline of the district is Thamiraparani River which feeds the district and quenches the thirst of residents. It is called as"Oxford of South India" consisting of twin cities Tirunelveli & Palayamkottai. The district is famous for Courtallam Waterfalls.

1.2 Key Economic Activities in the region

The blockwise key economic activities of Tirunelveli District are given below:

Name of the Industry	Name of the Blocks
Pottery	Naguneri, Valliyur
Mat Weaving	Patthamadai
Brass Work	Tirunelveli
Palm Leaf Products	Nanguneri
Wood Carving	Keezha Ambur
Medicinal Plants	Tenkasi, Papanasam
Lacquerware	Ambasamudram
Coir Industries	Tenkasi

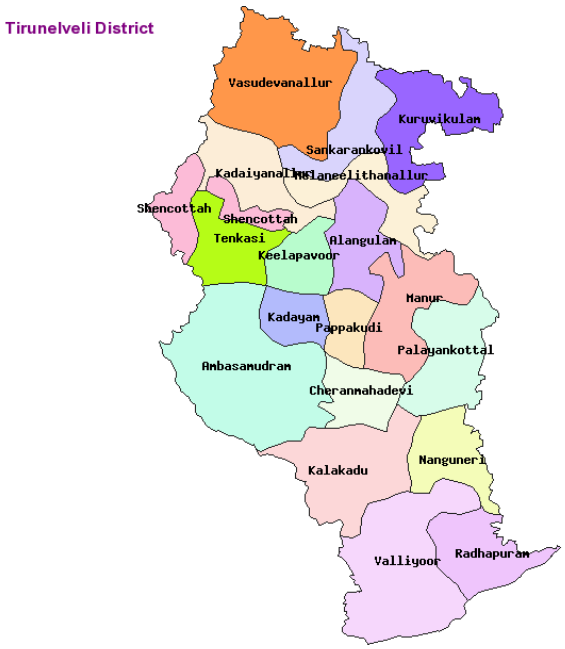
- Total Industrial Units : 41500
- Regd. Industrial Units : 16672
- Medium & Large units : 42

There are 2 Nos. of Coir Association functioning in the district namely Tenkasi Coir Association and Sengottai Coir Association.

1.3 Regional setting of the Cluster

The cluster area is located in Tirunelveli district, extends over Tenkasi block.

The block map of the Tirunelveli district is given below:



1.4 Location

The cluster spread includes 14 Village Panchayats of Tenkasi block in Tirunelveli District. The Geographical spread of the cluster measures about 20-25 Km radius. There are 14 village panchayats in Tenkasi block, listed as below:

S.No	Village Panchayat
1	Ayiraperi
2	K.pillaivalasai
3	Kasimajorpuram
4	Kuthukalvalasai
5	Mathalamparai
6	Pattakuruchi
7	Pattapathu
8	Periyapillaivalasai
9	Piranoor
10	Sillaripuravoo
11	Sumaitherthanpuram
12	Thenpothai
13	Thiruchittambalam
14	Vallam

1.5 Evolution of the Cluster

The Cluster is naturally evolved one. In Tirunelveli district, area of coconut cultivation is cultivated with an extent of 15,667 hectares, coconut production is 1573 lakh nuts and the productivity is 10,041 nuts per hectare. Most of the cultivation is done in Tenkasi and Sengottai blocks. All the Coir and allied industries are also situated in these blocks.

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.

1.6 Demography and Growth trends

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

Description	**2011**	**2001**
Actual Population	3,077,233	2,723,988
Male	1,520,912	1,333,939
Female	1,556,321	1,390,049
Population Growth	12.97%	8.93%
Area Sq. Km	6,693	6,693
Density/km2	460	403
Proportion to Tamil Nadu Population	4.27%	4.36%
Average Literacy	82.50	76.09
Male Literacy	89.24	85.21
Female Literacy	75.98	67.43

1.7 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 depend 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.

1.8 Human Development Aspects

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

Activity	Male	Female	Total
Fibre Extraction	160	660	820
Yarn Spinning	30	120	200
Curled Coir rope	40	160	150
Pith Block Making	50	110	160

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.Each semi-mechanized fibre industry having one unit is giving employment to20 to 25 unskilled women and 2 skilled men. Fully mechanized fibre unit is giving employment to 1 skilled man and 5 women. From the fibre produced by these units around 500 labourers are getting employment in manual spinning of coir yarnin the district in which most of them are women.The women working at the fibre units earning Rs.200/- to Rs.250/- per day and the skilled men labour earns Rs.300/- per day.

1.9 Infrastructure – social, physical, financial and production related

The infrastructure details of Tirunelveli district is tabulated as below:

District Abstract					
1.	Area	:	6823 Sq.Kms		
2.	Population	:	3,072,880		
			Male	Female	Total
			1578595	1554285	3072880
3.	No.of Revenue Divisions	:	3 - Tirunelveli, Cheranmadevi, and Tenkasi		
4.	No.of Taluks	:	11		
5.	No.of Revenue Villages	:	559		
6.	No.of Panchayat Unions	:	19		
7.	No.of Village Panchayats	:	450		
8.	No.of Town Panchayats	:	36		
9.	No.of Municipalities	:	7		
10.	No.of Corporation	:	1 - Tirunelveli		
11.	No.of Parliamentary constituencies	:	2 - (1) Tirunelveli, (2) Tenkasi		

Tirunelveli has been an agricultural area throughout its history. The district is a major producer of rice, coconuts, bananas, spices and forest-based products. The district is home to almost 50% of the buffalo population of Tamil Nadu.

Since it is a coastal district, Tirunelveli is also involved in fishery development and production. For the period 2005–2006, the total inland fish catch was 1,874 tonnes, and the total marine fish catch was 7,014 tonnes.India Cements Limited is the third largest cement company in India, and began at Sankarnagar in Tirunelveli in 1949.

The district is also rich in minerals, with a total of 407 mines and quarries. Limestone, granite and garnet sand are some of the minerals mined or produced in the district. Major industries include textile, food and forestry products.

A Special Economic Zone (SEZ) was established at Nanguneri in 2001. A pharma park and windmill spare-parts and television-manufacturing factories have been planned in this SEZ. The Tamil Nadu Industrial Development Corporation (TIDCO) has planned a

Rs 700-crore high-tech industrial park in Nanguneri in association with INFAC Group and Axes Technologies Inc of the US. The state government is planning light manufacturing, design and assembly facilities, modern infrastructure facilities and amenities in this SEZ to attract investors globally.

The Coir sector in this district is focused on intermediate products such as Coir Fibre, Coir yarn, Curled Coir and Coir pith blocks. The existing number of units, production and turnover of the cluster are given below:

Product	**No.of units**	**Production (in Tons)**	**Turnover (Rs. in Lakhs)**
Coir Fibre	41	17200	3100.00
Curled Coir	13	2353	800.00
2 Ply Yarn	40	2500	1000.00
5 Kg. Pith Block	8	4000	400.00

The Coir Fibre units located in the district source the husk within the district and the fibre extracted are supplied to the 2 ply yarn spinning and Curled coir units in the cluster. The pith generated in the fibre extraction units are supplied to the Pith block making units in the cluster.

2. CLUSTER VALUE CHAIN MAPPING

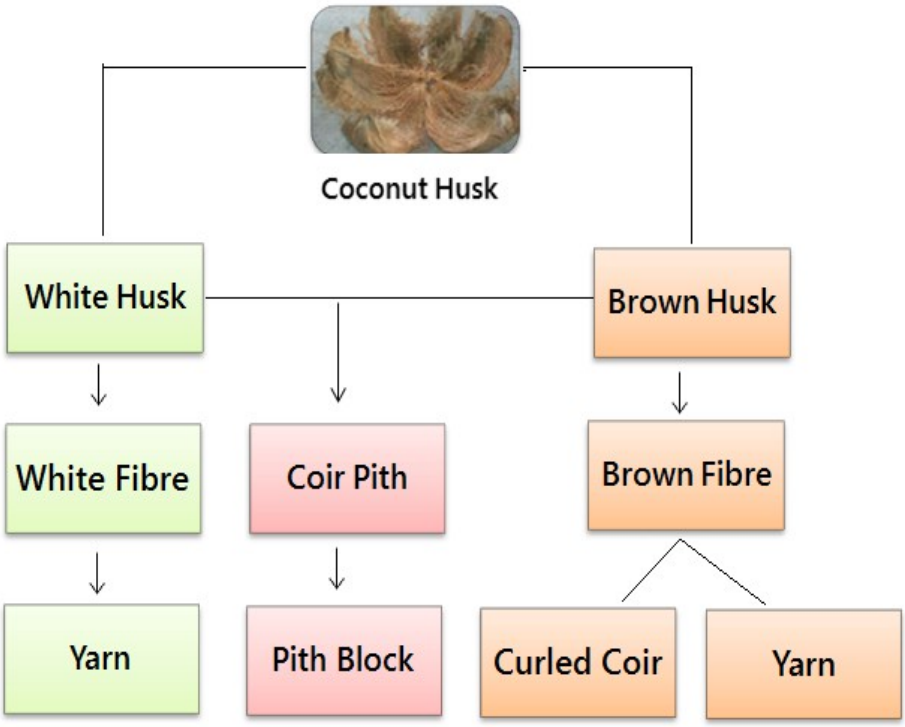
2.1 Product Profile

The following products are produced in the cluster presently.

- Coir Fibre
- Coir Yarn
- Curled Coir Rope
- Coir Pith Block

2.2 Production Process

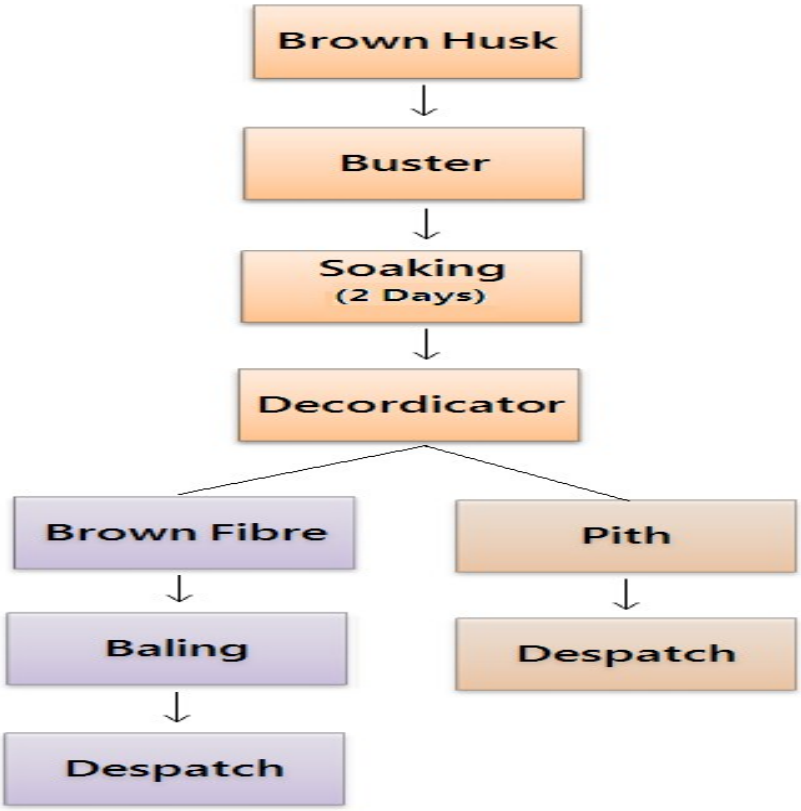
The Product flow from the raw material is depicted in the chart below:



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:



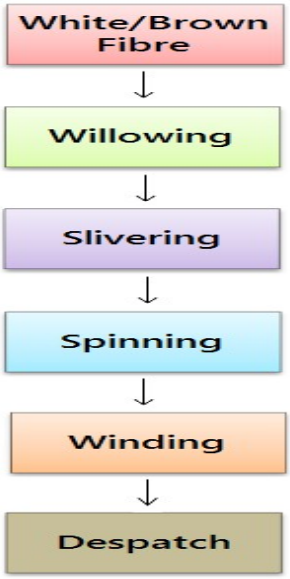
Coir Yarn:

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

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

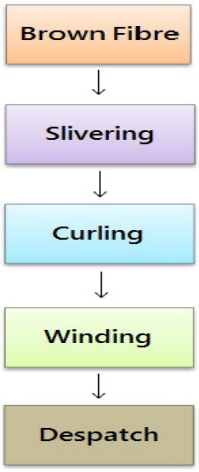
Cor fibre obtained from fibre extraction units and is wetted by spraying water. After 2-3 hours, the wetted fibre is passe through the willowing machine to remove the impurities and the place the fibre and parallel to each other. The fibre is then fed in to slivering machine wherein it is converted in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



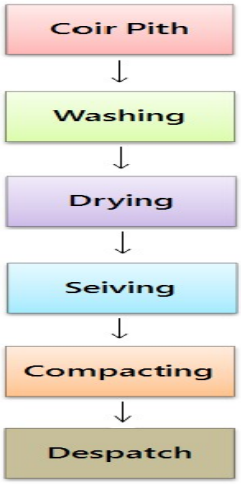
Curled Coir Rope:

The clean fibre is fed to the hackling machine in which the fibre is loosened, opened out and teased to facilitate easy curling. Then the hackled fibre is fed to the curling machine in which the fibre is straightened passing through the rollers and curled in the spinning head. The curled rope is wound on bobbins and the bobbin head. The hopper feeder is provided for feeding uniform weight from the quantity of fibre to the curling machine. The ropes of different diameters can be produced on the curling machine.



Coir Pith Block:

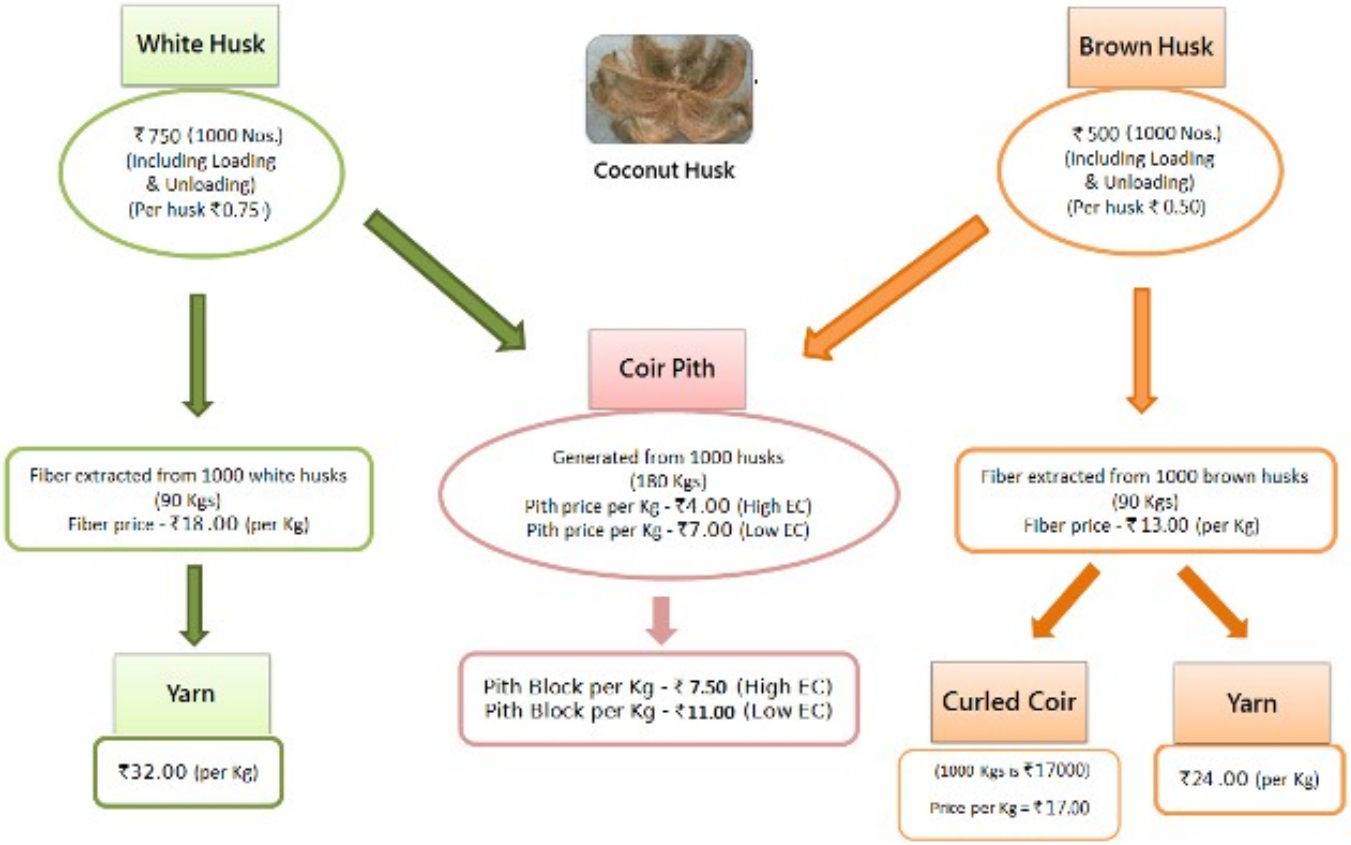
The by-product obtained during the process of Coir Fibre Extraction is Coir Pith. The raw coir pith (high EC) is received and washed in the soft water to reduce the EC. The low EC pith is dried in the yard and the dried pith is subjected to sieving / mixing process. The resultant pith is fed into the 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.

2.3 Value Chain Analysis

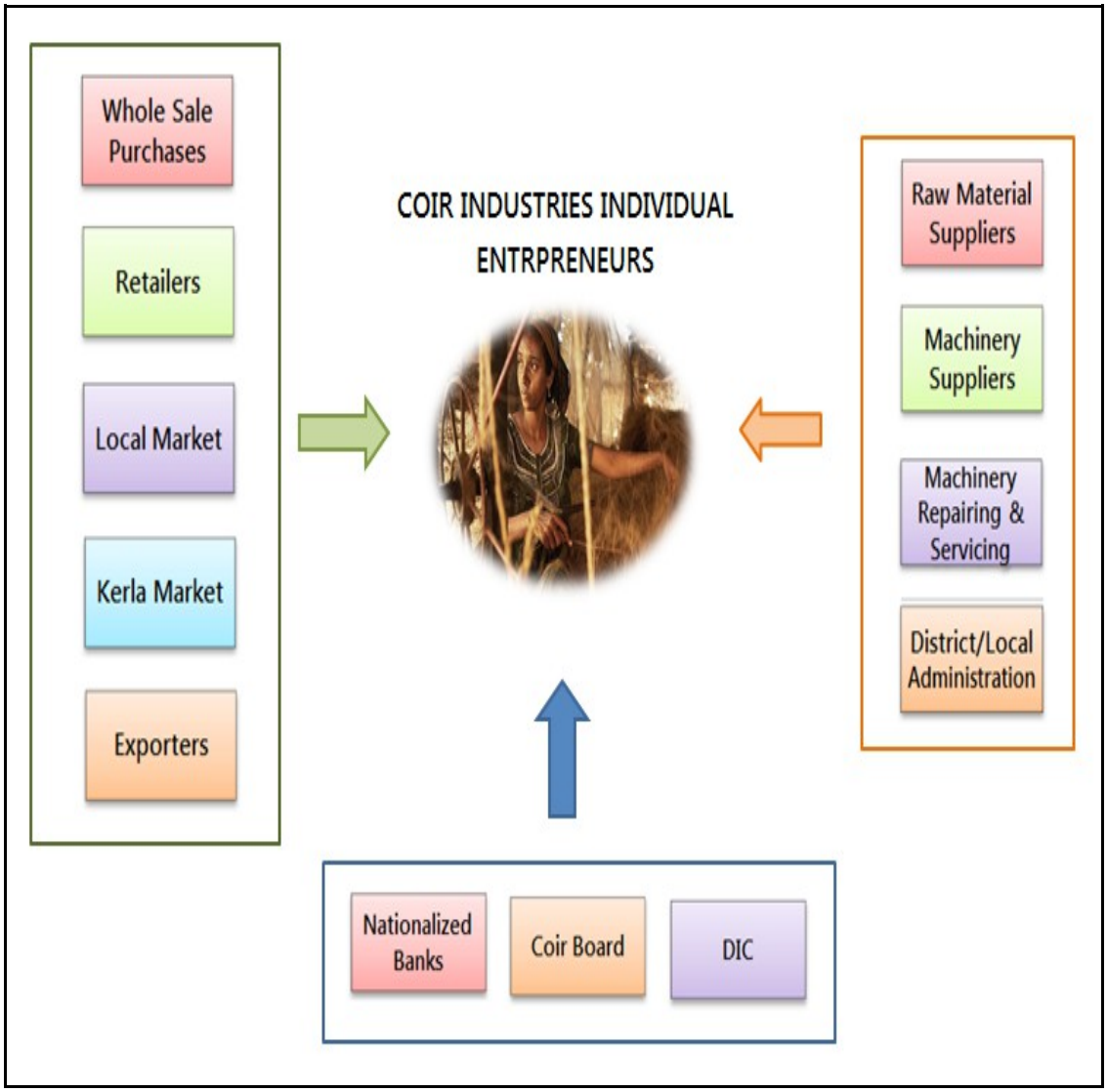
The incremental value of the cluster products from the basic raw material to the final product manufactured in the cluster is given below:



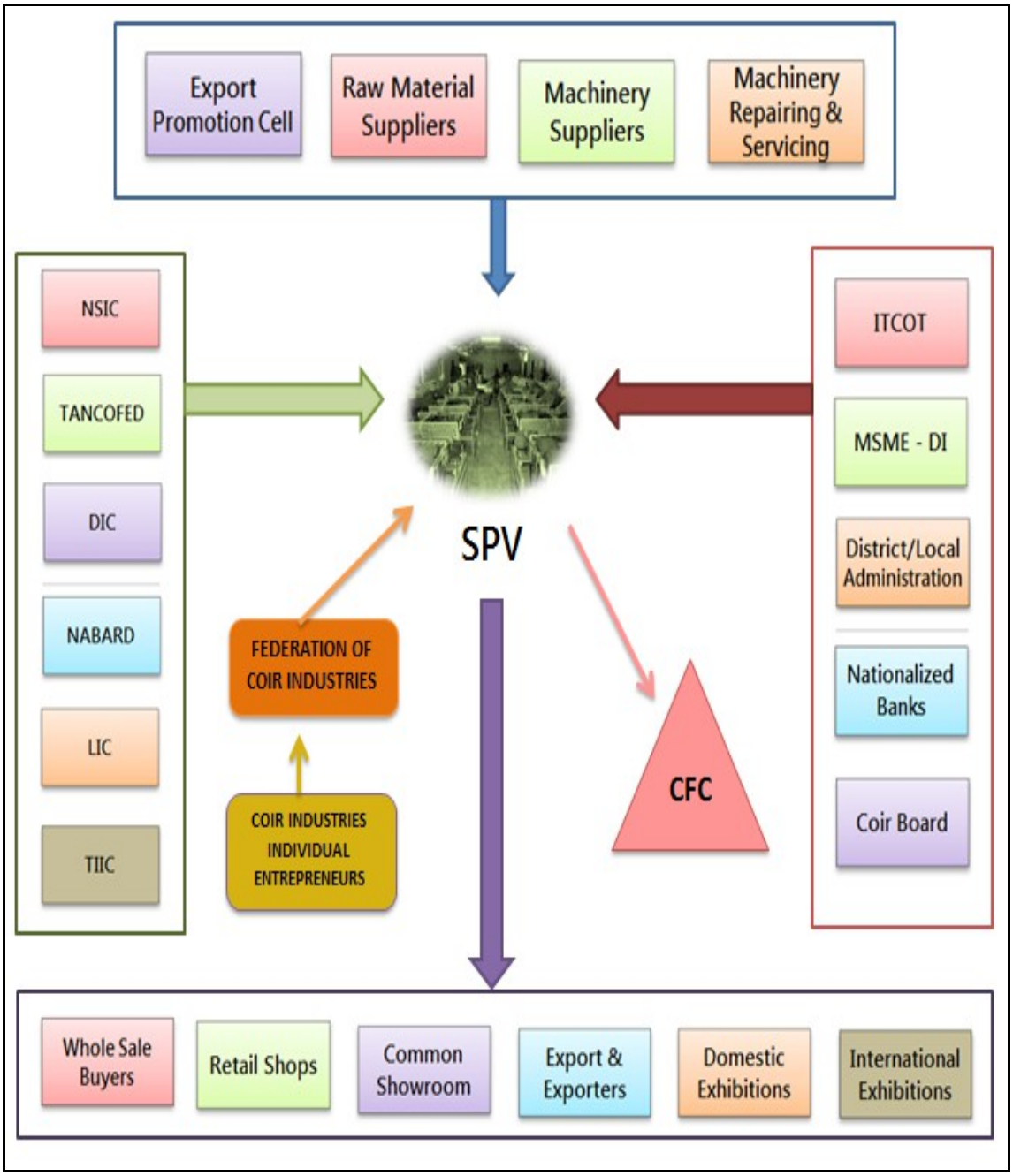
It is observed that the value addition in the cluster is limited to intermediate product level and the need and scope for value addition for coir sector in the cluster is considered significant. The cost of Green husk including loading and unloading is valued at Rs.0.75, which is incremented to Rs.18.00 per Kg. of fibre, which is further incremented to Rs.32.00 per Kg. of yarn. Similarly the cost of Brown husk including loading and unloading is valued at Rs.0.50, which is incremented to Rs.13.00 per Kg. of fibre, which is further incremented to Rs.17.00 per Kg of curled coir and Rs.24.00 per Kg. of yarn. The cost of raw coir pith including loading and unloading is valued at Rs.7.00 per kg., which is further incremented to Rs.11.00 per kg. of low EC – 5 kg.pith block.

2.4 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:



2.5 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.

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 Helf Groups. They also implement Tamil Nadu State Rural Livlihood 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 Overseas Bank is the Lead bank in Tirunelveli district. Lead bank will coordinate the credit activities of banks in the district in addition to performing leading role in implementing schemes launched by State/Central governments

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

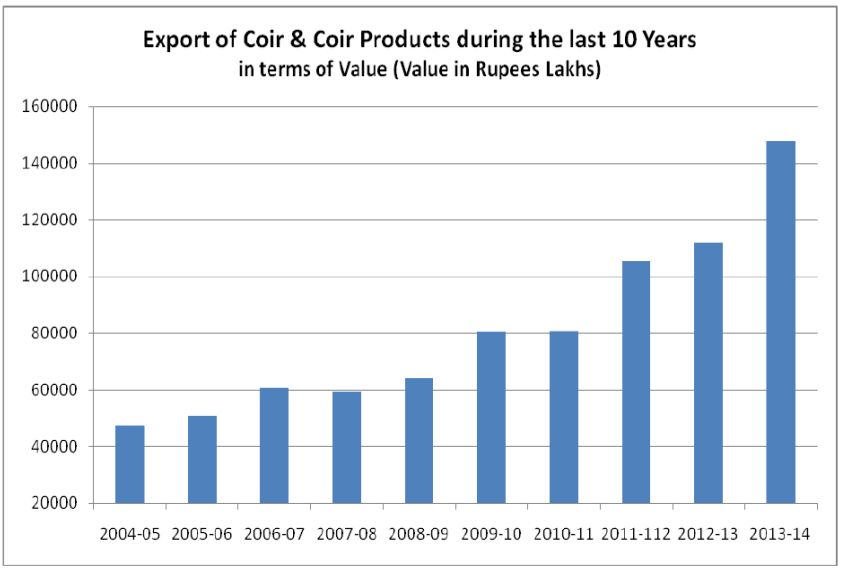
There is a good network of commercial Cooperative banks in the cluster. They offer both cash credit and term loan facilities to the coir industry. However, institutional finance for coir industry is limited and there is a large gap between the need for the credit and its availability.

3. MARKET ASSESSMENT AND DEMAND ANALYSIS

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

S.No.	State	Area ('000 Ha)	Production (in million nuts)	Coir fibre potential @ 60% husk utilization (MT)
1	Kerala	766.00	7057.88	338778
2	Tamilnadu	430.70	6211.21	298138
3	Karnataka	511.00	5915.33	283936
4	Andhra pradesh	142.00	1985.00	95280
5	Orissa	53.90	403.25	19356
6	West Bengal	29.10	395.28	18973
7	Gujarat	20.90	340.58	16348
8	Assam	20.80	304.47	14615
9	Other states/Uts	96.30	738.20	35403
	Total	2070.70	23351.20	1120827

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



The major products that are exported are Coir fibre, Coir pith and Mats. It has been observed that the percentage growth in value of export of Coir fibre has been 58.77% in 2013-14 compared to the previous year. Also the percentage growth in value of export of Coir pith has been 38.20% in 2013-14 compared to the previous year. The Product wise export details of coir products in 2013-14 is given below:

Q=Quantity in M.T						V= Value in Rs.Lakhs
	April -2013 - March 2014		April-2012 - March- 2013		%Growth Cumulative	
Item	Q	V	Q	V	Q	V
Coir Fibre	173902	32878.11	140693	20707.66	23.60	58.77
Coir Yarn	4247	2848.26	4202	2387.22	1.07	19.31
Handloom mat	22609	23623.82	24151	22810.10	-6.38	3.57
Powerloom mat	234	278.36	2	3.15	11600.00	8736.83
Tufted mat	43752	41776.39	37289	33572.91	17.33	24.43
Handloom matting	3425	3353.91	1418	1702.77	141.54	96.97
Powerloom matting	0	0	0	0	0.00	0.00
Geo textiles	4468	3503.78	3597	2628.74	24.21	33.29
Coir rugs & Carpet	93	105.99	95	133.38	-2.11	-20.54
Coir rope	498	390.17	420	282.41	18.57	38.16
Curled Coir	11263	2947.93	8883	2112.46	26.79	39.55
Rubberised Coir	965	1560.76	322	495.01	199.69	215.30
Coir pith	271495	34173.23	208399	24727.61	30.28	38.20
Coir other sorts	89	163.13	30	39.33	196.67	314.77
Total	**537040**	**147603.84**	**429501**	**111602.75**	**25.04**	**32.26**

 # Quantities Rounded

The percentage of share of each product with respect to total exports, both in Quantity and Value for the year 2013-14 is given below:

Composition of Export (Share in %)

Name of the item	Apri2013-March 2014		Apri2012-March 2013	
	Qty %	Value%	Qty %	Value %.
Tufted Mat	8.15	28.30	8.68	30.08
Coir Pith	50.55	23.15	48.52	22.16
Handloom Mats	4.21	16.00	5.62	20.44
Coir Fibre	32.38	22.27	32.76	18.55
Geo Textile	0.83	2.37	0.84	2.36
Coir Yarn	0.79	1.93	0.98	2.14
Curled Coir	2.10	2.00	2.07	1.89
Handloom Matting	0.64	2.27	0.33	1.53
Rubberised Coir	0.18	1.06	0.07	0.44
Coir Rope	0.09	0.26	0.10	0.25
Coir Rugs & Carpet	0.02	0.07	0.02	0.12
Coir Other Sorts	0.02	0.11	0.01	0.04
Powerloom Mat	0.04	0.19	0.00	0.00
Total	**100.00**	**100.00**	**100.00**	**100.00**

The Top five County wise Exports of Coir and Coir products in the year 2013-14:

S.No.	Country	Quatity (in MTs)	Value (Rs.Lakhs)	Quantity (%)	Value (%)
1	China	192110.62	36050.66	35.77	24.42
2	USA	55091.03	30026.05	10.26	20.34
3	Netherlands	53786.54	10870.04	10.02	7.36
4	UK	11987.01	8600.98	2.23	5.83
5	South Korea	67042.97	7020.54	12.48	4.76

As far as the cluster is concerned the product line is limited to Coir Fibre, Coir Yarn, Curled coir and Pith blocks. Of the total fibre production within the cluster, 60% is utilized within the cluster and the remaining is marketed through dealers to Alleppey.

The Coir yarn produced in the cluster is marketed to Alleppey, Mumbai & Hyderabad, both directly and also through dealers. The Curled coir produced in the cluster is marketed through dealers. As far as Pith is concerned, 40% of pith produced in the cluster is utilized within the cluster for Pith block manufacturing units and the balance 60% is marketed as raw pith mainly to the nearby districts viz. Tuticorin and Nagercoil.

It is observed that the potential for value addition of Coir yarn and pith are not exploited by the cluster properly. Hence focus on value addition of Coir yarn and pith are considered to be the need of the cluster in the existing scenario.

4. SWOT AND NEED GAP ANALYSIS

STRENGTHS:

- Readiness of the entrepreneurs in Coir sector to form a collaborative setup to undertake common initiatives under cluster mode.
- Sufficient availability of the basic raw material Coconut husk within the cluster.
- Existence of more number of fibre extraction units in the cluster, offers excellent scope for value addition of fibre and pith generated.
- Sufficient availability of Labour force.
- Availability of good physical infrastructure such as road, rail, power etc.
- Presence of Support institutions such as Coir Board, District Industries Centre, Commercial banks, ITCOT etc.

WEAKNESSES:

- Huge fluctuation in Husk (the basic raw material) price.
- In spite of good market prospects for value added products, enhanced production infrastructure within the cluster is not realized, due to limited individual investment potential.
- Unable to come out of the vicious circle of making the regular intermediate products
- 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:

- Excellent scope for pith based value added /diversified products
- Presence of support schemes by MSME & other departments
- Increasing domestic and export market prospects for coir products.
- Implementation of SFURTI Scheme for focused development of the cluster.

THREATS:

- Competition from products such as Nylon, Jute Sisal fibre etc.
- Increasing production of products such as Tender coconut, Neera etc., which utilize pre-mature nuts may result in basic raw material(husk) scarcity for Coir sector, as Coir sector depends on husk from fully mature nuts as raw material.
- Competition from coconut growing country viz.: Sri Lanka, Indonesia & Philippines etc.
- Utilization of husk for fuel purposes

NEED GAP ANALYSIS:

The key concern areas of the cluster are identified to be:

- Cluster's present production is limited to intermediate products such as fibre, yarn, pith etc., which fetches reduced margin only.
- Coir Pith, generated during fibre production (2 Tons of Coir pith generated in 1 Ton production of Coir fibre), is not being exploited by the Cluster, eventhough scope for value addition of Coir pith is enormous and excellent market potential exists for value added coir pith products.
- In spite of good market prospects for value added products, enhanced production infrastructure within the cluster is not realized, due to limited individual investment potential.
- No common marketing platform, resulting in over dependence of intermediaries/ agents /traders.

Increased production of value added pith products and venturing for exports would augment the cluster turnover and export revenues. Collaborative efforts to increase captive consumption of raw coir pith on cluster mode to tap the market opportunities for the value added coir products is considered to be the requirement of the cluster.

5. PROFILE OF THE IMPLEMENTING AGENCY

SFURTI scheme implementation guidelines prescribes that the Implementing agencies (IA) would be Non-Government Organizations (NGOs), institutions of the Central and State Governments and semi-Government institutions, field functionaries of State and Central Govt., Panchayat Raj Institutions (PRIs) etc. with suitable expertise to undertake cluster development.

The proposed model of implementation for Tenkasi Coir Cluster is based on the principle: *"active and accountable SPVs, accepting implementation responsibilities and offering active participation in the implementation at ground level may be assigned the role of Implementing Agency, under the close guidance, supervision and monitoring of the Technical Agency".* In brief, the operational part of the project has to be carried out by the SPV and the procedural part has to be ensured by the Technical Agency.

Considering the experience, knowledge base and managerial capacity of lead SPV members in 'Tenkaasi Podhigai Coir Consortium Private Limited', the SPV, which is 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 is being proposed as the Implementing Agency. As the Technical agency (ITCOT Consultancy and Services Limited) is involved in this cluster development process from the primary stage during the preparation of DPR, it is observed that the lead SPV members are capable of undertaking the implementation of the project successfully in adherence to the project timelines.

The SPV will have Regional Officer, Coir Board as NA representative and Project Manager, ITCOT as TA representative as its ex-officio members in advisory nature, who would monitor the progress of the implementation and ensure the adherence to scheme

guideline stipulations. Moreover, appointment of the qualified Cluster Development Executive (CDE) for the cluster would be undertaken by the Technical Agency in consultation with SPV and Nodal Agency.

The Technical Agency, assuming part role of Implementing Agency, would ensure timely completion of Cluster interventions and proper utilization of Government Grants. It will be responsible for furnishing Utilization Certificates (UC) and regular Progress reports to Nodal Agency. The financial transactions proposed by the SPV would be undertaken by the Technical Agency with the approval of Coir Board.

6. PROJECT CONCEPT AND STRATEGY FRAMEWORK

6.1 Project Rationale

The project rationale is to rejuvenate the existing product mix of the cluster and to enhance the competitiveness of cluster products, both in domestic and export markets, thereby elevating the cluster to a higher level in terms of value addition, turnover, employment and foreign exchange earnings.

6.2 Project Objective

- Strengthening linkages among the Cluster members and actors and to have a Collaborative setup to undertake common initiatives.
- To manufacture value added competitive products, using the available raw material resource and to venture the export market positively.
- To address current production and supply bottlenecks.
- Exploit the benefits arising due to optimization of resources and economies of scale.

6.3 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:

- Two Ply yarn spinning facility
- Geo Textiles manufacturing facility
- Coco Chips cutting facility
- Grow Bag manufacturing facility
- 5 kg. Pith Block making facility
- 650 gms. Pith Briquette making facility
- Coco Logs
- Coir Pith compost production facility

6.4 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

7. PROJECT INTERVENTIONS (CORE SFURTI)

The Core SFURTI project interventions include Soft Interventions (as detailed in Chapter 8) and Hard Interventions (as detailed in Chapter 9), in addition to Cross-cutting thematic interventions.

The **Soft interventions** proposed are categorized into Capacity building and Market promotion activities as given below (Detailed in Ch.8):

Capacity Building Initiatives:

- Trust Building: For strong association among cluster members to address common problems.
- Awareness Programme: To provide awareness about SFURTI scheme benefits, Cluster development initiatives and the prospects for value added products in Coir sector
- Entrepreneurship Development Programme: To foster entrepreneurship among cluster members.
- Technology based EDP: To educate & adopt the latest technology in coir sector.
- 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.

Market Promotion 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

In addition, trade fairs are the ideal place for surveying the market, comparing prices and sales terms etc.

- Buyer Seller Meet: To meet various players in the value chain for building business contacts and enhance marketability.

The **Hard interventions** proposed for the cluster are listed below (Detailed in Ch.9):

1. Two Ply yarn spinning facility -Input raw material to Geo textiles making CFC
2. Geo Textiles manufacturing facility – Value addition of yarn
3. Coco Chips cutting facility – One of the raw material for Grow bags manufacturing CFC
4. Grow Bag manufacturing facility – Value addition of Pith
5. 5 kg. Pith Block making facility – Value addition of Pith
6. 650 gm. Pith Briquette making facility – Value addition of Pith
7. Coco Logs - .
8. Coir Pith Compost production (Organic manure) – Value addition of Pith

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.

8. SOFT INTERVENTIONS

CAPACITY BUILDING PROGRAMME

S. No	Particulars	
1	Proposed Programme / Intervention	Trust Building and motivational programme
2	Target group	Coir Entrepreneurs, coir workers and Raw material suppliers
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	Awareness Programme
2	Target group	Coir Entrepreneurs, coir workers, Raw material suppliers
3	No. of Batches	2
4	Batch size	50 nos
5	Training content	About Cluster concept, SFURTI scheme, and other Government schemes
6	Trainer / Training Institution	ITCOT Consultancy and Services Limited
7	Cost of Training programme	Rs. 1,00,000/-
8	Implementation timeline	Year I - Quarter II

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

S. No	Particulars	
1	Proposed Programme / Intervention	Technology based Entrepreneurship Development Programme
2	Target group	Coir Entrepreneurs
3	No. of Batches	2
4	Batch size	25 nos
5	Training content	Scope for Value added coir products, Technological inputs & feasibility inputs, Marketing strategies
6	Trainer / Training Institution	ITCOT Consultancy and Services Limited
7	Cost of Training programme	Rs. 2,00,000/-
8	Implementation timeline	Year I - Quarter IV

S. No	Particulars	
1	Proposed Programme / Intervention	Skill upgradation Programme
2	Target group	Coir workers
3	No. of Batches	2
4	Batch size	20 nos
5	Training content	Skill Training for Geotextiles,Grow Bag, Coco chips & Pith block making
6	Trainer / Training Institution	Coir Board (at CCRI, Alleppey)
7	Cost of Training programme	Rs. 3,00,000/-
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 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 II - Quarter I

MARKET PROMOTION PROGRAMME

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 product wise market dynamics & to interact with market
5	Coordinating Institution	IA & TA
6	Cost of Training programme	Rs. 3,00,000/-
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
5	Programme objective	Participation, Exhibit products to generate market linkages and enquiries
6	Coordinating Organisation	Coir Board
7	Cost of Training programme	Rs. 5,00,000/-
8	Implementation timeline	Year II - Quarter II & Quarter III

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	Coordinating organisation	IA, TA & Coir Board
6	Cost of Training programme	Rs. 2,00,000/-
7	Implementation timeline	Year II - Quarter III & Quarter IV

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

9. HARD INTERVENTIONS

CREATION OF COMMON FACILITY CENTRE:

Land: The SPV has proposed to purchase land for the establishment of the Common Facility Centre under SFURTI scheme. The land has been identified at S.F.No. 47 & 48, Pattakurichi Village, Tenkasi Taluk, Tirunelveli District, the extent of land being 5.0 acres and the cost agreed upon is Rs.25.00 lakhs. The SPV has agreed upon the suitability of the land for the CFC proposed and paid advance of Rs.12.00 lakhs towards purchase proceeds. It is proposed to execute sale deed on final approval of the project under SFURTI scheme.

Location:

The arranged land for CFC proposed is located at Pattakurichi village, between Surandai – Sengottai main road, which is about 6 kms. from Tenkasi town. The location is considered suitable with reference to infrastructural facilities such as road, power, labour, water availability etc.

Cost & Area of Building works:

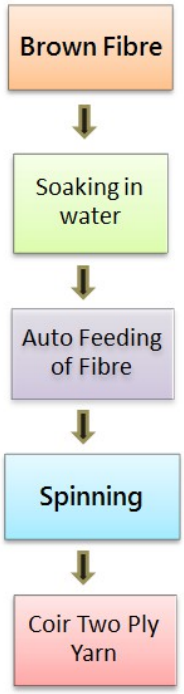
CFC activities	Built up Area (in Sq.ft)	Rate/Sq.ft. (Rs.)	Total cost (Rs. Lakhs)
2 Ply Yarn Machines with Auto Feeder	1500	800	12.00
Geo Textiles	3000	800	24.00
Grow Bag, Coco Chips	3000	800	24.00
5 kg. Pith Block, 650 gm.Pith Briquette & Coco log	3500	800	28.00
Drying yard	3000	500	15.00
Administration office	350	1200	4.20
Bore well and Overhead Tank	L.S.	L.S.	2.80
TOTAL			**110.00**

9.1 Two ply yarn spinning

9.1.1 Project Description

Coir Yarn is generally of two ply, spun from coir fibre by 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. Available in different forms like hydraulically pressed bales, spools bobbins, dholls, balls etc. cut length for various industrial and agricultural purpose.

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



9.1.2 Project justification

Coir yarn manufacturing facility is proposed to be a part of Common facility, as a raw material source, for captive consumption by the Geo textiles manufacturing CFC proposed. The need for this facility is to ensure uniform quality and uninterrupted supply of raw material, the yarn, to the Geo textiles manufacturing CFC. Moreover, with this project, value addition of yarn is carried out within the cluster.

9.1.3 Proposed Machineries and Cost:

Sl.No.	Machinery Description	Rate per unit (Rs.Lakhs)	Quantity	Total Price (Rs. Lakhs)
1.	Double Head spinning machine (Double conveyor type) with Auto fibre feeding machine	2.85	6	17.10
2.	Willowing Machine	0.60	2	1.20
3.	Motorised Rewinding machine	0.30	2	0.60
4.	Motors & other accessories	L.S.	L.S.	0.60
	Total			**19.50**

1. Installed capacity & production quantity

Year	1	2	3	4	5
Installed capacity per annum (in Tons)	144.00	144.00	144.00	144.00	144.00
Capacity utilization	60%	65%	70%	75%	80%
Production quantity per annum (in Tons)	86.40	93.60	100.80	108.00	115.20

9.1.4 Raw material availability

The raw material (Coir Fibre) required for the proposed installed capacity of the Two ply spinning facility is estimated at 160 MT per annum. Coir fibre is sourced from 41 units located nearby cluster area within 20 to 25 km radius.

Coir fibre is also purchased from the nearby Nagercoil district during demand seasons. It is proposed to execute purchase agreement with the coir fibre extraction units to ensure uninterrupted supply of raw material.

9.1.5 Operation and maintenance model

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the Common facility Center through User fee/Sales realization.

9.1.6 Market Strategy:

The total production of yarn is proposed to be utilized captively by the Geo-textiles manufacturing Common Facility Center proposed. Hence separate marketing initiative is not required, as far as Coir yarn is concerned with respect to this project.

9.1.7 Implementation time line

Year II - Quarter 1 (Total Project timeline is given in Chapter 13)

9.2 Coir Geo Textiles

9.2.1 Project Description

Coir Geotextiles protect land surface and promote quick vegetation. Geotextiles are a wonderful treasure of natural eco friendly, erosion control blankets in woven and non-woven preparations. Totally biodegradable, geotextiles help soil stabilisation and renew vegetation in varying slopes.

The process flow chart for Geo Textiles is given below:

9.2.2 Project justification

Geo textiles 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.

9.2.3 Proposed Machineries and Cost:

Sl.No	Machinery Description	Rate per unit (Rs.Lakhs)	Quantity	Total Price (Rs. Lakhs)
1.	Coir Geo Textile ANUGRAHA Loom Pneumatic type (Light Duty)- 2 meter width including 3 HP motor (1440 rpm, three phase) and compressor with all accessories	1.50	8	12.00

9.2.4 Installed capacity & production quantity

Year	1	2	3	4	5
Installed capacity per annum (in Sq. m)	360000	360000	360000	360000	360000
Capacity utilization	60%	65%	70%	75%	80%
Production quantity per annum (in Sq. m)	2,16,000	2,34,000	2,52,000	2,70,000	2,88,000

9.2.5 Raw material availability

The raw material for Geo textiles manufacturing is Coir two ply yarn. The total raw material is proposed to be sourced from the Two ply spinning CFC proposed in this project. The total requirement of Coir yarn for the proposed installed capacity of Geo Textiles production is estimated at 144 Tons per annum, which could be wholly sourced from the Twoply spinning CFC proposed.

9.2.6 Operation and maintenance model

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be

managed with the income from the operations of the Common facilities through Sales realization.

9.2.7 Market Strategy:

- Engaging Business Development Service providers to enhance the cluster market share in both domestic and export market for the product.
- Establishing specific marketing channel and appointment of dealers in potential market centers
- SPV has already started establishing business linkages with prospective buyers for Coir Geo Textiles viz. Techno Exports, Cherthala, Alleppey and A.G.Enterprises, Bhubaneshwar, Orissa.
- An informal market study by the SPV for the product has given lead on the utility of geo textiles in the mining applications such as tailing dams, secondary containments, heap leach pads, landfills ponds etc. The SPV has identified this as the potential target segment, which would be explored mainly in Karnataka and Orissa, on implementation of the project.

9.2.8 Implementation timeline

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

9.3 Coco chips cutting facility:

9.3.1 Project Description:

Coco chips, also known as Husk chips, are made by chopping coconut husk into nearly cube shaped pieces. It contains high quality Peat with Fibers to absorb more water. It is used as Mulching Agent. They are highly recommended for the germination of high value cash crops. Most orchid and cut-flower growers are using coco husk chips as an advanced alternative to bark based growing medium.

9.3.2 Project Justification:

Coco chips cutting is proposed as part of the CFC for effective utilization of the basic raw material (Husk) and also as a source of raw material for the Growbag manufacturing CFC proposed in this project. Excess chips after supplying for Growbag CFC, would be sold in the market, which has good market potential.

9.3.3 Proposed Machineries & Cost:

S.No.	Machinery Description	Quantity	Total Price (Rs. in Lakhs)
1.	Coconut Chips cutting machine with beater, screener and conveyor set	1	5.00
2.	Turbo Cleaner	1	1.50
	Total		**6.50**

9.3.4 Installed capacity & Production quantity:

Year	1	2	3	4	5
Installed Capacity per annum (in tons)	450	450	450	450	450
Capacity Utilization	60%	65%	70%	75%	80%
Production quantity per Annum (in tons)	270	293	315	338	360

9.3.5 Raw material availability:

Coconut husk is the raw material required for the Coco chips. Husk requirement is estimated at 4 Nos. of white husk or 6 Nos. of brown husk for 1 Kg. of Coco chips. The raw material would be sourced mainly from the cluster area itself. For additional requirement, it could be sourced from the nearby Kanyakumari district.

9.3.6 Operation and maintenance model:

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the Common facilities through sales realization.

9.3.7 Market Strategy:

The Coco chips produced in excess of the consumption for Grow bag CFC is proposed to be marketed in the nearby Tuticorin district.

9.3.8 Implementation timeline:

Year II – Quarter II & Quarter III. (Total Project timeline is given in Chapter 13)

9.4 Grow Bag manufacturing facility:

9.4.1 Project Description:

Coco peat grow bags are used as plant substrates for soil less cultivation, largely used in greenhouses for growing vegetables such as Tomatoes, Paprika, Cucumber, Strawberries and cut flower production. The dried coir pith will be screened to remove the baby fibres, fines and stone with the help of screener and destoner automatically and feed it manually to the grow bag machine to make slabs. These slabs will be packed in UV treated poly bags and palettized. The standard size of grow bag is 100 x 18 x 16 cms and the product weight is 5.75 Kgs. The production process of grow bag manufacturing comprises the following stages.

- Collection of raw materials
- Screening to remove fines upto 45%
- Weighing the raw material
- Feeding the machine
- Weighing the slab
- Insertion of slab in UV bag
- Sealing the bag
- Palleting
- Ready for despatch

This facility is a value added process, proposed in view of increased export earnings for the cluster.

9.4.2 Project Justification:

Grow bag manufacturing is proposed as part of the CFC in view of effective utilization of raw pith generated from the fibre extraction units within the cluster and to have value addition of pith to come out with product having excellent export market prospects. In addition, the implementation of the facility in the cluster naturally results in increased cluster turnover, export revenue earnings and enhancement in the income level of workers involved in fibre extraction in the cluster.

9.4.3 Proposed Machineries & Cost:

Sl.No.	Machinery Description	Quantity	Total Price (Rs. in Lakhs)
1.	Grow Bag Machine (with Hydraulic power unit, Dust proof Electrical Control Panel, Forming chambers & forming chamber lifting arrangement)	1	27.60

9.4.4 Installed capacity & Production quantity:

Year	1	2	3	4	5
Installed Capacity per annum (bags)	240000	240000	240000	240000	240000
Capacity Utilization	60%	65%	70%	75%	80%
Production quantity per Annum (bags)	1,44,000	1,56,000	1,68,000	1,80,000	1,92,000

9.4.5 Raw material availability:

Coir Pith and Coco chips are the raw material for the manufacture of Grow slabs. Coco chips is proposed to be sourced from the Coco chips CFC proposed and Coir Pith is sourced from the fibre extraction units (more than 40 fibre extraction units) located in the cluster. The raw material mix ratio of Coir pith to Coco chips vary from 60:40 to 80:20, based on the customer requirement. The packing materials viz. UV treated bags, Pallet base etc., could be sourced from vendors in Chennai and Bangalore.

9.4.6 Operation and maintenance model:

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project

implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the CFC through sales realisation.

9.4.7 Market Strategy:

- SPV has already started establishing business linkages with prospective domestic buyers for Growbags viz. Wonder Grow, Alleppey and Techno Exports, Cherthala, Alleppey.
- Grow Bag, the soil less growing medium, is the most wanted horticultural product from countries such as Holland, France, Spain, Italy, Israel, Canada, South Korea, U.S.A etc., The SPV lead members have already identified linkages to correspond with buyers from Holland & France for assured market arrangements on commencement of production.
- SPV plan to supply Grow bags for domestic buyers initially and when the production is stabilized, it is proposed to step-in for direct exports.
- Engaging Business Development Service providers to enhance the cluster's share in the market and for updating the emerging market trends and adaptations thereof.

9.4.8 Implementation timeline:

Year II – Quarter II & Quarter III (Total Project timeline is given in Chapter 13)

9.5 5 kg. Pith Block making facility:

9.5.1 Project Description:

The pith block making process involves receiving of pith, washing, drying, seiving and compacting as 5kg. block. Coir Pith, the spongy material that binds the coconut fibre in the husk, is compacted to 5 Kgs. block, finds its application as excellent soil conditioner and is extensively used as a soil-less medium for agri-horticultural purposes. With its moisture retention qualitites, coir pith is ideal for growing anthuriums and orchids.

9.5.2 Project Justification:

5 Kg. Pith block making facility (size: 30 x 30 x 9-12 cm) with Compaction ratio 6:1 is proposed as part of the CFC in view of effective utilization of raw pith generated from the fibre extraction units within the cluster and to have value addition of pith to come out with product having excellent export market prospects. In addition, the implementation of the facility in the cluster naturally results in increased cluster turnover, export revenue earnings and enhancement in the income level of workers involved in fibre extraction in the cluster.

9.5.3 Proposed Machineries & Cost:

S.No.	Machinery Description	Rate per unit (Rs.Lakhs)	Quantity	Total Price (Rs. Lakhs)
1.	5 Kg. block making machine (Hydraulic Power unit, Dust proof Electrical Control Panel, Forming chambers with Holding chambers with 20 blocks capacity mounted on sturdy structure)	14.00	1	14.00
2.	Screener (10 ft)	1.20	2	2.40
3.	Vibrator/Shaker	0.80	1	0.80
TOTAL				**17.20**

9.5.4 Installed capacity & Production quantity:

The installed capacity of the proposed 5 Kg. pith block making is 4000 Kgs. per shift.

Year	1	2	3	4	5
Installed Capacity per annum (in tons)	1200	1200	1200	1200	1200
Capacity Utilization	60%	65%	70%	75%	80%
Production quantity per Annum (in tons)	720	780	840	900	960

9.5.5 Raw material availability:

Coir Pith is raw material for this activity, which is proposed to be sourced from the fibre extraction units (more than 40 units) within the cluster. The raw material requirement for the installed production capacity of 1200 Tons of 5 Kgs. pith blocks per annum is

estimated at 1500Tons, which could be mostly sourced within the cluster itself and for additional requirement, raw material sourcing could be from the nearby Kanyakumari district.

9.5.6 Operation and maintenance model:

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the Common facilities through sales realization.

9.5.7 Market Strategy:

- Engaging Business Development Service providers to enhance the cluster's share in the market and for updating the emerging market trends and adaptations thereof.
- SPV has already started establishing business linkages with prospective domestic buyers for 5 Kgs.Pith blocks viz. Eco Coirs, Tuticorin and Touch Plantations, Coimbatore.

9.5.8 Implementation timeline:

Year II – Quarter III & Quarter IV (Total Project timeline is given in Chapter 13)

9.6 650 gm. Pith Briquette making facility:

9.6.1 Project Description:

The project is similar to the above mentioned 5kg pith block making but for the size of the pith block, which is 650 gm. in this process. This facility would result in increased export earnings of the cluster and increased marketability of the product.

9.6.2 Project Justification:

650 gms. Pith briquette making facility is proposed as part of the CFC in view of effective utilization of raw pith generated from the fibre extraction units within the cluster and to have value addition of pith to come out with product having excellent

export market prospects. In addition, the implementation of the facility in the cluster naturally results in increased cluster turnover, export revenue earnings and enhancement in the income level of workers involved in fibre extraction in the cluster.

9.6.3 Proposed Machineries & Cost:

S.No.	Machinery Description	Rate per unit (Rs.Lakhs)	Quantity	Total Price (Rs. Lakhs)
1.	650 gm. block making machine (Hydraulic Power unit, Dust proof Electrical Control Panel, Forming chambers with Holding chambers)	1	1	15.30
2.	Screener (10 ft)	1.15	2	2.30
3.	Vibrator/Shaker	0.80	1	0.80
TOTAL				**18.40**

9.6.4 Installed capacity & Production quantity:

Year	1	2	3	4	5
Installed Capacity per annum (in tons)	600	600	600	600	600
Capacity Utilization	60%	65%	70%	75%	80%
Production quantity per Annum (in tons)	360	390	420	450	480

9.6.5 Raw material availability:

Coir Pith is raw material for this activity, which is proposed to be sourced from the fibre extraction units (more than 40 units) within the cluster. The raw material requirement for the installed production capacity of 600 Tons of 650 gms. pith briquette per annum is estimated at 750Tons, which could be mostly sourced within the cluster itself and for additional requirement, raw material sourcing could be from the nearby Kanyakumari district.

9.6.6 Operation and maintenance model:

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be

managed with the income from the operations of the Common facilities through sales realization.

9.6.7 Market Strategy:

- Engaging Business Development Service providers to enhance the cluster's share in the market and for updating the emerging market trends and adaptations thereof.
- SPV has already started establishing business linkages with prospective domestic buyers for 650 gms.pith briquettes viz. Fibre family, Alleppey and Techno Exports, Cherthala, Alleppey.

9.6.8 Implementation timeline:

Year II – Quarter III & Quarter IV (Total Project timeline is given in Chapter 13)

9.7 Coco Log Production facility:

9.7.1 Project Description:

Coco logs are used along stream, river, and lake banks to protect against scour. It consists of coir fiber or non woven pads in the form of rolls and covered with coir nets. Coco logs are kept at the edge of the bank secured by wooden pegs may be used on alternate sides of logs. Coco logs work as a brake on waves and reduces the impact of erosion. The natural product combination will support the development of plant by roots binding take over the protection. Coco logs stabilize the soil and promote vegetation along slopes. These Coir logs have compact cores which form a Coir Web for superior filtration, covered by exterior coir mesh netting. Coco logs are available in standard sizes and as per customer requirements.

9.7.2 Project Justification:

Coco logs manufacturing facility is proposed as part of CFC in view of utilizing the baby fibres collected during the sieving process of pith. As most of the hard interventions proposed in this cluster is pith based, huge collection of baby fibres occur (to the tune of

about 120 -150 tons per annum), which would normally be considered as waste for disposal. In order to realize value for the waste, it has been proposed by the SPV, to go in for the production of Coco logs, which have good market prospects.

9.7.3 Proposed Machineries & Cost:

S.No.	Machinery Description	Quantity	Total Price (Rs. in Lakhs)
1.	Coco log machinery	1	3.00

9.7.4 Installed capacity & Production quantity:

Year	1	2	3	4	5
Installed Capacity per annum (in tons)	200	200	200	200	200
Capacity Utilization	60%	65%	70%	75%	80%
Production quantity per Annum (in tons)	120	130	140	150	160

9.7.5 Raw material availability:

The raw material is Coir baby fibre generated from the pith sieving of other CFC activities along with Coir fibre and Coir mesh netting. The Coir mesh netting is proposed to be sourced from Alleppey, Kerala, where many mesh netting manufacturers are available.

9.7.6 Operation and maintenance model:

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the Common facilities through sales realization.

9.7.7 Market Strategy:

The Kerala Backwaters are a network of interconnected canals, rivers, lakes and inlets, a labyrinthine system formed by more than 900 km of waterways. As the baby fibres are used in the manufacture of soil erosion control blankets in Kayals (backwater lakes) for

the promotion of vegetation on the slopes and control soil erosion, it is proposed to market baby fibre bales to the companies supplying the soil erosion control products.

9.7.8 Implementation timeline:

Year II – Quarter III & Quarter IV. (Total Project timeline is given in Chapter 13)

9.8 Coir Pith Compost Manure (Organic Manure)

9.8.1 Project Description

Composting is the biological decomposition and stabilization of organic substrates under conditions that allow development of thermophilic temperature, to produce a final stable product, free of pathogens and weed seeds and can be beneficially applied to crops. **Coir pith** has gained importance owing to its properties for use as a **growth medium in horticulture**. Because of wider carbon and nitrogen ratio and lower biodegradability due to high lignin content, coir pith is still not considered as a good carbon source for use in agriculture. Coir pith is composted to reduce the wider C:N ratio, reduce the lignin and cellulose content and also to increase the manorial value of pith. Composting of coir pith reduces its bulkiness and converts plant nutrients to the available form.

Composting method:

An area of 5 x3 Mtr. is to be selected in a sheltered place preferably under a tree that enabling to protect the heap from direct sun light and heavy rain. Spread uniformly 100 kg. of coir pith on the marked area. Spread 400 gms. of fungus, PITHPLUS on the coir pith. This layer is covered with another 100 kg. of coir pith over which 1 kg. urea is applied. This process of sandwiching the PITHPLUS and urea alternatively with 100 kg. coir pith is repeated so that the heap reaches a height of one meter. To compost one metric ton of coir pith 2 kg. PITHPLUS and 5 kg. urea are required. Water is sprinkled on the heap to maintain sufficient moisture up to 200%. The heap is allowed to decompose for 30 days.

At the end of 30 days, the coir pith turns into black mass of compost with Carbon to nitrogen ratio of 24:1 which is recommended as ideal organic manure. The recommended dosage of coir pith manure is 12.5 tonnes per hectare.

9.8.2 Project justification

As the proposed Common facilities under the scheme are pith based, the pith compost project is proposed in view of pith availability and prospective marketability of the product.

9.8.3 Proposed Machineries and Cost:

Land is the major component for the manufacture of Pith compost. The Equipments required are screeners, tarpaulins etc. with pipelines and sealer machine for packing. The cost of the implements is estimated as below:

Sl.No	Machinery Description	Total Price (Rs. Lakhs)
1.	Pith Compost Implements (Sievers, refrigerators etc.)	2.20

9.8.4 Installed Capacity & Production Quantity

The installed capacity of the proposed Coir pith composting facility is based on the number of beds to be formed. It is proposed to establish 20 Nos. of beds and considering 4 tonnes of coir pith requirement per bed per month, the installed processing capacity is estimated at 800 tonnes per annum, considering 10 operational months per annum. The yield of Compost is estimated at 60% of the total mass of Coir pith utilized.

9.8.5 Raw material availability

As the proposed Common facilities under the scheme are pith based, the pith required for the production of Pith compost would become the part of common procurement of pith for other pith based activities proposed in the CFC. The pith requirement of CFC would be met from the Coir Fibre Extraction(40 units) units in the Cluster.

9.8.6 Operation and maintenance model

The IA is responsible for the operation and maintenance of the CFC assets until scheme period and the SPV has to manage the entire operation on its own after project implementation period is over. The operation and maintenance cost is proposed to be managed with the income from the operations of the Common facilities through Sales realization.

9.8.7 Market Strategy:

- Coir pith compost manure, as the perfect organic growing medium, enjoys high market value in horticultural and agricultural sector.
- SPV has already identified private buyers/ farm houses in southern states for the supply of the product.
- SPV has also explored and identified the huge requirement of the Compost manure with the Department of Horticulture and Agriculture in Tamilnadu. The departments would be approached on commercial output of the product.
- SPV also plans to brand the manure as "PODHIGAI MANURE" and promote the brand both in domestic and export market.

9.8.8 Implementation timeline

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

10. PROJECT COST AND MEANS OF FINANCE (Core SFURTI)

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 (in lakhs)	SPV Share (in lakhs)
1	**SOFT INTERVENTIONS**			
1.1	**Capacity Building**			
1.1.1	Trust building and motivational programme	1.00	1.00	-
1.1.2	Awareness Programme	1.00	1.00	-
1.1.3	Entrepreneurship Development Programme	1.00	1.00	-
1.1.4	Technology based EDP	2.00	2.00	
1.1.5	Skill Upgradation Programme	3.00	3.00	-
1.1.6	Exposure Tour	2.00	2.00	-
	Total Capacity Building cost	10.00	10.00	
1.2	**Market Promotion**			
1.2.1	Market Study Tour	3.00	3.00	-
1.2.2	Participation in Trade fairs	5.00	5.00	-
1.2.3	Buyer Seller Meet	2.00	2.00	-
1.2.4	Tie up with Business Development Service (BDS) providers	5.00	5.00	-
	Total Market Promotion cost	15.00	15.00	-
	Total Soft Interventions Cost	**25.00**	**25.00**	**-**
				CONTD…

2	**HARD INTERVENTIONS**			
2.1	**Building for CFC**	**110.00**	**82.50**	**27.50**
2.2	**Machinery & Other infra for Common Facility Proposed**			
2.2.1	2 Ply Yarn Spinning	19.50	14.62	4.88
2.2.2	Coir Geo Textiles	12.00	9.00	3.00
2.2.3	Coconut Chips cutting facility	6.50	4.88	1.62
2.2.4	Grow bag manufacturing facility	27.60	20.70	6.90
2.2.5	5 Kg. Pith Block making facility	17.20	12.90	4.30
2.2.6	650 gm. Pith Briquette making facility	18.40	13.80	4.60
2.2.7	Coco log making facility	3.00	2.25	0.75
2.2.8	Coir Pith Compost Manure Implements	2.20	1.65	0.55
2.2.9	Pith handling equipments (Tractor bull, dipper)	22.00	16.50	5.50
2.2.10	Electricals & Accessories	5.50	4.12	1.38
	Total Machinery & Other infra cost	**133.90**	**100.42**	**33.48**
2.3	**Working Capital for one cycle of operation**	**36.00**	**27.00**	**9.00**
	Total Hard Interventions Cost	**279.90**	**209.92**	**69.98**
	TOTAL INTERVENTIONS COST (SOFT & HARD)	**304.90**	**234.92**	**69.98**
3	**Other Project Components**			
3.1	Contingencies, Deposits & Preoperative expenses	7.40	-	7.40
	Total Other Project Components	**7.40**	**-**	**7.40**
4	**Cost of TA (8% of Total Interventions-Grant Component)**	**18.79**	**18.79**	**-**
5	**Cost of IA/SPV including CDE**	**20.00**	**20.00**	**-**
	TOTAL PROJECT COST	**351.09**	**273.71**	**77.38**

11.PLAN FOR CONVERGENCE OF INITIATIVES

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

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

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

Scheme	No. of beneficiaries/ Activity	Cost of project	Scheme Funding	Bank Loan	Promoter Contribution
Coir Udyami Yojana	10 (Coir two ply units)	10 members x Rs.10.00 lakhs = Rs.100 lakhs	Rs.40.00 Lakhs	Rs.55.00 Lakhs	Rs.5.00 Lakhs
PMEGP	5 (Coir Fibre Extraction units)	5 members x Rs.25.00 lakhs = Rs.125.00 lakhs	Rs.43.75 Lakhs	Rs.75.00 Lakhs	Rs.6.25 Lakhs
	TOTAL	**Rs.225.00 Lakhs**	**Rs.83.75 Lakhs**	**Rs.130.00 Lakhs**	**Rs.11.25 Lakhs**

The additional investment estimated in the cluster is Rs.225.00 Lakhs with the scheme funding of Rs.83.75 lakhs, bank credit of Rs.130.00 lakhs and the promoter's contribution of Rs.11.25 lakhs.

12. ENHANCED PROJECT COST AND MEANS OF FINANCE

The Project cost and Means of Finance of CORE SFURTI project is illustrated in **Chapter 10**. Convergence of initiatives such as Dovetailing the benefits of other Coir Board schemes such as Coir Udyami Yojana, Export market promotion scheme etc. and also from other MSME schemes such as NEEDS, Capital subsidy scheme etc. to cluster members, would be undertaken to improve the viability of projects, strengthening the value chains and market linkages and to enable the overall improvement of the level of human development in the area.

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

(Rs.Lakhs)

S.No.	Component	Total Cost	Grant Component	Promoter's Contribution & Bank Loan
01.	Core SFURTI	351.09	273.71	77.38
02.	Convergence initiatives (Establishment of individual units under various schemes)	225.00	83.75	141.25
	TOTAL	576.09	357.46	218.63

The enhanced project cost including the Core SFURTI and other convergence initiatives works out to Rs.576.09 lakhs, whereas the corresponding Grant component is Rs.357.46 lakhs and that of Contribution and bank loan is Rs.218.63 lakhs.

13. 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
1.1.2	Awareness Programme	I	Q1,Q2
1.1.3	Entrepreneurship Development Programme	I	Q2,Q3
1.1.4	Technology based EDP	I	Q4
1.1.5	Skill Upgradation Programme	I	Q3,Q4
1.1.6	Exposure Tour	II	Q1
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,Q2
1.2.4	Tie up with Business Development Service (BDS) providers	III	Q1,Q2
2	**HARD INTERVENTIONS**		
2.1	**Land Purchase (5 Acres)**	**I**	**Q1**
2.2	**Building for CFC**	**I**	**Q3,Q4**
2.3	**Machinery for Common Facility Proposed**		
2.3.1	2 Ply Yarn Spinning	II	Q1
2.3.2	Coir Geo Textiles	II	Q2
2.3.3	Coconut Chips cutting facility	II	Q2,Q3
2.3.4	Grow bag manufacturing facility	II	Q2,Q3
2.3.5	5 Kg. Pith Block making facility	II	Q3,Q4
2.3.6	650 gm. Pith Briquette making facility	II	Q3,Q4
2.3.7	Coco log making facility	II	Q3,Q4
2.3.8	Coir Pith Compost	III	Q1

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 program												
Awareness Programme												
Entrepreneurship Development Programme												
Technology based EDP												
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												
Building for CFC												
2 Ply Yarn Spinning												
Coir Geo Textiles												
Coconut Chips cutting facility												
Grow bag manufacturing facility												
5 Kg. Pith Block making facility												
650 gm. Pith Briquette making facility												
Coco log making facitliy												
Coir Pith compost												

14. 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:

Assumptions For Cost Of Production And Profitability		
a. Automatic Coir Yarn Spinning		
Capacity per machine per shift	80	kgs
Number of machines	6	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	144.00	tons
b. Geo Textiles		
Capacity per loom per shift	150	Sq.M.
Number of looms	8	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	360000	Sq.M.
Raw material (Yarn) reqt. per 100 Sq.M	40	Kgs.
Total yarn reqt. for installed capacity	144	tons
Selling price of Geo texitiles	Rs. 62.00	per Sq.M.
c. Growbag Production (Size: 110 x 18 x 16 cms)		
Installed Capacity per machine per shift	800	bags
Number of machines	1	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	240000	bags
Total weight of Growbags	5.75	Kgs. per bag
Coir Pith requirement per bag	4.60	Kgs. per bag
Chips requirement per bag	1.15	Kgs. per bag
Selling Price	Rs. 60.00	per bag
d. Coir Pith Block(5 Kgs.) Production		
Installed Capacity per machine per shift	4	tons
Number of machines	1	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	1200	tons
Selling Price	Rs. 7,500.00	per ton
e. Coir Pith briquette (650 gms.)		

Production		
Installed Capacity per machine per shift	2.00	tons
Number of machines	1	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	600	tons
Selling Price	Rs. 14,000	per ton
f. Chips Cutting		
Installed Capacity per machine per shift	1.50	tons
Number of machines	1	
Number of shifts per day	1	
Number of days per annum	300	
Installed Capacity per annum	450	tons
Selling Price	Rs. 14,000	
Coconut husk requirement	4,000	Nos. per Ton of Chips
Cost of Coconut husk	Rs. 750	per 1000 Nos.
g. Coco Log		
Total Pith wastage (@20% of Pith requirement)	532	Tons
Baby Fibre yield from Pith wastage	40%	
Baby fibre available for Cocologs	213	Tons
Total raw material cost	60%	of Cocolog Sales realisation
h. Coir Pith Compost		
No. of Compost beds	20	
Coir Pith requirement per bed	4	Tons
Number of bed cycles per annum	10	
Coir Pith processed per annum	800	Tons
Yield (Coir Pith to Compost)	60%	
Cost of Pithplus and Urea	Rs. 1,200.00	per ton of output
Yarn consumption for Geo textiles Section (for installed capacity)		
Yarn requirement for Geo textiles section	144	tons
Yarn production from Spinning section	144	tons
Excess yarn production	0	tons per annum
Chips consumption for Grow bags section (for installed capacity)		
Chips requirement per grow bag	1.15	Kgs. per bag
Grow bag - Installed production capacity	240000	bags per annum
Chips requirement for the installed capacity	276	Tons

Chips production capacity - Cutting section	450	Tons
Excess chips production for sales	174	Tons
Percentage of excess chips production (for Sales)	38.67%	
Capacity Utilisation		
- First year	*60%*	
- Second year	*65%*	
-Third year	*70%*	
-Fourth year onwards	*75%*	
Average Cost of Raw Material		
Power Cost	Rs.6.50	per KWH
Repairs & Maintenance	2.00%	of P&M cost in the 1st year of operation and 10% increase in every subsequent years
Administrative Expenses	2.00%	Of sales realisation
Selling Expenses	5.00%	Of sales realisation

Working Capital:

Working capital gap for the first year of operation works out to Rs.36.00 lakhs (Statement 2). This is based on 30 days stock of raw materials, 3 days of work in process, 10 days stock of finished goods and receivables for 12 days. Sundry creditors for raw materials are considered at 10 days. SFURTI scheme guidelines stipulates that "20% of hard interventions cost will be utilized towards working capital corpus". Hence it is proposed that 75% of the working capital requirement (Rs.27.00 lakhs) will be met from SFURTI Grant and the balance 25% (Rs.9.00 lakhs) to be met from the SPV Contribution.

Break Even Point, Net Present Value (NPV) and Internal Rate of Return (IRR):

The Break even point works out to 47% for the first year of operation(Statement 11). The NPV works out to Rs.146.48 lakhs at 8% discount rate and the IRR 24.81% (Statement 12).

Project Financials:

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

Statement 1: Cost of Project and Means of Finance
Statement 1.1: Estimation of Deposits / Advances
Statement 1.2: Preliminary and Preoperative Expenses
Statement 2: Assessment of Working Capital
Statement 3: Cost of Production & Profitability
Statement 4: Assumptions for Cost of Production and Profitability
Statement 5: Calculation of Income Tax
Statement 6: Estimation of Power Cost
Statement 7: Manpower Requirement and Estimation of Cost
Statement 8: Estimation of Depreciation
Statement 9: Projected Cash-Flow Statement
Statement 10: Projected Balance Sheet
Statement 11: Estimation of Break-Even Point
Statement 12: Estimation of Net Present Value and Internal Rate of Return
Statement 13: Sensitivity Analysis

15. PROPOSED IMPLEMENTATION FRAMEWORK

15.1 Role of Implementing Agency

The role and responsibility of the IA includes the following:

i. 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
ii. The IA would implement various interventions as outlined in the approved DPR
iii. Undertake procurement and appointment of contractors, when required, in a fair and transparent manner
iv. The IA will enter into an agreement with the Nodal Agency for timely completion on cluster intervention and proper utilization of Government Grants
v. Operation & Maintenance (O&M) of assets created under the project by way of user-fee based model
vi. Responsible for furnishing Utilization Certificates (UCs) and regular Progress reports to Nodal Agency in the prescribed formats.

15.2 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. A Special Purpose Vehicle (SPV) has been formed in the name of "Tenkaasi Podhigai Coir Consortium Private Limited" with 20 members. Considering the knowledge base, experience and managerial capacity of the lead SPV members, the SPV is proposed as the Implementing agency for this cluster. The above agencies work in tandem towards the successful implementation of the project in a sustainable manner.

15.3 Structure of the SPV

The SPV is formed and registered as Private Limited Company under Companies Act 2013 in the name of 'TENKAASI PODHIGAI COIR CONSORTIUM PRIVATE LIMITED as per the Certificate of Incorporation issued by Registrar of Companies, Chennai dated 17.08.2015. The CIN of the company is U36104TN2015PTC101837.

15.4 Composition of the SPV

An SPV is formed with 20 members. The list of members are given below:

S.No.	Name	Designation	Present Activity
1	P.Kumaravel	Director	Fibre Mill
2	P.Vasudevan	Director	Curled Rope
3	R.Balasubramanian	Shareholder	Fiber Mill
4	Ameer J Tharik	Shareholder	Coir Yarn
5	A.Sankaralingam	Shareholder	Coir Yarn
6	A.Masood	Shareholder	Pith Block
7	K.V.Kalayana Kumar	Shareholder	Fibre Mill
8	B.Muthuraj	Shareholder	Coir Yarn
9	T.Magesh	Shareholder	Fibre Mill
10	S.Marimuthu	Shareholder	Fibre Mill
11	S.Sivagurunathan	Shareholder	Pith Yard
12	V.Selvamanikandan	Shareholder	Husk Chips
13	S.Mariappan	Shareholder	Coir Yarn
14	K.Krishnan	Shareholder	Pith yard

15	S.K.Sabarinathan	Shareholder	Fibre Mill
16	K.Vijayanpillai	Shareholder	Fibre Mill
17	K.Selvaraj	Shareholder	Coir Yarn
18	M.Pushpam	Shareholder	Coir Yarn
19	A.Malathy	Shareholder	Coir Yarn
20	S.Mahendran	Shareholder	Coir Yarn

16. EXPECTED IMPACT

- Well established management team in place under the strengthened SPV to excel in all the functional operations of the CFC established.
- Production of value added competitive products and marketing through strengthened marketing linkages (both domestic and export)
- Increase in the overall turnover of the cluster by 20%, including the output of new enterprises established due to convergence of cluster initiatives.
- Post interventions, the Cluster's export earnings increase by 40%
- Employment generation of additional 20% (minimum 300 persons) is foreseen, considering the establishment of CFC & establishment of new enterprises due to convergence of cluster initiatives.
- Due to value addition and effective utilization of Coir pith, increase in the income level of labour work force in fibre extraction units by 10 – 15% is expected.
- Emergence of specialized support service providers and their active involvement in the development process
- Establishment of new units by converging various schemes of State and Central Governments (such as Coir Udyami Yojana, NEEDS, PMEGP, UYEGP, etc.) resulting in additional investments in Coir sector by the cluster members
- 100% Coverage of cluster artisans under social security schemes
- Improved access to financial capital for cluster members