# DETAILED PROJECT REPORT

## Cluster Location: Tiptur, Karnataka

**SUBMITTED TO**

**COIR BOARD, KOCHI**

**July 2019**


**PREPARED BY**

**ITCOT CONSULTANCY AND SERVICES LIMITED**

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# Executive Summary

<table>
<tr><td>Name of the cluster</td><td>Sri Gaviranganatha Swamy SFURTI Coir Cluster</td></tr>
<tr><td>Type of cluster</td><td>Major cluster</td></tr>
<tr><td>Location & Spread of the cluster</td><td>The regional setting of the cluster extends over 4 blocks in Tumkur District namely Honnahalli, Kibbanahalli, Nonavinakere and Tiptur. The Geographical spread of the cluster measures about 25 Km radius.</td></tr>
<tr><td>Product range</td><td>The following products are produced in the cluster presently.<ul><li>Coir Fibre</li><li>2 Ply Coir Yarn</li><li>Curled Coir</li><li>Coir Pith Block</li><li>Rubberized coir</li></ul></td></tr>
<tr><td>Size of cluster & Type of units</td><td>The total number of coir units available in the cluster area is 72 units of which 14 Nos. are engaged in fiber extraction, 24 Nos. engaged in two ply yarn spinning, 20 Nos. engaged in manufacturing of curled coir, 10 Nos. engaged in manufacturing of coir pith block and 4 units are engaged in manufacturing in Rubberized coir sheets. Coir Fibre extraction, Curled Coir & Pith block are major activities undertaken in the cluster.</td></tr>
<tr><td>Production & Turnover of Coir products in the cluster</td><td>The annual production and turnover of the cluster is given below:<br><br>
<table>
<tr><th>Name of the Activity</th><th>No.of units</th><th>Production Per Year (in MT)</th><th>Annual Turnover (Rs. in lakhs)</th></tr>
<tr><td>Fibre Extraction</td><td>14</td><td>5880.00</td><td>882.00</td></tr>
<tr><td>Coir Yarn (2 ply)</td><td>24</td><td>1210.00</td><td>387.20</td></tr>
<tr><td>Curled coir</td><td>20</td><td>1680.00</td><td>285.60</td></tr>
<tr><td>Coir Pith Block</td><td>10</td><td>8400.00</td><td>1008.00</td></tr>
<tr><td>Rubberized Coir</td><td>4</td><td>2240.00</td><td>1568.00</td></tr>
<tr><td>Total</td><td>72</td><td>19410.00</td><td>4130.80</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Employment & Income level</td><td>
<table>
<tr><th>Activity</th><th>Male</th><th>Female</th><th>Total</th></tr>
<tr><td>Fibre Extraction</td><td>168</td><td>42</td><td>210</td></tr>
<tr><td>Coir Yarn (2 ply)</td><td>154</td><td>38</td><td>192</td></tr>
<tr><td>Curled coir</td><td>128</td><td>32</td><td>160</td></tr>
<tr><td>Coir Pith Block</td><td>120</td><td>30</td><td>150</td></tr>
<tr><td>Rubberized Coir sheet</td><td>32</td><td>8</td><td>40</td></tr>
<tr><td>Total</td><td>602</td><td>150</td><td>752</td></tr>
</table>
<br>The income level for the labours in the cluster is Rs.350/- for male workers and Rs.250/- for female workers</td></tr>
<tr><td>Key concern areas</td><td>
<ul>
<li>Appreciable Coir fibre and yarn production within the cluster and very limited value addition undertaken resulting in distress selling of Coir fibre and yarn.</li>
<li>Cluster’s present production is limited to regular products such as Coir fibre, Coir yarn and Curled coir. Limited awareness on the benefits of graduating to production of value added finished products.</li>
<li>The need for utilizing the Coir fibre and yarn for the production value added marketable products was not addressed in the cluster.</li>
<li>The individual investment potential of entrepreneurs in the area is limited, restricting them to venture into the production of value added coir products, on their own.</li>
<li>More dependence on the local trader / intermediary to sell their products even through the scope for direct marketing is huge.</li>
</ul>
</td></tr>
<tr><td>Proposed Strategic Interventions</td><td>
Soft Interventions:
<ul>
<li>Capacity Building initiatives</li>
<li>Market Promotion initiatives</li>
</ul>
Hard Interventions (Common facility creation):
<ul>
<li>Building for Common facility centre</li>
<li>Rubberized Coir Mattresses manufacturing facility</li>
</ul>
Thematic Interventions:<br>
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.
</td></tr>
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<table>
<tr><td>Budget for Soft interventions</td><td>Rs. 25.00 lakhs</td></tr>
<tr><td>Budget for Hard interventions</td><td>Rs. 432.00 lakhs</td></tr>
<tr><td>Total Project Cost including Agencies cost</td><td>Rs. 507.00 lakhs</td></tr>
<tr><td>Means of Finance</td><td>Grant under SFURTI scheme : Rs. 463.80 lakhs<br><br>IA/SPV share : Rs. 43.20 lakhs</td></tr>
<tr><td>Post Intervention Scenario (Expected Impact)</td><td>The pre-intervention & post-intervention scenario of the cluster is given below:<br><br>
<table>
<tr><th rowspan="2">S.No</th><th rowspan="2">Parameter</th><th rowspan="2">Pre-intervention</th><th colspan="3">Post Intervention</th></tr>
<tr><th>Y1</th><th>Y2</th><th>Y3</th></tr>
<tr><td>1</td><td>Cluster Turnover (Rs. Lakhs</td><td>4130</td><td>5086</td><td>6182</td><td>7418</td></tr>
<tr><td>2</td><td>Investment (Rs. Lakhs)</td><td>1848</td><td>2263</td><td>3072</td><td>3647</td></tr>
<tr><td>3</td><td>Employment (Nos.)</td><td>752</td><td>900</td><td>1750</td><td>2250</td></tr>
<tr><td>4</td><td>Wages per day (Rs.)</td><td>250/350</td><td>300/400</td><td>600</td><td>750</td></tr>
<tr><td>5</td><td>Profitability (%)</td><td>8-10%</td><td>18-20%</td><td>18-20%</td><td>18-20%</td></tr>
</table>
<br>
➢ The Common Facility Center would achieve turnover of minimum Rs.638.00 lakhs in the first year of commercial operations.<br>
➢ Increased value addition of Coir yarn, resulting in enhanced income for coir products manufacturers (both Coir fibre and yarn) by minimum 15%, on utilizing the CFC for the manufacturing of Tufted Coir Mats.<br>
➢ Increased employment for about 150 persons (both direct and indirect) is anticipated in the cluster on implementation of the project.<br>
➢ Establishment of new units by converging various schemes of State and Central Governments (such as PMEGP) resulting in additional investments and</td></tr>
</table>

| | |
|---|---|
| | employment in Coir sector by the cluster members<br>➢ 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.<br>➢ Emergence of specialized support service providers and their active involvement in the development process<br>➢ 100% Coverage of Coir workers in the cluster units under social security schemes<br>➢ Improved access to financial capital for cluster members. |
| **Cluster Management – Post interventions** | 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. Karnataka State Coir Co-Operative Federation, having its office at DIC Building, 3rd Floor, 1st Cross, West of Chord Road, Rajajinagar Industrial Estate, Rajajinagar, Bengaluru - 560010 is proposed as the Implementing Agency.<br><br>A Special Purpose Vehicle (SPV) is formed and registered as Society in the name of "Sri Gaviranganatha Swamy SFURTI Coir Cluster". The registration has been carried out with 9 members. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over. |

# 1 Preamble

India is the largest coir producer in the world accounting for more than 80% 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 sell 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. 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., Kerala, Orissa, Tamil Nadu, 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, Lakshadeep 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 for Sri Gaviranganatha Swamy SFURTI Coir Cluster, Tumkur to ITCOT Consultancy and Services Ltd. Accordingly, ITCOT has prepared the Detailed

Project Report (DPR) for submitting the same for seeking final approval from the Scheme Steering Committee (SSC).

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

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

*Cluster Profile is given in Chapter 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 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

Karnataka is the 2nd largest coconut producing state in the country. The total production of nuts was 1525.3 million in the year 2006 and now it has increased to 6273 million nuts during the year 2017-18. Tumkur is one of the 30 districts in the state of Karnataka. The total area of the district is 10597 sq. km. and it is the 3rd largest district in the state which occupies around 35% of coconut cultivation area of the state. It is also one of the progressive districts of Karnataka situated in the southern part of Karnataka. The district accounts for 4.4% of the total population of the State and stands at 4th place in the State. The district has registered a work participation of 50.6% and has the maximum number of villages (2,715) in the state with 10 Statutory Towns and 2 Census Towns.

Tumkur district is predominantly agricultural in nature and due to the variety of agricultural produce available, there is a vast potential for development of agro based and allied industries in this district. The district is also known as the 'Coconut City' due to numerous palm trees found in this town. Tumkur is the largest coconut producing district in Karnataka. Nearly one third of area under coconut cultivation and production in Karnataka is contributed by this district alone. Coir is one of the agro based industries gaining prominence in the district. The area of land utilization in the district for agriculture purpose is around 46%.

## 2.2 Regional setting of the Cluster

Tumkur district is bounded by Mandya District towards South, towards West and Northeast is Chitradurga, Hassan and Chikmagalur, towards Southeast is Ananthapur District of Andra Pradesh. The regional setting of the cluster extends over Tiptur taluk in Tumkur District. The Geographical spread of the cluster measures about 35-40 Km radius.

## 2.3 Location

Tumkur district is an important district of the state of Karnataka. It is situated at 70 km to the north-west of the State capital Bangalore. There are 10 Taluks in the District. They are: Tumkur, Koratagere, Sira, Gubbi, Pavagada, Turuvakere, Kunigal, Madhugiri, Tiptur and Chikkanayakanahalli. Tumkur is well connected with

road and rail from the state capital Bangalore. All the Taluks are also very well connected through internal roads. The taluk map of the district is given below:


## 2.4 Evolution of the Cluster

The Cluster is naturally evolved one. As mentioned earlier, Tumkur is one the leading district in the state in cultivation and production of coconuts. In Tumkur district, Coconut is cultivated with an extent of 157317 hectares, coconut production is 12034 lakh nuts and the productivity is 7650 nuts per hectare. The details of area of cultivation, production and productivity of Coconuts in Ramanagara district are as given below:

| Year | Area (Ha) | Production (Lakh Nuts) | Productivity (Nuts/Ha) |
|---|---|---|---|
| 2012 – 2013 | 147032.00 | 13888.04 | 9446.00 |
| 2013 – 2014 | 145910.00 | 11397.18 | 7811.00 |
| 2014 – 2015 | 149419.00 | 12836.92 | 8591.00 |
| 2015 – 2016 | 152341.00 | 12641.53 | 8298.00 |
| 2016 - 2017 | 157317.00 | 12034.33 | 7650.00 |
| **Average (2012-17)** | **150403.80** | **12559.60** | **8351.00** |

## 2.5 Demography and Growth trends

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

| Description | 2011 | 2001 |
|---|---|---|
| Actual Population | 2,678,980 | 2,584,711 |
| Male | 1,350,594 | 1,313,801 |
| Female | 1,328,386 | 1,270,910 |
| Population Growth | 3.65% | 12.10% |
| Area Sq. Km | 10,597 | 10,597 |
| Density/km2 | 253 | 244 |
| Proportion to Karnataka Population | 4.38% | 4.89% |

A The district is home to about 26.8 lakh people, among them about 13.5 lakh (50%) are male and about 13.3 lakh (50%) are female. 73% of the whole population are from general caste, 19% are from schedule caste and 8% are schedule tribes. Child (aged under 6 years) population of Tumkur district is 10%, among them 51% are boys and 49% are girls. There are about 6.4 lakh households in the district and an average 4 persons live in every family. Population of the district has increased by 3.6% in last 10 years. In 2001 census total population here were about 25.8 lakh. Female population growth rate of the district is 4.5% which is 1.7% higher than male population growth rate of 2.8%

The majority of the population, nearly 78% (about 20.8 lakh) lives in Tumkur District rural part and 22% (about 6 lakh) population live in the Tumkur District urban part. Rural population density of Tumkur district is 199 and urban population density is 4675 persons per $km^2$.

## 2.6 Socio-economic aspects

Tumkur's total GDP stands at Rs.100.75 billion contributing 3.4% to state GSDP. It's per capita annual income in the district being Rs.50,906/-. However, the GDDP trend has been growing at 6% CAGR from 2007-08 to 2012-13; with the Agriculture and Allied sector as the highest contributors at 6.1% for 2012-13.

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.

## 2.7 Human Development Aspects

The major human development aspects of Tumkur district are as given below:

- The district has registered a work participation of 50.6 percent and stands at 4th place in the State.
- The work participation rates for Male and Female population are 62.0 and 38.9 respectively in the district.
- Among the total workers in the district 79.6 percent are Main workers and 20.4 percent are Marginal workers.
- Major work force of 63.3 percent is engaged in Agricultural sector i.e., Cultivators (37.3percent) and Agricultural Labourers (26.0 percent).
- Cultivators constitute 37.3 percent of the total workers in the district and the district holds 4th rank in the State.
- In the district 32.6 percent are other workers and 4.0 percent of the total workers are engaged in Household Industry.
- About 49.4 percent of the total population in the district is non-workers

The Coir industry is agro based industry capable of providing rural employment, mostly to women. The total number of workers engaged in the Coir activity gender wise is given below:

| Activity | Male | Female | Total |
|---|---|---|---|
| Fibre Extraction | 168 | 42 | 210 |
| Coir Yarn (2 ply) | 154 | 38 | 192 |
| Curled coir | 128 | 32 | 160 |
| Coir Pith Block | 120 | 30 | 150 |
| Rubberized Coir sheet | 32 | 8 | 40 |
| **Total** | **602** | **150** | **752** |

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 | 350 | 250 |
| Coir Yarn (2 ply) | 350 | 250 |
| Curled coir | 350 | 250 |
| Coir Pith Block | 350 | 250 |
| Rubberized Coir sheet | 350 | 250 |

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

- Tumkur has very good Industrial infrastructure spread across 7 Industrial Parks and 7 Industrial Estates that serve 37 large and medium industries with an investment of Rs.113.916 billion and 27322 SSI that have an aggregate investment of Rs.456.47 billion.
- Agri and Food Processing Industry is a highly focused sector around 103 acre Food Park at Vasanthanarsapura is set to ignite the sector with not just infrastructure and food processing equipment, but the technology up-gradations and better techniques of production and knowledge transfer on grading, processing, packing and marketing being given impetus here.
- Rice mills, Coir industries, Oil extraction mills are the other major agro based industries in the region. A Flower Auction Center with an investment of US $ 3.12 million and a Fish Seed Farm at Markonahalli is on the anvil too.
- The district has a thrust on textiles with a proposed Textile Park, an Apparel Zone, A Readymade Garments Zone and a Handloom Cluster in the district. The district also has plans for an Integrated Machine tool Industry Park and Machine tools focused technology Incubation Centre in association with GoK on PPP mode.
- Tumkur is strategically located at the Centre of fast growing domestic car markets in Gujarat, Maharashtra and Tamil Nadu and has been identified as part of Electronics Manufacturing Cluster in under M-SIP (Modified Special Incentive Package) scheme which provide financial incentive. Establishment of Flower Auction Centers in Tumkur with an investment of US $ 3.12 million (INR 15 crores) is also proposed.
- Iron is obtained in large quantities from Tumkur district. Lime Stone, Graphite, Quartz, Silver sand, Corundum, Dolomite, Clay, Soap Stone are the major mineral resources available in the district.

The Industrial Scenario of Tumkur district is as per below:

| S.No | Description | No.of Units |
|---|---|---|
| 1. | Registered Industrial Unit | 23,804 |
| 2. | Total Industrial Unit | 26,152 |
| 3. | Registered Medium and Large Unit | 33 |
| 4. | Estimated Avg.no.of daily workers employed in Small Scale Industries | 132235 |
| 5. | Employment in Large and Medium Industries | 7204 |
| 6. | No.of Industrial Areas | 7 |

## 2.9 Infrastructure – social, physical, financial and production related

The infrastructure details of Tumkur district is tabulated as below:

| S.No | Indicator | Details | |
|---|---|---|---|
| 1. | Total Geographical Area | 10597 Sq.Km. | |
| 2. | Population | 26,78,980 | |
| | | **Male** | **Female** |
| | | 13,50,594 | 13,28,386 |
| | | **Rural** | **Urban** |
| | | 20,79,902 | 5,99,078 |
| 3. | Population Growth | 3.65% | |
| 4. | Sex Ratio (per 1000 males) | 984 females | |
| 5. | Literacy rate | 75.14% | |
| | | **Male** | **Female** |
| | | 82.81% | 67.38% |
| 6. | Administrative Setup | | |
| | No. of Sub districts | 10 | |
| | No. of Towns | 10 | |
| | No. of Villages | 2708 | |
| | No. of inhabited villages | 2574 | |
| | No. of un-inhabited villages | 134 | |
| 7. | Agriculture | | |
| | Total available for cultivation | 152820 Ha | |
| | Net sown area | 489901 Ha | |
| | Area Sown more than once | 67046 Ha | |
| | Net area irrigated | 15773 Ha | |
| 8. | Forest | 45,177 Ha | |

| S.No | Indicator | Details |
|---|---|---|
| 9. | Transport Infrastructure | |
| | Road length (NH, SH& other roads etc) | 13735 Kms. |
| | Length of railway line | 97 kms. |
| 10. | Post Offices | 566 Nos. |
| 11. | Commercial Banks | 61 Nos. |
| 12. | Rural & Cooperatives Bank | 47 Nos. |
| 13. | Education | |
| | Primary Schools | 3897 Nos. |
| | High Schools | 569 Nos. |
| | Pre-University college | 132 Nos. |
| | Colleges | 69 Nos. |
| | Medical colleges | 1 No. |
| | Engineering Colleges | 6 Nos. |
| | Industrial Training Institutes | 10 Nos. |
| 14. | No.of Private Hospitals | 487 Nos. |
| 15. | Primary Health centres | 143 nos. |
| 16. | Health sub centres | 28 Nos. |

## 2.10 Existing Coir activities:

The total number of coir units available in the cluster area is 72 units of which 14 Nos. are engaged in fiber extraction, 24 Nos. engaged in two ply yarn spinning, 20 Nos. engaged in manufacturing of curled coir, 10 Nos. engaged in manufacturing of coir pith block and 4 units are engaged in manufacturing in Rubberized coir sheets. Coir Fibre extraction, Curled Coir & Pith block 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 | Investment (Rs.lakhs) | Production Per Year (in MT) | Annual Turnover (Rs. Crores) |
|---|---|---|---|---|---|
| 1. | Fibre Extraction | 14 | 420.00 | 5880.00 | 882.00 |
| 2. | Coir Yarn (2 ply) | 24 | 288.00 | 1210.00 | 387.20 |
| 3. | Curled coir | 20 | 300.00 | 1680.00 | 285.60 |
| 4. | Coir Pith Block | 10 | 400.00 | 8400.00 | 1008.00 |
| 5. | Rubberized Coir sheet | 4 | 440.00 | 2240.00 | 1568.00 |
| **Total** | | **72** | **1848.00** | **19410.00** | **4130.80** |

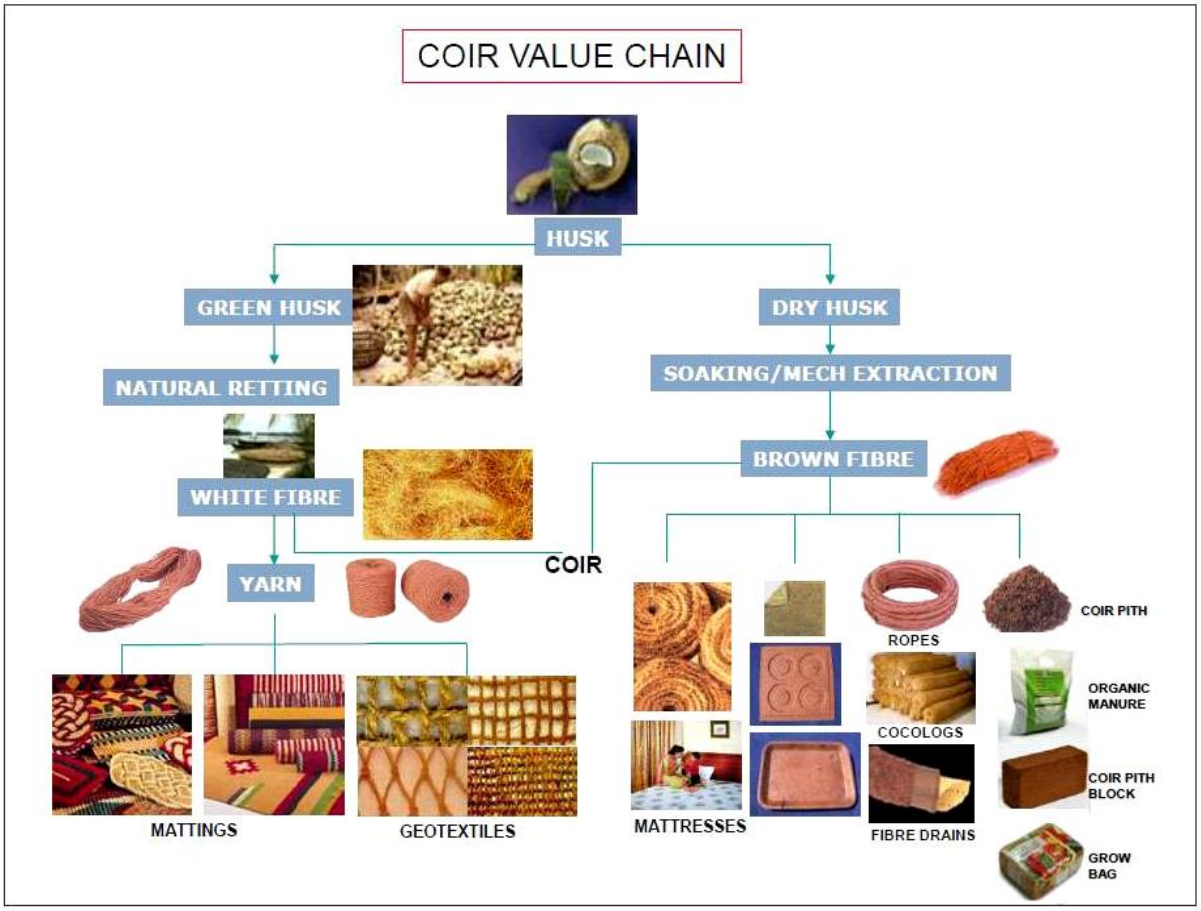
# 3 Cluster Value Chain Mapping

## 3.1. Product Profile

The following products are produced in the cluster presently.

- Coir Fibre
- 2 Ply Coir Yarn
- Curled Coir
- Coir Pith Block
- Rubberized coir

The pictorial representation of Coir Value Chain is given below:

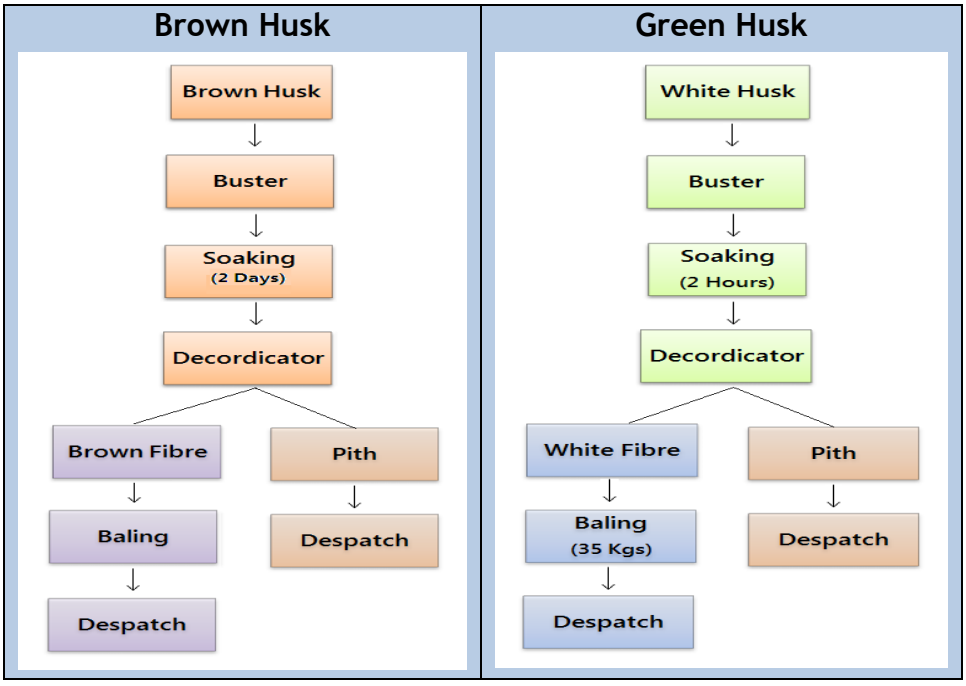



## 3.2. Production Process

The existing product line of the cluster is given below:

## a) Coir Fibre Extraction

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 is given below:



**b) Coir Yarn**

Coir yarn spinning is similar to cotton yarn spinning. The processes involved are Willowing, Combing, Spinning and Winding. Coir fibre obtained from fibre extraction units and is wetted by spraying water. After 2-3 hours, the wetted fibre is passed through the willowing machine to remove the impurities and the place the fibre and parallel to each other. The fibre is then fed in to slivering machine wherein it is converted in to sliver form. The slivers are spun into yarn as per specifications in the spinning machine. The yarn is then cleaned and wound in to rolls and is now ready for the market. The process flow chart for Coir yarn spinning is given below:

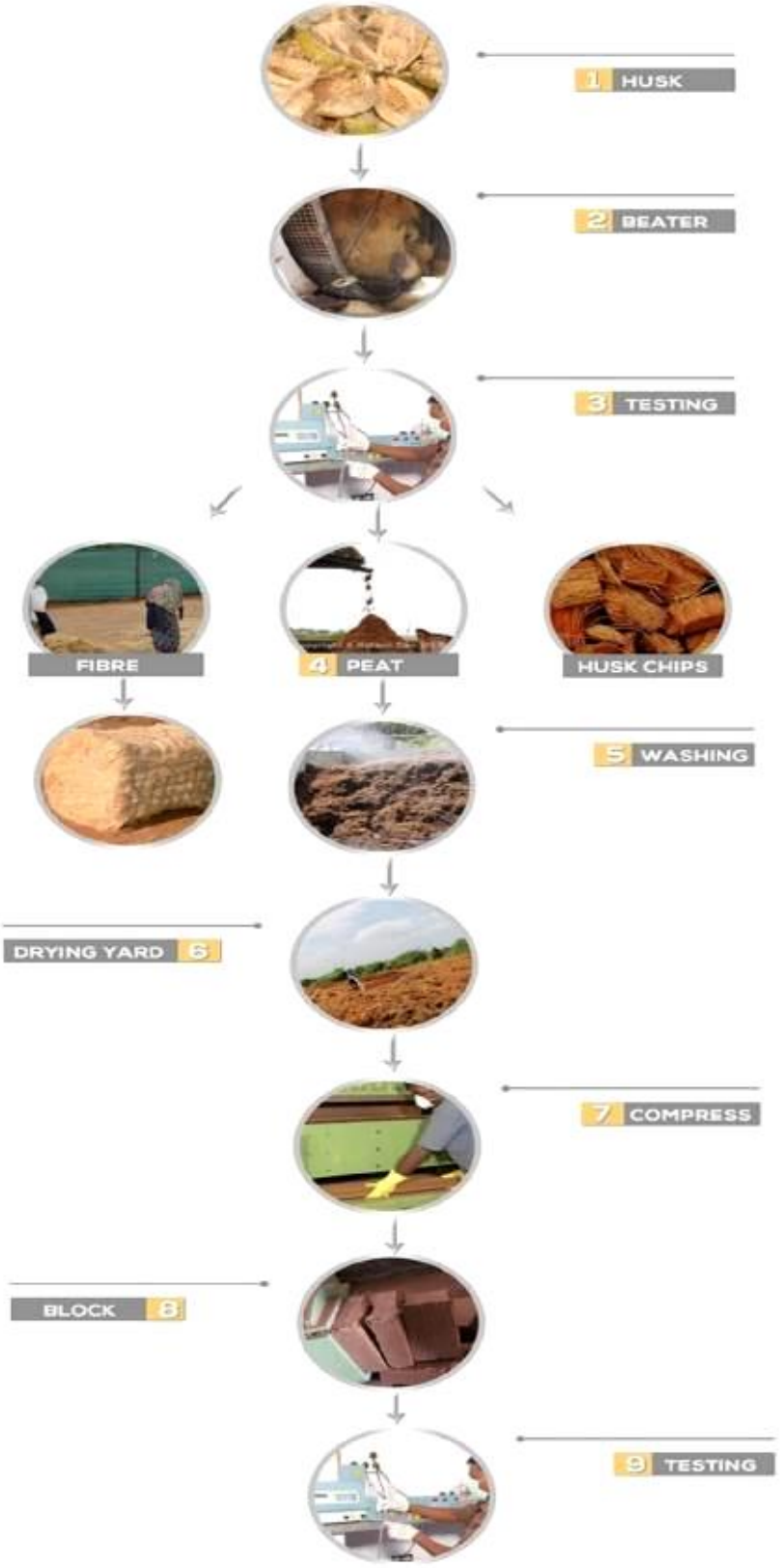
**c) Curled coir:**

The 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.


**d) 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.

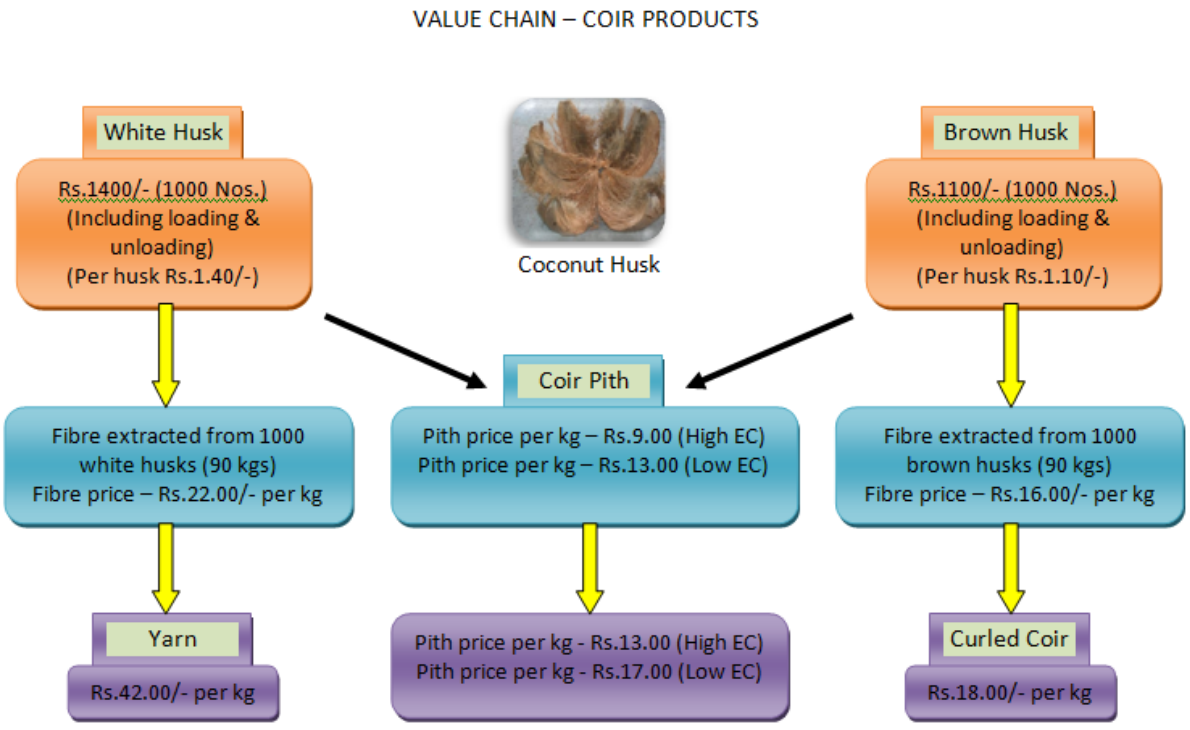


**e) Rubberized coir**

The curled coir is treated with steam and is fed into untwisting machine to untwist the ropes and to throw out the curved fibres into coded form. The untwisted fibre is then fed into a sheet machine. This machine further cords to fibre and puts it on a conveyor belt in required width and thickness. The sheet is now sprayed with rubber latex compounded with chemicals and the conveyor is passed through successive drying chambers where the water content in the latex is evaporated and the fibres get bonded with a rubber and the continuous bonded sheet of required width comes out from the machine. The sheet is then cut to pieces of required length. The laminated sheets are fed into hydraulic steam heated press for 10 to 15 minutes to obtain required thickness of the mattresses. These are then loaded into a hot air chamber where they get vulcanized. The vulcanized mattresses are trimmed using suitable machine. The mattresses are then covered with hessain cloth strip to give it a longer life.

## 3.3. Value Chain Analysis

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

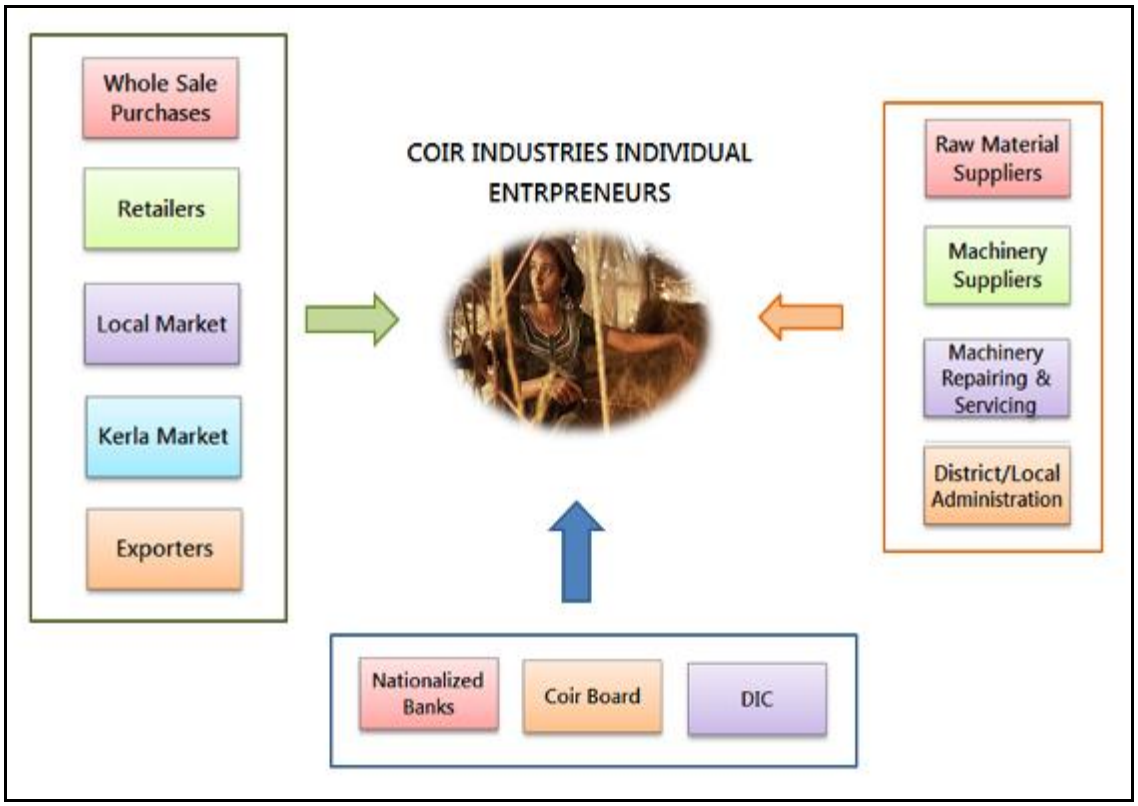



It is observed that the value addition in the cluster is limited to intermediate product level and the need and scope for value addition for coir sector in the

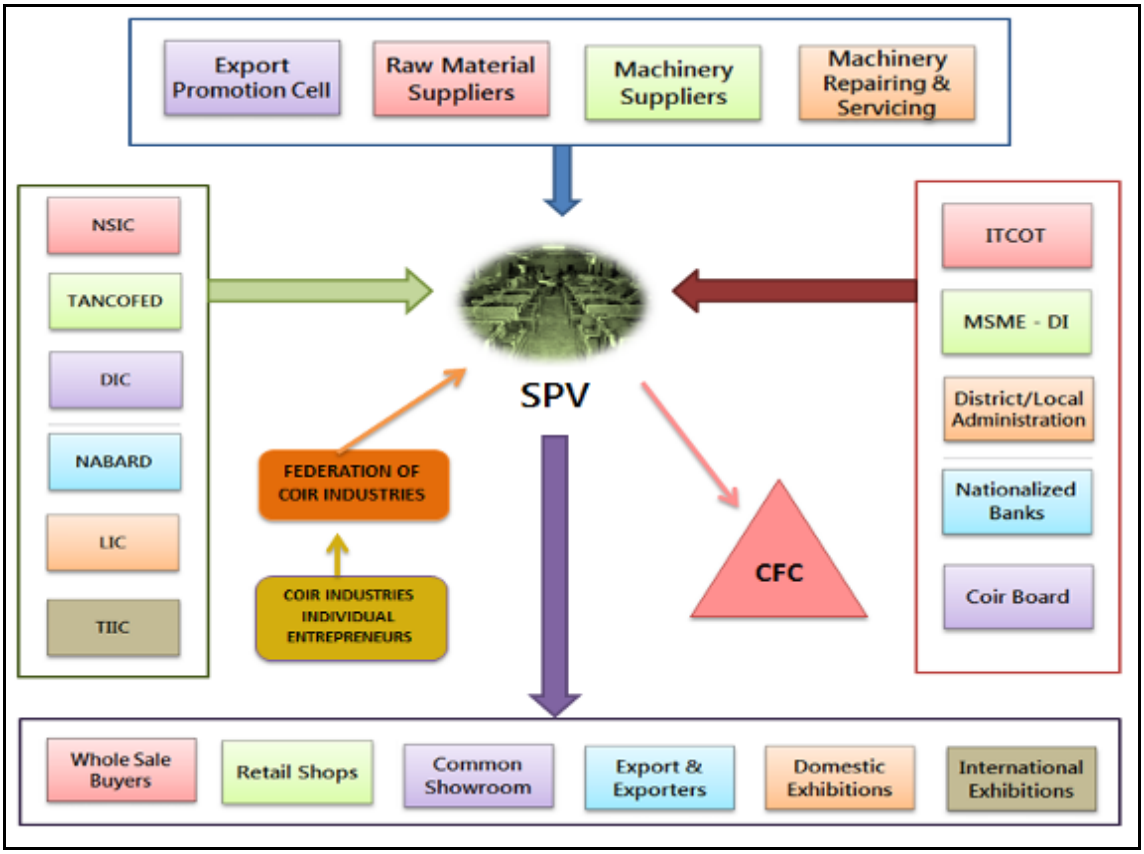
cluster is considered significant. The cost of Green husk including loading and unloading is valued at Rs.1.40 per kg. & Brown husk including loading and unloading is valued at Rs.1.10 per kg. Then the husk is value added and incremented to Rs.22.00 per kg. of white fibre & Rs.16.00 per kg. of brown fibre, which is further incremented to Rs.42.00 per kg. of 2 ply yarn & .Rs.18.00 per kg. of Curled coir. Raw coir pith, the by-product of fibre extraction is valued as Rs.9.00 per kg. for Low EC pith & Rs.13.00 per kg. for High EC pith. Further the pith is incremented as 5 kg. Pith block and valued as Rs.13.00 per kg. for low EC block & Rs.17.00 per kg. for high EC block.

### 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 Bangalore which is near about 150 kms from the cluster area.

### DISTRICT INDUSTRIES CENTRE (DIC)

The DIC, Tumkur has been involved in the promotion and development of Micro, small & medium enterprise. The present economic scenario and growing unemployment problem has bestowed more responsibility on the centre towards eradicating them. The DIC organizes entrepreneurship development programmes in various palaces for imparting skills to unemployed youths for setting up of micro

enterprises. The DIC implements Centrally Sponsored Scheme PMEGP and State sponsored Scheme for generation of employment through establishment of micro and small enterprises in rural as well as urban areas.

**KARNATAKA STATE COIR DEVELOPMENT CORPORATION LTD**

Karnataka State Coir Development Corporation Limited was established in the year 1985 with the main objectives of developing Coir based industries and also to act as catalytic agent in developing Coir sector in private sector. Presently, the Corporation is having Twelve Defibering units, Four Curled coir units and Seven Auto Spinning Units in rural areas.

The Corporation is having 75 production centers for the production of yarn, rope, curled coir, coir matting and foot mats in rural areas providing employment opportunities for about 1,500 beneficiaries. Also, the corporation has twelve sales outlets and four sales counters besides mobile vans to sell the products in the local market and also we are catering to the needs of the states like Delhi, Gujarat, etc.

**KARNATAKA STATE COIR CO-OPERATIVE FEDERATION LTD**

Karnataka State Coir Co-operative Federation Ltd was established on 30th December 1961, having its office at DIC Building, 3rd Floor, 1st Cross, West of Chord Road, Rajajinagar Industrial Estate, Rajajinagar, Bengaluru - 560010. This Federation is having 29 primary coir Co-operative societies as its affiliated member societies. There are more than 17 production center where in all coir products are manufactured apart from this as per the customer demand, new varieties of coir products are also manufactured and sold. The Federation is also having 13 sales outlets and 05 Mobile sales van wherein different types of coir mats, matting cushions, rubberized mattresses, pillows etc are displayed and sold.

**NABARD**

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

**LEAD BANK**

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

**ITCOT CONSULTANCY & 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, Tamilnadu 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

## 4.1. Global Economy

In 2017, global economic growth was broad based and the fastest since 2011 at 3.8%. Approximately two-thirds countries accounting for about three-fourths of total global output, witnessed faster growth as compared to the previous year. Recovery of investment demand in advanced economies, continued strong growth in emerging Asia, and an upswing in Europe, led to this growth.

Advanced Economies grew 2.3% in 2017 versus 1.7% in 2016 primarily driven by strong pick up in investment spending. Led by strengthening private investment, United States witnessed 2.3% growth in 2017 versus 1.5% in 2016. The Euro area witnessed 2.3% growth in 2017 versus 1.8% in 2016, aided by policy stimulus and strengthening global demand.

Emerging Market and Developing Economies grew 4.8% in 2017 as against 4.4% in 2016. Growth in net exports led to robust growth in China. India's growth was led by strong private consumption. Argentina, Brazil, Nigeria and the Russian Federation saw cyclical improvements.

Global growth is expected to gain some momentum in 2018 and 2019 with 3.9% growth expectations in both the years. Sustained strong momentum, favorable market sentiments and accommodative financial conditions are expected to be the major growth drivers. Growth is expected to be broad based with robust growth in both advanced economies and emerging market and developing economies. India and China are the only two economies that are projected to surpass the world's growth rate at 7.4% and 6.6% respectively in 2018. Climate change, geopolitical tensions, and cyber security breaches pose threats to the medium-term global outlook.

## 4.2. Indian Economy

In FY 2017-18, India's GDP at constant prices is expected to grow by 6.6% as compared to 7.1% in the previous year. Acceleration in manufacturing, rising sales growth, a pick-up in capacity utilization, strong activity in the services sector and a record agricultural harvest negated the after effects of demonetization, and the

implementation of Goods & Services Tax (GST). Industrial, services and agriculture sectors clocked 4.8%, 8.3% and 3% growth respectively in FY2017-18.

The expectations of the global community from India's economy to deliver on its potential continued to remain high as the country retained the tag of the fastest growing economy in the world leaving China behind. The government's impetus on Make in India, investment in road and transportation infrastructure & Smart Cities, rising middle class disposable income and lower inflation contributed to this growth.

Indian economy is consolidating the gains from the recent reforms and is moving in the right direction. Improved domestic macro-economic conditions, gradual revival in rural sector and small scale businesses and increased push towards infrastructure projects are providing strong impetus to growth. Construction is likely to receive a boost from increased public infrastructure spending aimed at improving the nation's rural infrastructure. Another factor that is expected to boost growth is the rise in foreign direct investment (FDI) as a result of ongoing improvements to domestic business conditions and regulatory amendments to encourage higher foreign investor participation.

## 4.3. Coir Industry

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, Karnataka, Andhra Pradesh, 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 30% 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. | Andhra Pradesh | 115.21 | 1,377.53 | 11,957 |
| 2. | Assam | 20.6 | 153.27 | 7,440 |
| 3. | Bihar | 14.9 | 141.09 | 9,469 |
| 4. | Chhattisgarh | 1.48 | 8.77 | 5,926 |
| 5. | Gujarat | 24.44 | 336.65 | 13,775 |
| 6. | Karnataka | 513.85 | 6,773.05 | 13,181 |
| 7. | Kerala | 770.79 | 7,448.65 | 9,664 |
| 8. | Maharashtra | 20.9 | 198.85 | 9,514 |
| 9. | Nagaland | 0.47 | 2.67 | 5,681 |
| 10. | Odisha | 50.91 | 341.68 | 6,711 |
| 11. | Others | 52.76 | 142.38 | 2,699 |
| 12. | Tamil Nadu | 461.06 | 6,570.63 | 14,251 |
| 13. | Telengana | 0.5 | 2.09 | 4,180 |
| 14. | Tripura | 4.61 | 32.23 | 6,991 |
| 15. | West Bengal | 29.63 | 374.56 | 12,641 |
| **Total** | | **2,082.11** | **23,904.10** | **11,481** |

Coir Board has targeted to double the export of coir and coir products from India within the next three years. During 2016-17, the growth of exports, compared to the previous year, was 27.3% in terms of quantity and 20% in terms of value. During 2018-19 the growth was increased to 6.2% in terms of quantity and 11% 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 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|
| Quantity (In Metric Tonnes) | 752020 | 957045 | 1016564 |
| Value (Rs. in lakhs) | 190142.52 | 228164.82 | 253227.84 |

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 12.5% in 2017-18 compared to the previous year. Also the percentage growth in value of export of Coir fibre has been 30.20% in 2017-18 compared to the previous year. The data on export of Coir products from India in FY 2016-17 & 2017-18, as per Coir Board, are given below:

| ` | April 2017-March2018 | | April 2016-March2017 | | % Growth | |
|---|---|---|---|---|---|---|
| **Item** | **Q** | **V** | **Q** | **V** | **Q** | **V** |
| Coir Pith | 548479 | 101846.82 | 490552 | 90539.11 | 11.8 | 12.5 |
| Coir Fibre | 374320 | 70177.88 | 370357 | 53913.63 | 1.1 | 30.2 |
| Tufted Mat | 54279 | 49591.41 | 51718 | 48442.83 | 5.0 | 2.4 |
| Handloom Mat | 18277 | 18613.96 | 20143 | 21316.31 | -9.3 | -12.7 |
| Geo textiles | 5845 | 3996.59 | 6219 | 4481.04 | -6.0 | -10.8 |
| Coir Yarn | 3328 | 2457.66 | 4426 | 2948.32 | -24.8 | -16.6 |
| Curled Coir | 8800 | 2316.26 | 10356 | 2419.30 | -15.0 | -4.3 |
| Handloom Mattings | 1117 | 1394.79 | 1272 | 1535.25 | -12.2 | -9.1 |
| Rubberized Coir | 900 | 1388.64 | 888 | 1295.64 | 1.4 | 7.2 |
| Coir Other Sorts | 306 | 498.29 | 256 | 416.59 | 19.4 | 19.6 |
| Coir Rope | 491 | 401.72 | 484 | 388.50 | 1.4 | 3.4 |
| Coir Rugs & Carpet | 254 | 269.58 | 205 | 271.92 | 24.0 | -0.9 |
| Powerloom Mat | 37 | 57.75 | 166 | 196.38 | -77.8 | -70.6 |
| Powerloom Matting | 131 | 216.49 | 0 | 0.00 | - | - |
| **Total** | **1016564** | **253227.84** | **752020** | **190142.52** | **6.2** | **11.0** |

* 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:

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

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

The Top five County wise Exports of Coir and Coir products in the year 2017-18:

| S.No. | Country | Quantity (in MTs) | Value (Rs.Lakhs) | Quantity (%) | Value (%) |
|---|---|---|---|---|---|
| 1. | China | 433733.54 | 80912.10 | 42.67 | 31.95 |
| 2. | USA | 131166.88 | 53449.79 | 12.90 | 21.11 |
| 3. | Netherlands | 95461.37 | 21161.89 | 9.39 | 8.36 |
| 4. | South Korea | 87264.81 | 14235.68 | 8.58 | 5.62 |
| 5. | UK | 17883.97 | 10257.14 | 1.76 | 4.05 |

It is observed that the growth in coir product exported from India in 2017-18 has increased 6.2% in terms of quantity and 11% in terms of value compared to the previous year of 2016-17.

## 4.4. Marketing Plan for PVC Tufted Coir Mat:

The following marketing initiatives are proposed to be undertaken to promote the PVC Tufted Coir mats produced in the CFC:

- 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
- Establishing linkages with retail showrooms (including Coir Board, KVIC & Poompuhar showrooms) in Bangalore, Chennai, Mumbai & Delhi.

The market for PVC Tufted Coir Mat includes both domestic and export segment. It is to be noted that about 51,718 MT of Tufted mats are exported in 2016-17, to the value of Rs.484.42 Crores. Hence focus on export market for this product is considered to be a valid option. Overall, the market prospects for PVC Tufted Coir mat is considered good.

# 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**

- Tumkur district is the major producer of coconut with the production of 12034 lakh nuts per annum. Nearly one third of area under coconut cultivation and production in Karnataka is contributed by this district alone.
- Coconut cultivation and diversifying the cultivation in favour of high value commercial crops (coconut) in Tumkur district is on increasing trend.
- Sufficient availability of coconut husk (basic raw material) provides scope for development of coir sector in the cluster.
- Strategically located with easy market access to buyers of coir products from main centres of states like Kerala, Karnataka etc.
- The district has very good network of road, rail, power and labour.
- Presence of Support institutions such as Coir Board, District Industries Centre, Karnataka State Coir Co-operative Federation Ltd, Karnataka State Coir Development Corporation Ltd, Commercial banks, Technical consultancy organization etc.

**Weaknesses**

- Defensive attitude of the entrepreneurs resulting in stagnancy in product line in spite of wide product line/value chain in coir sector.
- Existing entrepreneurs in the region are exposed only to 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**

- Ample opportunity to scale up Coir activity in the region, as there is sufficient availability of basic raw material (Coconut husk).

- Prospective export market that motivates the entrepreneurs in the region to venture into the production of value added coir products.
- Common procurement of raw material would result in price benefits in input procurement.
- Focus of State and Central governments on Cluster development and introduction of various schemes for cluster development.

**Threats**

- As coconut palm does not withstand prolonged spells of extreme weather/ climatic variations, the uninterrupted availability of Coconut husk (basic raw material for coir sector) depends on weather /climatic conditions, which may result in scarcity of raw material due to hot/dry summer.
- Competition from coconut growing country viz.: Sri Lanka, Indonesia & Philippines etc.
- Utilization of husk for unproductive purposes

## 5.2. Need Gap Analysis

- Appreciable Coir fibre and yarn production within the cluster and very limited value addition undertaken resulting in distress selling of Coir fibre and yarn.
- Cluster's present production is limited to regular products such as Coir fibre, Coir yarn and Curled coir. Limited awareness on the benefits of graduating to production of value added finished products.
- The need for utilizing the Coir fibre and yarn for the production value added marketable products was not addressed in the cluster.
- The individual investment potential of entrepreneurs in the area is limited, restricting them to venture into the production of value added coir products, on their own.
- More dependence on the local trader / intermediary to sell their products even through the scope for direct marketing is huge.

# 6 Profile of the Implementing Agency

**Karnataka State Coir Co-Operative Federation** was established in the year 1961-(Registration No.No.JDIRP-1/80/60/60-61) with the main objective of developing coir industry through co-operative movement in Karnataka state. This Federation is having 72 primary coir Co-operative societies as its affiliated member societies. There are more than 17 production centre where in all coir products are manufactured apart from this as per the customer demand, new varieties of coir products are also manufactured and sold.

The Federation is also having 14 sales outlets and 3 Mobile sales van wherein different types of coir mats, matting cushions, rubberized mattresses, pillows etc. are display and sold. The Federation is having godown facilities for storage and security of coir products at Bangalore and Arsikere. The Main manufacturing activities are coir fibre (Brown fibre and green husk fibre). Mats Matting, Geo-textiles, Curled coir required for Rubberized coir industry and other value added products. The Federation has provided employment to about 1500 unskilled persons in rural area out of which 90% are women.

Federation is implementing two SFURTI COIR CLUSTERS i.e. one at Hassan (Dudda) and Arsikere SFURTI sponsored by the Government of India through Coir Board, Kochi. The Federation is also implementing the Coir Development schemes sponsored by State and Central Government.

The main functions of the Federation are as follows:-

- Promoting exports of coir yarn and coir products and carrying on propaganda for that purpose.
- Undertaking, assisting or encouraging scientific, technological and economic research marketing and standardizing the coir.
- Improving the marketing of coconut husk, coir fiber, coir yarn and coir products in Karnataka and elsewhere and preventing unfair competition.
- Setting up or assisting in the setting up of factories for the producers of coir products with the aid of power.
- Promoting cooperative organization among producers of husks, coir fibre and coir yarn and manufacturers of coir products.
- Ensuring remunerative returns to producers of husks, coir fibre and coir yarn and manufacturers of coir products.

**Governance Structure**

The Organizational structure reflects Board of Directors, headed by President with 11 more members. At present Shri Hanumanta Gowda is the President of the federation. The Board of Directors is ably assisted by Office Staff headed by Managing Director.

**Operational Performance**

The regular operations are take care by office 48 member office staff, headed by Managing Director, who will not only take care of HO operations but also field offices and sales outlets. The federation has 5 sales managers, 15 Coir Supervisors of grade I and II based on their seniority, 2 depot managers, other than support staff.

**Management Profile**

The Board of Directors will take care of overall administration, while Managing Director along with staff will be take care the operational part. Each member of the federation has been entrusted with a specific task like marketing, input procurement, finance, training, raat procurement, product/ quality upgradation. The Board of Directors has been supported by Secretarial staff, which will take care of operational management at ground level, besides sales operations. Dr.H.R.Arun Kumar is present Managing Director of the Federation who has vast experience in textile and coir industry. The Federation is having 16 production centres spread across the state, with each one headed by an official of Superintendent/ Supervisor rank person.

**Financial Position**

The Federation is aiming for 6crore sales turnover during the current year. The Federation is having a Fixed Asset of Rs.2,54,50,670 and Paid-Up Share Capital is Rs.329.22 lakhs out of which, share capital from state government is Rs.329.00 lakhs.

# 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, curled coir & pith block. 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.

Focusing on empowering the Coir entrepreneurs in the cluster, the cluster development programme envisages establishment of Common Facility Centers (CFCs) on User fee basis to enable them the access of Modern technology/machinery to manufacture of value added products and to experience the benefits of value addition. Accordingly, the following project is proposed as Common Facility Center for the cluster.

i) Production of Coir Tufted Mats, which is the yarn based value addition to tap export market.

The establishment of the Common Facility Center revitalizes coir based activities in the cluster and the cluster convergence effect would result in additional investment in coir based industries, increased turnover and better employment opportunities.

## 7.2 Project Objective

- Effective utilization of available raw material resource (Coconut husk) in the cluster by strengthening the linkages with raw material suppliers/farmers
- To engage in production of value added competitive products to increase the cluster turnover substantially and to enhance the value chain of the cluster
- Production of Environment friendly value added products and to attain an equilibrium with environment and sustainable development
- Eco production of products that augment the income level of huge number of employees/ artisans engaged manufacturing of Curled Coir.

## 7.3 Focus Products/Services

In addition to the Soft interventions for Capacity building and Market promotion initiatives, the manufacturing facility for making of Coir tufted mats are proposed as interventions for the development of the cluster.

## 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.
- **Awareness Programme:** To provide awareness about scheme benefits, Cluster development initiatives and the prospects for value added products in Coir sector
- **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 facility is proposed for the Sri Gaviranganatha Swamy SFURTI Coir Cluster to enhance raw material utility, marketability and profitability.

- Coir Tufted mats Manufacturing 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<br>Quarter I |

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

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

| S. No | Particulars | |
|---|---|---|
| 4 | Batch size | 25 nos |
| 5 | Training content | Skill Training for Coir Tufted Mat |
| 6 | Trainer / Training Institution | Coir Board (at CICT, Bangalore) |
| 7 | Cost of Training programme | Rs. 2,00,000/- |
| 8 | Implementation timeline | Year I<br>Quarter III & Quarter IV |

| S. No | Particulars | |
|---|---|---|
| 1 | Proposed Programme / Intervention | Exposure tours |
| 2 | Target group | Coir Entrepreneurs |
| 3 | No. of batches | As per requirement |
| 4 | Programme content | Visiting research institutions, other Coir clusters to understand cluster dynamics and technology update |
| 5 | Coordinating Institution | ITCOT Consultancy and Services Limited |
| 6 | Cost of programme | Rs. 3,00,000/- |
| 7 | Implementation timeline | Year I<br>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,<br>To interact with market intermediaries to understand the product wise market potential in potential market centers |
| 5 | Coordinating Institution | IA & TA |
| 6 | Cost of programme | Rs. 4,00,000/- |
| 7 | Implementation timeline | Year II<br>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. 10,00,000/- |
| 7 | Implementation timeline | Year II - Quarter III / Quarter IV |

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

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

# 10 Hard Interventions

## 10.1. Creation of Common Facility Centre:

### a) Land & Building

The CFC is proposed in the following location considering the accessibility of the artisans and the availability of the raw material sources.

The land to an extent of 42,700 Sq.ft is proposed to be taken for lease by the SPV for a period of 15 years. The land identified is located at SF.No.46/7, Khata No.4134 Annapura, Halepalya Post, Tiptur Taluk, Tumkur district. This unit is proposed to create Coir tufted mat manufacturing facility and also it houses Storage godown for raw material and finished goods of the CFC. The land area is considered adequate for the proposed activity.

The above location has other infrastructural facilities such as road, power etc. and are suitable for the proposed CFC.

**Cost & Area of Building works**

The CFC land identified already comprises a built-up workshed of about 8,000 sq.ft area in the above mentioned location. Apart from the existing building, it is proposed to construct additional building with a built up area of around 12,250sq.ft. The details are given hereunder:

| CFC activities | Built up Area (in Sq.ft) | Rate/Sq.ft. (in Rs.) | Cost of Building (Rs. in Lakhs) |
|---|---|---|---|
| Work shed for manufacturing of Coir tufted mat | 12,250 sq.ft | Rs.800/- | 98,00,000 |

## 10.2. Product & Process

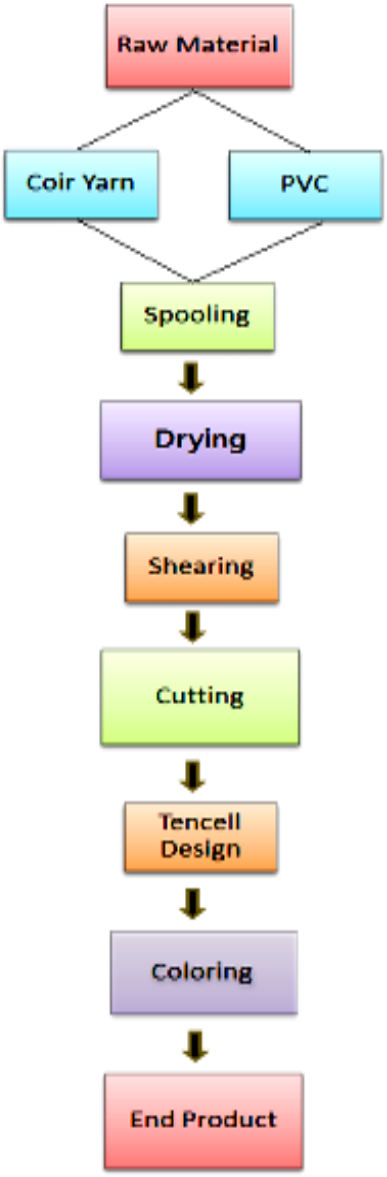
**PVC tufted (backed) mats and rolls** are made by tufting natural coir fibre into PVC backing. The vinyl backing provides anti slipping and ensures very low fibre shredding properties. The advantage is that these mats can be easily cut to any size or shape providing a completely clean and safe edge 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

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.

**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.




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.

## 10.3. Installed capacity

### a) 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. |
| Number of shifts per day | 1 |
| Number of days per annum | 300 |
| Installed Capacity per annum | 240000 Sq.M. |
| Selling Price | Rs. 380.00 per Sq.M. |

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

## 10.4. Proposed Machinery and Equipments

### a) PVC Tufted Coir Mat with printing facility

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 |
| 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. |
| 9. | Printing machine / facility set up | 1 set |
| 10. | Other supporting machineries | 1 set |

The total estimated cost of Tufted Coir Mat machineries with printing facility and accessories is **Rs.310.00 Lakhs**. **All the machineries for the Common Facility Center are to be procured through transparent tender process in accordance with GFR norms.**

### 10.5. Raw material

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

### 10.6. Manpower

The manpower requirement estimated for the project is given hereunder:

| Description | Nos. |
|---|---|
| Manager | 1 |
| Supervisors | 3 |
| Male Workers | 10 |
| Female workers (Unskilled ) | 18 |
| Admin and Accounts | 2 |
| Security | 2 |
| **Total** | **36** |

The required manpower would be sourced from within the cluster villages viz. Annapura, Halepalaya, gayathrinagara, Manjunath Nagara, Adhilakshmipura etc.

### 10.7. 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.

### 10.8. 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 | 1.00 | 1.00 | -- |
| 1.1.3 | Skill Upgradation Programme | 2.00 | 2.00 | -- |
| 1.1.4 | Exposure Tour | 3.00 | 3.00 | -- |
| | **Total Capacity Building cost** | **7.00** | **7.00** | -- |
| **1.2** | **Market Promotion** | | | |
| 1.2.1 | Market Study Tour | 4.00 | 4.00 | -- |
| 1.2.2 | Participation in Trade fairs | 10.00 | 10.00 | -- |
| 1.2.3 | Buyer Seller Meet | 2.00 | 2.00 | -- |
| 1.2.4 | Tie up with Business Development Service (BDS) providers | 2.00 | 2.00 | -- |
| | **Total Market Promotion cost** | **18.00** | **18.00** | -- |
| | **Total Soft Interventions Cost** | **25.00** | **25.00** | **--** |

**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 (12,250 Sq.ft. @ Rs.800/- per Sq.ft.)** | **98.00** | **88.20** | **9.80** |
| | | | | |
| **2.2** | **Machinery & other components of Hard Interventions** | | | |
| 2.2.1 | Coir Tufted Mat (with printing facility) | 310.00 | 279.00 | 31.00 |
| 2.2.2 | Electricals and accessories | 24.00 | 21.60 | 2.40 |
| | **Total - Machinery & other components of Hard Interventions** | **334.00** | **300.60** | **33.40** |
| | | | | |
| | **Total Hard Interventions Cost (2.1 + 2.2)** | **432.00** | **388.80** | **43.20** |
| | | | | |
| | **TOTAL INTERVENTIONS COST (SOFT & HARD)** | **457.00** | **413.80** | **43.20** |
| | | | | |
| **3** | **Cost of TA** | **30.00** | **30.00** | **-** |
| | | | | |
| **4** | **Cost of IA/SPV including CDE** | **20.00** | **20.00** | **-** |
| | | | | |
| | **TOTAL PROJECT COST** | **507.00** | **463.80** | **43.20** |

## 11.1. Cost of Establishment & Operation Common Facility Center

The project components and the cost thereof are mentioned below:

(Rs.Lakhs)

| Cost Of Project | Total | SPV Share | GoI Grant |
|---|---|---|---|
| **Hard Interventions – Grant Components** | | | |
| Building & Civil works | 98.00 | 9.80 | 88.20 |
| Plant and Machinery | 310.00 | 31.00 | 279.00 |
| Electricals & accessories | 24.00 | 2.40 | 21.60 |
| **Total** | **432.00** | **43.20** | **388.80** |
| **Other Non-Grant components** | | | |
| Contingencies | 8.64 | 8.64 | 0.00 |
| Deposits (as per statement 1.1) | 2.51 | 2.51 | 0.00 |
| Prel. & Pre-operative Expenses | 0.85 | 0.85 | 0.00 |
| Working Capital (as per statement-2) | 30.00 | 30.00 | 0.00 |
| **Total** | **42.00** | **42.00** | **0.00** |
| **Grand Total** | **474.00** | **85.20** | **388.80** |

The CFC cost of establishment and operation works out to Rs.474.00 Lakhs, of which Rs.85.20 lakhs will be the SPV share and Rs.388.80 lakhs will be the Grant component under SFURTI from the Government of India. The above project cost includes **Hard interventions viz. Building, Core machinery components and electrical & accessories amounting to Rs.432.00 lakhs**, which are to be contributed by SPV and GoI in 10:90 ratio. Lateral components viz. Contingencies, Deposits, Preliminary & Preoperative Expenses & working capital amounts to Rs.42.00 lakhs, for which GoI Grant is not applicable and the cost would be borne by the SPV separately.

# 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 MSME schemes and also from Coir Board schemes such as Export market promotion scheme, International cooperation Scheme (ICS) 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 PMEGP for individual cluster members are foreseen as below:

| Scheme | No. of beneficiaries/ Activity | Cost of project | Scheme Funding | Bank Loan | Promoter Contribution |
|---|---|---|---|---|---|
| PMEGP | 5 (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 |
| PMEGP | 15 (Yarn Spinning units) | 15 members x Rs.15.00 lakhs = Rs.225.00 lakhs | Rs.78.75 Lakhs | Rs.135.00 Lakhs | Rs.11.25 Lakhs |
| **Total** | | **Rs.350.00 lakhs** | **Rs.122.50 lakhs** | **Rs.210.00 lakhs** | **Rs.17.50 lakhs** |

The additional investment estimated in the cluster is Rs.350.00 Lakhs with the scheme funding of Rs.122.50 lakhs, bank credit of Rs.210.00 lakhs and the promoter's contribution of Rs.17.50 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 | **507.00** | **463.80** | **43.20** |
| 2 | Convergence initiatives (Establishment of individual units under various schemes) | **350.00** | **122.50** | **227.50** |
| **Total** | | **857.00** | **586.30** | **270.70** |

The enhanced project cost including the Core SFURTI and other convergence initiatives works out to Rs.857.00 lakhs, whereas the corresponding Grant component is Rs.586.30 lakhs and that of Contribution and bank loan is Rs.270.70 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 Awarness programme | I | Q1 |
| 1.1.3 | Entrepreneurship Development Programme | I | Q2 |
| 1.1.4 | Skill Upgradation Programme | I | Q3,Q4 |
| 1.1.5 | Exposure Tour | II | Q2, Q3 |
| | | | |
| **1.2** | **Market Promotion** | | |
| 1.2.1 | Market Study Tour | II | Q1/Q2 |
| 1.2.2 | Participation in Trade fairs | II | Q2/Q3 |
| 1.2.3 | Buyer Seller Meet | II | Q3/Q4 |
| 1.2.4 | Tie up with (BDS) providers | II | Q2/Q3 |
| | | | |
| **2** | **HARD INTERVENTIONS** | | |
| **2.1** | **Land Lease (15 years lease)** | I | Q1 |
| **2.2** | **Building for CFC** | I | Q1, Q2 |
| **2.3** | **Machinery for Common Facility Proposed** | | |
| 2.3.1 | Coir Tufted mat Production | I | Q3 |
| 2.3.2 | Electricals & accessories | I | Q3 |

# 15 Detailed Business Plan

The cost of production and profitability projection are presented in Statement-4. The assumptions for working the cost of production & profitability are given below:

| **Assumptions For Cost Of Production And Profitability** | |
|---|---|
| Installed Capacity per shift | 800 Sq.M. |
| Number of shifts per day | 1 |
| Number of days per annum | 300 |
| Installed Capacity per annum | 240000 Sq.M. |
| Selling Price | Rs. 380.00 per Sq.M. |
| Raw material (Yarn) reqt. per Sq.M. | 2.50 Kgs. |
| Cost of Yarn | Rs. 32.00 per Kg. |
| Raw material (PVC) reqt. per Sq.M. | 3.50 Kgs. |
| Cost of PVC | Rs. 45.00 per Kg. |
| | |
| **Capacity Utilisation** | |
| *- First year* | *70%* |
| *- Second year* | *80%* |
| *-Third year onwards* | *90%* |
| Power Cost | Rs.7.50 per KWH |
| Lease Rental for CFC Land | Rs.10,000 per month in the first year and 10% every year |
| Repairs & Maintenance | 2.00%0f plant and machinery cost in the first year of operation and 10% increase in every subsequent years |
| | |
| Administrative Expenses | 1.50% Of sales realisation |
| Selling Expenses | 3.00% Of sales realisation |
| Power Cost | Rs.6.50 per KWH |
| Repairs & Maintenance | 2.00%0f plant and machinery cost in the first year of operation and 10% increase in every subsequent years |
| Administrative Expenses | 1.00% Of sales realization |
| Selling Expenses | 5.00% Of sales realization |

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 | 638.40 | 729.60 | 820.80 | 820.80 | 820.80 |
| Profit Bef. Tax | 118.44 | 143.83 | 169.04 | 165.71 | 162.18 |
| Provision for taxation | 18.85 | 35.22 | 49.72 | 52.88 | 54.94 |
| Profit after Tax | 99.59 | 108.62 | 119.32 | 112.84 | 107.24 |
| Break Even Point | 40% | 36% | 33% | 34% | 36% |

Net Present Value (NPV): Rs.147.77 lakhs
Internal Rate of Return (IRR): 18.75 %

**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

# 16 Proposed Implementation Framework

## 16.1 Role of Implementing Agency

The role and responsibility of the IA includes the following:

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

## 16.2 Details of Strategic Partners

The cluster is proposed to be developed under SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Coir Board is the Nodal agency (NA) and ITCOT Consultancy and Services Limited is the Technical Agency (TA) appointed by Coir Board. The Technical agency will identify a potential Implementing agency (IA) for the cluster. The Implementing agency is Karnataka State Coir Co-Operative Federation, having its office at DIC Building, 3rd Floor, 1st Cross, West of Chord Road, Rajajinagar Industrial Estate, Rajajinagar, Bengaluru - 560010. 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 Society in the name of **"Sri Gaviranganatha Swamy SFURTI Coir Cluster.,"** as per the registration

certificate dated 18.12.2018. The registration has been carried out with 9 members, who have evinced interest are proposed to be included as shareholders. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over.

## 16.4 Composition of the SPV

An SPV is formed with 9 members and the list is given below:

| S.No. | Name | Present Activity |
|---|---|---|
| 1. | Mr.H.L.Aswathanarayana | Rubberized Coir manufacturing |
| 2. | Mr.C.J.Bhanuprakash | 2 ply yarn manufacturing |
| 3. | Mrs.C.J.Hamsaveni | Coconut Farmer |
| 4. | Mr.V.Ramesh | Coconut Farmer |
| 5. | Mrs.V.Hemalatha | 2 ply yarn manufacturing |
| 6. | Mrs.B.R.Padma | Coir Fibre & Curled coir Manufacturing |
| 7. | Mr.H.A.Sourav | Coconut Farmer |
| 8. | Mr.H.A.Gourav | Rubberized Coir manufacturing |
| 9. | Mr.M.N.Umapathi | Coir Fibre manufacturing |

# 17 Expected Impact

The Pre-investment and post-investment impact scenario of the cluster is given below:

| S.No | Parameter | Pre-intervention | Post Intervention | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y10 |
| 1. | Cluster Turnover (Rs. Lakhs) | 4130 | 5086 | 5340 | 5607 | 5888 | 6182 | 7418 |
| 2. | Investment (Rs. Lakhs) | 1848 | 2263 | 2681 | 2805 | 2935 | 3072 | 3647 |
| 3. | Employment (Nos.) | 752 | 900 | 1050 | 1250 | 1500 | 1750 | 2250 |
| 4. | Wages per day (Rs.) | 250/350 | 300/400 | 350/450 | 400/450 | 450/500 | 600 | 750 |
| 5. | Profitability (%) | 8-10% | 18-20% | 18-20% | 18-20% | 18-20% | 18-20% | 18-20% |

- The Common Facility Center would achieve turnover of minimum Rs.638.00 lakhs in the first year of commercial operations.
- Increased value addition of Coir yarn, resulting in enhanced income for coir products manufacturers (both Coir fibre and yarn) by minimum 15%, on utilizing the CFC for the manufacturing of Tufted Coir Mats.
- Increased employment for about 150 persons (both direct and indirect) is anticipated in the cluster on implementation of the project.
- Establishment of new units by converging various schemes of State and Central Governments (such as PMEGP) resulting in additional investments and employment in Coir sector by the cluster members
- 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
- 100% Coverage of Coir workers in the cluster units under social security schemes
- Improved access to financial capital for cluster members.

# Financial Statements

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Statement | 1 | | | |
| **COST OF PROJECT AND MEANS OF FINANCE** | | | | | | | |
| **Cost Of Project** | | Rs.Lakhs | | SPV Share | GoI Grant | | |
| Building & Civil works | | 98.00 | | 9.80 | 88.20 | | |
| Plant and Machinery (with spray painting facility) | | 310.00 | | 31.00 | 279.00 | | |
| Electricals (HT Conn.) & accessories | | 24.00 | | 2.40 | 21.60 | | |
| Contingencies | 2.00% | 8.64 | | 8.64 | 0.00 | | |
| Deposits (as per statement 1.1) | | 2.51 | | 2.51 | 0.00 | | |
| Prel. & Pre-operative Expenses | | 0.85 | | 0.85 | 0.00 | | |
| Working Capital (as per statement-2) | | 30.00 | | 30.00 | 0.00 | | |
| **Total** | | **474.00** | | **85.20** | **388.80** | | |
| | | | | | | | |
| **Means of Finance** | | | | | | | |
| SPV Contribution | | 85.20 | | | | | |
| Grant under SFURTI scheme | | 388.80 | | | | | |
| **Total** | | **474.00** | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Statement-1.1 | | | | | |
| **DEPOSITS** | | | | | | | |
| **Deposits payable to TNEB for** | **140** | **HP Power Connection** | | | | | |
| | | | | | | | |
| | **Total** | | | | | | |
| **Details** | (Rs.Lakhs) | | | | | | |
| Security Deposit | 2.25 | | | | | | |
| Others (Regn. , Agreement charges | 0.10 | | | | | | |
| | 2.35 | | | | | | |
| **Other Deposits / Advances** | 0.16 | | | | | | |
| **Total** | **2.51** | say | **Rs.2.51** | **Lakhs** | | | |
| | | | | | | | |
| | | **Statement-1.2** | | | | | |
| **PRELIMINARY AND PREOPERATIVE EXPENSES** | | | | | | | |
| | | | | | | | |
| Statutory fees (CTO, Land Regn. etc.) | 0.15 | | | | | | |
| Trial run expenses | 0.70 | | | | | | |
| | **0.85** | | | | | | |
| | | | | | | | |
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| **ASSESSMENT OF WORKING CAPITAL** | | | | | | Statement-2 | |
| | | | | | | | |
| **Current Assets** | Days | **1** | **2** | **3** | **4** | **5** | |
| | | | | | | | |
| Raw Materials | 18 | 23.94 | 27.36 | 30.78 | 30.78 | 30.78 | |
| Finished products | 5 | 7.71 | 8.74 | 9.77 | 9.83 | 9.89 | |
| Receivables | 5 | 10.64 | 12.16 | 13.68 | 13.68 | 13.68 | |
| Cash for expenses | | 3.00 | 3.43 | 3.86 | 3.86 | 3.86 | |
| Other current assets | | 1.00 | 1.14 | 1.29 | 1.29 | 1.29 | |
| **Total** | | **46.29** | **52.83** | **59.38** | **59.43** | **59.49** | |
| | | | | | | | |
| **Current Liabilities** | | | | | | | |
| Sundry creditors for R.M | 12 | 15.96 | 18.24 | 20.52 | 20.52 | 20.52 | |
| Other Current Liabilities | | 0.33 | 0.36 | 0.40 | 0.44 | 0.48 | |
| **Total** | | **16.29** | **18.60** | **20.92** | **20.96** | **21.00** | |
| | | | | | | | |
| **Working Capital Gap** | | **30.00** | **34.23** | **38.46** | **38.47** | **38.49** | |
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| | | | | | Statement | 3 | |
| **COST OF PRODUCTION & PROFITABILITY** | | | | | | | |
| | | | | **RS.LAKHS** | | | |
| **Years** | | **1** | **2** | **3** | **4** | **5** | |
| Installed Production Capacity per shift | Sq.M. | 800 | 800 | 800 | 800 | 800 | |
| Number of shifts per day | | 1 | 1 | 1 | 1 | 1 | |
| Number of working days per annum | | 300 | 300 | 300 | 300 | 300 | |
| Installed Production Capacity per annum | Sq.M. | 240000 | 240000 | 240000 | 240000 | 240000 | |
| Capacity Utilisation | % | 70% | 80% | 90% | 90% | 90% | |
| Annual Production Quantity | | 168000 | 192000 | 216000 | 216000 | 216000 | |
| Annual Sales Realization | Rs. 380.00 | 638.40 | 729.60 | 820.80 | 820.80 | 820.80 | |
| | | | | | | | |
| **Annual Sales Realisation** | | **638.40** | **729.60** | **820.80** | **820.80** | **820.80** | |
| | | | | | | | |

| **Cost Of Production** | | | | Statement-3 contd… | | | |
|---|---|---|---|---|---|---|---|
| **Cost of raw materials** | | | | | | | |
| PVC Tufted Mat | | | | | | | |
| - Coir yarn requirement | | 134.40 | 153.60 | 172.80 | 172.80 | 172.80 | |
| - PVC requirement | | 264.60 | 302.40 | 340.20 | 340.20 | 340.20 | |
| Total cost of raw materials - PVC Tufted Mat | | 399.00 | 456.00 | 513.00 | 513.00 | 513.00 | |
| Total Cost of Raw Materials | | 399.00 | 456.00 | 513.00 | 513.00 | 513.00 | |
| Lease Rental for CFC Land | Rs.10,000 | 1.20 | 1.32 | 1.45 | 1.60 | 1.76 | |
| Cost Of Power | Statement 6 | 12.33 | 14.09 | 15.86 | 15.86 | 15.86 | |
| Salary & Wages | Statement 7 | 44.06 | 46.27 | 48.58 | 51.01 | 53.56 | |
| Repairs & Maintenance | 2.00% | 6.20 | 6.82 | 7.50 | 8.25 | 9.08 | |
| | | **462.80** | **524.50** | **586.39** | **589.71** | **593.25** | |
| Administrative Expenses | 1.50% | 9.58 | 10.94 | 12.31 | 12.31 | 12.31 | |
| Selling Expenses | 3.00% | 19.15 | 21.89 | 24.62 | 24.62 | 24.62 | |
| Prel. & Preop. Expenses (w/o) | 10.00% | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | |
| Depreciation | Statement 8 | 28.35 | 28.35 | 28.35 | 28.35 | 28.35 | |
| **Total** | | **519.96** | **585.77** | **651.76** | **655.09** | **658.62** | |
| **Profit Bef. Tax** | | **118.44** | **143.83** | **169.04** | **165.71** | **162.18** | |
| Provision for taxation | | 18.85 | 35.22 | 49.72 | 52.88 | 54.94 | |
| **Profit after Tax** | | **99.59** | **108.62** | **119.32** | **112.84** | **107.24** | |
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| | | | | | Statement | 4 | |
| **Assumptions For Cost Of Production And Profitability** | | | | | | | |
| **PVC Tufted Mat** | | | | | | | |
| Installed Capacity per shift | 800 | Sq.M. | | | | | |
| Number of shifts per day | 1 | | | | | | |
| Number of days per annum | 300 | | | | | | |
| Installed Capacity per annum | 240000 | Sq.M. | | | | | |
| Selling Price | Rs. 380.00 | per Sq.M. | | | | | |
| Raw material (Yarn) reqt. per Sq.M. | 2.50 | Kgs. | | | | | |
| Cost of Yarn | Rs. 32.00 | per Kg. | | | | | |
| Raw material (PVC) reqt. per Sq.M. | 3.50 | Kgs. | | | | | |
| Cost of PVC | Rs. 45.00 | per Kg. | | | | | |
| | | | | | | | |
| **Capacity Utilisation** | | | | | | | |
| *- First year* | *70%* | | | | | | |
| *- Second year* | *80%* | | | | | | |
| *-Third year onwards* | *90%* | | | | | | |
| Power Cost | Rs.7.50 | per KWH | | | | | |
| Lease Rental for CFC Land | Rs.10,000 | per month in the first year and 10% every year | | | | | |
| Repairs & Maintenance | 2.00% | 0f plant and machinery cost in the first year of | | | | | |
| | | operation and 10% increase in every subsequent years | | | | | |
| Administrative Expenses | 1.50% | Of sales realisation | | | | | |
| Selling Expenses | 3.00% | Of sales realisation | | | | | |
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| | | | | | Statement | 5 | |
| **CALCULATION OF INCOME TAX** | | | | | | | |
| | | | | RS.LAKHS | | | |
| **Years** | | **1** | **2** | **3** | **4** | **5** | |
| Net Profit | | 118.44 | 143.83 | 169.04 | 165.71 | 162.18 | |
| Add: Straight Line Dep. | | 28.35 | 28.35 | 28.35 | 28.35 | 28.35 | |
| Less: Wdv Depreciation | | 92.93 | 71.56 | 55.33 | 42.98 | 33.55 | |
| Total | | 53.86 | 100.62 | 142.05 | 151.08 | 156.97 | |
| Income Bef. Incentives | | 53.86 | 100.62 | 142.05 | 151.08 | 156.97 | |
| Less: Deductions | 0% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Taxable Income | | 53.86 | 100.62 | 142.05 | 151.08 | 156.97 | |
| Income Tax | 35% | 18.85 | 35.22 | 49.72 | 52.88 | 54.94 | |
| Loss C/F | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Profit After Tax | | 99.59 | 108.62 | 119.32 | 112.84 | 107.24 | |
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| | | | | | Statement | 6 | |
| **ESTIMATION OF POWER COST** | | | | | | | |
| | | | | RS.LAKHS | | | |
| **Connected Load** | **145.00** | HP | | | | | |
| | | **ANNUAL POWER COST** | | | | | |
| Years | | 1 | 2 | 3 | 4 | 5 | |
| Working Days | | 300 | 300 | 300 | 300 | 300 | |
| Capacity Utilisation | | 70% | 80% | 90% | 90% | 90% | |
| Number of hours per shift | | | | | | | |
| **Power consumption per annum (KWH)** | | 243600 | 278400 | 313200 | 313200 | 313200 | |
| **Annual Power Bill** | | **12.33** | **14.09** | **15.86** | **15.86** | **15.86** | |
| ***Assumptions:*** | | | | | | | |
| Power Factor | 0.90 | | | | | | |
| Average Load Factor | 0.75 | | | | | | |
| Average Power Cost/K W H | Rs.7.50 | | | | | | |
| No. of working hours per shift | 8.00 | | | | | | |
| No. of shifts per day | 1 | | | | | | |

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| | | | | Statement | 7 | | |
| **MANPOWER REQUIREMENT AND ESTIMATION OF COST** | | | | | | | |
| | | | RS.LAKHS | | | | |
| | | | | | | | |
| **Description** | **Nos.** | **Salary** | **Annual** | | | | |
| | | **per month** | **Salary** | | | | |
| Manager | 1 | 20000 | 240000 | | | | |
| Supervisors | 3 | 15000 | 540000 | | | | |
| Male Workers | 10 | 8000 | 960000 | | | | |
| Female workers (Unskilled ) | 18 | 7500 | 1620000 | | | | |
| Admin and Accounts | 2 | 8000 | 192000 | | | | |
| Security | 2 | 5000 | 120000 | | | | |
| **Total** | **36** | | **3672000** | | | | |
| | Add: Benefits | 20% | 734400 | | | | |
| | **Grant Total** | | **4406400** | | | | |
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| | | | | | Statement | 8 | |
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| **ESTIMATION OF DEPRECIATION** | | | | | | | |
| | | | RS.LAKHS | | | | |
| **Straight Line Method** | VALUE | DEP. RATE | **1** | **2** | **3** | **4** | **5** |
| Building & Civil works | 99.96 | 3.34% | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 |
| Plant & Machinery | 317.05 | 7.40% | 23.46 | 23.46 | 23.46 | 23.46 | 23.46 |
| Electricals | 24.48 | 6.33% | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| **Total** | **441.49** | | **28.35** | **28.35** | **28.35** | **28.35** | **28.35** |
| **WDV Method** | | | | | | | |
| Building & Civil works | | 10.00% | 10.00 | 9.00 | 8.10 | 7.29 | 6.56 |
| WDV | 99.96 | | 89.96 | 80.97 | 72.87 | 65.58 | 59.03 |
| Plant & Machinery | | 25.00% | 79.26 | 59.45 | 44.59 | 33.44 | 25.08 |
| WDV | 317.05 | | 237.79 | 178.34 | 133.76 | 100.32 | 75.24 |
| Electricals | | 15.00% | 3.67 | 3.12 | 2.65 | 2.26 | 1.92 |
| WDV | 24.48 | | 20.81 | 17.69 | 15.03 | 12.78 | 10.86 |
| **Total** | **441.49** | | **92.93** | **71.56** | **55.33** | **42.98** | **33.55** |
| | | | | | | | |
| Note: Contingency & Pre-operatives are apportioned with the cost of assets. | | | | | | | |
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| **PROJECTED CASH-FLOW STATEMENT** | | | | | Statement | 9 | |
| | | | | RS.LAKHS | | | |
| **Years** | | **1** | **2** | **3** | **4** | **5** | |
| **Source Of Funds** | | | | | | | |
| Promoters Capital | 85.20 | | | | | | |
| SFURTI Grant | 388.80 | | | | | | |
| Profit Before Int.,Dep. & Tax | | 146.79 | 172.18 | 197.39 | 194.06 | 190.53 | |
| Increase in W.C.Loan | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| **Total** | **474.00** | **146.79** | **172.18** | **197.39** | **194.06** | **190.53** | |
| **Uses** | | | | | | | |
| Inc. in Capital Expenditure | 441.49 | | | | | | |
| Deposits (as per statement 1.1) | 2.51 | | | | | | |
| Increase in W.Capital | | 30.00 | 4.23 | 4.23 | 0.02 | 0.02 | |
| Provision For Taxation | | 18.85 | 35.22 | 49.72 | 52.88 | 54.94 | |
| **Total** | **444.00** | **48.85** | **39.44** | **53.95** | **52.89** | **54.96** | |
| Surplus | 30.00 | 97.94 | 132.74 | 143.44 | 141.17 | 135.57 | |
| Opening Balance | 0.00 | 30.00 | 127.94 | 260.68 | 404.12 | 545.29 | |
| Closing Balance | 30.00 | 127.94 | 260.68 | 404.12 | 545.29 | 680.86 | |
| | | | | | | | |

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| **PROJECTED BALANCE SHEET** | | | | | Statement | 10 | |
| | | | | RS.LAKHS | | | |
| **Years** | **PR. PERIOD** | **1** | **2** | **3** | **4** | **5** | |
| **Liabilities** | | | | | | | |
| Promoters Capital | 85.20 | 85.20 | 85.20 | 85.20 | 85.20 | 85.20 | |
| SFURTI Grant | 388.80 | 388.80 | 388.80 | 388.80 | 388.80 | 388.80 | |
| Reserves & Surplus | | 99.59 | 208.21 | 327.53 | 440.36 | 547.60 | |
| W.C.Borrowings | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Current liabilities | | 16.29 | 18.60 | 20.92 | 20.96 | 21.00 | |
| **Total** | **474.00** | **589.88** | **700.81** | **822.45** | **935.32** | **1042.60** | |
| **Assets** | | | | | | | |
| Gross Block | 441.49 | 441.49 | 441.49 | 441.49 | 441.49 | 441.49 | |
| Less: Accu. Depreciation | | 28.35 | 56.70 | 85.05 | 113.40 | 141.75 | |
| Net Block | 441.49 | 413.14 | 384.79 | 356.44 | 328.09 | 299.74 | |
| Deposits | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 | |
| Current Assets | | 46.29 | 52.83 | 59.38 | 59.43 | 59.49 | |
| Closing Balance | 30.00 | 127.94 | 260.68 | 404.12 | 545.29 | 680.86 | |
| **Total** | **474.00** | **589.88** | **700.81** | **822.45** | **935.32** | **1042.60** | |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| | | | | | | | |

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| | | | | | Statement | 11 | |
| **ESTIMATION OF BREAK-EVEN POINT** | | | | | | | |
| | | | | RS.LAKHS | | | |
| **Years** | **1** | **2** | **3** | **4** | **5** | | |
| **Fixed Expenses** | | | | | | | |
| Salary & Wages | 44.06 | 46.27 | 48.58 | 51.01 | 53.56 | | |
| Repairs & Maintenance | 6.20 | 6.82 | 7.50 | 8.25 | 9.08 | | |
| Preliminary expenses | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | | |
| Depreciation | 28.35 | 28.35 | 28.35 | 28.35 | 28.35 | | |
| **Total( A )** | **78.70** | **81.52** | **84.52** | **87.70** | **91.07** | | |
| **Variable Expenses** | | | | | | | |
| Cost Of Raw Material | 399.00 | 456.00 | 513.00 | 513.00 | 513.00 | | |
| Cost Of Power | 12.33 | 14.09 | 15.86 | 15.86 | 15.86 | | |
| Administrative Expenses | 9.58 | 10.94 | 12.31 | 12.31 | 12.31 | | |
| Selling Expenses | 19.15 | 21.89 | 24.62 | 24.62 | 24.62 | | |
| **Total( B )** | **440.06** | **502.93** | **565.79** | **565.79** | **565.79** | | |
| **Sales Realisation** | **638.40** | **729.60** | **820.80** | **820.80** | **820.80** | | |
| Break Even Point | 40% | 36% | 33% | 34% | 36% | | |

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| | | | | | Statement | 12 | |
| **ESTIMATION OF NET PRESENT VALUE AND INTERNAL RATE OF RETURN** | | | | | | | |
| | | | | | RS.LAKHS | | |
| Years | PR. PERIOD | 1 | 2 | 3 | 4 | 5 | |
| **Cash Out Flow** | | | | | | | |
| Capital Expenditure | 441.49 | | | | | | |
| Preliminary & Preoperative Expenses | 2.51 | | | | | | |
| Working Capital Margin | 30.00 | | | | | | |
| Total | 474.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| | | | | | | | |
| **Cash Inflow** | | | | | | | |
| Profit After Tax | | 99.59 | 108.62 | 119.32 | 112.84 | 107.24 | |
| Depreciation | | 28.35 | 28.35 | 28.35 | 28.35 | 28.35 | |
| W.C.Margin | | | | | | 13.68 | |
| Residual Value Of F.Assets | | | | | | 110.37 | |
| | | | | | | | |
| Total | 0.00 | 127.94 | 136.97 | 147.67 | 141.19 | 259.64 | |
| | | | | | | | |
| **Net Cash Flow** | **-474.00** | **127.94** | **136.97** | **147.67** | **141.19** | **259.64** | |
| | | | | | | | |
| **Net Present Value** | **Rs.147.77** | **lakhs** | | | | | |
| at 8% discount rate | | | | | | | |
| **Internal Rate of Return** | 18.75% | | | | | | |