

DETAILED PROJECT REPORT

Cluster Location: PURI, ODISHA
(Raghunath Coir Cluster, Puri district, Odisha)



SUBMITTED TO
COIR BOARD, KOCHI



PREPARED BY

ITCOT CONSULTANCY AND SERVICES LIMITED

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Executive Summary

Name of the cluster	Raghunath coir Cluster, Puri district, Odisha
Type of cluster	Regular cluster
Location & Spread of the cluster	Raghunath Coir Cluster covers Kanasa, Delanga and Pipili Blocks in Puri District, Odisha. The Geographical spread of the cluster measures about 8 Km radius.
Product range	<p>The following products are produced in the cluster presently.</p> <ul style="list-style-type: none"> • Coir Fibre • Coir Yarn • Coir Mat and Handicrafts
Size of cluster & Type of units	The total number of beneficiaries estimated to be around 1187 members and it is 100% women artisan cluster.
Key concern areas	<ul style="list-style-type: none"> ➤ Sustainable livelihood for the artisans is the key concern. Providing continuous engagement for the artisans is the dire need for their sustainable livelihood. ➤ Need for Skill upgradation of artisans mandatory to improve the quality of mats and handicrafts products. ➤ The process followed by majority of cluster artisans is manual and obsolete with specific reference to making of 2 ply yarn. In spite of availability of new machinery, the entrepreneurs are reluctant to adopt new machinery due to lack of awareness and also lack of finance. ➤ Even though husk availability is considerable, fibre extraction activities are limited within the cluster, resulting in shortage of input availability for mat and handicraft making by artisans. ➤ No organized effort towards husk collection within the cluster.

Proposed Strategic Interventions	<p>Soft Interventions:</p> <ul style="list-style-type: none"> • Capacity Building initiatives • Market Promotion initiatives <p>Hard Interventions (Common facility creation):</p> <p>Common facilities proposed:</p> <p>The Common facility center is proposed to be established in 4 locations considering the accessibility of the location by the artisans.</p> <ul style="list-style-type: none"> • <u>CFC-I:</u> <ul style="list-style-type: none"> - Automatic Coir Yarn spinning (2 Nos.) - Mat making - Handicrafts & Idols making - Raw material & Finished goods godown • <u>CFC-II:</u> <ul style="list-style-type: none"> - Automatic Coir Yarn spinning (2 Nos.) - Mat making - Handicrafts & Idols making • <u>CFC-III:</u> <ul style="list-style-type: none"> - Automatic Coir Yarn spinning (2 Nos.) - Mat making - Handicrafts & Idols making • <u>CFC-IV:</u> <ul style="list-style-type: none"> - Coir fiber extraction - Coir pith manure <p>Thematic Interventions:</p> <p>Participation in activities such as national and international level brand promotion campaigns, New Media marketing, E-commerce initiatives etc., as detailed in the SFURTI implementation guidelines</p>
Budget for Soft interventions	Rs. 18.00 lakhs
Budget for Hard interventions	Rs. 212.60 lakhs
Total Project Cost including Agencies cost	Rs. 268.92 lakhs
Means of Finance	Grant under SFURTI scheme : Rs. 243.34 lakhs IA/SPV share : Rs. 21.26 lakhs

Post Intervention Scenario (Expected Impact)	<p>The pre-intervention & post-intervention scenario of the cluster is given below:</p> <table border="1" data-bbox="651 286 1422 788"> <thead> <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>Y 1</th> <th>Y 5</th> <th>Y 10</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Cluster Turnover (Rs. Lakhs)</td> <td>120.00</td> <td>460</td> <td>575</td> <td>720</td> </tr> <tr> <td>2</td> <td>Investment (Rs. Lakhs)</td> <td>45.00</td> <td>285</td> <td>340</td> <td>410</td> </tr> <tr> <td>3</td> <td>Wages / day (Rs.)</td> <td>120.00</td> <td>220</td> <td>280-300</td> <td>360-380</td> </tr> <tr> <td>4</td> <td>Profitability (%)</td> <td>8-10%</td> <td>18-20%</td> <td>18-20%</td> <td>18-20%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ➤ Sustainable livelihood for artisans engaged in cluster activities. ➤ Strengthened backward (input procurement) and forward linkages (market). ➤ Establishment of new units by converging various schemes of State and Central Governments (such as CITUS, PMEGP etc.) resulting in additional investments and employment in Coir sector by the cluster members ➤ Improved access to financial capital for cluster members ➤ 100% Coverage of cluster artisans under social security schemes 	S. No.	Parameter	Pre-Intervention	Post-intervention			Y 1	Y 5	Y 10	1	Cluster Turnover (Rs. Lakhs)	120.00	460	575	720	2	Investment (Rs. Lakhs)	45.00	285	340	410	3	Wages / day (Rs.)	120.00	220	280-300	360-380	4	Profitability (%)	8-10%	18-20%	18-20%	18-20%
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Cluster Management - Post interventions	<p>The cluster is proposed to be developed under SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Coir Board is the Nodal agency (NA) and ITCOT Consultancy and Services Limited is the Technical Agency (TA) appointed by Coir Board. M/s.Raghunath Patnagar, having its is proposed as the Implementing Agency.</p> <p>Special Purpose Vehicle (SPV) is formed and registered as Trust in the name of "M/s RAGHUNATH COIR SPV TRUST". The registration has been carried out with 7 trustees. The SPV will be strengthened to manage the Cluster activities in sustainable nature after the project implementation is over.</p>																																	

1 Preamble

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

Coir's global production is about 350,000 tonnes. India and Sri Lanka being the major producers of coir, account for 90 per cent of the world production. Coir industry in India is an important cottage industry contributing significantly to the economy of the major coconut growing States and Union Territories, i.e., 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, Lakshadweep islands etc.

With a view to making the traditional coir industries more productive and competitive and facilitating their sustainable development, the Central government has announced Scheme of Fund for Regeneration of Traditional Industries (SFURTI). Coir Board has entrusted the task of preparation of Detailed Project Report for the Coir Cluster located at Puri District, Odisha 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

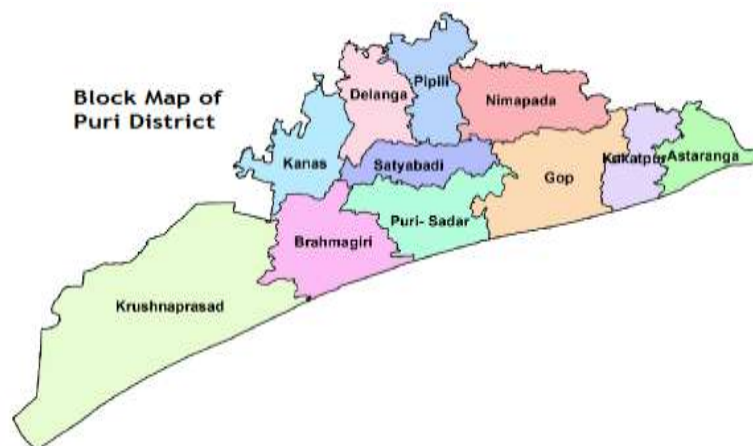
2.1 Background

Puri District is a coastal District on the eastern part of Odisha. It covers an area of 3479 sq.kms having 155 Km as coast line along with the Bay of Bengal. Though the district has a share of only 2.2% of the total geographical area of the State, it contributes around 3% of the Gross Domestic Product of the State. As per occupational pattern, agriculture is the primary occupation of the district.

This district comprises 1715 revenue villages. It has one subdivision (Puri Sadar), 11 taluks and 11 blocks. Puri is the only municipality in the district. It is bounded by the Khordha district in the North, Bay of Bengal in the South, Jagatsinghpur district in the East and Ganjam district in the west. Most of the industrial activities in and around Puri centre are in the form of art craft and handicraft. The district is also endowed with marine resources with store house of large and diverse quantities of fish and prawn and also other materials resources except mineral resources. The major product of the district is paddy, coconut, vegetables and oil seeds. With a network of rivers, the land is very fertile and very thickly populated. Despite having plenty of water, marine and agricultural resources, the district remains backward from the point of view of industry as there is no large and medium scale industry at present. The micro and small scale industries are also not vibrant in the district.

2.2 Regional setting of the Cluster

The regional setting of the cluster extends over three Blocks in Puri District viz Pipili, Kanasa and Delanga. The block map of Puri district is given below:



2.3 Location

Raghunath Coir Cluster is mainly spread over in three blocks viz., Pipili, Kanasa and Delanga blocks. Majority of the coir artisans / coir SHGs are located in 30 villages viz., 19 villages & hamlets in Pipili block, 4 villages / hamlets in Kanasa block and 7 villages / hamlets in Delanga block. The Geographical spread of the cluster measures about 30-35 Km radius.

2.4 Evolution of the Cluster

Odisha is one of the major coconut producing states of the country, where about 50,906 hectares of land is under coconut cultivation with overall production of 3277 lakh nuts.

The total coconut cultivation area of Puri district in 2015-16 is 9468.00 hectares, coconut production is 743.76 lakh nuts and the productivity is 7,856.00 nuts per hectare. The details of area of cultivation, production and productivity of Coconuts in Puri district is given below:

Year	Area (Ha)	Production (Lakh Nuts)	Productivity (Nuts/Ha)
2010 - 2011	9994.00	756.95	7574.00
2011 - 2012	9986.00	859.47	8607.00
2012 - 2013	9992.00	869.22	8699.00
2013 - 2014	9456.00	687.02	7265.00
2014 - 2015	9456.00	687.02	7265.00
2015 - 2016	9468.00	743.76	7856.00
Average (2010-16)	9725.33	767.24	7889.00

2.5 Demography and Growth trends

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

Description	2011	2001
Actual Population	1,698,730	1,502,682
Male	865,380	763,389
Female	833,350	739,293
Population Growth	13.05%	15.12%

Description	2011	2001
Area Sq. Km	3,479	3,479
Density/km ²	488	432
Proportion to Orissa Population	4.05%	4.08%

The district of Puri is the main attraction of tourists and Hindu devotees. Thus it presents a culture of assimilation and thus its demographic features may manifest some of its influence. The population of the district is enumerated in 2011 Census to be around 17 lakh of which 50.94 percent are males and 49.06 percent females. The decadal growth rate during 2001-2011 is 13.05 percent. The area of the district is 3479 sq.km, thus the calculated population density is 488 persons per sq km. The percentage of population living in urban area is 15.60.

The Scheduled Caste population is 19.14 percent of the total population and of these the Bauri 31.2%, Bhoi 18.20% and Dewar 15.17% are the major castes. The Scheduled Tribe population is only 0.30 percent. Even among this small segment of Tribes the largest three as indicated percentage to total Tribal population are Kondadora 20.62%, Shabar 20.62% and Saora 9.73% etc. Among the major religious groups of the district is Hindu 91.15%, Muslims 2.55% and Christian only 0.18%. The major towns are Puri, Nimapada and Konark having population 157,837, 16,915 and 15,013 respectively. The district has four towns and 1715 number of villages of which 1591 are inhabited.

2.6 Socio-economic aspects

The significance of coir industry arises primarily from the fact that a large a number of people from the economically weaker sections of the society 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

In Puri district out of total population, 621,676 were engaged in work activities. 72.5% of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 27.5% were involved in Marginal activity providing livelihood

for less than 6 months. Of 621,676 workers engaged in Main Work, 147,402 were cultivators (owner or co-owner) while 79,505 were Agricultural labourers.

The Coir industry is agro based industry capable of providing rural employment, mostly to women. There are 64 coir industries (39 working & 25 defunct) in Puri district. Out of which 23 are fiber extraction units, 33 automatic yarn spinning units and 8 fiber extraction cum automatic spinning units. The cluster consists of 1187 SHG member artisans and they are actively involved in yarn making, door mats making with dyed yarn in different colours.

2.8 Key Economic Activities in the region

- There are several small and medium scale industries in Puri that play a phenomenal role in shaping the district economy. Tourism, handicrafts and cottage industries are an important segment of the economy.
- The coastal location of Puri facilitates the burgeoning of fishing and its allied industries. Agro based industries, forestry units, marine based industries, units manufacturing leather and leather products as well as tourism have mushroomed in the district.
- Tourism forms the focal point of the district economy and generates a substantial amount of revenue. This industry shares a major portion of the economic map of Puri and it mainly revolves around the renowned Lord Jagannath temple. Many people are earning their living around the temple of Lord Jagannath.
- The handicraft industry and cottage industries have also flourished widely in Puri. Textile manufacturing that includes hand woven saris, dress materials, linen, bedspreads and towels form the means of livelihood for many.
- The handicraft and cottage industry also include silver filigree work, stone carving, bone work, horn work, applique work, patta painting, bamboo sticks, artifacts made of sea shell, bell metal ware, coir and furniture making.

2.9 Infrastructure - social, physical, financial and production related

The infrastructure details of Puri district is tabulated as below:

S.No	Indicator	Details	
1.	Total Geographical Area	3479 Sq.Km	
2.	Population	1,698,730	
		Male	Female

S.No	Indicator	Details	
		865,380	833,350
		Rural	Urban
		14,33,800	2,64,930
3.	Population Growth	13.05%	
4.	Sex Ratio (per 1000 males)	963 females	
5.	Literacy rate	84.67%	
		Male	Female
		90.85%	78.28%
6.	Administrative Setup		
	No.of municipality	1	
	No.of Sub-divisions	1	
	No.of Blocks	11	
	No.of Villages	1722	
	No.of Villages (Inhabited)	1591	
	No.of Gram Panchyats	268	
7.	Agriculture		
	Total area	279000 Ha	
	Non Agricultural Land	58000 Ha	
	Area available for Irrigation	188000 Ha	
	Net sown Area	136000 Ha	
	Gross cropped Area	258000 Ha	
	Barren & Uncultivated Land	8000 Ha	
8.	Forest Area	14000 Ha	
9.	Transport Infrastructure		
	Road length (NH, SH, MDR & ODR)	603.48 Kms.	
	Length of rail network	42 Kms.	
10.	Commercial Banks & Branches	31 & 188 Nos.	
11.	Education		
	Primary Schools	1296 Nos.	
	Colleges	37 Nos.	
12.	Ayuverdic Hospitals	24 Nos.	
13.	Primary Health Centres	41 Nos.	
14.	Primary Health sub-centres	241 nos.	

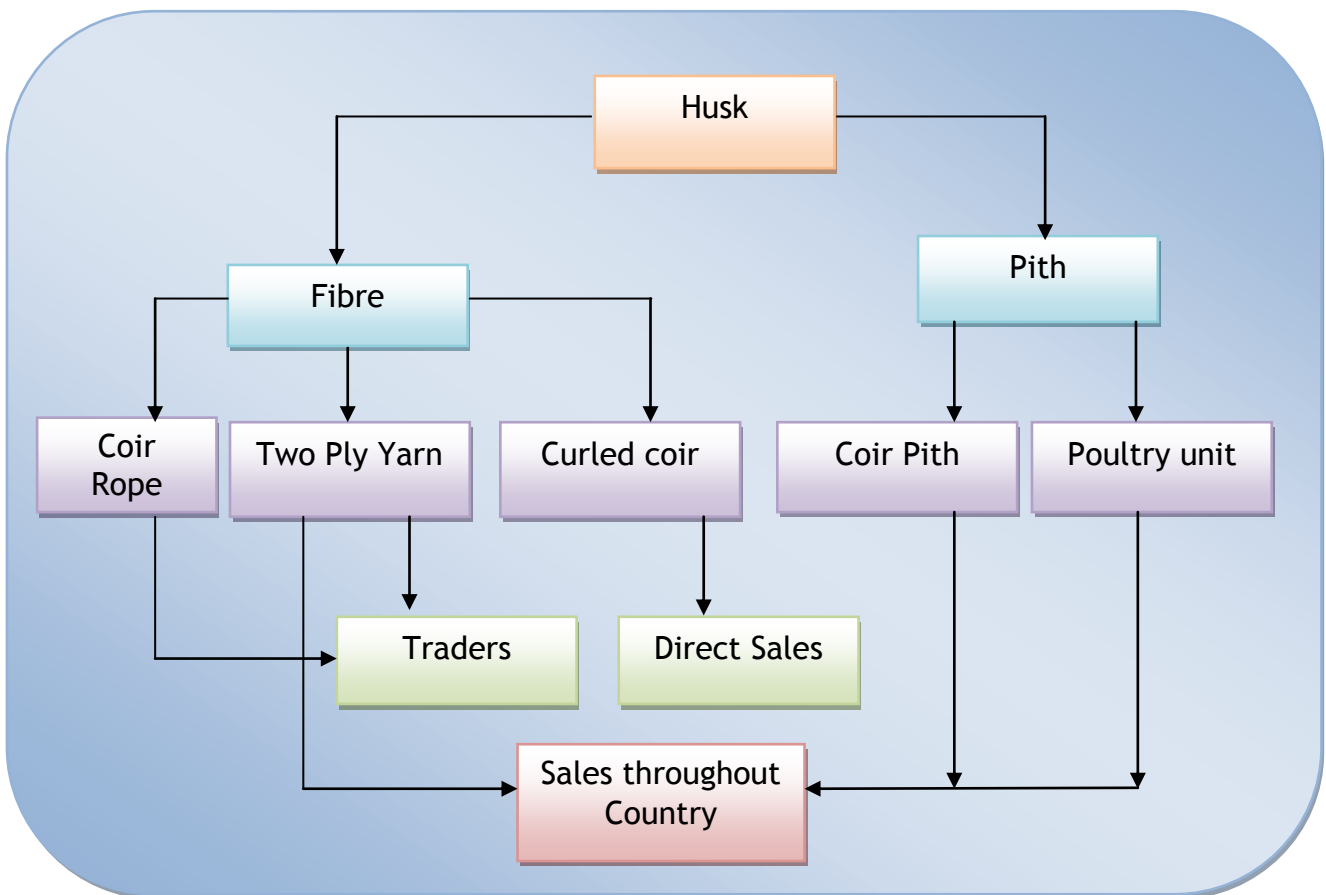
3 Cluster Value Chain Mapping

3.1. Product Profile

The following products are produced in the cluster presently.

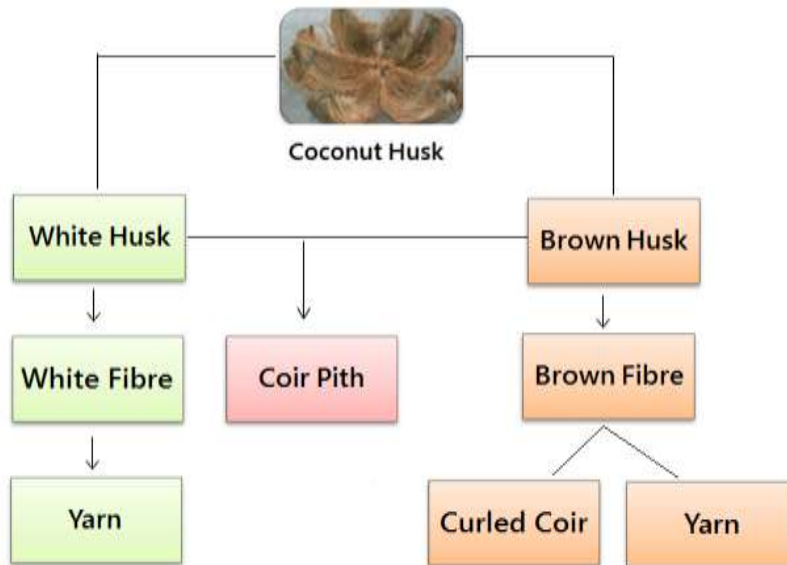
- Coir Fibre
- Coir Yarn
- Coir Mat

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



3.2. Production Process

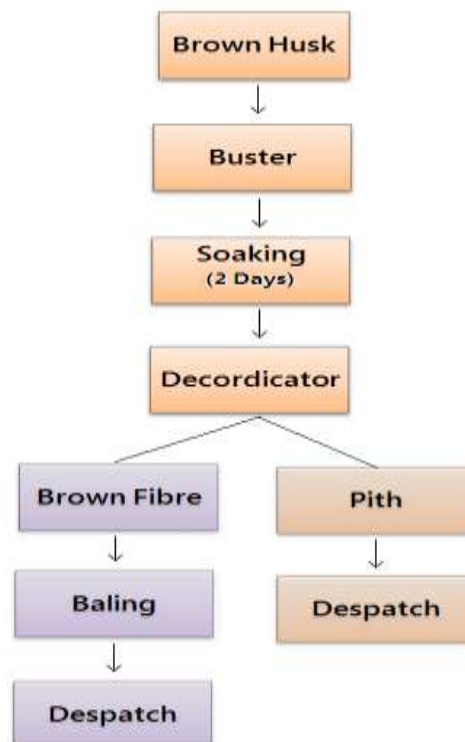
The existing product line of the cluster is given below:



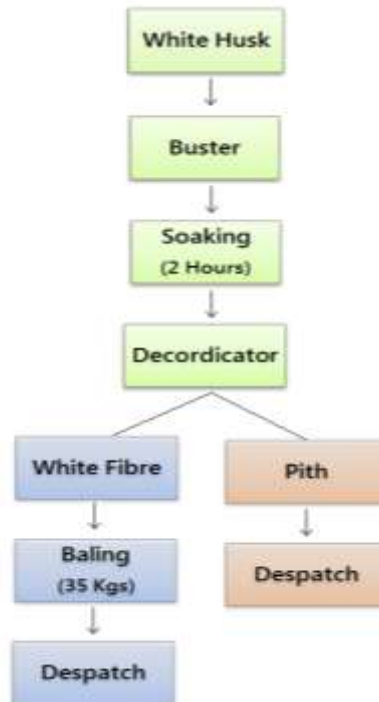
a) Coir Fibre

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

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



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



b) Coir Yarn

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

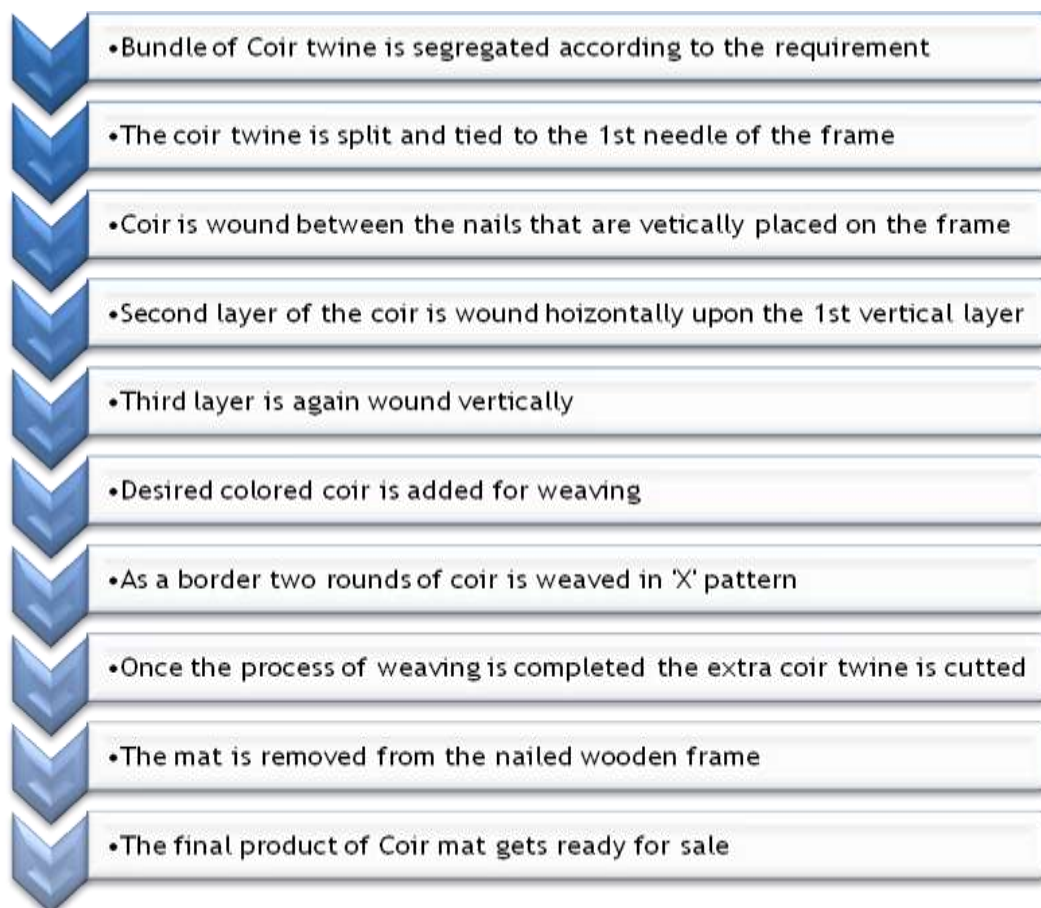


c) Coir Mat

Coir Mat making is the major activity undertaken in the cluster. Coir mats are purely handmade products, which are 100% organic, ethnic, biodegradable and hygienic that is strong, resistant and moisture in nature. The brushing qualities of coir doormats and their ability to keep the dirt away make the product a unique one. These mats are produced in various shapes like rectangular, star shaped and etc. The coir mats are also produced with the wording on them like 'welcome'. These mats are made of standard size by being 2ft breadth and 1½ ft length. The cost of these coconut coir mats range from Rs.100/- to Rs.500/-.

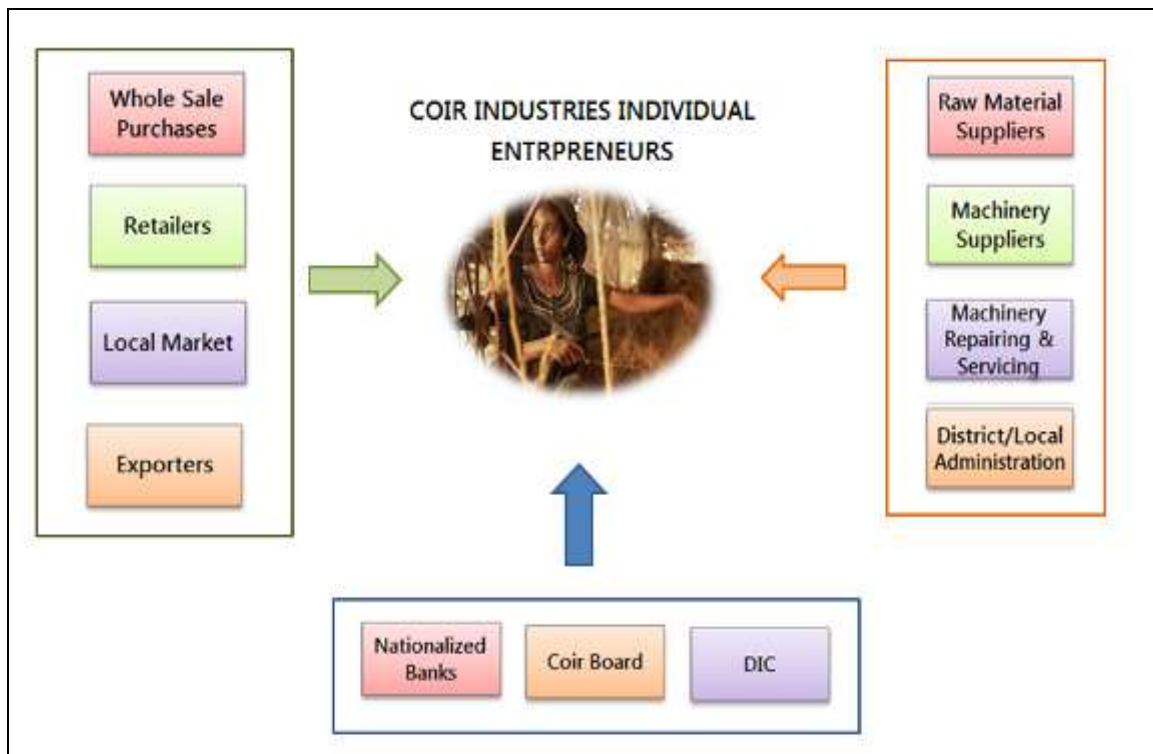
Production Process

The process flow chart for Coir mat making is given below:

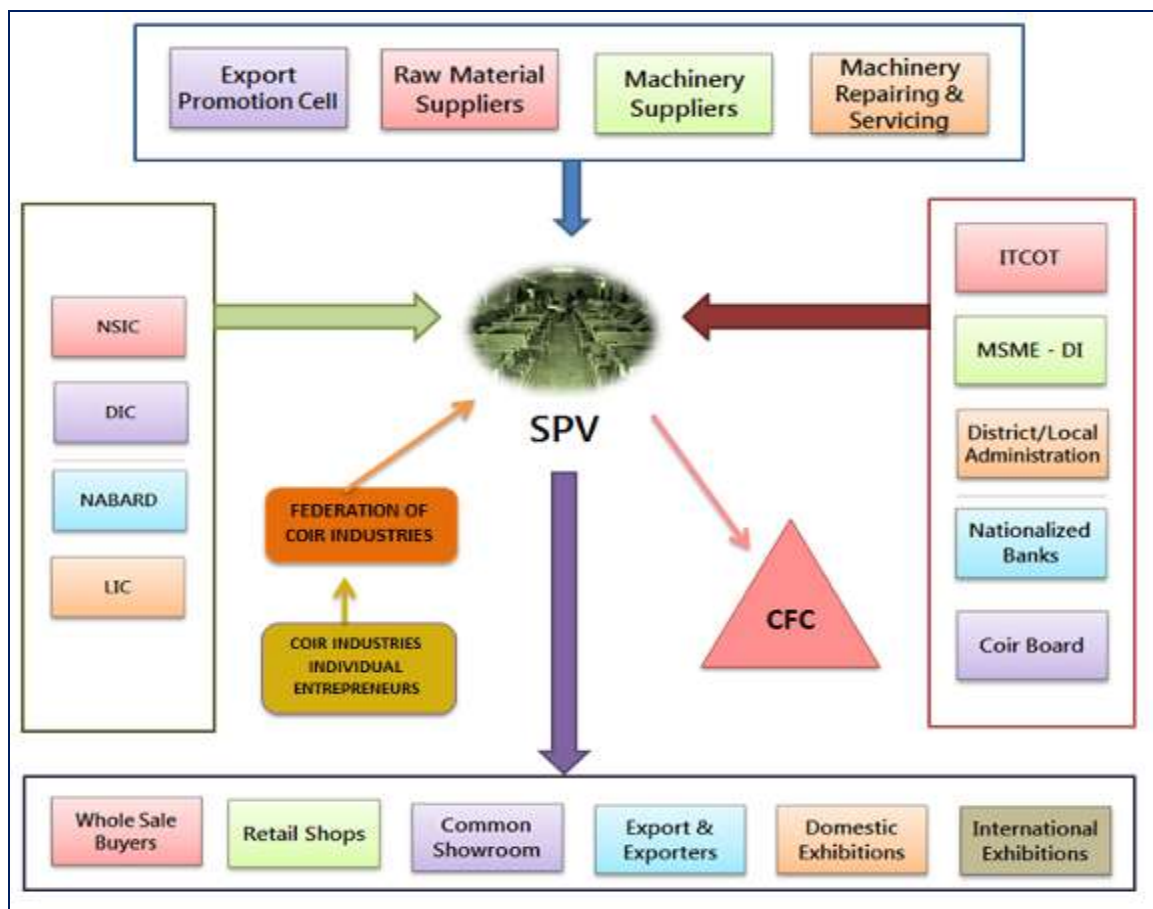


3.3. Cluster Map

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:



3.4. 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 Bhubaneswar which is near about 200 kms from the cluster area.

DISTRICT INDUSTRIES CENTRE (DIC)

The DIC, Puri has been involved in the promotion and development of Micro, small & medium enterprise since 1978. 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 in the Islands.

NABARD

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

LEAD BANK

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

ITCOT Consultancy and Services Limited (ITCOT)

ITCOT Consultancy and Services Limited, popularly known as ITCOT, is the state technical consultancy organization, promoted by all India financial institutions, State Development Corporations and Commercial Banks. ITCOT has wide experience in providing support services to micro and small enterprises under various government schemes. ITCOT, having its head office at Chennai, 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

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

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

Coir industry is of great importance to the coconut producing states in India, as it contributes significantly to the economy of rural areas. Kerala is the largest producer of coconut, contributing as much as 35% of country's total production, whereas Tamilnadu stands second in cultivation of coconut and first in production of brown coir fibre in the country. The State wise area and production of coconut is given below:

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

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

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

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

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

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

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

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

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

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

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

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

Proposed Marketing Plan:

- ✚ Coir Fibre will be internally value added as Coir Yarn in the cluster.
- ✚ Establishing specific marketing channel and appointment of dealers in potential market centers.

- ✚ Engaging Business Development Service providers to enhance the cluster market share in both domestic and export market for the products.
- ✚ Popularizing the brand as eco-friendly and exploring the opportunities in transport sectors and Government organizations with Coir Board support.
- ✚ Establishing linkages with retail showrooms (including Coir Board showrooms) in Chennai, Bangalore, Mumbai & Delhi and potential buyers for the products.

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

- Puri district accounts for around 20% of the total coconut cultivation area of Odisha and it is in the coastal section of Odisha blessed with hot and humid climate makes the district an apt place for the growth of coconut.
- Sufficient availability of coconut husk (basic raw material) provides scope for development of coir sector in the cluster.
- The cluster is situated in the major tourist zone of Puri district. There is potential for increasing volume of direct marketing of Handicrafts crafts to local and foreign tourists.
- The district has very good network of road, rail, power and labour.
- Presence of Support institutions such as Coir Board, District Industries Centre, Commercial banks, Technical consultancy organization etc.

Weaknesses

- Limited availability of Coir Fibre locally, though husk availability is ample
- Artisans are not exposed to any Coir activity other than Mat making.
- No organized collection system for Coconut husks.
- Lack of Knowledge on manufacturing of value added/diversified products i.e. Coir pith compost etc.
- 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 availability of basic raw material is considerable.
- Introduction of advanced machinery in fibre extraction and spinning would lead increased productivity and production, which would augment the profit margin.
- Coir products market demand is increasing day by day in domestic as well as export market
- Common procurement of raw material would result in price benefits in input procurement.
- Implementation of SFURTI Scheme for focused development of the cluster.

Threats

- Competition from coconut growing country viz.: Sri Lanka, Indonesia & Philippines etc.
- Utilization of husk for unproductive purposes

5.2. Need Gap Analysis

- Providing continuous engagement for the artisans is the dire need for their sustainable livelihood.
- Need for Skill upgradation of artisans mandatory to improve the quality of mats and handicrafts products.
- The process followed by majority of cluster artisans is manual and obsolete with specific reference to making of 2 ply yarn. In spite of availability of new machinery, the entrepreneurs are reluctant to adopt new machinery due to lack of awareness and also lack of finance.
- Even though husk availability is ample, fibre extraction activities are limited within the cluster.
- No organized effort towards husk collection within the cluster.
- No other Coir activity than Mat making by artisans in the cluster.
- Lack of knowledge on value added coir products viz. Coir pith manure etc.

6 Profile of the Implementing Agency

RAGHUNATH PATHAGAR is registered as a Society (Under Societies Registration Act 1860) with NGO unique registration ID is 'OR/2009/0018603'. The NGO registration is done by Registrar of Societies with registration number GJM3739-241/1994-95 on the date of 23rd February 1995 February through its parent Organization 'Paul Foundation'. The Chairman of RAGHUNATH PATHAGAR is Mr.Nirmal Chandra Nayak and Chief functionary officer is Sanchayeeta Nayak. The details of the NGO are given below:

Institutional Structure / Registration Details	Raghunath Pathagar (RNP)
Legal Status	Registered under Societies Registration Act 1860
Date of Incorporation / Registration	GJM3739-241/1994-95 Dt.23.02.1995
Registered Address	Gedal Palli, Chikalkhandi Post, Via Chatrapur, Ganjam district, Odisha
Office Address / Location	House No.29, Seven Hills City, Engineering Post, School Road, Berhampur- 760010, Ganjam, Odisha
Affiliated to KVIC	No

Governance Structure:

S.No	Name of the Member	Designation	Back Ground / Profile	Contact Number	Email id
1	Mr.Nirmal Chandra Nayak	President	Social Activist	72055 5383	rnp_1994@yahoo.com
2	Dr.Sudarshan	Vice President	Ex-Director, Horticulture	93377 18010	rnp_1994@live.com
3	Mr.Sanchayeeta Nayak	Secretary	Economist	93384 82805	rnp_1994@yahoo.com
4	Mr.K.Kameswar Rao	Joint Secretary	Business	82606 20231	rnp_1994@live.com
5	Mr.D.Gopal Reddy	Cashier	Social Worker	93384 82805	rnp_1994@yahoo.com

S.No	Name of the Member	Designation	Back Ground / Profile	Contact Number	Email id
6	Mr.A.Ananda Reddy	Member	Social Worker	93377 18010	rnp_1994 @live.com
7	Mr.Bijya Laxmi Patro	Member	Social Worker	93384 82805	rnp_1994 @yahoo.com
8	Mr.Swapana Nahak	Member	Member	82606 20231	rnp_1994 @live.com
9	Mr.Benu Panda	Member	Member	93377 18010	rnp_1994 @yahoo.com
10	Mr.Pratima Sahu	Member	Social Worker	93384 82805	rnp_1994 @live.com
11	Mr.Binod Nayak	Member	Social Worker	82606 20231	rnp_1994 @yahoo.com

Operational Profile	
Major Objectives - Vision, Mission, Goal of the Organisation	<p><u>Vision:</u> Equip the community with sufficient knowledge and skill to ensure their livelihood and create an enabling condition for equity and social justice, ultimately to improve their quality of life.</p> <p><u>Mission:</u> Enable the community to plan, participate, implement and monitoring all developmental programmes to bring social justice</p>
What are the focus areas of Operations	Horticulture, Agriculture, Animal Husbandry, Education, Health, Water and sanitation, Livelihoods, Skill Development Programmes, Women and Child Development, Child Labour Sector etc.
Provide Key Projects / Activities being undertaken by the IA - Brief Description including the project scope, size , duration (mention specific experience in the area / sector of the proposed project	State level Seminars, District level seminars, EDPs, SDPs, Seed Treatment campaign etc.
Mention Key Clients / Donors associated with for Project implementation along with details on the nature of association	<p>✚ NABARD, Odisha Regional Office</p> <p>✚ Nehru Yuva Kendra Sanghasthan, Bramha Nagar</p>

	<ul style="list-style-type: none"> ✚ National Horticulture Research Development Foundation ✚ Central Institute of Indian Languages, Mysore ✚ National Horticulture Board, Gurugoa ✚ Food Supplies & Consumer Welfare ✚ Department, Govt. of Odisha ✚ RWS&S, Berhampur, Division, Ganjam ✚ District Water and Sanitation Mission, Ganjam ✚ ATMA, Ganjam ✚ National Child Labor Project, Berhampur ✚ Center for Environment Studies, Bhubaneswar
<p>Mention key partnerships/alliances (if any)</p>	<ul style="list-style-type: none"> ✚ National Agriculture Bank for Rural Development (NABARD) ✚ National Horticulture Research and Development Foundation (NHRDF), Nashik ✚ National Horticulture Board (NHB), Gurugaon ✚ Nehru Yuva Kendra Sanghasthan, Berhampur ✚ Central Board for Worker Education (CBWE), Berhampur ✚ Department of Health and family Welfare, Govt. of Odisha ✚ Department of SC & ST Development, Govt. of Odisha ✚ Department of Culture, Government of Odisha ✚ Department of Womens and Child development, Govt. of Odisha ✚ Ministry of Small and Medium Enterprises

	<ul style="list-style-type: none"> ✚ Rural Water Supply and Sanitation, Berhampur ✚ Bankers Institute of Rural Development, Lucknow ✚ Social Participatory Action and Reflection, Kolkata ✚ National Institute of Rural Development, Hyderabad ✚ SaDhan, New Delhi ✚ Department of Agriculture, Govt. of Odisha
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Management Profile	
Background of Key Personal (Professionals and others) with brief profile of the Senior Management Personnel	Mr.Nirmal Chndra Nayak, President. 25 Years vast experience in rural development sector through NGO's in different welfare programmes, Experience in the field of community Organisation level to NGO administration level for providing training and other livelihoods skills development programmes.

Bank Account Details	
Name of the Bank	Corporation Bank
Branch Name	Giri Road, Berhampur, Ganjam, Odisha
Account Number	083900100103381

Contact Details	
Name of the Contact Person	Mr. Nirmal Chandra Nayak
Designation of Contact Person	President Cum Founder Raghunath Pathagara (RNP)
Correspondence Address	House No.29, Seven Hills City, Post Engineering School Road, Berhampur, District Ganjam, Odisha, Pin - 760010
CONTACT NUMBER	07205555383
E-MAIL ADDRESS	nirmal_nayak2005@yahoo.com

7 Project Concept & Strategy Framework

7.1 Project Rationale

The existing production potential of intermediate Coir products in the cluster is promising and hence the cluster is considered suitable for development in order to cater the growing market needs for the Value added coir products, both in domestic and international arena.

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 projects are proposed as Common Facility Center for the cluster.

- i) Coir fibre extraction, which is the basic value addition of the husks by producing Coir fibre,
- ii) Coir two ply yarn production, which is the value addition of Coir fibre, to be utilized for further value addition to finished product.
- iii) Coir pith manure, which is value addition of Coir pith, the by-product generated during Coir Fibre Extraction.
- iv) Coir Frame Mat, which is the value addition of yarn to utility product
- v) Coir Handicrafts, which is the value addition of fibre

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

- To advance growth and ensure sustainability of coir based industries with diversified basket of heterogeneous coir products based on target consumer segment.
- Setting up of suitable cluster-specific Common Facility Center (CFC) to ensure optimum output of value added coir products in the cluster

- Effective utilization of available raw material resource in the cluster by strengthening the linkages with raw material suppliers/farmers
- To form a Special Purpose Vehicle (SPV) with the participation of coir units in the cluster and to strengthen/capacitate the SPV as a whole.
- Strengthening linkages among the Cluster/SPV members and stakeholders and to have a Collaborative setup to address common problems.

7.3 Focus Products/Services

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

- Coir fibre extraction facility
- Coir Two ply yarn spinning facility
- Coir Pith Compost (Organic Manure)
- Coir Handicrafts & Decorative /Gift items manufacturing facility
- Coir frame mat manufacturing facility

7.4 Conceptual Framework / Project Strategy

- Cluster initiatives are considered to be efficient policy instruments in that they allow for a concentration of resources and funding in targeted areas with a high growth and development potential that can spread beyond the target locations (spillover and multiplier effects)
- The overall guiding principle is to make the Cluster more productive and the Cluster products more competitive by way of addressing the current production and supply bottlenecks, enhancing the marketability of the products, introduction of improved technology/techniques and strengthening Cluster linkages.
- Exploit the benefits arising out of optimization of resources and economies of scale. Create an autonomous governance framework in the cluster, in a step-by-step process that will affect dynamism and positive change in the cluster.

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
- ✚ **Design Development Programme:** To develop new design of the product to achieve commercial success of the business.
- ✚ **Engagement of Business Development Service Providers:** To improve the performance of the enterprise, its access to markets, and its ability to compete.

8.2 HARD INTERVENTIONS:

CREATION OF COMMON FACILITY CENTRE:

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

- ✚ Coir fibre extraction facility
- ✚ Coir Two ply yarn spinning facility
- ✚ Coir Pith Compost (Organic Manure)
- ✚ Coir Handicrafts & Idols manufacturing facility
- ✚ Coir frame mat 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 Programme

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

S.No	Particulars	
1	Proposed Programme / Intervention	Awareness Programme (on Fire & Safety & Social security schemes, Statutory requirements)
2	Target group	Coir workers
3	No. of Batches	2
4	Batch size	50 nos
5	Training content	Self & Group motivation
6	Trainer / Training Institution	ITCOT Consultancy & Services Ltd.
7	Cost of Training programme	Rs. 1,00,000/-
8	Implementation timeline	Quarter II

S.No	Particulars	
1	Proposed Programme / Intervention	Entrepreneurship Development Programme
2	Target group	Coir Entrepreneurs
3	No. of Batches	2
4	Batch size	25 nos
5	Training content	Project Opportunity Identification and Guidance, Support system for setting

		up of industries, Banking procedures, Taxation, Export Import procedures, Marketing etc.
6	Trainer / Training Institution	ITCOT Consultancy & Services Ltd.
7	Cost of Training programme	Rs.1,00,000/-
8	Implementation timeline	Quarter II

S.No	Particulars	
1	Proposed Programme / Intervention	Skill upgradation training on Mat making, Decorative Handicrafts, Gift articles making
2	Target group	Coir entrepreneurs
3	No. of Batches	4
4	Batch size	25 nos
5	Training content	Skill Training
6	Programme duration	5 days
7	Trainer / Training Institution	Coir Board
8	Cost of Training programme	Rs. 8,00,000/-
9	Implementation timeline	Quarter III,IV

S.No	Particulars	
1	Proposed Programme / Intervention	Exposure Visit
2	Target group	Coir Entrepreneurs/artisans
3	No. of Batches	As per requirement
4	Programme content	To enable entrepreneurs to interact with & learn from others, allowing them to view practical examples in the field
6	Coordinating Institution	IA
7	Cost of Training programme	Rs. 2,00,000/-
8	Implementation timeline	Quarter II

9.2. Market Promotion Programme

S.No	Particulars	
1	Proposed Programme / Intervention	Participation in Trade fairs
2	Target group	SPV members

3	No. of Batches	As per requirement
4	Programme content	Participation, Exhibit products to generate market linkages and enquiries
5	Coordinating Institution	IA & NA
6	Cost of Training programme	Rs. 3,00,000/-
7	Implementation timeline	Year II, Quarter II / Quarter III

S.No	Particulars	
1	Proposed Programme / Intervention	Design Development programme
2	Purpose	CFC Product development
3	No. of Batches	As per requirement
4	Programme content	New design development
5	Trainer / Training Institution	Coir Board & NID
6	Coordinating Institution	Nodal Agency
7	Cost of Training programme	Rs. 1,00,000/-
	Implementation timeline	Year II, Quarter III / Quarter IV

S.No	Particulars	
1	Proposed Programme / Intervention	Tie up with Business Development service(BDS) providers
2	Purpose	CFC Business development
3	No. of Batches	As per requirement
4	Content	Marketing & Technology
5	Coordinating Organization	SPV & Nodal agency
6	Cost of Training programme	Rs. 1,00,000/-
7	Implementation timeline	Year II, Quarter I / Quarter II

10 Hard Interventions

10.1. Creation of common facility centre:

a) Land

The CFC is proposed in 4 locations, considering the accessibility of the artisans. The land details of the 4 CFCs are given below:

CFC I: The SPV has taken land for long term lease (15 years) to an extent of 28710 Sq.ft (0.67 acres) for creating the Common Facility Centre-I for lease rental of Rs.18,000/- per annum. The location of the land is Plot No.120, Gadamatiapada Village, Kanasa Block. This unit is proposed to house yarn spinning facility, Mat making facility, Coir handicrafts facility and also it houses Storage godown for raw material and finished goods for all CFCs. The land area is considered adequate for the proposed activity.

CFC II: The land for CFC II has been taken for lease by the SPV, the lease period being 15 years and the extent of land is 7840 Sq.ft (18 Dismil) for lease rental of Rs.18,000/- per annum. The land is located at Plot no.343, Chandapada Balajitpur Village, Kanasa Block, Puri District. This unit is proposed to accommodate coir yarn spinning facility, Mat making facility and coir handicrafts facility. The land area is considered adequate for the proposed activity.

CFC III: The land is proposed to be taken on lease for a period of 15 years for lease rental of Rs.18,000/- per annum. The land is situated at Plot No.109, Jagadalpur Village, Delanga Block, Puri district. The extent of the land is 6970 Sq.ft (16.05 Dismil). The unit is proposed to house coir yarn spinning facility, Mat making facility and coir handicrafts facility. The land area is considered adequate for the proposed activity.

CFC IV: The land is located at Plot No.208, Sathasankha Village, Pipili block, Puri district. The SPV has taken land on lease basis for 15 years for lease rental of Rs.24,000/- per annum. The extent of the land is 9,583 Sq.ft (0.22 acre). The unit is proposed to house automatic fibre extraction facility and pith manure manufacturing facility. The land area is considered adequate for the proposed activity.

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

b) Cost & Area of Building works

CFC activities	Built up Area	Rate/Sq.ft.	Cost of Building
CFC I (Gadamatiapada village)			
Work shed for Auto yarn Spinning	2400 Sq.ft	Rs.900/-	Rs.21.60 lakhs
Work shed for Mat Making			
RM & FG Storage Godown			
Yard for Handicrafts	500 Sq.ft	Rs.300/-	Rs.1.50 lakhs
Sub Total			Rs.24.30 lakhs
CFC II (Kanasa Village)			
Work shed for Auto yarn Spinning	1200 Sq.ft	Rs.900/-	Rs.10.80 lakhs
Work shed for Mat Making			
Yard for Handicrafts	500 Sq.ft	Rs.300/-	Rs.1.50 lakhs
Sub Total			Rs.12.60 lakhs
CFC III (Jagadalpur village)			
Work shed for Auto yarn Spinning	1200 Sq.ft	Rs.900/-	Rs.10.80 lakhs
Work shed for Mat Making			
Yard for Handicrafts	500 Sq.ft	Rs.300/-	Rs.1.50 lakhs
Sub Total			Rs.12.60 lakhs
CFC IV (Sathasankha Village)			
Work shed for Fibre Extraction	2600 Sq.ft	Rs.900/-	Rs.23.40 lakhs
Process shed for pith manure	2500 Sq.ft	Rs.300/-	Rs.7.50 Lakhs
Sub Total			Rs.30.90 Lakhs
Grand Total	9,900 sq.ft (Building) 1,500 sq.ft.(Yard)		Rs.78.60 Lakhs

The estimate of building and civil works proposed has been worked out to **Rs.78.60 lakhs** as mentioned above.

10.2. Product & Process

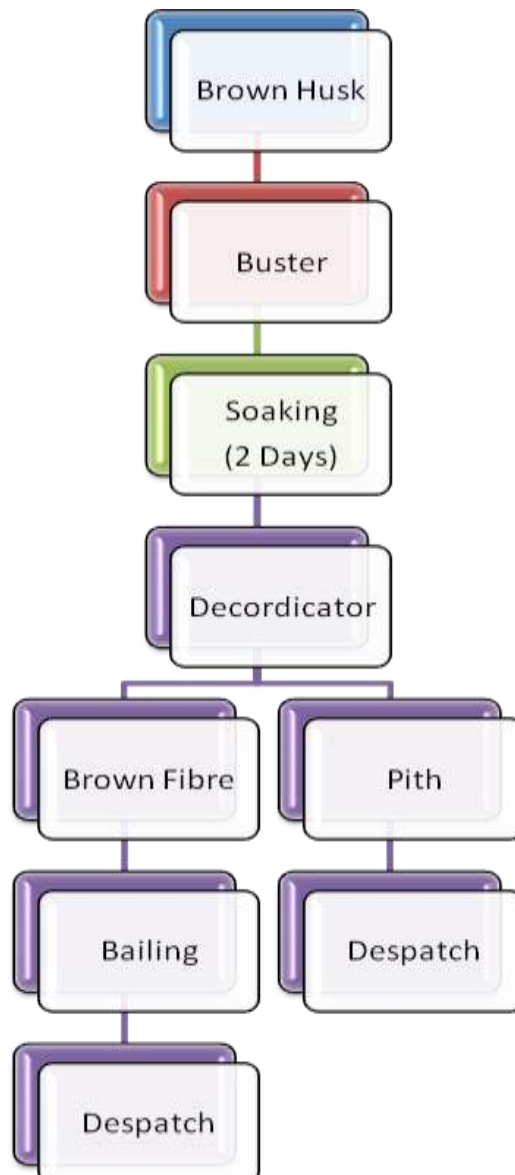
a) Coir Fibre Extraction

Coir fibre is used for agricultural and domestic purposes. It has also become an article of use in modern life either as garden article, as bags for the tea leaves, for

training hops, as brush mats at the door steps, as long-wearing carpets in the corridors of the bungalow veranda, as tastefully planned floor coverings in the drawing room or as the runner on the staircase, as geo-fabric for controlling landslide or soil erosion, for protection of embankments of roads, railway and canals.

Production Process:

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 bailing press and dispatched for sales. The process flow of fibre extraction from Brown husk is given below:





Soaking of coconut husk in water



Fibre Extraction Machine

Usage of Coir Fibre:

- ✚ Rope manufacturing
- ✚ Mattress & cushions filling
- ✚ Material for coir logs
- ✚ As a stitched blanket to control soil erosion
- ✚ Making fishing nets
- ✚ Prevent heat transfer and room insulation

Physical Properties of Coir Fibre:

Length in inches	6-8
Density (g/cc)	1.40
Tenacity (g/Tex)	10.0
Breaking elongation %	30
Diameter in mm	0.1 to 1.5
Swelling in water (diameter)	5 per cent
Moisture at 65 % RH	10.50 per cent

b) Coir Two Ply Yarn spinning facility

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

Coir yarn, being an intermediate product is consumed for varied uses. For the proposed Coir Matting and Geo-textiles manufacturing facility in the cluster, spinning facility is created to strengthen the backward linkage i.e. ensured raw

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

Production Process:

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



Two Ply Yarn Spinning Machine



Coir Two Ply Yarn

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

c) Coir Compost

Coir pith has gained importance owing to its properties for use as a growth medium in Horticulture. Because of wider carbon and nitrogen ratio and lower

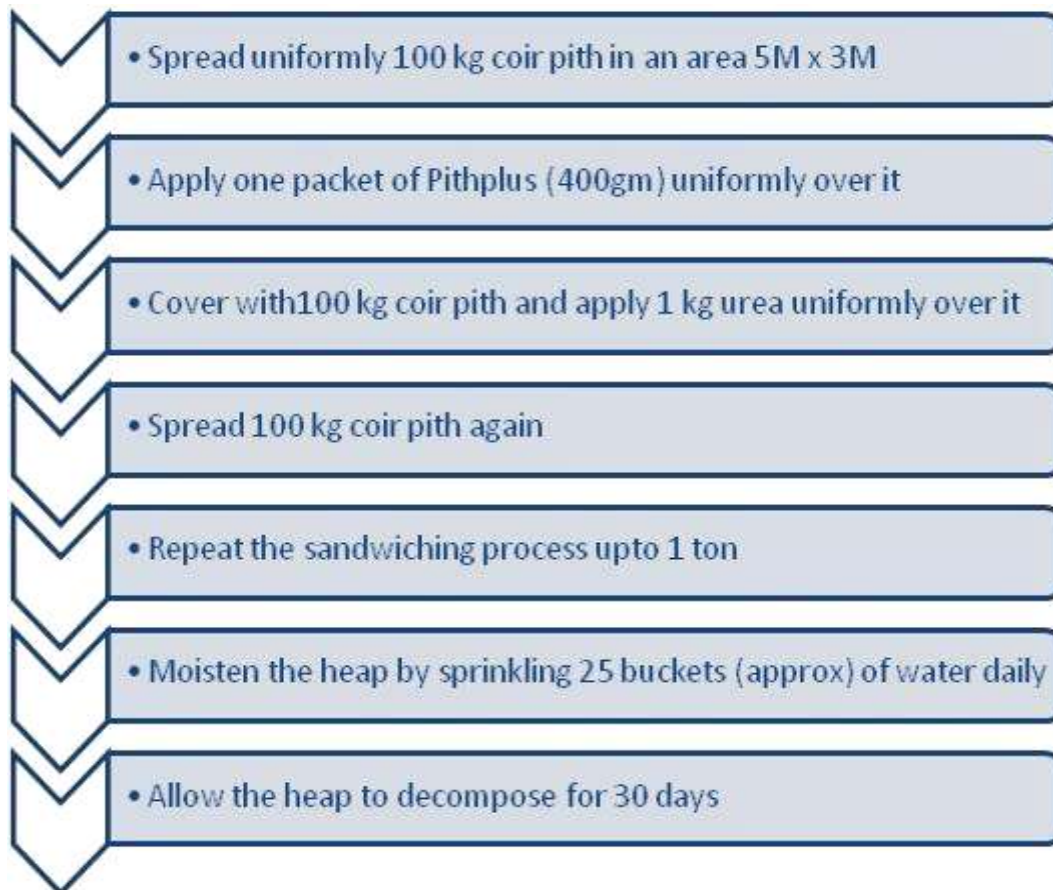
biodegradability due to high lignin content, coir pith is still not considered as a good carbon source for use in agriculture. Coir pith is composted to reduce the wider C:N ratio, reduce the lignin and cellulose content and also to increase the manorial value of pith. Composting of coir pith reduces its bulkiness and converts plant nutrients to the available form.

Benefits of composted coir pith

- The addition of composted coir dust improves soil texture, structure and tilth, sandy soil become more compact and clayey soil become more arable.
- It improves the soil aggregation
- It improves the water holding capacity (more than 5 times its dry weight) contributing towards increased soil moisture.
- The bulk density of both the sub surface (15-30 cm) soil is reduced to considerable extent with the application composted coir pith.
- Composted coir dust contains all plant nutrient elements and it can provide a supplemental effect along with inorganic fertilizers.
- There is improvement in cation exchange capacity of soils, where composted coir pith is applied.
- Coir pith compost application increased the soil native microflora because of addition of humic materials.
- Ammonification, nitrification and nitrogen fixation are increased due to improved microbiological activity.

Production Process

One tone of coir pith, 5 kg of urea and 5 bottles of, Pleurotus spawn is required to prepare one ton of coir pith compost. First 100 kg of coir pith waste should be spread over a shady place. Then one bottle of Pleurotus spawn should be applied over this layer uniformly. Now 100 kg of coir pith waste should be applied over this first layer and one kg of urea spread over the second layer of coir pith. This procedure of alternate application of Pleurotus and urea should be done for the whole one tonne of coir pith waste. Sufficient moisture should be ensured for speedy decomposition in this composting process. It takes nearly one month for complete decomposition of coir pith indicated when its colour changes to black. The process flow chart is given hereunder:



Specifications of Coir Pith Compost:

The specifications of Coir Pith Compost are as follows:

Moisture	30- 40%
pH	6.6-6.9
Electrical Conductivity (EC)	< 0.25 Millimhos/cm
Salinity	0-1 ppt
Cation Exchange Capacity (CEC)	40-60 meq/100 gm
Porosity	65-70%

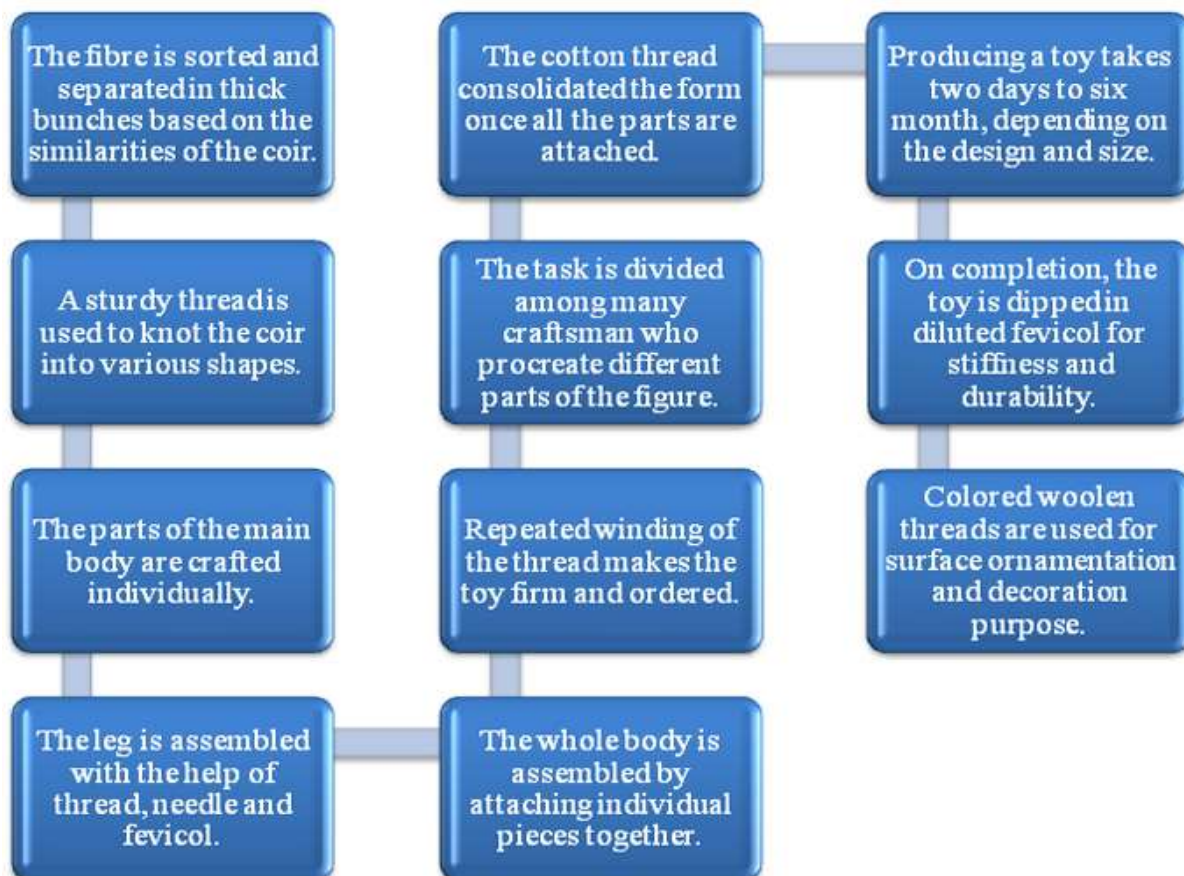


d) Coir Handicrafts

Coir fiber is converted into gorgeous toys by tying and folding the fibers together, the artisan in the cluster make animal figures, birds and utility products like Wall hangings, Pen stands etc, nearly a decade ago.

Production Process

The main steps in Coir toys making are illustrated in the flow chart below:



For making a toy, firstly, the design is to be finalized and made on the paper. According to the design they work on the proportion of the toys. For simple and small products, the coir is simply tied with the thread to make desired products. Glue is diluted with water and then used for pasting the fiber on the main body. The card board is cut into required shapes then fiber is stuck over the board which is used to provide proper shape and stiffness.

These toys are worked out in different parts and made in different forms. An artisan makes these parts in the particular day after which they are attached once all the parts are ready. Different parts are made by different people and then all

the parts are assembled together with the help of thread, needle and glue. After the completion of the product it is to be dipped in diluted glue for durability and stiffness.

Cotton thread is used to wrap the forms or products made of coir fiber. This helps the product to take a definite and a stable form. Colored wool is used for surface ornamentation of coir crafts like for eyes, clothes etc. Use of color wool also enhances the look of the toy. For value addition, wooden beads and metal bells are also used. After the completion of the toy or product, it is dipped into diluted glue. This is done, so that the thread stiffens up and does not open up. Glue solution provides better durability and stability to the product or toy. The final product may take two hours to six hours for completing depending upon the size of the product. Once the products are dried, they are packed in a newspaper, tied with the help of thread, and either sold to the middle men or direct marketing in front of a temple, tourist spots, shops etc. These products are attractive due to its decoration and various other attractive elements involved in the fiber.

The following images project a visual narrative of how a master craftsman transforms coir fibre to an attractive toy.



Coir Jewellery

Coir jewellery is one of the exotic new products. Artisans in the cluster are involved in making many beautiful jewellery articles like bracelet, necklace, bangles, ear rings, finger rings and other exclusive products. The price varies from Rs.50/- to 5000/-.



Production Process

Firstly the coir fibres are taken out of the husk. For making of the coir jewellery the coir is taken from the immature green coconut and soaked in water for months together. Later the coir fibres are naturally dyed with pleasant colors. Small articles like sequences, pearls, crystals, stones and studs are used in embellishments for the jewellery. Initially the longer coir fibre is picked and sewed onto a thin stick in order to make a ring with the help of needle. The rings are made in bulk which is then comprehended in making of a finger ring by binding all the linked rings together and sewing it in an appropriate manner like how

plaiting is made. Sometimes the coir is wined with regard to the diameter required and then single coir is taken and sewed around the wined coir to fasten the rings in crochet technique. The protruding fibres are cut with the help of nail cutter. The jewelries are made with subject to the form and design thought off. The coir fibres are bind together, sewed and twisted to the form needed.



- The coir is extracted from the immature coconut.
- The coir is soaked in water to attain its flexibility.
- Coir is dyed with natural colors.
- Coir fibres are taken and wined with regard to the required shape, size, and then single coir is sewed around the wined coir to fasten the rings in crochet technique.
- Embellishments like pearl, sequences, beads, crystals are added when required.



e) Coir Frame Mats

Coconut coir mats are purely handmade products, which are 100% organic, ethnic, biodegradable and hygienic that is strong, resistant and moisture in nature. They are available in spectrum of golden shades naturally like golden brown to reddish brown that is suitable for rustic environment. These mats are available in various shapes like rectangular, star shaped and etc. The coir mats are also available with the wording on them like 'welcome'. These mats are made of standard size by being 2ft breadth and 1½ ft length. The cost of these coconut coir mats range from Rs.100/- to Rs.500/-

Production Process

The coir mat is made of coir twine. The artisans used the natural brown coir according to the design concept, some coir twine are colored and segregated. Rectangular wooden frame with the nails attached to it is used for this process, and the coir mat making procedure gets begin.

At the one end of the coir twine, some length of the twine is divided into two strands and is knotted around the first nail of the wooden frame. And the coir twine is wound vertically of the frame around the nails that are at the opposite sides of the wooden frame.

Once the first layer is wound around the nails as the base, the same coir twine is continued to be woven for the second layer of the mat by winding it around the nails horizontally to the frame, by attaching the fresh coir twine to the one which is being wound and the process of winding gets continued to the second layer.

Once the whole of the second layer of winding gets completed the same coir twine is continued to be wound for the third layer, which is wound vertically to the frame and in the end it is knotted to the nail that is placed in a corner of the frame. Then the desired colored coir twine is weaved by inserting it in the spaces in-between the layers of the coir twine that is wound. This colored coir twine is weaved according to the 'X' pattern on these three layers of coir twine by using the knotting technique. Once the weaving is completed, the extra coir twine is cut and the mat is removed from the wooden frame. As a final practice, whole of the mat is cross-checked by the artisan and kept for the sales.

The main steps in Coir frame mat making are illustrated in the flow chart below:

01

Bundle of coir twine is segregated according to the requirement.

02

The coir twine is spilt and tied to the first needle of the frame.

03

Coir is looped/wound between the nails that are vertically placed on the wooden frame.

04

Second layer of the coir is wound horizontally upon the first vertical layer.

05

Third layer is again wound vertically.

06

Desired colored coir is added/attached for weaving.

07

As a border two rounds of coir is weaved in 'x' pattern knotting, accordingly.

08

Once the process of weaving is completed the extra coir twine is cut.

09

The mat is removed from the nailed wooden frame.

10

The final product of coconut coir mat gets ready to be sold.



10.3. Installed capacity

a) Coir Fibre Extraction

The installed capacity of the proposed Coir Fibre production unit is 2.00 Ton per shift. It has been proposed one shift operations and the installed capacity of the unit is worked out to 600 tons per annum, with 300 working days per annum.

Installed Capacity per shift	2.00 Ton of fibre
Number of shifts per day	1
Number of days per annum	300 days
Installed Capacity per annum	600 Tons
Raw material (Coconut Husk) requirement	12000 no. of husks per ton of Fibre output
Cost of Coconut Husk	Rs. 1.20 per husk

The Capacity utilization of the unit is proposed to be 70% in the first year of operation, 80% in the second year of operation and 90% in the subsequent year of operations.

b) Coir Two Ply Yarn Spinning

The installed capacity of the proposed Coir yarn spinning unit is 80 kgs per shift. It has been proposed to purchase 6 Nos. of yarn spinning machine. On single shift operation for 300 working days per annum, the installed capacity is worked out to 144 tons per annum

Capacity per machine per shift	80 kgs
Number of machines	6
Number of shifts per day	1
Number of days per annum	300 days
Installed Capacity per annum	144 tons

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

c) Coir pith compost

The production capacity of the coir pith compost is given hereunder:

No. of Compost beds	10
Coir Pith requirement per bed	4 tons
Number of bed cycles per annum	8
Coir Pith processed per annum	320 tons

10.4. Plant and Machinery

a) Coir Fibre Extraction

The list of machineries proposed for the Coir Fibre Extraction activities are given below:

S.No	Name of the Machineries & Specifications
1.	Disintegrator 3.5'- 60 HP, 1440 RPM, 3 Phase
2.	Decorticator 7'- 60 HP, 1440 RPM, 3 Phase
3.	Bailing press - 3 HP, 1440 RPM, 3 Phase
4.	Screeener (Fibre) - 2 HP, 960 RPM, 3 Phase
5.	Screeener (Pith) - 2 HP, 960 RPM, 3 Phase
6.	Conveyer 285' - 1.5 HP, 960 RPM, 3 Phase

The estimated cost of Coir Fibre Extraction machineries and accessories is Rs.45.00 Lakhs.

b) Coir Two Ply Yarn Spinning

It is proposed to establish 2Nos. of Automatic yarn spinning machine with Auto feeder in each of the 3 CFCs (CFC-I, CFC-II & CFC-III). The Coir Yarn spinning machinery components of each set up is given below:

S.No	Name of the Machineries & Specifications
1.	Turbo Willowing Machine - 3 HP
2.	Double Head Double Combing 2 Ply Coir Yarn Spinning Machine - 1.5 HP, 1440 RPM Motor
3.	Auto Feed For Double Head Spinning Machine With 0.5 HP Motor 1440 RPM and Gear Box coupled with 0.5 HP Motor
4.	Auto Rewinding Machine

Totally 6 Nos. of Coir spinning machines are proposed for the 3 CFCs and the cost of spinning section in each CFC (for 2 machines) is estimated at Rs.8.00 lakhs.

c) VAT DYE SET

Dyeing of coir fibre/yarn is essential for improving the marketability and aesthetic value of coir products and according to customer taste.

In this system, The vats of prescribed specifications (1.2 M diameter and 0.75 height) are fixed on hearths made of firebricks with flue pipes for efficient air draught for maximum utilisation of the heat energy. After filling with required quantity of water, it is heated from below till the required temperature is reached. The required quantity of dyestuffs and chemicals are added to the dyebath after making into a paste. The dyebath is stirred well and the material is entered and turned manually at frequent intervals for level dyeing. At the end of dyeing the material is taken out washed in cold water and dried under shade. The dyes are taken as per recipes formulated by the Central Coir Research Institute (CCRI), which is available in the shade cards.

It is proposed to establish vat dye set in each of the 3 CFC locations (CFC-I, II & III) and the cost estimated is Rs.0.60 lakhs for each CFC.

d) Handicrafts Moulding set, tools and accessories

It is proposed to install a Decorative/Gift article Moulding set, technology demonstrated by CICT-Bengalure, in CFC-I along with Handicrafts tools at an estimated cost of Rs.8.00 lakhs.

In CFC-II & CFC-III, Handicrafts tools and accessories are provided at the cost of Rs.2.00 lakhs for each cluster.

The list of machineries proposed for the CFC I, II, III & IV and cost thereof are given below:

CFC	Activity	Machines	Rate	Qty.	Amount
CFC-1 (Gadamatia- pada village)	1. Coir Yarn Spinning	a. Auto 2 Ply yarn spinning machines	Rs.3.50 lakhs	2 Nos.	Rs.7.00 lakhs
		b. Turbo Cleaning machine with motor	Rs. 0.60 lakhs	1 No.	Rs. 0.60 lakhs
		c. Auto rewinding machine	Rs. 0.40 lakhs	1 No.	Rs. 0.40 lakhs
				Total	Rs.8.00 lakhs
	2.Coir yarn dyeing	SS VAT Dye set	Rs.0.60 lakhs	1 set	Rs.0.60 lakhs
				Total	Rs.0.60 lakhs
	3. Mat making	Mat making frames with tool kits	Rs.0.60 lakhs	4 sets	Rs.2.40 lakhs
				Total	Rs.2.40 lakhs
	4. Handicrafts and Idols making	Hydraulic press,tools & Moulding set	Rs.8.00 lakhs	1 set	Rs.8.00 lakhs
			Total	Rs.8.00 lakhs	
		SUB-TOTAL - CFC -1 MACHINES			Rs.19.00 lakhs
CFC-2 (Chandapada balajitpur village)	1. Coir Yarn Spinning	a. Auto 2 Ply yarn spinning machines	Rs.3.50 lakhs	2 Nos.	Rs.7.00 lakhs
		b. Turbo Cleaning machine with motor	Rs. 0.60 lakhs	1 No.	Rs. 0.60 lakhs
		c. Auto rewinding machine	Rs. 0.40 lakhs	1 No.	Rs. 0.40 lakhs
				Total	Rs.8.00 lakhs
	2.Coir yarn dyeing	SS VAT Dye set	Rs.0.60 lakhs	1 set	Rs.0.60 lakhs
				Total	Rs.0.60 lakhs
	3. Mat making	Mat making frames with tool kits	Rs.0.60 lakhs	4 sets	Rs.2.40 lakhs
				Total	Rs.2.40 lakhs
	4. Handicrafts and Idols making	Handicrafts tools and accessories	Rs.2.00 lakhs	1 set	Rs.2.00 lakhs
			Total	Rs.2.00 lakhs	
		SUB-TOTAL - CFC -2 MACHINES			Rs.13.00 lakhs
CFC-3 (Jagadapur	1. Coir Yarn Spinning	a. Auto 2 Ply yarn spinning machines	Rs.3.50 lakhs	2 Nos.	Rs.7.00 lakhs
		b. Turbo Cleaning machine with motor	Rs. 0.60 lakhs	1 No.	Rs. 0.60 lakhs

CFC	Activity	Machines	Rate	Qty.	Amount	
village)		c. Auto rewinding machine	Rs. 0.40 lakhs	1 No.	Rs. 0.40 lakhs	
				Total	Rs.8.00 lakhs	
	2. Coir yarn dyeing	SS VAT Dye set	Rs.0.60 lakhs	1 set	Rs.0.60 lakhs	
				Total	Rs.0.60 lakhs	
	3. Mat making	Mat making frames with tool kits	Rs.0.60 lakhs	4 sets	Rs.2.40 lakhs	
				Total	Rs.2.40 lakhs	
	4. Handicrafts and Idols making	Handicrafts tools and accessories	Rs.2.00 lakhs	1 set	Rs.2.00 lakhs	
				Total	Rs.2.00 lakhs	
		SUB-TOTAL - CFC -3 MACHINES			Rs.13.00 lakhs	
CFC-4 (SultanNagar village, Sathasankhta)	1. Coir Fibre Extraction	Disintegrator, Decorticator, Bailing press, Screener (Fibre), Screener (Pith), Conveyor 285'.	Rs.45.00 lakhs	1	Rs.45.00 lakhs	
				Total	Rs.45.00 lakhs	
	2. Coir Pith manure	Refrigeration, weighing, testing and handling equipments	Rs.3.00 lakhs	1 set	Rs.3.00 lakhs	
				Total	Rs.3.00 lakhs	
			SUB-TOTAL - CFC -4 MACHINES			Rs.48.00 lakhs
			TOTAL OF ALL CFC MACHINES			Rs.93.00 lakhs
Common provisions	Electricals & Accessories	Electrification and wiring for all CFCs, Water well & pipeline			Rs. 3.00 lakhs	
	Handling infra	Mini truck (Hi deck)			Rs. 6.00 lakhs	
		SUB-TOTAL - Common			Rs. 9.00 lakhs	
Total cost of machinery, Electricals and Handling Infrastructure					Rs.102.00 lakhs	

10.5. Power

The connected load requirement estimated for the project is 158 HP (Unit I, II & III- 38 HP & Unit IV- 120 HP). The power connection could be availed through Single window scheme of District Industries Center.

10.6. Manpower

The manpower requirement estimated for the project is given hereunder:

Description	Nos.
Manager	1
Supervisors	4
Male Workers	5
Female workers (Unskilled)	15
Admin and Accounts	2
Security	3
Total	30

The required manpower would be sourced from within the cluster villages.

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 motivational programme	1.00	1.00	-
1.1.2	Awareness Programme	1.00	1.00	-
1.1.3	Entrepreneurship Development Programme	1.00	1.00	-
1.1.4	Skill Upgradation Programme	8.00	8.00	-
1.1.5	Exposure Tour	2.00	2.00	-
	Total Capacity Building cost	13.00	13.00	-
1.2	Market Promotion			
1.2.1	Participation in Trade fairs	3.00	3.00	
1.2.2	Design Development Programme	1.00	1.00	-
1.2.3	Tie up with Business Development Service (BDS) providers	1.00	1.00	-
	Total Market Promotion cost	5.00	5.00	-
	Total Soft Interventions Cost	18.00	18.00	-

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 (Unit I, II, III & IV)	78.60	70.74	7.86
2.2	Machinery & other components of Hard Interventions			
2.2.1	Common facility Centre I	19.00	17.10	1.90
2.2.2	Common facility Centre II	13.00	11.70	1.30
2.2.3	Common facility Centre III	13.00	11.70	1.30
2.2.4	Common facility Centre IV	48.00	43.20	4.80
	Total - Machinery cost	93.00	83.70	9.30
2.2.5	Electricals & accessories	3.00	2.70	0.30
2.2.6	Handling infrastructure (Mini truck - Hi desk)	6.00	5.40	0.60
	Other Infrastructure Cost	9.00	8.10	0.90
2.2.7	Working Capital	32.00	28.80	3.20
	Total - Machinery & other components of Hard Interventions	134.00	120.60	13.40
	Total Hard Interventions Cost (2.1 + 2.2)	212.60	191.34	21.26
	TOTAL INTERVENTIONS COST (SOFT & HARD)	230.60	209.34	21.26
3	Cost of Technical Agency (8% of HI Grant)	17.00	17.00	-
4	Cost of Implementing Agency (8% of HI Grant)	17.00	17.00	-
	TOTAL PROJECT COST	264.70	243.34	21.26

11.1. Cost of Establishment & Operation Common Facility Center

The project components and the cost thereof are mentioned below:

(Rs.Lakhs)

Cost Of Project	Total	SPV Share	Gol Grant
Hard Interventions - Grant Components			
Building & Civil works	78.60	7.86	70.74
Plant and Machinery	93.00	9.30	83.70
Electricals & accessories	3.00	0.30	2.70
Handling infrastructure	6.00	0.60	5.40
Working Capital	32.00	3.20	28.80
Total	212.60	21.26	191.34
Other Non-Grant components			
Contingencies (2.00%)	3.49	3.49	-
Deposits	2.55	2.55	-
Prel. & Pre-operative Expenses	0.56	0.56	-
Total	6.60	6.60	-
Total	219.20	27.86	191.34

The CFC cost of establishment and operation works out to Rs.219.20 Lakhs, of which Rs.27.86 lakhs will be the SPV share and Rs.191.34 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 Working capital amounting to Rs.212.60 lakhs**, which are to be contributed by SPV and Gol in 10:90 ratio. Lateral components viz. Contingencies, Deposits, Prel. & Preop. Expenses amounts to Rs.6.60 lakhs, for which Gol Grant is not applicable and the cost would be borne by the SPV separately.

11.2 Working Capital

Working capital gap for the first year of operation works out to Rs.32.00 lakhs. This is based on 30 days stock of raw materials, 10 days work-in-progress, 18 days finished goods stock and receivables for 20 days. The SPV would contribute 10% (Rs.3.20 lakhs) of the total working capital requirement and 90% (Rs.28.80 lakhs) would be met by the Gol grant under SFURTI. The increase in working capital in the subsequent years of operation will be met by internal generation. The details are provided in **Financial Statement 2**.

12 Plan for Convergence of Initiatives

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

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

The above initiatives would be undertaken with the participation of stakeholders on approval of the project. Notwithstanding the above initiatives, it is expected that the benefits of various other schemes such as 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 (Coir yarn spinning units)	5 members x Rs.15.00 lakhs = Rs.75.00 lakhs	Rs.26.25 Lakhs	Rs.45.00 Lakhs	Rs.3.75 Lakhs
PMEGP	5 (Coir Mat making units)	5 members x Rs.5.00 lakhs = Rs.25.00 lakhs	Rs.8.75 Lakhs	Rs.15.00 Lakhs	Rs.1.25 Lakhs
	Total	Rs.100.00 lakhs	Rs.35.00 lakhs	Rs.60.00 lakhs	Rs.5.00 lakhs

The additional investment estimated in the cluster is Rs.100.00 Lakhs with the scheme funding of Rs.35.00 lakhs, bank credit of Rs.60.00 lakhs and the promoter's contribution of Rs.5.00 lakhs.

13 Enhanced Project Cost & Means of Finance

The Project cost and Means of Finance of CORE SFURTI project is illustrated in Chapter 11. Convergence of initiatives would be undertaken to improve the viability of projects, strengthening the value chains and market linkages and to enable the overall improvement of the level of human development in the area.

Considering the convergence of other scheme benefits for individual cluster members, as foreseen in Chapter 12, the enhanced project cost and means of finance is given below:

(Rs.Lakhs)

S.No.	Component	Total Cost	Grant Component	Promoter's Contribution & Bank Loan
1	Core SFURTI	256.24	235.24	21.00
2	Convergence initiatives (Establishment of individual units under various schemes)	100.00	35.00	65.00
	Total	356.24	270.24	86.00

The enhanced project cost including the Core SFURTI and other convergence initiatives works out to Rs.356.24 lakhs, whereas the corresponding Grant component is Rs.270.24 lakhs and that of Contribution and bank loan is Rs.86.00 lakhs.

14 Project Timeline

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

S.No.	Proposed Interventions	Period	
		Year	Quarter
1	SOFT INTERVENTIONS		
1.1	Capacity Building		
1.1.1	Trust building and motivational programme	I	Q1
1.1.2	Awareness Programme	I	Q2
1.1.3	Entrepreneurship Development Programme	I	Q2
1.1.4	Skill Upgradation Programme	I	Q3,Q4
1.1.5	Exposure Tour	I	Q2
1.2	Market Promotion		
1.2.1	Participation in Trade fairs	II	Q2/Q3
1.2.2	Design Development Programme	II	Q3/Q4
1.2.3	Tie up with BDS providers	II	Q1/Q2
2	HARD INTERVENTIONS		
2.2	Building for CFC	I	Q3,Q4
2.3	Machinery for Common Facility Proposed		
2.3.1	Coir fibre Extraction	II	Q1
2.3.2	Automatic Yarn Spinning	II	Q1
2.2.4	Coir Pith Compost	II	Q2
2.2.5	Coir Handicrafts & Frame Mats	II	Q2
2.2.6	Electricals & accessories	II	Q1

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	
a. Coir Fibre Extraction	
Installed Capacity per shift	2.00 Tons of fibre
Number of shifts per day	1
Number of days per annum	300
Installed Capacity per annum	600 Tons
Raw material (Coconut Husk) requirement	12000 no. of husks per ton of Fibre output
Cost of Coconut Husk	Rs. 1.20 per husk
Selling price of Coir Fibre	Rs. 18,500.00 per Ton
b. Coir Yarn Spinning	
Capacity per machine per shift	80.00 Kgs.
Number of machines	6
Number of shifts per day	1
Number of days per annum	300.00
Installed Capacity per annum	144.00 Tons
Selling price of Coir Yarn	Rs. 38,000.00 per Ton
c. Coir Pith Compost	
No. of Compost beds	10
Coir Pith requirement per bed	4 Tons
Number of bed cycles per annum	8
Coir Pith processed per annum	320 Tons
Yield (Coir Pith to Compost)	70%
Cost of Pith plus and Urea	Rs. 750.00 per ton of output
Selling price of Coir pith compost	Rs. 15,000.00 per ton of output
d. Coir Handicrafts	
Annual Sales realization - Sale of Handicrafts & Decorative moulded items	Rs. 24.00 lakhs in the first year of operation and 20% increase in subsequent years
Cost of consumables & labour	30% of Sales Realization
e. Coir Mats	
Annual Sales realization - Sale of Mats	Rs. 36.00 lakhs in the first year of operation and 20% increase in

Assumptions For Cost Of Production And Profitability	
	subsequent years
Cost of consumables & labour	30% of Sales Realization
Capacity Utilization	
- First year	70%
- Second year	80%
-Third year onwards	90%
Lease Rental for CFC land	Rs.78,000 per year in the first year and 5% increase every five years as per lease deed
Power Cost	Rs.6.00 per KWH
Repairs & Maintenance	2.00%Of plant and machinery cost in the first year of operation and 10% increase in every subsequent years
Administrative Expenses	1.00% Of sales realization
Selling Expenses	2.00% Of sales realisation
Capacity Utilization	
- First year	75%
- Second year	80%
-Third year onwards	90%
Lease Rental for CFC land - Rs.6,000 per month in the first year and 10% increase every five years as per lease deed	
Power Cost - Rs.6.00 per KWH	
Repairs & Maintenance - 2.00%Of plant and machinery cost in the first year of operation and 10% increase in every subsequent years	
Administrative Expenses - 1.00% Of sales realization	
Selling Expenses 2.00% 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	189.68	220.21	253.14	270.42	291.15
Profit Bef. Tax	50.30	63.97	79.14	88.66	100.35
Provision for taxation	9.39	16.70	23.95	28.77	34.02
Profit after Tax	40.91	47.27	55.19	59.88	66.33
Break Even Point	35%	31%	27%	26%	24%

Net Present Value (NPV) : Rs.88.77 lakhs

Internal Rate of Return (IRR) : 20.55 %

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 Raghunath Pathagar, having its registered office at Gedal Palli, Chikalkhandi Post, Via Chatrapur, Ganjam district, Odisha. 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 Trust in the name of "M/s Raghunath Coir SPV Trust" as per the Trust Deed dated 10.07.2017. The registration has been carried out with 7 trustees, 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 7 trustees and the list is given below:

S.No.	Name	Age	Designation
1.	Ms.Sanchayeeta Nayak	41 years	Chairman & founder
2.	Mr.Shitikantha Nayak	51 years	Trustee
3.	Mr.Baikuntha Pradhan	35 years	Trustee
4.	Ms.Harapriya Samantasinghar	45 years	Trustee
5.	Ms.Jayashree Panhatsingh	47 years	Trustee
6.	Ms.Abharani Balabantary	40 years	Trustee
7.	Ms.Santilata sahoo	48 years	Trustee

17 Expected Impact

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

S. No.	Parameter	Pre-Intervention	Post-intervention		
			Y 1	Y 5	Y 10
1	Cluster Turnover (Rs. Lakhs)	120.00	460	575	720
2	Investment (Rs. Lakhs)	45.00	285	340	410
3	Wages per day (Rs.)	120.00	220	280-300	360-380
4	Profitability (%)	8-10%	18-20%	18-20%	18-20%

- Sustainable livelihood for artisans engaged in cluster activities.
- Strengthened backward (input procurement) and forward linkages (market).
- Establishment of new units by converging various schemes of State and Central Governments (such as CITUS, PMEGP etc.) resulting in additional investments and employment in Coir sector by the cluster members
- Improved access to financial capital for cluster members
- 100% Coverage of cluster artisans under social security schemes

Financial Statements