Detailed Project Report

PENDUR COIR CLUSTER

North Malvan Block, Sindhudurg District
Maharashtra State

Submitted to

Coir Board
Kochi

Prepared by

NATIONAL INSTITUTE FOR MICRO, SMALL AND MEDIUM ENTERPRISES
(An Organization of Ministry of MSME, Government of India)
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List of Acronyms

BDS:	Business Development Service Providers
CDP:	Cluster Development Programme
CFC:	Common Facilities Centre
DPR:	Detailed Project Report
DIC:	District Industries Centre
DRDA:	District Rural Development Agency
IA:	Implementing Agency
MMSME:	Ministry of Micro, Small and Medium Enterprises
MSME-DI:	Micro, Small and Medium Enterprise Development Institute
nimsme:	National Institute of Micro, Small and Medium Enterprises
NMCP:	National Manufacturing Competitiveness Program
NGO:	Non Government Organisation
NABARD:	National Bank for Agriculture and rural Development
SHG:	Self Help Groups
SPV:	Special Purpose Vehicle
SWOT:	Strengths, Weaknesses, opportunities and Threats
TIs:	Technical Institutions

PROJECT SUMMARY

1. Cluster Category: Minor

2. Name of Cluster: **Pendur Coir Cluster**

3. Location
   State: Maharashtra State
   District: Sindhudurg
   Blocks: Malvan and Devgad

4. Craft/ Industry: Coir

5. Current Product Portfolio: Fibre, Yarn, Rope, Door mat, Matting, coir Pith

6. Name of IA: Mahila Katthaya Audogik Cooperative society Ltd, Vengurla

7. Project Objectives:

- To create networks for collection of husk by motivating artisans and farmers
- To upgrade technical and marketing skills of artisans
- To manufacture value added products
- To create required common facilities
- To enhance production level by at least 50%
- To increase profitability by at least 30%
- To enhance turnover by 30%

8. Key gaps identified

- Abundant quantity of coconut trees but negligible utilization of coir husk
- Production of traditional products
- Poor technical skills of artisans
- Absence of technology for production of value added products

9. Proposed Interventions

Soft Interventions

- Formation of consortiums for raw material bank, CFC and marketing
- Supply of 100 Rats and 75 mat frame and press including installation and training
- Skill Upgradation programs for Artisans
- Exposure visit for artisans to understand market demand, customer taste and develop new designs as per customer preferences.
- Development of new product range by involving experts from NIFT/NID or other service providers
- Training programme on Marketing for SHG leaders and consortium members
- Printing of brochures and catalogues
- Participation in National & international Marketing events Hard Interventions

Hard Interventions:

- Establishment of common facility Centre with fibre extraction, automatic spinning machines, Anugraha looms and coir pith making unit

10. Project cost & Means of Finance

S. No.	Particulars	NA	IA	Total
1	Hard Interventions	94.76	31.59	126.35
2	Soft Interventions	25.00	-	25.00
3	Cost of TA (8% of 94.76+25.00)	9.58	-	9.58
4	Cost of IA/CDE	20.00	-	20.00
		149.34	**31.59**	**180.93**

11. Scheduling

Soft Interventions

S. No	Activity	2015-16				2016-17				2017-18			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Formation of consortiums for raw material bank, CFC and marketing												
2	Supply of 100 Rats and 75 mat frame and press including installation and training												
3	Skill Upgradation programs for Artisans												
4	Exposure visit for artisans to understand market demand, customer taste and develop new designs as per customer preferences.												
5	Development of new product range by involving experts from NIFT/NID or other service providers												
6	Training programme on Marketing for SHG leaders and consortium members												
7	Printing of brochures and catalogues												
8	Participation in National & international Marketing events												

Hard Interventions

Financial Year		2015-16				2016-17				2017-18			
S. No	Activity	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
1	Civil works												
3	Bidding process for machinery												
4	Electrical works												
5	Installation of Machinery & commissioning												
6	Trial production												
7	Commercial Production												

13. Scope for convergence

- Coconut Development board will be involved to motivate the farmers and their family members for collection of husk, processing and making coir products.
- District Rural Development Authority (DRDA) and Department of Agriculture will be involved in capacity building of SHG members.
- MSSIDC will be involved in marketing of coir products through their outlets.
- Initiatives will be taken to associate corporate CSR foundations to promote coir handicrafts for the tourist place like Goa etc.

14. Proposed SPV

The cluster is proposed to be set up at Pendur covering the radius area of 15 kms in Malvan and Devgad blocks of the district. There are about and 10 individual automatic spinning and curled coir units in the cluster area besides the 400 artisans trained by the coir board and DRDA for coir processing by Implementing Agency. The cluster is proposed is to be set up at Pendur village of Malvan taluka of Sindhudurg district. The Cluster will collect the husk from the villages in both the blocks. As Malvan and Devgad are the coastal belt, adequate raw material is available in the area. A cooperative society has been established which acts as SPV and takes initiatives to establish and

manage CFC. The CFC provides only services and no business transactions to get profit. Hence, the recurring cost is to be met by collecting service charges. However, the Implementing agency has agreed to meet the required contribution in creation of CFC, if SPV is not in a position to mobilize required funds, apart from the Ministry of MSME grant.

16. Key impact

The initiatives proposed by cluster have been towards creating employment opportunities for the rural unemployed youth. It was observed that the young generation migrates from their place to the nearby cities like Mumbai, Thane, Goa and Pune for livelihood as there is no employment opportunity in the local place. Establishment of unit at their village by each trained entrepreneur will be able to provide employment to about 5 people with the raw material available at the village level.

By setting up the unit, entrepreneur will get the income through out the year. Providing the employment to 10 people, direct and indirect employment generation will to the extent of 1000 people.

Husk is used as a waste and burnt which will fetch price for the farmers. Once CFC is created, there is a possibility to increase the price of husk from existing level of Rs. 0.70 to Rs. 1.00 per husk The pollution and health hazard could be prevented.

The small units could pave way for the rural industrialization in the district. The small units can form the cluster at village level in future.

Chapter – 1
Cluster Profile

1.1 Background

India is endowed with more than one million traditional manufacturing enterprises which are micro in nature and fall under unorganized sector. Since ages the artisans are producing handlooms, handicrafts and coir products across the country especially in rural areas. Due to reasons like availability of skilled manpower, raw materials, these enterprises are concentrated in clusters across the country. These clusters are playing an important role in providing employment opportunities in rural areas and even exporting to global markets due to uniqueness of the products. However issues like labour intensive nature, low volumes of production, limited focus on value addition are hindering their growth and make them incompatible with countries like Indonesia, China and Malaysia.

In recent times, Cluster approach has become one of the important tools for micro enterprise development in the country. The Cluster strategy is expected to help the micro enterprises to enhance their productivity and develop new innovative products through cooperative mode. In fact development of clusters as a tool for increasing production, triggering economic growth, alleviating poverty and removing regional economic imbalances is gaining momentum in both the developed and developing countries.

The Government of India through various Ministries is implementing cluster based development Schemes/ programmes. In addition, many International agencies like UNIDO, GTZ, UNDP, banks, financial institutions like NABARD, SIDBI and NGOs are taking part in cluster development. Micro and Small Enterprises Cluster Development Programme (MSE-CDP), Scheme of Fund for Regeneration of Traditional Industries (SFURTI), Integrated Handloom Cluster Development Scheme (IHCDS), and Baba Saheb Ambedkar Hastshilp Vikas Yojana (AHVY) are some of the important schemes

being implementing by the Government of India for development of micro and small enterprises.

1.2. Scheme of Fund for Regeneration of Traditional Industries (SFURTI)

With a view to make the traditional industries more productive, competitive and facilitate their sustainable growth, the Government of India has launched a Scheme in the year 2005 called SFURTI (Scheme of Fund for Regeneration of Traditional Industries). The Union Ministry of Micro, Small and Medium Enterprises and its organizations and institutions, in collaboration with State Governments, their organizations concerned, non-Governmental organizations, etc, are implementing the Scheme.

The SFURTI Scheme takes a holistic approach for cluster development and includes an initial diagnostic study and trust building exercise, based on which assistance is provided for infrastructure development, skill development, technology upgradation of the enterprises, marketing, product development and setting up of common facility centres, etc.

Encouraged by the success of implementation of SFURTI scheme during 11th Plan, Coir Board has proposes to implement said scheme in the 12th plan period because of its impact in terms of employment creation, new enterprise creation, improved quality and productivity to name a few. About 20 clusters have been identified by the Coir Board for implementation of SFURTI scheme. Coir Board has entrusted National Institute for Micro, Small and Medium Enterprises (**ni-msme**) to prepare Detailed Project Report for Pendur Coir Cluster, Block Malvan, District Sindhudurg, Maharashtra State.

1.3. Overview of Coir Industry

Coir is a natural fibre extracted from coconut husk and used in making products such as rope, floor mats, doormats, brushes, mattresses, etc. Technically, coir is the fibrous material found between the hard, internal shell and the outer coat of a coconut. Other uses of brown coir (made from ripe coconut) are in upholstery padding, sacking and

horticulture. White coir, harvested from unripe coconuts, is used for making finer brushes, string, rope and fishing nets.

Coir fibres are found between the hard, internal shell and the outer coat of a coconut. The individual fibre cells are narrow and hollow, with thick walls made of cellulose. They are pale when immature, but later become hardened and yellowed as a layer of lignin is deposited on their walls. Each cell is about 1 mm (0.04 in) long and 10 to 20 mm (0.0004 to 0.0008 in) in diameter Fibres are typically 10 to 30 centimetres (4 to 12 in) long. The two varieties of coir are brown and white. Brown coir harvested from fully ripened coconuts is thick, strong and has high abrasion resistance. It is typically used in mats, brushes and sacking. Mature brown coir fibres contain more lignin and less cellulose than fibres such as flax and cotton, so are stronger but less flexible. White coir fibres harvested from coconuts before they are ripe are white or light brown in colour and are smoother and finer, but also weaker. They are generally spun to make yarn used in mats or rope. The coir fibre is relatively waterproof, and is one of the few natural fibres resistant to damage by saltwater. Fresh water is used to process brown coir, while seawater and fresh water are both used in the production of white coir.

The word Coir came from the Malayalam word Kayar or Kayaru, which means cord, to be twisted. Coir is stiff and coarse fiber from the outer husk of a coconut which is used for making rope and other products. During the 13th century there was evidence of coir yarn being used in building ships in the Persian Gulf. When Portuguese Admiral Vasco de Gamma sailed in to Kerala, in the late 15th century, he must have seen this multipurpose fibre. In the historical archives in Lisbon, there is a reference to coir. Coir is used for caulking, for sealing the space between the planks and for making ropes for sails and hawsers to tie ships and hold them during the tidal waves. The coir industry was in U.K before the 2nd half of the 19th century. In 1840 Captain Widely, in co-operation with Captain Logan and Mr. Thomas Treolar founded the well known Carpet firm of Treloar and Sons in Ludgate Hill.

It is likely that both India and Sri Lanka were the first countries in the world to have discovered the multiple uses of coconut fibre: Coir fibre and yarn was therefore, known

beyond the shores of India from ancient times. Coir industry in India has a very long history. In the Valmiki Ramayana there are references of coconut in the Kishkindha and Aranya Kanda. It is believed that coconut was introduced in India during the post-Vedic period. References have been made on coconut in Raghuvamsa of Kalidasa and Sangam literatures, which proves the antiquity of the coconut in India. But its origin in India remains disputed. Marco Polo, the Arab traveller who visited India in the 13th century called coconut "Indian Nut" and the logic for such a reference need further research by historians. Shri P.K. Balakrishnan, a Kerala historian argues that organised coconut cultivation started in Kerala only after the arrival of the Portuguese.

1.4. Global Scenario

Total world coir fiber production is 250,000 tones (250,000 long tons; 280,000 short tons).The major countries producing coir are India, Sri Lanka, Indonesia, Philippines. This industry is particularly important in some areas of the developing world. India, mainly in Pollachi and the coastal region of Kerala State, produces 20% of the total world supply of white coir fiber. Sri Lanka produces 36% of the total brown fiber output. Over 50% of the coir fiber produced annually throughout the world is consumed in the countries of origin, mainly India. Together, India and Sri Lanka produce 90% of the coir produced every year.

1.5. National Scenario

In the recent years, India has attained the top position amongst the coconut producing countries with a production of 13088 million nuts surpassing Indonesia and Philippines which is about 24.23 per cent of the world production. With an area of 2.14 million hectares, the national average of nut is about 10615 nuts per hectare. Coconut contributes around Rs. 5000 crore annually to the Gross Domestic product. Among the states in India, Kerala is the largest producer of coconuts contribution 45% of India's production with Tamilnadu, Karnataka and Andhra Pradesh.

The coir industry, which forms the main plank of the economy of the coastal areas of Kerala, is one of the oldest and most traditional industries in India. The geographical

location of this area providing a salubrious climate for the large scale cultivation of coconut palms and the winding network of rivers, canals, lakes, lagoons and estuaries is an enormous inter connected, web of water ways, Virtual forests of coconut palm spread across these flat, green lands which is providing further a unique and distinct facility for the retting of coconut husks, that constitute the basic raw material for the industry, have helped in concentrating this industry in and around coastal area. These natural facilities, which do not seem to exist as such anywhere in the other large coconut producing countries have been fully made use of by the generations of men and women who inhabit this part of the country.

Coir Industry is exclusively a cottage Industry on its spinning side. On the manufacturing side of finished goods, it is partly cottage wise and partly factory wise. The Co-operative Sector also made its mark, organizing individual households involved in coir making activities and reaping the benefits of organised buying of raw material and shared common facilities. Kerala alone has 620 primary societies and 43 manufacturing societies.

The Indian Coir Industry has been fortunate to get another boost in the form of the ever-increasing awareness about eco protection. Coir, being a natural fiber that is environment friendly in the strictest sense of the term, is now seen as the fiber of the future. The eco friendly quality of coir will help to hold its ground even as it battles competition from synthetic fiber.

The Indian Coir Industry is now on the come back trail, after the sluggishness over the past three decades. The export figures have moved up from Rs. 250 crores in 1997 to Rs 605.17 crores during 2006-07. Those figures may not look awesome in value terms, but the real significance lies in the fact that the industry employs a staggering 6 lakhs people directly or indirectly. Equally significant is the fact that most of these people are from the economically disadvantaged classes, and as much as 80 % of the workers are women.

Mechanization is no more opposed by the labourers and the winds of liberalization are sweeping the industry. The Indian Coir Industry, that many thought was breathing its last in the early Nineties, is waking up to a new blooming.

The Coir processing units in the country (excluding the small sized spinning, tiny and household units in unorganized sector which are about 300000 units) are as under:

State	Fiber extraction units	Spinning & rope making units	Product manufacturing units	Rubberized coir units	Pith processing units	Curled coir units	Others	Total
Andhra Pradesh	111	134	45	9	1	7	-	307
Karnataka	174	191	113	15	-	62	1	556
Kerala	47	395	7323	20	5	-	4	7794
Maharashtra	1	1	-	9	1	-	3	15
Orissa	21	253	116	3	-	5	30	428
Tamil Nadu	708	340	30	10	38	180	1	1307
Total All India	1085	1363	7652	109	45	261	58	10573

Source: CCRL Liabrary

The Coir Industry in India has a strong position in the export orientation since the early days, when trade was dominated by European companies. Structure of production and relations has changed significantly since then. The pattern of exports and product mix has also changed drastically. With the level of fiber and yarn exports, India is an exporter of goods with added value, which in turn led to a significant change in total volume and value of exports. Coir Export in India fetched around Rs 1116 cr in 2012-13 as against Rs 1052 crore in the last fiscal. There is a huge market for Indian Coir products abroad and at present exports are being done to more than 112 countries. More than 40 per cent of the production is being exported. At present domestic sale is about Rs 3000 crores. The exports had grown by 30 per cent in value and 28 per cent in the current financial year. Coir exports from India had maintained a continuous growth trajectory even during the global economic crisis. For the Indian coir exports the US is

the largest market accounting for 37 per cent. Coir exports from India now have new markets such as Russia and Latin America. The state of Kerala is responsible for about 80% of India's coir exports. Exports have risen at healthy rate of more than 20% during the last nine months of this fiscal.

Export of Coir & Coir Products from India
(April 2009 to March 2013)

Q=Quality in tones **V=Value in Rs (lakhs)**

PRODUCT NAME	2009-2010		2010-2011		2011-2012		2012-2013	
	Q	V	Q	V	Q	V	Q	V
CURLED COIR	3365.7	668.33	5527.08	1056.52	11855.97	3171.30	8883.14	2112.46
COIR FIBER	73074.93	9742.03	83393.01	12148.55	119684.54	20323.98	140692.93	20707.66
COIR RUGS	46.17	45.38	1146.81	826.22	191.00	185.55	94.83	133.37
COIR PITH	131916.67	12347.06	157854.93	14829.02	206424.57	22150.70	208399.28	24727.61
COIR ROPE	430.56	165.92	211.56	86.72	792.82	340.99	419.62	282.41
COIR OTHERSORTS	55.04	28.52	45.96	35.84	58.36	68.75	30.36	39.33
COIR YARN	6108.35	2461.21	5021.96	2685.34	5562.87	3140.70	42002.30	2387.22
GEO-TEXTILES	375.44	2023.77	3266.63	1823.05	3680.91	2433.12	3597.30	2628.74
HANDLOOM MATS	36297.71	25428.01	29409	21525.8	27656.17	23545.00	24150.93	22810.10
HANDLOOM MATTING	1832.24	1425.28	1406.49	1244.72	1473.78	1582.83	1418.31	1702.76
POWERLOOM MATS	2.84	2.03	0.00	0.00	36.14	24.56	1.94	3.15
POWERLOOM MATTING	2.41	3.04	0.00	0.00	0.00	0.00	0.00	0.00
RUBBERISED COIR	629.78	713.39	383.39	476.89	415.60	549.80	321.47	495.02
TUFTED MATS	36991.21	25351.24	33349.2	23968.41	33021.17	27745.26	37288.51	33572.91
TOTAL	294508.05	80405.2	321016.02	80707.1	410853.90	105262.54	429500.92	111602.74

1.6. Maharashtra Scenario

The coconut is grown in the entire district and total area under coconut plantation in Maharashtra has been 28,880 hect. The major area under coconut is found in Konkan region of Maharashtra comprising of districts viz. Thane, Raigad, Ratnagiri and Sindhudurg. Konkan Region is having costal area of 720 km, having coconut plantation on large scale giving scope to coir industries. The coconut grown in other district is meagre and for the decorative purpose and not commercial level.

The area covered under the coconut plantation in the state and coastal districts in 2012-13 is as under:

District	Area under Coconut planation (in Hect.)	% to total
Thane	1910	6.61
Raigad	1320	4.57
Sindhudurg	17555	60.79
Ratnagiri	4882	16.90
Total area of Konkan	25667	88.87
Maharashtra	28880	100.00

Source: Coir Board

Sindhudurd has the area of 17555 Hectares under coconut plantation i.e. 60.79 per cent of the total area under coconut plantation in Maharashtra state. As against the total area under coconut plantation of 25667 Hect. In Konkan region, the share of coconut plantation in Sindhudurg district during 2012-13 was 68.40 per cent. It has been

observed that despite having the substantial area under coconut plantation, the husk is used as fuel. Further, only one unit under cooperative sector " mahial Kathya Audhigic Sahakari Sanstha ' is in operation in the district. 161 Self help Groups are the members of the cooperative society. The unit is working at Vengurla. The raw material is available in plenty and the same can be processed in to the fiber and then to coir products. The potential can be harnessed with proper training to the entrepreneurs in the district for coir making.

1.7 Project Location

Malvan and Devgad are the talukas of Sindhudurg district which are well connected by rail, road, port and having large area under coconut plantation. The proposed cluster is therefore proposed to be set up for promoting coir products in the state of Maharashtra at village Pendur, Malvan block, district Sindhudurg. This cluster will be the center for de-fibering of husk. Automatic spinning- Anupum looms. The salient features of the district and also the Taluka Malvan and Devgad are as under:

1.7.1. Sindhudurg District

Sindhudurg is one of the administrative districts in the state of Maharashtra in India, which was carved out of the erstwhile Ratnagiri District. The district headquarter is located at Oros. The district is named after the fort of Sindhudurg (which means "fort in the sea"), which lies on a rocky island just off the coast of Malvan. Sindhudurg fort, built in the 16th century by Shivaji is the only fort which has Shivaji temple inside the fort and palm imprint of King Shivaji. Sindhudurg district has 37 forts, the highest number of forts in Maharashtra as well as all types of forts (Jaldurg – Sea), (Bhuikot – fort on land) and (Giri- fort on hilltop).

The district occupies an area of 5207 km² and has a population of 849651 of which 9.47% were urban (as of 2011). The district is *divided* in 8 Tehsils viz. Dodamarg, Sawantwadi, Vengurla, Kudal, Malvan, Kankavli, Devgad, Vaibhavwadi

There are 743 villages and 5 towns

Total Railway track of 103 km is in the district and all the villages are connected by roads. Total Road Length is 4640 km- National Highway 108 km, State Highway 668 km, Dist. Roads 1473 km and Village Roads 2391. Irrigated area is 33,910 Hec.and non-Irrigated-104,390 Hect. Besides Forest 38,643 Hect. 74% of total land holding in the district, are held by small and marginal farmers. The irrigated area is only 23.48% through well and small channels. Major Projects viz Tilari & Talamba, 4 Medium Projects, 33 Small Projects are in the district. Major Crops of the district are Rice, Coconut, kokam, Mango, Cashew. The area under different crops is as under:

Crops	Area in Hec. (000)	Horticulture and plantation crops.	Area in Hec(000)
Rice	78.7	Mango	27.1
Finger Millets	3.7	Cashew	60.6
Pulses	6.0	Sapota	0.2
Groundnut and sunflower	5.8	Coconut	17.555 *
Sugarcane	0.62	Arcanut	0.8

Source. Agriculture Department- 2009-10 * Coir board statistics

1.7.2. Manvan Taluka

Malvan (also written as Malwan) is a town and *taluka* in Sindhudurg District, the southernmost district of Maharashtra State, India, well known for the historically important Sindhudurg Fort. Malvan *taluka* consists of villages such as Aangnechi wadi, Achra, Khalchi Devli, Jamdul, Juva, Pankhol and Sarjekot. The main occupation here is fishing. The town produces Alphonso mangoes.. Malvan is a compact town situated on the coast of Western India and boasts some beautiful beaches. Sindhudurg fort, Tarkarli beach, Mobar point, Chiwala beach, Tondavali beach, all attract tourists. Malvan town is bound by three small creeks: Karli, Kolamb and Kalavali. The climate of Malvan can be generally classified as warm and moderately humid. Average temperatures range between 16 - 33 °C while relative humidity ranges from 69 to 98%. The annual average rainfall of Malvan is 2275 mm.

Malvan is easily accessible by road, being 514 km from Mumbai and 140 km from Ratnagiri. When arriving from Mumbai or Goa, take National Highway NH-17 till Kasaal, and then take a State Transport bus or rickshaw for an approximately 35 km ride to Malvan. The nearest railway station is at Kudal/Kankawali and the nearest airport is at Dabolim in Goa. Overnight trains depart daily Mumbai for Kudal.

1.7.3 Devgad

Devgad is a coastal village in Sindhudurg district and consists of 98 villages Devgad is known globally for its exports of locally grown Alphonso mangoes.[3] Mangos grown here are characterised by their distinct aroma, smooth exterior, thin skin and thick saffron pulp.Devgad is located on the Arabian Sea in the coastal Konkan region of Maharashtra, south of Mumbai. It is noted for its harbor, its beach, and a lighthouse built in 1915 at the Deogad fort. The nearest railway station is Kankavli on Konkan Railway on Mumbai-Goa road. From Kankavli, one can get autorickshaw and state transport buses to reach Devgad-Vijaydurga. There is a wall under the sea at shores of the Vijaydurga built such that an enemy's ships, trying to attack, would crash and sink. Devgad is also widely known for its pure Alphonso mango cultivation/farming and the whole development has evolved due to undertaking of the cultivation of Alphonso

mango farming. Fishing is carried out on a large scale in the sea as well as in the creeks throughout the Deogad taluka region.

1.7.4. Infrastructure

The project will be set up in village Sonurli Taluka Sawantwadi. The cluster has already identified the land and deal is going on. The project infrastructure to be created in the cluster will be creating of Common Facility Centre for the activities of coir processing for the artisans.

TAs may be seen from the production of coconut in the district, the raw material available will be collected for the cluster for further processing with improved technology in coir making. It is expected that the entrepreneurs should start the coir making activity at their place and further to create common facility centre under the SFURTI. Husk which is being burnt as fuel could be processed and convert into the employment opportunity for the new entrepreneur in rural area. This will reduce the pollution and add to the income of the people.

The husk is only used as fuel in the district and people are not aware of the coir making activity. Large number of cluster in coir making could be possible but require improvement in skill up-gradation and creation of awareness. It is therefore proposed to impart the skill through this cluster with the support from Coir Board.

1.8 Project Overview:

The cluster is the first unique concept in the state to promote coir products and employment generation for rural masses. The raw material is freely available through out the district. The entrepreneurs proposed to be selected will be committed first generation entrepreneurs. The support from other developmental agencies will also be taken for the training and demonstration wherever available. With this activity self employment at their place will be available which will reduce their idle time and will stop migration to the cities like Mumbai. The entrepreneurs will get full scope for long term production opportunity to initiate, maintain and organize a profit oriented micro units in their work place or industrial area.

There is a huge demand for coir rope and coir products both national and international level. Mumbai is one of the big markets for these products. Presently the demand is met by the coir industries in Kerala and other centers mainly from southern states. The transportation cost will be reduced substantially as the units will be set up in rural area.

Chapter - 2

Production Process and Cluster Product

2.1. Cluster Products

The main cluster products include fiber, 2 ply yarn, and curled coir.

a) Coir Fiber

Coir fiber is extracted from the fibrous outer cover of the fruit of the coconut palm, with or without retting. Coir fiber is graded based on its nature of extraction, colour, presence of long and short fibers, impurities etc.

b) Coir Yarn

Coir yarn is generally of two ply, spun from coir fiber by hand as well as with the help of traditional ratts, fully automatic spinning machines etc. The coir yarn is of different qualities/grades based on the quality of fiber used, the nature of twist, presence of impurities etc.

c) Curled Coir

Curled Coir is mainly used for manufacturing rubberized mattresses, pillows and cushions.

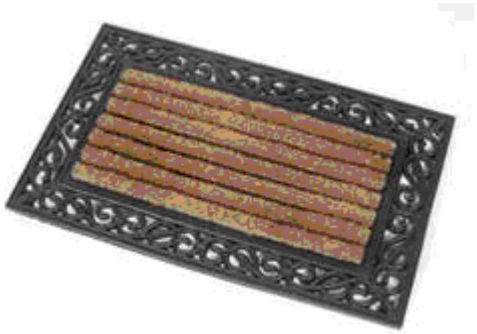
d) Coir Mats

Coir door mats will be made on power loom with or without brush. It will be in a range of colours, sizes and designs. The brushing qualities of coir doormats and their ability to keep the dirt away make the product a unique one. Mats will be made in plain, natural and bleached, available with woven or stenciled designs and beveled patterns for use in interior or exterior door fronts

e) Floor Mats

Coir Matting is primarily used as a floor furnishing material. It is widely used in exhibition and fairs as a temporary but neat and elegant floor coverings. Because of its sound deadening characteristics, it is being used on a large scale for furnishing stairs,

corridors, and auditorium and cinema halls. A wide range of attractive designs and colours as well as quality makes it a favourite item for interior decorators. Coir matting will be made through mechanised unit.



2.2 Production process

2.2.1 Husk

The coir industry is largely manual and labour intensive with women constituting the greater part in the activity. The activity start with husk. Under the project, the husk will be collected from farmers in the villages. The activity would require around 45000 husk for 7.5 hours. Two units of 3000 husk per hour each will be established with a capacity of de-husking of 3000 husk per hour. There would the collection centre in the villages and transport facility to bring to the production center. It could be possible to assign the task of collection of husk from farmers to the identified person or the SHG in the village. Transport facility will be ensured by making the arrangement with transporter.

As regards charges to be paid towards commission and transport, the same may be included in the price for delivery at the production centre. It is estimated that Rs. 1 per husk will be paid including the commission and transport charges for the delivery at production centre. Quality standards for husk purchasing will be prescribed and plan for regular supply will be enforced.

2.2.2. De-husking

The starting point of the industry is the process of de-husking the husk collected. Coir fiber will be extracted from the husks surrounding the coconut. The quality of the fiber that can be extracted from husk depends on the type of peeling of the coconut. Full Husk where Kernel is removed without any fiber left to it. This yields the maximum quantity of husk. Semi peeled husk where the kernel is removed with some fiber attached to it so that it is preserved for some days and this yields less quantity. The quality of fiber depends on the husk is green or dry. Dry husk gives brown fiber whereas green husk gives white fiber which is considered better quality.

With proper standards for procuring good quality husk, it is estimated that the average fiber of 80 grams will be from each husk.

2.2.3 Fiber extraction

Fiber extraction in the production centre will be done through decorticating equipments. Crushing the husk in a breaker opens the fiber. By using revolving drums the coarse long fibers are separated from the short woody parts and the pith. The stronger fibers are washed, cleaned, dried, hackled and comber. Largely fiber extraction in the project will be done in the mechanized process using disintegrator, decorticator rolling drum screener and bailing press. Basically, there will be three main products from the coir fiber unit as under:

Group	Length (mm)
Long fiber	Above 200
Medium fiber	Above 150 upto 200
Short Fiber	Above 50 upto 150

Long fiber is used to make yarn, ropes, curled coir, door mats, floor matting, mattress and brushes.

2.2.4. Pith

Presently it is considered as waste but pith can be converted in to compost or briquette can be made out of it. There is a demand for pith briquette. This will be done through mechanized equipments and machines.

2.2.5. Motorized Ratt

A spinning device- motorized ratt will be used for improving the productivity and the working environment. In the mechanized ratt the spinner is made to sit on a chair/stool and roll the well cleaned fiber stacked in the spinning trays attached to the spinning device where the yarn is spun and wound over the bobbins attached to the ratt. All varieties of coir yarn are produced on ratt with a slight alteration on the equipment. 2 ply yarn will be produced. 10% loss in the fiber quantity has been considered as some waste and mechanized losses may occur.

2.2.6 Rope making

From 2 ply yarn, rope will be made. The Coconut fiber is attached to hooks on a wheel that is turned by hand. This twists the coir while more is added. It forms a strong rope that doesn't unwind or break. Among the natural fiber, coir has some unique characteristic particularly its rigidity, durability and friction.

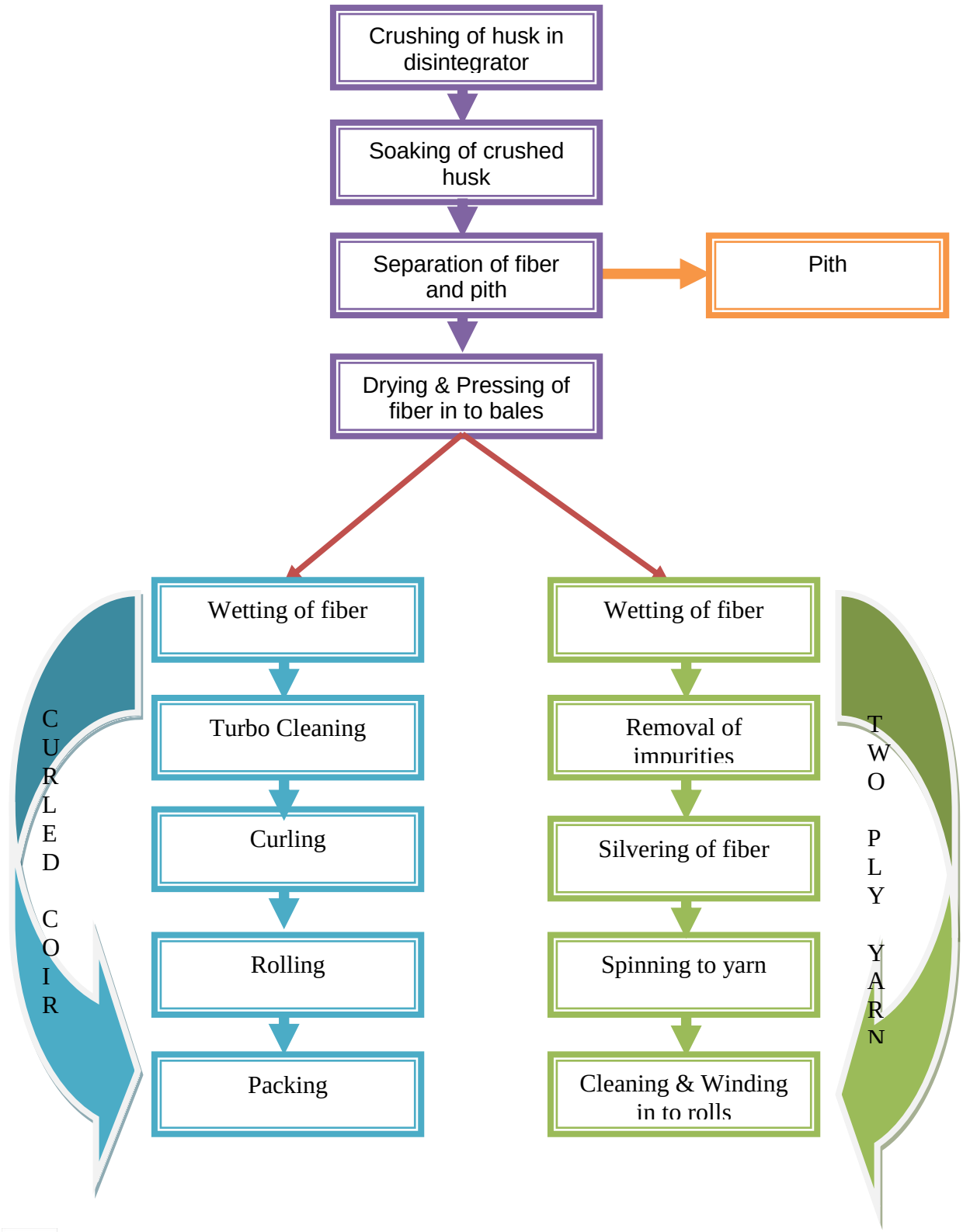
2.2.8 Coir Pith

The coir pith is comprised into very small packs of 650 gm shrink wrapped which is most suitable to the hobby market and home garden owners. The compost is also made out of pith and it is used for farming.

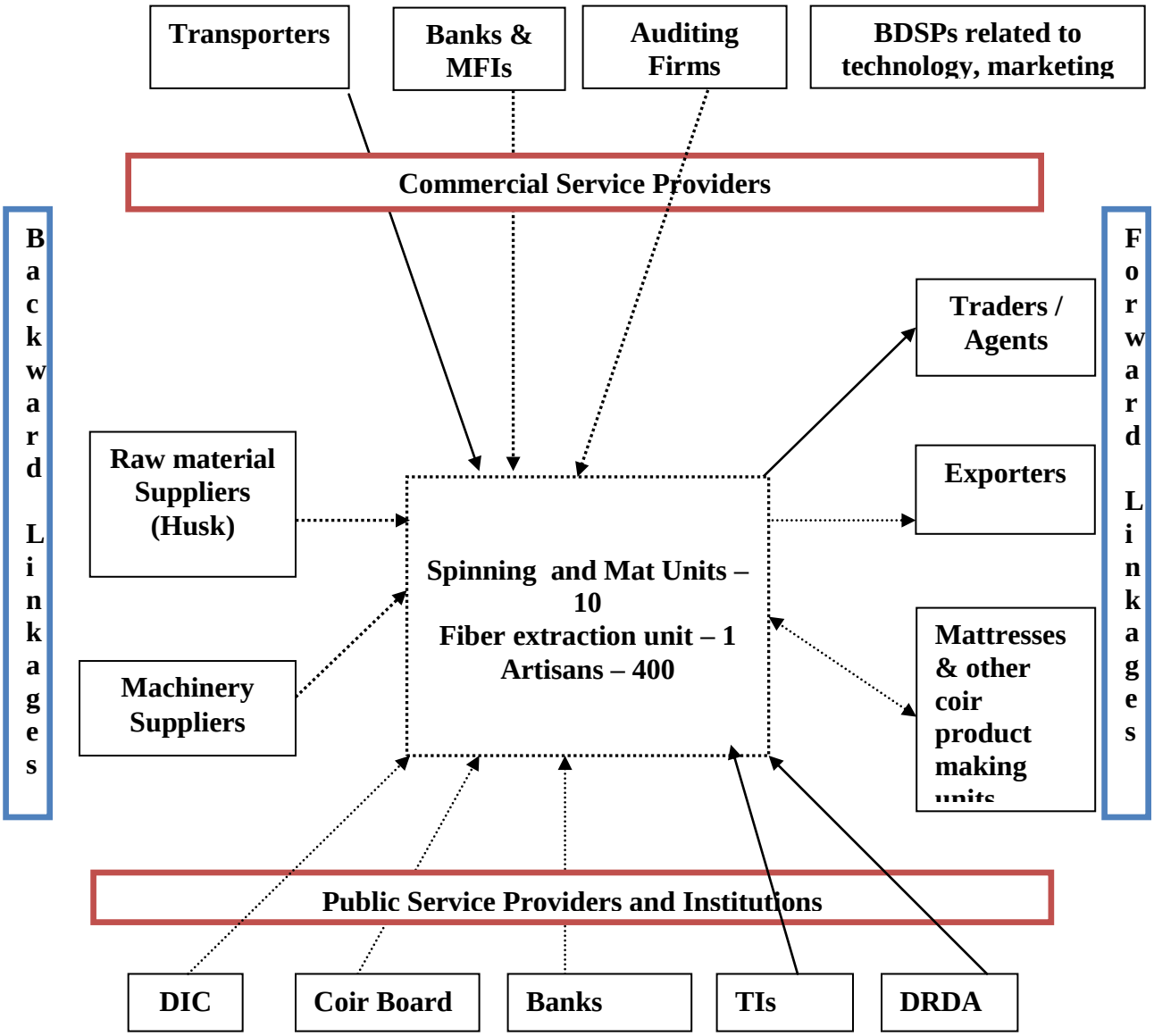
As may be seen from the above process, the processing activity will be terminated and final products like, rope, door mats, floor matting, pith for compost or briquette will be made in the proposed cluster. The products will be sold in the market through the traders and commission agents. There are number of activities which can be made out of the coir fiber and continuous research is going on in this direction. Coir Board is involved in the research and education of coir activities. It is available in a range of colours, sizes and designs. The brushing qualities of coir doormats and their ability to keep the dirt away make the product a unique one. Mats are available in plain, natural and bleached, available with woven or stenciled designs and beveled patterns for use in interior or exterior door fronts.

2.3. Operation process proposed in cluster

A typical process flow chart of the cluster is given as below:



2.4. Cluster map- Backward and Forward Linkages



Index:

1) Dotted square box around principle enterprises represent weak linkage at cluster level
2) Solid arrow represents strong linkage
3) Dotted arrow represents weak linkage
4) Dotted double arrow represents weak two way linkage
6) Absence of arrow represents lack of any linkage

2.4.1. Principle firms

The cluster is having 14 manufacturing units which are scattered. All are automatic spinning units. It is estimated that 150 workers including staff are employed in the units. In addition an estimated 500 artisans are engaged in making rope on traditional charakas in the cluster area.

The linkage among cluster firms is limited. As there are no formal associations of cooperative societies in the cluster, entrepreneurs try to address issues on their own.

2.4.2 Support Firms/ Institutions

The Support Institutions / Public and Private Service Providers in the cluster are:

A. Machinery Suppliers

Decades old machineries are being used by majority of cluster firms, in spite of availability of advanced machinery in Bangalore and Vellore. Lack of financial support from Commercial Banks for upgradation is the main reason. M/s 2M Enterprises & 2M Engineers at Bangalore and M/s. Everest Coir Engineering, M/s.Revanth Engineering Works, M/s.Sri Ram Industrial, and M/s.Vinayaga Engineering Works at Coimbatore are available for supply of various kinds of coir machineries.

B Coir Board:

Coir Board is the Nodal Agency for the SFURTI scheme. The Coir Board was 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. At present the linkage of cluster firms with Coir Board is weak.

C. District Industries Center:

DIC organizes entrepreneurship development training programs, provides information about various government schemes, subsidies, grants and assistance available from the other corporations set up for promotion of industries, assessment of availability of infrastructure facilities, provide MSME registrations for entrepreneurs. However at present the linkage of DIC with cluster firms is poor.

D. R&D, Testing & Training Institutions:

No R&D, Training and Testing Institutions are available in the cluster area.

E. Commercial banks & Micro finance institutions:

The enterprises are having accounts with commercial banks but they are reluctant to provide financial assistance for procuring latest technology/ modernization etc. No micro finance institution is having operations within the cluster region.

Chapter – 3

Market Assessment and Demand Analysis

At present domestic sale is about Rs 3000 crores. The exports had grown by 30 per cent in value and 28 per cent in the financial year 2012-13. Coir Export in India fetched around Rs 1116 crore in 2012-13 as against Rs 1052 crore in the last fiscal. There is a huge market for Indian Coir products abroad and at present exports are being done to more than 112 countries. More than 40 per cent of the production is being exported. Coir exports from India had maintained a continuous growth trajectory even during the global economic crisis. For the Indian coir exports the US is the largest market accounting for 37 per cent.

Coir exports from India now have new markets such as Russia and Latin America. The state of Kerala is responsible for about 80% of India's coir exports. Exports have risen at healthy rate of more than 20% during the year 2012-13.

India has the advantage of having large quantity of raw material in coastal area of various states. The processing activity is mainly concentrated in Kerala, Tamil Nadu and the processing activity is being expanded in Andhra Prasesh and Maharashtra. The demand for coir products is expected to grow by 10% of the present level of sale.

The government organizations at state level have also been taking up the marketing facilities and with cluster approach the marketing of products through exhibitions and fairs will be increased.

Chapter 4

SWOT and Gap Analysis

4.1 SWOT analysis

The SWOT analysis has been carried out taking into account the situation prevailing in the district for coir industry as under:

STRENGTHS

- Large quantity availability of raw material i.e Husk
- Market potential though out the country and foreign market
- Eco friendly product
- Availability of labour force
- Presence of supporting institutions
- Proactive support available from Coir Board
- Young and educated entrepreneurs are available
- Low investment in machineries
- Established marketing channels for fibre
- Proximity to market-Mumbai, Pune, Goa
- Presence of basic infrastructure and utilities
- Large domestic market
- Vast potential for value addition

WEAKNESSES:

- Lack of skilled manpower
- Only 5% of husk is utilized
- Seasonality of raw material
- Lack of value added products for market expansion
- Use of obsolete machinery
- Lack of formal networks for marketing and input procurement
- Limited awareness on Government Schemes
- Lack of entrepreneurial capabilities
- Limited awareness on Quality Control

- Poor infrastructure facilities
- Limited contact with BDS providers and Technical Institutions
- Low level of awareness among the people about the uses of husk and its product
- Poor financial linkages

OPPORTUNITIES:

- Growing demand at domestic and international market
- Strategic location as it is well connected with roads and other communication system
- Nearness to Mumbai, Pune and Goa
- Untapped raw material potential
- Potential for high value product
- Scope for adopting zero waste through new technology
- Environmental friendly product
- Untapped raw material potential
- Potential for product diversification and value addition
- Less competition for value added products
- Increased domestic and export market for coir products
- Relatively cheap manpower
- Congenial state government policies
- Importance to traditional industries in 12th plan

THREATS:

- Competition from synthetic fibres
- Utilization of husk as firewood
- High power tariff
- Shortage of skilled workers
- Competition from Kerala coir clusters

4.2 Gap analysis

4.2.1. Technology related:

The process followed by majority of cluster firms is manual and obsolete with specific reference to making of 2 ply yarn and curled coir. 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. Unless the existing process and quality are not improved, the cluster products may not penetrate in to new markets and also leads to poor economics of scale.

4.2.2. Input related:

The husk is available in large quantities but utilization is only 5%. Most of the farmers use husk as firewood due to lack of awareness on importance of husk and scope for value addition. There is no collective purchase mechanism observed in the cluster. The implementing agency have done good job in creating awareness on coir and also encouraged farmers. There is huge potential for collection and processing of husk within the cluster area.

4.2.3. Market related:

It is understood that the only fibre extraction will not give profit for the artisans. The margins are meager in fibre extraction. The profit increases through value addition like making yarn, curled coir, mat and matting. Lack of efforts to make value added products due to limited financial resources and entrepreneurial capabilities are other reasons for limited market. Unorganized marketing is also one of the reason.

4.2.4. Labour related:

Migration of labour to Goa, Mumbai, and Pune to work in other lucrative industries and lack of sufficient skilled personnel are also effecting the quality of products and limiting capacity utlisation.

4.2.5. Infrastructure related:

The cluster is in need of a training centre so as to train existing semi skilled and unskilled labour. Similarly a common facility can be planned for making of coir fibre, yarn, mats, and matting. However viability of such facility need to be assessed based on raw material availability, local market and stakeholder's commitment.

4.2.6. Finance:

Banks have good linkages with Implementing agency and also artisans. But artisans are reluctant to take risk. Further due to the unorganized nature of operations and poor expansion/ modernization plans by entrepreneurs also affecting bank linkages. The entrepreneurs have limited awareness on schemes like SFURTI, REMOTE, PMEGP.

4.2.7 Others:

Lack of a formal cluster level association, limited contact with BDS providers and technical institutions are other issues hindering the growth of the cluster.

Chapter- 5

Profile of Implementing Agency

The implanting agency for the cluster will be Mahila Kathya Kamgar Audyogic Sahakari Sanstha Maryadit. The Society is registered under the Maharashtra State Cooperative Societies Act, 1960. The area of operation of the society is Maharashtra. The registration no. of the Society is SDG/KDL/PRD(I)101/88 dated 12.4.1988 and working from Vengurla, District Sindhudurg. The management of the society is with the members mainly women associated with processing and he present management committee comprises of 9 members. The list of the Board of Directors of the Society is attached. The processing of industrial product is one of the important functions of the society and it has started coir processing in Vengurla. The society has acquired 3 acres land and purchase the machinery and equipments for coir processing. The society has approximately 10000 sq. ft constructed area at the site. The coir processing taken up at the site is de-fibering of coir, yarn spinning, making ropes, Door and floor mats making, mattress making etc. The financial status and turn over of the Mahila Kathya Kamgar Audyogic Sahakari Sanstha Maryadit is as under:

Sr. No.	Particulars	Amount (Rs lakh) 2011-12	2012-13	2013-14
1	Members (no.)			
2	Share capital	8.05	8.31	8.17
3	Reserve	21.36	43.35	43.87
4	Loans Outstanding	27.27	21.51	15.25
5	Sales	1558.43	241.59	1309.94
6	Trading profit	229.13	28.06	216.57
7	Net profit	31.51	(2.24)	18.37

The profile of the Mahila Kathya Kamgar Audyogic Sahakari Sanstha Maryadit is enclosed. Annexure

Chapter- 6
Project Concept and Strategy Framework

6.1 Project Rationale

In the proposed Pendur cluster, there are about 400 artisans in coir sector but the earning of artisans is less compared to other economic activities. They are getting Rs 200/-to 250 per day only. In order to improve their earnings and utilize available raw material, it is proposed to take up interventions for capacity building, husk collection, and infrastructure development.

6.2 Project Objectives

- *To create networks for collection of husk by motivating artisans and farmers*
- *To upgrade technical and marketing shills of artisans*
- *To manufacture value added products*
- *To create required common facilities*
- *To enhance production level at least by 50%*
- *To increase profitability at least by 30%*
- *To enhance turnover by 30%*

6.3 Focus Products/ Services

- Collection of husk
- Fibre extraction
- Rope making
- Door and floor Mats making

6.4 Project Strategy

- The identified artisans are to be organized in to Self Help Group with available cooperative societies in the cluster. Training is to be provided to make them understand group approach, impact technical and marketing skills.

- With the support of coconut development board, department of agriculture and District Rural Development Authority, the husk collection mechanism is to be strengthened. The farmers are encouraged to be part of this interventions and suitable benefits may be provided.
- The skill development programmes will be organized involving implementing agency, coir board, district industries centre, bank officials and other service providers like designers and marketing consultants to improve their technical and business skills
- A special purpose vehicle (SPV) is to be promoted involving representation from each SHG
- An interactive meet with machinery suppliers is to be organized to impart skills to solve day to day maintenance /operational problems
- Exposure visits are to be organized to Allephuza and Pollachi coir clusters to make them understand better operational and management practices
- Interactive meets are to be organized with coconut farmers so as to assess the ways of getting continuous supply of raw material and formation of a raw material consortium for bulk purchase of raw material
- With the support of designers and coir board, skill development training programme are to be conducted for making value added products like coir jewelry, handicrafts, mats, and geo-textiles etc so as to motivate cluster firms to produce the same
- Skill development training programmes on automatic spinning and curled coir are to be conducted
- A workshop on network formation is to be organized so as to motivate cluster firms to strengthen self governance mechanisms
- Bankers meets are to be conducted so to assess the bankers requirements and making entrepreneurs aware of the same

- Design Development workshop for developing new product range and also product diversification is to be organized with the help of designers
- Exhibitions are to be organized at Pune and Mumbai for market expansion
- The artisans/SHG s will be given opportunity to participation in exhibition

Cluster Vision

"Cluster envisions to enhance the production levels by 50%, turnover by 30%, profitability by 30% through adopting better husk collection and processing techniques, skill-up gradation, making value added products and establishment of required common facilities by the year 2018".

Chapter -7
Project Interventions

7.1. Interventions under the project

The interventions under the SFURTI have been proposed keeping in view the awareness of the people about the activity, capacity building of the people for bringing them together for common activities in future.

A) Soft interventions

Action Plan for Soft Interventions
(2015 – 16)

Sr. No.	Item	IA	NA	Amount (Rs in Lakhs)	Justification	Expected outcome/target
1	**Capacity Building**					
1.1.	Formation of consortiums for raw material bank, CFC and marketing	-	1.00	1.00	Poor utilization of husk, need for up-gradation of skills and improve marketing	New networks for collection, processing, production and marketing. Improved profits.
1.2	Supply of 100 Rats and 75 mat frame and press including installation and training	-	15.25	15.25	Limited margin in fibre Lack of machinery for artisans for value addition	Improved skills and profits for artisans
1.3	Skill Upgradation programs for Artisans	-	1.00	1.00	Production of low quality yarn and mats	Awareness on SFURTI, Improved quality, reduced cost leads to productivity
Total		**-**	**17.25**	**17.25**		

Action Plan for Soft Interventions
(2016 – 17)

Sr. No.	Item	IA	NA grant	Amount (Rs in Lakhs)	Justification	Expected outcome/target
1	**Product Design and Development**					
1.1	Exposure visit for artisans to understand market demand, customer taste and develop new designs as per customer preferences.	-	1.00	1.00	Lack of knowledge in market awareness and customer preferences	understand market demand, customer taste and awareness on competitors products, and their quality
1.2	Development of new product range by involving experts from NIFT/NID or other service providers	-	1.75	1.75	Traditional and regular designs Not much variation in design	Development of new product range including handicrafts
2	**Market Promotion**					
2.1.	Training programme on Marketing for SHG leaders and consortium members	-	1.00	1.00	Lack of marketing skills and market information	Improved knowledge on marketing
2.2.	Printing of brochures and catalogues	-	1.00	1.00	To reach out customers	Facilitates in exhibitions and trade fairs
2.3	Participation in National & international Marketing events (Stall Rent and T.A & D.A for participant artisans)	-	3.00	3.00	Selling in regional markets only	Networking and market expansion and also reach national market
Total			**7.75**	**7.75**		

B). Hard Intervention

This support will be one time recurring grant from Government of India to CFC. The estimated expenditure suggested is based on the needs of the project and prevailing cost of the related items.

The Cluster CFC is to be set up at the site to be acquired by SPV and required equipments and machines. The construction cost for civil work is also taken into account. The components of hard intervention and estimated cost will be as under:

Action Plan for Hard Interventions
(2016-17 & 2017-18)
Common Facility Centre (CFC)

1. **Land & Building**

S. No	Particulars	Cost
1	Shed Construction (2 Nos. of 2000 sq.ft)	32,00,000
2	Shed Construction (1 Nos. of 1200 sq.ft)	9,60,000
Total		41,60,000

2. **Plant & Machinery**

S.No.	Name of the equipment & machineries	Qty	Cost
1	Buster/ Disintegrator	1	30,00,000
	Beater/ Decorticator	2	
	Screener	1	
	Conveyor	2	
	Bailing Press	1	
2	Curling machine with auto feeder	1	16,00,000
	Hackling machine	1	
	Yarn winding machine	1	
3	Automatic two ply yarn spinning machine	8	13,00,000
	Slivering machine	1	

	Willowing machine	1	
4	Anugraha Loom	5	7,50,000
5	Coir Pith Unit	1	2,50,000
	Installation & Electrification		5,00,000
Total			74,00,000

C. Cost for Technical Assistance

The project involves the preparation of Diagnostic Study Report and Detailed Project Report and guidance for identification of suitable machines from the approved panels of Coir Board suppliers. The implementing agency, nodal officer and cluster executive are to be trained on cluster development and mentoring services need to be provided for all agencies involved in the project. The remuneration to be paid to the technical agency as envisaged under the SFURTI guidelines. 8% of the project cost covering the cost of soft intervention and hard intervention has been taken as under:

Technical agency fee: 8% of (Rs. 25.00 + 94.76 lakh) =Rs. 9.58 lakh)

D. Remuneration to Cluster Development Executive and Implementing Agency Expenses

As per the provision made under the scheme, Cluster Development Executive will be engaged in executing the programme. The implementing agency is to meet expenditure involved in implementation of the project like conducting review meetings; documentation etc. The grant support for the purpose as covered under the scheme is Rs. 20.00 lakh.

7.2 Financial assistance from Govt. under SFURTI

The assistance required under SFURTI from Govt. of India will be as under:

S. No.	Particulars	NA	IA	Total
1	Hard Interventions	94.76	31.59	126.35
2	Soft Interventions	25.00	-	25.00
3	Cost of TA (8% of 94.76+25.00)	9.58	-	9.58
4	Cost of IA/CDE	20.00	-	20.00
		149.34	**31.59**	**180.93**

Chapter 8

Project cost and Means of Finance

8.1. Project cost

The project cost including the grant support for soft interventions, remuneration to technical agencies and remuneration to CDE will be as under:

S. No.	Particulars	NA	IA	Total
1	Hard Interventions	94.76	31.59	126.35
2	Soft Interventions	25.00	-	25.00
3	Cost of TA (8% of 94.76+25.00)	9.58	-	9.58
4	Cost of IA/CDE	20.00	-	20.00
		149.34	**31.59**	**180.93**

8. 2. Means of Finance

Particulars	Amount in Rs. Lakhs
SPV contribution (25% of the project cost- hard intervention)	31.59
GoI Grant(75% of the project cost) Under SFURTI	149.34
Total	**180.93**

Chapter 9

Plan for convergence Initiatives

1. Coconut Development board will be involved in expansion of coconut plantation in the project area. Both the blocks are the coastal area and large number of coconut plants are in existence. In the vacant lands plantation of coconut trees are possible.
2. The research work for coconut is going on through the Agriculture University. The practices for better yield and fiber quality, the research will be converged with the farmers.
3. District Rural Development Authority (DRDA) and Department of Agriculture will be involved in capacity building of SHG members.
4. MSSIDC will be involved in marketing of coir products through their outlets.
5. Initiatives will be taken to associate corporate CSR foundations to promote coir handicrafts for the tourist place like Goa etc.

Chapter- 10

Project Planning and Monitoring

10.1 Project Planning

During preparation of Diagnostic Study Report (DSR) and also Detailed Project report (DPR), the Technical Agency, **ni-msme** had discussed with the implementing agency and proposed SPV members to be associated in the project on critical problems, suitable interventions to overcome the problem areas including soft and hard interventions.

The management representatives from implementing agency and also artisans have given their views and suggestions for designing suitable interventions. The details of soft interventions are mentioned in earlier report.

- Formation of consortiums for raw material bank, CFC and marketing
- Supply of 100 Rats and 75 mat frame along with press
- Skill Upgradation programs for Artisans
- Exposure visit for artisans to understand market demand, customer taste and develop new designs as per customer preferences.
- Development of new product range by involving experts from NIFT/NID or other service providers
- Training programme on Marketing for SHG leaders and consortium members
- Printing of brochures and catalogues
- Participation in National & international trade fairs

With respect to the hard interventions, the following are finalized:

S.No.	Name of the equipment & machineries	Qty	Cost
1	Buster/ Disintegrator	1	30,00,000
	Beater/ Decorticator	2	
	Screener	1	
	Conveyor	2	
	Bailing Press	1	
2	Curling machine with auto feeder	1	16,00,000
	Hackling machine	1	
	Yarn winding machine	1	
3	Automatic two ply yarn spinning machine	8	13,00,000
	Slivering machine	1	
	Willowing machine	1	
4	Anugraha Loom	5	7,50,000
5	Coir Pith Unit	1	2,50,000
	Installation & Electrification		5,00,000
Total			74,00,000

Two (2) Sheds of 2000 sq ft area and another shed of 1200 sq ft are to be constructed to install the machinery.

The proposed SPV members have agreed to invest the contribution of 25% as per the project requirement.

The following important tasks are required to be completed during establishment of the above infrastructure at Common Facilities Centre (CFC).

- Formation of purchase committee with representation from IA, NA, TA, CDE, Financial Institution (or Financial expert), Technical Institution (or Technical Expert) and senior artisans
- Identification and selection of machinery suppliers
- Procurement of machinery
- Construction of sheds
- Installation & Electrification
- Trial production
- Commercial production

The successful implementation of above activities will depend on the following aspects:

- Scheduling of above activities to implement within the time frame
- Regular follow-up with NA & TA supervision of project progress and managing the same
- Undertaking work as per the defined time frame in the schedule
- Regular review of project by NA at State level

In order to implement the project successfully, the SPV, NA (Coir Board), IA (Mahila Katthaya Audogik Cooperative society Ltd), TA (**ni-msme**), and CDE need to work as a team and coordinate each other from time to time. At the same time it is suggested to carry out these activities simultaneously to reduce the

time. All the concerned agencies have to play their role at the appropriate time for successful implementation of the project. It's the responsibility of IA to regularly interact with NA and TA for their requirements and also to attend or solve any issues.

Some important activities of the above agencies are outlined in the following:

10.1.1. Field office, Coir Board: The State Office, Coir Board at Oras, Sindhudurg is local office of the nodal agency. The nodal agency facilitates IA in smooth implementation of the project. The State Office at Bangalore monitors the progress of proposed CFC in addition to appraising implementation and progress of the CFC to the head office at Kochi.

10.1.2. District Industries Centre, Sindhudurg District: On behalf of the Government of Maharashtra, the District Industries Centre plays an important role in successful implementation of the project. The DIC also acts as one of the facilitator in smooth functioning of CFC in long run and also helps in fulfilling requirements of IA/SPV for successful operation of CFC

10.1.3. National Institute for Micro, Small & Medium Enterprises (ni-msme): The Technical Agency, **ni-msme** monitors the cluster on regular basis, and reports to the field office of Nodal Agency, and assists Nodal agency in disbursement of funds.

10.1.4. Mahila Katthaya Audogik Cooperative society Ltd (IA): The IA would facilitate SPV in identification of suitable land for the project, undertake procurement and appointment of contractors, and operates and maintains common facilities in association with SPV members.

10.1.5. Special Purpose Vehicle (SPV): A total of 14 micro enterprises and also some of leaders of SHGs have shown interest to be part of the project and also a

cooperative society is to be established which acts as SPV. All the members together manage the common facilities. The CFC provides only services and no business transactions to get profit. Hence, the recurring cost is to be met by collecting service charges. However, the Implementing agency has agreed to meet the required contribution in creation of CFC, if SPV is not in a position to mobilize required funds, apart from the Ministry of MSME grant.

10.2. Implementation, Monitoring & Evaluation:

As mentioned above IA plays vital role in implementation of the project. After receiving final approval of the project from Scheme Steering Committee (SSC), the Implementing Agency establishes Cluster Advisory Group headed by District Magistrate and Working Committee for regular monitoring of the project apart from a purchase committee for procurement of machinery for CFC, looms and machinery.

10.2.1. Cluster Advisory Group

The Cluster Advisory Group is to be established under the chairmanship of District Magistrate with representation from District Rural Development Authority, Educational Institution, Lead Bank, with the objective of fostering increased level of involvement of various cluster stakeholders and strengthening the implementation of the project.

10.2.2. Working Committee:

The working committee is to be formed having nominated members from State Office, Coir Board, Implementing Agency, Technical Agency, District Industries Centre, District Rural Development Authority, Commercial Bank/ Lead Bank Manager, Technical Institution and also Cluster Development Executive & senior artisans. The artisans consists a minimum of 33% of total members. The Working Committee will be chaired by representative not below the rank of Assistant Director of the State/ Divisional office of the Nodal Agency and will meet at least once in a month to review the operational and maintenance aspects of the CFC

and decide about the user charges. The IA will open and maintain a corpus fund for maintenance of the CFC. The user charges will go to the corpus. The IA on the basis of recommendation of Working Committee may incur expenditure towards maintenance/ augmentation of the CFC.

10.2.3. Purchase Committee

Facilitating the IA in identification of suitable suppliers of machinery, inviting tenders, bid processing and finalizing tenders are some of the important functions of purchase committee. The Committee will be formed for short term duration at the time of purchase of plant and machinery. The Nodal officer of Coir Board, nominated members from a technical institution, TA, IA, DIC, and senior artisans will be the members in the committee and the committee is to be chaired by the Nodal Officer.

The project will be implanted through the involvement of farmers, artisans. The Implementing agency will take initiatives for capacity building of the artisans to promote the coir processing and spinning activities. The project outline will be as under:

1. Implementing agency will organize the capacity building programmes for the artisans. IA had already trained the artisans under DRDA and Coir Board.
2. Arrange the exposure visit under the cluster for the artisans.
3. The automatic ratt with the frame for door mat will be given to each artisan.
4. Training will be imparted under soft interventions for the members on skill development.
5. SPV will be formed under Cooperative Societies Act with membership to the artisans
6. Machinery and civil structure contemplated in the cluster will be ensured through the transparent process.
7. In CFC, husk will be collected from the villages through individuals, SHG members, Traders and temples.

8. De-husking will be taken up in the CFC and 50 % of the fiber will be given to the artisans for spinning and mat making.
9. 50% of the fiber will be processed in CFC for spinning and mat making.
10. The individual artisans will sell their product in the market. CFC will also take up the marketing role for the members through organized market outlets.
11. The society will work for the members and will ensure the regular supply of raw material and improvement in quality

Chapter 11
Business Plan

11.1 Financials

A detailed financial modeling exercise has been undertaken to assess the financial feasibility of the project. Cost and revenue streams for the cluster have been modeled based on the prevailing situation in coir industry. The cost of machinery is proposed as per price quoted by the approved suppliers of Coir Board.

11.2. Project cost

The total project cost for the cluster is expected to be Rs. lakh. The estimates of investment cost have been arrived based on the projections for the sheds and machineries, working capital requirement for one month and also the preliminary expenditure incurred for designing the project.

Cost Head	Amount (Rs. in Lakh)
i) Land Cost on lease	0.00
ii)Construction cost	
a) 2 Sheds with area of 2000 each Sq. ft	
and 1 shed with 1200 sq.ft	
@ Rs. 800 /Sq.ft	41.60
iii) Machineries and equipments	74.00
(as per list – Annex)	
iv) Working Capital (1 month)	10.75

Total cost	126.35

11.3 Financial structuring (Means of Finance)

Considering the importance of the project and the need for creating employment opportunities for the unemployed women, funding for capital investment is projected to be funded under SFURTI programme by MSME, Government of India. For the recurring cost it is expected to generate through the revenue sources of the coir products.

11.4. Assumptions

The assumptions made for the financials are as under:

I. From one husk 80 gm of coir fiber will be drawn

II. Purchase cost of one husk – Rs.1.00

III. Transportation from farmer to production centre @ 10% of cost of husk

IV. Commission to agent/SHG group will be Rs.0.10 per husk.

V. Working days 25 in a month

VI. Working days in a year 300

VII. Capacity Utilisation

a. 1st year 75%

b. 2nd year- 80%

c.3rd year onwards 90%

VIII. For production of 1 MT of coir fiber @ 0.080 kg per husk. Total 12,500/- no. of husk will be required.

IX. The cost of raw material required for production of 1 MT of coir fiber will be as follows :-

(Amount in Rs.)

1	Cost of husk 12,500 x 1.00	12,500/-	
2	Transportation @ 10% of cost of husk	1,250/-	
3	Commission paid to the SHG members @ Rs.0.10 per husk for 12,500/- no. of husk	1,250/-	
	Total Raw material cost for production of 1 Mt of coir fiber (1+2+3)		15000/-

X. The per day capacity of plant & machinery proposed to be installed will be of 3000 husk per hour. 50% of the fiber processed will be given to artisans for rope making and door mats. Remaining 50% fiber will be processed in CFC for will be used for rope making, door mat and floor mat making Processing -per day capacity

Total husk process per day considering 7.5 hours of working (half hour lunch break) will be 3000 x 7.5 = 22500 husk per day.

XI. For 1 MT of coir fiber 12,500 husk will be required hence the per day capacity of the plant will be

Per day capacity = total no. of husk processed during a day
husk required for 1 MT of coir fiber (12500)
= 22500/12,500

Total cost of the raw material required per day = 1.8 x 15,000=27000

Per month raw material expenses Expcs. Rs. 27000x25= Rs.675000/--

XIV. Labour charges

Labour charges for 15 labours @ Rs.300/- per day will be Rs.4500/- per day.

Total labour charges required per month = Rs 4500/- x 25 days = Rs1,12,500/-

XV. Water charges will be from own sources

XVI. Electricity charges

The total load is 100 kV. The estimated consumption of electricity will be around 70% of the total sanctioned load which will be 70 kV per hour

Total consumption during the day will be about 560 kV

The electricity charges per day will be 560 xRs. 12 per kV = Rs.6720/- per day.

The electricity charges per month will be Rs.6720/- X 25 days = 168000/-

Administrative cost

a. Project in-charge Rs. 20,000 per month

b. Administrative staff cost for 5 nos. of staff Rs.50,000/- p.m.

b. Administrative expenses– 50% of administrative staff cost Rs.35000.pm

c. Other expenses Rs15,000 per month

XVII Summery of administrative cost per month

Administrative staff cost	70,000/-
Administrative expenses	35000,/-
Rent &Other expenses	15,000/-
Total	1,20,000/-

XII. WASTAGE & LOSSES in operation

10% of total raw material cost

XIII. TOTAL PRODUCTION COST P.M.with 100% capacity

Raw material cost	6,75,000
Electricity charges	1,68,000
Labour charges	1,12,500
Administrative expenses	1,20,000
	==========
Total	10,75,500

XVI. PRODUCTION with 100 % capacity

With 10% loss in process of fiber making, per day coir fiber production will be = 1.62 MT per day

For 1 month (1.62 MT per day x25 days= 40.5 MT)

The proportion of production in to final product is assumed as under:

Fiber to artisans	50%
Rope:	25% of coir fiber
Door and floor mats	25% of coir fiber

XVII. Processed coir fiber will be given to artisans @ Rs. 30 per Kg will be charged by CFC.

XVIII. Price of the product at 100 % capacity for a month

A. Service charges from Artisans

The coir fiber will be given to artisans for further processing at their individual units. In a month 20.25 MT coir fiber will be sold to artisans. The service charges will be charged from member artisans will be @ RS. 30 per Kg.

The income through service charges will be at Rs. Rs. 6,07,500 in a month

B. Processing at CFC

a. Coir Rope

Coir rope are of different sizes in mm as per the use of rope. The prices vary from size between Rs.40 to 60 per Kg. The price has however been taken as Rs. 50 per kg for coir rope.10.125 MT will be ropes .

The income per month will be Rs. 5,06,250

b. Door Mat and floor mat

There are different designs of door mat with colour and designs. The price of the mat is difficult to assess as it is related to color design. Even simple door mat without any colour of the size 2 feet by 1.5 feet get the prices of Rs. 200 to 450. The average weight of the this size mat comes to around 1.5 Kgs.. Considering the production cost at the site, it is assumed the price of a mat will be Rs. 120 Kg.

The income for the rope making and mats will be RS. 12,15,000

C. Pith

The pith after the process will be the double of the coir fiber production. As such pith will be 3.6 MT per day and selling price of the pith is Rs. 1 per Kg i.e. 3600 per day at the factory cost and sell will be at factory cost.

For a month income will be Rs. 9,00,000

XIX Production Quantity

The production of the coir fiber will be converted into rope, door/floor at in the proportionate of production capacity of 1.62 MT fiber of which 810 kg will be given to artisans and balance 810 kg will be processed at factory for rope making and for door mat and floor mat.

XIX Income of CFC

A. From coir rope and door mat with 100% capacity per day

a) Coir rope = Rs. 5,06,250

b) Door/floor mat = Rs.12,15,000

d) Pith = Rs. 90,000

Total income per month from coir products = Rs. 18,11,250

B. Service charges from Artisan for the coir fiber sold to them

Rs. 810 kg per month = 6,07,500

Per month income (A+B) = Rs. 24,18,750

Total income for one year with 100% capacity Rs. 2,90,25,000

XIV. <u>DEPRICIATION</u>

Depreciation will be as per Income Tax Rule

Civil work 10%

Machinery 15%

XV. Repairs and maintenance 3% of the machineries and civil work.

XVI. Working capital of Rs.10.75 lakh has been taken at 100 % capacity keeping the scope for increased capacity utilization. Further the loan will not be taken from bank and therefore working capital requirement has been shown as project cost as the funding from Coir Board/MSME is contemplated.

XVII. Selling and transportation cost has been taken as 10% of the Sales.

XVIII. Preliminary expenses will be written off in 5 years.

	COST OF PROJECT	
A	**Fixed Capital Investment**	
	Particulars of Cost	**Amount**
a)	Land & Building	41.60
b)	Plant and Machinery	74.00
c)	Working capital for one month	10.75
	Total	**126.35**

Projection of Income

Sr. No.	Product	Total production MT per day	Working 30 days	Total production in MT	Price per MT (Rs. in 000)	Total Income (Rs. in 000)
CFC processing	Coir rope	0.405	300	121.500	50	6075
	Door/floor mat	0.405	300	121.500	120	14580
	Pith Block	3.6	300	1080.00	1	1080
Services to Artisan	Sell of extracted fiber	0.810	300	243.00	30	7290
	Total					29025

STATEMENT OF DEPRECIATION

STATEMENT SHOWING DERPRECIATION ON FIXED ASSETS

1	Machineries & Tools	1ST YR	2ND YR	3RD YR	4TH YR	5TH YR
	Particulars					
	Opening Balance	74.00	62.90	53.46	45.44	38.62
	Depreciation @ 15% pa	11.10	9.44	8.02	6.82	5.79
	Closing Balance	62.90	53.46	45.44	38.62	32.83
				RATE 10%		
3	Sheds- Fixed Assets	1ST YR	2ND YR	3RD YR	4TH YR	5TH YR
	Particulars					
	Opening Balance	41.60	37.44	33.37	30.60	27.30
	Depreciation @ 10%	4.16	3.74	3.34	3.06	2.73
	Closing Balance	37.44	33.37	30.60	27.30	24.57
4	TOTAL DEPRECIATION					
	Machineries	11.10	9.44	8.02	6.82	5.79
	Fixed Assets	4.16	3.74	3.34	3.06	2.73
	Total	15.26	13.18	11.36	9.88	8.52.
5	Total Written Down Value					
	Written down value	62.90	53.46	45.44	38.62	32.83
	Misc. Fixed Assets	37.44	33.37	30.60	27.30	24.57
	Total	100.34	86.83	76.04	65.92	57.40

Projected Profit & Loss Account

Particulars	**1ST YR**	**2ND YR**	**3RD YR**	**4TH YR**	**5TH YR**
Capacity Utilisation	75%	80%	90%	90%	90%
Production per day in Tones	1.215	1.296	1.458	1.458	1.458
No. of Days of Operations	300	300	300	300	300
Quantity produced	364.50	388.80	437.40	437.40	437.40
Sales/Receipt	**217.69**	**232.20**	**261.23**	**261.23**	**261.23**
Cost of Production					
Consumables	60.75	64.80	72.90	72.90	72.90
Utilities (Power Charges)	15.12	16.13	18.14	18.14	18.14
Wages and Salary (Direct)	13.50	14.85	16.34	17.97	19.77
Repairs and Maintenance	3.45	3.45	3.45	3.45	3.45
Depreciation	15.26	13.18	11.36	9.88	8.52.

Total Cost of Production	**108.08**	**112.41**	**122.19**	**122.34**	**122.78**
Gross Profit	1o9.61	119.79	139.04	138.89	138.45
Administrative and Selling Expenses					
Salaries and Wages (Indirect Expenses)	14.44	15.84	17.42	19.17	21.08
Insurance @0.5%	0.63	0.63	0.63	0.63	0.63
Cost of Packaging	0	0	0	0	0
Selling Expenses	21.77	23.22	26.12	26.12	26.12

Total Administrative and Selling Expenses	36.84	39.69	44.17	45.92	47.83
Profit before Tax	72.77	80.10	94.87	92.97	90.62
Income Tax (Proposed @ (33 %)	24.01	26.43	31.31	30.68	29.90
Profit After Tax	48.76	53.67	63.56	62.29	60.72
Available Surplus	48.76	53.67	63.56	62.29	60.72

14 Cash Flow Statement

Sr. No.	Particulars	1ST YR	2ND YR	3RD YR	4TH YR	5TH YR
	-					
	Opening Cash/Bank Balance	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Cash Inflows					
	-					
A	**Sources of Fund:**					
	Net Profit after Depreciation but before tax	72.77	80.10	94.87	92.97	90.62
	Bank Loan	0.00				
	Promoters Contribution	31.60	0	0	0	0
	Subsidy/Grant from Govt. of India	94.75	0	0	0	0
	Depreciation on Fixed Assets	15.26	13.18	11.36	9.88	8.52.
	Total	**214.38**	**93.28**	**106.23**	**102.85**	**99.14**
	Cash Outflows					
b	**Diposal of Funds**					
	Capital Expenditure					
1	Land & Building	41.60	0	0	0	0
2	Plant & Machinery	74.00				
	Total (1 +2)	115.60	0	0	0	0
	Net surplus	48.76	53.67	63.56	62.29	60.72
	Reserve for depreciation	15.26	13.18	11.36	9.88	8.52.
	Tax liability	24.01	26.43	31.31	30.68	29.90
	Total	**214.38**	**93.28**	**106.23**	**102.82**	**99.14**

Projected Balance Sheet					
Projected Balance Sheet	**1ST YR**	**2ND YR**	**3RD YR**	**4TH YR**	**5TH YR**
LIABILITIES					
SPV (Promoters) Equity	31.60	31.60	31.60	31.60	31.60
GoI Grant	94.75	94.75	94.75	94.75	94.75
Net Profit for the years after Taxation	48.76	53.67	63.56	62.29	60.72
Total	175.11	180.02	189.91	188.64	187.07
ASSETS					
Fixed (net of depreciation)	100.34	86.83	76.04	65.92	57.40
Preliminary Expenses not written off	0	0	0	0	0
Pre-operative Expenses not written off	0	0	0	0	0
Bank balance	59.51	64.75	74.07	73.04	71.47
Reserve for depreciation	15.26	28.44	39.80	49.68	58.20
Total	175.11	180.02	189.91	188.64	187.07

Break Even Analysis

Estimated Revenue (Total)	**217.69**	**232.20**	**261.225**	**261.225**	**261.225**
Income	**217.69**	**232.20**	**261.225**	**261.225**	**261.225**
Variable Cost					
Total Variable Cost	**108.08**	**112.41**	**122.19**	**122.34**	**122.78**
Contribution	109.61	119.79	139.035	138.885	138.445
Fixed Cost					
Office, Admn, Selling	36.84	39.69	44.17	45.92	47.83
Preliminary and Pre-operative Expenses (Non-Cash and Not Included in Cash Fixed Cost)	**0**	**0**	**0**	**0**	**0**
Total Fixed Cost	36.84	39.69	44.17	45.92	47.83
Profit Volume Ratio (%)	66%	66%	68%	68%	68%
Break Even Sale %	69.19	63.54	62.15	62.99	64.09

Average Break Even Point **64.79**

Net Present Value (NPV):

Formula: =NPV (Rate of Discount, Net Income for 1 year, Net Income for 2 year……..Net Income for 10th Year)- Initial Investment

	Cash Flows
Initial Cost of Business	126.35
Net Income for the 1st Year	72.77
Net Income for the 2nd Year	80.10
Net Income for the 3rd Year	94.87
Net Income for the 4th Year	92.97
Net Income for the 5th Year	90.62
Discount Rate	15%
Net Present Value	201

Internal Rate of Retun (IRR)

	Cash Flows
Initial Cost of Business	126.35
Net Income for the 1st Year	72.77
Net Income for the 2nd Year	80.10
Net Income for the 3rd Year	94.87
Net Income for the 4th Year	92.97
Net Income for the 5th Year	90.62
Discount Rate	50%
Net Present Value	75
IRR more than 50%	

Chapter 12

Implementation Framework

1. The SPV will be taken the initiatives in mobilizing the artisans in the cluster. Capacity building will be the crucial factor for implementation of the project.
2. IA will be registering the SPV under Industrial Cooperative Society having jurisdiction with in the district.
3. For the members contribution will be collected for formation of the society and also contributing their share.
4. Bye-laws will be prepared by the IA.
5. IA has already trained 2000 artisans with the help of Coir Board, DRDA etc.
6. The land has been identified in Sonurli village which is having the water and also electricity
7. CFC will be created with the help of government assistance.
8. Some of the artisans are willing to take up the rope making and mats making and expect full time activity. One unit consisting of ratt and support system will be provided to artisans.
9. Artisans will be given coir fiber for further processing into the value addition.
10. Marketing of the products will be done by the artisans. fiber will be purchased from CFC. 11. The final products made by the artisans will be displayed time to time and needs advertisement.
12. CFC will also do the marketing if required by the members.

Soft Interventions

S. No	Activity	2015-16				2016-17				2017-18			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Formation of consortiums for raw material bank, CFC and marketing												
2	Supply of 100 Rats and 75 mat frame and press including installation and training												
3	Skill Upgradation programs for Artisans												
4	Exposure visit for artisans to understand market demand, customer taste and develop new designs as per customer preferences.												
5	Development of new product range by involving experts from NIFT/NID or other service providers												
6	Training programme on Marketing for SHG leaders and consortium members												
7	Printing of brochures and catalogues												
8	Participation in National & international Marketing events												

Hard Interventions

Financial Year	**2015-16**				**2016-17**			
Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Civil works								
Civil Alterations								
Bidding process for machinery								
Electrical works								
Purchase of Machinery & commissioning								
Trial production								
Commercial Production								

Chapter 13
Expected Outcome

13.1. Inducing cluster for coir making

The project envisages creating coir cottage units for the rural people particularly women. After the training, it is expected to start de-husking and spinning with the help of CFC and equipment provided for the artisans. Further the artisans make value added products like mat and matting to get more profit. This activity will give the additional income to the entrepreneurs and empower women.

13.2. Employment opportunity

The initiatives proposed by cluster will create employment opportunities for the rural unemployed youth. It was observed that the young generation migrates from their place to the nearby cities like Mumbai, Thane, Goa and Pune for livelihood as there is no employment opportunity in the local place. Establishment of unit at their village by each trained entrepreneur will be able to provide employment to about 5 people with the available raw material at the village level.

13.3 Income level of entrepreneur

By setting up the unit, entrepreneur will get the income throughout the year and provides employment to 10 people. The direct and indirect employment generation will be to the extent of 1000 people.

13.4. Income source and Pollution control

The farmers consider husk as a waste and use as firewood. Once CFC is created, it will fetch price for the farmers. There is a possibility to increase the price of husk from existing level of Rs. 0.70 to Rs. 1.00 per husk. The pollution and health hazard could be prevented. .

13.5. Industrialization

The small units could pave way for the rural industrialization in the district. The small units can form the cluster at village level in future for their business development.

13.6 Role of MSSIDC in marketing

MSSIDC is marketing the handloom and handicraft products in the domestic market. The coir products will be the additions to the existing market avenues. Further it has marketing linkage and the same can be used for marketing of coir products.

13.7 Integrated approach for coir industry in the district

The CFC will become Training cum production centre in coir sector in the state. Similar approaches could be possible in the districts having coconut plantation.

13.8. Marketing hub for coir industry

With increasing number of entrepreneurs and expectation to start their units in the villages, the production level will increase and hence collective processing for value added products and marketing can be taken up. It could be developed as marketing hub for coir.