



CHAPTER 1: CLUSTER PROFILE

1.1 Background (Support for Traditional Industries – National Scenario) :

Indian heritage and sustenance is interwoven with traditional industries. Indian masses are heavily depends upon this sector, and probably the most involved sector after agriculture. With a view to making the traditional industries more productive and competitive and for facilitating their sustainable development, the Govt. of India announced setting up of a fund for regeneration of traditional industries, with an initial allocation of Rs.100 crore. Subsequently, a Central Sector Scheme titled the “Scheme of Fund for Regeneration of Traditional Industries (SFURTI)” was approved at a total cost of Rs.92.25 core. This scheme was implemented by the Ministry of Micro, Small and Medium Enterprises (MSME) through two nodal agencies viz; (i) Khadi and Village Industries Commission – KVIC; and (ii) Coir Board. Endorsement of SFURTI by working Group of Planning Commission on XII Plan provides support to coir sector in a meaningful way.

In the Union budget of 2013-14, the then Finance Minister announced the extension of the scheme. The revamped scheme will provide support to 800 clusters from Khadi & Village Industries as well as Coir. The total financial outlay was Rs.850 crores to provide support to 4 lakhs artisans. The support is extended basically for three types of intervention viz; (i) soft, (ii) hard, and (iii) thematic.

This Detailed Project Report pertains to Ambalappuzha Coir Cluster which outlines about the cluster, product information, market analysis and other details of Implementing Agency, Stake holders etc.

Coir Industry:

Coir industry in India was originated from Kerala and now being expanded to other coconut producing States like Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, West Bengal, Maharashtra, Assam, Tripura, etc. It employs, approximately, more than 7.00 lakh persons and majority of them are from rural belt and belongs to economically weaker sections of the society. 80% of the coir



Coir Geo-textiles made from yarn by using modern Power looms will improve the Ecosystem in and around the unit. This will be used in the protection of soil and water. Coir geo textiles are best for controlling soil erosion and conditioning soil. Made from coir fiber, they are naturally resistant to rot and moulds and is cheaper than synthetic geo-textiles.

Traditionally a cottage industry, the coir sector has more recently been undergoing substantial changes as more capital intensive products are coming on-line. Non-coir inputs are also increasingly being used, with coir accounting for only 60% of the total product. New products include:

- **Coir Mats:** Made from yarn by using mainly century old manual production technique. Largely used as door mats which constitute a mix of coir yarn and rough fibres as bristles. Woven matting, which is used in interiors of houses etc. are done in Semi-automated and fully automated looms.
- **Rubberized Coir:** Using another important Kerala commodity, ‘rubberized’ products include products that combine coir and rubber (such as a coir mat with a rubber trim or backing) or blend the coir fibre itself with rubber (such as coir-rubber composites for car seat stuffing).
- **PVC Mats:** One of the latest changes in coir production, PVC mats are made from coir fibre brushes adhered onto PVC base (or ‘seat’).
- **Mixed Products:** In Alappuzha floor-coverings cluster is increasingly incorporating non-coir inputs into its products. Apart from rubber and PVC as raw materials, jute, sisal and cotton are also the raw materials used.

1.2 Regional Settings of the Cluster:

The history of Coir and its association with the State of Kerala dates back to the 19th Century. Sandwiched between the Western Ghats on the east and the Arabian Sea on the west, Kerala is one of the most beautiful States in India. A tropical paradise of waving coconut palms and wide sandy beaches, this thin strip of coastal territory slopes down from the mountain Ghats in a cascade of lush green vegetation and varied fauna. One of the most commonly seen tropical trees in Kerala is the Coconut tree. In fact, even the name Kerala (Keralam in Malayalam) is derived from this tree (“Kera” in Malayalam language means Coconut and “Alam” means Land, thus Keralam = Land of Coconut). Everything in Kerala, from culture to its dishes, is evolved around the Coconut tree.

Alleppey (Alappuzha in Malayalam) is the nerve centre of Kerala's famous Coir industry. Here, on earlier days, one can see coconut husks being beaten into fibre for making beautiful mats and other



coir products. Both men and women were actively involved in the production of Coir. The women are mainly involved in the yarn spinning sector and the men in the product-weaving sector. Coir Industry enjoys the status as the largest Cottage Industry in the State of Kerala, giving employment to about 2-3 lakhs people. Kerala also has a very fine natural harbour located at Cochin (Kochi), near to the cluster.

Coconut Production in Kerala

Among the Indian States, Kerala tops in production of coconut in the country. As per the data available from Horticulture Department, during 2013-14, coconut was cultivated in 797.21 hectares in Kerala. During the same year it was estimated a coconut production of 5968.01 million nuts with a productivity of 7486 nuts per hectare.

Coconut Production in Alappuzha

Statistics given by Coconut Development Board reveals that in Alappuzha during 2015-16 coconut production was in 33227.00 (Ha) land and 1870 lakh nuts produced. It also shows the productivity as 5628 (nuts/Ha). However, it is worth to mention that, even after such promising scale of coconut production, the fibre production is too low. The fibre requirement is basically met with purchases from other locations and States. The basic coir related work in Alappuzha start with spinning activities.

Coir Industries in Alappuzha at a Glance:

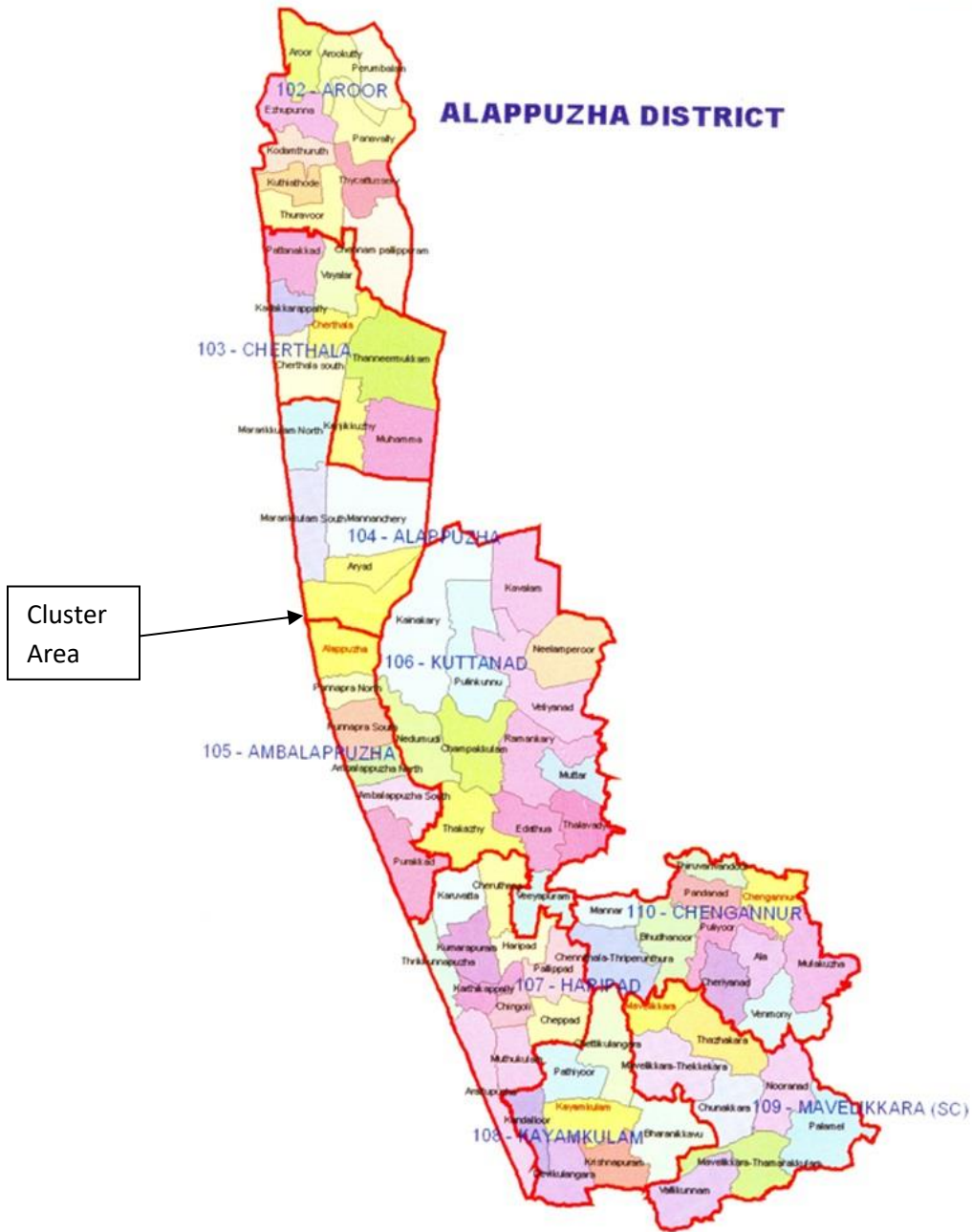
S. No	Type of Industry/Activity	No. of Industries
1	Spinning Societies	350
2	Mat and Mattings	27
3	Producers' Society for Mats	40
	Total	417



1.3 Location:

The proposed project location of Ambalappuzha is in Alappuzha District. Located at central part of Alappuzha. It had its heyday as a commercial hub when Dewan Raja Keshavadas, in 1775-76, built it to be a major port of the erstwhile Travancore State. The proposed cluster location covers Ambalappuzha and Aryad blocks of Alappuzha district. The cluster will attract coir activities mainly in 9 villages of these Blocks. The cluster area covers Ambalappuzha, fully and South part of Cherthala Thaluk. The following are the specific area covered by the cluster:

1. Alappuzha Municipality
2. Aryad Gramapanchayat
3. Mannachery
4. Mararikulam South
5. Punnapra
6. Ambalappuzha North
7. Ambalappuzha South
8. Purakkad South
9. Purakkad North





1.4 Evolution of the Cluster:

Alappuzha (known as Alleppey) was the nerve centre of Kerala's famous Coir industry. Here, one could see coconut husks being beaten into fibre and beautiful mats and other coir products being made. Both men and women were actively involved in the production of coir products. The women are mainly involved in the yarn spinning sector and the men in the product-weaving sector. Coir Industry enjoys the status as the largest Cottage Industry in the State of Kerala, giving employment to 2-3 lakhs people. Skilled and semi-skilled manpower is available in the cluster. Captive usage of coir yarn in Ambalappuzha cluster will have enhanced employment opportunities, especially for the skilled women workforce in spinning sector.

The Coir Board was established in Alappuzha in 1955. Then, the National Coir Training and Designing Centre was set up in 1965. Subsequently, the Coir Research Institute is also established. Coir continues to be an important cottage industry for the local people. It is common to find doormats crafted out of tufts of coir fibre in small village units and people even making coir ropes in their backyards.

The extraction of coir fibre and small scale production of many coir based products provides employment to almost 90% of the womenfolk of the coastal belt of Ambalappuzha area. This makes the coir industry important to both labour and economy of western region of Ambalappuzha. The manual process of manufacturing coir mats is not economically viable and very errant in meeting the demands. In other words the skilled person of Ambalappuzha is in a vicious circle of economy of scale. Introduction of automation and technology will go a long way in upgrading the economy of scale and making the product availability at the right time. After successful implementation of Ambalappuzha Coir Cluster, the spinners of in and around the cluster will have a steady income as the employment opportunities will be on up-scale.



Coir Production during 2014-15 in the cluster location:

Arattupuzha, Vaikom, Mangadan are the varieties of coir produced in the cluster. During 2014-15, 57 societies in the project area worked more than 100 days for coir production. During the financial year 2014-15, the societies of these area had produced 8000 Ton of coir worth Rs.40,36,88,042 by using 8800 Ton fibre.

Problems being faced by the coir industry in Ambalappuzha:

- (i) While Alappuzha district stands as the apex centre for coir production and related activities of India, the nearby area Ambalappuzha within the district is not able to contribute significantly.
- (ii) The revolutionary changes of Alappuzha in the production of value added items could not tap the potential of Ambalappuzha area.
- (iii) Artisans at Ambalappuzha still using only out dated and traditional technology for production.
- (iv) In Ambalappuzha approximately 15 societies are registered. The land available with Co-operative Societies is not able to utilize for productive purpose. At the same time, micro and small enterprises are running around for getting land for production centres.
- (v) Co-operatives, as a whole, depend upon government support & strategies and they are unable to bring dynamism, vibrancy and professionalism in their work.
- (vi) Co-operatives not able to operationalize any new marketing channels and so remain with traditional market and approach. Its sole agency, Coirfed is the only marketing channel available with them.
- (vii) As the young generation is apathetic about the development from this sector, innovation is not coming in the sector.
- (viii) The vast skilled human resource available in the cluster is not able put into productive area. Productivity is low due to absence of automation/new technologies in Ambalappuzha



1.6 Socio-Economic Aspects

Alappuzha is a backward district in terms of the standard of living of the people. The majority of population of the district comprises agricultural labourers and coir workers. Though literacy rate in Alleppey district is in the second rank as compared to other districts, employment rate is not proportionate to the literacy rate. The awareness of democratic equality and the land reform measures offered a feeling to the individual that each is equal to anybody else. The high literacy level coupled with the achievements of the labour class has speeded up the breakdown of the coterie of casteism and landlordism in the district.

1.7 Human Development Aspects

As of 2014, Kerala has a Human Development Index (HDI) of 0.790 which comes under the "high" category and it is the highest in the country. Comparatively higher spending of the government in primary level education, health care and elimination of poverty from the 19th century onward has helped the state to maintain an exceptionally high HDI.

1.8 Key Economic Activities in the Region

Kerala suffers from low industrial growth. The share of manufacturing industry is low and within manufacturing, unregistered manufacturing forms a disproportionately large part. The path forward is based on the idea of sustainable industrialization. This would balance economic prosperity, environmental stewardship, and social sustainability. It will prioritize high knowledge activities and diversify the industrial structure. It will adopt Clean Production Systems to mainstream environment. A cluster development approach for Kerala is recommended with one town one industry and one village one product model. Kerala may promote logistic hubs given its unique location. Regional innovation systems will be built. Skill development and entrepreneurship for sustainable development are to be encouraged. Kerala must pay special attention to small and medium enterprises. Enforcement of a social security system and strict compliance with decent working conditions are necessary for inclusive development. Every action must be benchmarked against international standards. After the cluster intervention in Ambalappuzha, it is envisaged



1.9 Infrastructure – social, physical, financial and production – related

Necessary facilities are to be created during the cluster intervention. The location is well connected with main roads/national high way. The nearest airport is Cochin and Railway Station is Alappuzha. The premier agency of coir sector i.e., Coir Board is in Cochin which is nearby district of Alappuzha. Central Coir Research Institute and National Coir Training and Design Centre both are located at Alappuzha.

Minerals

S.NO.	NAME OF MINERAL	PRODUCTION in tones
		2015-2016
MAJOR MINERAL		
1.	Granite Building Stone	2378
MINOR		
1.	Laterite	10991
2.	Sand	265956
3.	Brick Clay	0
4.	Lime shell	0
5.	Silica Sand	66402

SOURCE:- DEPT. OF MINING & GEOLOGY.

Roads

The credit for development of roads in this district goes back to the period of Ramayyan Dalawa, the Dewan of Travancore, who opened several roads chiefly for the convenience of militia and for traffic. With the appointment of Mr. Bartom as the Chief Engineer during the time of Dewan Madhava Rao, remarkable progress in the expansion of roads has been achieved. With the opening of the Alappuzha -Changanacherry road in 1958 this district has a network of good motorable roads.

Water Transport

The commercial canals connecting the nook and corner of this district are its life line. Canals, rivers and backwaters afford an easy and cheap mode of transport of goods and men which was one of the main reasons for the importance of Alappuzha town as the major commercial centre of older times.



CHAPTER – 2: CLUSTER PRODUCT AND VALUE CHAIN

2.1 Product Profile:

At present the main cluster product is Coir, coir yarn, Mats, Mattings, Coir Geo-Tex and all other ancillary coir products. Ambalappuzha cluster is having the outdated and low technology-manual process for manufacturing coir geo-textiles. This results in low productivity and un-remunerative value added products which becomes un-attractive and in-competitive in the market. Providing products at the right time is also quite difficult for the cluster as manual process takes a very long time in order to produce large quantities of coir geo-textiles. Under-employment of skilled manpower is another critical issue in the cluster. The spinners are not getting regular employment opportunities and yarn consumption is not regular. Introduction of automation/ modern technology for producing value added products on regular basis will increase the yarn consumption within the cluster and the spinners can avail the increased employment opportunities. Altogether, there is a great potential for value added products like coir geo-textiles for both domestic and export markets. Ambalappuzha cluster is envisaging to en-cash this opportunity through the intervention with the solid backing by the SFURTI.

Fiber

Mechanized de-fibering process has replaced the traditional one considerably. In this process, major output will be brown fiber. Novel developments by the Central Coir Research Institute, under Coir Board, using a bio-technological approach with specific microbial enzymes have reduced the retting time substantially to three to five days. High quality fiber production has been maintained. Full potential of fiber production is not being utilized due various infrastructural and logistic issues confronting Alappuzha region in general and Ambalappuzha in particular.

Coir Yarn Production

The skilled manpower of spinning is not being utilized fully because of errant value addition process of old method. The automation/modern technology introduced by the Ambalappuzha Coir Cluster will result in increased demand for coir yarn for value addition. This will increase the employment opportunities for spinner and higher yarn production in and around Ambalappuzha.

Coir Geo-Textiles

Coir is a 100% natural fiber, from a renewable source – the coconut husk. Naturally resistant to rot, molds and moisture, it needs no chemical treatment. Hard and strong, it can be spun and woven into matting. They also have the right strength and durability to protect the slopes from erosion, while allowing vegetation to flourish.

Coir Geo Textiles can dissipate the energy of flowing water and absorb the excess solar radiation.



Coir can be spun and woven into small and large sized meshes, depending on the nature of the soil, and other factors. Coir geo-textiles are hard and strong and blend well with soil. They hold soil in place and prevent erosion, dissipating the force of heavy rains and run of water. It provides good soil support for years, allowing natural vegetation to become established. Coir geo textiles promote the

growth of new vegetation by absorbing water and preventing the topsoil from drying out. As it has strength and durability, it protects slopes and help natural vegetation to take root, coir geo textiles are available as woven, meshes and nets and non-woven. They have varying densities depending on their application. Over a period of time the eco-friendly and biodegradable coir disintegrates completely, leaving only humus.



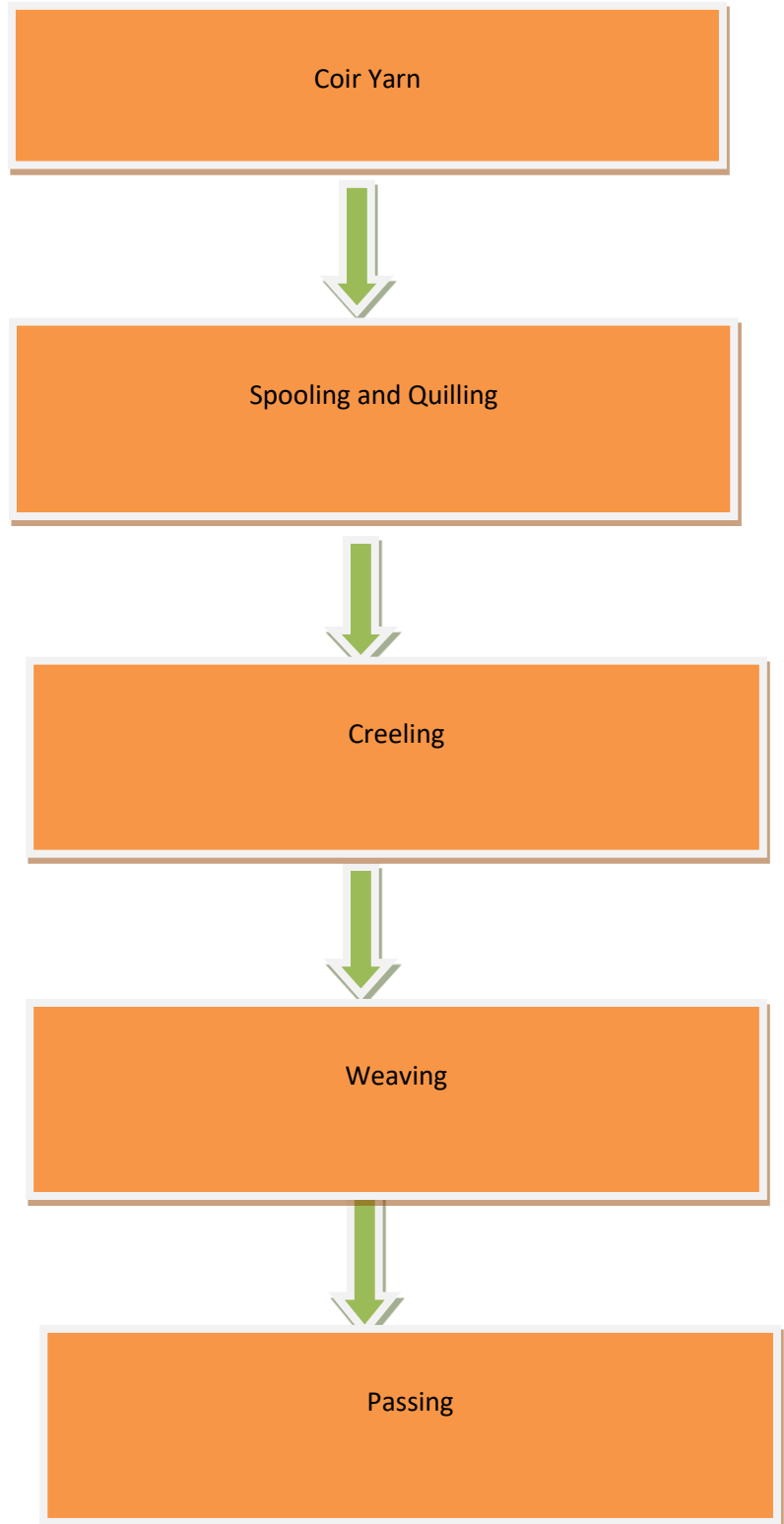
Uses:

- Slope stabilization
- Embankment and stream bank stabilization
- Effective erosion and sediment control
- Highway shoulder stabilization
- Landscaping and Golf Courses
- Lush green natural lawn made of coir geotextile and coco peat
- Filtration and drainage

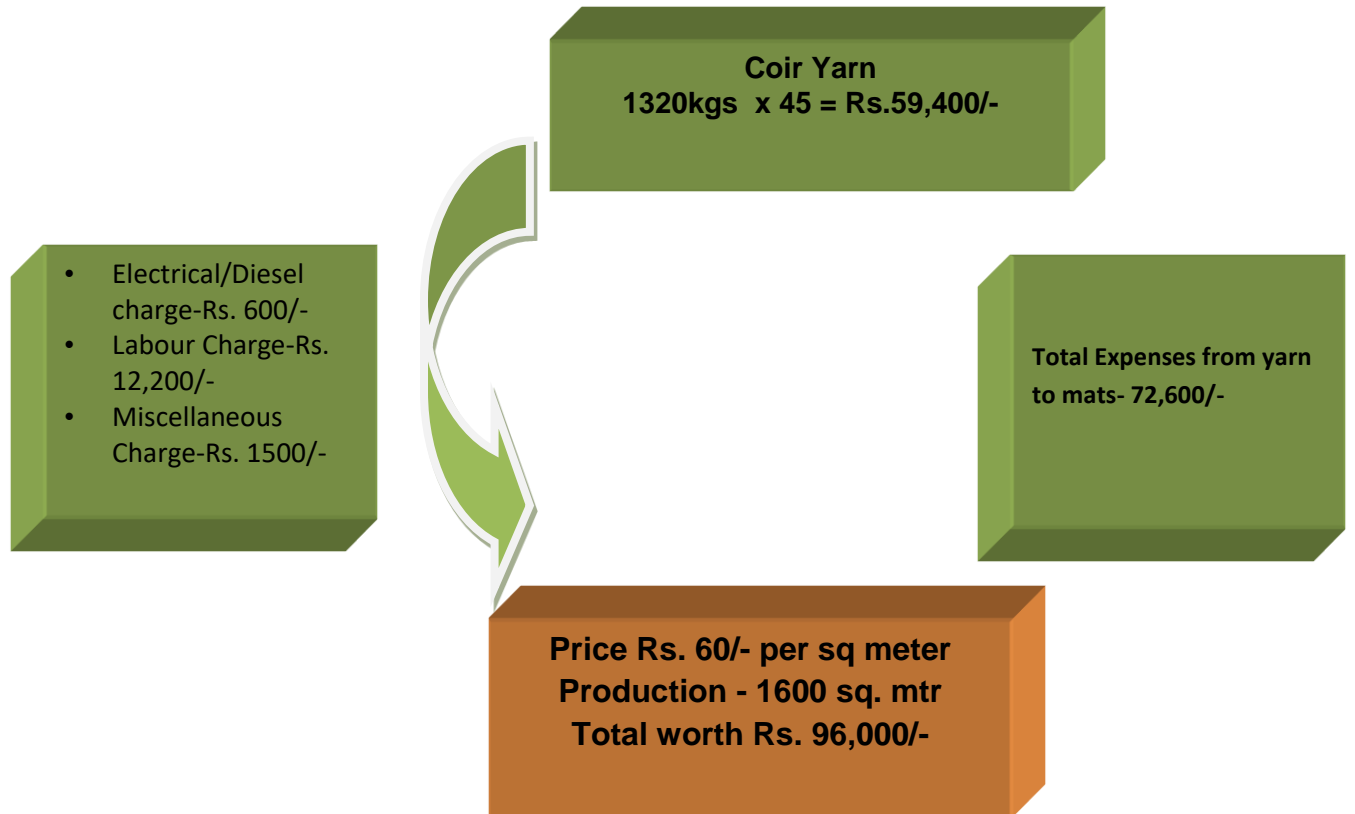
Benefits :

- Prevent soil erosion
- Faster binding of soil
- Excellent air and water permeability
- Cost effective and easy to install and maintain
- Promotes natural vegetation
- 100% biodegradable and environment friendly

2.2 Production Process – Power loom coir geo textiles

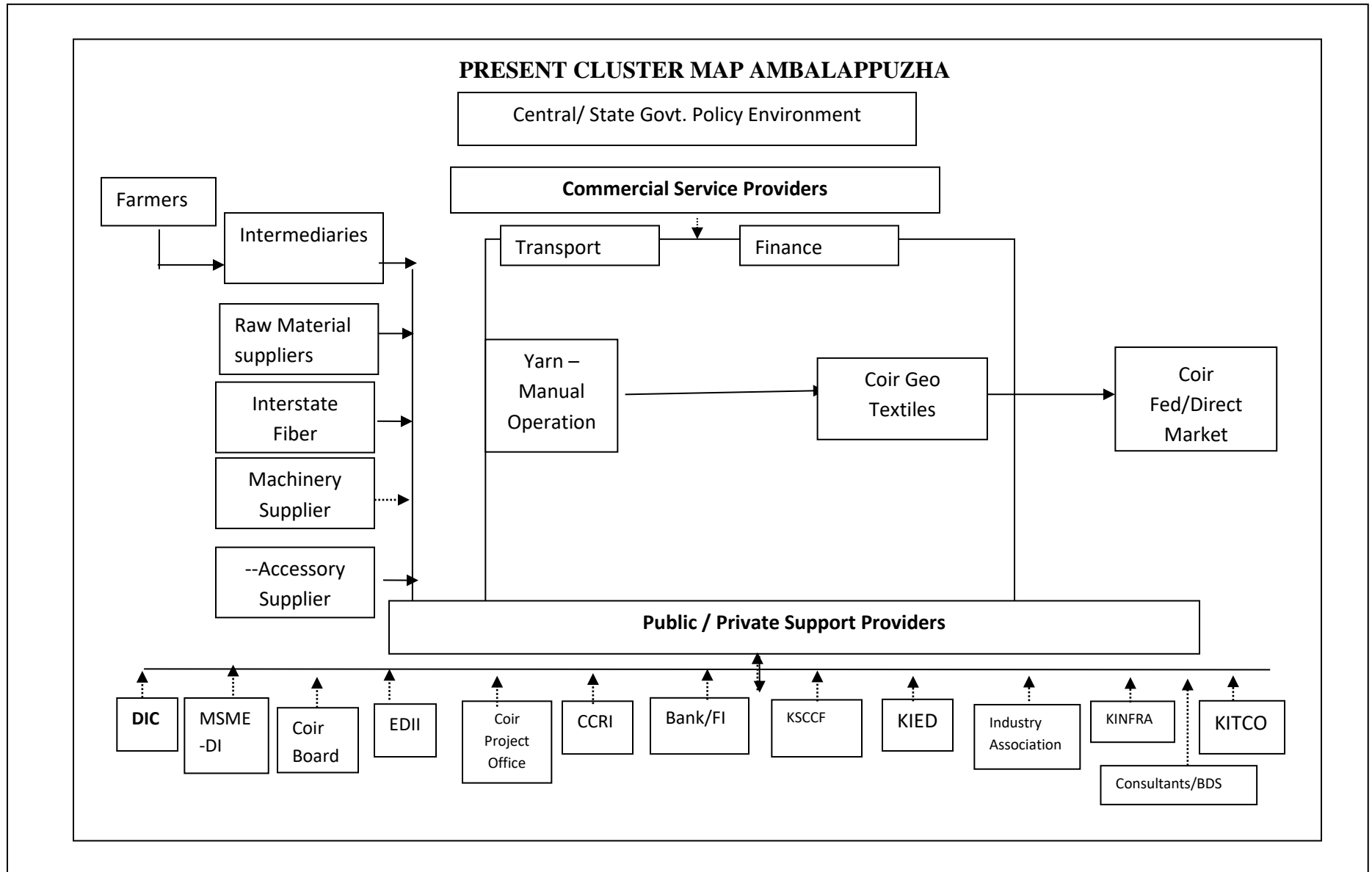


2.3 Value Chain Analysis –Coir Geo textile





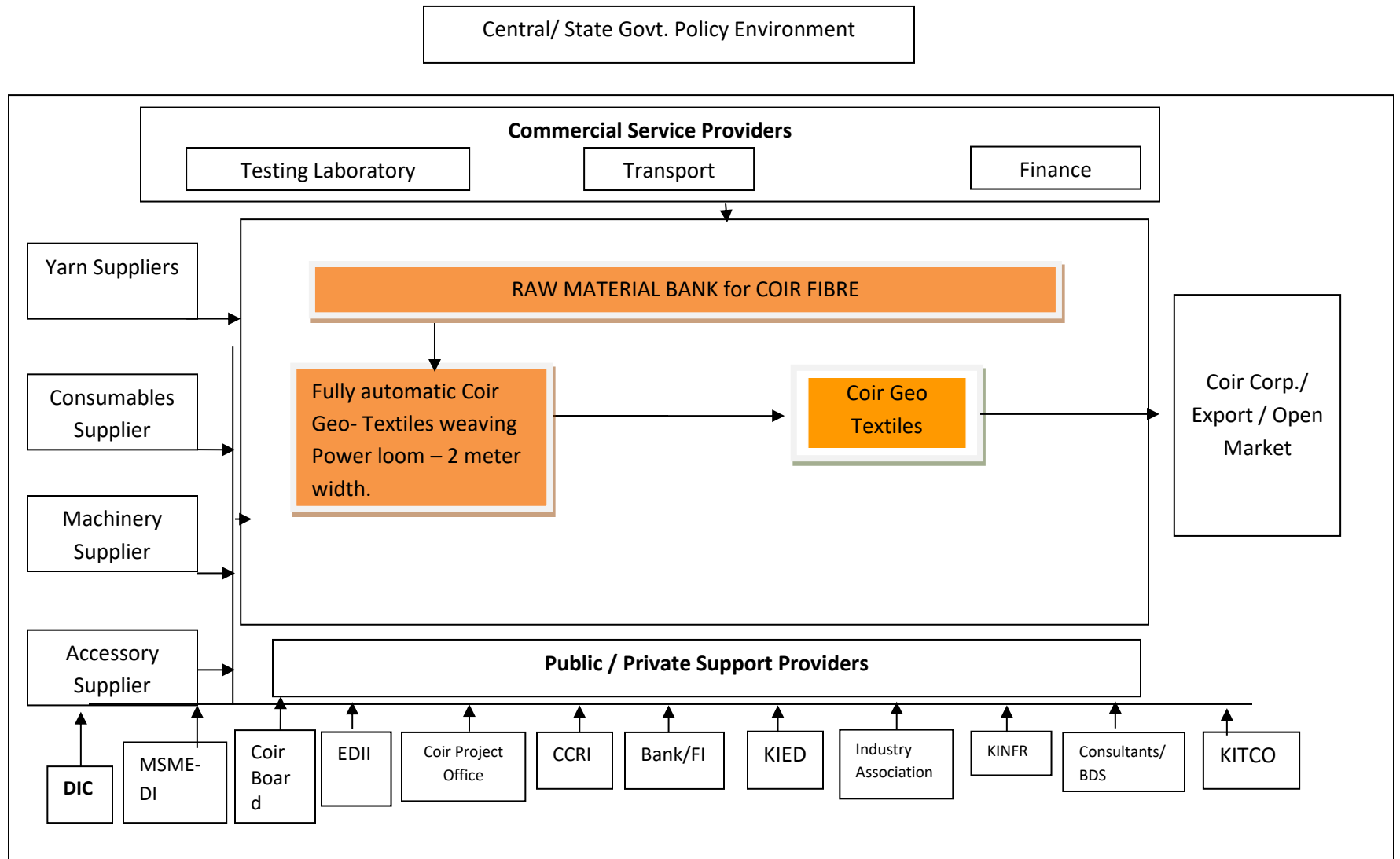
2.4 Cluster Map





Cluster Map after Intervention

EXPECTED CLUSTER MAP IN AMBALAPPUZHA





Plan for Backward and Forward linkage for strengthening the Mini Cluster of Ambalappuzha

Backward Linkage

- a) Supporting the spinning activity as the skilled human resource in large are without regular employment opportunities because of limited value addition in the cluster. The captive consumption by the Ambalappuzha Coir Cluster will be a boon for the spinners. The yarn will be purchased locally and hence the spinners will get better and timely payment. This backward linkage is one of the very important aspect of this cluster.
- b) Long term tie up can be made with inter-state mechanized yarn producers and other clusters to ensure the availability of quality yarn for the raw material bank proposed to be set up at Ambalappuzha.
- c) Promote mobile de-fibering units at Panchayat level
- d) Promote private entrepreneurs for collection of husk and defibering.

Forward Linkage

- i. The strategy also provides potential and possibility for attractive private entrepreneurs into the coir sector.
- ii. Sufficient tie ups can be made to export the products
- iii. Setting up of more value added products in the cluster, after successfully implementing this strategy.
- iv. Government agencies like PRIs, NHAI, DMA etc.

2.5 Principal Stakeholders

There are thousands of coir workers available in the cluster location; however in our preliminary interaction 500 members have shown interest in the cluster activities.



Business Development Service Providers

Machinery Suppliers

Currently the stakeholders are approaching manufacturers from different parts for necessary machinery. Modernization of machinery is a very slow process. An awareness exercise is to be carried out to get a better option for stakeholders. Research and development works has to be executed for modernization of machinery.

Coir Board, Kochi

Coir Board's presence at Cochin is very advantageous for the CFC. They provides financial, market development, skill training assistance for the development of coir industry and extends the financial 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.

Central Coir Research Institute (CCRI)

The Central Coir Research Institute is one of the prime research centres of Coir Board established in the year 1959 and implements all the S & T programs of Coir Board for the development of Coir Industry. CCRI is headed by Dr. Das Anita Ravindranath, Director, RDTE. The Research wing of the Coir Board was formed in 1955 in pursuance of the recommendations of the committee for Research and Statistics of the Coir Board. The Committee had suggested short term measures for initiating scientific research on problems of importance to the coir industry for immediate follow up and also establishment of a Central Coir Research Institute in the long term. Accordingly, nucleus of the Research Station was formed in September 1955, with the appointment of a Coir Technologist. Pending establishment of the Central Coir Research Institute, the initial research investigation under the Board were conducted at the Cotton Technology Research Laboratory, Mumbai and the Department of Chemical Technology, University of Mumbai, Mumbai. Simultaneously, action was pursued for acquisition of the land and organization of the laboratories for the Research Institute. A ten acre site was acquired in 1958 at Kalavoor, Alleppey about 8



km.north of the Alleppey Town(Kerala) on the Alleppey-Cherthalai National Highway 47(now NH 66). The Institute started functioning in 1959.

District Industries Centre

This Kerala government organization helps existing and potential entrepreneurs from all walks of life and sectors. DIC is equipped with Entrepreneurs Guidance Cell to guide the entrepreneurs. In addition to this, there are several schemes of state and central governments implemented through this organization for the benefit both new and existing entrepreneurs as well as large number of exporters from Alappuzha.

Kerala State Co-operative Coir Corporation

Coir Corporation, an Apex Federation of Cooperative Societies engaged in the manufacture of coir and products is entrusted with the task of marketing the products of the cooperative societies. It aims the sustenance of coir workers, especially women. The mission of Coir Corporation is to eliminate middlemen and provide better services to cooperatives. Presently, more than 620 societies, all over Kerala, is affiliated to this organization.

The product range of Coir Corporation include fiber, Coir Pith, 80 odd varieties of coir yarn, coir geo-textiles, alluring range of coir products like mats, mattings, rugs, coir tiles and rubber packed coir products like mattress, pillows, PVC tufted mats, briquettes, garden materials like pots, climbers etc.

Commercial banks and micro finance institutions

The stakeholders are having linkages ranging from Co-operative to Nationalized banks. Almost all the nationalized banks, designated cooperative banks have branches all over Alleppey and surrounding areas. In addition these, there is district level offices of specialized financial institutions like NABARD etc.

Entrepreneurship Development Institute of India, Thrissur

EDII will be able to play its role for supporting both the cluster activities and helping the new and existing entrepreneurs for coir sector.



CHAPTER 3: MARKET ASSESSMENT AND DEMAND ANALYSIS

India is one of the top producers and exporters of coir products in international market. The tradition was started by an Irish born American Late Shri James Darragh, who set up a factory in Alleppey in 1859. The Indian Coir Products are in great demand in the international market because of their special attributes like fitness, price, craftsmanship, quality, attractiveness and Eco-friendly, biodegradable renewable natural resources, non-pollutant, usage of the product is up to the expected level when compared to plastic and other environment pollutant item. Even though India is one of the leading exporters, it could not top the list with the value added products and there seems to be several reasons for its unsatisfactory and poor performance in Coir and coir products exports.

The exports of Coir products from India during the year 2016-17 registered an all time high record of Rs. 2281.65 crores. During 2016-17, 957045 MT of coir and coir products were exported from the country. Approximately 51 per cent is coir pith in the export basket. The second is fiber with around 38 per cent. Just 11 per cent constitutes the value added products in the export basket. This shows there a huge opportunity to increase the value added products in the export market coupled with good demand from domestic market. Following provides details of export composition of coir and coir products during 2016-17.



Export Composition of Coir and Coir Products during the year 2016-17

Q = Quantity

V = Value in Rs. Lakhs

Items	2016-17		Export Composition%	
	Q	V	Q	V
Coir Pith	490552	90539.11	51.26	39.68
Coir Fiber	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
Coir 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

Subject to E & O E - Source – Coir Board

Domestic and local Market:

The domestic market for coir products is currently estimated approximately at Rs. 2,000 crore and this is expected to grow to Rs. 3,500 crores by 2019. The state of Kerala is responsible for about 80% of India's coir market. The coir industry in Kerala employs approximately 2-3 lakhs people. Over 50% of the coir produced annually throughout the world is consumed mainly in India. The exports of coir and coir products from India during 2016-17 have reached Rs. 2281.65 crores



Analysis

1. Stakeholders of Ambalappuzha Coir Cluster never en-cashed the growing opportunities in export as well as domestic markets for value added products. There is a need for cluster to en-cash the available opportunities for both domestic and export markets through value addition and technology up-gradation to coir yarn.
2. The available skilled human resources are not fully utilized, especially the spinners for want of regular employment opportunities.
3. There is huge untapped market in countries like Russia and Latin America for coir value added products. However for any exports, stakeholders of Ambalappuzha cluster need to understand international quality norms and upgrade their facilities accordingly.
4. Stakeholders are not able to utilize the hugely available basic infrastructure like land and building for want of investments. They are not open to offer the facility to private operators as they fear losing the same to them in the long run. The stakeholders view investing big amount a very risky due to current volatile market condition for their manually processed value added products.
5. Need for automation/new technologies to cater to the demands on time with right quantity and quality.
6. There is an urgent need to sync the skilled human resources with the market potentials of both domestic and international.



CHAPTER 4: SWOT AND NEED GAP ANALYSIS

A threadbare discussion with various stakeholders of the clusters helped us to understand the limitations and dynamics of the cluster with more clarity. Following are our major observations on the cluster.

SWOT Analysis

Strength:

- Low investment with regular employment for skilled/un-skilled workers
- Skilled human resources, especially in the spinning area as the area is well known for coir and coir products since centuries. In fact, the pioneers of coir sector.
- Availability of requisite logistics and physical infrastructure facilities
- Exposure to SFURTI developmental activities, including social security measures
- Traditional/inter-state yarn suppliers and input providers
- Govt. assistance through the Project Office, Alleppey
- Market can be expanded as an eco-friendly product
- Good transport link, rail, road, water and air.
- One of the best known places in international tourism map and increased possibilities for export market
- Experienced and quality managerial expertise available in the cluster both from Central and State Governments to manage the cluster activities on day today basis.
- Existence of two National level Coir Research and Development Institutions in the vicinity of cluster.



Weaknesses:

- Low credit facility due to inability of stakeholders to provide collateral security and margin for working capital
- Limited efforts on value addition to coir like mats/mattings etc.
- Lack of linkage and trust among important stake holders
- Almost nil use of high level technology and modernization in cluster
- Lack of entrepreneurial and management skills among the stakeholders
- Lack of awareness in technical and managerial knowledge
- Limited knowledge of government schemes
- Awareness about the BDS providers and the need for stakeholders
- Lack of young hands for coir related activities
- Untapped possibilities for direct export
- Limited efforts to establish value added products in the cluster area
- Limited entrepreneurial skills among unit holders and artisans

Opportunity:

- Natural product and eco-friendly hence acceptable to even in developed markets of America and Europe and lack awareness about the same
- Supporting the Government's initiative of Make in India plan
- Availability of govt. schemes like SFURTI, soft credit etc.
- Working capital mobilization under raw material bank etc.
- Better utilization of skilled human resources especially the weaker section of the society. The major beneficiaries will be the women from in and around Ambalappuzha



- Increased acceptability of products like coir geo-textiles and mats with more viable and attractive products
- Presence of coir specific technical institutions like Coir Board/CCRI/EDII and synergy among these institutions
- Both governments at Centre and State are ready to support traditional and labour intensive sector like coir.

Threats/Challenges:

- Availability of cheaper and more attractive synthetic products
- Absence of modernization and technology upgradation
- Competition from countries like Srilanka, Philippines, Bangladesh and Vietnam with cheaper products
- Irregular supply of power and increasing cost of power
- Political interference in developmental activities
- Inability to attract younger generation to this activity mainly due to drudgery
- Frequent fluctuations in raw materials like yarn. Dependency on other states for yarn

Need Gap Analysis:

Technology:

There are very limited facilities for value added products like coir Geo textile and other demand based products in the cluster. Lack of finance and awareness are the major issues for restricted value added mix in the cluster. Therefore, there is a very critical need to introduce automation / new technologies in the cluster. The coir Geo textile produced in the cluster will be further processed in and around Ambalappuzha among the Agricultural Industry before exporting/domestic marketing.

Marketing:



Currently, the cluster cannot meet the demands because of handmade products. When there is a huge order for export markets, the cluster is facing difficulties in meeting the requirements of exporters. Therefore, cluster intervention in Ambalappuzha will help them to produce the right quantity of Geo Textiles at the right time and at the right price. The cluster products can be the raw material

for 100's of units in and around Ambalappuzha for Geo Textile products. The cluster also has plans to do the job-work in Coir Geo textile for exporting/domestic marketing.

Finance:

Financial institutions are reluctant to finance the coir sector due to various reasons. There is a need to impart training on accounts and finance for the cluster members. Soft Interventions can take care of this need in the cluster. There is also a need to organize an awareness workshop on government schemes and its goals with the help of support institutions like NABARD, KVIC, Coir Board, EDII and DIC.

Quality:

To attain fine finish and constant quality the cluster intervention is very important. Technology up gradation will improve the quality and quantity of the products from the cluster. This intervention will also improve the quality of lives of coir workers by removing drudgery. Therefore, there is a need to educate the Ambalappuzha cluster members on quality and standards with the help of CCRI, Export promotion councils, Coir Board and EDII.



CHAPTER 5: PROFILE OF THE IMPLEMENTING AGENCY

Profile of the Implementing Agency (IA)

Institutional Structure/ Registration Details					
	Legal Status	The implementing agency for the proposed Coir Cluster will be Coir Boucle Consortium, Alappuzha. It is a registered Society under Travancore Cochin Literary, Scientific and Charitable Registration Act.			
	Date of Incorporation/ Registration	Reg. No.388 of 2013., 14 th August 2013			
	Registered Address	Coir Boucle Consortium Bldg No. CRA24, Chandhanakkav East, Alappuzha-688011			
	Office Address/ Locations	Coir Boucle Consortium Bldg No. CRA24, Chandhanakkav East, Alappuzha-688011			
	Affiliated to coir Board	Yes			
Governance Structure					
Composition of the Executive Board/ Trustees/ Governing Body/ Managing Committee and Back Ground of Members					
	Name of Member	Designation	Back Ground / Profile	Contact Number	Email
	M. Kumaraswamy Pillai	Chairman	Director, (Marketing), Coir Board (Rtd)	9447409933	
	A.J. Thomas	Vice Chairman	Dy. Director, Coir Board (Rtd)	9447485230	
	P.R.Sudheendran	Director	Secretary (Rtd), KCM&MCS Ltd	9447160519	
	V.Syamaprasad	Treasurer	Dy. Director, Coir Board (Rtd)	9447828450	
	K.V.Mohanan	Member	Dy. Director, Coir Board (Rtd)	9495805750	
	George Samuel	Member	Executive (Retd), Aspinwall & Company	9447224432	
	A.Premnath	Member	Records Ma, Coir Board (Rtd)	8086765566	



Operational Profile	
Major Objectives – Vision, Mission, Goal of the Organization	<ol style="list-style-type: none"> 1. Providing Technical consultancy for modernization of the coir industry with technology upgradation and infrastructure enhancement 2. To perform works of charity for those in need in the coir industry irrespective of race, caste, community and creed 3. To engage in development activities aimed at improving the living conditions and general welfare of the people dependent on the coir and allied industries
What are focus Areas of operation	Technical support for the up-gradation of coir industry
Provide Key projects/ Activities being under taken by the IA-Brief description including the project scope, size and duration (mention specific experience in the area / sector of the proposed project)	The five retired coir board officers were the main actors behind the successful implementation of Rs. 64 crores Coir Board project for infrastructure project in Alappuzha Coir sector.
Mention Key Clients/ donors/ Associated with for project implementing along with details on the nature of Association	Nil
Mention key partnerships / Alliances (if any)	Nil
Management Profile	
Back ground of key personnel (Professionals and others) with brief profile of the senior management personnel	The management of the implementing agency is carried out by a committee of 7 members. 5 out of the 7 members are the retired officers of Coir Board and the balance 2 people have the past working experience with premier coir exporting companies of Alappuzha. The experience and passion of this 7 people will definitely support the cluster for its implementation. However, it has a team led by Chairman. In his absence the Vice Chairman will take care of the activities. They are administratively supported by a Director and Treasurer. In view of this, it is felt the implementing agency is capable to manage the operation of the cluster.



CHAPTER 6: PROJECT CONCEPT AND STRATEGY FRAMEWORK

6.1 Project Rationale:

Ambalappuzha is one of the highly populated places of coir artisans in the State. Yet, their experience and expertise could not be utilized fully for production, as they have limited scope to get access to high tech production system. Foreseeing the demand for eco-friendly coir geotextiles, the artisans are currently involved in production and promotion of the same using conventional methods. Thus the intervention proposed in the SFURTI model is the need of the hour as it involves modern machinery and hence increased rate of production of Geo Textiles from the cluster.

Of late, there is a growing awareness on the soil and water conservation all over the world. A lot of studies are launched to know the impact of global warming leading to conservation of water and valuable top soil. Soil erosion is one of the greatest problems being faced by the mankind. It is estimated that around one sixth of the land area is subjected to soil erosion in India every year. This will result in transportation of precious top soil of an estimated quantity of 60,000/-million tonnes of top soil to sea every year. This problem needs to be averted and Coir Geo textiles is the perfect solution for the problem.

In Europe and USA, major projects using eco-friendly natural geo textile for soil conservation has been expeditious. Slowly, but surely the concept of using geo textiles for top soil conservation in place of conventional methods of concreting, stone pitching etc. is creeping in. The Coir Board and Govt. of Kerala are promoting the use of coir geo textiles in various soil bio-engg, projects by undertaking field demonstration and providing financial support in the form of discount for the purchase of coir geo textiles. PRIs and MNGREGA have already started using coir geo textiles in their soil and water conservation projects in the village by sourcing coir geo textiles from the Kerala State Coir Corporation in subsidized rate. In turn the Coir Corporation would be sourcing the Geo Textiles from the Mats and Mattings Coir-Cooperative Society and the Small Scale Coir Societies.



6.2 Project Objective:

The main objective of the project is to provide vibrancy to the coir activities in the cluster and position it with value added products. However, the intervention will also focus to:

- Introduce new technology in the value added coir production sector
- Ensure regular employment of skilled manpower, especially women spinners
- Attracting youngsters into the cluster and motivate them to start ups in value added coir sector by reducing drudgery
- Directly as well as indirectly help for boosting export market of the coir products
- Establish the linkage of Ambalapuzha with Alappuzha for the promotion of Coir and its other value added products.
- Utilize abundantly available managerial capabilities of experts in coir sector for upgrading the sector to next so that dynamism if inculcated in the cluster in general and among the stakeholders particularly.
- After the great flood of 2018, state government is also to begin the reconstruction work to build a new Kerala and coir geo textile has an important role in the reconstruction work. The climate change is also augments for good potential for coir geo textiles for a quite a long period.

6.3 Focus Products/ Services:

Keeping in mind the project objective as specified above, the cluster intervention focuses on the followings:

Products:

Through the proposed CFC, new technology based fully automatic coir geo textile units will be started. Through this, the market penetration of mats will be increased and overall turnover of



the cluster will also increase. The modernization/automation will ensure timely availability of value added products as per the demand in both national and international markets. The backward integration will result in getting opportunity for regular employment for the womenfolk of cluster area. Additionally, the reconstruction of flood affected projects will be extensively using this product as well as activities related to climate change.

Services:

- Set up a Raw Material Bank for the Coir Artisans for easy availability and storage of Raw Material, so that supply to the CFC is properly maintained.
- Develop a trust among all cluster members in the location through the creation better visibility
- Introduction of new technologies in coir sector otherwise only manual activities
- Train members to perform a better quality life with added social security measures
- Create a demonstration effect with new technologies for value added coir products and resulting in multiplier effects
- Make available BDC needed for the coir sector in upgrading the consumption of modern technology and increase the dynamism and sustainability among the stake holders

6.4 Conceptual Framework/ Project Strategy:

The overall framework of the project is the development of coir sector in Ambalappuzha taluk with value addition to coir yarn so that increase in consumption of yarn can create more employment opportunities for the skilled manpower, especially womenfolk. It has strategized the intervention on the guidelines and framework of SFURTI schemes of Coir Board. The intervention will take care of followings:

- Bring all stakeholders together and increase the synergy of the cluster. Inculcate vibrancy among the stake holders of cluster, especially coir workers
- Take a cluster approach in the area and improve life and product cycle of coir workers



- Frame out a proper value chain suitable to the cluster and involve stakeholders in the process
- Establish a common facility centre with modern technology and machinery and make it ready to use by the stakeholders
- Help to develop value added products and link them with export market for getting remunerative return to the coir workers
- Holding the slogan of ‘zero’ waste policy convert waste to products and offer them in the market that environment friendly
- Develop forward and backward linkages to ensure vibrancy of the cluster
- Encourage youngsters for startups in coir sector for in increasing the sustainability among the communities
- Eco friendly products and protecting the climate change.

Project Strategy:

The basic strategy proposed for the improvement of Ambalappuzha Cluster is:

- Enhance active participation of coir workers and other stakeholders
- Guide and support for producing value added products in the cluster
- Lead the project intervention in democratic set up by forming a SPV
- Ensure involvement of Govt. of Kerala, and converge its scheme
- Ensure beneficiary contribution in the project by contributing 10% of the project cost
- Provide a permanent position to Ambalappuzha cluster in the international coir market
- Overall socio-economic development of the artisans in the cluster by providing better amenities including social security measures



CHAPTER 7: PROJECT INTERVENTIONS (CORE SFURTI)

No cluster intervention can be successful without a proper mix of soft skills on various functional and management themes. In Ambalappuzha cluster, as it is proposed under Mini category, members are to be trained on various functionalities. Following soft intervention is proposed based on the SWOT and Need Gap Analysis:

Soft Interventions:

Sr. No.	Intervention	Need
i.	Cluster awareness and Trust Building workshops:	Cluster promotion is a group activity wherein all stakeholders are to be apprised on commonalities and combined visioning exercise is to be held. This will also be helpful to have an understanding to each of the stakeholders on their duties and responsibilities that they have to perform for the vibrancy of the cluster. In view of this a series of awareness and trust building workshops are proposed. Over a period of 3 years it is estimated to impart inputs for at least 500 cluster members.
ii.	Exposure visits:	As the cluster intervention is taking place in adult training method, more inputs on cluster dynamism, process, collectiveness etc. are to be shown to its members. This will be managed by taking the members to successful cluster locations within Kerala or its nearby locations. It is estimated to organize exposure visits to 100 members over a period of 3 years.



iii.	Visit to national / international exhibitions:	The cluster will be, by default, producing value added products in higher volume. While with the funding support of SFURTI schemes, the cluster will be able to produce, there is tremendous need to market all the products it is produced. As coir products are being used almost all houses and offices, its market should be done directly to the customers to the maximum extent. With this purpose, visit to national and international exhibition is planned for 25 members within three years.
iv.	Entrepreneurship Development Programme (EDP):	Success of any project is basically depends upon the ability of its leader. “Enterprise never fails, and if, that is only Entrepreneur”. As such there is a tremendous need for developing entrepreneurial competencies / acumen of the cluster leaders. To develop a group of best performers within the cluster, entrepreneurship development training is proposed for 50 members.
v.	Skill and skill up-gradation Training:	Technical competency of artisans is one of the basic requirements for success of the cluster intervention; especially when the cluster is proposed to produce value added products. As geo textile production is high technology based production process the cluster needs higher level technicians and skilled persons. It is in this context skill training or its up gradation is proposed for 100 members. Application of coir geo textiles in different slopes, road etc as a tailor made programme.
vi.	Workshop on Social Security Schemes	The main of the activity is to get an understanding of the social security schemes run by the Govt. of India. This will be a platform to make membership in the relevant schemes
vii.	Management Development Training (MDP):	As in the case of need for entrepreneurial personalities, cluster requires efficient managers to perform its functions. As such Management Development Training is also proposed for 30 members in the first year, so that they will be groomed to perform the functions when the cluster is getting promoted.



viii.	Vendor Development Programme	One of the main issues facing by the coir industry in Ambalappuzha is the sale of coir products. So a vendor development programme shall be arranged to develop vendors
ix	Workshop on Development Schemes (WDS):	In the cluster, there is a need for multiplied number of entrepreneurs. As such to attract the youth to be entrepreneurs, they should be sensitized on development schemes being promoted by coir board, coconut board and various other developmental agencies. A workshop on such schemes is proposed in the first year to train at least 35 youth.
x	Training on Quality Production (TQP):	There is a need for giving more attention to production parameters. In each and every stage of production, each one should take care of quality. Quality consciousness should be build at all level. In view of this a training programme for 35 members are proposed.
xi	Training Programme on International Marketing (TPIM):	Training on International Marketing is proposed for 10 core members. As the tufted mat is generally used for export, there is need for strong marketing section within the cluster. The propose programme will take care of such needs. They will also be imparted inputs on design and packing.
xii	Website creation	As the business of modern era is mostly on on-line based, the cluster needs its own website and online marketing services. It is in this context a website is proposed for the cluster.

Hard Interventions:

While the soft intervention is useful to make changes in the life of beneficiaries, thinking pattern and action of the cluster members and society, the hard intervention is aimed at giving enhancement of income source to the artisans/ cluster members. In Ambalappuzha cluster following hard intervention is proposed:



CHAPTER 9: HARD INTERVENTIONS – Power-loom Coir Geo-textiles

1.0 Proposed Intervention:

The cluster is envisaging placing of four Power-loom coir geo textile units. Each machine will consume 330 kgs of coir yarn being produced in the cluster. The expected output from each machine is 400 Square Feet mat per shift. The Cluster also plans to set up a Raw Material Bank for easy availability and supply of Coir fibre for the artisans.

2.0 Land and Building

The Aryad Block Small Scale Coir Fibre Mats Manufacturers Co-Op Society Ltd No. A741 Avalukkunu P.O., S. Aryad, Alappuzha – 6 has provided the basic infrastructure at land survey no. 213/11-1 owned by them for 15 years. Some interior work is proposed in the allotted building and the cost has been included in the project.

3.0 Proposed Capacities

1sq.m Geo texties needs 770gms of Coir Yarn. Each machine will consume 308 Kgs of coir yarn and the expected output per machine is 400 sq. meter coir geo textiles. Therefore the total consumption of coir yarn will be 369600 kgs/year for the 4 machines put together and the expected output is 336000 square meter coir geo textiles.

4.0 Common Facility Centre

A	Fully-Automatic coir geo textile unit	Amt. Lakhs
i)	Land (Lease Amount)	100000
ii)	Building Interior work	600000
iii)	Plant and Machinery	10567500
iv)	Miscellaneous Fixed Assets	300000
v)	Preliminary and Preoperative Expenses	50000
vi)	Raw Material Bank cum Working Capital corpus	2322600
	Total Cost	13940100

Detailed Business Plan is provided in Chapter No. 14



CHAPTER 10: PROJECT COST AND MEANS OF FINANCE

The cost of project include cost of implementing soft interventions, hard interventions, IA fees and TA fees with a total project span of three years. However, for SI and HI the aggregate project costs are given. Following table shows the aggregate cost of project.

Project Cost and Means of Finance

	Project Intervention		SFURTI Share	Beneficiary Contribution
A	Cluster Intervention	Maximum	Rs.	Rs.
A1	SOFT INTERVENTION			
	Skill Trainings, capacity building, design development	1394010	1394010	
A2	HARD INTERVENTION			
a.	Fixed Capital	11617500		
b.	Working Capital corpus	2322600		
	Total (HI)	13940100	12546090	1394010
B	Cost of TA	1003687.2	1003687.2	
C	Cost of IA/SPV	1003687.2	1003687.2	
	TOTAL Rs		15947474.4	1394010
	NET PROJECT COST		17341484.4	



A. Project Phasing:

Sr. No	Name of Activity	Year 1				Year 2				Year 3			
		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1.	Cluster Awareness & Trust Building												
2.	Exposure visits for familiarizing cluster intervention												
3.	Visit to Exhibitions												
4.	EDP												
5.	Skill Trainings												
6.	Training on Social Security Schemes												
7.	MDP												
8.	Vendor Development Programme												
9.	Workshop on Developmental Schemes												
10.	Training progr. On quality production												
11.	Trg. On international Marketing												
12.	Website creation												



CHAPTER 11: PLAN FOR CONVERGENCE INITIATIVES

Any cluster intervention will be successful once the synergy of support system and stakeholders are effectively channelized. In the coir sector, as in the case of Coir Board, Govt. of Kerala has also concentrated well. There are several schemes being implemented by the Governments by its funding as well as also implementing schemes with central govt. support. The proposed project is mooted proposal to convergence with following schemes: The DPR has taken almost all possible anticipated expenses. However, any further escalation will be met by the project itself from other source of socio-economic upliftment bodies. However, followings converged as proposed:

a) Ministry of Commerce, Government of India, New Delhi

- Market Development Assistance Scheme of Ministry of Commerce, Government of India for market development internationally. A sum of Rs.0.50 lacs is expected under this scheme.

b) Directorate of Coir Development, Government of Kerala

- Market Development Assistance: An amount of Rs. 800.00 lakhs has been apportioned in the budget by Government of Kerala. The cluster is expected to avail Rs. 1.0 lakh under this scheme.
- Government of Kerala is also supporting cluster development program: A sum of Rs. 150.00 lacs has been earmarked for the same. Since the cluster is having societies as stakeholders, a sum of Rs.1.00 lac may be sourced under this scheme.
- Husk Collection Scheme : To promote utilization of husk in the State, State Government is offering subsidy for the following :
 - Husk collection
 - Establishing Defibering units
 - Revamping existing DF mills.



The State Government is promoting husk collection through workers' co-operatives and Kudumbashree units. A sum of Rs. 6 crores has been ear marked on this account. During the cluster development program it would be facilitated to avail Rs. 1 lakh from this scheme.

- Regulated mechanization of coir Industry - Under this scheme Government of Kerala is providing subsidy for procuring computer with software for computer aided design. Government has earmarked Rs. 10 crores for this purpose. A sum of Rs. 2 lakhs may be availed by the cluster.

c) Coir Board

- Avail the schemes of Coir Udyami Yojana of Coir Board for developing private entrepreneurs. 8 private entrepreneurs will be developed availing this scheme. This scheme will have the component of subsidy as well as loan. A sum of Rs. 30 lacs may be earmarked under this scheme.
- Under Mahila Coir Yojana, Coir Board is providing subsidy for purchasing machinery for coir handcraft and jewellery manufacturing units. A sum of Rs. 60,000/- is earmarked for the same.

d) Social Security Schemes

During the cluster intervention, the artisans will be linked to following social security schemes:

- Pradhan Mantri Suraksha Bhima Yojana
- Pradhan Mantri Jan Dhan Yojana
- Atal Pension Yojana



CHAPTER 12: ENHANCED PROJECT COST AND MEANS OF FINANCE

The project cost and means of finance is indicated in Chapter 10 of this report. We have estimated all possible interventions within the budget outlay and ability of the beneficiary. However, still we seek convergence of followings:

Sl. No.	Particulars	Amount (Rs. in Lakhs)
1	Market Development Assistance Scheme of Ministry of Commerce, Government of India	0.50
2	Market Development Assistance, Directorate of Coir Development, Government of Kerala	1.00
3	Cluster development program ,Directorate of Coir Development, Government of Kerala	1.00
4	Husk Collection Scheme, ,Directorate of Coir Development, Government of Kerala	1.00
5	Regulated mechanization of coir industry	2.00
6	Coir Udyami Yojana of Coir Board	30.00
7	Mahila Coir Yojana of Coir Board	0.60
	Total	36.1



CHAPTER 13: PROJECT TIMELINE

SOFT INTERVENTION

Sr. No	Name of Activity	Objectives	Duration	Year 1				Year 2			
				Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr.4
1.	Cluster Awareness & Trust Building	To build awareness on cluster concepts	One day								
2.	Exposure visits for familiarizing cluster intervention	Familiarizing cluster intervention	One day								
3.	Visit to Exhibitions	To promote the business									
4.	EDP	Attract more entrepreneurs to the sector	5 days								
5.	Skill Trainings	To develop innovative and value added products	3 days								
6.	Training on Social Security Schemes	To create awareness on schemes	2 days								
7.	MDP	Development of Managerial competency	5 days								
8.	Vendor Development Programme	To develop vendors in coir sector	2 days								
9.	Workshop on Developmental Schemes	Create Awareness on possible development	1 day								
10.	Training progr. On quality production	Develop quality consciousness	1 day								
11.	Trg. On international Marketing	Develop competent marketing cadre	3 days								
12.	Website creation										



Hard Intervention					
		Year 1			
Sr. No.	Name of Activity	Q1	Q2	Q3	Q4
1	Finalization of the project				
2	Registration of CFC				
3	Site Selection				
4	Site Development				
5	Machinery identification				
6	Fund Mobilization				
7	Civil Work construction				
8	Machinery sourcing				
9	Commissioning of machinery				
10	Trail production				
11	Commercial production				



CHAPTER 14: DETAILED BUSINESS PLAN

PROJECT PROFILE for FULLY-AUTOMATIC GEO-TEXTILE POWER LOOM UNITS and RAW MATERIAL BANK cum WORKING CAPITAL

1.0 Introduction

Four Fully-automatic geo-textile power loom units are envisaged in the CFC. This will increase the use of coir yarn produced in the cluster. The geo textile has good potential both at domestic and export market. These machines will provide employment to 13 persons directly. There will be 4 machines in this unit. There will also be a Raw material Bank corpus set up to cater to the demand for the beneficiaries.

2.0 Financial Details

Project Details

a. Land - Available

Land and building available with many societies in the Ambalappuzha cluster area and the following societies have agreed to give the land and building for lease and the same will register on lease in the name of SPV for a period of 15 years.

M/s. Aryad Block Small Scale Coir Fibre Mats Manufacturers Co-op. Society Ltd. No. A741,Avalukkunnu PO., S.Aryad, Alappuzha-6 Phone Nos., 04772258176, 9847604130

b. Building

B	Building	Area	Unit Cost	Amount Rs. (Lakhs)
1	Land & Building Lease amount for Machinery	5000 sqft		1.00
2	Building Interior work	5000 sqft		6.00
	Total			7.00



c. Plant and Machinery

Sl.No.	Particulars	Quantity	Amount (Rs.)
1	Coir Geo- Textiles weaving Power loom – 2 meter width with with Motors, starters and all accessories	4	7700000
2	Spool winding machine – 4 heads	2	750000
3	Cops Winding machine double spindle	1	200000
4	GST 18% on above machines		1557000
5	Loading, Transportation, Erection, Installation Electrification and Commissioning Charges	LS	360500
Total			10567500

d. Miscellaneous Fixed Assets-

3.00 Lakhs

e. Preliminary & Preoperative Expenses

0.50 Lakhs

3 Project Cost

Project Cost			
Sl. No.	Particulars	Amount	Amount
1	Land Lease		100000
2	Interior		600000
3	Raw Material Bank cum Working capital corpus		2322600
	Machinery		
4	Fully automatic Power Loom for weaving Coir Geo Textile – 200 cm width with Motors, starters and all accessories (4 Nos)	77,00,000	
5	Spool winding machine – 4 heads – 2 Nos	7,50,000	
6	Cops Winding machine double spindle - 1 No	2,00,000	
	Sub Total	86,50,000	
8	GST	1557000	
9	Installation charges	360500	
	Total Machinery Cost	10567500	10567500
10	Misc. Assets		300000
11	Prelimi & Pre-op. exp.		50000
	Total		13940100



4 Means of Finance:

Sl.No.	Particulars	Amount
1	Beneficiary contribution	1394010
2	Coir Board Grant	12546090
	Total	13940100

5 Annual Sales Turnover

Sl. No.	Item	Quantity Kg/Year	Rate (Rs.)	Amount (Rs.)
1	Geo textile	3,36,000	60/-	2,01,60,000/-

6 Cost of Production

a. Raw Material

Sl.No.	Item	Quantity	Rate (in Rs.)	Amount (in Rs)
	Coir Geo Textile	Kg/Year		
1	Coir Yarn	3,69,600	38 Rs/Kg	1,40,44,800/-

b. Utility - - 4.00 Lakhs

c. Man Power

Man power Requirement				
Sl.No.	Designation	Unit	Unit Cost	Annual Amount (Rs)
1	CFC Manager cum QC	1	20000	240000
2	Weavers	4	25000	1200000
3	Helpers	3	15600	210000
4	Bobbin Winders	2	15600	936000
5	COPS Winding	1	15600	748800
6	Total			2426400
7	Employee benefit			363960
	Total			2790360

d. Repairs, Maintenance and Insurance-

1.8 Lakhs

The detailed operations and financial statements are given below:



7 Project Profitability Statement

(Amount Rs.)

f		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
	Rate	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Income											
Installed Capacity/Year/sq.m		480000	480000	480000	480000	480000	480000	480000	480000	480000	480000
Utilised Capacity		70%	75%	80%	85%	90%	95%	100%	100%	100%	100%
Production (sq.m)		336000	360000	384000	408000	432000	456000	480000	480000	480000	480000
Rate/sq.m		60	61	62	63	64	65	66	70	74	78
Annual Income		20160000	21960000	23808000	25704000	27648000	29640000	31680000	33600000	35520000	37440000
Expenses											
Raw Material	5%	14044800	14747040	15484392	16258611.6	17071542.18	17925119.3	18821375.3	19762444	20750566.2	21788094.5
Salaries & Wages	10%	2790360	3069396	3376335.6	3713969.16	4085366.076	4493902.68	4943292.95	5437622.25	5981384.47	6579522.92
Utilities	10%	400000	440000	484000	532400	585640	644204	708624.4	779486.84	857435.524	943179.076
Depreciation		1116750	1006575	907343	817962	737452	664928	599596	540739	487713	439937
Repairs & Maintenance		180000	220000	260000	300000	340000	380000	420000	460000	500000	540000
Selling & Admin. Expenses		100000	125000	150000	175000	200000	250000	300000	350000	400000	450000
Misc. Expenses	5%	200000	210000	220500	231525	243101.25	255256.313	268019.128	281420.085	295491.089	310265.643
NET EXPENSES		18831910	19818011	20882570	22029468	23263101.4	24613411	26060908	27611712	29272590	31050999
Profit Before Tax		1328090	2141989	2925429.9	3674532.2	4384898.63	5026589	5619092	5988288	6247410	6389001
Tax (25%)		332022.5	535497.25	731357.475	918633.06	1096224.658	1256647.32	1404773	1497071.88	1561852.46	1597250.28
Profit After Tax		996067.5	1606491.75	2194072.43	2755899.18	3288673.974	3769941.96	4214319	4491215.65	4685557.38	4791750.85
Cumulated Profit		996068	2602559	4796632	7552531	10841205	14611147	18825466	23316681	28002239	32793990



Cash Flow Statement

Cash Inflow											
	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Beneficiary Contribution	1394010.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coir Board Grant	12546090.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Profit	0.00	996067.50	1606491.75	2194072.43	2755899.18	3288673.97	3769941.96	4214319.00	4491215.65	4685557.38	4791750.85
Depreciation	0.00	1116750.00	1006575.00	907342.50	817962.00	737451.86	664928.44	599596.26	540739.27	487712.85	439936.70
Total Cash Inflow	13940100.00	2112817.50	2613066.75	3101414.93	3573861.18	4026125.84	4434870.40	4813915.27	5031954.93	5173270.24	5231687.55
Cash Outflow											
	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Building Cost	600000										
Land & Machinery	10667500										
Increase in Current Assets	2322600		200000	200000	200000	200000	200000	200000	200000	200000	200000
Misc. Fixed Assets	300000										
Preliminary Expenses	50000										
Total Cash Outflow	13940100	0	200000	200000	200000	200000	200000	200000	200000	200000	200000
BALANCE	0	2112817.5	2413066.75	2901414.925	3373861.18	3826125.84	4234870.395	4613915.266	4831954.928	4973270.237	5031687.55
Accumulated Cash	0	2112817.5	4525884.25	7427299.175	10801160.36	14627286.2	18862156.59	23476071.85	28308026.78	33281297.02	38312984.57



Projected Balance Sheet

Sl. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A	Liabilities										
1	Beneficiary contribution	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00	1394010.00
2	Grant	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00	12546090.00
3	Reserve & surplus	996068	2602559	4796632	7552531	10841205	14611147	18825466	23316681	28002239	32793990
	Total	14936167.50	16542659.25	18736731.68	21492630.86	24781304.83	28551246.79	32765565.79	37256781.44	41942338.83	46734089.68
B	Assets										
1	Fixed capital	11617500.00	11617500.00	11617500.00	11617500.00	11617500.00	11617500	11617500	11617500	11617500	11617500
2	Less Depreciation	1116750	2123325	3030668	3848630	4586081	5251010	5850606	6391345	6879058	7318995
		10500750.00	9494175.00	8586832.50	7768870.50	7031418.64	6366490.20	5766893.94	5226154.66	4738441.81	4298505.11
3	Current assets	2322600	2522600	2722600	2922600	3122600	3322600	3522600	3722600	3922600	4122600
4	Cash in hand/bank	2112817.5	4525884.25	7427299.175	10801160.36	14627286.19	18862156.59	23476071.85	28308026.78	33281297.02	38312984.57
	Total	14936167.50	16542659.25	18736731.68	21492630.86	24781304.83	28551246.79	32765565.79	37256781.44	41942338.83	46734089.68



8. Break Even Point

(Amount in Rs.)

Break Even Analysis (Based on I st Year)		
A.	Variable cost	
1	Raw Material	14044800.00
2	Power	400000.00
3	Administrative expenses	100000.00
		14544800.00
B	Semi Variable and fixed cost	
1	Salary & wages	2790360.00
2	Other Expenses	200000.00
3	Repair and maintenance	180000.00
4	Depreciation	1116750.00
		4287110.00
	Annual Income (SP)	20160000.00
	Variable cost	14544800.00
	SP-VC	5615200.00
	Breakeven point as a percentage of installed capacity	53.44

The project will reach breakeven in the first year of operation. During the first year the variable expenses are coming to Rs. 145.44 lakhs with a breakeven of 53.44% at 70% installed capacity.



Internal Rate of Return (IRR)

IRR is defined as the discount rate at which the NPV of a project becomes zero (or just above as positive).

Initial Investment for the project is Rs 1,39,40,100/-

Calculation of NPV based on Ten year Net Cash Flow without Depreciation.

Time Periods	Net Cash Flow (w/o Depreciation)	Discount Rate (At 20.58%)
Year 1 (Present Value)	2444840	$[2444840 \times (1-0.2058)^1] = 1941692$
Year 2 (Present Value)	2948564	$[2948564 \times (1-0.2058)^2] = 1859817$
Year 3 (Present Value)	3632772.4	$[3632772.4 \times (1-0.2058)^3] = 1819818$
Year 4 (Present Value)	4292494.24	$[4292494.24 \times (1-0.2058)^4] = 1707769$
Year 5 (Present Value)	4922350.494	$[4922350.494 \times (1-0.2058)^5] = 1555328$
Year 6 (Present Value)	5491517.715	$[5491517.715 \times (1-0.2058)^6] = 1378071$
Year 7 (Present Value)	6018688.266	$[6018688.266 \times (1-0.2058)^7] = 1199530$
Year 8 (Present Value)	6329026.812	$[6329026.812 \times (1-0.2058)^8] = 1001788$
Year 9 (Present Value)	6535122.698	$[6535122.698 \times (1-0.2058)^9] = 821528.6$
Year 10 (Present Value)	6628937.834	$[6628937.834 \times (1-0.2058)^{10}] = 661824.4$
Sum of Discount Rates		13947167

At 20.58% Discounted rate NPV becomes just positive above Initial Investment. (Sum of Discount rates-Initial Investment)

So the IRR for this project is 20.58%



11. Depreciation Amount

	Building (5%)	Machinery (10%)	Misc. Fixed Assets (10%)	Total	Cumulative
Year 1	600000	10567500	300000	11467500	
Depreciation Amount	30000	1056750	30000	1116750	1116750
Year 2	570000	9510750	270000	10350750	
Depreciation Amount	28500	951075	27000	1006575	2123325
Year 3	541500	8559675	243000	9344175	
Depreciation Amount	27075	855968	24300	907343	3030668
Year 4	514425	7703708	218700	8436833	
Depreciation Amount	25721	770371	21870	817962	3848630
Year 5	488704	6933337	196830	7618871	
Depreciation Amount	24435	693334	19683	737452	4586081
Year 6	464269	6240003	177147	6881419	
Depreciation Amount	23213	624000	17715	664928	5251010
Year 7	441055	5616003	159432	6216490	
Depreciation Amount	22053	561600	15943	599596	5850606
Year 8	419002	5054402	143489	5616894	
Depreciation Amount	20950	505440	14349	540739	6391345
Year 9	398052	4548962	129140	5076155	
Depreciation Amount	19903	454896	12914	487713	6879058
Year 10	378150	4094066	116226	4588442	
Depreciation Amount	18907	409407	11623	439937	7318995



CHAPTER 15: PROPOSED IMPLEMENTATION FRAMEWORK

The project will be implemented in line with the cluster norms and regulations stipulated by the Nodal Agency, i.e. Coir Board with the support of a Technical Agency, EDII, and will be implemented by Coir Boucle Consortium, Alappuzha. They will ground the activities through a locally formed SPV wherein experienced individuals and co-operative societies are in leading roles. In line with this framework Coir Board has entrusted the responsibilities of Technical Agency to Entrepreneurship Development Institute of India.

The SPV is registered under the Travancore-Cochin Literacy, Scientific and Charitable Societies Act XII of 1955.

15.1 Role of the Implementing Agency – Coir Boucle Consortium

- Recruit a full-time CDE in order to ensure efficient implementation of the project;
- The IA would identify and arrange suitable land for the project whose book value may be shown as their contribution towards the project;
- Implement various interventions as outlined in the approved DPR;
- Undertake procurement and appointment of contractors, when required, in a fair and transparent manner;
- The IA will enter into an agreement with the Nodal Agency for timely completion on cluster intervention and proper utilization of Government Grants;
- Operation & Maintenance (O&M) of assets created under the project by way of user-fee based model;
- Responsible for furnishing Utilization Certificates (UCs) and regular Progress Reports to Nodal Agency in the prescribed formats.
- Acquisition of all clearances, documents, NOCs for land, power, water, construction from concerned departments with the help of TA
- Leveraging of other state schemes for add on activities with due help from TA
- Acquire capacities for its executive members for strong self-governance



The IA shall endeavor to increase participation of various other cluster stakeholders and institutions by forming a Cluster Advisory Group, traditional industry enterprises, support service institutions, banks, etc. with the objective of fostering increased level of involvement of various cluster stakeholders and strengthening the implementation of the project.

15.2 Details of Strategic Partner and Other Project Stakeholders

Strategic Partners:

1. Coir Board, Cochin
2. Coir Boucle Consortium, Alappuzha
3. Coir Co-operative Societies
4. Entrepreneurship Development Institute of India

Project Stakeholders:

- a) Machinery Suppliers
- b) Kerala State Co-operative Coir Marketing Federation (Coirfed)
- c) Commercial banks and micro finance institutions
- d) National Bank for Agriculture and Rural Development
- e) Small Industries Development Board of India, Cochin
- f) R&D, Testing and Training Institutions
- g) Central Coir Research Institute at Kalavoor
- h) National Coir Training and Design Centre at Alleppey
- i) Central Institute of Coir Technology, Bangalore
- j) MSME-DI in Thrissur.



15.3 Registration of the SPV

Ambalappuzha Thaluk Coir Development Society has been registered as the SPV. This SPV is registered under the Travancore-Cochin Literacy, Scientific and Charitable Societies Act XII of 1955 vide Regn No. ALP/TC/166/2016 Dtd 02.03.2016. It was registered by a group of 9 members who are belongs to coir sector with vast experience in the field as follows:

Sl. No.	Name & Occupation	Present Address	Position	Sign
1	M P Pavitran, Coir Work	Maruthachikkal Bhavan, Kuthirapathy, Alappuzha	President	
2	K Sreedharan, Coir Work	Kuruvelil, North Aryad P.O., Mannachery	Vice President	
3	P.Chithambaram, Coir Work	Pattalasseril, Pollaithai P.O., Alappuzha	Secretary	
4	M. Anilkumar, Coir Work	Chittezhathuveli, South Aryad, Avalookunnu P.O., Alappuzha	Treasure	
5	V. Suguthan, Coir Works	Kunnelveli, Pathirappally P.O.	Member	
6	K.V. Sreedharan, Coir Works	Kuruppasseril, Mannachery P.O., Alappuzha	Member	
7	P.J. Xaviour, Coir Work	Puttiltharayil, Poomkavu, Pathirapilly p.O.	Member	
8	P.V. Ramesan, Coir Work	Veliyil Veedu, Komalapuram, Avalookunnu P.O., Alappuzha	Member	
9	R Suresh, Coir Work	Padippurackal, Thumpoly P.O., Alappuzha	Member	



15.4 Membership of the SPV:

- a) All small scale coir manufactures and coir workers in Ambalappuzha Thaluk of Alappuzha District are eligible to become members of the society.
- b) Sympathizers effectively engaged in coir sector also shall be eligible for membership but, they should not exceed 10% of the total membership.
- c) The membership fee will be Rs. 5000

15.5 Executive Committee and Board of Directors:

The SPV will have an Executive Committee for day to day management of the society. This will be managed by a group of Board of Directors from following constituents/agencies

Category A

- a. An officer from Coir Board not below the rank of Deputy Director.
- b. Lead Bank Manager, Alappuzha.
- c. The Chairman, Kerala Coir Workers Welfare Fund Board.
- d. A person from Entrepreneurship Development Institute of India (EDII).
- e. The Director, NCRMI, Thiruvananthapuram
- f. District Mission Co-ordinator, Kudumbasree.
- g. The Director, Central Coir Research Institute, Kalavoor

Category B

Representative from Coir Vyavasaya Co-operative Societies & Integrated Coir Vyavasaya Co-operative Societies.

Category C

Sympathizers effectively engaged in coir sector.

IV Officer Bearers

The Office Bearers of the Society will be Chairman, Vice Chairman, and Treasurer.



CHAPTER 16: EXPECTED IMPACT

- The cluster will be able to meet the demands from exporters as well as domestic customers on time with uniform quality-standards. Currently, when the exporters approach with the large orders, the stakeholders of cluster cannot meet the requirements on time, because of manual operations. This shall be overcome by the formation of the cluster.
- Geo-Textiles productions will go up from the current 8000 MT p.a. to approximately 8369 MT p.a. It is expected to increase production every year by approximately 369 MTs for next 10 years of operation.
- The total turnover will go up by 10% every year for the next ten years from the current 40 crores.
- Approximate investment of Rs. 200 lakhs from the base year of operation will increase manifold as the stakeholders will invest in automatic spinning etc.
- The current profitability margin is approximately 15%. After the cluster intervention the stakeholders are expecting the same to raise upto 25%. The fully-automatic Geo textile machinery will help to increase the productivity to about 400 sq.m per 4 looms per day.
- Currently about 364 artisans are getting maximum 100 days of work. This will be changed to near full employment of 200 days per annum. The number of artisans getting near full employment will be increased from 364 to 500, after the cluster intervention.
- When the spinners get near to full employment, their income will also be raised 100 per cent. Currently the average income is approximately Rs. 8,000/- and on conventional basis, the same will be raised to Rs. 14,000/-
- Currently, the stakeholders are not into direct export. They are catering to export market through the established export houses of Alleppey. The cluster intervention will enable the stakeholders for export marketing through training and international fairs etc. In future, about ten units will be involved in direct export.
- The cluster will enable the backward integration through the coir spinners by providing them work opportunities round the year by consuming the coir yarn produced by them in the cluster itself.
- For forward integration, the cluster will feed the requirement of Agricultural, Engineering & Construction Industries in and around Ambalappuzha. It is estimated that there are more than 100



units in and around Ambalappuzha. The cluster has plans to go for manufacturing of Geo-textiles using the facilities of few of these units and establish its own brand.

- One more important aspects of this intervention will be the social security measures of both central and state governments targeting the coir workers will be applied as a part of cluster initiative. Schemes like PMSBY, Jandhan Yojana etc. will be compulsorily made available to 500 coir workers in Ambalappuzha cluster