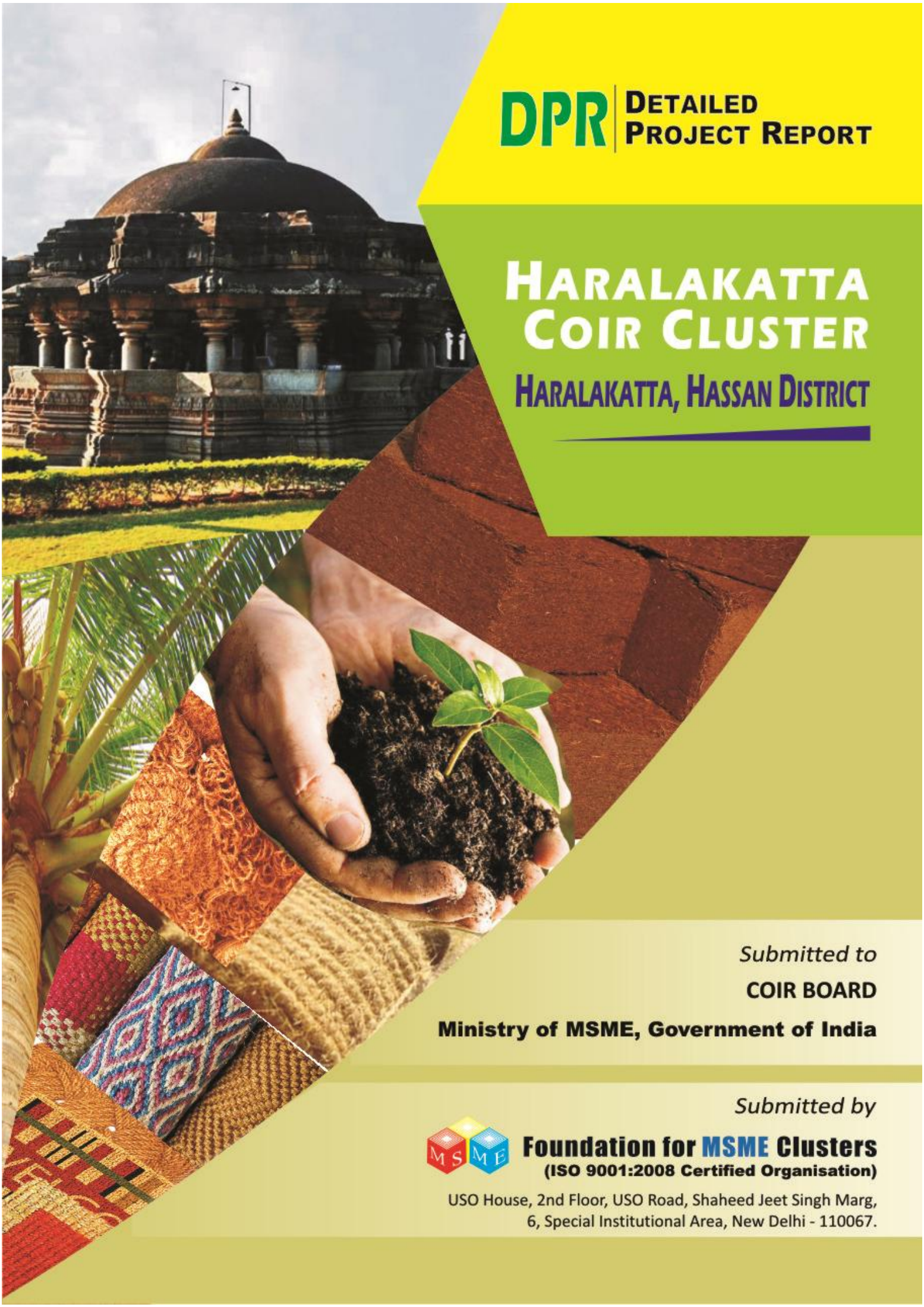

DPR | DETAILED PROJECT REPORT

HARALAKATTA COIR CLUSTER

HARALAKATTA, HASSAN DISTRICT

Submitted to

COIR BOARD

Ministry of MSME, Government of India

Submitted by

Foundation for MSME Clusters
(ISO 9001:2008 Certified Organisation)

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HARALAKATTA MINOR COIR CLUSTER

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LIST OF ACRONYMS

1	BIS	Bureau of Indian Standards
2	BEP	Break Even Point
3	CCRI	Central Coir Research Institute
4	CFC	Common Facilities Centre
5	CGTMSE	Credit Guarantee Trust for Micro, Small and Medium Enterprises
6	CICT	Central Institute of Coir Technology
7	CLCSS	Credit Linked Capital Subsidy Scheme
8	CUY	Coir Udyami Yojana
9	CVY	Coir Vikas Yojana
10	DIC	District Industries Centre
11	DRDA	District Rural Development Agency
12	DPR	Detailed Project Report
13	FICEA	Federation of Indian Coir Exporters Association
14	FI	Financial Institution
15	IRR	Internal Rate of Return
16	KSFC	Karnataka State Coir Federation
17	KVIC	Khadi & Village Industries Commission
18	MSME	Micro Small & Medium Enterprises
19	MoMSME	Ministry of Micro Small & Medium Enterprises
20	MSMEDI	Micro Small Medium Enterprise Development Institute
21	MDA	Market Development Assistance
22	NABARD	National Bank for Agri & Rural Development
23	NMCP	National Manufacturing Competiveness Program
24	NPV	Net Present Value
25	NH	National Highway
26	NTDC	National Technology Development Corporation
27	ROCE	Return on Capital Employed
28	SFURTI	Scheme of Fund Under Rejuvenation of Traditional Industries
29	TI	Technical Institution
30	TL	Term Loan
31	EC	Working Capital
32	PC & MF	Project Cost and Means of Finance
33	UPS	Uninterrupted Power Supply

PART - I

CHAPTER – 1
CLUSTER PROFILE

1.1 Background

SFURTI is a cluster based scheme to promote and strengthen the traditional village indu stries. The scheme was commenced in the year 2005 and was initiated by the ministry of MSME, Govt. of India.

Under the scheme so far 96 Khadi and village industries and 26 coir clusters have been approved and are under various stages of implementation. In the year 2014 the guidelines of SFURTI have been revamped and it is expected to cover 800 clusters under 12th five years plan.

Coir Board with the help of Commissioner of Industries, Government of Karnataka has identified 7 coir clusters and entrusted the task of preparation of DSRs to EDII, Ahmedabad. The DSRs for all the seven clusters have been approved by subsequent Scheme Steering Committee meetings for DPR preparation. M/s Foundation for MSME clusters has been appointed as the Technical Agency and entrusted with the task of preparing the DPR.

The present report pertains to the Detailed Project Report along with action plan for Soft Interventions and Business Plan for Hard Interventions.

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1.2 Regional Setting of cluster

Haralakatta village is set in Arsikere taluk of Hassan district in Karnataka.It is home to 10 major defibering units, besides the existence of many household units and women's SHGs engaged in defibering and mat making. Theper day production is around 5625 tonnes with an aggregate turnover of around 900 lakhs per year and employing at least 140 artisans directly and 360 indirectly.

1.3 Location

Haralakatta is located 44 kms from the district capital of Hassan and 195 kms from the state capital of Bangalore. It is well connected by road with the nearest town, Arsikere, where the nearest railway station is also located.

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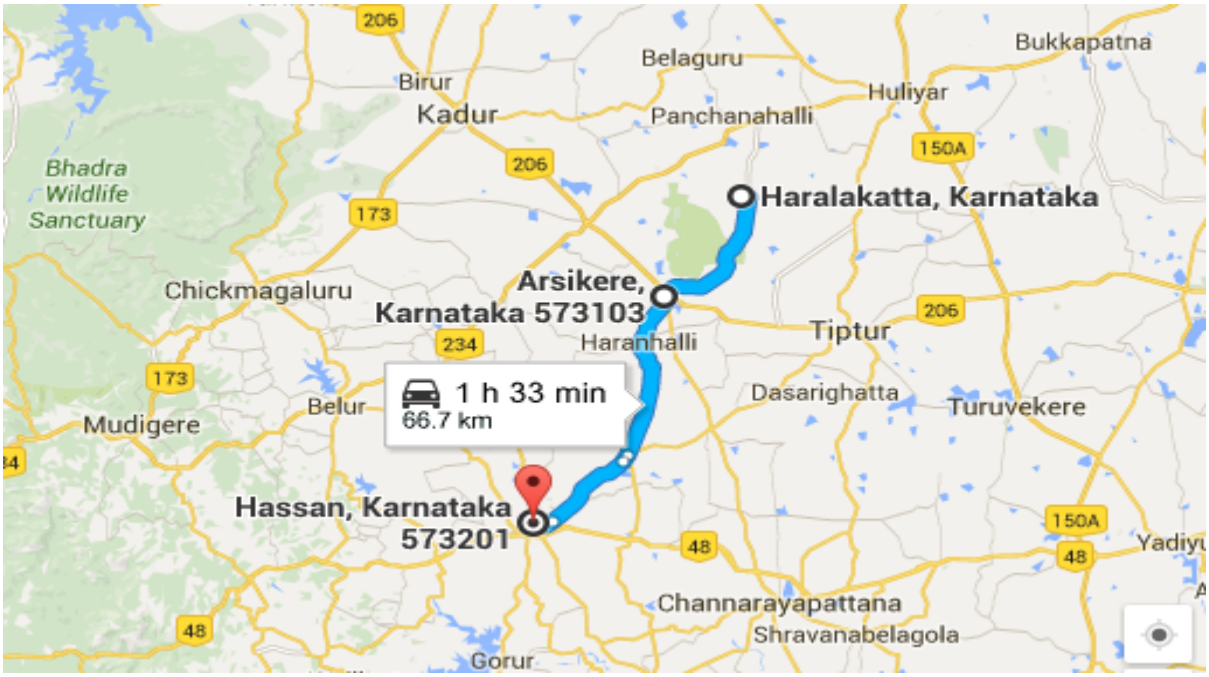

Hassan district is located in the south eastern part of Karnataka and is bounded by Tumkur, Chickmagalur, Davanagare and Bellary and is 194 kms away from the state capital of Bengaluru.The District was formerly a part of Malanadu area and due to deforestation; it has become a separate Semi-Malanad District. Like most of the other districts in the State, this district also derives its name from the Head Quartertown of Hassan. The geographical area of Hassan district is 6,845 Sq. Kms, which accounts to 3.58per cent of the state. The district is one of the smaller districts in Karnataka State.

NH48, NH206 passes through Hassan district through a length of 246 Km. Thedistrict has 15322 Km ofsurface roads. The nearest port is Mangalore port and the nearest airport is Bengaluru international airport (168 kms).

(Source: http://www.onefivenine.com/india/villag/Hassan/)

1.4 Evolution of the Hassaan Coir Industry

Hassan has the second largest coconut area in the State. Nearly 14% of area under coconut cultivation in Karnataka is from this district. The district comprises of 8 taluks, of which Arisekere and Channarayapatna were selected under the study as cluster spread is in this blocks. Of the 8 Taluks in Hassan, Arisekere and Channarayapatna contributes maximum towards the coconut production in the district (almost 81%). Average holding

size as per survey findings is 0.74 Ha. Coconut palm density for the district is found to be 141 per Ha. Whereas the bearing palm density is 106 per Ha.

Around 40 years ago *Kurl-on has set up its* fibre unit as back ward integration for its mattress making unit in Arsikere town. The first coir unit in Arsikere Taluk was set up during 1970s such as Siddeswara and Renuka coir industries. The earliest units set up however, were not survived as the industry is quite sensitive to cost fluctuations and environmental factors.

However with the success of Kurl on and some of the workers from it have started their own defibering, curled yarn and activated carbon units in various villages of the cluster which is apart from the unit established by Karnataka State Coir Development Corporation. Even the Karnataka Coir Federation also started their units by early 2000.

In the year 2000-02, most of the units were shut down due to an outbreak of disease in the coconut plantations. The industry has recovered since then and by 2014, the production has increased by many folds and today the fibre production has reached 40000 MT per annum.

1.5 Demography and growth Trends in Cluster Region

According to the 2011 census Haralakatta village has a total of 413 families residing. The Haralakatta village has population of 1726 of which 863 are males while 863 are females.

In Haralakatta village population of children with age 0-6 is 212 which make up 12.28 % of total population of village. Average Sex Ratio of Haralakatta village is 1000 which is higher than Karnataka state average of 973. Child Sex Ratio for the Haralakatta as per census is 1038, higher than Karnataka average of 948.

Growth trends in Hassan District

There are 78 factories, 16 industrial estates and 10,883 MSME units with investments of Rs.1975 million and 47,307 workers employed in these in Hassan district.

The prominent sectors are in the realm of food processing and tourism.

SEZs: Hassan district has established SEZs in textiles, food processing, pharma and electronic hardware.

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The details of existing micro, small & artisan enterprises in the district are as follows:

Sl.No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
1	Agro Based, Food & Beverage	2013	6985.41	11172
2	Cotton textile	192	452.00	438
3	Woollen, silk & artificial Thread based clothes. Garments	1792	2322.14	5637
4	Jute & jute based	-	-	-
5	Wood/wooden based furniture	2020	2708	7031
6	Paper & Paper products, printing	234	696.61	1050
7	Leather based	333	378.74	1420
8	Chemical/Chemical based	360	939.28	1715
9	Rubber, Plastic & petro based	223	589.9	991
10	Mineral based	214	2334.15	1433
11	Metal based (Steel Fab.)	86	346.56	402

(Source: District Industry Centre, Hassan)

There is an increasing trend in the number of industrial units being registered in Hassan (across large, medium and small industries) after a short lull between 2006 and 2009, as shown in the figure:

Year	Number of Units Registered	Employment	Investment (Lakh Rs.)
2004-05	467	2139	2403
2005-06	562	2295	3823
2006-07	485	2296	2823
2007-08	361	3722	4402
2008-09	290	2038	2560
2009-10	544	1604	1127
2010-11	642	1541	1872
	12503	**51997**	**25603**

(Source: District Industry Centre, Hassan)

Coir Industry in Hassan District

Coir, the agro-based rural industry, provides sustenance to about ten thousand families in Hassan of which 80% is women from the weaker section.

The concentration of coir industry in the District was due to the abundant availability of raw material, skilled labour and natural facilities of backwaters and lagoons within the easy reach. There are nearly 100 coir industrial establishments and most of them are

micro/cottage household units engaged in the processing and manufacture of coir and coir products.

SL No	Year	Area(Ha)	Production(Lakh Nuts)	Productivity(Nuts/Ha)
1.	2005 - 2006	61775.00	2564.94	4153
2.	2006 - 2007	61788.00	2565.47	4153
3.	2007 - 2008	61805.00	2968.79	4804
4.	2008 - 2009	61880.00	3471.67	5611
5.	2009 - 2010	62256.00	4426.51	7111
6.	2010 - 2011	62390.00	4040.12	6476
7.	2011 - 2012	62575.00	6221.56	9943
8.	2012 - 2013	63056.00	6208.83	9847
9.	Average Production in the Year group(2000-13) :	60055.23	3454.27	5752

Source:www.coconutboard.gov.in

1.6 Human Development Aspects in Haralakatta region

- Haralakatta village has lower literacy rate compared to Karnataka. In 2011, literacy rate of Haralakatta village was 68.23 % compared to 75.36 % of Karnataka.
- In Haralakatta Male literacy stands at 76.15 % while female literacy rate was 60.26%.
- Sex ratio is also commendable with 1000 females per 1000 males. (Compared to state average of 948).
- HDI stood at 0.639 according to Karnataka state Human Development Report 2005 and this has also improved significantly as shown:

Si No	Name of the District/State	HDI			GDI		
		1991	2001	% change	1991	2001	% change
1.	Hassan	0.519	0.639	23.12	0.507	0.630	24.26
2.	Karnataka	0.541	0.650	20.14	0.525	0.637	21.34

(Source: Government of Karnataka (2006) Karnataka Human Development Report 2005)

- Per capita GDP has also improved significantly from Rs.10,263 to Rs.19,277.

1.7 Socio Economic aspects Arisikere Block where cluster region fall

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According to the Dr. Nanjundappa High Power Committee on Regional Imbalances Redressal Report of Karnataka State, Arsikere taluk has been considered as one of the backward taluks in Hassan district.Per capita income of the district is Rs 19,277 .The percentage of BPL population is 11.55%.

Majority of the people are Hindus such as, Lingayath, Vokkaligas, and Edigs. The sub clusters to be targeted have a significant SC population.

The income of major unit holders ranges between Rs. 20000 to 30000 per month, whereas for artisans it is Rs. 300 to 400 per day if skilled and Rs.150 to 200 per day for semi/unskilled.

Name of village	SC population	ST population	Main workers	Marginal workers
Haralakatta	51.56%	0.64%	96.92%	3.08%

(Source:http://www.census2011.co.in/data/village/)

1.8 Key Economic Activities in Hassan District

The major industries in Hassan are of textiles, pharma, dairy, electronic hardware, IT and ITES with a number of SEZs established in these sectors. The region also has a huge scope for food processing industries and is recognized as an agri export zone. Tourist and religious centres such as Belur, Halabeedu, Ramanathapura, Gorur, BisleGhat, Shravanbelagola are also aplenty here.

There is 3,93,500 hectares of land under agriculture. Coffee, Black Pepper, Potato, Paddy and Sugarcane are the major agricultural crops, Horticulture is also prominent in the area with extensive plantations of Coconut, Areca nut, Cocoa and Oil palm as well as spices , vegetables, flowers and fruits.

(Source: bounteouskarnataka.com/…/DistrictProfile-Hassan.pdf)

1.9 Infrastructure

Power: While power generation is handled by various organisations like NTPC, KPCL, etc.; power transmission is efficiently managed by Chamundeshwari Electricity Supply Corporation Ltd. The district has no major power generation units.

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Water:Cauvery, Hemavathi and Yagachi rivers are flowing in this district.Hemavathy reservoir at Gorur is the main dam while Yagachi and Vatehole are the other two small reservoirs in the district. The ground water level is low.

Education: Hassan has 2998 primary schools, 508 High schools and 149 junior colleges. In higher education segment, the district has 5 engineering colleges, 2 medical colleges and 3 polytechnics besides 15 general colleges. The district has 274 public libraries.

Health: The district has 98 Primary Health Centres, 8 Allopathic Hospitals and 39 private hospitals. Dispensaries and drug shops are also available in plenty in the district. The district has been the centre for various healthcare initiatives at Government level like TB control programme, polio immunization programme, etc.

(Source: bounteouskarnataka.com/…/DistrictProfile-Hassan.pdf)

CHAPTER 2

CLUSTER PRODUCT AND PRODUCTION PROCESS

2.1 Product Profile:

The main activity inthe cluster is defibering in order to produce fibre, curled yarn and ropes using fully or semi-automated machinery. They also produce pith as a by - product but it utilization is minimum and it is sold to nurseries and manure producing agents.There are 10 defibering units in the cluster region. There are also around 10 charcoal making units that produce activated carbon from coconut shells. Mats are also produced in limited quantity by the coir federation units and a few households or women SHGs.

2.2 Production Process

Raw material: Around 20,000 husks are used per day per unit for production of fibre per unit. This is procured from the husk merchantsat the rate of Rs.500-600 for 1000 husks who in turn collect the produce of the local farmers

Defibering: There are 10 defibering units that produce fibre, curled ropes and pith as a by-product. For this process, motorized machines withflat beater arms, operating inside steel drumsare made use of. Separation of the bristle fibers is done by hand or in a machine consisting of a rotating drum fitted with steel spikes. Separation of the mattress fibers from the pith is completed by washing the residue from the de-fibering process and combing through it by hand or tumbling it in a perforated drum or sieve. The clean fibers are spread loosely on the ground to dry in the sun.

Finishing: Bristle fibres willbe further processed are rolled and tied into loose bundles for storage. Major units are using manual operated press to create compact bales. All the units in Haralakatta and Javagalare making use of semi-automated bundle presser for creating bundles.

Yarn making: Most of the units that produce curled ropes in are making use of automatic 2 ply yarn spinning machine. Each machine produces around 15 bundles of 30kgs each in one shift.

In Haralakatta, only three units are undertaking production of curled ropes.

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Several of the household units and women SHGs are making use of traditional charkas for yarn spinning but productivity of these are low, i.e. about 25kgs per day.

Analysis of production Process:

- Curled ropes are the only value added product and these are also not produced in all the units.
- Most unit owners are reluctant to go for any value added products like mats and matting after defibering as it is viewed as a risky venture involving new investment in machinery, labour intensity and uncertain demand.
- Husk pricescan fluctuate widely with seasons – it has doubled since last year due to deficient rainfall and production. This adversely affects net production and breakeven costs.
- There is excess availability of pith and all unit owners are finding the dumping of this pith a huge problem. Almost 3 tonnes of pith are produced for every tonne of fibre produced, of which only 10-15% is being utilized currently for manure.

2.3 Value Chain

2.3.1 Husk to Fibre (output of 1 MT fibre)

Activity	Present Value Chain	
	Cost (In Rs.)	(Cumulative)
12,000 husks/day at Rs 500/1000 husks	6000	6000
Defibering-12,000 husks for 1 tonne of fibre	2500+5000+1000 (labor + Electrical/diesel+ misc charges)	14,500
Selling price at Manufacturer (10% on cost of production)	1450	15,950
Yarn making Charges from 1 ton fibre (20 % wastage thus 800 KG of yarn)	7500	23450
Selling price of 800 KGs of Yarn (10% on cost of production)	2400	25850

2.3.2 Pith Block Making value chain (Post CFC)

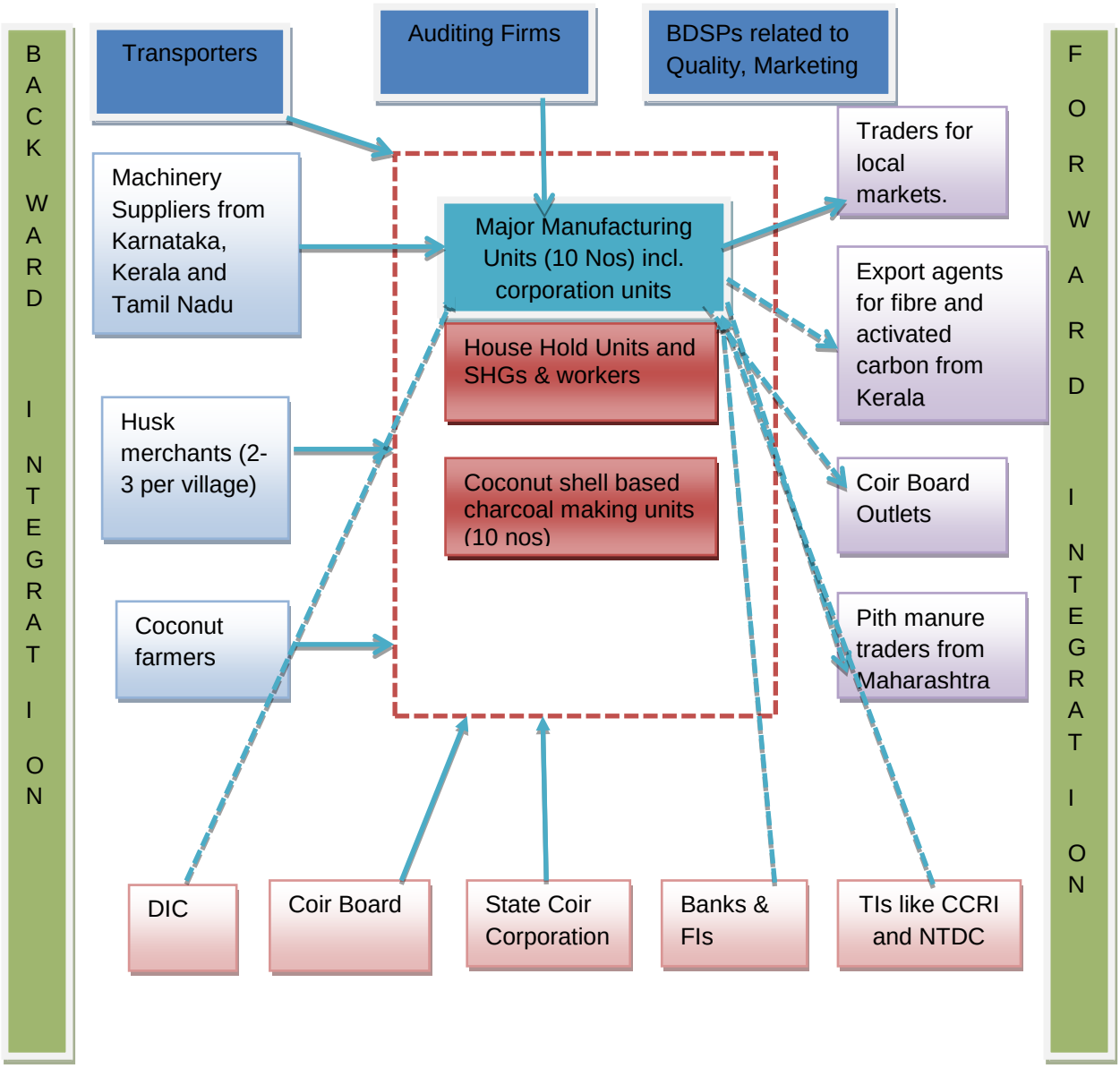
Activity	Value chain post CFC	
	Cost (In Rs.)	Cumulative
14,000 kg pith (Requirement of 1 machine/day)	5000	5,000
Screening, Cleaning, Dyeing, Processing + labor+ Misc Charges	42,000 +12,500+ 2,500	62,000
Sale of 4800 kg pith block per machine at Rs. 16/kg	14,800 (24%)	76,800

Analysis of value chain

At present, due to the high price of good quality husks and involvement of middlemen in the marketing process, the margins for fibre and curled yarn is very low and reaching a breakeven point can get difficult.

Pith is an untapped resource that need not be bought as it is available in plenty with all units. Thus, manufacture of pith blocks at a common facility centre may allow them to realize higher margins than that gained through their main manufacturing processes.

2.4 Cluster Map



Index:
1. **Dotted square box around core cluster firms indicate poor inter-firm linkage**
2. **Dotted arrow represents weak linkages**
3. **Solid arrow represents strong linkages**
4. **Lack of arrow represents absence of any linkages**
5. **Double sided arrow represents two way linkages**

2.5 Principal Stakeholders

There are around 10 major defibering and curled yarn units including major and minor units. There are 2-3 husk merchants in every village. Some of the fibre manufacturers also supply their curled ropes to *Kurl-on* mattress ltd that has a unit in Arsikere town. Other than the above, house hold units and workers in the major units have also been

considered as principle firms. Linkage among the sub clusters is good while as cluster level it is weak.

Backward linkages

The raw material suppliers are coconut farmers and husk merchants who supply minor and major units with husk, most of which is from local plantations. Some units also procure a small percentage from Kerala. The common machinery put to use are buster, beater and screener for defibering, 2 ply automatic yarn spinning machine or charkas for spinning and mat frames for mat making. These are supplied by machinery suppliers from Tamil Nadu, Karnataka and Kerala. At the pith processing unit, machinery was fully imported from Mexico.

Forward Linkages

The coconut fibre is mainly sold to local traders who further sell it to markets in Arsikere and Bangalore. Some of the bigger defibering units also sell their products to export agents who supply to China. Value added products like mats and trays from the Karnataka Coir Federation units are sold solely at their outlets around the state.

The activated carbon units supply their produce to traders and exporters based in Kerala.

There is marginal utilization of pith for manure and it is supplied for nurseries and greenhouses in Maharashtra. Pith blocksproduced at the sole pith processing unit in the cluster is bought by the Mexican contractor firm which exports it to foreign countries.

Other Support Institutions

Coir Board provides technical support to these units like sharing ideas on value addition of the products and imparting skill development trainings. The units also avail of subsidies meant for village industries form the Khadi or Coir Board. For availing credit, units generally approach Canara bank and State Bank of Mysore.

CHAPTER 3

MARKET ASSESSMENT AND DEMAND ANALYSIS

The coir manufacturing industry is producing coir mats, matting and other floor coverings, which was started in India on a factory basis, over a hundred years ago when the first factory was set up in Alleppey in 1859 by the Late Mr. James Darragh, an adventurous Irish born American national. Enterprising Indians followed the trail blazed by this foreigner. India accounts for more than two-thirds of the world production of coir and coir products. Amongst the coconut growing countries of the world India ranks 3rd after Philippines and Indonesia with 1.2 Million hectares of coconut growth and an average production of 6620 Million nuts.

Indian coir industry is an important cottage industry contributing significantly to the economy of the major coconut growing states and Union Territories of India, i.e., Kerala, Tamilnadu, Andhra Pradesh, Karnataka, Maharashtra, Goa, Orissa, Assam, Andaman and Nicobar, Lakshadweep, Pondicherry, etc. Modern machines were introduced into the coir industry in the late 1960's. About 5.5 lakh persons get employment in this industry. India exports around Rs.1000 crores of coir and coir products annually. Coconut husk is the basic raw material for coir products. Coir or Cocos - Nature's wonder Fibre is extracted from the protective husk of the Coconut.

3.1 Coir Products and their applications

A score of varieties/grades of coir yarn are produced and each variety is associated with certain specific characteristics, used for industrial, agricultural and domestic applications. The exhaustive range of floor coverings, hardwearing door mats, durable Mattings and rugs, crush-proof pile carpets, heavy flowered Mourzouks, etc. in a variety of dimensions enhance the elegance of the place of choice. These products are either hand-woven by expert craftsmen or are aesthetically manufactured on modern mechanised looms.

Other products of coir are, Geo-Textiles which are inexpensive, quick and effective in Civil Engineering practices. Rubberised coir, a blend of coir and latex, offers mattresses and cushioning for restful comfort and Pith which is now being widely used in agriculture as a natural hydroponic growing medium.

3.2 Domestic and Global markets for coir

The domestic market for coir products is currently estimated at Rs 2,000 crore and this is expected to grow to Rs 3,500 crore by 2017. The state of Kerala is responsible for about 80% of India's coir market. The coir industry in Kerala employs almost 3.5 lakh people. Over 50% of the coir fibre produced annually throughout the world is consumed mainly in India.

The exports of coir and coir products from India during 2014-15 have reached 1630.30 crores which is an increase by Rs. 154 crores from previous year. During the year 2014-15, 6, 26,666 MT of coir and coir products were exported from the country as against 5, 37,040 MT exported during preceding year. The increase in quantity and value works out to 16.7% and 10.5% in comparison with 2013-14. Coir pith, fibre, handloom mats, coir rope, curled coir, coir rugs and coir mats registered a growth ranging from 12 to 45%, coir yarn tufted mat, power loom mat, handloom matting, and coir geo textiles and rubberised coir recorded decline ranging from 5 to 51%.

China is the major importer of coir fibre for manufacturing mattress boards for their domestic requirement. They are focussing further to import more coir pith/ grow bags for horti/ agriculture requirements. The coir handloom products export has shown marginal increase by quantity but no increase by value comparing last year.

Coir fibre with export earnings of Rs, 419.23 crores constituted 26% of total export of coir products from the country. Similarly coir pith with an export of Rs. 432.95 crores constituted to 27% of total exports. All other value added items put together constitutes 47% of total exports. During the year 2014-15 coir and coir products from the country were exported to 115 countries around the globe. China topped the importing countries with 28.6% in value and 39% in quantity. USA emerged as the second largest importer of coir from India with a share of 21.3%. Coir exports from India now have new markets such as Russia and Latin America.

(Source: website of Coir Board)

3.3 Programs to promote Coir Products

Programs for coir industry aims at increased utilisation of coconut husk for production of coir fibre, growth of the domestic market, strengthening of research and development to find out new uses of coir fibre especially in the areas of geo-fabric, acquiring of new technology like Vinyl backed coir products. Mechanisation in all areas of production like the dfibreing, spinning and weaving are implemented in a phased manner without

affecting employment to make Indian coir products competitive in the export market. Modernisation of coir units has been propelled by providing incentives for installation of modern equipment's to make the coir industry more productive and labour friendly. Some of the common attributes are it provides excellent insulation against temperature and sound.

3.4 Major associations involved in coir promotion

FICEA Is the Confederation of Coir and also allied products exporters of India. FICEA, under its single umbrella, has to its credit all the Exporter Associations of coir from the country namely- the Indian Coir Exporters Chamber, Indian Coir Association, Coir Shippers Council, Travancore Coir Mats and Mating Manufacturers Association and The Coir Pith and Allied Products Manufacturers and Exporters Association, which exports about 1000 crores worth of Coir and Coir Products from the country. It voices the problems and difficulties being faced by the coir industry in general and the exporters in particular.

(Source: Indian Mirror.com)

3.5 Analysis

- *Cluster firms never capitalised, the growing export market for coir yarn and mats, which are its major products. All the firms are depending only on domestic traders who in turn by exporting are making major profits. There is a need for cluster firms to opt for direct export market.*
- *With the existing production process, cluster firms are capable of making pith, for which no conscious efforts were made. In fact cluster firms can opt for a Common Pith making unit, if economics of scale for individual units is adverse.*
- *Linkage of cluster firms never gone beyond coir board; it is high time for at least major manufacturers to be the members of FICEA, which can facilitate in direct marketing.*
- *There is a huge untapped market in countries like Russia and Latin America for coir mats and pith, which cluster firms need to tap. However for any exports firms need to understand international quality norms and upgrade their facilities accordingly.*

CHAPTER - 4

SWOT AND NEED GAP ANALYSIS

4.1 Cluster SWOT

The SWOT analysis of the Cluster is based on the status of the cluster, production process and market analysis.

4.1.1 Strength

- Abundance of raw material
- Presence of state coir corporation and federation which have technical knowhow and experience
- Huge market demand for the coir, coir pith products.
- Established local market channels
- Most of the units are having mechanised defibering and curling machines.
- There is no shortage of labour as the coir industry is well established in the area.
- Availability of requisite logistics and physical infrastructure facilities

4.1.2 Weakness

- Limited or nil utilization of pith.
- Limited efforts on value added products like matting, pith block making and pith manure to capture wider markets.
- Lack of proper infrastructural facilities for mat making, pith block/ manure making, resulting in heavy dependency on one or two products.
- Limited skill sets of workers with reference to advanced pith product making, yarn making and mats and mattings making
- Poor linkage with banks and FIs
- Limited awareness on Government Schemes like Coir Udyami Yojana, NMCP, CLCSS, and CGTMSE etc.
- Limited market skills with specific reference to export market procedures
- Lack of awareness on quality standards on coir industry
- Limited entrepreneurial skills among unit holders and artisans
- Absence of linkage with support institutions mainly to artisans
- Linkage with BDS providers is absent

4.1.3 Opportunities

- Growing market demand for eco-friendly value added coir products like pith blocks, manure etc.
- Growing demand for curled coir from mattress making sub sector
- Huge local demand for mats and global demand for mattings
- Presence of latest technologies for pith blocks manufacturing, whereby lignin content is removed using R.O system water.
- Presence of coir specific Technical Institutions like CCRI
- Availability of advanced machinery in spinning, mat making and pith block making in the market at reasonable prices
- Presence of sector specific promotional agencies like Coir Board, CCRI, FICEA to help in the areas of grant, soft loans, market promotion and skill development.
- Coir Board is ready to support with cluster programme
- Young entrepreneurs are eager to enter the coir industry.
- The climate is conducive for coir pith production since the area has only two months of rain in an year

4.1.4 Threats/ Challenges

- Coconut plantations are highly prone to pests and crop diseases.
- There is high degree of competition in the market for value added products in coir.
- Machinery required for pith processing is quite expensive and is mostly imported.
- Best quality pith blocks production is water intensive, requiring the cleanest water, preferably R.O treated.
- Industry is adversely affected by frequent fluctuations in husk prices.

4.2 Need Gap Analysis

4.2.1 Technology

There are very limited facilities for value added products like pith block making and manure making mainly due to their capital intensive nature, which individual firms cannot afford. Even the mat and matting facilities are mainly confined to units run by corporation and federation. Lack of finance and awareness are the major issues for restricted product mix. Thus there is a need to establish pith block and manure making units in all the sub clusters. Similarly there is also a need to upgrade/ establish 2 & 3

ply yarn making, mat and matting making based on the requirement and interest among the sub cluster groups.

4.2.2 Marketing

Fibre and curled ropes are provided to traders and export agents and there is no direct marketing of products except to the *Kurl-on* outlet. Karnataka Coir Federation units are producing many value added products in comparison to private units, but they have very low market visibility and are available only at the federation outlets in the state.

Since there is a huge demand for pith blocks abroad, there is a need to organise training on market development. There is also a need to link with end users like Kurl On for curled rope, D Mart, Big bazaar, Metro for mats, ecommerce portals like Alibaba, Indiamart, Pepperfry, for sale of mats and mattings, yarn etc.

4.2.3 Finance

Canara Bank and State Bank of Mysore are the major banks approached for availing loans. There is a need to impart training on financial management and training to the unit owners by organizing EDPs. There is also a need to organise an awareness workshop on Public Support Schemes with the help of NABARD, KVIC, MSMEDI, and local DIC.

4.2.5 Quality

For 2 ply coir yarn made manually, the cluster firms are required to follow IS 14596 and for other coir products IS 2295 have been framed. There is also IS 1410: 2001 for coir ropes. Similarly there is an IS 11420 for coir mats. Even to make coir pith DOC.TXD 25 (1164), the standards are under making by BIS. Unless the cluster forms won't understand the specifications and standards of BIS, their chances of exporting and supplying to major market chains will be difficult. Thus there is a need to educate cluster firms on quality standards with the help of CCTRI through a training program.

4.2.6 Linkage with Institutions:

At present the cluster firms are having linkage only with Coir Board. There is a need tolink them with CCTRI for quality skill up gradation, FICEA for export market promotion,

MSME-DI for leveraging NMCP scheme, Banks not only to avail credit facility but also benefit under CGTMSE, DIC for EM registration and availing state schemes, NABARDto avail schemes like Rural Mart, UPNRM.

4.2.3 Suggested Market Plan for the Cluster

PITH BLOCKS AND PITH MANURE

Coir pith blocks are generally exported in brick form, have caught on well as a soil conditioner and are also being used as a growing medium/substitute for peat moss. It is used for horticultural purposes, in greenhouses and also for commercial and domestic gardening. Pith compost is also a good source of organic manure and it has been successfully used in enhancing the productivity and yield of various agricultural crops.

The advantages of pith as a growing medium are:

- It has proven higher yields and is conducive for horticulture and floriculture.
- It is free from weeds and pathogens and is within safe EC and pH standards.
- It is free from all soil diseases.
- It offers high resistance to most root diseases.
- Ensures high oxygen levels for drainage.

Demand for pith blocks: Pith blocks are in huge demand globally, especially in Australia, European and Middle Eastern countries. Even locally and nationally, pith manure and pith blocks are demanded by various farmer societies, nurseries and agro traders. As there is ready demand for these products, familiarization with traders and export agents can be achieved through the buyer seller meets proposed under the soft interventions.

Business model of CFC: The estimated aggregate production of pith manure is 210 MT whereas for pith block it is 2.50 lakh nos. in optimal year of operation (3rd year). The concerned SPV have already held discussions with local nurseries and those in Maharashtra, traders for supply of manure and blocks. The expected segment wise consumption of pith block and manure are given in the following tables:

HARALAKATTA MINOR COIR CLUSTER

	Pith Manure			Expected consumption
		Potential Customers		
Market Channel	Local	1	Algundagi Agro services, Hubali, ,	50 MT
		2	Sri Nanjundeswara Nursery, Konanur	
		3	Kissan Agro Centre, BM Road, Hassan	
		4	Nandanam Nursery, Palaya	
		5	Sri Krishna Nursery, Chennaraya Pattana	
		6	Agri mart, Mysore	
	Pan India Level	1	K Shanti Seeds Pune	60MT
		2	Krishna Agro services Nashik,	
		3	GEE ESS, Bombay	
		4	Green movers, Tamil Nadu	
	Export	1	SMS Exporters, Pollachi	100 MT
		2	Asian Coir products, Coimbatore	
		3	Shaa Pith Media Company, Pollachi	
	Total			210 MT

	Pith Blocks			Expected consumption (in lakh nos)
		Potential Customers		
Market Channel	Pan India Level	1	Jain Irrigation Systems Ltd, Maharashtra	1.00
		2	S.S Mehatha, Salem	
		3	Prakruthi Agro Cocopeat, Bengaluru	
		4	United Global traders, Mumbai	
		5	Harish coconut products pvt ltd, Pollachi	
	Export	1	Mnidharma Biotech Pvt Ltd, Chennai	5.00
		2	Dutch plantin, Netherland	
		3	Kob and sons, Gudiyattam	
		4	Runver Exports, Chennai	
	Total			**1.5 lakhs**

CHAPTER – 5
PROFILE OF THE IMPLEMENTING AGENCY

5.1 Institutional Structure

The Karnataka State Coir Co-Operative Federation was established in the year 1961 with the main objective of developing coir industry through co-operative movement in Karnataka state. This Federation is having 72 primary coir Co-operative societies as its affiliated member societies. There are more than 17 production centre where in all coir products are manufactured apart from this as per the customer demand, new varieties of coir products are also manufactured and sold. The Federation is also having 14 sales outlets and 3 Mobile sales van wherein different types of coir mats, matting cushions, rubberized mattresses, pillows etc. are display and sold.

The Federation is having godown facilities for storage and security of coir products at Bangalore and Arsikere. The Main manufacturing activities are coir fibre (Brown fibre and green husk fibre). Mats Matting, Geo-textiles, Curled coir required for Rubberized coir industry and other value added products. The Federation has provided employment to about 1500 unskilled persons in rural area out of which 90% are women. The main objective of the Federation is as follows:-

- To assist and support primary coir Co-operative societies.
- To provide Training.
- Supply of raw- materials
- Marketing of coir products
- Technical guidance

5.2 Governance Structure

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

5.3 Operational Profile

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

5.4 Management Profile

The Board of Directors will take care of overall administration, while Managing Director along with staff will be take care the operational part. Each member of the federation has been entrusted with a specific task like marketing, input procurement, finance, training, raat procurement, product/ quality upgradation.

The Board of Directors has been supported by Secretarial staff, whichwill take care of operational management at ground level, besides sales operations. Dr. H.R. Arun Kumar is present Managing Director of the Federation who has vast experience in textile and coir industry.

The Federation is having 16 production centres spread across the state, with each one headed by an official of Superintendent/ Supervisor rank person.

5.5 Financial Position

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

CHAPTER – 6

PROJECT CONCEPT AND STRATEGY FRAMEWORK

6.1 Project Rationale, frame work and strategy

Thus there is a need to stress on soft interventions at the initial stage so as to improve the capacities of stakeholders, which will propel them to establish and run requisite hard interventions in a sustainable way. While individual specific soft interventions will be dealt separately, the common issues will be met through organising few common activities like bankers meets, exposure visits, EDPs etc.

Hard interventions will be addressed, only after the implementation of important basic level soft interventions as second phase preferably in the 2nd year, so as to make the project a sustainable venture. Once the soft and hard interventions are completed based on the additional requirement, leveraging of other public support schemes may be planned. The sub cluster wise strategy is given as below:

7 units in Haralakatta are totally depending on dehusking while 3 units are also making curled coir and 2 ply yarn. There is an artisan SHG run unit where 50 artisans are involved in making of mats with frame loom. Thus majority of the units are mainly depending on limited products thus operations have become seasonal. There is a need to implement few soft interventions with specific reference to training on making of pith blocks, pith compostingand automatic spinning for yarn making, better mat making practices.

Based on the outcome of the soft interventions, establishment of pith processing and pith block making facilities can be planned. As the SHG groups of 50 members at Haralakatta are having only 1 frame loom to make mats, it will be expanded as part of convergence under Coir Udyami Yojana Scheme.

The cluster firms are not aware of cluster concepts with limited inter member trust, limited awareness on government schemes like NMCP, CLCSSS, and CGTMSE etc. The linkage with banks and FIs are also limited. Lack of entrepreneurial capabilities is one of the reasons for their limited linkage with banks and limited market penetration. They also lack awareness on export policies and procedures. Thus there is a need to implement few soft interventions at cluster level like organising EDPs, awareness workshop on government schemes, interface with banks. These interventions are

planned in the first year itself and will be organised at Arisikere which is the central point for the cluster.

6.2 Project Objective

Major objectives of implementing SFURTI in the cluster are:

- The address the issues of each sub cluster based on their requirement, need and products manufactured, which ultimately strengthen the cluster per se.
- To improve the aggregate cluster production by introducing part mechanisation and upgradation of existing equipment.
- To improve the social capital of the cluster by capacitating the IA and SPV.
- To establish requisite Common Facilities for value added products
- To strengthen linkages of cluster firms with support institutions and relevant BDSPs so as to make the proposed interventions sustainable
- To encourage direct marketing by cluster firms instead of existing trader controlled sales
- To improve entrepreneurial skills of principal stakeholders so as to gain confidence to opt for export marketing besides improving linkages with banks and FIs

6.3 Focus Products/ Services

Pith Blocks and High grade pith manure are the major focus products of the cluster under SFURTI due to the abundant availability of husk.

Part – II

CHAPTER – 7

PROJECT INTERVENTIONS

7.1 Soft Interventions

As indicated in the previous chapter, there are soft interventions which are individual specific other common cluster level interventions. While individual specific interventions will be organised separately, the common interventions will be organised at Haralakatta, since its strategic location. The planned cluster specific interventions are given as below:

1. Training Programmes & SDPS				
1	2 week training program on pith manure making	Q2-Q3	30 house hold units, and workers in manufacturing units	30 artisans trained in Pith manure making
2	2 week training program on pith block making	Q2-Q3	30 house hold units, and workers in manufacturing units	30 artisans trained in Pith block making
3	4 week training on auto spinning (1No)	Q2-Q3	30 workers and major manufacturers	30 participants will be trained in auto spinning, with establishment of an auto spinning unit as spin off effect
4	2 week training program on better mat making practices (2 Nos)	Q3 – Q4	50 House hold units/ SHGs	40 artisans trained in better mat making practices
2. Trust Building				
5	Launch workshop	Q1	50 cluster firms and artisans	Information dissemination regarding launch of CDP in the cluster
6	Organising 2 EDPs	Q3	20 entrepreneurs and house hold units	50 participants will adopt better management practices
3. Building Awareness on various Government Schemes				
7	Awareness Workshop on Government Schemes	Q2	50 manufacturers and household units	At least 100 firms get awareness on various schemes like PMEGP, NMCP, CGTSME
8	Interface with Bankers (2 Nos)	Q2-Q3	40 manufacturers and household units	40 stakeholders to understand banking procedures and documentation
4. Marketing				
9	Launching of cluster level Website	Q5-Q6	All cluster firms and artisans	For promotion of products through e-commerce

10	Organising buyer-seller meet at Hassan (2nos)	Q5-Q6	80 member and non-member manufacturing units	Help the principle firms to understand buyer requirements and led to direct marketing.

7.2 Hard Interventions

7.2.1 Haralakatta

Pith Manure and pith block Unit

There are 10 units making fibre out of husk, on an average they are making 1 ton of fibre per unit, which means 3 tons of pith per unit. Thus per day total pith production is 30 to 40 Tons, which is sold without any value addition at a through away price of Rs. 600 per MT to farmers. If value additions like manure/ blocks are made out of this pith, the sale realisation may increase by 200 to 300% depending on the product.

Thus all the 10 units are seeking pith composting cum block making unit as common facility which can make 200 to 250 pith blocks per days and pith screener, pith tank, RO water processing machine, buller and dryer etc. are planned to be bought for the facility. Total machinery cost is coming to Rs. 121.55 lakhs. One of the members of SPV is having 2.5 acres of industrially converted land with power facility, which is sufficient for the CFC and he will give it on lease. The entire produce will be sold on common brand basis, since the output quantity is limited. **SPV will take care of market and production activities.**

(Pith processing screener)

(Pith Squeezer)

CHAPTER – 8

SOFT INTERVENTIONS

Detailing of soft interventions as per the suggested guidelines is given as below:

8.1 Common interventions

8.1.1 Proposed Program: Launch Workshop

Course outline: To make cluster stakeholders aware of the proposed activities and their expected outcomes.

Duration: Half day

Batch Size: 50 cluster firms including manufacturers, house hold units, and workers

Trainers and their details: Not applicable

Training deliver method: Not applicable

Details of infrastructure required: Excepting a venue, projector and LCD no other infrastructure is required

Availability of Infrastructure: Karnataka Coir Federation is having hall which will be used for organising the event.

Cost of training program:

Venue Cost	2000
Local TA/ DA	5000
Refreshments 50 persons @ Rs. 200 per head	10000
Photo & Video expenses, LCD & Projector Expenses	10000
Literature	3000
Total	30,000

8.1.2Proposed Program: Interface with Bankers (3Nos)

Course outline: Stakeholders to understand banking procedures and documentation

Duration: One day

Batch Size: 50 manufacturers and household units

Trainers and their details: Not applicable

Training delivery method: Not applicable

Details of infrastructure required: Excepting a venue, projector and LCD no other infrastructure is required

Availability of Infrastructure: Karnataka Coir Federation is having hall which will be used for organising the event.

Cost of training program:

Interface with bankers	
Venue Cost	2000

Local TA/ DA	5000
Refreshments 50 persons @ Rs. 200 per head	10000
Photo & Video expenses, LCD, Projector	10000
Literature	3000
Total	30000
For 2 Nos.	60000

8.1.3Proposed Program: Awareness Workshop on Government Schemes

Course outline: 50 firms get awareness on various schemes like PMEGP, NMCP, and CGTSME

Duration: One day

Batch Size: 50 manufacturers and household units

Trainers and their details: Not applicable

Training delivery method: Not applicable

Details of infrastructure required: Excepting a venue, projector and LCD no other infrastructure is required

Availability of Infrastructure: Karnataka Coir Federation is having hall which will be used for organising the event.

Cost of training program:

3. Awareness Workshop on Govt. schemes	
Venue Cost	2000
Local TA/ DA	2000
Refreshments 50 persons @ Rs. 200 per head	10000
Photo & Video expenses, LCD & Projector	6000
Literature	5000
Total	25000
2 Nos	50000

8.1.4Proposed Program: E Commerce Portal

Course outline: For promotion of products through e-commerce

Duration: Continuous dynamic website

Batch Size: Not applicable

Trainers and their details: Not applicable

Training delivery method: Not applicable

Details of infrastructure required: Not applicable

Availability of Infrastructure: Not applicable

Method of selection of consultant: selection of consultant will be done in bidding process.

HARALAKATTA MINOR COIR CLUSTER

Cost of program: 2.00 lakhs as BDSP fees

8.1.5Proposed Program: Organising Buyer Seller Meets (2nos)

Course outline: Help the principle firms to understand buyer requirements and led to direct marketing.

Duration: One day

Batch Size: 40

Trainers and their details: Not applicable

Training delivery method: Not applicable

Details of infrastructure required: Venue, LCD, Projector, Tables and Chairs, partitions

Availability of Infrastructure: Will be organised in a hotel at Hassan

Method of selection of trainer: Not applicable

Cost of training program:

Organising BSMs	
Venue Cost	30000
Local TA/ DA	10000
Travel	20000
Refreshments 50 persons @ Rs. 300 per head	15000
Photo & Video expenses	20000
Literature	15000
Total	100000
For 2 meets	220000

8.1.6Proposed Program: Organising EDP

Course outline: Capacitate principle firm owners in better management practices.

Duration: 3 days

Batch Size: 15

Trainers and their details: Not applicable

Training delivery method: Not applicable

Details of infrastructure required: Venue, LCD, Projector, Tables and Chairs, partitions

Availability of Infrastructure: Will be organised in conference hall of Karnataka Coir Federation

Method of selection of trainer: EDII, Bangalore will be hired to organise EDPs, due to their vast experience in the field.

Cost of training program:

Organising EDPs	
Venue Cost	5000
Local TA/ DA	5000
Travel	5000
Refreshments 20 persons @ Rs. 200 per head x 3 days	12000
Photo & Video expenses, CLD, Projector	10000
Literature	3000
Total	40000

8.1.7Proposed Program: 2 week training program on pith manure and 2 week training on pith block making

Course outline: 60 artisans trained in pith product making

Duration:2 weeks

Batch Size: 30

Trainers and their details: Central Institute of Coir Technology, Bangalore is a research institute of Coir Board, an autonomous body, under the control of Ministry of Agro and Rural Industries, Government of India. It has vast experience in conducting such programs. Even pith block making supplier will also be involved in training.

Training delivery method: Class room sessions followed by practical sessions on machines

Details of infrastructure required: Venue (preferably at campus), LCD, Projector, Tables and Chairs

Availability of Infrastructure: Local community hall will be used as venue, while chairs and tables will be taken on hire from local tent house. As alternative program can also be organised in CICT Campus

Method of selection of trainer: As per the norms, selection of trainers has to be done in bidding process. However coir based institutions is limited as such direct selection is preferred.

Cost of training program:

Venue Cost	20000
travel expenses for faculty	10000
Local TA/ DA	10000
Stifund for participants 30 persons @ Rs. 150 per head x 10 days	45000
Refreshments 30 persons @ Rs. 100 per head x 10 days	30000
Faculty Fees	30000

Photo & Video expenses	10000
Literature & Misc. expenses	10000
Total	175000
For 2 Nos.	350000

8.2.2 Proposed Program: 4 week training program on auto spinning

Course outline: 30 workers of major manufacturing firms will be trained in spinning.

Duration:one month

Batch Size: 30

Central Institute of Coir Technology, Bangalore is a research institute of Coir Board, an autonomous body, under the control of Ministry of Agro and Rural Industries, Government of India. It has vast experience in conducting such programs. Even pith block making supplier will also be involved in training.

Training delivery method: Class room sessions followed by practical sessions on machines

Details of infrastructure required: Venue (preferably at campus), LCD, Projector, Tables and Chairs

Availability of Infrastructure: Local community hall will be used as venue, while chairs and tables will be taken on hire from local tent house. As alternative program can also be organised in CICT Campus

Method of selection of trainer: As per the norms, selection of trainers has to be done in bidding process. However coir based institutions is limited as such direct selection is preferred.

Cost of training program:

Venue Cost	10000
travel expenses for faculty	10000
Local TA/ DA	10000
Stifund for participants 30 persons @ Rs. 150 per head x 20 days	90000
Refreshments 40 persons @ Rs. 100 per head x 20 days	80000
Faculty Fees	30000
Photo & Video expenses	10000
Literature & Misc. expenses	10000
Total	250000

8.2.3Proposed Program: 2 week training program on better mat making

Course outline: 50 artisans and workers

Duration: Four weeks

Batch Size: 50

HARALAKATTA MINOR COIR CLUSTER

Trainers and their details: : The Central Coir Research Institute is one of the prime research centre of Coir Board (Recognised by the Department of Science & Technology, Government of India).The Institute has infrastructure for imparting training to students to acquire in depth knowledge in the processing of coir and coir products. Hence it will also provide training sessions on mats and mat making.

Training delivery method: Class room as well as practical sessions on machinery.

Details of infrastructure required: Venue, Tables and Chairs

Availability of Infrastructure: Venue (preferably at campus), LCD, Projector, Tables and Chairs

Method of selection of trainer: As per the norms, selection of trainers has to be done in bidding process.

Cost of training program:

Venue Cost	15000
travel expenses for faculty	10000
Local TA/ DA	10000
Stifund for participants 25 persons @ Rs. 150 per head x 10 days	35000
Refreshments 30 persons @ Rs. 100 per head x 10 days	30000
Faculty Fees	30000
Photo & Video expenses	10000
Literature & Misc. expenses	10000
Total	1,50,000
For 2 Nos	3,00,000

Activity wise budget for Soft Intervention Action Plan is given as below:

HARALAKATTA MINOR COIR CLUSTER

S No.	Name of activity	Timeline	GOI Grant	State Contribution	SH contribution	Total required Fund
1	Launch Workshop	Q1	0.3	0	0	0.3
2	Interface with bankers	Q2-Q3	0.60	0	0	0.60
3	Awareness workshop on Govt. Schemes	Q2-Q3	0.50	0	0	0.50
4	Proposed: E Commerce portal	Q5-Q6	2.00	0	0	2.00
5	Proposed: Organising BSMs (2 Nos)	Q5-Q6	2.20	0	0	2.20
6	Proposed: Organising EDPs	Q2-Q3	0.4	0	0	0.4
7	2 week training on pith manure making	Q1-Q2	1.75	0	0	1.75
8	2 week training on pith block making	Q1-Q2	1.75	0	0	1.75
8	4 week training on auto-spinning	Q2-Q3	2.50	0	0	2.50
9	2 week training program on better mat making practices	Q3-Q4	3.00	0	0	3.00
	TOTAL		**15.00**	**0**	**0**	**15.00**

CHAPTER – 9
HARD INTERVENTIONS

Reasons for pith block cum manure units in Hassan Region:

- Hassan is one of the major coir fibre producing areas in the country with an estimated production of more than 30000 MT per annum. The ratio of coir pith to fibre is 1:3, which means the pith production is coming to 80000 to 90000 MT per annum. Out of which at present only 10% is value added as manure by one private unit and another maintained by Coir Corporation. Remaining 90% is either sold to farmers at through away price or kept in the units for longer periods, resulting in air pollution and limited price realisation.

- On an average Haralakatta cluster is thus wasting 20000 to 25000 MT of coir pith per annum, which can be value added as pith blocks or manure which have good domestic and international market.

- However planning a centralised pith block cum manure making unit may not be viable as distance between sub clusters varies from 12 to 30 KMs, resulting in higher transportation costs. A centralised plant also requires 8 to 9 acres of land as drying require huge tracts of land, which is not available.

- Since all the four major regions are generating substantial pith, each one can plan a satellite CFC of its own for pith block and composting. Same fact was also agreed by the stake holders of 4 clusters. In fact in Haralakatta, the only CFC planned is pith block cum manure making unit.

9.1 Pith Block & Manure Making Unit :

9.1.1 Proposed intervention

At present no unit is having pith manure or block making facility due to its capital intensive nature. Moreover the production of pith by individual unit is not large enough to make either manure or blocks. Thus the cluster firms as of now are either dumping the pith or selling to farmers at through away prices. An estimated 2 to 3 tons of pith is made as by product during defibering by each unit, thus an estimated 30 to 40 MT of pith is generated per day in the sub cluster, which is substantial. Thus a common pith block cum manure making unit is planned in the cluster, with a production capacity of 1200 pith blocks per day (Each 5 KG) and 300 MT of manure per annum. The proposed facility will work one shift per day for 300 days.

9.1.2 Land details

2.5 acres of land is available which was already converted for commercial use with Mr. Mallikharjun, one of the key members of the cluster. The address of the land is Haralakatta at post, Kannakatte (Hobale), Arisikere Block, Hassan District. Power and ground water are already available in the land.

9.1.3 Proposed capacities

1 pith block making machine with a capacity of 150 blocks per hour besides the production capacity of manure is estimated at 300 MT per annum.

9.1.4 Proposed equipment's/ machines etc.

Details of machines are given as below:

S.No.	Name of the machinery	Total Amount
1. Pith Manure and Pith Block centre		
1	Pith Block making m/c including cooling tower	1366000
2	Rotary Sieving M/c	262000
3	Pith washing Machine with conveyor and cooling tower	1460000
4	RO water processing machine with testing equipment	452000
5	650 grams Briquette machine	1260000
6	Tractor with Buller	1332789
7	Conveyor system including, gear box motor etc.	1296000

8	Green House	1000000
	Sub Total - 1	**8428789**

9.1.5 Master Plan/ Detailed engineering drawings

A detailed master plan along with civil estimates are given as **annexure – 57**

9.1.6 Project Cost

The total project cost includes civil and purchase of machinery is given as below:

Sl.No	Particulars	Already incurred	To be incurred	Total Cost
A	Land	-	-	-
	land Development	-	-	-
B	Building & other Civil Works	-	32.50	32.50
C	Plant and machinery			
	a. indigenous	-	84.29	84.29
	b.import	-	-	-
D	Lease Deposit & Electricity Deposit	-	-	-
E	Technical consultancy fee	-	-	-
F	Miscellaneous fixed assets	-	1.05	1.05
G	Erection / installation charges	-	-	-
H	Preliminary expenses	-	0.50	0.50
I	Pre-operative expenses	-	2.00	2.00
J	Provision for contingencies			
	a.buildings (@2%)	-	0.65	0.65
	b.Plant& Machinery (5%)	-	4.21	4.21
	c.Other fixed assets	-	-	-
K	Working capital	-	13.50	13.50
	Total :	-	138.70	138.70

9.1.7 Operation and maintenance model

Production basis: To make the facility more sustainable, entire capacity will be sold on common brand basis, where SPV itself will by the raw material and sell the blocks/

manure directly to clients. In this option, the SPV is expected to sell blocks at the rate of Rs. 50 per block and manure at a price of Rs. 3800 per MT.

The unit is expected to generate revenue of Rs. 114.84 lakhs and production costs of Rs. 94.49lakhs, thus giving Rs. 13.07lakhs as surplus in the first year of operation.

9.1.8 Business Plan

T9.2 he business plans of each sub cluster aregiven in the detailed business plan Chapter (No: 14).

9.1.9 Implementation schedule

The civil construction is expected to be complete second quarter of the firstyear of the project implementation. Purchase and erection of machinery will be done by third quarter of 2nd year and plant is expected to start its commercial operations by end of second year. It is expected to reach breakeven in the first year of operation.

9.1.10 Any other information pertaining to the project

The facility will be mainly used by major manufacturers and the plant capacity is also designed in such a way to meet their requirements. However a provision will be made in the bylaws that even any house hold unit can also use the facility if required.

CHAPTER – 10

PROJECT COST AND MEANS OF FINANCE

10.1 Project Cost

The cost of project include cost of implementing Soft Interventions, Hard Interventions, IA fees and TA fees with a total project span of 3 years. However for SI and HI the aggregate project costs are given. Following table shows the aggregate cost of project:

Aggregate Project Cost		
		Rs.In lakhs
Sl.No	Particulars	Total Cost
I. Hard Interventions		
A	Land	-
	land Development	0.00
B	Building & other Civil Works	32.50
C	Plant and machinery	-
	a. indigenous	84.29
	b.import	-
D	Lease Deposit &Electricity Deposit	0.00
E	Technical consultancy fee	-
F	Miscellaneous fixed assets	1.05
G	Erection / installation charges	-
H	Preliminary expenses	0.50
I	Pre-operative expenses	2.00
J	Provision for contingencies	-
	a.buildings (@2%)	0.65
	b.Plant& Machinery (5%)	4.21
K	Working capital	13.50
	Total for Hard Interventions	**138.70**
II. Provision for Soft Interventions		**15.00**
III. IA Fees		**20.00**
IV. TA Fees (SI + HI)		**9.52**
Total (I+II+III+IV)		**183.22**

10.2 Means of Finance

Means of finance is mainly confined to SFURTI Grant and Promoter's equity. Promoters are willing to contribute on their own and are not taking any unsecured loans for the project. Thus the details of means of finance are given as below:

Means of Finance		
Sl.No.	Particulars	Total
	Equity	
A	Equity from SPV	34.68
B	Subsidy: central govt. (75%)	148.55
C	Subsidy : state govt.	-
	Total	**183.22**

As per the guidelines 100% grant is considered for implementation of SI plan. For Hard interventions 75% grant is considered. Remaining 25% will be brought by IA through SPVs as their contribution. IA fee is coming to Rs. 20.00 lakhs which is within maximum cap of Rs. 20.00 lakhs. TA fees are calculated as 8% of SI+HI and are coming to Rs. 9.52 lakhs. Thus the total project cost is coming to 183.22 lakhs in which GoI grant is 148.55 lakhs, which is with in maximum cap for Minor Cluster i.e. Rs. 150 lakhs.

10.3 Project Phasing

As indicated, project will be implemented in 3 years of time. While first year concentration will be more on implementation of soft interventions and initiation of HI, the second year will not only completion of SI but also completion of CFCs. By third Year, there will not be any SI and only strengthening of established CFCs will be given priority. Accordingly the following phasing has been suggested:

HARALAKATTA MINOR COIR CLUSTER

Sl.No	Particulars	1st Year	2nd Year	3rd Year	Total
A	Land (Lease)	0.00	0.00	0.00	0.00
	land Development	0.00	0.00	0.00	0.00
B	Building & other Civil Works				0.00
	Civil Alterations for Spinning Plant	22.75	9.75	0.00	32.50
	Civil Works for Mat making cum godown	0.00	0.00	0.00	0.00
C	Plant and machinery				
	a. indigenous	42.14	42.14	0.00	84.29
	b.import				
D	Lease Deposit & Electricty Deposit	0.00	0.00	0.00	0.00
E	Technical consultancy fee				
F	Miscellaneous fixed assets	0.00	1.05	0.00	1.05
G	Erection / installation charges	0.00	0.00	0.00	0.00
H	Preliminary expenses	0.25	0.25		0.50
I	Pre-operative expenses	1.00	1.00		2.00
J	Provision for contingencies				
	a.buildings (@2%)	0.00	0.65		0.65
	b.Plant & Machinery (10%)	2.95	1.26		4.21
	c.Other fixed assets	0.00	0.00	0.00	0.00
K	Working capital	0.00	13.50		13.50
G	**Provision for Soft Interventions**	**7.50**	**7.50**	**0.00**	**15.00**
H	**IA Fees**	**6.60**	**6.70**	**6.70**	20.00
I	**TA Fees (75% of SI+HI)**	**3.29**	**3.29**	**3.29**	9.86
	Total	86.48	87.09	9.99	183.56
		1st Year	**2nd Year**	**3rd Year**	**Total**
I.	**GoI Grantunder SFURTI**	69.21	69.69	9.99	148.88
II.	**State Contrbution if any**	0.00	0.00	0.00	0.00
III.	**Promoters Equity**				
	Own Sources	17.27	17.40	0.00	34.68
	Unsecured loans	0.00	0.00	0.00	0.00
Total		86.48	87.09	9.99	183.56

CHAPTER 11

PLAN FOR CONVERGENCE OF INITIATIVES

During the survey it was observed that there are many house hold artisans who have zeal to establish their own defibering, and mat making units. These artisans once capacitated with planned SDPs, need to be encouraged to apply under Coir Udyami Yojana and PMEGP Scheme. Thus in the second and third year at least10 capable artisans will be targeted to be covered under such schemes.

The common convergence activities planned and their tentative estimates are given as below:

S.No	Activity	Number of firms/ artisans targeted	Tentative project Cost (In Rs.)	Scheme contribution	Bank Loan	Promoter Contribution
1	Establishment of defibering/ mat making units by artisans under Coir Udyami Yojana	10	30 Nos. x Rs. 5,00,000 = Rs.50,00,000	20,00,000	25,00,000	5,00,000

There are 10 SHGs which are in to mat and rope making. There is a small common facility with one frame loom, one charkha with 200 SFT open shed. Once these SHG artisans are capacitated by planned SDPs and gained confidence, all the SHGs will form a cooperative society and apply under Coir Udyami Yojana for expansion of the unit. 4 more frame looms other expansion of the shed is planned in the supposed expansion. The proposed facility is planned in third year of project phase. The detailed costing is given as below:

HARALAKATTA MINOR COIR CLUSTER

S. No	Name of the Activity	Bank Loan	Grant by Coir Board	Stake Holders Contribution	Total Cost
1	**Common Facility Centre for Mat Making** 1. Civil Cost 400 SFT @ Rs. 250 per SFT = Rs. 1.00 lakhs 2. Plant & Machinery Cost = 4 frame looms @ Rs. 2.00 lakhs each = Rs. 08.00 lakhs 3. Working Capital Costs = Rs. 1.00 lakhs 4. Total = Rs. 10.00 lakhs	5.50	04.00	0.50	10.00

Revenue generation mechanism: The society itself with the help of SPV will make mats, and sell on its common brand name, and pass on profit margins to concerned SHG members on pro rata basis.

CHAPTER - 12

ENHANCED PROJECT COST WITH CONVERGENCE OF SCHEMES

Overall project cost which is including grant under SFURTI, Stakeholder contribution, and co-founding by MoMSME (MDA Scheme), Coir Board (Coir Udyami Yojana), and KVIC (PMEGP Scheme) as grant, which is given as below. A component wise break up is give as per the format.

(Rs. In lakhs)

S.No	Component	Total	Grant under SFURTI	Bank Finance	State Contribution	Grant from other schemes (PMEGP, CUY, MDA)	Stakeholder Contribution
1	Soft Interventions	15.00	15.00	0.00	0.00	0.00	0.00
2	Hard Interventions (under Core SFURTI)	138.70	104.03	0.00	0.00	0.00	34.68
3	Convergence under common umbrella (establishment of new units)	50.00	0	25.00	0.00	20.00	5.00
4 A	Expansion of mat making unit at Harlakatta	10.00	0.00	5.50	0.00	4.00	0.50
5	IA Fees	20.00	20.00	0	0	0	0
6	Technical Agency Fees	9.52	9.52	0	0	0	0
	Total	**243.22**	**148.55**	**30.5**	**0.00**	**24.00**	**40.18**

Thus out of a total of 243.22 lacs as project cost, SFURTI contribution is coming to 54%, Stake Holders contribution is coming to 15% and remaining 31% is shared by Grant under various schemes, besides bank loan.

CHAPTER – 13

PROJECT TIMELINE

The project implementation schedule with details of activities to be undertaken are given in the following chart based on the project phasing as given in the chapter – 8.

Project Activity	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
1. Preparation and submission of DPR for proposed HI under SFURTI												
2. Implementation of Trust Building activities under SI												
3. Implementation of trainings/ SDPs under SI												
4. Capacity building initiatives for Self Governance under SI												
5. Market Promotion Activities under SI												
6. Civil construction of planned HIs under Core SFURTI												
7. Erection of machinery and cabling												
8. Initiation of commercial production of CFCs												
9. Convergence initiatives												
10 Exit from the cluster by TA and IA												

CHAPTER – 14
DETAILED BUSINESS PLAN

It is to be mentioned that no income is expected from any of the soft interventions for SPV. The add on components like convergence initiatives are not included in business plan, as it is too early to assess the production levels and their marketing capability.

14.1 Haralakatta

The production capacity of pith block making unit is 1200 blocks per day based on the production capacity of 10 individual units. Similarly the production capacity of pith manure making unit is 300 MT per annum. It is difficult to assess the per day production of manure since it is a long term process. Both the capacities mentioned are at 100% utilisation. Both the units are expected to reach 60% capacity utilisation in the first year, 65% in the second year and reach a capacity of 85% by 6th year.

14.1.1 Product Mix:

The focus products of the CFC are pith block and pith manure which will be made from the raw pith coming from 10 major manufacturing units. The price of each block is kept at Rs. 50 and sale price of per ton of manure is Rs. 3800.

14.1.2 Manpower Cost:

The man power includes a plant in-charge who will take care of production that will be supported by 3 operators, two for pith manure and one for pith block. A store in-charge to take care of godown facility is also provisioned in the estimates. Both the units together require 15 skilled workers and 30 unskilled workers.

The administrative staff will have one manager, one assistant, one marketing officer besides 2 security guards.

The total wages for plant is estimated at 48.00lakhs and for administrative staff the salaries are coming to Rs. 4.95lakhs, which are inclusive of 25% fringe benefits as per enforcement directorate norms.

(Details of manpower given in annexed financial estimates)

14.1.3 Utility and other overheads:

Power: The project requires 66 HP power and is expected to cost an amount of Rs. 5.36 lakhs in the first year of operation.

Water:40 gallons is required per day for industrial purpose for pith wash. So a charge of Rs. 3.60 lakhs is considered for the first year.

Preliminary expenses of 2.00 lakhs are considered for salaries during construction and power deposit, while **pre-operative expenses** were considered at Rs. 0.50 lakh for other admin costs.

Admin expenses are considered at 2% on sales, repairs and maintenance as 3% of sales and sales expenses as 3% on sales.

14.1.4 Depreciation

A depreciation of 3.34% on buildings and 4.75% on plant and machinery considered as per the Government Norms. While Straight line method is used for profit and loss account statement, WDV method is used for tax calculations. Total depreciation per year is coming to Rs. 5.05 lakhs per annum.

14.1.5 Working Capital

Since 100% of capacity is used for direct marketing, the total working capital is coming to Rs. 13.50 lakhs.

14.1.6 Financial Projections

Profitability Statement: Given as below:

Year Ending 31st March	2016	2017	2018	2019	2020	2021
Production Capacity Utilisation	0.60	0.65	0.70	0.75	0.80	0.85
Sales as percentage of installed capacity	0.60	0.65	0.70	0.75	0.80	0.85
Sales/ Total Income						
Gross Domestic Sales	114.84	124.41	133.98	143.55	153.12	162.69
Less: Excise Duty	0.00	0.00	0.00	0.00	0.00	0.00
Net Domestic Sales	114.84	124.41	133.98	143.55	153.12	162.69
Export Sales	0.00	0.00	0.00	0.00	0.00	0.00
Net Sales	114.84	124.41	133.98	143.55	153.12	162.69
Other Operational Income	0.00	0.00	0.00	0.00	0.00	0.00
Total Income	**114.84**	**124.41**	**133.98**	**143.55**	**153.12**	**162.69**
COST OF PRODUCTION-SALES						

Raw material Consumed	16.20	17.82	19.60	21.56	23.72	26.09
Consumables, Stores and spares (5% on sales)	5.74	6.22	6.70	7.18	7.66	8.13
Power, Fuel and other utlities (Variable)	3.90	4.23	4.55	4.88	5.21	5.53
Power, Fuel and other utlities (Fixed)	2.60	2.82	3.04	3.25	3.47	3.69
Water	4.60	4.83	5.07	5.33	5.59	5.87
Factory salaries & Wages (variable)	48.00	48.00	48.00	48.00	48.00	48.00
Factory salaries & Wages (fixed)	4.95	4.95	4.95	4.95	4.95	4.95
Repair and maintenance	3.45	3.73	4.02	4.31	4.59	4.88
Other Variable Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	5.46	5.46	5.46	5.46	5.46	5.46
Sub Total	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**
Add: Opening Stock in process	0.00	0.00	0.00	0.00	0.00	0.00
Less: Closing stock in process	0.00	0.00	0.00	0.00	0.00	0.00
COST OF PRODUCTION	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**
Add: Opening stock of finished goods	0.00	0.00	0.00	0.00	0.00	0.00
Less: Closing stock of finished goods	0.00	0.00	0.00	0.00	0.00	0.00
Cost of sales	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**
Selling Packing & Distrbution Expenses	3.45	3.73	4.02	4.31	4.59	4.88
Administrative & Misc. Expenses	2.30	2.49	2.68	2.87	3.06	3.25
Sub Total	100.65	104.28	108.09	112.09	116.30	120.74
Profit Before Interest and Tax (PBIT)	**14.19**	**20.13**	**25.89**	**31.46**	**36.82**	**41.95**
Interest on Bank Loan	0.00	0.00	0.00	0.00	0.00	0.00
Interest on unsecured loan	0.00	0.00	0.00	0.00	0.00	0.00
Interest on bank borrowing	0.00	0.00	0.00	0.00	0.00	0.00
Operating Profit	14.19	20.13	25.89	31.46	36.82	41.95
Preliminary expenses written off	0.25	0.25	0.25	0.25	0.25	0.25
Non Operational Income	0.00	0.00	0.00	0.00	0.00	0.00
Profit Before Tax (PBT)	**13.94**	**19.88**	**25.64**	**31.21**	**36.57**	**41.70**
Provision for taxation	1.02	3.47	5.56	7.91	10.18	12.08
Profit After Tax	**12.93**	**16.41**	**20.08**	**23.30**	**26.39**	**29.63**

14.1.8Break Even Analysis

The project will reach breakeven in the first year of operation. During the first year the variable expenses are coming to Rs. 77.29 lakhs with a contribution of Rs.

37.55lakhs thus leaving a breakeven of 48.86%. The breakeven will show a declining trend and by 6th year it will reach to 31.15 which is significant.

(Please refer annexure 13 for detailed BE analysis)

14.1.9IRR Calculation

Both pre and post-tax IRR were calculated to assess the viability of the project. The average IRR before tax is coming to 18.36 with an NPV of Rs. 99.13 lakhs at 7% discount rate. The average IRR post tax is coming to 13.16 with NPV of Rs. 49.16 lakhs. Since there is no bank lending the IRR appears to be on very positive side showing the viability of the project.

(Please refer annexure 12 for detailed IRR analysis)

Conclusions:

The above financial statements indicate that the proposed facilities are viable, provided at least 60% capacity utilization is ensured. Any drop in sale charges more than 20% and increase in expenditure cost by 10% will make the unit a non-viable proposition.

Note: The detailed financial statements are given as annexure 1 to 14.

CHAPTER – 15

PROPOSED IMPLEMENTATION FRAMEWORK

13.1 Role of implementing agency

Following are the expected role of implementing agency

- Appointment and monitoring of the performance of CDA
- Selection of relevant beneficiaries for each activity balancing all the areas of concentration and stakeholders
- Micro planning of each activity in to sub activities and make a plan, besides sticking to time lines
- Acquisition of all clearances, documents, NOCs for land, power, water, construction from concerned line departments with the help of TA. .
- Preparation of quarterly progress reports, expenditure statements on timely basis with the help of TA.
- Leveraging of Central and State Schemes for add on activities with due help from TA
- Capacitate its executive members for strong self-governance

13.2 Details of strategic partners and other project stakeholders

TA needs to help the IA in not only preparation of DSR and subsequent DPR but also in identification of competent CDA, implementation of SI and HI as per the plan. They also expected to help IA in framing proper O&M framework for CFC maintenance.

Coir Board is required to release the funds on time once the yearly action plan has been submitted. It also needs to provide technical help wherever required since coir sector comes under its fold.

CCRI and other coir beard affiliated institutions play a crucial role in organising the training programs like on advanced practices in spinning, mat making, pith block making. FICEA can also play a crucial role in supporting manufacturing firms for export of yarn and mats.

Coir Board

The Coir Board will act as the Nodal Agency. The agency will not only provide financial assistance in the form of grant in aid but also act as apex monitoring agency to oversee the progress of the proposed CFC through its regional office at Bengaluru.

The nodal agency will also appraise the implementation and progress of the CFC to the Scheme Steering Committee headed by Secretary, Ministry of MSME.

Commissioner of Industries (CoI)

As state level apex agency for industrial development, they can help the IA/ SPV in dovetailing state schemes with specific reference to establishment of hard interventions.

Cluster Coordination Committee (CCC)

A CCC will be formed preferably chaired by District Magistrate, with nominated members from Commissioner of Industries, Coir Board local office, NABARD, SPV and a related Technical Institution. The CCC will play the role of an advisor in technical, financial, marketing and management mechanisms for smooth functioning of CFC. It will monitor the progress of the CFC on monthly/ quarterly basis and suggest corrective actions wherever required. It will be a catalyst committee between SPV and other concerned Central/ State institutions for smooth coordination.

13.3 Structure and composition of SPVs

The Proposed Common Facilities will be managed by Special Purpose Vehicle. The name of cluster wise SPVs and its details are given as below:

S.No	Name of the sub cluster	Name of the SPV	Number of Members
1	Haralakatta	SFURTI Coir cluster Society, Harlakatta Head Post, Kannakatte (Hobale), Arisikere Block **Contact Person and details:** Mr. Mallikharjun< President 09900704636	10 members (increasing to 15)

The SPV will oversee the following functions in their respective sub clusters:

- Establish, operate and maintain all common facilities as mentioned in the DPR.
- Collection of user charges from SPV members and other users of the facilities so as to meet the recurring expenses and future expansions
- Preparation and submission of progress reports to KVIC through TA

The management of the CFC will be a three tier structure for smooth and uninterrupted operations and is as follows:

The Management Committee: It is the main governing body for each SPV which is ably assisted by Technical and Secretarial staff. At present each SPV is having 3 executive namely President, Secretary and Treasurer. While the President will oversee the entire operations, the other members are entrusted with specific responsibility like marketing, technical, finance, Public relations etc. based on his past experience and qualifications.

The technical staff: The Common Facility will have its own technical staff who will work on full time basis. The technical staffs are headed by an experienced plant in charge and will be assisted by skilled and unskilled employees to run the proposed hard interventions.

The Secretarial Staff: A competent person will be appointed as the assistant/ NDA who will look after day to day administrative operations of CFC.

CHAPTER – 16

EXPECTED IMPACT

The expected impact is given at sub cluster level since each one is unique in its dynamics and production levels. The sub cluster wise impact is given as below:

16.1 Haralakatta

16.1.1 at Enterprise Level

Number of direct beneficiary firms: 10 manufacturing firms along with its 140 workers besides 350 artisans.

a) **Likely range of outputs:**

- At least 150 workers, artisans will be trained in advanced 2 ply yarn making, mat and matting making, pith block making
- At least 5 firms will start export marketing and 15 house hold units direct marketing by becoming producers
- Banks will support at least 20 potential house hold units, and manufacturers by providing term loans/ working capital
- At least 40 units will be benefitted under Public Support Schemes like CLCSS, TUFS, CGTMSE
- At least 10 to 15 house hold units will be linked to Coir Udyami Yojana

b) **Indirect beneficiary firms:**

Strengthening of forward and backward linkages and local institutions, provision of linkages with public and private support institutions, strengthening of local infrastructure through public-private partnerships would benefit at least 80% of the existing cluster enterprises indirectly, in 3 years of intervention.

16.1.2 Cluster Level

- Strengthening of SPV for establishment and management of proposed hard interventions
- Establishment of an pith block manure making centre
- Strong linkages with related institutions and BDSPs like CCRI, FICEA, NIFT and Banks, Coir Board and DIC
- Increase in productivity by 50 to 60%, turnover by 50 to 60%, employment by 80%

HARALAKATTA MINOR COIR CLUSTER

The performance indicators at cluster level are given as below:

S.No	**Indicator**	**Present Status**	**Post Intervention**
1	Total Production (in MT/ Nos)	5625 MT of fibre& 15000 Mats	7000 MT of fibre, 3.00 lakh pith blocks and 250 MT of pith manure
2	Total Turnover (Rs. In lakhs)	900	**1370**
3	Investments (Rs. In lakhs)	550	**830 (including CFCs)**
4	Profitability (in Percentage)	7% to 10%	**14% to 17%**
5	Employment – Direct & Indirect (in Nos.)	500	**800**
6	Capacity Utilization (in %)	30 to 50	**60 to 70**
7	Artisan income (Rs. in Thousands)	4000 to 6000	8000 to 10000
8	Direct Marketing by artisans (In nos.)	0	30
9	Export marketing by Manufacturers	0	5
10	Beneficiaries under Coir Udyami Yojana	0	10 to 15
11	Artisans to be covered under social benefit schemes (Jandhan + Pradhan Mantri Suraksha Bheema Yojana + Atal Pension Yojan + Pradhan Mantri Jeevan Jyothi Bheema Youjana)	0	500 Nos

Annexures 1 – 14

Financial Statement of Haralakatta Sub Cluster

Annexure - I

Cost of the Project and Means of Finance

Rs.In lakhs

Sl.No	Particulars	Already incurred	To be incurred	Total Cost
A	Land	-	-	-
	land Development	-	-	-
B	Building & other Civil Works	-	32.50	32.50
C	Plant and machinery			
	a. indigenous	-	84.29	84.29
	b.import	-	-	-
D	Lease Deposit & Electricty Deposit	-	-	-
E	Technical consultancy fee	-	-	-
F	Miscellaneous fixed assets	-	1.05	1.05
G	Erection / installation charges	-	-	-
H	Preliminary expenses	-	0.50	0.50
I	Pre-operative expenses	-	2.00	2.00
J	Provision for contingencies			
	a.buildings (@2%)	-	0.65	0.65
	b.Plant & Machinery (5%)	-	4.21	4.21
	c.Other fixed assets	-	-	-
K	Working capital	-	13.50	13.50
	Total :	-	138.70	138.70

MEANS OF FINANCE

Rs.In Lakhs

Sl.No.	Particulars	amonut already raised	amonut proposed to be raised	Total
	Equity			
A	Equity from spv@25%	-	-	34.68
B	Share premium	-	-	-
C	Preference Share Capital	-	-	-
	Debt			
D	Term loans (0%)	-	-	-
E	Unsecured loans and deposits	-	-	-
	Quasi Equity			
E	Interest free unsecured loans	-	-	-
F	Subsidy : central govt. (75%)	-	-	104.03
G	Subsidy : state govt.	-	-	
	Total	-	-	138.70

Annexure - III

Detailed Workings

1. Civil Works

	Description	Quantity (SFT/ Nos)	Rate (In Rs.)	Amount
	General			
	For Spinning Unit			
1	Shed	3000	800	24,00,000
2	Drying Yard	10000	85	8,50,000
	Sewarage			-
	Total			**32.50**

Annexure III (Contd.)

2 Misc Fixed Assets

		Items	Qty	Rate	Amount	Final Amount after ST/ VAT
a	**Communication & Teaching Equipment**	Computers	1	27500	27500	27500
		UPS (1KVA)	1	4000	4000	4000
		Printer	1	16100	16100	16100
		FAX Machine	1	7500	7500	7500
c	Furniture & Fixture				0	50000
d	Fire Service					0
e						-
f	Others					-
	Total					**105100**
	Rounded					**105100**
	In Lakhs					**1.05**

Annexure III (Contd.)

3 PRELIMINARY & PRE-OPERATIVE EXPENSES

S.No	Details	Quantity	Amount Rs. lakhs
1	Admn, Maintenance & Stationery, Electricity, Insurance and Bank Charges	LS LS	1.00
2	Travelling Conveyance	LS	1.00
3	Electricty Connection Charges	LS	0.00
4		LS	0.00
4		LS	0.00
	TOTAL =		**2.00**

	DEPOSITS		
1	Preliminary expenses		0.50 0.00
	TOTAL		**0.50**
	Grand Total		**2.50**

Annexure -IV
Inputs

(Rs.in lakhs)

YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Raw materials, (3 MT per day x 300 days x Rs. 1800 per MT)	16.20	17.82	19.60	21.56	23.72	26.09	28.70	31.57	34.73	38.20
Power & Diesel	6.51	7.05	7.59	8.13	8.68	9.22	9.22	9.22	9.22	9.22
Water	4.60	4.83	5.07	5.33	5.59	5.87	6.16	6.47	6.80	7.14
Total	**27.31**	**29.70**	**32.27**	**35.02**	**37.99**	**41.18**	**44.08**	**47.26**	**50.74**	**54.55**
Total Cost	**27.31**	**29.70**	**32.27**	**35.02**	**37.99**	**41.18**	**44.08**	**47.26**	**50.74**	**54.55**

COST COMPONENTS AS % OF SALES

Cost Component	Sales
Admn. Expenses	2.00%
Repairs&Maintenance	3.00%
Selling Expenses	3.00%

DETAILS OF MANPOWER REQUIRED

Particulars		No.	Salary/Month Rs.	Annual Wages & Salaries Rs. lakhs
Plant Incharge		1	20000	2.40
Operators		3	15000	5.40
Store Keeper		1	10000	1.20
Skilled Labour		15	8000	14.40
Unskilled labour		25	5000	15.00
		45		**38.40**
Add: Fringe Benefits	**@25%**			**9.60**
Total				**48.00**
ADMINISTRATIVE SALARIES				
Manager		0	25000	0.00
Marketing Officer		1	15000	1.80
Accts/ Admin/ Assts		1	8000	0.96
Security		2	5000	1.20
		4		**3.96**
Add: Fringe Benefits	**@25%**			**0.99**
Total				**4.95**
TOTAL		**49**		**52.95**

ANNEXURE- V

BASIC ASSUMPTIONS FOR PROFITABILITY

REVENUE PROJECTIONS

YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Capacity Utilization (%)	60%	65%	70%	75%	80%	85%	85%	85%	85%	85%	100%
I. Pith Blocks											
Installed Capacity (In nos)	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000
Service (In Nos)	216000	234000	252000	270000	288000	306000	306000	306000	306000	306000	360000
Sale cost per block	50	50	50	50	50	50	50	50	50	50	50
Revenue(Rs lakhs)	**108.00**	**117.00**	**126.00**	**135.00**	**144.00**	**153.00**	**153.00**	**153.00**	**153.00**	**153.00**	**180.00**
II. Pith Composte											
Installed Capacity (MTs)	300	300	300	300	300	300	300	300	300	300	300
Production (MTs.)	180	195	210	225	240	255	255	255	255	255	300
Sale cost per Ton	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Revenue(Rs lakhs)	**6.84**	**7.41**	**7.98**	**8.55**	**9.12**	**9.69**	**9.69**	**9.69**	**9.69**	**9.69**	**11.40**
TOTAL REVENUE	**114.84**	**124.41**	**133.98**	**143.55**	**153.12**	**162.69**	**162.69**	**162.69**	**162.69**	**162.69**	**191.40**

ANNEXURE - VI

PROJECTED PROFITABILITY STATEMENT

Year Ending 31st March	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production Capacity Utilisation	0.60	0.65	0.70	0.75	0.80	0.85	0.85	0.85	0.85	0.85
Sales as percentage of installed capacity	0.60	0.65	0.70	0.75	0.80	0.85	0.85	0.85	0.85	0.85
Sales/ Total Income										
Gross Domestic Sales	114.84	124.41	133.98	143.55	153.12	162.69	162.69	162.69	162.69	162.69
Less: Excise Duty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Domestic Sales	114.84	124.41	133.98	143.55	153.12	162.69	162.69	162.69	162.69	162.69
Export Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Sales	114.84	124.41	133.98	143.55	153.12	162.69	162.69	162.69	162.69	162.69
Other Operational Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Income	**114.84**	**124.41**	**133.98**	**143.55**	**153.12**	**162.69**	**162.69**	**162.69**	**162.69**	**162.69**
COST OF PRODUCTION- SALES										
Raw material Consumed	16.20	17.82	19.60	21.56	23.72	26.09	28.70	31.57	34.73	38.20
Consumables, Stores and spares (5% on sales)	5.74	6.22	6.70	7.18	7.66	8.13	8.13	8.13	8.13	8.13
Power, Fuel and other utlities (Variable)	3.90	4.23	4.55	4.88	5.21	5.53	5.53	5.53	5.53	5.53
Power, Fuel and other utlities (Fixed)	2.60	2.82	3.04	3.25	3.47	3.69	3.69	3.69	3.69	3.69
Water	4.60	4.83	5.07	5.33	5.59	5.87	6.16	6.47	6.80	7.14
Factory salaries & Wages (variable)	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00
Factory salaries & Wages (fixed)	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95
Repair and maintenance	3.45	3.73	4.02	4.31	4.59	4.88	4.88	4.88	4.88	4.88
Other Variable Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46

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Sub Total	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**	**115.50**	**118.68**	**122.16**	**125.97**
Add: Opening Stock in process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Closing stock in process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COST OF PRODUCTION	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**	**115.50**	**118.68**	**122.16**	**125.97**
Add: Opening stock of finished goods	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Closing stock of finished goods	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of sales	**94.90**	**98.06**	**101.39**	**104.91**	**108.64**	**112.60**	**115.50**	**118.68**	**122.16**	**125.97**
Selling Packing & Distrbution Expenses	3.45	3.73	4.02	4.31	4.59	4.88	4.88	4.88	4.88	4.88
Administrative & Misc. Expenses	2.30	2.49	2.68	2.87	3.06	3.25	3.25	3.25	3.25	3.25
Sub Total	100.65	104.28	108.09	112.09	116.30	120.74	123.64	126.82	130.30	134.11
Profit Before Interest and Tax (PBIT)	**14.19**	**20.13**	**25.89**	**31.46**	**36.82**	**41.95**	**39.05**	**35.87**	**32.39**	**28.58**
Interest on Bank Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on unsecured loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on bank borrowing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating Profit	14.19	20.13	25.89	31.46	36.82	41.95	39.05	35.87	32.39	28.58
Preliminary expenses written off	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Non Operational Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Profit Before Tax (PBT)	**13.94**	**19.88**	**25.64**	**31.21**	**36.57**	**41.70**	**38.80**	**35.62**	**32.14**	**28.33**
Provision for taxation	1.02	3.47	5.56	7.91	10.18	12.08	11.49	10.82	10.06	9.19
Profit After Tax	**12.93**	**16.41**	**20.08**	**23.30**	**26.39**	**29.63**	**27.31**	**24.80**	**22.09**	**19.14**
Dividend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retained Earnings	12.93	16.41	20.08	23.30	26.39	29.63	27.31	24.80	22.09	19.14
Net Cash Accruals	18.64	22.12	25.78	29.01	32.09	35.33	33.01	30.51	27.79	24.85
PBIDT/ total income (%)	12.36	16.18	19.32	21.92	24.05	25.79	24.00	22.05	19.91	17.57
Operating Profit/ Total Income (%)	12.36	16.18	19.32	21.92	24.05	25.79	24.00	22.05	19.91	17.57
Net Profit/ Total Income (%)	11.26	13.19	14.99	16.23	17.23	18.21	16.79	15.24	13.58	11.76

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Raw material cost/ cost of production (%)	17.07	18.17	19.33	20.55	21.83	23.17	24.85	26.60	28.43	30.32
Cost of production/ net sales (%)	82.64	78.82	75.68	73.08	70.95	69.21	71.00	72.95	75.09	77.43
Cost of sales/ Net sales (%)	82.64	78.82	75.68	73.08	70.95	69.21	71.00	72.95	75.09	77.43
Interest Coverage Ratio (PBIT/Interest Expense)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Return on Capital Employed	11.51	16.93	23.03	29.41	36.26	43.91	42.86	42.37	40.89	38.84

ANNEXURE - VII

PROJECTED CASH FLOW STATEMENT

(Rs. In Lacs)

DETAILS	Const. Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A. SOURCES OF FUNDS											
1. PBT with interest added back	0.00	13.94	19.88	25.64	31.21	36.57	41.70	38.80	35.62	32.14	28.33
2. Add Depreciation other non cash expenses	0.00	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71	5.71
3. Increase in Equity Share Capital	34.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4. Increase in term loan	0.00										
4. Increase in Subsidy	104	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Increase in current liabilities		13.50	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17
TOTAL SOURCES	**138.70**	**33.15**	**26.22**	**32.99**	**37.57**	**42.94**	**48.08**	**44.64**	**42.48**	**38.01**	**34.21**
B. DISPOSITION OF FUNDS											
1. Increase in capital expenditure	122.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Preliminary & Pre op expenses	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Increase in Current Assets		28.71	2.39	2.39	2.39	2.39	2.39	0.00	0.00	0.00	0.00
4. Repayments of Term Loans		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Taxation	0.00	1.02	3.47	5.56	7.91	10.18	12.08	11.49	10.82	10.06	9.19
TOTAL APPLICATION	**125.20**	**29.73**	**5.86**	**7.96**	**10.30**	**12.58**	**14.47**	**11.49**	**10.82**	**10.06**	**9.19**
C. NET SURPLUS/ DEFICIT	13.50	3.42	20.36	25.03	27.27	30.36	33.61	33.15	31.65	27.95	25.02
D. ADD : OPENING CASH BALANCE	0.00	13.50	16.92	37.28	62.31	89.58	119.94	153.55	186.70	218.35	246.30
E. CLOSING CASH BALANCE	13.50	16.92	37.28	62.31	89.58	119.94	153.55	186.70	218.35	246.30	271.32

ANNEXURE - VIII

PROJECTED BALANCE SHEET

(Rs. In Lacs)

DETAILS	Const. Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
LIABILITIES											
1. Share Capital	34.68	34.68	34.68	34.68	34.68	34.68	34.68	34.68	34.68	34.68	34.68
2. Reserves & Surplus	0.00	12.93	29.34	49.41	72.72	99.11	128.73	156.04	180.84	202.92	222.06
3. subsidy (Central +State)	104.03	104.03	104.03	104.03	104.03	104.03	104.03	104.03	104.03	104.03	104.03
4. Term Loans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 Working Capital		13.50	14.13	15.77	16.42	17.08	17.75	17.89	19.03	19.19	19.36
5 Current Liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL LIABILITIES	**138.70**	**165.12**	**182.17**	**203.89**	**227.84**	**254.89**	**285.18**	**312.63**	**338.57**	**360.82**	**380.13**
ASSETS											
1. Gross Fixed Assets	122.70	122.70	122.70	122.70	122.70	122.70	122.70	122.70	122.70	122.70	122.70
2. Less : Accm.dpreciation	0.00	5.46	10.92	16.37	21.83	27.28	32.74	38.20	43.65	49.11	54.56
3. Net Fixed Assets	122.70	117.24	111.79	106.33	100.88	95.42	89.96	84.51	79.05	73.60	68.14
4. Current Assets	0.00	28.71	31.10	33.50	35.89	38.28	40.67	40.67	40.67	40.67	40.67
5. Cash & Bank Balance	13.50	16.92	37.28	62.31	89.58	119.94	153.55	186.70	218.35	246.30	271.32
6. Prelim. expenses not w/o	2.50	2.25	2.00	1.75	1.50	1.25	1.00	0.75	0.50	0.25	0.00
TOTAL ASSETS	**138.70**	**165.12**	**182.17**	**203.89**	**227.84**	**254.89**	**285.18**	**312.63**	**338.57**	**360.82**	**380.13**
Current Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt Equity Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

ANNEXURE - IX

CALCULATION OF MARGIN FOR WORKING CAPITAL & ASSESSMENT OF WORKING CAPITAL

(Rs.lacs)

As per Nayak Committee method (If working capital is upto Rs. 5 crore)

Partuculars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Gross Sales (Incl. job income)	114.84	124.41	133.98	143.55	153.12	162.69	162.69	162.69	162.69	162.69
Total working capital requirement (25% of gross sales)	28.71	31.10	33.50	35.89	38.28	40.67	40.67	40.67	40.67	40.67
Marging money for working capital (5% of gross sales)	5.74	6.22	6.70	7.18	7.66	8.13	8.13	8.13	8.13	8.13
Permissable bank borrowing (20% of gross sales)	22.97	24.88	26.80	28.71	30.62	32.54	32.54	32.54	32.54	32.54

As per second method of lending

Particulars	No. of months	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Current Assets											
1. Raw materials	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00
2. Consumables, Stores and spares	1.00	0.48	0.52	0.56	0.60	0.64	0.68	0.68	0.68	0.68	0.68
3. Stock in process (Month's cost of production)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4. Finished Goods (Months cost of sales)	1.00	7.91	8.17	8.45	8.74	9.05	9.38	9.63	9.89	10.18	10.50
5. Export's recievables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Recievables other than exports	0.50	4.79	5.18	5.58	5.98	6.38	6.78	6.78	6.78	6.78	6.78
Total Current Assets (A)		**14.17**	**14.87**	**16.59**	**17.32**	**18.07**	**18.84**	**19.08**	**20.35**	**20.64**	**20.95**

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Current Liabilities											
1. Creditors for purchases	0.50	0.68	0.74	0.82	0.90	0.99	1.09	1.20	1.32	1.45	1.59
		0.00									
Total Cuurent Liabilities (B)		0.68	0.74	0.82	0.90	0.99	1.09	1.20	1.32	1.45	1.59
Working Capital Gap (A-B)		**13.50**	**14.13**	**15.77**	**16.42**	**17.08**	**17.75**	**17.89**	**19.03**	**19.19**	**19.36**
Less : Bank Borrowing for working capital		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Margin money for working capital		13.50	14.13	15.77	16.42	17.08	17.75	17.89	19.03	19.19	19.36

RECOMMENDED METHOD — **NAYAK COMMITTEE METHOD**

Particulars		**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Total current assets		28.71	31.10	33.50	35.89	38.28	40.67	40.67	40.67	40.67	40.67
Total current Liabilities		0.68	0.74	0.82	0.90	0.99	1.09	1.20	1.32	1.45	1.59
Working Capital Gap		28.04	30.36	32.68	34.99	37.29	39.59	39.48	39.36	39.23	39.08
Margin Money for Working Capital		5.74	6.22	6.70	7.18	7.66	8.13	8.13	8.13	8.13	8.13
Less: Margin Money for Working Capital or WC financed by way WCTL which ever is higher		5.74	6.22	6.70	7.18	7.66	8.13	8.13	8.13	8.13	8.13
Borrowing for Working Capital		22.97	24.88	26.80	28.71	30.62	32.54	32.54	32.54	32.54	32.54
Interest on bank borrowing for working capital	**0.00%**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

ESTIMATION OF INTEREST ON TERM LOAN

(Rs.lacs)

DETAILS	OPG BAL RC	REPAY-MENT	CL BAL RC	INTEREST 12.00%	TOTAL INTEREST	TOTAL REPAYMENT
1 st year- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
2 nd yar- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
3 rd year 2007- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
4 th year 2008- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
5th year 2009- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		

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III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
6 th year - I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
7 th year - I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
8 th year- I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
9th year - I Quarter	0.00	0.00	0.00	0.00		
II Quarter	0.00	0.00	0.00	0.00		
III Quarter	0.00	0.00	0.00	0.00		
IV Quarter	0.00	0.00	0.00	0.00	0.00	0.00
					0.00	0.00

ANNEXURE - X

ESTIMATION OF DEPRECIATION

a) Apportionment of Pre-operatives (Rs.lacs)

Particulars	Actual Cost	Contin-gencies	Pre-Ope-ratives	Detailed Engg.Ser	Total Cost
1. Buildings	32.50	1.34	0.55	0.00	34.39
2. Plant and Machinery	84.29	3.48	1.43	0.00	89.20
3. Misc Fixed Assets	1.05	0.04	0.02	0.00	1.11
Total	**117.84**	**4.86**	**2.00**	**0.00**	**124.70**

b) Estimation of Depreciation - St. Line basis

Particulars	Total Cost	Depn. Rate (%)	Amount
1. Land	0.00	0.00	0.00
2. Buildings	34.39	3.34	1.15
3. Plant and Machinery	89.20	4.75	4.24
4. Misc. Fixed Assets	1.11	6.33	0.07
Total	**124.70**		**5.46**

c) Estimation of Depreciation - WDV Method

(Rs.lacs)

Particulars	Buildings	Plant & Mach.	Others	Total
Rate of Depreciation (%)	**10.00**	**15.00**	**10.00**	
I YEAR - Cost	34.39	89.20	1.11	124.70
- Depreciation	3.00	13.00	0.11	16.11
II YEAR - WDV	31.39	76.20	1.00	108.59
- Depreciation	3.00	11.00	0.10	14.10
III YEAR - WDV	28.39	65.20	0.90	94.49
- Additions	0.00	0.00	0.00	0.00
- Total	28.39	65.20	0.90	94.49
- Depreciation	3.00	10.00	0.09	13.09
IV YEAR - WDV	25.39	55.20	0.81	81.40
- Additions	0.00	0.00	0.00	0.00
- Total	25.39	55.20	0.81	81.40
- Depreciation	3.00	8.00	0.08	11.08
V YEAR - WDV	22.39	47.20	0.73	70.32
- Additions	0.00	0.00	0.00	0.00
- Total	22.39	47.20	0.73	70.32
- Depreciation	2.00	7.00	0.07	9.07
VI YEAR - WDV	20.39	40.20	0.66	61.25
- Additions	0.00	0.00	0.00	0.00
- Total	20.39	40.20	0.66	61.25
- Depreciation	2.00	6.00	0.07	8.07
VII YEAR - WDV	18.39	34.20	0.59	53.18
- Additions	0.00	0.00	0.00	0.00
- Total	18.39	34.20	0.59	53.18
- Depreciation	2.00	5.00	0.06	7.06

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VIII YEAR - WDV	16.39	29.20	0.53	46.12
- Additions	0.00	0.00	0.00	0.00
- Total	16.39	29.20	0.53	46.12
- Depreciation	2.00	4.00	0.05	6.05
IX YEAR - WDV	14.39	25.20	0.48	40.07
- Additions	0.00	0.00	0.00	0.00
- Total	14.39	25.20	0.48	40.07
- Depreciation	1.00	4.00	0.05	5.05
X YEAR - WDV	13.39	21.20	0.43	35.02
- Additions	0.00	0.00	0.00	0.00
- Total	13.39	21.20	0.43	35.02
- Depreciation	1.00	3.00	0.04	4.04
X YEAR - WDV	12.39	18.20	0.39	30.98
- Additions	0.00	0.00	0.00	0.00
- Total	12.39	18.20	0.39	30.98
- Depreciation	1.00	3.00	0.04	4.04

ANNEXURE - XI

COMPUTATION OF TAXATION

(Rs.lacs)

Details	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1. Profit Before Tax	13.94	19.88	25.64	31.21	36.57	41.70	38.80	35.62	32.14	28.33
2. Add: St. Line Depreciation	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
3. Less: WDV Depreciation	16.11	14.10	13.09	11.08	9.07	8.07	7.06	6.05	5.05	4.04
4. Gross Taxable Income	3.29	11.24	18.01	25.59	32.96	39.09	37.20	35.03	32.55	29.75
5. Carry forward loss	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Net Taxable Income	3.29	11.24	18.01	25.59	32.96	39.09	37.20	35.03	32.55	29.75
7. Income Tax @ 30%	0.99	3.37	5.40	7.68	9.89	11.73	11.16	10.51	9.76	8.92
8. Surcharge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9. Total income tax (including surcharge)	0.99	3.37	5.40	7.68	9.89	11.73	11.16	10.51	9.76	8.92
10. Education Cess @ 3%	0.03	0.10	0.16	0.23	0.30	0.35	0.33	0.32	0.29	0.27
11. Total income tax (Incl. surcharge & Education Cess)	**1.02**	**3.47**	**5.56**	**7.91**	**10.18**	**12.08**	**11.49**	**10.82**	**10.06**	**9.19**

ANNEXURE - XII

CALCULATION OF INTERNAL RATE OF RETURN & NPV

IRR before tax (Rs.in lacs)

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	Const. Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Out Flows											
Capital Investment	-138.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		13.50	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17
Total outflows	-138.70	13.50	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17
Inflows											
Profit before tax	0.00	13.94	19.88	25.64	31.21	36.57	41.70	38.80	35.62	32.14	28.33
Add Depreciation and non cash expenses	0.00	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Add: Preliminary & Preop Expenses	0.00	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Add : Interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Add : Salvage Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.98
Total Inflows	0.00	19.65	25.59	31.35	36.92	42.28	47.41	44.51	41.33	37.85	65.02
Net cash flows	**-138.70**	**6.16**	**24.95**	**29.71**	**36.27**	**41.62**	**46.74**	**44.38**	**40.18**	**37.69**	**64.85**
NPV before tax(Rs. in lakhs)	**99.13**		**Discount Rate taken =**		**7.00%**						
Before - Tax IRR	**18.36%**										

IRR after tax **(Rs.in lacs)**

	Const. Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Out Flows											
Capital Investment	-138.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		13.50	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17
Total outflows	-138.70	13.50	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17
Inflows											
Profit after tax	0.00	12.93	16.41	20.08	23.30	26.39	29.63	27.31	24.80	22.09	19.14
Add Depreciation and non cash expenses	0.00	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Add: Preliminary & Preop Expenses	0.00	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Add : Interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Add : Salvage Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.98
Total Inflows	0.00	18.64	22.12	25.78	29.01	32.09	35.33	33.01	30.51	27.79	55.83
Net cash flows	**-138.70**	**5.14**	**21.48**	**24.14**	**28.36**	**31.43**	**34.66**	**32.88**	**29.36**	**27.63**	**55.66**
NPV after tax(Rs. in lakhs)	**49.16**		**Discount Rate taken =**		**7.00%**						
Post - Tax IRR	**13.16%**										

ANNEXURE - XIII

DEBT SERVICE COVRAGE RATIO

(Rs. In Lacs)

DETAILS	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025

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CASH INFLOW										
1. Profit after Tax	12.93	16.41	20.08	23.30	26.39	29.63	27.31	24.80	22.09	19.14
2. Depreciation	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
3. Prel.Expenses	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
4. Interest on Term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	**18.64**	**22.12**	**25.78**	**29.01**	**32.09**	**35.33**	**33.01**	**30.51**	**27.79**	**24.85**
DEBT										
1. Interest on Term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Repayment of Term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
DEBT SERVICE COVRAGE RATIO	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**0.00**	**0.00**
Average	#DIV/0!									

ANNEXURE - XIII
BREAK EVEN POINT (Installed Capacity)

(Rs. In Lacs)

DETAILS	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production Capacity Utilisation	60.00 %	65.00 %	70.00 %	75.00 %	80.00 %	85.00 %	85.00 %	85.00 %	85.00 %	85.00%
A. Variable Expenses										
1. Raw material consumed	16.20	17.82	19.60	21.56	23.72	26.09	28.70	31.57	34.73	38.20
2. Consumable Spares	5.74	6.22	6.70	7.18	7.66	8.13	8.13	8.13	8.13	8.13
3. Power, Fuel & other utlities (Variable Cost)	3.90	4.23	4.55	4.88	5.21	5.53	5.53	5.53	5.53	5.53
4. Factory Salaries & Wages (Variable)	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00
5. Other variable expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Selling, Packaging & distribution expenses (Variable)	3.45	3.73	4.02	4.31	4.59	4.88	4.88	4.88	4.88	4.88
7. Interest on bank borrowing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Variable Cost	77.29	80.00	82.88	85.93	89.17	92.64	95.25	98.12	101.27	104.74
B.Fixed Expenses										
1. Power, Fuel & other utlities (Fixed Cost)	2.60	2.82	3.04	3.25	3.47	3.69	3.69	3.69	3.69	3.69
2. Factory Salaries & Wages (fixed)	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95
3. Repairs & Maintenance	3.45	3.73	4.02	4.31	4.59	4.88	4.88	4.88	4.88	4.88
4. Depreciation	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
5. Administrative & Misc. Expenses	2.30	2.49	2.68	2.87	3.06	3.25	3.25	3.25	3.25	3.25
6. Interest on term loans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7. Interest on unsecured loans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

8. Lease rentals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total	18.75	19.45	20.14	20.84	21.53	22.23	22.23	22.23	22.23	22.23
C.Sales	114.84	124.41	133.98	143.55	153.12	162.69	162.69	162.69	162.69	162.69
D.Contribution	37.55	44.41	51.10	57.62	63.95	70.05	67.44	64.57	61.42	57.95
E.Break Even Point (B/D)	49.95 %	43.79 %	39.41 %	36.16 %	33.67 %	31.73 %	32.96 %	34.42 %	36.19 %	38.36%
F.Cash Break Even	35.41 %	31.50 %	28.74 %	26.69 %	25.14 %	23.94 %	24.87 %	25.97 %	27.31 %	28.94%
G.BREAK EVEN SALES	57.36	54.48	52.80	51.91	51.56	51.62	53.62	56.00	58.88	62.41

ANNEXURE - XIV

RETURN ON CAPITAL EMPLOYED

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Return										
Operating Profit	14.19	20.13	25.89	31.46	36.82	41.95	39.05	35.87	32.39	28.58
Interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lease Rentals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total A	**14.19**	**20.13**	**25.89**	**31.46**	**36.82**	**41.95**	**39.05**	**35.87**	**32.39**	**28.58**
Net Fixed Assets	122.70	117.24	111.79	106.33	100.88	95.42	89.96	84.51	79.05	73.60
Current Asets less creditors	0.63	1.64	0.65	0.66	0.67	0.13	1.15	0.16	0.17	0.00
Total B	123.34	118.89	112.44	106.99	101.54	95.55	91.11	84.67	79.22	73.60
ROCE	11.51	16.93	23.03	29.41	36.26	43.91	42.86	42.37	40.89	38.84

ROCE for Optimal Year	**29.41**
Average ROCE for 10 Years	**32.60**