Detailed Project Report (DPR)

PurbaBardhaman Coir Cluster, West Bengal

Submitted to

Directorate of SFURTI
Ministry of MSME,
Government of India

Submitted by

PanuhatKarmaudyog Welfare Society,
Panuhat, Katwa, PurbaBardhaman

Prepared by

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Contents

List of Acronyms

CFTRI	Central Food Technology Research Institute
DoI	Director of Industries
DC-MSME	Development Commissioner – Micro, Small and Medium enterprises
DPR	Detailed Project Report
DSR	Diagnostic Survey Report
MSE-CDP	Micro Small Enterprise – Cluster Development Program
FIs	Financial Institutions
JSS	Jana SikhyaSansthan
NIFT	National Institute of Fashion Technology
CLCSS	Credit Linked Capital Subsidy Scheme
MDP	Management Development Program
BDS	Business Development Service
NMCP	National manufacturing Competitiveness Program
CGTMSE	Credit Guarantee Trust Scheme for Micro Small Enterprises
TIs	Technical Institutions
MFI	Micro Finance Institutions
SWOT	Strengths, Weakness, Opportunities and Threats
KVIC	Khadi and Village Industries Commission
PPR	Preliminary Project Report
IA	Implementing Agency
IIHT	Indian Institute of Handloom Technology
CDA/CDE	Cluster Development Agent/Executive
OBC	Other Backward Classes
NID	National institute of Designing
NCTD	National Centre for Textile Designs
NHDC	National Handloom Development Corporation
CGTSME	Credit Guarantee Trust Scheme for Micro Enterprise
NABARD	National Bank for Agriculture and rural Development
SFURTI	Scheme of Fund Under Rejuvenation of Traditional Industries
CADD	Computer Aided Design Development

CHAPTER – 1
CLUSTER PROFILE

1.1. Introduction:

Indian heritage and sustenance is interwoven with traditional industries. Indian masses are heavily depend upon this sector, and probably the most involved sector after agriculture. With a view to making the traditional industries more productive and competitive and facilitating their sustainable development, the Govt. of India announced setting up of a fund for regeneration of traditional industries. Subsequently, a Central Sector Scheme titled the "Scheme of Fund for Regeneration of Traditional Industries (SFURTI)" was approved. This scheme was implemented by the Ministry of Micro, Small and Medium Enterprises (MSME). The Ministry with the help of Nodal Agencies like KVIC and Coir Board is in the process of selecting 800 clusters across the country. The SFURTI scheme provides support to coir sector in a meaningful way. Subsequently, Coir Board has appointed M/s. Foundation for MSME Clusters (FMC) as Technical Agencies and entrusted the task of conducting diagnostic survey in the cluster and submitted Preliminary Project Report (PPR) as the first phase.

PurbaBardhamanCoir Cluster is situated in **Katwa Block-II area of PurbaBardhaman in West Bengal** and developed by **PanuhatKarmaudyog Welfare Society, Panuhat,Katwa,PurbaBardhaman, Pin: 713502.**The sector is decentralized unorganized but plays an important role in economy of our state. While industry is gearing up with production and business, it has still a lot of limitations. Shortage on availability of yarn for the industry and the sensitivity of required quality is a bottleneck. The shortage of coir yarn and its fluctuating price is becoming a survival problem for the industries. The level of mechanization is very low in the coir industry and it is required at each and every stages of production to create competitiveness. Low productivity due to the manual processes right now is also one of the major challenges. This is one of the important and largest economy activities after agriculture of PurbaBardhaman. Hence, coir artisans direct & indirect in the district of PurbaBardhaman are yet to be covered under the trees of cluster during next couple of years. A number of coir artisans are either working under production centre or engage them with the work fully or partly other than different work as household units. The artisans are familiar to produce different types of coir products and are losing its market day by day, so some of them have diversified them to sustain in the present competitive market. Keeping in view the above facts**PurbaBardhamanCoir Cluster**is being selected to favour with the production of comprehensive **Coir Yarn, Corridor Mat, Mesh Mat, Matting and other value added eco-friendly products like Coco pith, Geo Textile, Room Décor items and Handicrafts and Decorative Products** under SFURTI development scheme for the development of the artisans

so as to the artisans may get chance to change and to improve their community status by earning more with the help of ample scope.

Coir and Coir product cluster is situated in Katwa-I and Katwa-IIBlocks of PurbaBardhamandistrict in West Bengal is one such potential coir cluster considered to be developed under Cluster Mode. Project Steering Committee has already given in principle approval and made **PanuhatKarmaudyog Welfare Society, Panuhat**as **Implementing Agency**. Subsequently Coir Board has appointed **Foundation for MSME Clusters (FMC)** as **Technical Agency** and entrusted the task of conducting preliminary survey in the cluster in the first phase. Now the detail project report is prepared in the second phase.
A systematic approach was followed in preparation of report, desk research, design and development of study tools, kick-off workshop, sample selection, primary data collection and analysis, preparation of draft report, validation of major findings and finalization of the report are the major phases of the exercise, which were undertaken as per the guidelines of SFURTI Scheme.

1.2. Regional Setting of the cluster:

PurbaBardhaman district is a flat alluvial plain area that can be divided into four prominent topographical regions. On the north, the KanksaKetugram Plain lies along the Ajay which joins the Bhagirathi. The Bardhaman Plain occupies the central area of the district, which the Damadar on the south and south-east. On the southern part is the Khandaghosh Plain. The Bhagirathi flows along the eastern boundary of the district, and the Bhagirathi Basin occupies the eastern part of the district.

Katwa is situated between the Ajay River and the Hooghly River and so bounded by water to the east, west and north. Katwa police station has jurisdiction over Katwa and Dainhat Municipalities, and Katwa I and Katwa II Community Development Blocks. The location of the town at the confluence of two navigable rivers, Ajay and Bhagorothi made the town strategically important. Katwa was considered the gateway to Murshidabad, the erstwhile capital of Bengal.

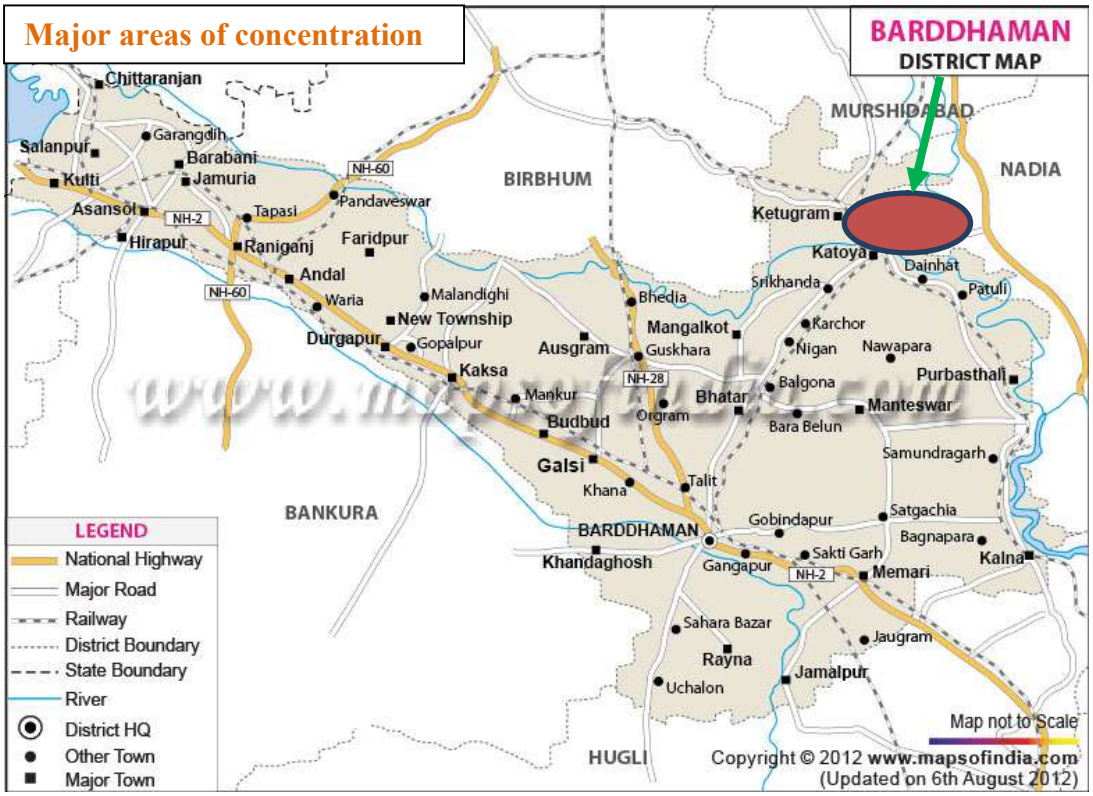
The distance between Bardhaman to Katwa is 58.8 km by road. The state head quarter Kolkata is located around 89 km away from Bardhaman and can reach in 2 hours. National Highway 2 (NH-2) which is known as Durgapur Expressway in West Bengal is connected. Other state high ways are connected with cluster. Other highways passes through the district are National Highway 114, State Highway 6, State Highway 7, State Highway 13, 14 and 15. Train and Bus services are very well established and regularized. Bus and train services from Howrah,

Sealdahand Dharmatala are very frequent. Nearest airport is Netaji Subhas Chandra Bose International Airport.

1.3 Location:

Bardhaman district is extended from 22o56' to 23o53' North latitude and from 86o48' to 88o25' East longitudes. Lying within Burdwan Division, the district is bounded on the north by Dumka (of Jharkhand), Birbhum and Murshidabad, on the east by Nadia, on the south by Hooghly, Bankura and Purulia and on the west by Dhanbad (of Jharkhand) districts.

The river Barakar forms the State boundary to the west; the Ajay separates Birbhum and Dumka to the north with exception of a portion of Katwa subdivision; the Damodar forms a southern boundary with Purulia and Bankura, while Bhagirathi forms the main eastern boundary with a few exceptions. The maximum length from east to west is 208 Km while the maximum breadth from north to south is 112 KM. In shape the district resembles a hammer.



Bardhaman districtwas a district in West Bengal. On 7 April 2017, the district was bifurcated into PurbaBardhaman district and Paschim Bardhaman district. The headquarters of the district was Bardhaman, and it housed the cities of Asansol and Durgapur.

The cluster is located in Katwa I and II community development block in Katwa Sub-Division of PurbaBardhaman district in the state of West Bengal spread a radius of 25 to 30 kms covering more than 30 villages in two blocks named Bikihat, Bandra, Charpataihat, Ekaihat, Gopkhanji, Khajurduri, Mondalhat, Goyai, Nalhati, Panuhat in Katwa I and Barokulgachi, Chotokulgachi, Garagacha, Gazipur, Ramdashpur, Agradwip, Akhra, Islampur in Katwa II.

There are more than 500 artisans are involved in this sector. Due to its vast spread, size and decentralised operations, unique area specific dynamics fall under the category of regular cluster as per SFURTI guidelines.

Under the cluster fold there are 450 coir artisans are processing coir and making different coir products.

There are number of bank branches in the block and they are SBI, UCO, UBI, Bank of Baroda, Canara, Axis, HDFC, ICICI, PNB, Bank of India, Oriental Bank, Bandhan Bank.

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

1.4 Evolution of the cluster

Bardhaman District is one of the most important commercial districts of the State with abundant natural resources.Though the coconut cultivation in the district is higher compared to other districts but presence of skilled workers led to establishment of yarn and mat making units in late eighties. Later the local NGOs are organised various skill training in making mesh mat and corridor mats. Now a day more than 500 artisans are making these mat and financially supporting their family.

1.5 Demography and growth trends

In 2011, Bardhaman had population of 7,717,563 of which male and female were 3,966,889 and 3,750,674 respectively. In 2001 census, Bardhaman had a population of 6,895,514 of which males were 3,588,376 and remaining 3,307,138 were females. Bardhaman District population constituted 8.46 percent of total Maharashtra population. In 2001 census, this figure for Barddhaman District was at 8.60 percent of Maharashtra population.

The initial provisional data released by census India 2011, shows that density of Bardhaman district for 2011 is 1,099 people per sq. km. In 2001, Bardhaman district density was at 982 people per sq. km. Bardhaman district administers 7,024 square kilometers of areas.

(Source: www.censu2011.co.in)

As per the 2011 Census of India data, recast after bifurcation of Bardhaman district in 2017, PurbaBardhaman district had a total population of 4,835,532. There were 2,469,310 (51%) males and 2,366,222 (49%) females. Population below 6 years was 509,855.

In Katwa subdivision, Katwa - I Block of Bardhaman district has total population of 173,087 as per the Census 2011. Out of which 89,087 are males while 84,000 are females. In 2011 there were total 39,425 families residing in Katwa - I Block. The Average Sex Ratio of Katwa - I Block is 943.

As per Census 2011 out of total population, 3.7% people lives in urban areas while *96.3% lives* in the rural areas. The average literacy rate in urban areas is 82.7% while that in the rural areas is 69.9%. Also the Sex Ratio of Urban areas in Katwa - I Block is 930 while that of rural areas is 943.

The population of Children of age 0-6 years in Katwa - I Block is 2011 which is 12% of the total population. There are 10173 male children and 9838 female children between the ages 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Katwa - I Block is 967 which is greater than Average Sex Ratio (943) of Katwa - I Block.

Katwa - II Block of Bardhaman district has total population of 136,708 as per the Census 2011. Out of which 70,588 are males while 66,120 are females. In 2011 there were total 31,714 families residing in Katwa - II Block. The Average Sex Ratio of Katwa - II Block is 937.

As per Census 2011, all of the population of Katwa - II Block lives in urban areas. The average literacy rate in urban area is 69.2% and the sex ratio of Katwa - II Block is 937.

The population of Children of age 0-6 years in Katwa - II Block is 15183 which are 11% of the total population. There are 7883 male children and 7300 female children between the ages 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Katwa - II Block is 926 which is less than Average Sex Ratio (937) of Katwa - II Block.

1.6 Socio-Economic Aspects

Climate:

PurbaBardhaman district has a tropical climate is hot and humid. While the hottest month is May, the coldest is January. The monsoonseason is from June to September, with an annual average rainfall of 1,400 mm, 75% of it falling in the monsoon months. Localised thunderstorms, called kalbaisakhi in Bengali, is a special feature from March until the monsoon sets in. The location Katwa in Bardhamandistrict is at the confluence of two navigable rivers, Ajay and Bhagorothi enjoys climate of PurbaBardhaman.

Literacy:

As per the 2011 census data, recast after bifurcation of Bardhaman district in 2017, the total number of literates in PurbaBardhaman district was 3,232,452 (74.73% of the population over 6 years) out of which males numbered 1,781,090 (80.60% of the male population over 6 years) and females numbered 1,453,362 (68.66% of the female population over 6 years)

The total literacy rate of Katwa - I Block is 70.36%. The male literacy rate is 66.8% and the female literacy rate is 57.37% in Katwa - I Block.

The total literacy rate of Katwa - II Block is 69.16%. The male literacy rate is 66.13% and the female literacy rate is 56.52% in Katwa - II Block.

Source of income:

In the erstwhile Bardhaman district agriculture was the pre-dominant economic activity and the main source of livelihood for the rural people. The soil and climate favours the production of food grains. The undivided Bardhaman district was the largest producer of rice in West Bengal and bulk of it was produced is now in PurbaBardhaman District other than cereals and pulses. Cash crops such as mustard, til, jute and potatoes are also grown.

Apart from agriculture, horticulture, pisciculture, dairy, tourism have successfully emerged as economically rewarding viable options for diversifying income. Micro, small and medium industries are also source of income.

Wages:

Normal wages is maintained. Accordingly, the wages of unskilled are Rs. 180 - 200 per day and skill are getting wages of Rs. 250 – 300 per day. Income of person is not less than Rs. 5000 – Rs. 6000 per month.

Health:

In PurbaBardhamandistrict there are 3 hospitals, 5 rural hospitals, 19 block primary health centres, and 74 primary health centres. These facilities are provided by the Health and Family Welfare department of the Government of West Bengal. Additionally 2 medical units are provided by other departments of the state government, 1 medical unit by the Central Government/ PSUs and there are 109 private nursing homes.

The rural areas of PurbaBardhaman district are flooded frequently and that affects health. Some blocks near the Bhagirathi have been facing the problem of arsenic contamination in ground water.

In 2001, in most of the blocks, even 25% of the households did not have individual sanitation latrines but since then the situation has improved and the district had been moving towards the

100% target. The district has become a *naranjilla*. The availability of safe drinking water is also moving towards the 100% target.

Public healthcare is no longer an illusion for the poor. The district has come a long way from the colonial era. However, the scenario of undernourished mothers and babies has not vanished even in the 21st century. *Health for all*, the clarion call of world bodies, still remains to be achieved.

Katwa Sub-divisional Hospital, Indian Red Cross Society, Katwa, Rural Hospitals in blocks, Block Primary Health Centre, Primary Health Centres is situated in Katwa for providing service to the people.

Education:

The first vernacular school in erstwhile Bardhaman district was set up by Captain Stuart in 1816. Prior to that there were chatuspathis and maktabs run by local pundits and maulavis. There also were Sanskrit tolls, Persian and Arabic schools.

There were almost 250,000 students in the primary schools and more than 50,000 students studied at the college and university levels in the district.More than 6,000 schools (in erstwhile Bardhaman district) serve cooked midday meal to more than 900,000 students.

97% of the primary schools have pucca buildings and 99% have sanitation facilities. All primary and high schools have drinking water facility. Availability of teachers per school is 3 in primary schools, 12 in secondary schools and 20 in higher secondary schools.

The University of Burdwan was founded in 1960, as part of Dr. B.C.Roy's master plan to expand the scope of higher education beyond the metropolis of Kolkata. The university was privileged to inherit a large part of the estate of the erstwhile Bardhaman Raj.Burdwan Raj College was established at Bardhaman in 1881. All other degree colleges in the district came up after independence. Amongst the specialized institutes are: Burdwan Medical College,University Institute of Technology, Burdwan Universityand College of Agriculture (Extended Campus of Bidhan Chandra Krishi Viswavidalaya), MeghnadSaha Planetarium was opened at Bardhaman in 1994.

Primary schools include junior basic schools, middle schools, high schools and higher secondary schools include madrasahs, technical schools include junior technical schools, junior government polytechnics, industrial technical institutes, industrial training centres, nursing training institutes etc.; technical and professional colleges include engineering colleges, medical colleges, para-medical institutes, management colleges, teachers training and nursing training colleges, law colleges, art colleges, music colleges etc. Special and non-formal education centres include sishusikshakendras, madhyamiksikshakendras, centres of Rabindra Mukta

Vidyalaya, recognised Sanskrit tols, institutions for the blind and other handicapped persons, Anganwadi centres, reformatory schools etc are located in Katwa sub-division. Katwa College was established in Kalna in 1948.

Income:

As per the rural household survey conducted by the state government in 2005, the percentage of rural households living below poverty line in the old Bardhaman district was 33.49%. Using the same data the percentage of households living below poverty line in PurbaBardhaman district is 37.14%.

(Source:http://www.census2011.co.in/census/district/)

1.6 Key economic activities in the region

PurbaBardhaman district was composed of rural agricultural areas. Though, agriculture is main source of income, PurbaBardhaman district has some medium scale enterprises. Since it is an agro-based area, it has many rice mills. The other industries are rice bran oil, cold storage, oil mill, chira mill, bakery, L.P.G. gas filling plant, transformer manufacturing/repairing, automobile spare parts etc. There is an industrial estate at Saktigarh. There are handicrafts like sola craft of Bankapasi and dhokra of Dwariaur is now acceptable to European markets. There are rural wood carving artisans who are maintain the continuity of their traditional art.Amongst the other crafts in PurbaBardhaman district are clay craft, including terracotta work and idol making, wooden dolls, stone carving, bamboo and cane craft and kantha designing. There are vibrant weaving network around Kalna, Dhatrigram and Samudragarh.Apart from above, West Bengal has an immense range of unique regional sweets. Burdwan is known for Sitabhog and Mihidana. Tourism is also a source of income. Tourists are used to visit Sri GaurangaBati Temple where Sri Sri Chaitanya Mahaprabhu received “Diksha” from his guru Kesava Bharati. Madhaitala Ashram is the ashram was visited by Jagai and Madhai, two famous disciples of Sri Chaitanya Mahaprabhu, and remains a center of Gaudiya Vaishnav culture. Shah Alam’s Dargah, a building of archaeological interest built in the early18th century by Nawab Murshid Quli Khan, Nawab of Bengal.

1.7 Infrastructure

1.	Area	5432.69 sq.km.
2.	Population (as per Provisional 2011 Census)	Total: 4835532 Nos. Male:2469310 Nos. Female: 2366222 Nos
3.	No.of Revenue Divisions	4 Nos.
4.	No.of Taluks	23 Nos.
5.	No.of Revenue Villages	

6.	No.of Panchayat Unions	23 Nos	
7.	No.of Village Panchayats	215 Nos.	
8.	No.of Town Panchayats	6 Nos.	
10.	No.of Town	20 Nos.	
11.	No.of Parliamentary constituencies	4 Nos.	
12.	No.of Assembly constituencies	16 Nos.	
13.	Irrigation (Major Ayacut	Government canals	287180 hec.
		High capacity deep tubewell	7400 hec.
		Middile capacity deep tubewell	790 hec.
		Low capacity deep tubewell	1580 hec.
		River lift irrigation	11630 hec.
14.	Road	SH-6	169 KM.
		SH-7	196 KM.
		SH- 8	190 KM
		SH-13	17 KM.
		NH- 114	33 KM
		NH-19	25 KM
		Surfaced	8228.76 KM
		Un-surfaced	3704.83 KM

Chapter – 2

Cluster Product and Production Process

2.1 Product profile

Existing product profile of the cluster is traditional Coir products are:

Coir Yarn

Corridor Mat.

Mesh Mat

Coir Yarn: Coir yarn is making in automatic and motorized spinning processes. The process involved willowing, slivering, spinning, winding and binding. Coir purchased from market and is wetted by spraying water. After 2-3 hours, the wetted fibre is passing through the willowing machine to remove the impurities and the place the fibre and parallel to each other. The fibre is then fed in to slivering machine wherein it is converted in to sliver form. The slivers are spun into yarn as per specifications in the spinning machine. The yarn is then cleaned and winding and then binding into rolls and is now ready for the market.

Corridor Mat::Corridor mat is also known as Hollander mat or Dutch mat. It is a mat in which both warp and weft strands are continuous without tucking in or binding. This is one of the mats that are woven without the help of a loom. It is a non- brush type one and the weaving is of carpet weaving in which the weft is predominant and warp is concealed. The pattern effect being produced by the weft strands only and has rib effect on both sides. The iron rods temporarily function as warp.

It requires a wooden frame in which iron rods can be kept vertically through grooves cut on rails to the thickness of the iron rods .Basing on the length of mat, the rods are arranged on the frame according to the number of rods required for a particular length as per the ends per foot of each quality of mat. After arranging the rods, the weft yarn is passed in between the rods by hand alternately from one end to other and is turned back. This process of winding the yarn is continued until the required number of weft required for a particular width of mat is wound. For mats having designs, coloured threads are wound on the iron rods according to the designs.

After completion of winding of yarn on one side the frame along with iron rods is turned to the other side so that the yarn can be wound on the latter portion of the iron rods. The process of winding the yarn on the iron rod is done similarly as with above case. The winding of yarn is done in this also as was done in the case of other half. Now the iron rods with yarn wound over it is removed from the frame and is placed in a pressing device. The press consists of two iron rails out of which one is moveable by turning a handle. On the rails, small iron nails are fixed in such a way that the distance between the two iron nails equals to the distance between the grooves cut on the wooden frame to erect iron rods vertically to wind the yarn. This helps the iron rods to place them comfortably in the press while pressing. The iron rods with yarn placed on the two rails are subjected to pressing by turning the handle which causes the movable iron rail to move closer to the fixed rail to press the yarn to the required width. Now the iron rods are removed one by one and drawn roping yarn through the holes from where the rods are removed. All the iron rods are removed like this and the rope yarn is passed in. While passing the roping yarn through the holes at the extreme ends, a single thread of coir yarn is also passed in along with the roping yarn so that the protruding ends of thread can be utilised for preventing the weft threads of the mat at 4 corners from being loosened or removed while in use. The mat is then removed from the press and the 4 corners of the mat are made in tact by taking the protruding threads suitably to interlace with the weft in the mat.

Mesh Mat: This is a non-brush doormat having a regular mesh effect produced with the help of a specially designed rectangular wooden frame upon which nails without head are fixed in equal distance. The size of the frame is made to the size of the mat to be made. The warp yarn is guided in between the nails in the length way and width way perpendicular to each other. There must be 4 layers of warp – two in length way and two in width way alternately. There will be 4 coir yarns crossing each other at the intersecting point. The mat is made by tying together the 4 coir yarn at the crossing point of warp layers by coir yarn with a special knot. Finer variety of coir yarn with the help of a needle is inserted through the mesh and circled over the warp yarn at the point of intersection in such a way that the stitching yarn should cross at the rear side of the mat. For getting designs, coloured yarn is used for tying. A rectangular frame made out of 4 wooden planks up on which nails without heads are fixed in equal distance. The nails on one side of the frame are parallel to the nails on the opposite side of the frame. Having completed the tying according to the pattern, the mat is taken out of the frame. The edges of the mat all round is finished by stitching with coir braid of suitable type or by a special braiding with 8 ends of coir yarn or finished with lace work.

The cluster at a glance

Main Products	No. of unit	No. of artisan in each unit	Total artisans	Production per day per	Total production in units per day	Major area of concentration
Coir Yarn Unit I (Motorized)	25	2	58	5 – 6 kg.	130 kg	PanuhatBoliyapara, Ambagan, Pachimpara, Mondalhat, Eakihat, Adarshapally, Palpara
Coir Yarn Unit II (Automatic Spinning)	3	2	6	40 kg.	120 kg.	Boliyapara
Mesh Mat	10	1	10	4 nos.	40 nos.	Charpataihat, Charmongolhat, Char Eakihat, Mondalhat, Eakihat, Adarshapally, Palpara
Corridor Mat	4	8	32	15 – 20 nos.	70 nos.	Baidyapara, Mondolhat, Ambagan, Pachimpara, Adarshapally, Panuhat, Boliyapara
	42	13	106			

List of artisans is enclosed for information. The ratio of male and female artisans in cluster is 90:10. The cluster is basically female concentrated.

This product is mainly used to daily consumption of Katwa, Daihat, Nabadwip, Kalna and Bolpur markets. Payments from buyers are not very regularized and proper way. Sometime payments are kept pending from buyers. The irregular payment from buyers makes the cluster firms weaker and lower production.

Scenario of cluster at present:

Name of cluster	PurbaBardhaman Coir Cluster
Total artisans covered	150 nos. in production: 106 nos. others like dying, cutting, finishing, bindingetc.: 50 nos.
Number of Male artisans	15 nos. working for binding, machine maintenance, marketing, willowing, transporting, finishing of products
Number of Female artisans	135 nos. working for spinning, mat making
% of general artisans	75%
% of SC and ST artisans	20-25%
% of minority artisans	NIL
Production at present	Coir Yarn: 250 kgs. Mesh Mat: 40 nos. Corridor Mat: 70 nos. per day
Existing products	Coir Yarn, Mesh Mat and Corridor Mat
Types of machines	Traditional motorized Rat, Automatic Spinning Machine, Mesh Mat Frame, Corridor Mat Press Device and Corridor Mat Standing, Willowing machine, dyeing vat etc.
Raw material	Coconut fibre, nylon thread, colour and chemicals
Present earning of the Artisans per month	Unskilled: Rs.150 to Rs. 200 per day Skilled: Rs. 500-600 per day

The total number of workers engaged in the Coir activity gender wise is given below:

Activity	Male	Female	Total
Fibre Extraction / Willowing / Dyeing / Binding	10	29	39
Yarn Spinning	0	64	64
Matt Making	5	42	47

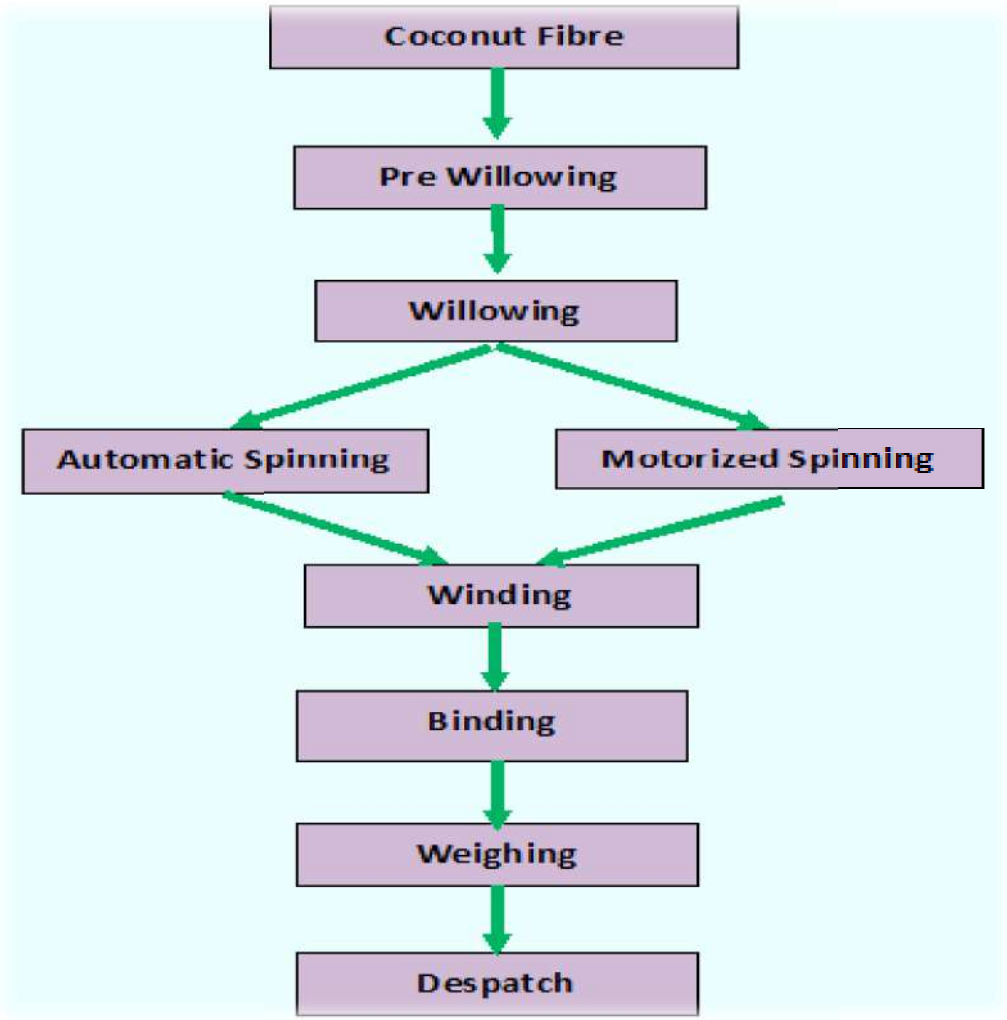
The existing income level of the labour force in the Coir sector of the district is given below:

Activity	Wages per day	
	Male	Female
Fibre Extraction/ Willowing	200	180
Yarn Spinning	300	250

The project is conceived under SFURTI and major focus of the project will be the modernization with specialized mechanism to increase production from 250 kg of coir yarn per day through tradition mechanism to 1080 kg. per day by providing training to artisans and introduction of production centre in common facility centre. Apart from that, product diversification and introduction of traditional value added products by absorbing artisans in product diversification programme by providing training. The entire process will increase the number of involvement of artisans from 250 to 400 to 450 artisans. The cluster will produce 30 to 35% of new product items like Matting, Geo-Textiles and Value added products after implementation of scheme and common facility centre. The Common Facility Centre also will reduce the wastage cost by 10%.

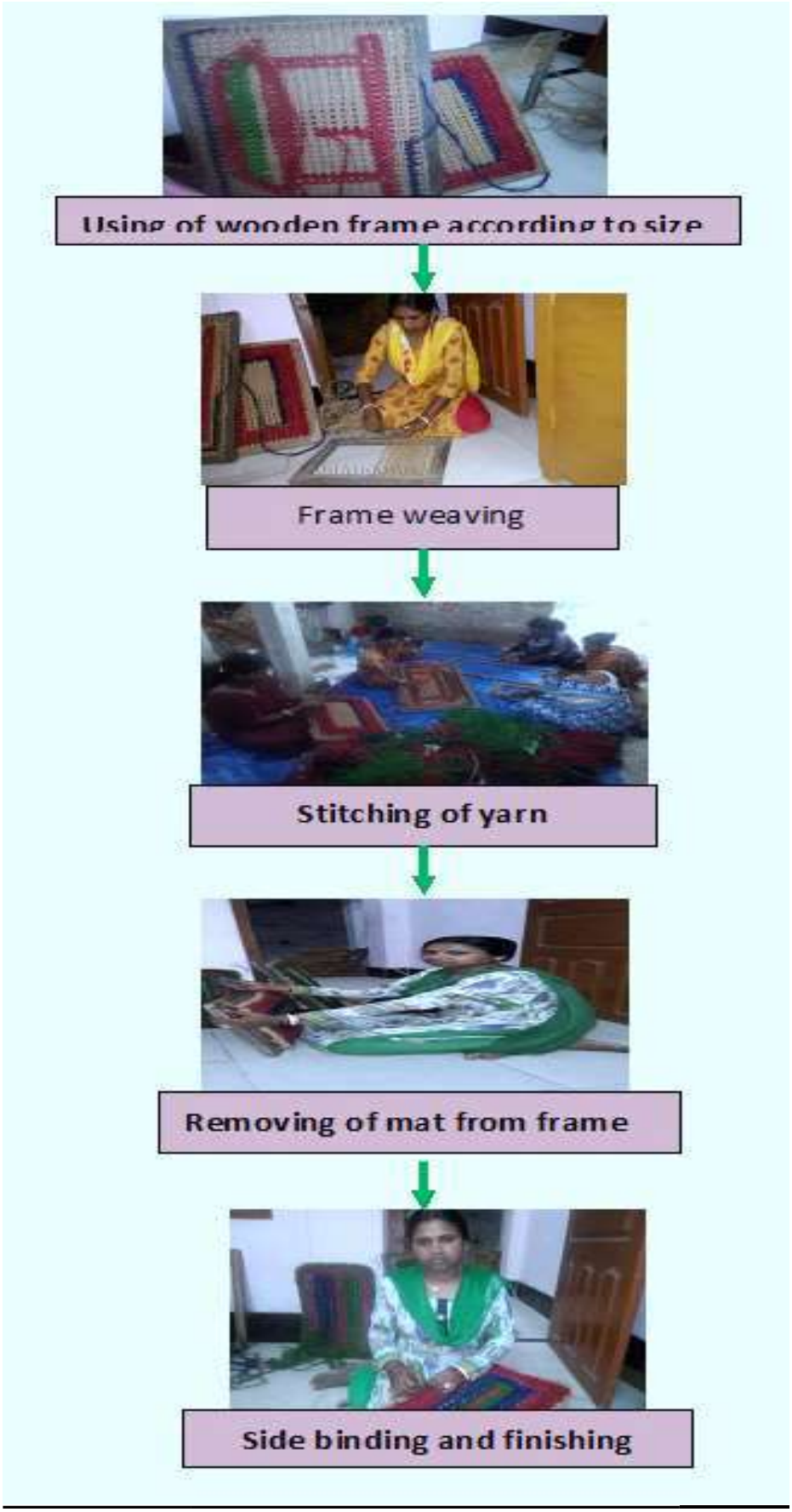
2.2 Production Process:

COIR YARN MAKING "PROCESS CHART" (THROUGH PHOTOGRAPHS)



COIR CORRIDOR MAT MAKING "PROCESS CHART" (THROUGH PHOTOGRAPHS)

COIR MESH MAT MAKING "PROCESS CHART" (THROUGH PHOTOGRAPHS)



Analysis of the existing processCoir products:

- Use of traditional method of making coir products
- Lack of knowledge in making coir value added products
- Lack of knowledge of using modern machinery and tools
- Lack of knowledge of new design development
- Lack of knowledge of direct marketing, only marketing through few local traders
- Young generation is not attracted cluster products due to low income.

2.3 Value Chain Analysis

Primary cost	Coir yarn		Mesh mat		Corridor mat	
	Percentage	Price	Percentage	Price	Percentage	Price
Raw material	50%	25	50%	40	75%	30
Fuel/ power	8%	4	-		-	
Other consumables	18%	9	10%	8	10%	4
Labour charges	24%	12	40%	30	15%	6
Total cost	100%	50	100%	80	100%	40
Profit margin of trader/ hotel	30%	65	30%	105	37%	55

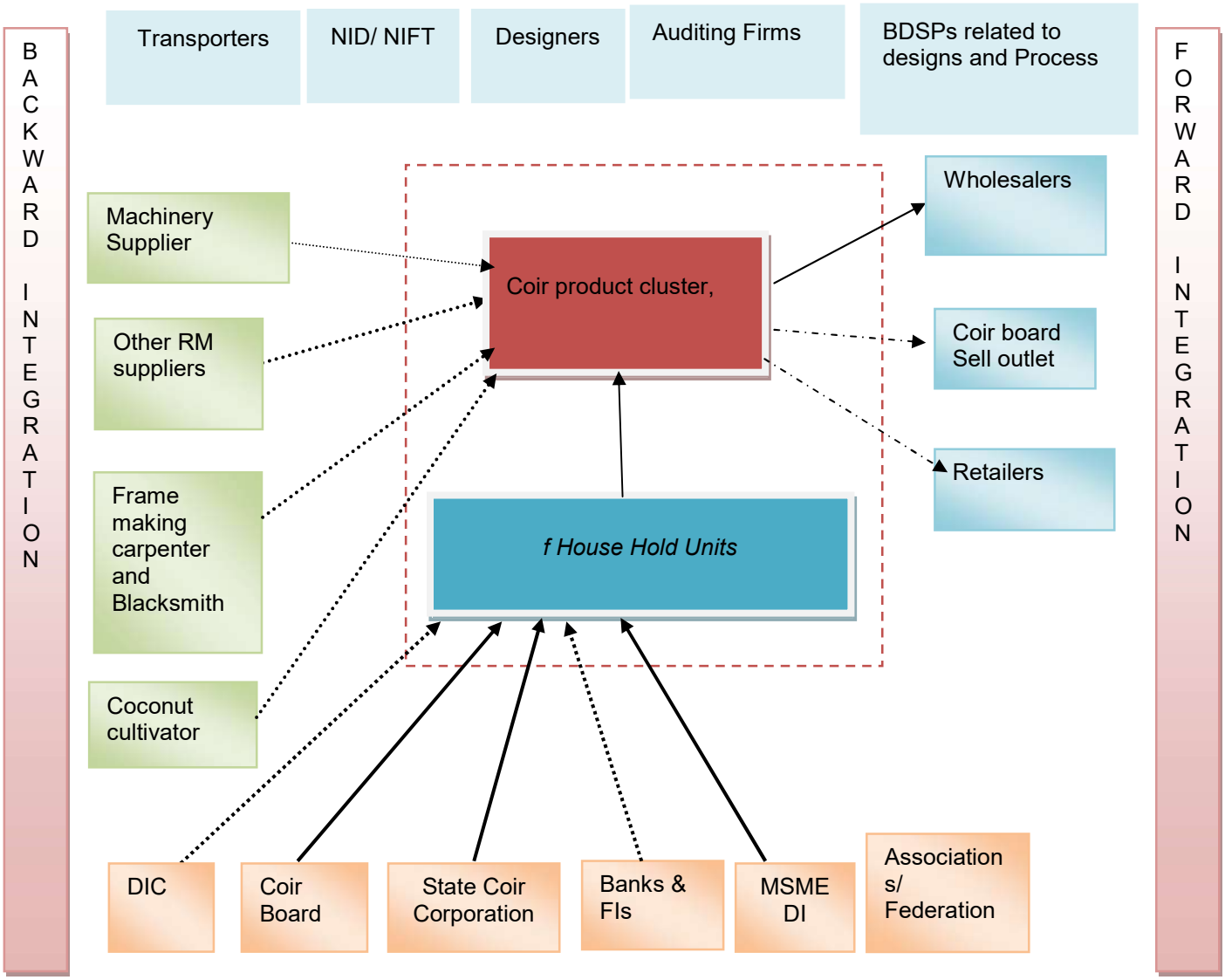
Analysis of value chain:

- ***Raw material cost is almost 50% to 75% of the total cost, which is very high compared. It can be reduced by bulk purchase mechanisms through the SPV.***
- ***In the existing supply chain there will not be any retailers, the producers (artisans) will sell it to local trader and NGOs who will directly sell it to customers.***
- ***Since lack of retailerbased marketing, artisans are totally depending on local traders & NGOs wholesalers leading to high exploitation.***

2.4 Cluster Map

A detailed cluster map is given as below:

Figure 2.1 Present 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 Principle Stakeholders

The cluster is having very simple cluster map. There are very simple backward and forward linkages. The stakeholders are manufacturing cluster products using very simple casual regular machinery and tools. All units are household units. The artisans of 250 numbers are engaged in manufacturing of coir products and out of which 135 are women artisans.

Backward Linkages

The cluster is working in a very traditional method. The raw material suppliers, machinery suppliers, machinery repair and replacement of machinery spare parts are the basic backward linkages of coir producing cluster. The designers in cluster are available but have no link with cluster as there is no product diversification in cluster. The simple production process and traditional method is responsible for low productivity. The stakeholders of cluster have good connection with raw material suppliers which helps the cluster to carry on of producing of coir products. Skill and unskilled artisans are available in cluster. The regular basis skill training from Coir Board is organized by the production centre which creates easily availability of skilled artisans.

Forward Linkages

As indicated above, marketing is totally done by the society. The lady artisans are making the corridor mat and mash mat at house hold level in job work basis. Society is marketing the products in the local market of Katwa and supply to the few local traders. There is no-linkage with the export market and coir sales outlets. Same with the coir pith. Coir pith manure can be supplied to the nurseries. With the establishment of the common processing center, their coir SPV. The forward linkage is the marketing channels. The cluster is associated with retailers, wholesalers and individual customers. The products of cluster are used as daily requirement basis mainly to wholesalers. The retailers and individual customers are purchasing from wholesalers. Hence, there is huge demand of cluster products. The cluster has no link with exporters at present. The product diversification which gives a new shape and momentum to the cluster will definitely creates linkage with various export houses.

Support Institutions and Public Service Providers

Linkage with DIC is very limited. There is absolutely no linkage with professional BDSPs, market promotional institutions. The IA is attached with manufacturing of coir products which helps the unit owners and production centre to have link with Coir Board. The IA has very good link with stakeholders of clusters which assist the unit owners to produce and to market the products. The cluster is still working with the role and assistance of IA. The members of IA are always trying to encourage the stakeholders. The cluster has no link with technical institutions. The stakeholders have their accounts in local banks but there is no bank linkage for development of their business and awareness banking system. The connectivity of cluster is so developed which helps the cluster to have good transporter linkages to market the products without any difficulty. There is no association. There is no link with KVIC/KVIB, MSME DI and NABARD in cluster for development by implementing their various types of cluster development schemes.

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:coirboard.gov.in)

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 capitalized, the growing export market for coir yarn and mats, which are its major products. There is a need for cluster firms to opt for direct export market.
- The available coconut husks are not fully utilized in the district. With the existing cluster, only 63% of the overall potential of the district is being exploited.
- 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.
- 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 prices can 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.

CHAPTER – 4

SWOT and Need Gap Analysis

4.1 Cluster SWOT

	Strengths	Weaknesses	Opportunities	Threats
Technology	➢ Eco friendly product ➢ Vast potential for value addition ➢ Easy to adopt technology to manufacture value added and diversified products ➢ Presence of machinery suppliers ➢ Low investment in machinery	➢ Use of obsolete machinery ➢ Unable to maintain uniformity, quantity and quality of products produced	➢ Presence of modern technologies for various value added products ➢ Scope for adopting zero waste through new technology ➢ Potential for products diversification and value addition ➢ Presence of schemes for technology up-gradation like TUFS	➢ Competition from synthetic fibres
Marketing	➢ Established marketing channels for Yarn and mats ➢ Proximity to market-for value added products ➢ Large domestic market ➢ Market potential though out the country and	➢ Lack of value added products for market expansion ➢ Lack of formal networks for marketing and input procurement	➢ Environmental friendly products leads to growing demand at domestic and international market ➢ Increased domestic and export market for coir products ➢ Less market competition for value added products	➢ Competition from other coir cluster of Kerela, Tamilnadu and Karnataka

	foreign market		➢ Presence of market promotional agencies and schemes of MoT and Coir borad ➢ Huge scope for e-commerce	
Finance	➢ Cash credit facilities are in nationalized banks ➢ Loan finance under subsidized scheme coir board	➢ Poor and inadequate financial linkage	➢ Existence of all major banks (both Rural & Nationalised) within the cluster. ➢ Proximity to district Head Quarters for necessary support.	➢ Exploitation by money lenders
Inputs	➢ Large quantity availability of raw material i.e Husk ➢ Quality of the Husk is better than that of Andhra Pradesh	➢ Only 30% of husk is utilized ➢ Seasonality of the raw material due to lack of mechanical drying process of fibre and yarn	➢ Untapped raw material potential ➢ Presence of various input sourcing national level agencies like NSIC	➢ Utilization of husk as firewood
Infrastructure	➢ Presence of basic infrastructure and utilities ➢ Presence of Sub Regional office, Coir Board at Kolkata to provide technical inputs	➢ Lack of common coir processing unit	➢ Strategic location as it is well connected with roads, railways and other communication systems ➢ Presence of cluster specific schemes like MSECDP	

			&SFURTI for infra development	
Business Environment	➢ Presence of support institutions like coir board, DIC Commercial banks etc. ➢ Young and educated entrepreneurs are available ➢	➢ Limited awareness on Government Schemes ➢ Lack of awareness in the incremental benefits of value added finished products ➢ Unable to come out of the vicious circle of making traditional/ intermediate products ➢ Lack of entrepreneurial capabilities ➢ Limited awareness in Quality Control ➢ Limited contact with BDS providers and technical institution	➢ Presence of schemes and promotional agencies for organizing EDPs ➢ Congenial state government policies ➢ Importance of traditional industries in 12th plan	➢
Human resource	➢ Availability of labour force.	➢ Limited skilled manpower ➢ Lack of awareness among the people about the uses of husk and its products	.	➢ Shortage of skilled workers
Others		➢ Lack of a strong association at the district level.		➢ High power tariff

2 Need Gap Analysis

Raw material:

The basic raw material used in the cluster id coir husk. The district has highest plantation of coconut tree in the state. As raw material is abundantly available in the area but not being

processed and utilized. There are no de-fibre unit in the district. They purchased the fibre from the local traders or from the neighbouring states to make coir products at a higher price.

Technology:

In the cluster production process is very traditional. Low technology has been adopted. During last five years the automatic two ply double headed spinning machine has replaced to manual ratting machine for making of yarn, but still in some places artisans are using manual ratting machine for spinning. Again mat making process is also very traditional. These low technology resulting non maintenance of uniformity, quantity and quality of the cluster products. which is affecting the selling price.

Marketing:

The cluster has very limited products i.e. coir fibre, yarn and mats. These are very low value added items having very limited market demand. Artisans are basically depends on the local traders for marketing of their products. Local traders collect the products from the door steps through their agents. There is an assured market for artisans but with very limited profit margin.

Finance:

There are good number of financial institutions in the cluster area but banks are reluctant to finance the coir cluster people. 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

Linkage with support institutions:

At present the cluster firms are having linkage only with Coir Board. There is a need to link them with CCRI (Central Coir Research Institution) 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, NABARD to avail schemes like Rural Mart, UPNRM.

Human resources:

Coir activity is a traditional activity, so the workers are known the skill by practice. They are neither skilled nor trained but they coming under the category of semi skilled worker but labour are available in the cluster area. They need skill training in making of different coir value added products. There is lack of knowledge about different value added coir products among the artisans and also they are lacking the entrepreneurial skill.

CHAPTER – 5

PROFILE OF IMPLEMENTING AGENCY

5.1 Institutional Structure

Institutional Structure/Registration Details	
Legal Status	** Society (Under Societies Registration Act, 1860) W.B. act XXVI of 1961 ** Niti Aayog Under Central Government
Date of Incorporation/Regis-Tration	Attached Certificate of Incorporation. Reg. - S/1L/84950 Date - 15.11.2011 Niti Aayog Unique ID of VO/NGO WB/2018/0208570
Registered Address	PanuhatBoyaliapara, Katwa, PurbaBardhaman
Office Address/Locations	PanuhatBoyaliapara, Katwa, PurbaBardhaman

5.2 Governance Structure

Name of Members	***Designation***	***Background***	***Contact No.***	***Email id***
Mr. Shital Chandra Debnath	President	Social Worker	9332959335	
Mr. Shyamal Kumar Bairagya	Vice President	Social Worker	938223953	
Mr. Mrityunjoy Debnath	Secretary	Master Trainer of Coir Product	9800404283	panuhatkwelfaresociety@gmail.com
Mr. Nripen Debnath	Assistant Secretary	Marketing & Mechanical Expert	8617242729	
Mr. Pampita Debnath	Treasurer	Skill Artisan of Coir Product	6294255814	
Mr. Rajesh Debnath	Member	Master Trained by NCDC	9333219686	
Ms. Shankari Debnath	Member	Master Trainer of coir products (Dyeing & Spinning)	9091758847	

5.3 Operational Profile

Major Objectives-Vision, Mission Goal of the organization	**Objectives.** To arrange infrastructure for training in rural Men and Women / SHG groups To provide scope for setting up production unit for rural artisans. To give technical/Skill training and other guidance to the rural Artisans for production unit. To arrange net working of needy Artisans organization for Socio-economical survival and rural development. **Mission: PKWS** has its mission to facilitate the rural people particularly the marginalized and their family to improve their all round condition for empowerment of poor by promoting continuous support and strengthening the village level organization to bring a participatory development in the socio-economic structure through rural artisan development. **Vision:** Vision of **PKWS** is to build-up a world, based on justice, equity and freedom. **GOAL :**To give technical training and other guidance to the rural Artisans in Katwa -1 &Katwa -2 under this block area for production in Coir and Coir products Backward forward linkage for sustainable income and marketing Nationally and Internationally.
Focused area of operational	Katwa -1 &Katwa -2, Ketugram -1 &Ketugram -2 block area regular cluster development, Artisans development, Community development, Improve economy in our area, Eco-friendly product making to reduce the nature polution.
Provide key projects/activities being undertaken by the IA- brief description including the project scope, size and dura- tion (mention specific experi- ence in the area/sector of	**Present :**Coir yarn, Corridor Mat, Mesh Mat, Handicraft product produced **Future :**Tufted mat**,** Geo-textile, Mating & room decoration product our future plan We are trained by Coir board, which trained 250 skilled artisans in the cluster.

the proposed project)	
Mention key clients/donors associated with for project implementation along with details on the nature of asso-Citation	**Coir board (Kolkata regional Office)**
Mention key partnerships/ Alliances (if any)	Coir board trained artisans & S.H.G group

5.4Management Profile

Background of key personal	**1. President : Shital Chandra Debnath,** Founder member of
(Professionals and others)	PKWS. Accounts head
with brief profile of the senior	**2. Vice-President : Shyamal kumarBairagya,** Funder mem-
management personnel)	ber of PKWS. He is a Social Worker
	3. Secretary :Mrityunjoy Debnath, Funder member of PKWS.
	Master trainer of Coir board (MCY & VAP). Experience in Coir
	product about in 12 years.
	4. Asst. Secretary :Nripen Debnath, Funder member of
	PKWS. Experience in marketing of Coir product & he is
	technical hand.
	5. Treasurer :PampitaDebnat, Funder member of PKWS.
	Skilled artisan by Coir board (Wel knowledge in dyeing).
	6. Member : Rajesh Debnath, Master of Coir product trainer
	under Coir bord & 15 years of experience. He trained 6 months
	course at (NCDC) - 1st Class.
	Shankari Debnath, Master trainer of Coir board (MCY &
	VAP) & also experience in Dyeing & Matting.

5.5 Financial Position

Key financials of the organization (Provide copy of the audited financial statements for last 3 years)	Fixed Assets	250000
	Current Assets	72392
	Current Liabilities	10000, 13730,54808.10

	Revenue trend for last 3 yrs.	215000, 281424.10,179800
	Profit/Loss for the last 3 yrs.	**3730, 41078, 17584**

Chapter – 6

Project Concept and strategy Framework

6.1 Project Rationale:

The cluster require both soft and hard interventions related to technology up gradation, capacity building, skill development, market development besides financial linkages with banks, leveraging of other public support schemes, services of public support institutions like CCTRI for quality up gradation so as to make artisans as producers and enhance their income levels. Unless these interventions are not taken, the artisans will remain with low incomes and their next generation may not take up the same profession, which ultimately may lead to dissemination of the cluster. The interventions are also needed to expand the existing product base.

6.2 Project objectives

The Cluster Development Program under SFURTI is considered with the following objectives:

1. To make theartisans as direct producers and market their own product rather depending on local trader which ultimately may increase their income level and living standards
2. To establish requisite common processing center, raw material depot, sales outlets, which will improve the quality, reduce the quality and expand the existing market base.
3. To establish training cum research and development cell to enhance the skill set of the artisans
4. To improve the entrepreneurial skills of artisans so as to make them potential and vibrant producers.
5. Motivate artisans to go for more valueaddedcoir products like Coir pith compost, geotextile etc.

6.3 Focus Products

So far the cluster is depending mainly on Coir yarn with Corridor and mesh mats., which are not commercially viable for long term sustainability. There is a need to make the following products with mechanically processed with adopting modern technology, which are given as below



Geo textile **Coir pith manure** **Coir craft**

6.4 Conceptual Framework/ Project Strategy

Since the cluster is not very vibrant with poor social capital, there is a need to give due emphasis for implementation of soft interventions. Based on the improved cohesiveness among stakeholders through collective activities and self-governance mechanisms like SPV, hard interventions like Common Processing center, and establishment of coir processing center can be targeted as long term objective at least after one year.

In the soft intervention in the initial phase trust building activities like launch workshop, exposure visits, awareness program on Government schemes, interface with bankers will be planned. Then more complex activities like Skill upgradation programs can be planned in collaboration with technical institutions. Once reasonable quality has been assured for the products, and then buyer-seller meets with Big Bazaar, Metro, Spencer's can be organized.

Cluster also requires a sales outlet managed by farmers, which can be considered as long term objectives during end of second year.

Prior to exit by IA and TA from the cluster, it will be ensured to develop industry-institutional linkage, strengthening of self-governance mechanisms, market linkage, developing strong monitoring & evaluation mechanisms for long term sustainability of interventions.

Chapter – 7

Project interventions (Core SFURTI)

7.1 Soft interventions

Required soft interventions based on the analysis of production process, cluster SWOT, and gap analysis are tabulated as below:

SL. NO.	ACTIVITY	EXPECTED BENEFITS	APPR. FUNDS ESTIMATE
1. Capacity Building			
1	Launch workshop	information dissemination regarding launch of CDP in the cluster	40,000
2	Exposure visit to Polachi Cluster	10 participants to understand better self-governance mechanisms, direct marketing	2,00,000
3	Awareness Workshop on Government Schemes	At least 100 firms get awareness on various schemes like PMEGP, NMCP, CGTSME	40,000
4	Organising a two Entrepreneurship Development Programme for three days	50 (25*2) particplants will adopt better manag/ement practices	1,20,000
2. Product development and Brand development (Training Programmes & SDPS)			
5	one week training on Pith Manure (4Nos)	120 (30*4) participants will be trained in Block and manure making	4,00,000
6	1 week training program on 2 Ply Yarn makingand Fiber Extraction on mobile defibring machine	30 artisans trained in mats and matting making	1,00,000
7	1week training program on mat weaving and geotextile making (2 nos)	60 (60 * 3Nos) artisans trained in mats and matting making	2,00,000
8	Two months training program on coir craft	30 artisans trained in mats and matting making	4,00,000
3. Market Promotion			
9	Participation in fair and exhibitions	To see and exhibit their products	7,00,000
10	Organising buyer-seller meets (3 Nos)	Help the principle firms to understand buyer requirements and led to direct marketing.	1,20,000
11	Launching of Website and inauguration of CFC	Cluster website opening for online, e-commerce and export marketing	30,000

12	Interface with ecommerce service providers like India Mart, Alibaba	To make Linkage with the ecommerce partners	1,50,000
	Total		25.00,000

7.2 Hard Interventions

7.2.1 Common Processing cum production Centre:

Defiberingsection:

At present the cluster is purchasing the fibers from the neibouring states with a higher price. There for cluster is proposing to have one difiering unit at cluster level and ten mobile mahcine at field level to process the husk and get the fiber for further value addtion.

Spinning Section:

Due to huge demand for coir yarn the cluster is proposing to have five double headed spinning machines at CFC.

Geo textile and matting section:

There is huge market demand for the geotextile and floor mat. Geotextile loom and matting loom is proposed to put at the centre.

Revenue mechanism:

SPV will run the CFC in two methods

1. The SPV will run the centre on common brand basis, where in SPV will the procure the husk from the local area and produce the finished products and market in a common brand The revenue will be shared on the pro rata basis.

2. The SPV will operate the machine on job work basis and collect the user fee from the cluster beneficiaries to operational and maintenance charges.

7.2.2 Coir pith manure and coir mat

Cluster beneficiaries will make the coir pith manure and coir mat. SPV will procure formthe field and package those and market in common brand.

Land details: **Panuhat Karmaudyog Welfare Society has land measuring 42 katha i.e. 30240 sq ft. area at Mouza Sahapur, JL No. 095,Khatian No. 317 / 644 / 825 Dag No. 1203,1204 / 1203, 1204, 1205 / 1203, 1204, 1205 Thana Katwa, District Purba Bardhaman, Pin Code 713502. The said property was purchased under virtue of Bengali "KoshKobala" dated 8th.August 2019 and registered under Katwa Sub-Division. Out of which, 21600 sq. ft. of land has leased for 25 years to Panuhat Rural Welfare Society under said SFURTI project The land is sufficient for hard intervention.**

Chapter – 8

Soft interventions

8.1 Trust building activities

8.1.1 Launch workshop

a) No. Of programs: One
b) Batch size: 100 cluster firms
c) **Place & Organization impart training:** Will happen in cluster itself by the IEDO NAFO, TA, IA, CDA and other promotion agencies
d) Duration of training: Half day
e) Faculty available: Not required
f) Cost of training:

Venue Cost	4000
Local TA/ DA for guest	8000
Refreshments 100 persons @ Rs. 200 per head	20000
Photo & video expenses	5000
Misc. Expenses	3000
Total	40000

g) Topics to be covered under training: Basically, to impart advantages of cluster concepts to stakeholders besides major interventions approved under SFURTI project.

H) Impact of the training: 100 artisans will understand the importance of cluster concepts, which will pave way for smooth implementation of the project.

8.1.3 Study tour to*Polachi cluster*

a) No. Of programs: One

b) Batch size: 10 manufacturers, artisan including members of IA/SPV and CDA

c) **Place & Organisation imparts training: At Polachi**

d) Duration of training: 3 days visit

e) Faculty available: Not required

f) Cost of training:

travel expenses 10 SPV/ IA members including CDA@ Rs. 9000 per head	90000
Lodging & Boarding for members @ Rs. 2000 per head x 3days	60000
Misc. expenses including local transport	50000
Total	200000

g) Topics to be covered under training: Basically to impart advantages of self-governance mechanisms, collective bargaining, establishment and management of CFC.

H) Impact of the training: 10 key players of the cluster to understand the management of CFC and effective implementation of SFURTI project.

8.1.4 Awareness workshop on Government Schemes

a) No. Of programs: One

b) Batch size: 100 cluster firms

c) **Place & Organisation impart training:** Will happen in cluster itself by the NAFO, TA, IA and CDA.

d) Duration of training: Half day

e) Faculty available: Not required

f) Cost of training:

Venue Cost	5000
Local TA/ DA	5000
Refreshments 100 persons @ Rs. 200 per head	20000
Photo expenses	2000
Misc. Expenses	3000
Literature	5000
Total	40000

g) Topics to be covered under training: To sensitise cluster firms on various public support schemes like PMEGP, NMCP, and YUFS etc.

H) Impact of the training: 100 artisans will get awareness on various Government Schemes and at least 15 of them will be benefitted under different schemes.

8.1.6 Entrepreneurship development programme of three days duration each

a) No. Of programs: two numbers

b) Batch size: 30 in each program

c) **Place & Organisation imparts training:** Will happen in cluster itself by the IA and CDA, with the help of EDP training institutions.

d) Duration of training: three day (each one)

e) Faculty available: Guest faculty of the EDP institution.

f) Cost of training:

Venue Cost	4500
Local TA/ DA (including participants and faculty)	12000
Refreshments 30 persons @ Rs. 200 per head for 3days	18000
Faculty Fees	18000
Photo & Video expenses	2500
Literature & Misc. Expenses	5000

Total	60000
For two programmes	120000

g) Topics to be covered under training: To sensitise cluster firms regarding establishment and management of an enterprise.

H) Impact of the training: 80to100 artisans will get awareness on establishment and management of an enterprise.

8.2. Product development training

8.2.1 One week training on making of Coir pith manure

a) No. Of programs: Four numbers

b) Batch size: 30 in each program

c) **Place & Organisation imparts training:** Will happen in cluster itself by the coir professional

d) Duration of training: One week days

e) Faculty available: Coir board

f) Cost of training:

Venue Cost	5000
travel expenses for faculty	10000
Local TA/ DA	5000
Refreshments 30 persons @ Rs. 200 per head x 5 days	30000
Faculty Fees	15000
Photo & Video expenses	2000
Literature & Misc. Expenses	3000
Raw material	30000
Total	100000
For four programmes	400000

g) Topics to be covered under training: To trained the artisans in making of coir pith manure

H) Impact of the training: 120 artisans will have trained in Pith manure making in four villages

8.2.2 One week training program on 2 Ply Yarn making and Fiber Extraction on mobile defibring machine

a) No. Of programs: One numbers

b) Batch size: 30 in each program

c) **Place & Organisation imparts training:** Will happen in cluster itself by the IA and CDA, with the help of machine supplier.

d) Duration of training: One week days

e) Cost of training:

Venue Cost	5000

travel expenses for faculty	10000
Local TA/ DA	5000
Refreshments 30 persons @ Rs. 200 per head x 5 days	30000
Faculty Fees	15000
Photo & Video expenses	2000
Literature & Misc. Expenses	3000
Raw material	30000
Total	100000
For four programmes	400000

g) Topics to be covered under training: To trained cluster firms regarding making of 2 ply yarn and defibring in the machine

H) Impact of the training: 30 artisans will have trained in making 2 ply yarn and extract fiber from husk

8.2.2 One week training program on mat weaving and geotextile making

a) No. Of programs: two numbers

b) Batch size: 30 in each program

c) **Place & Organisation imparts training:** Will happen in cluster itself by the IA and CDA, with the help of machine supplier.

d) Duration of training: One week days

e) Cost of training:

Venue Cost	5000
travel expenses for faculty	10000
Local TA/ DA	5000
Refreshments 30 persons @ Rs. 200 per head x 5 days	30000
Faculty Fees	15000
Photo & Video expenses	2000
Literature & Misc. Expenses	3000
Raw material	30000
Total	100000
For two programmes	200000

g) Topics to be covered under training: To trained cluster firms regarding making of mat and geotextile

H) Impact of the training: 30 artisans will have trained in making mat and geo textile

8.2.2 Two months training program on making of coir craft

a) No. Of programs: One numbers

b) Batch size: 30 in each program

c) **Place & Organisation imparts training:** Will happen in cluster itself by the IA and CDA, with the help of coir master craft man (MCM).

d) Duration of training: Two months (50 days)

e) Cost of training:

Venue Cost	10000
travel expenses for faculty	15000
Refreshments 30 persons @ Rs. 200 per head x 50 days	300000
Faculty Fees	40000
Photo & Video expenses	2000
Literature & Misc. Expenses	3000
Raw material	30000
Total	400000

g) Topics to be covered under training: To trained cluster artisans regarding making of coir craft

H) Impact of the training: 30 artisans will have trained in making of Coir crfat

8.2. Market Promotion

8.2.1 Buyer and sellers meet

a) No. Of programs: Three numbers

b) Batch size: 60 in each program

c) **Place & Organisation imparts event:** Will happen in cluster itself by the IA and CDA.

d) Duration of event: One day

e) Faculty available: Buyers from the Kolkata and Bardhaman will be invited

f) Cost of training:

Venue Cost	10000
Local TA/ DA	15000
Refreshments 50 persons @ Rs. 150 per head	7500
Photo & Video expenses	3000
Products	4500
Total	40000
For three programmes	120000

g) Impact of the training: 50 cluster firms develop linkage with major buyers from Cuttack and Bhubaneswar

8.2.2 Participation in local, national and international exhibition and fairs

a) Cost to activity: Rs.

c) Impact of the events: Cluster firms will get exposer to other market and able to sell their products.

8.2.3 Launching of website and inauguration of CFC

Cost of the activity: Rs. 30,000

Impact: cluster website will be launched and help for online publicity and marketing of the cluster products

8.2.3 Interface with ecommerce service providers like India Mart, Alibaba

Cost of the activity: Rs. 1,50,000

Impact: It will promote the online marketing of the cluster products

8.3 FUNDING FOR SOFT INTERVENTIONS

S. No	Name of the Activity	GoI Grant	State Government Contribution	Stake Holders Contribution	Total Funds required
1. Capacity Building					
1	Launch workshop	0.40	0.00	0.000	0.40
3	Study tour to Polachi Coir cluster	1.50	0.00	0.000	1.50
4	Awareness Workshop on Government Schemes	0.40	0.00	0.000	0.40
6	Entrepreneurship development training (2nos)	1.20	0.00	0.000	1.20
2. Product development & SDPS					
7	One week training on making of coir pith manure (4 no.)	4.00	0.00	0.000	4.00
8	One week training program on 2 Ply Yarn making and Fiber Extraction on mobile defibring machine	1.00	0.00	0.00	1.00
9	One week training program on mat weaving and geotextile making (2 nos)	2.00	0.00	0.00	2.00
10	Two months training program on coir craft	4.00	0.00	0.00	4.00
3. Market promotion					
11	Organising buyer-seller meet (3 nos)	1.20	0.00	0.000	1.20
12	Participation in local, national and international exhibition and fairs	7.00	0.00	0.000	7.00
13	Launching of Website and inauguration of CFC	30	0.00	0.000	30
14	Interface with e commerce service providers	1.50	0.00	0.000	1.50
Grand Total		**25.00**	**0.00**	**0.00**	**25.00**

CHAPTER – 9
Hard intervention

9.1 Coir processing cum production centre

The Cluster is proposing to have on defibering unit at CFC for process the collected husk available in the local area. The prodcution capacity of the is 4000 kg per kg per day..

At present all the units are using charkas for spinning yarn which can produce 20 KG of yarn from fibre per day per machine. Thus on an average a unit is making only 100 to 150 KG, of yarn. Due to low production they could not able to make geo textiles which require huge quantity of yarn. Moreover the quality of yarn is also not very good since spinning cannot be as tight as made by an automatic spinning machine. Thus there is a need to establish an automatic spinning unit as common facility which can make 25 KG per hour per machine, thus improving the productivity and reduced employee drudgery. 5 machines are planned to be bought for the facility which can make 4000 KG per day per one shift.

The SPV is contemplating to establish Geo Textile making unit and Matting unit, which is expected to supply for local PWD and other Road Development Authorities both at State and Ventral Level.

The SPV is as planning to commercially utilise the coir pith by making of manure and making of coir handicraft. At field as well as the CFC level the pith will get processed manually with help of some tools and equipments to make manure and then it will be get weighed and packed manually in half kg, one kg, five kg and twenty five kg packets for domestic marketing.

The SPV is also planning to distribute the mesh mat frame to 200 artisans at their household level to make mats at their end and 20 corridor mat frame and press devise to give 120 artisans (6 nos in one group) to make corridor mat at household level. SPV will supply yarn to the artisans and will also provide marketing support to them.

9.2 Land details

Implementing agency has his own land at cluster area And IA has leased the land to the SPV for 25 years The existing land is sufficient for establishment of Coir processing plant. All the basic amenities like power, water are already available in the proposed site. Lease letter is enclosed.

9.3 Civil structure

Sl. No	Description	Unit of Area	Qty.	Unit Rate (In Rs.)	Total amount (In Rs.)
1	Industrial shed for defibring section	Sq. Ft.	2000.00	600.00	12,00,000
2	Industrial shed for spinning section	Sq. Ft.	3000.00	1000.00	30,00,000
3	Industrial shed for geotextile and matting section	Sq. Ft.	1500.00	1000.00	15,00,000
4	Store Room	Sq. Ft.	1700.00	1000.00	17,00,000
5	Office	Sq. Ft.	300.00	1000.00	3,00,000

	Total Civil Estimate (A)				**7700000**

Civil Map and BOQ (Bill of Quantity) is enclosed

9.4 Machinery and equipment details

Machinery details are given in the following table:

Name of the machinery	hp	qty	Rate	Total Basic Price
Defibering machine	20	1	1800000	1800000
Double head spinning machine, including willowing , auto fiber feeding double head conveyor and spares	30	15	407000	6105000
Geotextile powerloom	15	1	1750000	1750000
Meash Mat		200	800	160000
Corridor mat fram & Press divice		20	45000	900000
Pith manure processing tools like sieving machine, sand remover, Weighing and sealing machine	3	1	500000	500000
Well & Pumpset				150000
Transformer and Electrical cabling				500000

9.5 Business Plan

The combined business plan of both production center is given in the detailed business plan Chapter (No: 14).

9.6 Implementation schedule

The civil construction will be completed by end of third quarter of the first year of the project implementation. Purchase and erection of machinery will be done by last quarter of 1st year and plant is expected to start its commercial operations by end of 1sy. It is expected to reach breakeven in the first year of operation.

9.7 Any other information pertaining to the project

Cluster members will mainly use the facility 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 other household 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. Following table shows the cost of project:

Sloe	Particulars	Total (Rs. lakhs)
I. Hard Interventions		
A	Land (Lease)	-
B	Building & other Civil Works	77.00
C	Plant and machinery	141.08
D	Raw Material Bank/ Working capital	38.92
	Total for Hard Interventions	**257.00**
II.	**Provision for Soft Interventions**	**25.00**
III.	**IA Fees (8% of HI max. up to 20 lakhs)**	**20.00**
IV.	**TA Fees (8% of HI max. up to 30 lakhs)**	**20.86**
	Total	**322.56**

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:

S.No	Means of finance	Total
I.	**GoI Grant under SFURTI**	296.86
II.	**State Contribution if any**	0.00
III.	**Promoters Equity**	0.00
	Own Sources	25.70
	Unsecured loans	0.00
IV	**Loan from Bank**	0.00
Total		**322.56**

As per the revised guidelines, 100% grant is considered for implementation of SI plan and SI is 10% of the HA or 25.00 lakhs, whichever is lesser so here SI is Rs. 25.00 lakhs. For Hard interventions 90% grant is considered and IA as their contribution will bring Rs 25.70 lakhs remaining 10%. IA fee is 8% of HI or Rs. 20 lakhs, whichever is lesser I,e 20.00 lakhs. TA fees are calculated as 8% of HI or 30.00 lakh whichever is lesser so coming to Rs. 20.56 lakhs. Thus the total project cost is coming to 322.56 lakhs in which GoI grant is 296.86 lakhs, which is within maximum cap for major Cluster i.e. Rs. 500 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 establishment of f HI, the second and third year will be sustaining the CFC and other interventions. The detailed phasing is given as below:

Sl.No	Particulars	1st Year	2nd Year	3rd Year	Total
A	Land Development				
B.	Civil Construction	77.00	0.00	0.00	77.00
C	Plant and machinery	141.08	0.00	0.00	141.08
D	Working capital	0.00	38.92	0.00	38.92
G	Provision for Soft Interventions	20.00	5.00	0.00	25.00
		0	0	0	0
H	IA Fees	7.52	6.24	6.24	20.00
		0	0	0	0
I	TA Fees	10.28	5.14	5.14	20.56
		0	0	0	0
	Total	255.88	55.3	11.38	322.56

		1st Year	2nd Year	3rd Year	Total
I.	**GoI Grant under SFURTI**	230.18	55.30	11.38	296.86
II.	**State Contribution if any**	0.00	0.00	0.00	0.00
III.	**Promoters Equity**	0.00	0.00	0.00	0.00
	Own Sources	25.70	0.00	0.00	25.70
	Unsecured loans	0.00	0.00	0.00	0.00
Total		255.88	55.3	11.38	322.56

Chapter – 11

Plan for convergence of initiatives

Coir industry in cluster is mainly having 500 artisans. At present these units are depending on manual charkhas for spinning which can produce not even 5 KG per day. Thus the total production of 5 units is not crossing 300 Kgs per day. Thus there is a need to leverage PMEGP, to expand their yarn making facilities by purchasing one fully automatic double head spinning machine per unit. Thus each unit require Rs. 5.00 lakh for purchase of machinery, civil alterations and working capital.

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/ 2 ply making units by artisans under PMEGP	5	5 Nos. x Rs. 5,00,000 = Rs.25,00,000	10,00,000	13,75,000	1,25,000
	Total		25,00,000	10,00,000	13,75,000	1,25,000

Chapter – 12

Enhanced project cost with convergence of schemes

Overall project cost which is including grant under SFURTI, Stakeholder contribution, and cofounding by State Government as grant besides bank finance 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 otherScheme (PMEGP)	Stakeholder Contribution
1	Soft Interventions	25.00	25.00	0.00	0.00	0.00	0.00
2	Hard Interventions	257.00	231.30	0.00	0.00	0.00	25.70
3	Activities through convergence	25.00	0.00	10.00	0.00	13.75	1.25
4	Implementing Agency Fees	20.00	20.00	0.00	0.00	0.00	0.00
6	Technical Agency Fees	20.56	20.56	0.00	0.00	0.00	0.00
	Total	**347.56**	**296.86**	**10**	**0.00**	**13.75**	**26.95**

Thus out of a total of 347.56 lakhs as project cost, SFURTI contribution is coming to 83%, Stake Holders contribution is coming to 3% ,bank loan is coming around 5% and remaining 9% is from PMEGP.

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.

	Q1	Q2	Q3	Q4	Q5	Q6
MoU Signing, Dedicated account opening, Deposit of IA contribution, Opening of project office (IA), Appointment of CDE, Formation of working committee						
Trust building and capacity building programme execution						
Product development and Skill training programme execution						
Establishment of Common facility centre						
Market promotion activities						

Chapter – 14

Detailed Business Plan

A tentative business plan is prepared for proposed common Processing center, raw material bank and training centre based on the following parameters. It is to be mentioned that no income is expected from any of the soft interventions for SPV. The add on components like artisan sales outlet are not included in business plan, as it is too early to assess the competency development of artisans to operate such high end facilities.

14.1: Production Capacity:

Only new products made under SFURTI Scheme have been considered for business plan calculation, and they are:

a) **Coir fiber**
b) **Coir yarn**
c) **Coir pith manure**
d) **Geo textile**
e) **Coir mat**

The existing products made by the Cluster like Mesh mat and corridor mat were not considered as they are not made under the scheme.

The production capacity of Coir fiber is 2000 kg per day, coir pith manure 2000 kg per day, coir yarn 800 kg per day, geo textile 300 sqmt per day and coir mat 60 sq mt per day based on the no. of machines and their individual capacities, at 100% utilisation. The unit is expected to reach 60% capacity utilisation in the first year, 65% in the second year and reach a capacity of 80% by 6th year.

14.2 Product Mix:

As stated above the product mix considered under SFURTI Scheme is coir fiber,which will be sold at average price of Rs. 20 per kg, the average price of coir pith manure Rs.10 Per Kg, the average price of coir yarn Rs.45 Per Kg.Geotextile average price isRs.100 Per sq mt. and coir mat average price is Rs.120 Per sq.mt.

14.3 Manpower Cost:

Details of manpower cost are given in the following table:

Particulars	No.	Salary/ month Rs.	Annual Wages & Salaries Rs. lakhs
Plant Incharge	1	20000	2.40
Operators	6	15000	10.80
Store Keeper	2	6000	1.44
Skilled Labour	30	6000	21.60
Unskilled labour	4	5200	2.50
	43		**38.74**
Add: Fringe Benefits			**9.68**
Total			**48.42**
ADMINISTRATIVE SALARIES			
Manager	1	25000	3.00
Marketing Officer	3	15000	5.40
Accts/ Admin/ Assts	2	8000	1.92
Security	2	5000	1.20
	8		**11.52**
Add: Fringe Benefits			**2.88**
Total			**14.40**
TOTAL	**51.00**		**62.82**

14.4 Utility and other overheads:

Power: The project requires 70 HP power and is expected to cost an amount of Rs. 4.91 lakhs in the first year of operation.

Water: Only potable water is required and no water for industrial purpose. So nominal charges of Rs. 0.20 lakhs is considered for the first year.

Admin expenses are considered at 2% on sales, repairs and maintenance as 3% of sales and sales expenses as 4% on sales.

14.5 Depreciation

A depreciation of 3.34% on buildings and 7.42% 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. 9.27 lakhs per annum.

14.6 Working Capital

Working Capital requirement is 19.29 lakhs for purchase of Husk and fiber will be procured.

Particulars	No. of months	2021
Current Assets		
1. Raw materials	2.00	14.00
2. Consumables, Stores and spares	2.00	4.00
3. Stock in process (Month's cost of production)	0.50	8.04
4. Finished Goods	0.50	8.04
5. Export's recievables	0.47	0.19
6. Recievables other than exports	0.49	9.79
Total Current Assets (A)		**44.06**
Current Liabilities		
1. Creditors for purchases	0.75	5.29
		0.00
Total Cuurent Liabilities (B)		5.29
Working Capital Gap (A-B)		**38.92**
Less : Bank Borrowing for working capital		0.00
Margin money for working capital		38.92

14.7 Financial Projections

14.7.1 Profitability Statement: Given as below:

Year Ending 31st March	2021	2022	2023	2024	2025
Production Capacity Utilisation	0.60	0.65	0.70	0.75	0.80
Sales as percentage of installed capacity	0.60	0.65	0.70	0.75	0.80
Sales/ Total Income					
Gross Domestic Sales	239.76	259.74	279.72	299.70	319.68
Less: Excise Duty	0.00	0.00	0.00	0.00	0.00
Net Domestic Sales	239.76	259.74	279.72	299.70	319.68
Export Sales	0.00	0.00	0.00	0.00	0.00
Net Sales	239.76	259.74	279.72	299.70	319.68
Other Operational Income	0.00	0.00	0.00	0.00	0.00
Total Income	**239.76**	**259.74**	**279.72**	**299.70**	**319.68**
COST OF PRODUCTION- SALES					
Raw material Consumed	84.60	91.65	98.70	105.75	112.80

Consumables, Stores and spares (5% on sales)	23.98	25.97	27.97	29.97	31.97
Power, Fuel and other utlities (Variable)	4.91	5.32	5.73	6.14	6.55
Power, Fuel and other utlities (Fixed)	2.46	2.66	2.87	3.07	3.28
Water	0.20	0.21	0.22	0.23	0.24
Factory salaries & Wages (variable)	48.42	48.42	48.42	48.42	48.42
Factory salaries & Wages (fixed)	14.40	14.40	14.40	14.40	14.40
Repair and maintenance	4.80	5.19	5.59	5.99	6.39
Other Variable Expenses	0.00	0.00	0.00	0.00	0.00
Depreciation	9.27	9.27	9.27	9.27	9.27
Sub Total	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**
Add: Opening Stock in process	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
COST OF PRODUCTION	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**
Add: Opening stock of finished goods	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
Cost of sales	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**
Selling Packing & Distrbution Expenses	4.80	5.19	5.59	5.99	6.39
Administrative & Misc. Expenses	4.80	5.19	5.59	5.99	6.39
Sub Total	202.62	213.50	224.37	235.24	246.11
Profit Before Interest and Tax (PBIT)	**37.14**	**46.24**	**55.35**	**64.46**	**73.57**
Interest on Bank Loan	0.00	0.00	0.00	0.00	0.00
Interest on unsecured loan	0.00	0.00	0.00	0.00	0.00
Interest on bank borrowing	0.00	0.00	0.00	0.00	0.00
Operating Profit	37.14	46.24	55.35	64.46	73.57
Preliminary expenses written off	0.00	0.00	0.00	0.00	0.00
Non Operational Income	0.00	0.00	0.00	0.00	0.00
Profit Before Tax (PBT)	**37.14**	**46.24**	**55.35**	**64.46**	**73.57**
Provision for taxation	5.38	9.43	13.48	16.91	20.65
Profit After Tax	**31.76**	**36.81**	**41.87**	**47.55**	**52.91**

14.7.2 Break Even Analysis

DETAILS	2021	2022	2023	2024	2025
Production Capacity Utilisation	**60.00%**	**65.00%**	**70.00%**	**75.00%**	**80.00%**
A. Variable Expenses					
1. Raw material consumed	84.60	91.65	98.70	105.75	112.80
2. Consumable Spares	23.98	25.97	27.97	29.97	31.97
3. Power, Fuel & other utlities (Variable Cost)	4.91	5.32	5.73	6.14	6.55
4. Factory Salaries & Wages (Variable)	48.42	48.42	48.42	48.42	48.42
5. Other variable expenses	0.00	0.00	0.00	0.00	0.00

6. Selling, Packaging & distribution expenses (Variable)	4.80	5.19	5.59	5.99	6.39
7. Interest on bank borrowing	0.00	0.00	0.00	0.00	0.00
Total Variable Cost	166.71	176.56	186.42	196.28	206.13
B.Fixed Expenses					
1. Power, Fuel & other utlities (Fixed Cost)	2.46	2.66	2.87	3.07	3.28
2. Factory Salaries & Wages (fixed)	14.40	14.40	14.40	14.40	14.40
3. Repairs & Maintenance	4.80	5.19	5.59	5.99	6.39
4. Depreciation	9.27	9.27	9.27	9.27	9.27
5. Administrative & Misc. Expenses	4.80	5.19	5.59	5.99	6.39
6. Interest on term loans	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
8. Lease rentals	0.00	0.00	0.00	0.00	0.00
Sub Total	35.72	36.72	37.73	38.73	39.74
C.Sales	239.76	259.74	279.72	299.70	319.68
D.Contribution	73.05	83.18	93.30	103.42	113.55
E.Break Even Point (B/D)	48.89%	44.15%	40.44%	37.45%	35.00%
F.Cash Break Even	36.20%	33.00%	30.50%	28.48%	26.83%
G.BREAK EVEN SALES	117.22	114.68	113.11	112.24	111.87

14.7.3 IRR Calculation

IRR before tax						
	Const. Period	**2021**	**2022**	**2023**	**2024**	**2025**
Out Flows						
Capital Investment	-257.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		38.92	2.41	2.56	3.56	2.56
Total outflows	-257.00	38.92	2.41	2.56	3.56	2.56
Inflows						
Profit before tax	0.00	37.14	46.24	55.35	64.46	73.57
Add Depreciation and non cash expenses	0.00	9.27	9.27	9.27	9.27	9.27

Add: Preliminary & Preop Expenses	0.00	0.00	0.00	0.00	0.00	0.00
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
Add : Salvage Value	0.00	0.00	0.00	0.00	0.00	0.00
Total Inflows	0.00	46.41	55.52	64.62	73.73	82.84
Net cash flows	**-257.00**	**7.48**	**53.10**	**62.06**	**70.17**	**80.28**
NPV before tax(Rs. in lakhs)	**158.05**		**Discount Rate taken =**		**10.00%**	
Before - Tax IRR	**20.56%**					

IRR after tax

	Const. Period	2021	2022	2023	2024	2025
Out Flows						
Capital Investment	-257.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		38.92	2.41	2.56	3.56	2.56
Total outflows	-257.00	38.92	2.41	2.56	3.56	2.56
Inflows						
Profit after tax	0.00	31.76	36.81	41.87	47.55	52.91
Add Depreciation and non cash expenses	0.00	9.27	9.27	9.27	9.27	9.27
Add: Preliminary & Preop Expenses	0.00	0.00	0.00	0.00	0.00	0.00
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
Add : Salvage Value	0.00	0.00	0.00	0.00	0.00	0.00
Total Inflows	0.00	41.03	46.09	51.14	56.82	62.19
Net cash flows	**-257.00**	**2.11**	**43.67**	**48.58**	**53.26**	**59.62**
NPV after tax(Rs. in lakhs)	**61.70**		**Discount Rate taken =**		**10.00%**	
Post - Tax IRR	**14.51%**					

Conclusions:

All the above financial statements indicate that the proposed facilities are viable, provided at least 50% capacity utilization is ensured. Any drop-in user charges more than 20% and increase in expenditure cost by 10% will make the unit a non-viable proposition. For both the facilities provision for use of non-members is compulsory to make it a sustainable venture.

Chapter – 15
Proposed Implementation Framework

15.1 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 other State Schemes for add on activities with due help from TA
- Capacitate its executive members for strong self-governance

15.2 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 play a crucial role in organising few of the training programs like on advanced practices in mat making, rope making etc.

Coir Board

The CB 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 (COL)

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.

Working Committee (WC)

A WC will be formed preferably chaired by District Magistrate, with nominated members from Commissioner of Industries, Coir Boar local office, NABARD, SPV and a related Technical Institution. The WC 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.

15.3 Structure and composition of SPV

The Proposed Common Facilities will be managed by Special Purpose Vehicle. The SPV will oversee the following functions:

- 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

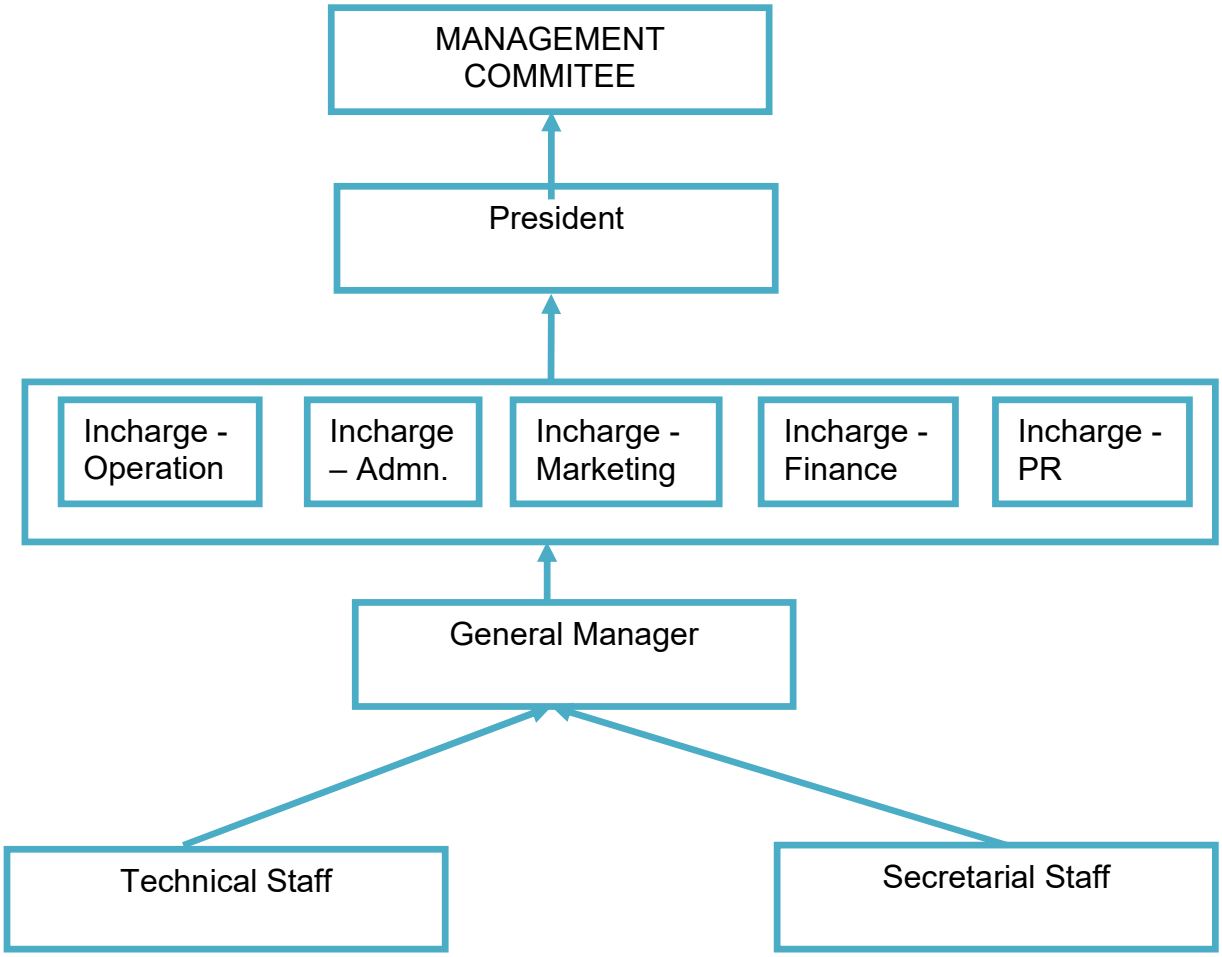
The management of the CFC will be a three tier structure for smooth and uninterrupted operations and is as follows:

The Management Committee: It is the main governing body for the SPV which is ably assisted by Technical and Secretarial staff. At present committee is having 3 executive namely President, Secretary and Treasurer. While the President will oversee the entire operations, the other 2 executives and 2 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 staff is headed by an experienced Manager and will be assisted by skilled and unskilled employees to run the proposed hard interventions.

The Secretarial Staff: A competent and well qualified person will be appointed as the General Manager who will look after day to day operations of CFC and is directly reporting to Management Committee. He will be assisted by an accountant and assistant besides security guards who will work on shift basis.

The proposed organizational structure of the CFC is given as below:



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 Impact

16.1.1 at Enterprise Level

Number of direct beneficiary firms: all manufacturing firms along with 800 artisans.

a) **Likely range of outputs:**

- At least 30 workers, artisans will be trained in advanced 2 ply and defibring making besides 120 artisans in making of pith manure
- At least 60 workers, artisans will be trained in making of geo-textile and mat besides 30 artisans in making of coir craft
- 320 artisans will able to make mesh mat and corridor mat at their household level with the support of frames distributed to them under the project
- At least 5 firms will start export marketing and 15 house hold units direct marketing by becoming producers
- At least 5 units will be benefitted under Public Support Schemes like PMEGP

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.

15.1.2 Cluster Level

- Strengthening of SPV for establishment and management of proposed hard interventions
- Establishment of a common facility centre for geotextile, coir mats, 2 Ply yarn, pith manure and fibre making.
- 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 50%

The performance indicators at cluster level are given as below:

S.No	**Indicator**	**Present Status**	**Post Intervention (At the end of 3rd Year)**
1	Present product	Yarn, Mesh mat, Corridor mat	Fiber, yarn, pith manure, geotextile, coir mat
2	Total Turnover (Rs. In lakhs)	22	225.36 lakhs
3	Investments (Rs. In lakhs)	35	245 (including CFCs)
4	Profitability (in Percentage)	10% to 15%	20% to 25%
5	No. of Artisans	300	600
6	Capacity Utilization (in %)	20 to 30	60 to 70
7	Skilled Artisan income (Rs. in Thousands)	1500 to 2000	4000 to 6000
8	Direct Marketing by artisans (In nos.)	0	20
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 SurakshaBheema Yojana + Atal Pension Yojan + Pradhan Mantri JeevanJyothiBheemaYoujana)	0	600 No's

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	-	77.00	77.00
C	Plant and machinery			
	a. indigenous	-	141.08	141.08
	b.import	-	-	-
D	Lease Deposit &Electricty Deposit	-	-	-
E	Technical consultancy fee	-	-	-
F	Miscellaneous fixed assets	-	-	-
G	Erection / installation charges	-	-	-
H	Preliminary expenses	-	-	-
I	Pre-operative expenses	-	-	.
J	Provision for contingencies			
	a.buildings (@2%)	-	-	-
	b.Plant& Machinery (5%)	-	-	-
	c.Other fixed assets	-	-	-
K	Working capital	-	38.92	38.92
	Total :	-	257.00	257.00

MEANS OF FINANCE

				Rs.In Lakhs
Sl.No.	Particulars	amonut already raised	amonut proposed to be raised	Total
	Equity			
A	Equity from spv@10%	-	-	25.70
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. (90%)	-	-	231.30
G	Subsidy : state govt.	-	-	
	Total	-	-	257.00

Annexure - II

S.No.	Name of the machinery	hp	qty	Rate	Total Basic Price	GST (18%)	Frieight Charges (2% or actuals)	Total Amount
1	Defibering machine	20	1	1800000	1800000	324000	36000	2160000
2	Double head spinning machine, including willowing , auto fiber feeding double head conveyor and spares	30	15	407000	6105000	1098900	122100	7326000
3	Geotextile powerloom	15	1	1750000	1750000	315000	35000	2100000
4	Meash Mat		200	800	160000	28800	3200	192000
5	Corridor mat fram & Press divice		20	45000	900000	162000	18000	1080000
5	Pith manure processing tools like sieving machine, sand remover, Weighing and sealing machine		1	500000	500000	90000	10000	600000
7	Well & Pumpset							150000
8	Transformer and Electrical cabling							500000
	Sub Total - 1	**65**						**14108000**

Sub Total 1 **14108000**

In Lakhs **141.08**

Annexure - III

Detailed Workings

1. Civil Works

	Description	Quantity (SFT/ Nos)	Rate (In Rs.)	Amount
	General			
1	Industrial shed for defibring section	2000.00	600.00	12,00,000
	Industrial shed for spinning section	3000.00	1000.00	30,00,000
	Industrial shed for geo textile and mat making section	1500.00	1000.00	15,00,000
	Raw materila godown	1700.00	1000.00	17,00,000
	Office	300.00	1000.00	3,00,000
	Total	8500.00		**77.00**

Annexure -IV
Inputs

(Rs.in lakhs)

YEAR	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Raw materials for Cor fiber and pith	36.00	39.00	42.00	45.00	48.00	51.00	51.00	51.00	51.00	51.00
Raw materials for Coir yran	21.60	23.40	25.20	27.00	28.80	30.60	30.60	30.60	30.60	30.60
Raw materials for geo textile	27.00	29.25	31.50	33.75	36.00	38.25	38.25	38.25	38.25	38.25
Raw materials for Mat	8.10	8.78	9.45	10.13	10.80	11.48	11.48	11.48	11.48	11.48
Power & Diesel	4.91	5.32	5.73	6.14	6.55	6.96	6.96	6.96	6.96	6.96
Water	0.20	0.21	0.22	0.23	0.24	0.26	0.27	0.28	0.30	0.31
Total	**97.81**	**105.96**	**114.10**	**122.25**	**130.40**	**138.54**	**138.55**	**138.57**	**138.58**	**138.60**
Total Cost	**97.81**	**105.96**	**114.10**	**122.25**	**130.40**	**138.54**	**138.55**	**138.57**	**138.58**	**138.60**

COST COMPONENTS AS % OF SALES

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

ANNEXURE- V

BASIC ASSUMPTIONS FOR PROFITABILITY

REVENUE PROJECTIONS

YEAR	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capacity Utilization (%)	60%	65%	70%	75%	80%	85%	85%	85%	85%	85%
Coir fiber										
Installed Capacity (In Set)	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000
Actual production(In Set)	360000	390000	420000	450000	480000	510000	510000	510000	510000	510000
Sale cost per Set	20	20	20	20	20	20	20	20	20	20
Revenue(Rs lakhs)	**72.00**	**78.00**	**84.00**	**90.00**	**96.00**	**102.00**	**102.00**	**102.00**	**102.00**	**102.00**
Coir pith										
Installed Capacity (in Nos)	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000
Actual Production (in nos)	360000	390000	420000	450000	480000	510000	510000	510000	510000	510000
Sale cost per Pic	10	10	10	10	10	10	10	10	10	10
Revenue(Rs lakhs)	**36.00**	**39.00**	**42.00**	**45.00**	**48.00**	**51.00**	**51.00**	**51.00**	**51.00**	**51.00**
Coir yarn										
Installed Capacity (in Nos)	240000	240000	240000	240000	240000	240000	240000	240000	240000	240000
Actual Production (in nos)	144000	156000	168000	180000	192000	204000	204000	204000	204000	204000
Sale cost per Pic	45	45	45	45	45	45	45	45	45	45
Revenue(Rs lakhs)	**64.80**	**70.20**	**75.60**	**81.00**	**86.40**	**91.80**	**91.80**	**91.80**	**91.80**	**91.80**

Geo textile										
Installed Capacity (in Nos)	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Actual Production (in nos)	54000	58500	63000	67500	72000	76500	76500	76500	76500	76500
Sale cost per Pic	100	100	100	100	100	100	100	100	100	100
Revenue(Rs lakhs)	**54.00**	**58.50**	**63.00**	**67.50**	**72.00**	**76.50**	**76.50**	**76.50**	**76.50**	**76.50**
Coir mat										
Installed Capacity (in Nos)	18000	18000	18000	18000	18000	18000	18000	18000	18000	18000
Actual Production (in nos)	10800	11700	12600	13500	14400	15300	15300	15300	15300	15300
Sale cost per Pic	120	120	120	120	120	120	120	120	120	120
Revenue(Rs lakhs)	**12.96**	**14.04**	**15.12**	**16.20**	**17.28**	**18.36**	**18.36**	**18.36**	**18.36**	**18.36**
TOTAL REVENUE	**239.76**	**259.74**	**279.72**	**299.70**	**319.68**	**339.66**	**339.66**	**339.66**	**339.66**	**339.66**

COST OF THE PROJECT

(Rs.lacs)

DETAILS	COST
1. Land and site development	0.00
2. Civil Works	77.00
3. Plant & Machinery-	141.08
4. Margin for Working Capital	38.92
TOTAL	**257.00**

(Rs.lacs)

DETAILS	AMOUNT
Equity from spv@10%	25.70
Subsidy : central govt. (90%)	231.30
Term loan-0%	0.00
Subsidy : state govt.	0.00
TOTAL	**257.00**

ANNEXURE - VI

PROJECTED PROFITABILITY STATEMENT

Year Ending 31st March	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
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	239.76	259.74	279.72	299.70	319.68	339.66	339.66	339.66	339.66	339.66
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	239.76	259.74	279.72	299.70	319.68	339.66	339.66	339.66	339.66	339.66
Export Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Sales	239.76	259.74	279.72	299.70	319.68	339.66	339.66	339.66	339.66	339.66
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	**239.76**	**259.74**	**279.72**	**299.70**	**319.68**	**339.66**	**339.66**	**339.66**	**339.66**	**339.66**
COST OF PRODUCTION- SALES										
Raw material Consumed	84.60	91.65	98.70	105.75	112.80	119.85	119.85	119.85	119.85	119.85
Consumables, Stores and spares (5% on sales)	23.98	25.97	27.97	29.97	31.97	33.97	33.97	33.97	33.97	33.97
Power, Fuel and other utlities (Variable)	4.91	5.32	5.73	6.14	6.55	6.96	6.96	6.96	6.96	6.96
Power, Fuel and other utlities (Fixed)	2.46	2.66	2.87	3.07	3.28	3.48	3.48	3.48	3.48	3.48
Water	0.20	0.21	0.22	0.23	0.24	0.26	0.27	0.28	0.30	0.31
Factory salaries & Wages (variable)	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42
Factory salaries & Wages (fixed)	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40
Repair and maintenance	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
Other Variable Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
Sub Total	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**	**243.40**	**243.41**	**243.43**	**243.44**	**243.45**
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	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**	**243.40**	**243.41**	**243.43**	**243.44**	**243.45**
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	**193.03**	**203.11**	**213.18**	**223.25**	**233.33**	**243.40**	**243.41**	**243.43**	**243.44**	**243.45**
Selling Packing & Distrbution Expenses	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
Administrative & Misc. Expenses	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
Sub Total	202.62	213.50	224.37	235.24	246.11	256.99	257.00	257.01	257.03	257.04
Profit Before Interest and Tax (PBIT)	**37.14**	**46.24**	**55.35**	**64.46**	**73.57**	**82.67**	**82.66**	**82.65**	**82.63**	**82.62**
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	37.14	46.24	55.35	64.46	73.57	82.67	82.66	82.65	82.63	82.62
Preliminary expenses written off	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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)	**37.14**	**46.24**	**55.35**	**64.46**	**73.57**	**82.67**	**82.66**	**82.65**	**82.63**	**82.62**
Provision for taxation	5.38	9.43	13.48	16.91	20.65	24.09	24.70	25.00	25.62	25.92
Profit After Tax	**31.76**	**36.81**	**41.87**	**47.55**	**52.91**	**58.59**	**57.96**	**57.64**	**57.02**	**56.70**
Dividend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retained Earnings	31.76	36.81	41.87	47.55	52.91	58.59	57.96	57.64	57.02	56.70
Net Cash Accruals	41.03	46.09	51.14	56.82	62.19	67.86	67.23	66.92	66.29	65.97
PBIDT/ total income (%)	15.49	17.80	19.79	21.51	23.01	24.34	24.34	24.33	24.33	24.32
Operating Profit/ Total Income (%)	15.49	17.80	19.79	21.51	23.01	24.34	24.34	24.33	24.33	24.32
Net Profit/ Total Income (%)	13.25	14.17	14.97	15.86	16.55	17.25	17.06	16.97	16.79	16.69
Raw material cost/ cost of production (%)	43.83	45.12	46.30	47.37	48.34	49.24	49.24	49.23	49.23	49.23
Cost of production/ net sales (%)	80.51	78.20	76.21	74.49	72.99	71.66	71.66	71.67	71.67	71.68
Cost of sales/ Net sales (%)	80.51	78.20	76.21	74.49	72.99	71.66	71.66	71.67	71.67	71.68
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	16.84	21.88	27.25	33.43	40.08	48.14	50.89	53.96	57.42	61.37

ANNEXURE - VII

PROJECTED CASH FLOW STATEMENT

(Rs. In Lacs)

DETAILS	Const. Period	2021	2022	2023	2024	2025	2026	2027	2028	2029
A. SOURCES OF FUNDS										
1. PBT with interest added back	0.00	37.14	46.24	55.35	64.46	73.57	82.67	82.66	82.65	82.63
2. Add Depreciation other non cash expenses	0.00	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
3. Increase in Equity Share Capital	25.70	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	231	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Increase in current liabilities		38.92	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00
TOTAL SOURCES	**257.00**	**85.33**	**57.93**	**67.19**	**77.30**	**85.40**	**94.51**	**91.94**	**91.92**	**91.91**
B. DISPOSITION OF FUNDS										
1. Increase in capital expenditure	218.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Preliminary & Pre op expenses	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		59.9	5.00	4.99	5.00	4.99	5.00	0.00	0.00	0.00

		4								
4. Repayments of Term Loans		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Taxation	0.00	5.38	9.43	13.48	16.91	20.65	24.09	24.70	25.00	25.62
TOTAL APPLICATION	**218.08**	**65.32**	**14.42**	**18.48**	**21.91**	**25.65**	**29.08**	**24.70**	**25.00**	**25.62**
C. NET SURPLUS/ DEFICIT	38.92	20.01	43.51	48.71	55.39	59.75	65.43	67.24	66.92	66.29
D. ADD : OPENING CASH BALANCE	0.00	38.92	58.93	102.44	151.15	206.54	266.30	331.72	398.96	465.88
E. CLOSING CASH BALANCE	38.92	58.93	102.44	151.15	206.54	266.30	331.72	398.96	465.88	532.17

ANNEXURE - VIII

PROJECTED BALANCE SHEET

(Rs. In Lacs)

DETAILS	Const. Period	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
LIABILITIES											
1. Share Capital	25.70	25.70	25.70	25.70	25.70	25.70	25.70	25.70	25.70	25.70	25.70
2. Reserves & Surplus	0.00	31.76	68.57	110.44	157.99	210.90	269.49	327.45	385.10	442.11	498.81
3. subsidy (Central +State)	231.30	231.30	231.30	231.30	231.30	231.30	231.30	231.30	231.30	231.30	231.30
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		38.92	41.34	43.90	47.46	50.03	52.59	52.59	52.59	52.59	52.59
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	**257.00**	**327.68**	**366.91**	**411.35**	**462.46**	**517.93**	**579.08**	**637.05**	**694.69**	**751.71**	**808.41**
ASSETS											
1. Gross Fixed Assets	218.08	218.08	218.08	218.08	218.08	218.08	218.08	218.08	218.08	218.08	218.08
2. Less : Accm.dpreciation	0.00	9.27	18.54	27.82	37.09	46.36	55.64	64.91	74.18	83.45	92.73
3. Net Fixed Assets	218.08	208.81	199.54	190.26	180.99	171.72	162.44	153.17	143.90	134.63	125.35
4. Current Assets	0.00	59.94	64.94	69.93	74.93	79.92	84.92	84.92	84.92	84.92	84.92
5. Cash & Bank Balance	38.92	58.93	102.44	151.15	206.54	266.30	331.72	398.96	465.88	532.17	598.14
6. Prelim. expenses not w/o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL ASSETS	**257.00**	**327.68**	**366.91**	**411.35**	**462.46**	**517.93**	**579.08**	**637.05**	**694.69**	**751.71**	**808.41**

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	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Gross Sales (Incl. job income)	239.76	259.74	279.72	299.70	319.68	339.66	339.66	339.66	339.66	339.66
Total working capital requirement (25% of gross sales)	59.94	64.94	69.93	74.93	79.92	84.92	84.92	84.92	84.92	84.92
Marging money for working capital (5% of gross sales)	11.99	12.99	13.99	14.99	15.98	16.98	16.98	16.98	16.98	16.98
Permissable bank borrowing (20% of gross sales)	47.95	51.95	55.94	59.94	63.94	67.93	67.93	67.93	67.93	67.93

As per second method of lending

Particulars	No. of months	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Current Assets											
1. Raw materials	2.00	14.00	15.00	16.00	18.00	19.00	20.00	20.00	20.00	20.00	20.00
2. Consumables, Stores and spares	2.00	4.00	4.33	4.66	5.00	5.33	5.66	5.66	5.66	5.66	5.66
3. Stock in process (Month's cost of production)	0.50	8.04	8.46	8.88	9.30	9.72	10.14	10.14	10.14	10.14	10.14
4. Finished Goods	0.50	8.04	8.46	8.88	9.30	9.72	10.14	10.14	10.14	10.14	10.14
5. Export's recievables	0.47	0.19	0.20	0.22	0.23	0.25	0.27	0.27	0.27	0.27	0.27
6. Recievables other than exports	0.49	9.79	10.61	11.42	12.24	13.05	13.87	13.87	13.87	13.87	13.87
Total Current Assets (A)		**44.06**	**47.06**	**50.07**	**54.07**	**57.08**	**60.08**	**60.08**	**60.08**	**60.08**	**60.08**
Current Liabilities											
1. Creditors for purchases	0.75	5.29	5.73	6.17	6.61	7.05	7.49	7.49	7.49	7.49	7.49
		0.00									
Total Cuurent Liabilities (B)		5.29	5.73	6.17	6.61	7.05	7.49	7.49	7.49	7.49	7.49
Working Capital Gap (A-B)		**38.92**	**41.34**	**43.90**	**47.46**	**50.03**	**52.59**	**52.59**	**52.59**	**52.59**	**52.59**
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		38.92	41.34	43.90	47.46	50.03	52.59	52.59	52.59	52.59	52.59

RECOMMENDED METHOD **NAYAK COMMITTEE METHOD**

Particulars	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total current assets	59.94	64.94	69.93	74.93	79.92	84.92	84.92	84.92	84.92	84.92
Total current Liabilities	5.29	5.73	6.17	6.61	7.05	7.49	7.49	7.49	7.49	7.49
Working Capital Gap	54.65	59.21	63.76	68.32	72.87	77.42	77.42	77.42	77.42	77.42
Margin Money for Working Capital	11.99	12.99	13.99	14.99	15.98	16.98	16.98	16.98	16.98	16.98

Less: Margin Money for Working Capital or WC financed by way WCTL which ever is higher		11.99	12.99	13.99	14.99	15.98	16.98	16.98	16.98	16.98	16.98
Borrowing for Working Capital		47.95	51.95	55.94	59.94	63.94	67.93	67.93	67.93	67.93	67.93
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**

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	77.00	0.00	0.00	0.00	77.00
2. Plant and Machinery	141.08	0.00	0.00	0.00	141.08
3. Misc Fixed Assets	0.00	0.00	0.00	0.00	0.00
Total	**218.08**	**0.00**	**.**	**0.00**	**218.08**

b) Estimation of Depreciation - St. Line basis

Particulars	Total Cost	Depn. Rate (%)	Amount
1. Land	0.00	0.00	0.00
2. Buildings	77.00	3.34	2.57
3. Plant and Machinery	141.08	4.75	6.70
4. Misc. Fixed Assets	0.00	6.33	0.00
Total	**218.08**		**9.27**

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	77.00	141.08	0.00	218.08
- Depreciation	8.00	21.00	0.00	29.00
II YEAR - WDV	69.00	120.08	0.00	189.08
- Depreciation	7.00	18.00	0.00	25.00
III YEAR - WDV	62.00	102.08	0.00	164.08
- Additions	0.00	0.00	0.00	0.00
- Total	62.00	102.08	0.00	164.08
- Depreciation	6.00	15.00	0.00	21.00
IV YEAR - WDV	56.00	87.08	0.00	143.08
- Additions	0.00	0.00	0.00	0.00
- Total	56.00	87.08	0.00	143.08
- Depreciation	6.00	13.00	0.00	19.00
V YEAR - WDV	50.00	74.08	0.00	124.08
- Additions	0.00	0.00	0.00	0.00
- Total	50.00	74.08	0.00	124.08
- Depreciation	5.00	11.00	0.00	16.00
VI YEAR - WDV	45.00	63.08	0.00	108.08

- Additions	0.00	0.00	0.00	0.00
- Total	45.00	63.08	0.00	108.08
- Depreciation	5.00	9.00	0.00	14.00
VII YEAR - WDV	40.00	54.08	0.00	94.08
- Additions	0.00	0.00	0.00	0.00
- Total	40.00	54.08	0.00	94.08
- Depreciation	4.00	8.00	0.00	12.00
VIII YEAR - WDV	36.00	46.08	0.00	82.08
- Additions	0.00	0.00	0.00	0.00
- Total	36.00	46.08	0.00	82.08
- Depreciation	4.00	7.00	0.00	11.00
IX YEAR - WDV	32.00	39.08	0.00	71.08
- Additions	0.00	0.00	0.00	0.00
- Total	32.00	39.08	0.00	71.08
- Depreciation	3.00	6.00	0.00	9.00
X YEAR - WDV	29.00	33.08	0.00	62.08
- Additions	0.00	0.00	0.00	0.00
- Total	29.00	33.08	0.00	62.08
- Depreciation	3.00	5.00	0.00	8.00
X YEAR - WDV	26.00	28.08	0.00	54.08
- Additions	0.00	0.00	0.00	0.00
- Total	26.00	28.08	0.00	54.08
- Depreciation	3.00	4.00	0.00	7.00

ANNEXURE - XI

COMPUTATION OF TAXATION

(Rs.lacs)

Details	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1. Profit Before Tax	37.14	46.24	55.35	64.46	73.57	82.67	82.66	82.65	82.63	82.62
2. Add: St. Line Depreciation	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
3. Less: WDV Depreciation	29.00	25.00	21.00	19.00	16.00	14.00	12.00	11.00	9.00	8.00
4. Gross Taxable Income	17.41	30.52	43.62	54.73	66.84	77.95	79.93	80.92	82.91	83.89
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	17.41	30.52	43.62	54.73	66.84	77.95	79.93	80.92	82.91	83.89
7. Income Tax @ 30%	5.22	9.15	13.09	16.42	20.05	23.38	23.98	24.28	24.87	25.17
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)	5.22	9.15	13.09	16.42	20.05	23.38	23.98	24.28	24.87	25.17
10. Education Cess @ 3%	0.16	0.27	0.39	0.49	0.60	0.70	0.72	0.73	0.75	0.76
11. Total income tax (Incl. surcharge & Education Cess)	**5.38**	**9.43**	**13.48**	**16.91**	**20.65**	**24.09**	**24.70**	**25.00**	**25.62**	**25.92**

ANNEXURE - XII
CALCULATION OF INTERNAL RATE OF RETURN & NPV

IRR before tax

(Rs.in lacs)

	Const. Period	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Out Flows											
Capital Investment	257.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		38.92	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00	0.00
Total outflows	257.00	38.92	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00	0.00
Inflows											
Profit before tax	0.00	37.14	46.24	55.35	64.46	73.57	82.67	82.66	82.65	82.63	82.62
Add Depreciation and non cash expenses	0.00	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
Add: Preliminary & Preop Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	54.08
Total Inflows	0.00	46.41	55.52	64.62	73.73	82.84	91.95	91.93	91.92	91.91	145.97
Net cash flows	**257.00**	**7.48**	**53.10**	**62.06**	**70.17**	**80.28**	**89.38**	**91.93**	**91.92**	**91.91**	**145.97**
NPV before tax(Rs. in lakhs)	**158.05**		**Discount Rate taken =**		**10.00 %**						
Before - Tax IRR	**20.56 %**										

IRR after tax

(Rs.in lacs)

	Const. Period	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Out Flows											
Capital Investment	-257.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase in WC Gap		38.92	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00	0.00
Total outflows	-257.00	38.92	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00	0.00
Inflows											
Profit after tax	0.00	31.76	36.81	41.87	47.55	52.91	58.59	57.96	57.64	57.02	56.70
Add Depreciation and non cash expenses	0.00	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
Add: Preliminary & Preop Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	54.08
Total Inflows	0.00	41.03	46.09	51.14	56.82	62.19	67.86	67.23	66.92	66.29	120.05
Net cash flows	**-257.00**	**2.11**	**43.67**	**48.58**	**53.26**	**59.62**	**65.30**	**67.23**	**66.92**	**66.29**	**120.05**
			Discount Rate		**10.00**						
NPV after tax(Rs. in lakhs)	**61.70**		**taken =**		**%**						
Post - Tax IRR	**14.51 %**										

ANNEXURE - XIII

DEBT SERVICE COVRAGE RATIO

(Rs. In Lacs)

DETAILS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
CASH INFLOW										
1. Profit after Tax	31.76	36.81	41.87	47.55	52.91	58.59	57.96	57.64	57.02	56.70
2. Depreciation	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
3. Prel.Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	**41.03**	**46.09**	**51.14**	**56.82**	**62.19**	**67.86**	**67.23**	**66.92**	**66.29**	**65.97**
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	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
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	84.60	91.65	98.70	105.75	112.80	119.85	119.85	119.85	119.85	119.85
2. Consumable Spares	23.98	25.97	27.97	29.97	31.97	33.97	33.97	33.97	33.97	33.97
3. Power, Fuel & other utlities (Variable Cost)	4.91	5.32	5.73	6.14	6.55	6.96	6.96	6.96	6.96	6.96
4. Factory Salaries & Wages (Variable)	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42	48.42
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)	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
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	166.71	176.56	186.42	196.28	206.13	215.99	215.99	215.99	215.99	215.99
B.Fixed Expenses										
1. Power, Fuel & other utlities (Fixed Cost)	2.46	2.66	2.87	3.07	3.28	3.48	3.48	3.48	3.48	3.48
2. Factory Salaries & Wages (fixed)	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40
3. Repairs & Maintenance	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
4. Depreciation	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27

5. Administrative & Misc. Expenses	4.80	5.19	5.59	5.99	6.39	6.79	6.79	6.79	6.79	6.79
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	35.72	36.72	37.73	38.73	39.74	40.74	40.74	40.74	40.74	40.74
C.Sales	239.76	259.74	279.72	299.70	319.68	339.66	339.66	339.66	339.66	339.66
D.Contribution	73.05	83.18	93.30	103.42	113.55	123.67	123.67	123.67	123.67	123.67
E.Break Even Point (B/D)	48.89 %	44.15 %	40.44%	37.45%	35.00 %	32.94 %	32.94 %	32.94 %	32.94 %	32.94%
F.Cash Break Even	36.20 %	33.00 %	30.50%	28.48%	26.83 %	25.44 %	25.44 %	25.44 %	25.44 %	25.44%
G.BREAK EVEN SALES	117.22	114.68	113.11	112.24	111.87	111.89	111.89	111.89	111.89	111.89

ANNEXURE - XIV

RETURN ON CAPITAL EMPLOYED

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Return										
Operating Profit	37.14	46.24	55.35	64.46	73.57	82.67	82.66	82.65	82.63	82.62
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	**37.14**	**46.24**	**55.35**	**64.46**	**73.57**	**82.67**	**82.66**	**82.65**	**82.63**	**82.62**
Net Fixed Assets	218.08	208.81	199.54	190.26	180.99	171.72	162.44	153.17	143.90	134.63
Current Asets less creditors	2.41	2.56	3.56	2.56	2.56	0.00	0.00	0.00	0.00	0.00
Total B	220.49	211.37	203.10	192.83	183.55	171.72	162.45	153.17	143.90	134.63
ROCE	16.84	21.88	27.25	33.43	40.08	48.14	50.89	53.96	57.42	61.37

ROCE for Optimal Year	**33.43**
Average ROCE for 10 Years	**41.13**