

**KARNATAKA STATE COIR DEVELOPMENT
CORPORATION LIMITED**

&

KARNATAKA EVALUATION AUTHORITY

Final Report

**Evaluation of the Performance of Karnataka State Coir Development
Corporation (KSCDC)**

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Submitted by:



**ICRA Management Consulting Services Limited
INDIA**

#M-01, Mezzanine Floor
Prestige Infantry Court
130, Infantry Road
Bangalore 560 001,
Phone: + (91 80) 4110 9650
Fax: + (91 80) 4093 4111

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1. List of Abbreviations

Abbreviation	Expanded Form
CAGR	Compound Annual Growth Rate
COIRFED	Coir Federation
EBITDA	Earnings Before Interest Tax Depreciation and Amortisation
GoI	Government of India
GoK	Government of Karnataka
KSCDC	Karnataka State Coir Development Corporation
IMaCS	ICRA Management Consulting Services Limited
MT	Metric Tonne
MSME	Micro Small and Medium Enterprise
NGO	Non Governmental Organisation
PBT	Profit Before Tax
SCP	Special Component Plan
Sq m	Square Metre
TSP	Tribal Sub Plan

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2. Executive Summary

Karnataka is the third largest coconut producing state, after Kerala and Tamil Nadu thus has potential to develop large scale coir based industry. Karnataka State Coir Development Corporation Limited (KSCDC) was established in the year 1985 with the purpose of developing coir based industries, including private sector. Current products produced by KSCDC are coir fibre, yarn, curled rope, corridor mats, dutch mats, mattings, coir pith, coir veneer board and rubberized coir mattresses.

Since KSCDC's inception in 1985, profit before tax (PBT), was negative from 1985-86 to 1991-92. After being marginally profitable for 4 years from 1992-93 to 1996-97, the Corporation recorded a loss of Rs. 15.22 lakh in 1997-98 and it has been in the red since then. It was an exceptional year of 2014-15, when the Corporation made a PBT, of about Rs. 11.66 lakh, which was due to 4G exemption. The challenges faced by KSCDC currently are poor financial performance due to lower sales coupled with high overheads and poor inventory management.

KSCDC's market share is estimated to be around 0.3% of the domestic market, despite Karnataka having third highest coir potential in the country. Export market is witnessing high growth due to increase in exports of coir pith, which is witnessing a Compounded Annual Growth Rate (CAGR) of ~36% during 2010-11 and 2015-16. Domestic market is growing on increase in consumer spend and growth in organised mattress brands. KSCDC has to leverage the growing opportunities in domestic and export market to improve sales and profitability.

While the current product mix covers a broad dimension of value added products, key share of revenue comes from sale of mattresses, cots and tables. KSCDCs sale of these products is limited primarily to Government Institutions while retail market needs to be addressed. Further potential for sale of coir briquettes in both domestic and export market exists however this product is not currently marketed by the corporation.

With the corporation having about 60 production centres for producing yarn, curled coir, rope, matting and foot mats, 10 de-fibring units and four curling units, it has clocked a total revenue about Rs. 10 crore during 2012-13. Excluding the mattress and pillows which have primarily traded goods component, an estimated average production value per centre is Rs. 31,400 per month. Further to manage these units, unit in charge/regional in charge are being employed which would add up to the overheads. While decentralisation helps in broad basing of units within geography and job creation, it will add to the costs leading to lack of competitiveness. So there is a need for finding a balance in decentralisation to cover the catchment potential and manage profitability. During our visits to the private players in coir fibre manufacturing, it was observed that their production unit was visibly more efficient due to better technology and employment of unskilled labour was lesser than the KSCDC production units it is necessary to centralise the units and upgrade technology in line with the latest developments.

For the Corporation to be profitable, they need to increase sales and/ or reduce overhead expenses. The administrative expenses and cost of manpower, which is at an average of about 68% of revenue from operations, for the duration 1985-86 to 2012-13. To offset such high overheads, they need to increase revenue from operations to at least Rs. 25 crore with share of cost materials maintained at 70% of the revenue. To achieve this, the CAGR for the revenue of operations need to be 20%, without considering the effect of 4G exemption. Assuming the corporation achieves 10% growth in the sale of existing line of products, with mattresses especially by focusing on retail market and starting exports of coir briquettes by capturing about 0.25% of share of India's exports, at an estimated value of

around Rs. 1.5 crore, KSCDC can get an estimated Rs. 2 to Rs. 3 crore increase in revenue every year, thereby making them profitable in 5 to 6 years from now.

After analysing the financial statements of KSCDC between 1985-86 and 2013-14, infrastructure facilities, coir products produced and the market it is catering to, it can be seen that the overhead expenses are high for the corporation for the current level of sales. Significant sale of products is restricted to mattress, cots and tables and mainly through sales channel of Government Institutions. It is essential for the Corporation to increase competitiveness, by generating higher revenues through sale of coir products in domestic retail market as well as exports. Our recommendations are in the direction of improving cost structure in the short term and generating increased revenues through medium and long term measures.

Short term recommendations are implementable within a year without significant policy/budgetary interventions. The short term recommendations are to improve inventory management by maintaining inventory turnover ratio at 4 or more and make necessary changes in KSCDCs Internal documentation/ Payment cycle such that the wages may be paid before 7th of every month to the workers.

In the medium term the corporation may focus on consolidating the number of manufacturing units for efficient management, upgrade technology to produce cost effective products, focus on coir briquette sales in domestic and export market and coir mattress sales in domestic market. Further since the government has been assisting the corporation the social benefit cost analysis may be carried out annually and may be published as part of the annual report.

In the long term KSCDC may focus on R&D to develop the low cost and environmental friendly substitutes to wood/metals/plastics which includes development of cost effective veneer boards. Further the corporation should focus and upgrading technology as well as scale of operations to be viable at the individual unit level. The corporation has to focus on promotion of coir industry/ MSMEs in the industry by tying up with online market places, providing platforms of markets through national and international exhibitions and having a brand ambassador to promote products.

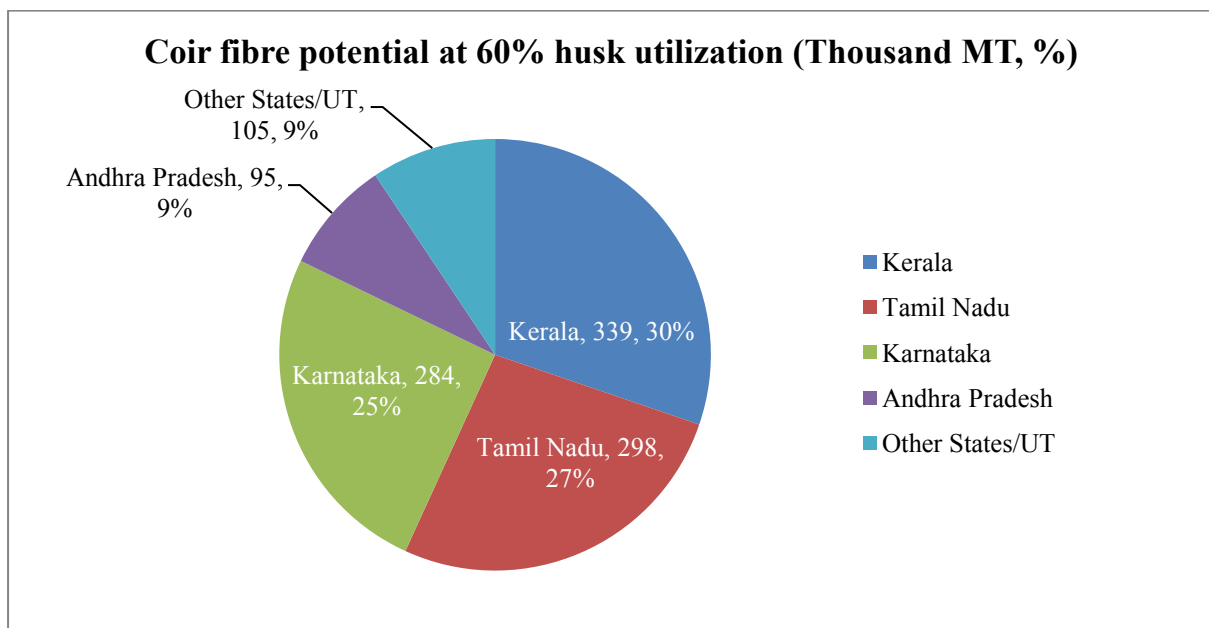
3. Context

Coir industry is a part of the cottage and agro based industry, with high potential for rural employment. Indian coir industry has grown from manufacturing simple ropes to various other utility and lifestyle products. The industry currently employs an estimated 7 lakh people, mainly from economically weaker sections of the society, and 80% of them are women, who work mainly in the fibre extraction process and spinning. Coir sector in India is an amalgamation of households, manufacturers, cooperatives, NGOs and exporters.

India produces about 80% of the total supply of coir fibre in the world. During 2014-15, total production of coir fibre in India, is estimated to be 5.42 lakh Metric Tonne (MT) and Kerala contributes about 60% of it. Coir industry flourished in Kerala due to its long coastline, backwaters, lakes and lagoons providing favourable conditions the process of retting. Other key states where coir industry has spread over are Karnataka, Tamil Nadu and Andhra Pradesh.

Coir is a bio-degradable and an organic fibre, which possesses water absorbing capacity. Products such as coir geo-textiles, coir ply, coir garden articles, and coir pith organic manure contribute to the protection of environment. It was earlier limited to manufacture of floor mats, cushions, mattresses etc. Coconut husk, which is the main raw material of this industry, has very few other commercial uses. By 2014, only about 40% of the coconut husks were utilized for extracting coir fibre. The potential for producing coir fibre in various states is shown in Exhibit 1. Karnataka has coir fibre potential estimated at 2.84 lakh MT.

Exhibit 1: Coir fibre potential in various Indian states (2011-12)



Source: Ministry of Agriculture, Govt. of India; coirboard.gov.in, IMaCS Analysis

Karnataka is the third largest coconut producing state, after Kerala and Tamil Nadu thus has potential to develop large scale coir based industry. Karnataka State Coir Development Corporation Limited was established in the year 1985 with the purpose of developing coir based industries, including private sector.

4. Introduction

Karnataka State Coir Development Corporation Limited, which was registered on 28 February, 1985, was established for promoting the use of coir products in Karnataka. It is committed to empower rural folk, women especially and develop natural and eco-friendly coir products.

Objectives of KSCDC are:

- To identify eligible beneficiaries in rural areas, train them and provide employment opportunities in the production of coir products
- To train coir artisans to improve their skill levels, and produce high quality value added products such as yarn, mats and mattings
- To leverage abundantly available coconut husk to produce value added products
- To produce environmental friendly, durable and low cost coir products
- To produce coir composite boards and geotextiles
- To produce compost from coir pith and supply to farmers for horticultural crops and nurseries
- To provide domestic and export market opportunities for coir and coir products
- To manufacture pith briquetting from pith, and supply to greenhouse for scientific horticultural plantations
- To produce high quality curled rope, rubberized coir mattresses and pillows and supply to State and Central educational institutions at competitive prices
- To produce coir veneer boards from coir, for usage in making windows, doors, tables, study desks and other furniture thereby reducing dependence on trees and reducing deforestation

Presently, KSCDC has 10 defibring units, 3 curled coir units and various auto spinning units in various rural areas of Karnataka. They employ about 82 employees (42 permanent and 40 temporary) and about 850 workers, of whom 90% is women. The number of workers varies every month depending on their turn up based on seasons of farming and availability of other employment options. There are about 60 functional production centres currently, for producing yarn, curled coir, rope, matting and foot mats. Details of all activities undertaken at the production centres are in Appendix D. There are 6 showrooms, which are situated in Bengaluru, Mysore, Davangere, Hubli, Belgaum, and Sasthana in Udupi District.

Current centres for production and sales:

Centres	Number
Coconut defibring unit	10
Production of yarn, mat and mattings	51
Production of curled coir	3
Production of 2-ply yarn	11
Production of moulded tray	1
Powerloom matting, matting and geo textiles	2
Production of rubberized coir mattress	1
Production of coir veneer board	1
Showrooms	6

Current products produced by KSCDC are coir fibre, yarn (produced conventionally as well as by using auto spinning machines, curled rope, corridor mats and dutch mats, mattings (handloom and

powerloom), coir pith, coir veneer board and rubberized coir mattresses. Key products sold, in terms of value, are cots/tables and mattresses. It sells coir products through various channels, such as, retail outlets, dealership mechanism, exhibitions and a bulk of sales to the Government of Karnataka (GoK) and various Institutions.

The GoK has extended financial supports to the Corporation for implementing various programmes in Coir production centres. The summary of grants received by KSCDC is mentioned in Exhibit 2 and further detailed in Appendix C.

Exhibit 2. Summary of grants received by KSCDC from Government (in Rs. Lakh)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Grant Received	17	12.5	166.46	158.54	448.12	471.68	421.37
Expenditure incurred	17	12.5	166.46	156.14	448.12	467.5	302.05
Balance	0	0	0	2.4	0	4.18	119.32

The schemes/funds under which KSCDC has received grants are a listed below:

- Modernization and Technology Training
- Working Capital
- SCP-TSP : Training
- SCP-TSP: Living Cum Workshed
- Special Development Programme
- Participating of Exhibition and conducting of Seminars
- Assistance under Coir Sector

Since KSCDC's inception in 1985, profit calculated before tax, was negative from 1985-86 to 1991-92. After being marginally profitable for 4 years from 1992-93 to 1996-97, the Corporation recorded a loss of Rs. 15.22 lakh in 1997-98 and it has been in the red since then. There was an exceptional case in 2014-15, when the Corporation made a profit before tax, of about Rs. 11.66 lakh, which was due to 4G exemption. This was a milestone year in the history of the corporation, recording its highest profits.

Main challenges faced by KSCDC currently are poor financial performance due to under-utilization of production units because of low sales, high overheads and poor inventory management, absence of technological improvements in the production of coir products and untapped potential in export market.

The evaluation study is being conducted to find the causes for poor financial performance, to understand the extent to which the Corporation has met its objectives and its related influence on the financial health, to understand morale and feeling of the workforce and finally to derive measures to address the challenges faced and pull the Corporation out of the red.

5. Log frame / Theory of Change / Program Theory

Under this section, the basis for intervention has been analysed using Theory of Change, which is described below:

Issue:

KSCDC has been set up towards developing the coir industry. The Government of Karnataka has extended financial support to the Corporation towards implementing various programmes in Coir production centres. The Central as well as State Government has extended market development assistance for the promotion and enlargement of our products to markets. The corporation has been making losses for many years. The purpose of the evaluation is to find current problems in the corporation and if they are fulfilling their objectives.

Community Needs:

The needs of the stakeholders are summarised below:

- To leverage abundantly available coconut husk to develop and produce value added products
- To produce environmental friendly, durable and low cost coir products
- To provide domestic and export market opportunities for coir and coir products
- To identify eligible beneficiaries in rural areas, train them and provide employment opportunities in the production of coir products

Desired result:

The desired result is that the organisation successfully addresses objectives and runs profitably on sustained basis.

Influential Factors:

The key influencing factors for the organisation to remain profitability are

- Demand for Coir and coir products both in domestic and export market
- Substitutes in the market for coir products
- Organisations capability to produce and market the products efficiently and effectively
- Cost structure of the organisation including fixed costs
- Technology level adopted by the organisation

Strategies:

The strategies to be adopted would as mentioned below

- Improve the scale and efficiency of operations
- Focus on untapped markets
- Focus on new products

Further the data has been analysed findings have been mentioned, based on which recommendations are developed.

6. Progress Review

With respect to Financial progress, profit calculated before tax for KSCDC, was negative since its inception, from 1985-86 to 1991-92. After being marginally profitable for 4 years from 1992-93 to 1996-97, the Corporation recorded a loss of Rs. 15.22 lakh in 1997-98 and it has been in the red since then. There was an exceptional case in 2014-15, when the Corporation made a profit before tax, of about Rs. 11.66 lakh, which was due to 4G exemption. This was a milestone year in the history of the corporation, recording its highest profits. This was contributed by sale of its key product, coir mattresses.

KSCDC's product mix includes trays, cots, tables, baskets, mattresses, mats, geo-textiles and yarn, which are sold through multiple retail outlets as well directly to Government Institutions. Number of retail outlets for KSCDC has varied between 10 and 15 during the last 5 years, with the average annual sales of Rs. 32 lakh between 2010-11 and 2011-12, and it increased to an average of Rs. 76 lakh by 2013-14. Value of sales in cots/tables has grown at a CAGR of 170%, while the growth of value in sale of mattresses stand second, with a CAGR of 62.8% between year 2011-12 and 2015-16. There is a huge spike witnessed in the sale of mattresses in 2014-15 primarily due to 4G exemption the corporation received during the year.

While one of the main objectives for the Corporation has been to provide employment opportunities in the rural areas, by training eligible beneficiaries, there is an observed decrease in the overall workers employed at KSCDC from 1500 numbers few years back to 850 numbers currently. Since coir business has low margins, workers prefer other avenues of employment. Hence, a decreasing trend is observed in the number of workers at KSCDC units.

7. Problem Statement

KSCDC has been set up towards developing the coir industry with the following summarised objectives:

- To leverage abundantly available coconut husk to develop and produce value added products
- To produce environmental friendly, durable and low cost coir products
- To provide domestic and export market opportunities for coir and coir products
- To identify eligible beneficiaries in rural areas, train them and provide employment opportunities in the production of coir products

The Government of Karnataka has extended financial support to the Corporation towards implementing various programmes in Coir production centres. The Central as well as State Government has extended market development assistance for the promotion and enlargement of our products to markets.

Despite the support the corporation has been continuously incurring losses.

8. Objectives and issues for evaluation

To analyse the problem the profit and loss statements of the corporation have to be analysed starting from the year of inception.

Objectives and issues of the evaluation are:

- To Analyse the causes for the poor Financial performance of the Corporation
- To assess whether the objectives for which the Corporation was set up have been achieved. If yes, to what extent? If no, why not?
- To analyse the correlation between poor financial performance of the Corporation with the achievement/non achievement of some/all objectives of the Corporation.
- To identify the measures, if taken, will pull the Corporation out of the red
- To identify the measures that needs to be taken for fulfilment /better fulfilment of me objectives of the Corporation.

9. Evaluation Design

Our approach towards addressing all the aspects as spelt out in the terms of reference is structured as:

Diagnostic Assessment of KSCDC performance

The performance of KSCDC was assessed considering both operational and financial parameters. Balance sheets and Profit and Loss statements were analysed, since the year of inception of KSCDC. Overview of domestic and export market for coir and its products is also highlighted. The baseline data for arriving at export markets was considered based on the export data available Coir board. Domestic market assessment of key products was made based on the data available on secondary domain.

Evaluation of functions of KSCDC

Considering the inputs from the diagnostic assessment, an evaluation of various functions of KSCDC was made covering various streams such as marketing, coir products made, infrastructure and human resources. This evaluation was done through the primary survey of staff and workers as well as observation.

In addition to visiting the production units of KSCDC, private units were also visited to evaluate and compare the operations of KSCDC. Observations made under this module were further correlated with the analysis of financial performance. A need gap analysis was made to assess the gaps in performance of the organisation.

Recommendations

Based on the need-gap analysis and challenges faced, recommendations are derived.

10. Evaluation Methodology

We have carried out this engagement through a mix of primary and secondary research.

Primary Research

Discussion with KSCDC Managing Director and Staff: The following people were met by IMaCS personnel for the discussion:

Name	Designation/Department
Mr. Kumaraswamy	Managing Director, KSCDC
Mr. N. Shashidhar	Chief Manager (Accounts), KSCDC
Ms. Usha K. M	Deputy Manager (Accounts), KSCDC
Mr. Ravi Kumar	Chief Manager (Production), KSCDC
Mr. C. Thirtharaj	Marketing Manager, KSCDC
Mr. T. R. Kumaraswamy	Chief Manager, KSCDC

In addition, the following were visited during primary research:

Production centres and godown: IMaCS personnel visited KSCDC's production centres at Gubbi, Tiptur and central godown at Tiptur in Tumkur District.

About 5 staff members at Head office in Bengaluru and about 9 workers at the production and godown units visited, along with 3 production unit Managers, totalling to over 17 respondents (covering more than 1% of the total workforce of KSCDC,) were interviewed with a structured questionnaire, presented in Appendix B, to find their satisfaction and morale in working for KSCDC.

Out of the 14 employees and workers surveyed at units, 57% of them were women. However, we observed that about 90% of the workers at the production units were women.

	Male	Female
Workers	2	7
Employees	4	1

Additionally, the following units managed by private players at Tiptur were visited and discussions with their staff were held:

- Anand Comforts Pvt. Ltd.
- Bedsy Comforts Pvt. Ltd.

Secondary Research / Literature Review

We conducted extensive secondary research and analysis for the engagement.

Key sources of information are documents provided by KSCDC such as Annual Reports, Government orders, Bye laws etc. In addition we have also reviewed information available on public domain from various associations of user industries, research reports of reliable agencies, databases and other sources we considers reliable. We have analysed the profit & less statements of the Corporation from since the year of its inception.

Other Sources are:

- Production and sales data from KSCDC
- Coir Board website (www.coirboard.gov.in/)
- MSME Annual Report 2015-16
- Auditors' Report To The Shareholders Of Karnataka State Coir Development Corporation Ltd
- Coir related articles from www.fibre2fashion.com
- http://articles.economictimes.indiatimes.com/2016-03-27/news/71849959_1_coir-industry-coir-board-coir-sector
- Indian Journal of Applied Research: Trends and outlook for Sleep mattress Industry in India, Hima C Menon
- Model Project profiles under MSME
- Annual reports/credit ratings of private players
- A value chain for Coconut Fiber and its by-product manufacture of diversified products of higher value and better marketability to enhance the economic returns of farmer - Mr.K.Rajkumar, Dr.S.K.Chakraborty, Mr.Ranjith.P

11.A Snapshot of Findings in Response to Evaluation Questions

S. No	Question	Response
1	What are the causes for the poor Financial performance of the Corporation?	The primary causes of poor financial performance are low sales, high overheads and poor inventory management. Further details are in mentioned in Section 10.5
2	Whether the objectives for which the Corporation was set up have been achieved? If yes, to what extent? If no, why not? a. To identify eligible beneficiaries in rural areas, train them and provide employment opportunities in the production of coir products b. To train coir artisans to improve their skill levels, and produce high quality value added products such as yarn, mats and mattings c. To leverage abundantly available coconut husk to produce value added products d. To produce environmental friendly, durable and low cost coir products e. To produce coir composite boards and geotextiles f. To produce compost from coir pith and supply to farmers for horticultural crops and nurseries g. To provide domestic and export market opportunities for coir and coir products h. To manufacture pith briquetting from pith, and supply to greenhouse for scientific horticultural plantations i. To produce high quality curled rope, rubberized coir mattresses and pillows and supply to State and Central educational institutions at competitive prices j. To produce coir veneer boards from coir, for usage in making windows, doors, tables, study desks and other furniture thereby reducing dependence on trees and reducing deforestation	The achievement of the objectives are provided below against each of the objectives a. This objective is fulfilled since production centres are present in various rural areas, where workers from nearby villages are trained and employed in various production activities b. This objective is fulfilled, since workers are trained every year to get absorbed into various operations of producing high quality value added products such as yarn, mats and mattings Further details are mentioned under Section 10.4 c. This objective is fulfilled as valued added products including mattings, geotextiles and other products are being manufactured d. This objective is fulfilled regarding environmental friendly nature and durability of the products, but they may not be low cost as compared to substitutes e. This objective has been fulfilled. Further details are mentioned under Section 10.2 f. This objective has not been fulfilled, as the corporation is not manufacturing pith briquetting. g. This objective is partially fulfilled, since only the domestic market opportunities are leveraged and there is absence of exports h. This objective has not been fulfilled i. This objective is fulfilled as the corporation is competing with other vendors in supplying to institutional orders. Further details are mentioned under Section 10.2 j. This objective is fulfilled. Further details are mentioned under Section 10.2
3	Is there any correlation between poor Financial performance for the Corporation with the achievement/non achievement of some/all objectives of the Corporation?	Yes, there is a correlation. Poor financial performance can be attributed to not exploiting export opportunities, not producing pith briquetting and compost from pith as stated in the objectives. Production centres are decentralised, which fulfils

S.	Question	Response
		<p>the objective of providing employment in rural areas spread over geography, but it adds costs in terms of overhead expenses, administrative and transport expenses, which affects profitability. Further details are mentioned under Section 10.5</p>
4	<p>What measures need to be taken for fulfilment /better fulfilment of the objectives of the Corporation?</p>	<p>KSCDC needs to leverage domestic and export potential, especially for coir pith/briquettes, improve domestic sales of mattresses through wholesale or retail operations. Details are mentioned in Section 10.1, 10.2, 10.5 and Section 11 Recommendations.</p>
5	<p>What is the morale and feeling of the work force of the Corporation? Are they proud of the Corporation? If not, Why not? What is their suggestion for taking the Corporation out of the red?</p>	<p>For employees, the morale and feeling of working for the Corporation is high and they are proud of it. Some concerns they raised are that, they are yet to receive a raise in their salary as per 5th Pay Commission, and that Cadre and Recruitment rules of Karnataka are not entirely followed. Temporary staff and wage workers expressed displeasure over low salary levels.</p> <p>For workers, there is delay in getting the payment as per calendar month. They requested their payment be increased and is paid in the first week of calendar month. For the staff of KSCDC sourcing and retaining workers, as of now, is a challenge due to low wages.</p> <p>Suggestions from employees for taking the Corporation out of red are:</p> <ol style="list-style-type: none"> 1. 4G exemption needs to be provided 2. Technology needs to be improved to reduce manpower 3. There should be focus on new product development <p>Further details are mentioned in Section 10.4.</p>
6	<p>Whether it is relevant with reasons to have the corporation for now?</p>	<p>Karnataka has 3rd highest coir potential in the country, with the quantity of coconut production. KSCDC has been serving the purpose of utilization of husk, producing value added coir products, thereby providing market connect between husk and the customers, including Institutions. However, there is a need for better promotion of coir products, due to their environmental friendliness. There is also significant potential for coir pith/briquettes and coir mattresses in both domestic and export market. Further focus on development of new products. Hence it is relevant to have the Corporation. Details are mentioned in Section 11.</p>

S.	Question	Response
7	What measures, if taken, will pull the Corporation out of the red? Is it possible to get the Corporation in profit? If yes, approximately When?	<p>Measures which can pull the Corporation out of the red are increasing the overall sales of the corporation by increasing the sale of mattress, export coir pith/briquettes to derive benefits of increasing coir pith export potential from India, centralisation of production units to reduce overheads which can lead to better cost structure for KSCDC.</p> <p>Details are mentioned in Section 10.1, 10.3, 10.5 and Section 11.</p>

12. Data Collection, Analysis and Study Findings

The study findings are detailed under the below mentioned sections

- Market Analysis
- Product Analysis
- Infrastructure
- Human Resources
- Financial Performance Analysis

Based on the insights obtained from each of the sections mentioned above recommendations have been derived.

12.1 Market Analysis

The market for coir products consists of domestic and export market. The two segments under domestic market are household and institutional segments. The domestic market is estimated currently at Rs.3,500 crore¹, of which coir mattress will be the largest segment. Traditionally, coir products were marketed in the country by private traders, but there has been an expanding role for cooperatives since 1994-95, when there was a growth of cooperative movement. Current impediments of the sector include bulkiness of some of the products which have turned them unattractive, and lack of identity of coir products. Major marketing for coir products is provided by Coir co-operatives and apex agencies i.e. COIRFED, Coir Board, Kerala State Coir Corporation Ltd., KSCDC, and private manufacturers and traders.

Mattress industry is a key consuming segment of coir products. Total organised mattress industry in India is estimated Rs. 10,000 crore². While in case of the un-organised segment fibrefill, cotton and coir mattresses are consumed. In the organised space the main segments in the mattress industry are rubberised coir, memory foam, natural latex foam, PU foam, and inner spring.. The key players in the Indian mattress market are Kurlon, Sleepwell, Peps, Springwell and Springfit. There is also unorganized market with small manufacturers and local brands. Our estimation of the share of rubberised coir mattresses among the organised players is estimated to be in the range of 40%. However spring/foam mattresses are increasingly becoming popular.

The key challenge faced by coir products is competition from fibre and plastic substitutes. Substitutes for Matts have been rubber/manmade fibre mats and for coir composites (coir with resin and coir with bamboo) competes with wood products, asbestos, and plastic mouldings.

KSCDC sells its coir products through 12 sales outlets in various parts of Karnataka and through, dealers, direct sales to Government and Institutions, and by participating in various exhibitions. These exhibitions, usually organized at the district level, are Krishi Mela, Kala Vaibhav, Lalbagh Exhibitions, besides others conducted to popularize coir and coir composite products.

Current products produced by KSCDC are coir fibre, yarn (produced conventionally as well as by using auto spinning machines, curled rope, corridor mats and dutch mats, mattings (handloom and powerloom), coir pith, coir veneer board and rubberized coir mattresses. KSCDC has about 70% of

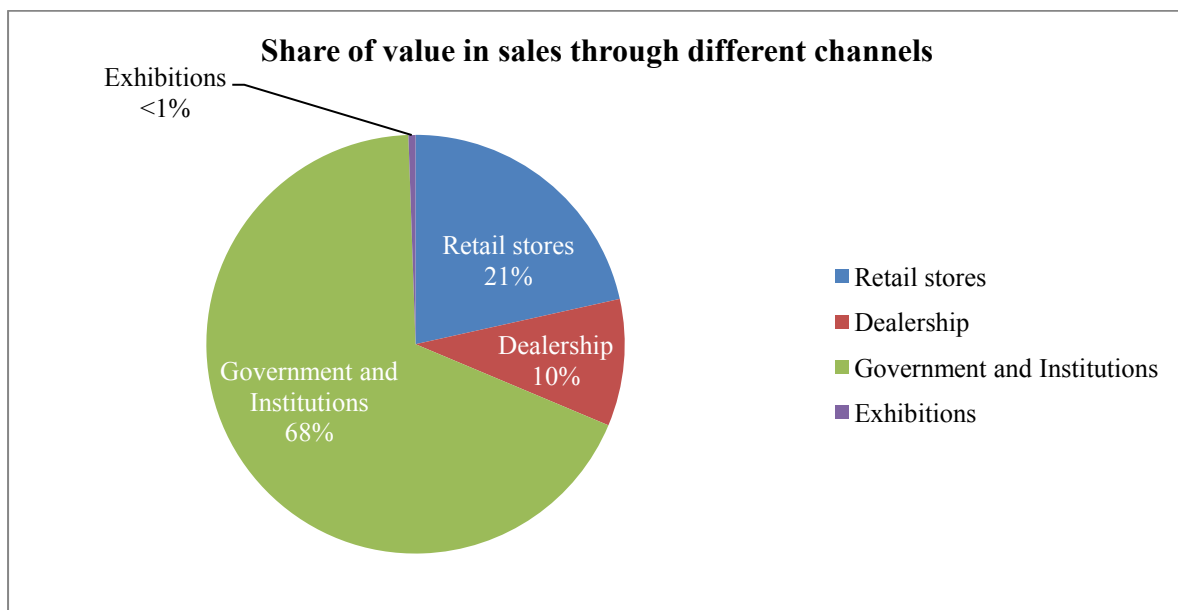
¹ http://articles.economicstimes.indiatimes.com/2016-03-27/news/71849959_1_coir-industry-coir-board-coir-sector

² Indian Journal of Applied Research: Trends and outlook for Sleep mattress Industry in India, Hima C Menon

traded products, mainly rubberized coir mattresses, and 30% of manufactured products. KSCDC caters to coir domestic market, by selling them through its channels, which are retail outlets, dealership, exhibitions and direct selling to Government bodies and Institutions.

Based on our interactions with the staff in sales and marketing division, it was observed that bulk of sales happen to Government and Institutions, and key products sold are mattresses, cots/tables and geotextiles. It was estimated based on the sales data that, on an average, about 68% of the value realized is through Institutional sales, followed by retail outlets, which contribute about 21.5%, as shown in Exhibit 3. Products sold in wholesale through dealership contributes about 10% of the overall value, while sale through exhibitions are the lowest, contributing about 0.5% of the value in overall sales.

Exhibit 3: Share of value in sales through different channels



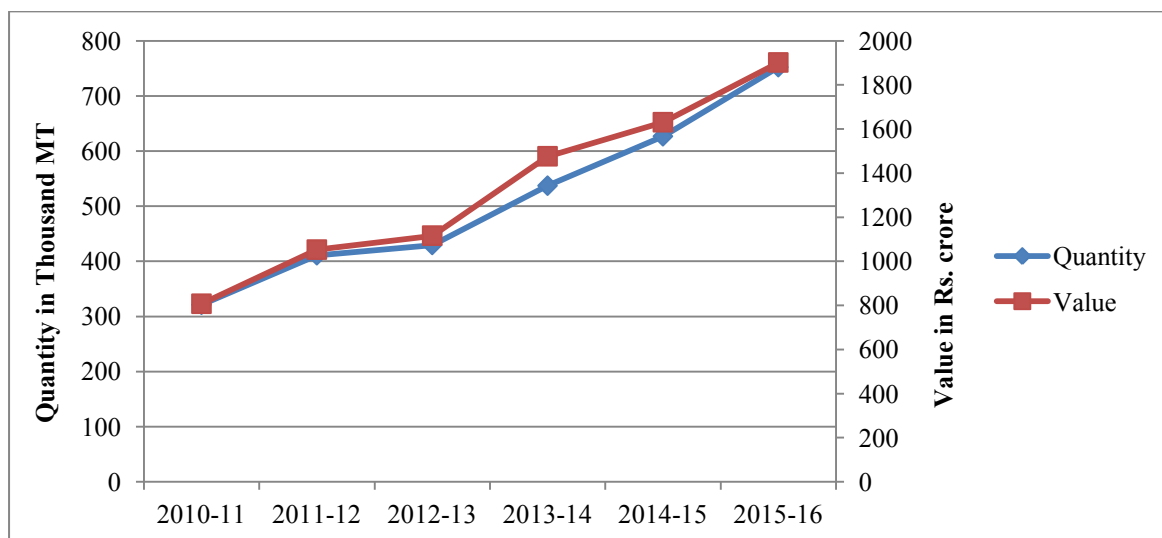
Source: Primary research with KSCDC staff, IMaCS Analysis

Number of retail outlets for KSCDC has varied between 10 and 15 during the last 5 years, with the average annual sales of Rs. 32 lakh between 2010-11 and 2011-12, and it increased to an average of Rs. 76 lakh by 2013-14.

India is one of the largest exporters of coir and coir products, accounting for over two-thirds of coir and coir products production in the world. In the 1990s, global exports of coir and coir products fell almost by 50% due to the shift in the use of synthetic foam and fibres over coir in the West. But since 2001, there has been a rising demand for coir by China, and an expanding global market for geotextiles and coir pith specifically as a peat moss substitute in horticulture.

There is an increasing demand for coir products in the developed countries, due to its environmental friendliness. The export of coir products has seen an increasing trend, growing at a CAGR of about 18.7% in terms of value, during the last 6 years, as shown in Exhibit 4.

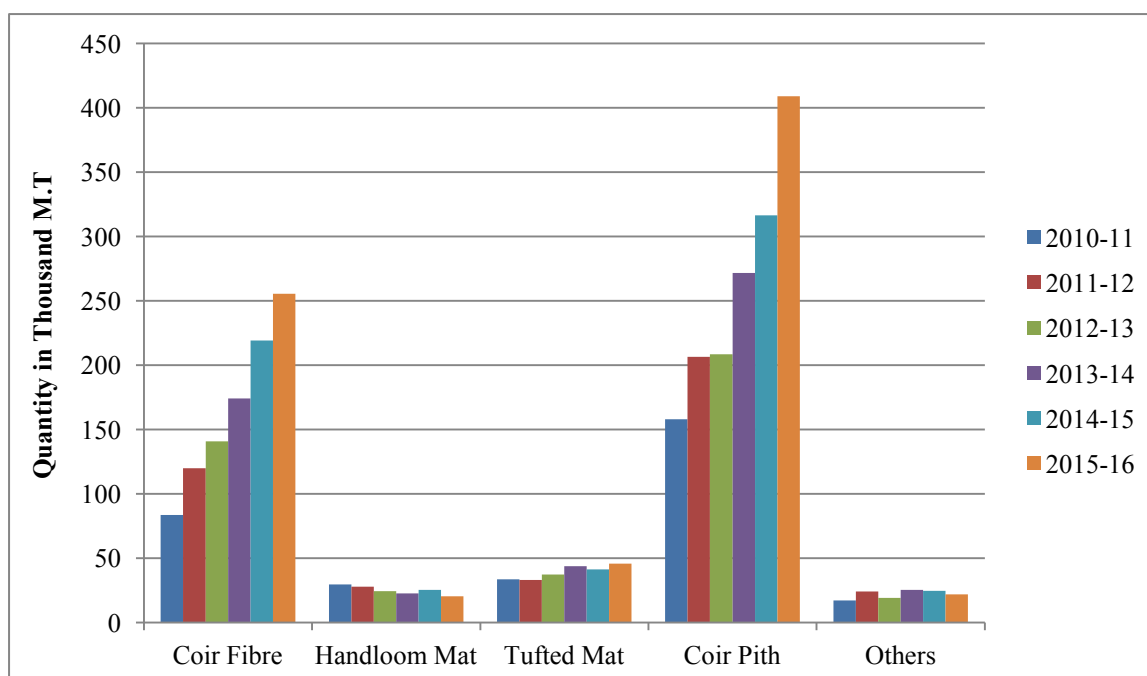
Exhibit 4: Export trends of coir products from India



Source: Coir Board, IMAcS Analysis

While the coir products which are exported are coir fibre, coir yarn, mats (handloom mat, powerloom mat, tufted mat), mattings (handloom mattings, powerloom mattings), geotextiles, coir rugs, carpets, coir rope, curled coir, rubberized coir, coir pith and coir other sorts, the main ones in terms of value are coir pith, coir fibre and mats. Coir pith has maximum share in exports, with 36.2% of the overall value in 2015-16, and its quantity exported in 2015-16 has grown to almost 1.6 times the quantity exported in 2010-11.

Exhibit 5: Export trends of various coir products, from 2010-11 to 2015-16



Source: Coir Board, IMAcS Analysis

Coir pith segment has seen the highest growth in value among coir products, with a CAGR of around 35.9%, followed by coir fibre segment with a CAGR of 28% from 2010-11 to 2015-16. Tufted mat

segment has witnessed a CAGR of 13%, while there is a decline in the handloom mat exports during the same period, as shown in Exhibit 5. Coir briquette can be sold in the domestic market at Rs. 6500 per MT³, can be sold at around Rs.16,000 per MT⁴ when it is exported. During the primary research we have understood that currently the coir pith is being sold by KSCDC at a price of Rs. 650 per MT. So there is an opportunity for KSCDC to export coir pith.

Among the export destinations, China is the major importer of coir and coir products in terms of its value, while USA stands second. Other countries importing coir and coir products are countries in European Union, South Korea, Russia, Australia, Brazil, Canada and Japan. The challenge however, lies in the acceptance of coir products from KSCDC's perspective is quite low due to their preference of buying white fibre and products made of white fibre over brown fibre and its products. KSCDC currently do not export any products.

KSCDC's market share is estimated to be around 0.3% of the domestic market, despite Karnataka having third largest coir potential in the country. Hence, KSCDC is relatively a small player in the coir industry. Export market is witnessing high growth due to increase in exports of coir pith and domestic market is growing on increase in consumer spend and growth in organised mattress brands. KSCDC has to leverage the growing opportunities to improve sales and profitability. The coir products produced and marketed by the corporation is explained in the next section.

³ Model Project profiles under MSME

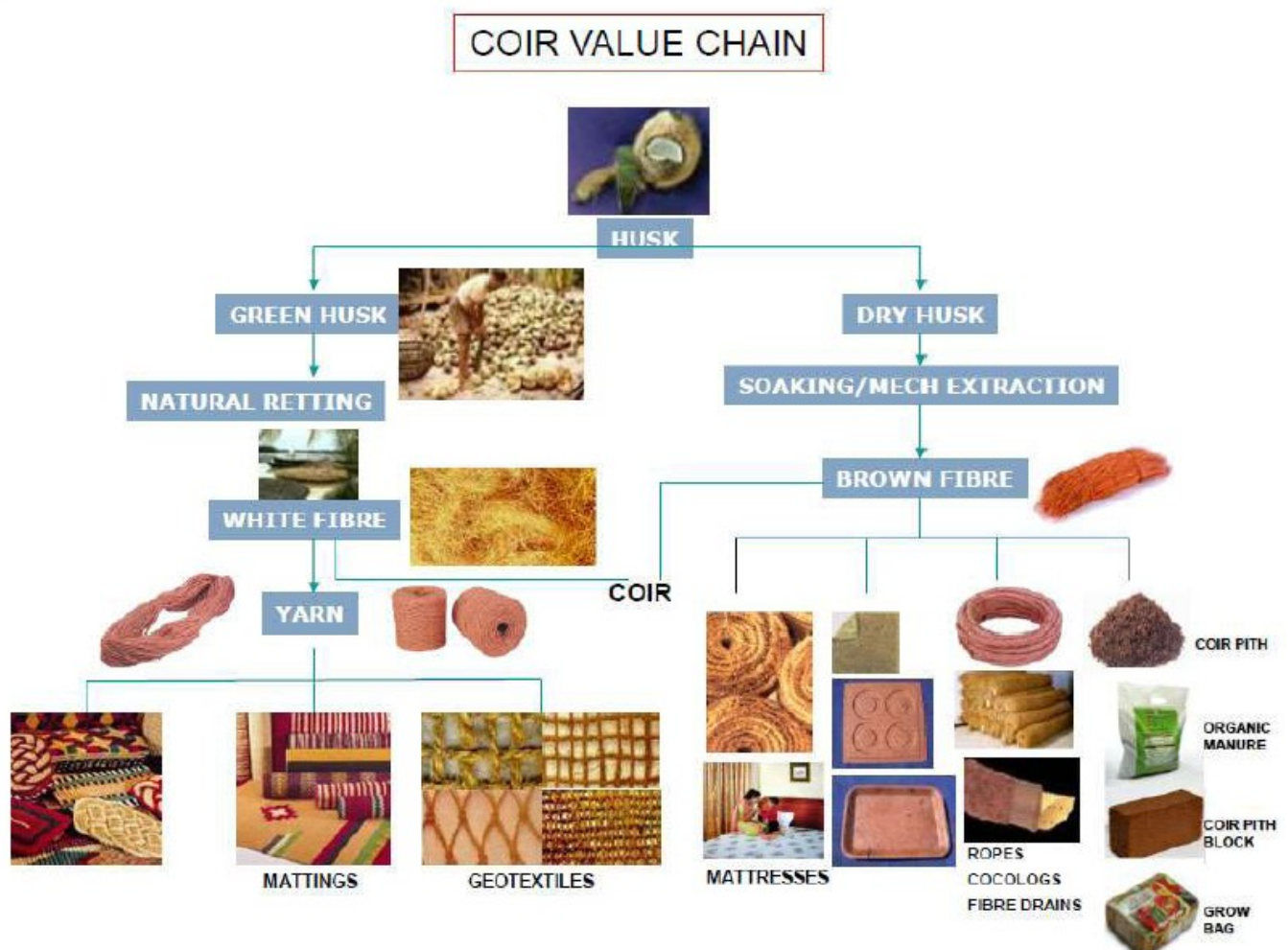
⁴ IMaCS Analysis

12.2 Product Analysis

Coconut husk is the basic raw material used for making coir products. Coir fibre, extracted from coconut husk are of two types – white fibre, which is extracted from retted husk; and brown fibre, which is extracted from dry husk after soaking them in tanks. Coir fibre is spun to make coir yarn, which is a semi finished raw material. Coir yarn can be of three types, single ply yarn, 2-ply yarn, and 3-ply yarn. Quality of yarn is based on its colour, texture, fineness, absence of impurities and the type of fibre used. They are used for producing coir floor furnishings and geotextiles mainly. Coir rope is made by twisting several stands of yarn. Mats and mattings are woven with the help of handlooms or power looms. Coir geotextiles are woven open mesh fabrics which are installed on the ground, to hold soil and seed intact in the vegetation areas. It has wide applications in civil engineering, and land and slope stabilization mechanisms. Rubberized coir, which is extensively used in mattresses, and cushions, requires brown curled coir fibre as raw material.

Coir value chain: The value chain of coir is shown in Exhibit 6 and the process is explained subsequently.

Exhibit 6: Coir Value Chain



Source: Coir Board

There are two varieties of coir – brown coir and white coir. Brown coir is harvested from fully ripened coconuts. Having strength, thickness and high abrasion resistance, it finds applications in preparation

of mats, mattresses, sacking, brushes and ropes. White coir fibres are harvested from the coconuts before they are completely ripe. Their properties include being smoother, finer and comparatively weaker as compared to brown fibre. They are spun into yarn which are used to make mats, mattings, geo-textiles or rope. In the yarn preparation process, fresh water is used to process brown coir while sea water and fresh water are both used in the production of white coir.

Coir pith which is by-product from brown fibre, are cork-like particles, which ranges in size from granules to fine dust. Raw coconuts are washed, heat treated, screened and graded before processed into various coir pith products ranging from varied granularity and density.⁵

Ripe coconuts are husked immediately, but unripe coconuts may be seasoned for a month by spreading them in a single layer on the ground and keeping them dry. To remove the fruit from the seed, the coconut is impaled on a steel-tipped spike to split the husk. The pulp layer is easily peeled off.

Retting process is followed to extract white fibre from green husk. Retting is a curing process during which the husks are kept in an environment that encourages the action of naturally occurring microbes. This action partially decomposes the husk's pulp, allowing it to be separated into coir fibers and a residue called coir pith. Freshwater retting is used for fully ripe coconut husks, and saltwater retting is used for green husks.

Ripe husks can be processed in crushing machines after being retted for only seven to 10 days. Immature husks can be dry milled without any retting. After passing through the crushing machine, these green husks need only be dampened with water or soaked one to two days before proceeding to the defibering step. Dry milling produces only mattress fiber.

Mechanical extraction process is followed to extract brown fibre from dry husk. Once husk is ready for extraction of fibre, defibering process is carried out to extract fibre. Traditionally, workers beat the retted pulp with wooden mallets to separate the fibers from the pith and the outer skin. In recent years, motorized machines have been developed with flat beater arms operating inside steel drums. Separation of the bristle fibers is accomplished by hand or in a machine consisting of a rotating drum fitted with steel spikes.

Separation of the mattress fibers from the pith is completed by washing the residue from the defibering process and combing through it by hand or tumbling it in a perforated drum or sieve. (Saltwater retting produces only mattress fibers and also brown fibre is used for mattresses). The clean fibers are spread loosely on the ground to dry in the sun.

Depending on its intended final use, the yarn may be shipped to customers, or multiple strands may be twisted into twine and bundled for shipment. Both traditional manual techniques and newer mechanical methods are used to braid twine into rope and to weave yarn into mats or nets.

KSCDC's Product analysis:

Each production centre of KSCDC buys raw materials in bulk once or 2 times a year, by giving tenders in the nearby region. This helps them save on transportation costs. There is abundant supply of white fibre in Kerala, while Karnataka has brown fibre from the coconut husks, but the strength is

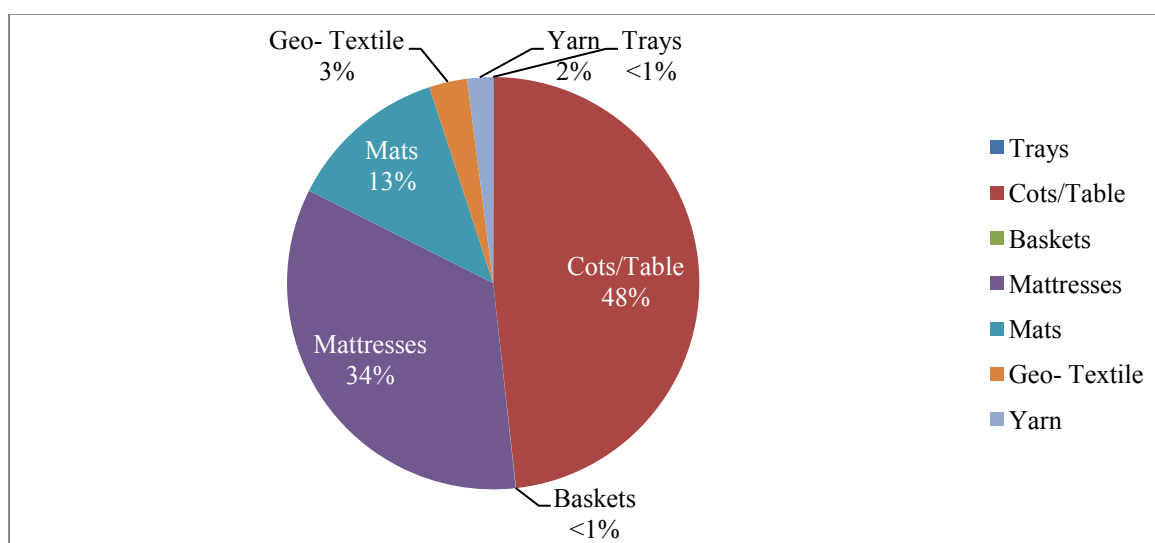
⁵ A value chain for Coconut Fiber and its by-product manufacture of diversified products of higher value and better marketability to enhance the economic returns of farmer - Mr.K.Rajkumar, Dr.S.K.Chakraborty, Mr.Ranjith.P

greater for the white fibre as compared to the brown fibre. The product mix of KSCDC is shown in Exhibit 7.

Exhibit 7: KSCDC: Product Mix

Mix/Depth	Trays	Cots / Tables	Baskets	Mattresses (Rubberized coir)	Mats	Geo Textile	Yarn
1	Square Trays	Two Tier MDF Cot	Coir Bird Nest	Commercial	F.F.Mats	Geo textile mat	2 ply yarn
2	Round Trays	Two tier MDF sliding cot	Coco basket	Hospital mattress with rexine cover	Coir Mattings		3 ply yarn
3	Rectangle Trays	Coir MDF Single Cot	Nursery Coco pot	Hospital mattress with cloth cover	Corridor Mats		Curled rope
4		Coir reversible desk with cast iron legs		Pillows with cloth cover			
5		Coir dual desk with back rest		Pillows with rexine cover			
6		Coir desk with steel frame		Bolsters			
7		Computer table		Cushions			
8		Library table					
9		Office Table					

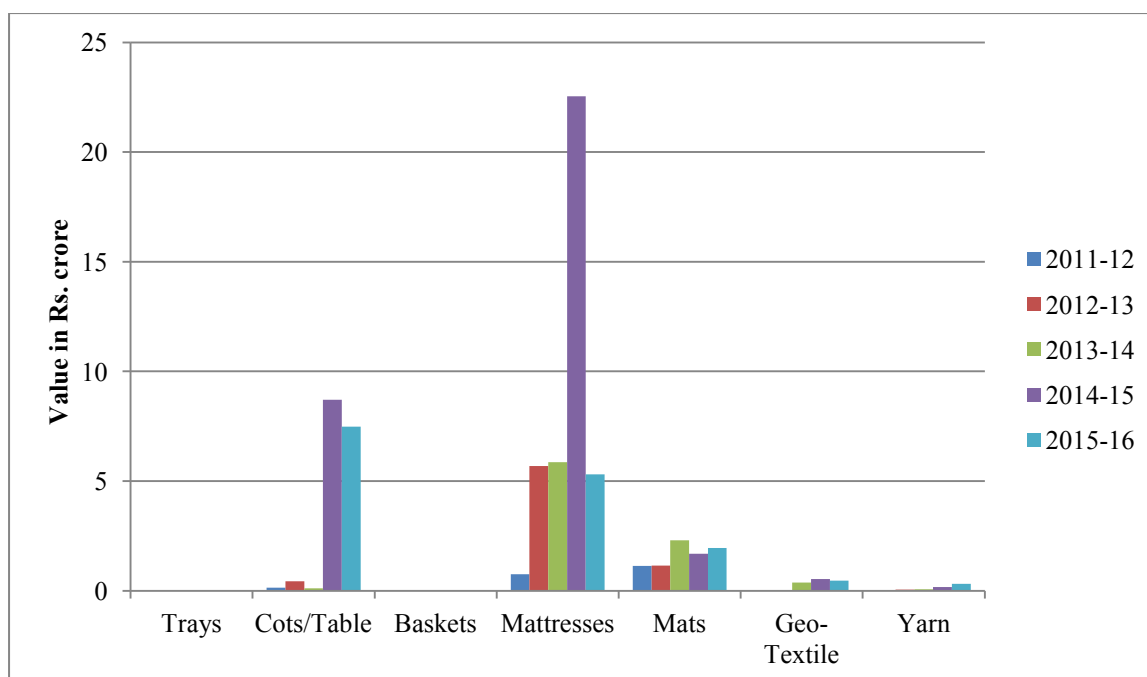
Exhibit 8: Share of different products sold in 2015-16, in terms of value (Rs. Lakh)



Source: KSCDC, IMAcS Analysis

Key products sold, in terms of value, are cots/tables and mattresses, as seen from Exhibit 8. Rubberized coir mattress has consistently seen high percentage of sales among all its products and is expected to be largest contributor in sales of coir products in the coming years, based on interactions with the staff. Value of sales of different products from year 2011-12 to 2015-16 is shown in the Exhibit 9. Value of sales in cots/tables has grown at a CAGR of 170%, while the growth of value in sale of mattresses stand second, with a CAGR of 62.8% for the same duration. There is a huge spike witnessed in the sale of mattresses in 2014-15 primarily due to 4G exemption the corporation received during the year. Value of sale of mats has seen a CAGR of about 14.6%. Sale of geotextiles was less than 1000 Sq m annually until 2013-14, when it saw a jump to a sale of about 40,000 Sq m. Since then, contribution of value in sales of geotextiles has been about 3% of the overall value in sales.

Exhibit 9: Value of sales of different products from year 2011-12 to 2015-16



Source: KSCDC, IMAcS Analysis

Segment	2011-12	2012-13	2013-14	2014-15	2015-16
Trays	0.17	0.61	0.81	0.88	0.78
Cots/Table	14.07	42.72	11.58	870.10	748.73
Baskets	-	-	0.24	0.27	0.38
Mattresses	75.43	568.93	585.86	2253.64	530.81
Mats	113.58	115.22	230.21	168.30	195.57
Geo-Textile	0.77	0.06	37.25	53.63	46.28
Yarn	0.91	5.39	7.01	16.70	31.51

All values are in Rs. crore

Source: KSCDC, IMAcS Analysis

There is no provision for Research and Development for products so far in KSCDC. However interaction with the staff revealed that they have a tie-up with Indian Plywood Research & Training Institute, Bangalore, to test coir veneer board since it is facing issues of bending. They provide them

with specification and the testing is done at the Institute. Coir veneer boards has great potential to be used as a substitute for wood in making windows, door shutters, kitchen cupboards, flooring etc. Though coir products are environment friendly the products are yet to achieve the cost effectiveness in comparison with wood/plywood, etc. In this direction R&D needs to be done.

While the current product mix covers a broad dimension of value added products, main share of revenue comes from sale of mattresses, cots and tables. KSCDCs sale of these products is limited primarily to Government Institutions. As discussed under market section potential for sale of coir briquette in both domestic and export market exists however not currently marketed by the corporation.

After analysing products and the markets, infrastructure available at KSCDC has been discussed in the next section.

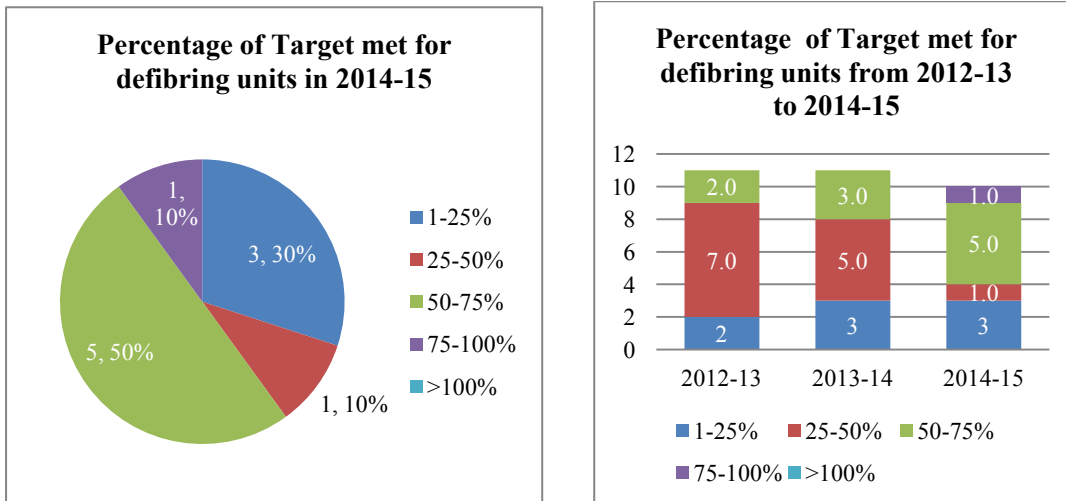
12.3 Infrastructure

KSCDC has about 60 production centres currently, for producing yarn, curled coir, rope, matting and foot mats, 10 defibring units and 4 curling units. Details of all activities undertaken at the production centres are in Appendix D.

Capacity utilization: Based on the capacity of the production unit, monthly and annual targets for production of various coir products in terms of its quantity and value are set every year..

There are 10 defibring units and 2 mobile defibring units, which do not have annual targets set. For the rest, it can be observed that about half the number of units are achieving targets in the range of 50% to 75%, and one unit is exceeding 100%, as shown in Exhibit 10. If we compare the targets achieved over three years from 2012-13 to 2014-15, it can be seen that the number of units improving their targets achieved has increased.

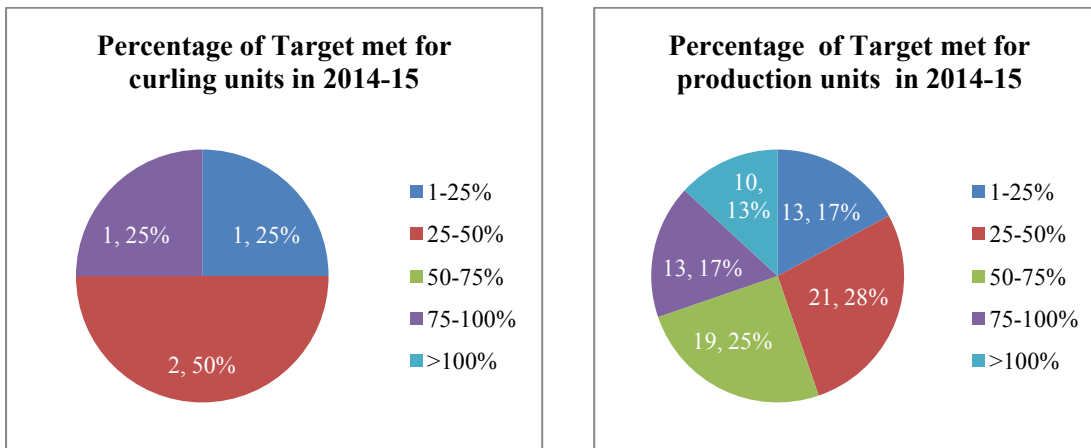
Exhibit 10: Targets achieved by defibring units



Source: KSCDC, IMaCS Analysis

As for the curling units, which were 4 in number as of 2014-15, 3 are meeting less than 50% of the targets set for them, as shown in Exhibit 11.

Exhibit 11: Target achieved by curling units and production units



Source: KSCDC, IMaCS Analysis

As for production units, which are about 60 in number, as of 2014-15, 34 units, which are more than half the number of units, are achieving less than 50% of targets set for them based on their capacity. This shows that their capacity is underutilized. There are about 10 units which are exceeding their targets and hence are doing well.

The age and automation levels of each machine installed in these production centres couldn't be determined, but based on our interactions with staff, it was revealed that most of the machines are at least 10 years old.

Based on our survey with employees and workers at the production units, it was found out that these production units face shortage of workers. But from those who come regularly, some of them work for long hours, sometimes from 7am to even midnight. They highlighted that their poorly lit work area is not conducive for working at night. Those areas also face frequent power cuts, which delays their productivity.

KSCDC has set up coir geo textile matting manufacturing unit at Mangala village in Chamarajanagar district, where the geotextile matting produced is used in mining dumping areas, to stabilize dumping yards with greenery. 100-125 kgs capacity of coir fibre baling press unit has been recently set up in Banavara, in Hassan District with the financial assistance of the GoK. The private coir industries are expected to obtain the services of this unit for bundling of coir fibre in 100-125 kgs coir bales by paying fixed service charges and also, which would be helpful to transport the bales easily in local places.

With the corporation having about 60 production centres for producing yarn, curled coir, rope, matting and foot mats, 10 defibring units and 4 curling units, it has clocked a total revenue about Rs. 10 crore during 2012-13. However, the production value is around Rs. 2.26 crore (excluding mattresses and pillows) for the same year. The mattress and pillows have primarily traded goods. This shows that an estimated production value per centre at about Rs. 3.76 lakh annually or Rs. 31,400 per month per production unit. Further to manage these units, unit in charge/regional in charge are being employed which would add up to the overheads. While decentralisation helps in broad basing of units within geography and job creation, it will add to the costs leading to lack of competitiveness. So there is a need for finding a balance in decentralisation to cover the catchment potential and manage profitability.

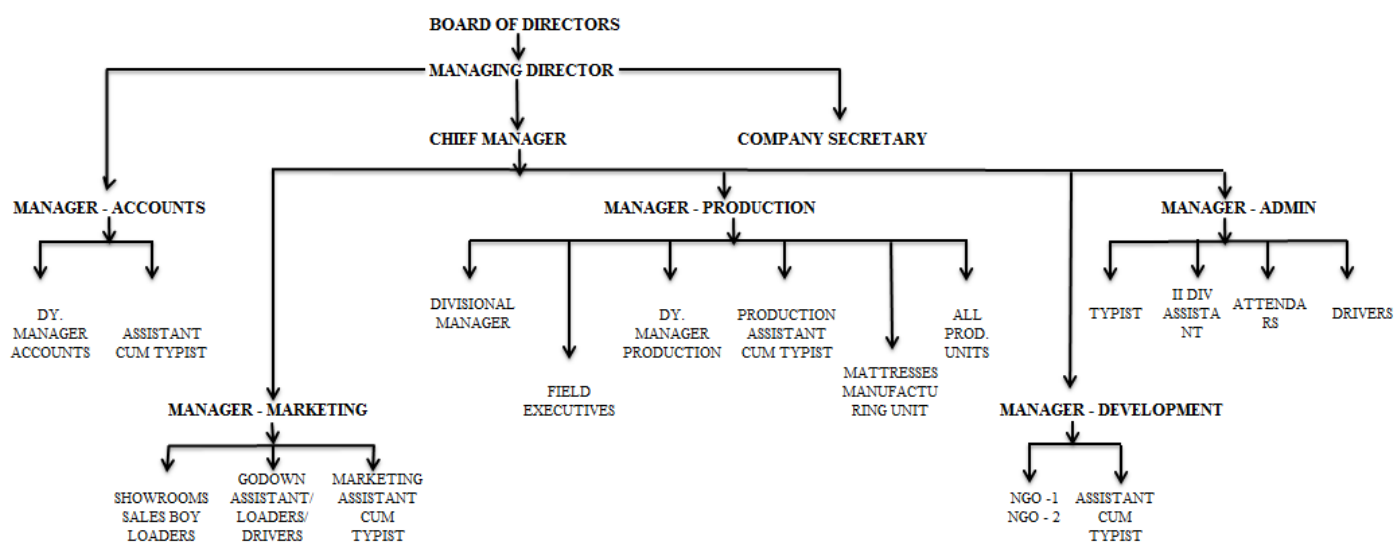
From our visit to the private players in coir fibre manufacturing , it was observed that that their production unit was visibly more efficient than the KSCDC production units, in terms of the machines used, which were more automated, had conveyor belts, and employed less labour than the machines used at KSCDC units. While capacity of private unit was more than five times of unit run by KSCDC the labour employed was similar. Further the curled rope manufacturing capacity was balanced with the capacity of fibre manufacturing. Thus wage cost would be significantly less. Needless to say to stay competitive, it is necessary to upgrade technology in line with the latest developments.

12.4 Human Resources

There are about 82 employees, out of which 42 are permanent and 40 are temporary. Workers at various production units are about 850 in number, though this varies every month based on production level requirements and workers' availability. There is an observed decrease in the overall workers employed at KSCDC from 1500 numbers few years back to 850 numbers currently.

The organization structure is shown in Exhibit 12.

Exhibit 12: Organization chart of KSCDC



Source: KSCDC

The wage workers are trained initially by KSCDC, after which some choose to work and some decide to leave. For a standard sized mat, with dimensions 14 in x 24 in, a wage worker in any of the unit of KSCDC here, makes about 8 to 10 per day, and they are paid on piece rate basis.

Based on our interactions with workers and staff in KSCDC units of Gubbi and Tiptur, it is observed that they are not satisfied with the payment mainly due to the delay in getting the money as per calendar month. Many revealed that they have obligations to pay rent, children's school fees, money owed in their Self Help Groups, in the first 7 to 10 days of the calendar month, while they receive payment for their labour in making coir products, almost by 22nd of each month.

Since workers are paid at piece rate for most of the coir products they make, they work for long hours, sometimes from 7am to even midnight. They highlighted that their poorly lit work area is not conducive for working at night. Those areas also face frequent power cuts, which delays their productivity. Women workers in the mat making division said that they were trained for 2 months before they started working. They take about 45 minutes to make a mat, and currently make about 8 to 10 mats per day. They earn around Rs. 1,000 to Rs. 1,500 per month for average work hours, and about Rs. 2,500 at their maximum productivity.

In case of mats produced on power loom the workers would like yarn to be of better quality yarn with higher strength than the current type, since the current quality yarn breaks often, especially in the

weft. In the production units, there are automated power looms but they still run it manually due to the problem of the brown yarn getting cut often. A skilled worker who has been working for 20 years in the handloom and 6 years of powerloom within KSCDC production unit, suggested that there would be improvement in speed of production in mattings, if they can have better quality yarn for weft (with white fibre), while they can use the current quality yarn for warp. Apart from increasing productivity, this would also reduce strain on the workers, and reduce number of cuts in producing mattings.

Many of the employees at these units have been working for KSCDC for over 25 years. They expressed pride in working for KSCDC. They like their co-workers and seniors. They have a feedback mechanism which has started as recently as two months back, in which weekly meetings with the Managing Director gives them a platform to express concerns, if they have any. Everyone said they have a comfortable workload, but half of them are dissatisfied with salary and benefits, while others were neutral about it. Some concerns they raised are that they don't have leave encashment since 2014, they are yet to receive a raise in their salary as per 5th Pay Commission, and that Cadre and Recruitment rules of Karnataka are not entirely followed. Marketing department highlighted the need for increase in promotional activities for the coir products of KSCDC. Suggestions from employees for taking the Corporation out of red are that 4G exemption needs to be provided on a continuous basis, technology used in the production needs to be improved to reduce manpower and there should be focus on new product development to be competitive to various substitutes in the market.

As per discussions with workers at the production units visited, most of them like the job, their co-workers and seniors but they are dissatisfied with the salary and benefits. They requested for payment increases and payment to be made in the first week of calendar month. They expressed that they would like to see provision for Provident Fund and Medical Insurance. They would also like to have a feedback mechanism to share the concerns with the Management. They had an incentive scheme earlier, in which they were paid additional incentives for meeting targets in production of coir products, but it was stopped 6 years back. They would like that scheme to be revived.

Details of training programs conducted annually from year 2010-11 to 2014-15 are shown below:

2010-11		2011-12		2012-13		2013-14		2014-15	
STP	TSP	STP	TSP	STP	TSP	STP	TSP	STP	TSP
100	20	100	-	396	103	228	100	193	50

From our interactions with KSCDC staff, we have understood that the trainees trained are absorbed in house in various operations. Since coir business has low margins, workers prefer other avenues of employment. Hence, a decreasing trend is observed in the number of workers at KSCDC units. Product cost is also high in comparison with the other un-organised units due to higher overhead costs. So competing with the un-organised players has been a challenge.

While being profitable is essential for the sustainability of the corporation, it should be noted that there are social benefits being derived by the existence of the corporation, So it is important to estimate social benefits over the costs incurred by the Government.. The Corporation has been able to train eligible beneficiaries in rural areas through Government support in terms of grants, and provide them with employment opportunities. A significant proportion of these beneficiaries are women, which leads to women empowerment, additional source of income in their household, thereby improving overall earnings by a rural family and quality of living.

During the period 2010-11 and 2012-13 the average grants provided by Government was Rs. 150⁶ lakh per annum under the heads of Modernisation and Technology training and working capital support, which has been a cost to the government and we have considered the social benefit of this intervention to be rural income generation. Total wages earned is considered as an indicator for rural income generation. Average cost of wages during this period for the corporation was Rs. 101.81 lakh. The Benefit cost ratio in this case is 0.67. While this is an indicator, this number does not comprehensively cover the social benefits. The benefit cost ratio has to be higher than 1 which would indicate higher benefits over the costs incurred by the government. While income generation is a social benefit, this is not a representation of comprehensive social benefits, and comprehensive data on the social benefits are currently unavailable with the corporation and was not covered as part of the study since it was not part of the scope of work.

However it is essential for the Government and corporation to assess the Social Benefit costs so has to choose projects which has higher benefits.

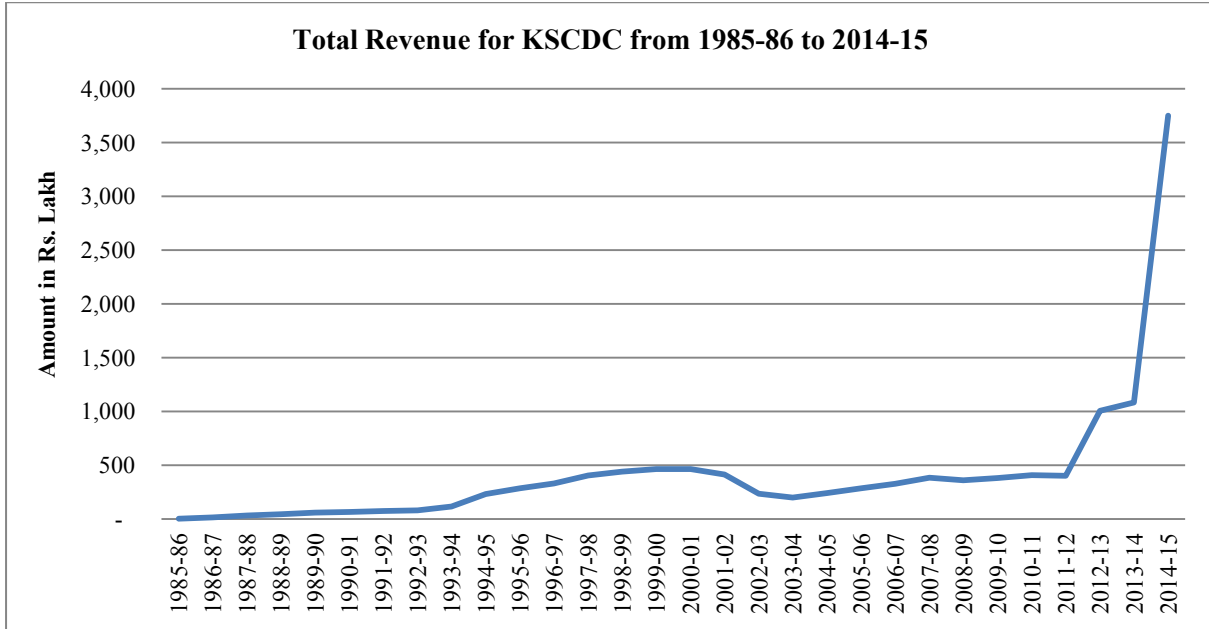
Further analysis on the financial performance, and cost structure of the Corporation is presented in next section.

⁶⁶ The funding under skill development has not been considered as the data on outcomes was not available

12.5 Financial performance analysis

During 2015-16 the total revenue of KSCDC stood at Rs. 37.51 crore. Revenue has increased at a CAGR of 18.39% during 2003-04 to 2013-14, as shown in Exhibit 13. The spike in the revenue for the year 2014-15 is due to 4G exemption.

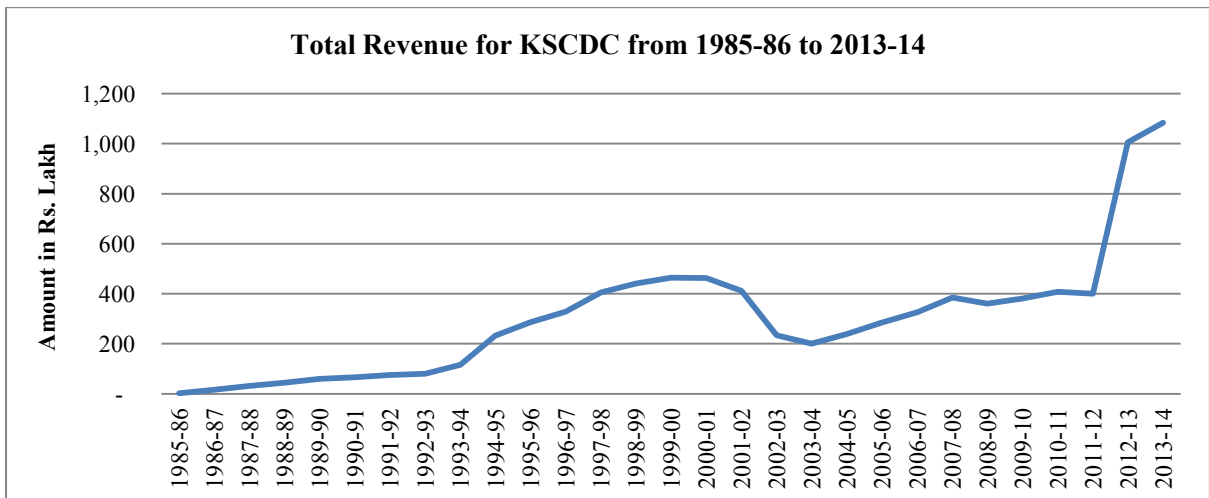
Exhibit 13: Total Revenue for KSCDC from 1985-86 to 2014-15



Source: KSCDC, ImaCS Analysis

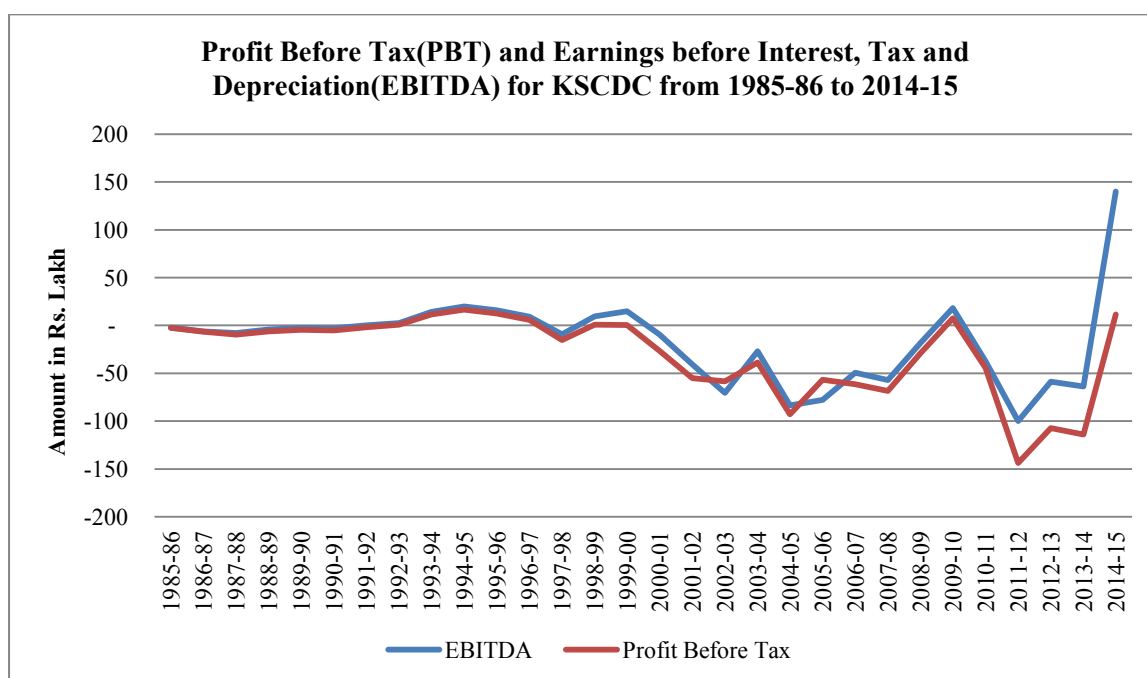
The trend in total revenue of KSCDC, without the consideration of the year 2014-15, is highlighted in Exhibit 14. The decline in revenue from 1999-00 was due to increase in Interest amount paid. Other expenses, which include administrative costs increased by almost 57% between 1999-00 and 2000-01. Sales also declined from about Rs. 4.26 crore in 1998-99 to Rs. 1.43 crore, which is about one-third of the initial figure.

Exhibit 14: Total Revenue for KSCDC from 1985 -86 to 2013-14



Source: KSCDC, ImaCS Analysis

Exhibit 15: Profitability of KSCDC from 1985-86 to 2014-15



Source: KSCDC, ImaCS Analysis

Since KSCDC's inception in 1985, profit calculated before tax, was negative from 1985-86 to 1991-92, as shown in Exhibit 15. Overall loss increased from Rs. 2.45 lakh in 1985-86 to Rs. 9.67 lakh in 1987-88. After those 2 years, trading income through sale of coir products increased by almost 1.5 times in 5 years, which made the Corporation record a marginal profit of Rs. 93, 020 in 1992-93. For 4 years from 1992-93 to 1996-97, KSCDC's profits grew marginally to Rs. 5.87 lakh.

After being marginally profitable for 4 years, the Corporation recorded a loss of Rs. 15.22 lakh in 1997-98. This is because the purchase of raw material increased by almost 54% as compared to previous year, while revenue from sale of products increased by 12.4% during the same time. Common form analysis shows that the cost of raw materials consumed was about 29% higher than the revenue from operations in 2011-12. This shows that there is inefficient planning for buying of raw materials.

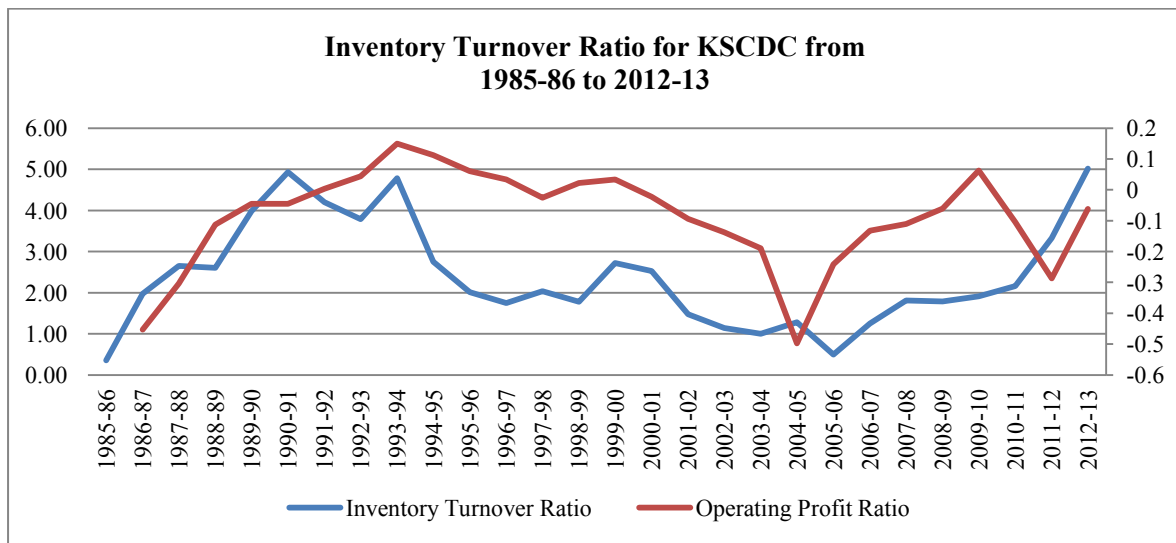
Since then the Corporation has been in the red till 2013-14, excluding year 2009-10 when it made a profit of Rs. 7.6 lakh and two years from 1998-2000 with marginal profits of Rs. 69,003 and Rs. 53,258 respectively. The profits seen in the consecutive years from 1998-99 and 1999-00 are due to the increase in revenue due to sales by 22.6% and 26.8% respectively.

In 2009-10, due to accumulation of stock of raw materials purchased from previous years, the cost of buying raw materials in this year reduced by 4%, which is around Rs. 7.89 lakh. Also, the amount KSCDC received as miscellaneous income, which is for marketing development assistance increased by around 78% from Rs. 16.66 lakh in the year 2008-09 to Rs. 29.68 lakh in the year 2009-10.

Inventory turnover ratio, which measures KSCDC's efficiency to turn its inventory or coir products into sales, saw a downward trend from 1993-94 to 2005-06 as shown in the Exhibit 16. Low inventory turnover ratio indicates a relatively excess procurement or low sales which would in turn affect the

profitability. There is an observed positive correlation of 0.37 between Inventory Turnover ratio and Operating Profit ratio, and the relation can be seen from the trend shown in Exhibit 16.

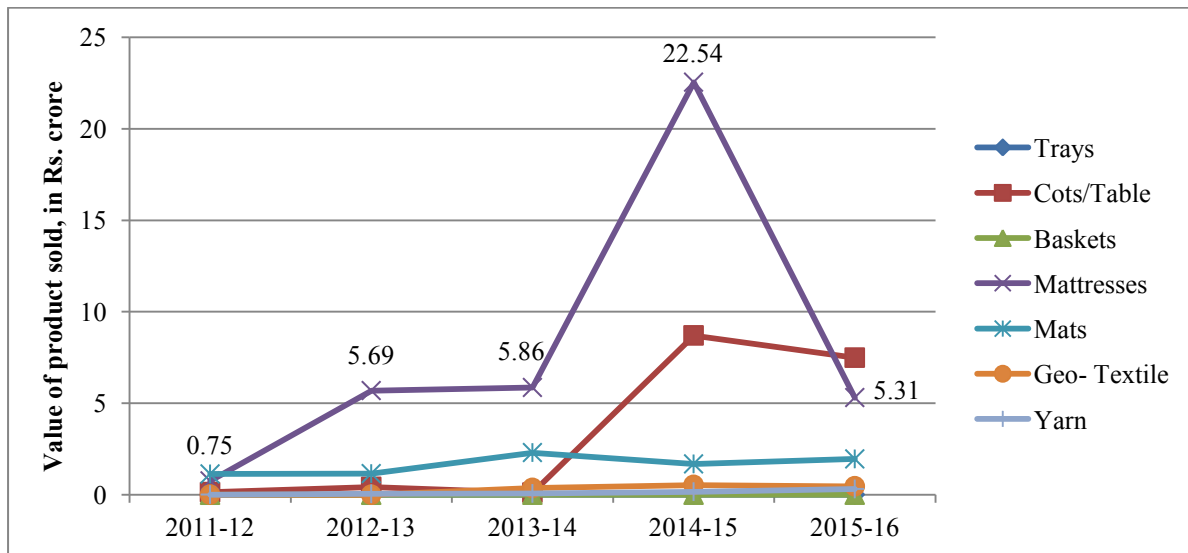
Exhibit 16: Inventory Turnover Ratio for KSCDC from 1985-86 to 2012-13



Source: KSCDC, ImaCS Analysis

In 2012-13, the overall revenue for KSCDC by the sale of its products increased by almost 1.5 times from Rs. 3.97 crore in 2011-12 to Rs. 9.83 crore in 2012-13. On further analysis of item wise sales for the past 5 years, it was found out that the sale of mattresses increased by Rs.4.935 crore from 2011-12 to 2012-13, as shown in the Exhibit 17. Value of Item-wise sales for KSCDC from 2011-12 to 2015-16:

Exhibit 17: Trends in value of coir products sold by KSCDC from 2011-12 to 2015-16



Source: KSCDC, ImaCS Analysis

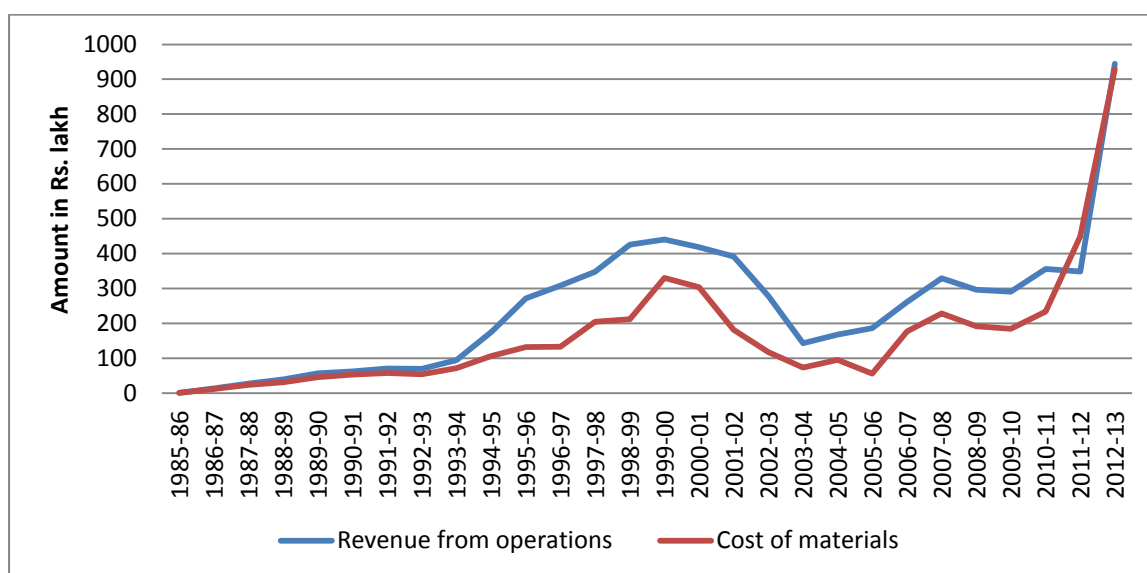
The details of Government grants received from 2008-09 to 2015-16 and the details of the schemes on which they were spent are mentioned in Appendix D.

The corporation recorded a sales turnover of Rs. 37.09 crore in 2014-15, recording a profit of around Rs. 1.17 crore due to the 4G exemption which was provided to the organisation specifically for that year, increasing the sale of mattresses, to various Government Institutions. Value of sales in mattress was almost 67% of the total value of sales across all product segments of KSCDC.

One of the main reasons for the Corporation to be in the red, has been due to operational losses caused by low sales, and relatively high overhead expenses. Average of cost of materials consumed has been about 69% of the revenue generated from operations, for the years 1985-86 to 2012-13. The trend for all the years is shown in Exhibit 18. During 2011-12, the raw materials purchased and consumed was about 29% higher than what revenue was generated from operations. This shows poor inventory planning.

Average of employee benefits expense for the same duration, is about 31% of the revenue from operations. On further analysis, it was found that other expenses like rent, vehicle maintenance, discounts provided and other administrative expenses added up to an average of 37% of the revenue generated from operations in the same duration.

Exhibit 18: Trends in revenue and cost of materials consumed by KSCDC



Source: KSCDC, ImaCS Analysis

Despite being in red, the Corporation has been able to continue operating with the support of and market borrowings and Government grants. The Corporation faced decreasing profits from 1999-00 and it made losses during 2000-01 and remained so till 2008-09. Short term borrowings of Rs. 24.60 lakh, were availed from financial institutions in 1998-99 and the borrowings has gradually increased since then, to reach around Rs. 1.26 crore in 2010-11. Share of estimated debt servicing in the accumulated losses till 2012-13 for the Corporation is about 11.7%. There were also long term borrowings availed from financial institutions during 1987 -1993 of amount less than Rs. 3.5 lakh annually, except for the year 1998-89 when it was about Rs. 22.75 lakh.

Other source of financing has been Government grants. Karnataka State Government has provided grants at an average of around Rs. 3.16 crore annually from 1993-94 to 2012-13. GoI has provided grants of Rs. 30 lakh in 2005-06, and around Rs. 90 lakhs annually during 2011-12 and 2012-13. Total Government grants received have increased from 1993-94 to 2001-02, while the profit before

tax have reduced in the same duration. While these Government grants were used for specific schemes including technology upgradation, there was also a component of Government grant, towards fulfilling working capital requirements. Working capital fund of Rs. 30 lakh annually was received from GoK during the years 2004-05 and 2005-06. Grant availed for working capital started in 2005-06 with the amount of Rs. 1.18 crore and has increased up to Rs. 3.4 crore in 2012-13. Thus short term borrowings and government grants have been the sources of financing to the corporation.

Expanding sales by Exports is an objective that KSCDC is yet to take initiatives in. In the current context of coir and coir product exports from India, coir pith has the highest share, in terms of the value, at 36.2%, in the year 2015-16.

For the Corporation to be profitable, they need to increase sales and/ or reduce overhead expenses. The administrative expenses and cost of manpower, such as employee expenses and wages, is at an average of about 68% of revenue from operations, for the duration 1985-86 to 2012-13. To offset such high overheads, they need to increase revenue from operations to at least around Rs. 25 crore with share of cost materials maintained at 70% of the revenue. To achieve this, the CAGR for the revenue of operations need to be 20%, without considering the effect of 4G exemption. Assuming there is 10% growth in the sale of existing line of products, with mattresses especially, and starting exports of coir briquettes by capturing about 0.25% of share of India's exports, at an estimated value of around Rs. 1.5 crore, KSCDC can get an estimated Rs. 2 to Rs. 3 crore increase in revenue every year, thereby making them profitable in 5 to 6 years from now.

13. Reflections and conclusions

As for market for coir products, domestic market is estimated to be Rs.3,500 crore and mattress industry is a key consuming segment. KSCDC's market share is estimated to be around 0.3% of the domestic market, despite Karnataka having third largest coir potential in the country. There has been an increasing demand for coir products in the developed countries, due to which India's exports have witnessed a CAGR of about 18.7% in terms of value, during the last 6 years. Coir pith segment has seen the highest growth in value among export of coir products, with a CAGR of around 35.9%. There is an opportunity for KSCDC to export coir pith.

To cater to the market, the current product mix of KSCDC covers a broad dimension of value added products, but main share of revenue comes from sale of mattresses, cots and tables. KSCDCs sale of these products is limited primarily to Government Institutions. Rubberized coir mattress has consistently seen high percentage of sales among all its products and is expected to be largest contributor in sales of coir products in the coming years, based on interactions with the staff. However, there is no provision for Research and Development for products so far in KSCDC, and the industry is facing stiff competition from synthetic fibre and plastic substitutes.

To produce coir products, KSCDC has about 60 production centres currently, but about 34 units of them are achieving less than 50% of production targets set for them based on their capacity. This shows that their capacity is underutilized. Workers highlighted issues of poor lighting condition in the work area and power cuts, due to which their productivity is hampered. They earn around Rs. 1,000 to Rs. 1,500 per month for average work hours, and about Rs. 2,500 at their maximum productivity. Since coir business has low margins, workers prefer other avenues of employment. Hence, a decreasing trend is observed in the number of workers at KSCDC units. Product cost is also high in comparison with the other un-organised units due to higher overhead costs. So competing with the un-

organised players has been a challenge. To stay competitive, it is necessary to upgrade technology in line with the latest developments.

All these are significant contributors for financial performance of KSCDC. Since KSCDC's inception in 1985, profit calculated before tax, was negative from 1985-86 to 1991-92. After being marginally profitable for 4 years from 1992-93 to 1996-97, the Corporation recorded a loss of Rs. 15.22 lakh in 1997-98 and it has been in the red since then. One of the main reasons for the Corporation to be in the red, has been due to operational losses caused by low sales, and relatively high overhead expenses. Average of cost of materials consumed has been about 69% of the revenue generated from operations, for the years 1985-86 to 2012-13. During 2011-12, the raw materials purchased and consumed was about 29% higher than what revenue was generated from operations. This shows poor inventory planning. It was an exceptional year of 2014-15, when the Corporation made a PBT, of about Rs. 11.66 lakh, which was due to 4G exemption.

14. Recommendations

After analysing the financial statements of KSCDC between 1985-86 and 2013-14, infrastructure facilities, coir products produced and the market it is catering to, it can be seen that the overhead expenses are high for the corporation for the current level of sales. Significant sale of products is restricted to mattress, cots and tables and mainly through sales channel of Government Institutions. It is essential for the Corporation to increase competitiveness, by generating higher revenues through sale of coir products in domestic retail market as well as exports.

Recommendations are in the direction of improving cost structure in the short term and generating increased revenues through medium and long term measures.

Measures to improve competitiveness can be classified as mentioned below:

- Productivity improvements
 - By upgrading technology
 - Providing regular and intensive training to workers
- Cost reduction
 - By centralizing the production units
 - Improve inventory management

The recommendations towards improvement in productivity and cost reduction are further detailed under recommendations

A. Short term recommendations: These are implementable within a year without significant policy/budgetary interventions. This would include tactical improvements. The short term recommendations are as follows.

I. **Improve Inventory management:**

As seen from the analysis of KSCDC financials there is a positive correlation between Inventory Turnover ratio and Operating Profit ratio. The improvement in inventory turnover ratio can improve the profitability. The priority for KSCDC is to plan for inventory control, which in turn can reduce the amount of operational losses. Inventory turnover ratio has remained less than 4, for almost 80% of the duration from 1985-86 to 2013-14. This highlights relatively excess procurement over sales. Inventory planning is required to maintain the inventory turnover ratio of at least 4. While existing inventory may be analysed and non-moving and low moving stock may be disposed. Inventory level may be continuously monitored, to ensure raw material purchases are made at the required quantity.

II. **Change the cycle of payment of wages:**

The wages to the workers are being paid monthly basis in the second half of each calendar month. Due to this the workers face problems as their obligations to pay house rent, children's school fees, repayment of loans to SHGs, etc in the first 7 to 10 days of the calendar month. KSCDCs Internal documentation/ Payment cycle may be readjusted such that the wages may be paid before 7th of every month to the workers.

B. Medium term recommendations:

I. Centralisation of production units:

With the corporation having about 60 production centres for producing yarn, curled coir, rope, matting and foot mats, 10 de-fibring units and 4 curling units. The estimated average production value per centre is at Rs. 31,400 per month. Average of employee benefits expense, which does not include wages for the 1985-86 to 2012-13 is about 31% of the revenue from operations. By centralising some of the activities like defibring, curled rope manufacturing, etc, among the production units situated geographically close by, overheads in terms management and co-ordination, rent, electricity, transport, and other administrative expenses can be reduced. This can help in reducing the cost of production. While decentralisation helps in broad basing of employment provision. A balance may be achieved by clustering activities in the catchment area to achieve centralisation based on the availability of raw material.

II. Focus on Coir pith/briquette sales in domestic and export market:

There is an increasing demand for coir products in the export market, due to its environmental friendliness. The export of coir products has seen an increasing trend, growing at a CAGR of about 18.7% in terms of both quantity and value, during the last 6 years. Coir pith has maximum share in exports, with 36.2% of the overall value in 2015-16, and it has witnessed a CAGR of around 36%. The sales realisation of the corporation is currently dependent only on the domestic sales, where it has just about 0.3% market share of domestic coir market. During the primary research we have understood that currently the coir pith is being sold by KSCDC at a price of Rs.650 per MT, where as the export value of coir briquette is estimated Rs. 16,000 per MT. Hence KSCDC needs to focus on export opportunities of coir briquette to improve revenues.

The corporation may also focus on domestic promotion/sales of coir pith/briquetting by partnering with agricultural universities, agriculture/horticulture co-operatives, Government Departments related to agriculture/horticulture, horticulture experts, Estate management firms, NGOs, etc.

III. Focus on Coir Mattress sales in domestic market:

Coir mattress is the largest product segment in organised market in India. While KSCDC is catering the institutional market (Primarily government), they may also focus on retail market to improve sales through, distributor, online market place .Necessary marketing activities to be taken to create a brand identity for the products of KSCDC.

IV. Estimate and publish social benefits of the Corporation annually:

While the Corporation is focussed on development of coir industry by implementing many projects towards economic empowerment of rural personnel and considering that there is Government intervention, it is important to estimate the extent of social benefits derived quantitatively. Social benefits may be calculated with indicative parameters like economic self-reliance, additional income generation, women empowerment and quality of life with a link to Human Development Indicator (HDI). Social cost-benefit analysis may be done on annually basis and published as part of annual report.

C. Long term recommendations:

I. Focus on Research and Development of cost effective Coir products:

To help in sustained existence and growth of KSCDC, it is important to undertake innovative product development in coir sector. Promotion of R&D through tie-ups and partnerships with Universities to increase value addition in the industry covering new product development, prototyping and commercialization aspects may be taken up. Partnerships can be developed with National Coir Research and Management Institute (NCRMI), and extended with Indian Plywood Research & Training Institute, to undertake market research to explore possible areas of replacing synthetic/ natural products by coir, exploring market for blended products among coir, cotton, jute and wool. Possibilities of improving strength in coir veneer board, stiffness in geo-textiles, and quality of mattresses cost effectively needs to be explored. Tie-up with Bombay Textile Research Association (BTRA) which is a Centre of Excellence for geo-textiles may be explored to develop and commercialize the geo-textile products.

D. Recommendations requiring change in policy:

I. Upgrade Technology and scale of operations:

During our visits to the private players in coir fibre manufacturing, it was observed that the scale of production was higher with improved technology such as usage of conveyor belts, which reduces the unskilled manpower requirement and manufacture efficiently. Further KSCDC staff mentioned that it's challenging to source unskilled labour for fibre production. So there is a need for upgrading technology, primarily in fibre production and manufacturing of curled rope with minimum economies of scale so that the cost of production is lower and products are more competitive. Existing staff and workers may be trained on regular basis on new products, technology and designs.

II. Promotion of coir industry:

In addition to manufacturing and marketing products under KSCDC, the Organization may promote products manufactured by MSMEs/ Cooperatives in the state by taking up promotional activities few of which are mentioned below:

- Tie-ups with online marketplaces – KSCDC may register various MSMEs manufacturing coir products and formulate quality standards and provide authentication of the products. Such products which are of authentic quality may be marketed through the tie-ups with online marketplaces or websites. Similar initiatives are being taken up by Development Commissioner (Handlooms), New Delhi, under Ministry of Textiles to promote handloom products.
- Promoting coir industry through exhibitions - Promotion of coir products produced by KSCDC and private manufacturers in the state by providing access to platforms such as exhibitions nationally and internationally to boost production and exports needs to be undertaken.
- Brand ambassador – KSCDC may appoint brand ambassador to promote the coir industry. The suitable brand ambassador should be able to promote eco-friendliness/ farmer/artisan orientation of the coir industry.

15. Appendices

A. Questionnaire guideline for KSCDC (Management)

SALES AND MARKETING

1. Please provide details of sales of various product segments of KSCDC:

Sl No.	Product segment	Quantity of Sales (Tonnes)					Value of Sales (in Rs. Lakh)				
		2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
1	Trays										
2	Cots/Tables										
3	Baskets										
4	Mattresses										
5	Mats										
6	Geo textiles										
7	Yarn										

2. Please provide details of exports of KSCDC for the past five years, in the following format:

Sl No.	Product segment	Quantity of export (Tonnes)					Value of exports (in Rs. Lakh)				
		2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
1	Trays										
2	Cots/Tables										
3	Baskets										
4	Mattresses										
5	Mats										
6	Geo textiles										
7	Yarn										

INFRASTRUCTURE

3. Please provide details of production units in the format below:

Sl no	Production unit / centre	Production capacity (Tonnes)	Production quantity (Tonnes)				
			2011-12	2012-13	2013-14	2014-15	2015-16

4. Please provide details about the machinery used at all the production units:

Sl no	Production unit / centre	Machine name	Machine manufacturer /model name	Machine age	Working status (Y/N)

HUMAN RESOURCES:

5. What is the organization structure of KSCDC? Kindly provide the hierarchy with all the levels/roles, number of people working under each role and the reporting relationship.
6. How many daily wage workers are currently working for KSCDC? _____
7. Kindly provide details of the number of daily wage workers working in different operations:

Sl no	Activity	Number of daily wage workers	
		Male	Female
1	Husk extraction		
2	Yarn manufacturing / spinning		
3	Matting		
4	Others _____		
5	Others _____		
6	Others _____		

8. Kindly provide details of productivity in manufacturing of different products:

Sl no	Product segment	Average production per day/worker	Production Unit	Earnings per worker per day (Rs)	
				Male	Female
1	Trays				
2	Cots/Tables				

B. Questionnaire for KSCDC's Staff

Name:		Age(Years)	
Gender:	Male <input type="checkbox"/> Female <input type="checkbox"/>	Location:	
Designation		Department:	

1. Since how many years are you working with KSCDC? _____
2. How has your job been in terms of the workload?
 No work Little Manageable More Unimaginably high
3. What do you like the most about your job?

4. What do you like the least about your job?

5. What training programs would you suggest for improvement of skills required for the job?

6. Please provide your agreement level for the below parameters:

	Highly Disagree	Disagree	Neutral	Agree	Highly Agree
I like my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like my co workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like the seniors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am learning necessary skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am rewarded for the quality of my efforts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am proud of the Corporation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Please provide your satisfaction level:

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
Salary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall Satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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8. Is there a feedback mechanism to share your concerns with the management?

9. What are your suggestions to improve the morale of workforce in the organisation?

10. Suggestions for helping the Corporation turn into a profit making body:

C. KSCDC Training-cum-Production centres as of June 2016

No	District	Taluk	SI No	Place	Activities					
					Fibre	Curling	Auto.spin	Yarn	Mats	Matting
1	RAMANAGARA	Channapatna	1	HUNASANAHALLI	Fibre			Yarn	Mats	
			2	NEELAKANTANAHALLI				Yarn	Mats	
			3	KUNTURDODDI C.V.Board						
		4	Kanakapura TUNGANI			Auto.spin				Matting
2	TUMKUR	Gubbi	5	GUBBI	Fibre		Auto.spin	Yarn	Mats	Matting
			6	CHELUR				Yarn	Mats	
			7	BIDHARE				Yarn	Mats	
		8	Chikkanayakanahalli M.H.KAVAL				Yarn	Mats		
		9	Tiptur KANCHAGHATTA	Fibre	Curling					
		10	Sira KILARADAHALLI TANDA				Yarn	Mats		
		11	BEVINAHALLI				Yarn	Mats		
3	CHIKKAMAGALUR	Kadur	12	PANCHANAHALLI			Auto.spin	Yarn	Mats	
		Shrungeri	13	KERE KATTE				Yarn	Mats	

		Shrungeri	14	THYAVANA				Yarn	Mats	
4	HASSAN	Arasikere	15	BANAVARA	Fibre					
			16	ADHIHALLI				Yarn	Mats	
			17	ARAKERE				Yarn	Mats	
			18	BAGEVALU				Yarn	Mats	
			19	CHIKKA GANDASI				Yarn	Mats	
			20	DODDAYARAGANALU				Yarn	Mats	
			21	GANDASI	Fibre	Curling	Auto.spin		Tray	
			22	JAVAGAL			Auto.spin	Yarn	Mats	
			23	KALLUSADARAHALLI			Auto.spin	Yarn	Mats	
			24	KANAKATTE				Yarn	Mats	
		25	MUDUDI				Yarn	Mats		
		26	YADAVANAHALLI				Yarn	Mats		
		Channarayapatna	27	NAVILE THIMLAPURA	Fibre	Curling	Auto.spin	Yarn	Mats	
			28	JUMBOORU				Yarn	Mats	
		Holenarasipura	29	HOLENARASIPURA				Yarn	Mats	

5	CHITRADURGA	Hiriyur	30	RANGANATHAPURA	Fibre		Auto.spin	Yarn	Mats	
		Hosadurga	31	DODDAGHATTA	Fibre			Yarn	Mats	
			32	HAGALAKERE				Yarn	Mats	
			33	VEERAVVA NAGATHIHALLI				Yarn	Mats	
			34	MADADAKERE				Yarn	Mats	
6	DAVANAGERE	Channagiri	35	GARAGA				Yarn	Mats	
			36	HEBBALAGERE				Yarn	Mats	
7	CHAMARAJANAGARA	Chamarajanagara	39	MANGALA			Auto.spin	Yarn	Mats	
			40	PUNAJANUR						Matting
		Gundlupet	41	BEGUR	Fibre	Curling				
			42	KABBALLI				Yarn	Mats	
8	MANDYA	K.R.Pet	43	HOSAHOLALU				Yarn	Mats	
		Malavalli	44	MAREHALLI				Yarn	Mats	
		Nagamangala	45	BINDIGANAVILE				Yarn	Mats	
			46	NAGAMANGALA	Fibre		Auto.spin	Yarn	Mats	
		Pandavapura	47	KYATHANAHALLI				Yarn	Mats	

9	MYSORE	T.Narasipura	48	CHIDHARAVLLI			Auto.spin	Yarn	Mats	
			49	BENAKANAHALLI				Yarn	Mats	
		H.D.Kote	50	JAKKALLI				Yarn	Mats	
		Mysore	51	MYSORE-JAIL				Yarn	Mats	
10	UDUPI	Kundapura	52	KARKUNJE				Yarn	Mats	
			53	VAKWADI	Fibre					
			54	MUDOOR				Yarn	Mats	
		Udupi	55	HANEHALLI				Yarn	Mats	
			56	SASTHANA			Auto.spin	Yarn	Mats	
			57	NITTUR				Yarn	Mats	
		Karkala	58	EEDUBARE				Yarn	Mats	
			59	MAALA (Peradka)				Yarn	Mats	
11	UTTARA KANNADA	Ankola	60	SHETGERI	Fibre		Yarn	Mats		

D. Details of grants received and expenditure incurred by KSCDC from 2008-09 to 2015-16

SL. NO.	YEAR	SCHEME	GRANT RECEIVED	EXPENDITURE INCURRED	BALANCE
1	2008-09	Establishment of Anupam Looms	17.00	17.00	0.00
		Total	17.00	17.00	0.00
2	2009-10	Modernization and Technology Training	12.50	12.50	0.00
		Total	12.50	12.50	0.00
3	2010-11	Modernization and Technology Training	50.00	50.00	0.00
		Working Capital	75.00	75.00	0.00
		SCP-TSP Training	22.56	22.56	0.00
		SCP-TSP Living Cum Workshed	18.90	18.90	0.00
		Total	166.46	166.46	0.00
4	2011-12	Modernization and Technology Training	50.00	50.00	0.00
		SCP-TSP Training	15.04	15.04	0.00
		SCP-TSP Living Cum Workshed	13.50	11.10	2.40
		Special Development Programme	80.00	80.00	0.00
		Total	158.54	156.14	2.40
5	2012-13	Modernization and Technology Training- 1 Qtr.	25.00	25.00	0.00
		Working Capital	225.00	225.00	0.00
		Special Component Plan - Training	15.04	15.04	0.00
		Tribal Sub Plan - Training	9.40	9.40	0.00
		Special Development Programme	75.00	75.00	0.00
		Modernization and Technology Training- 2 Qtr.	25.00	25.00	0.00
		Special Component Plan - Training	13.80	13.80	0.00
		Tribal Sub Plan - Training	1.38	1.38	0.00
		Special Development Programme	58.50	58.50	0.00
		Total	448.12	448.12	0.00
6	2013-14	Modernization and Technology Training	75.00	75.00	0.00
		Working Capital	100.00	100.00	0.00
		Special Development Programme	243.20	243.20	0.00
		Special Component Plan - Training	29.36	29.36	0.00
		Tribal Sub Plan - Training	15.62	11.44	4.18
		Participating of Exhibition and conducting of Seminars	8.50	8.50	0.00
			471.68	467.50	4.18
1	2014-15	Modernization and Technology Training	182.32	87.90	94.42
		Working Capital Loan	200.00	200.00	0.00

Special Component Plan/Tribal Sub Plan	39.05	14.15	24.90
Total	421.37	312.05	109.32

SL. NO.	YEAR	SCHEME	GRANT RECEIVED	EXPENDITURE INCURRED	BALANCE
1	2015-16	Assistance under Coir Sector	190.00	86.53	103.47
		Total	190.00	86.53	103.47

E. Terms of Reference

The terms of reference for this engagement are to answer the following questions:

1. What are the causes for the poor financial performance of the corporation?
2. Whether the objectives for which the corporation was set up have been achieved?
3. If yes, to what extent? If no, why not?
4. Is there any correlation between poor financial performance of the corporation with the achievement/non achievement of some/all objectives of the corporation?
5. What measures need to be taken for fulfilment /better fulfilment of the objectives of the corporation?
6. What is the morale and feeling of the work force of the corporation? Are they proud of the corporation? If not, why? What is their suggestion for taking the corporation out of the red?
7. Whether it is relevant with reasons to have the corporation for now?
8. What measures, If taken, will pull the Corporation out of the red? Is it possible to get the Corporation in profit? If yes, approximately when?