

**COIR BOARD,  
Cochin**

**Executive Summary  
STATUS OF COIR INDUSTRIES IN INDIA**



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## EXECUTIVE SUMMARY

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### **Background**

India accounts for more than two-thirds of the world production of coir and coir products. Kerala is the home of Indian coir industry, particularly white fibre, accounting for 61 percent of coconut production and over 85 per cent of coir products. Although India has a long coastline dotted with coconut palms, growth of coir industry in other coastal States has been insignificant. Not more than 28 per cent of the coconut husks are utilised in the coir industry, the remaining being used as fuel or as a waste material in rural areas. Productions in the cooperative fold and in the private sector are not encouraging too. The already undertaken development programmes aimed at revitalisation of coir cooperatives, creation of entrepreneurship, quality improvement and diversification products ranges.

Since the development of coir sector contributes towards the sustainable development agenda in terms of creation of environment friendly products, its application for domestic use along with the usage in housing, building, agriculture, horticulture, and infrastructure production are significant. The world population is becoming more and more conscious about the need of preserving the nature with an increasing number of people opting for environment friendly products. This is the opportune time to promote the case of coir to replace synthetic furnishings and certain wooden building materials. It is therefore extremely important that, a major collective initiative may be taken up to promote the cause of coir by identifying the thrust areas involving a quantum jump in coir sector development. The assessment of the current status of the coir industry is of much importance prior to the implementation of the National Coir Policy.

### **Scope of the Assignment**

The present utilization of coconut husks for coir industry is at a low level. There is a need to raise the level to at least 60%. The Coir Board wanted to conduct a state-wise survey in all the coconut producing states to understand the status of coir industry.

## **Methodology**

The study was based on explorative, descriptive and analytical-research approach to study the above objectives in-depth with regard to the specific target respondents as mentioned in the subsequent paragraphs. The study was conducted on a basis of the sample of respondents involved in the chain including the coconut farmers, trade participants, Trader's / Distributors / Retailers, Daily wage labourers, Market Associations / Industrial Co-operative Societies, Industry Owners, Artisans, Officials of the Coir Board, State Government and other opinion leaders who found has adequate knowledge on the topic. The findings of the study are highlighted below:

## **Coconut Production in the World**

Coconut is produced in about 91 countries of the world. India produces 12685 million nuts and occupies the third place after Indonesia and the Philippines. The Indian share in the world coconut production is about 16.28% and 17.07% in the area harvested. Annual production is about 216651 million nuts with an average of 10122 nuts per hectare. The high producing state is Kerala in terms of area, followed by Tamil Nadu, Karnataka, Andhra Pradesh and Odisha.

## **Coconut Husk Utilization and Market Potentials**

Currently 36310.44 lakh husks are utilized for generating fibres. The market value of husks consumed is between Rs 259.36 crore to Rs 315.12 crore. It is estimated 127824.62 lakh husks can be used for fibre generation and estimated market value will be Rs 913.03 crore to Rs 1109.34 crore per annum. If the government succeeds to tap the husks, it has the potential to generate additional revenue of Rs 653.67 to Rs 794.22 crores per annum.

## **Coir Fibre and Coir Yarn Consumption and Market Potentials**

539815 ton fibres are being consumed in India. The market value of the consumed fibres is Rs 890.69 to Rs 1199.16 crore. The utilization of coir fibre stands at 28.41 %. It has the potential to generate revenue of Rs 3135.54 to Rs 4221.44 crore per annum.

With regard to Coir yarn, the country produces 323900 MT Coir Yarn in the 2013-14 while the coir production was reported to be 321701MT in the year 2012-13 and 318900 MT in the year 2010-11. The major coir yarn producing states are Tamilnadu (131447 MT), followed by Kerala (85317MT), Andhra Pradesh (37416 MT), Karnataka (32541MT), Odisha (1706 MT) and others (35473MT).

### **Profile of the Coconut Farmers**

When the study tried to ascertain the profile of the farmers, the study reveals out of the total farmers engaged in coconut production, 32.5% farmers cultivate paddy, 12.5% paddy and pulses (12.5%), Mango (8.8%), fishing (7.5%), 6.5% (business or shop) and other activities (6.9%). As indicates, 25 percent farmers treat coconut production as main livelihood resource. On ownership of land, 95.6% farmers cultivate coconut on their own land, while 4.4% farmers cultivate on other's land. This indicates coconut is being produced primarily in own land. The survey findings also indicate only 4.4 percent farmers (mainly in Tamilnadu and Maharashtra) are engaged in coconut husk trade while 95.6 percent are limited to production of coconut and not engaged in husk trade. This indicates, the coconut farmers across the country have not shown interest so far to engage in coconut husk / coir industry in India

### **Benefits received by the Coconut Farmers**

The survey further intended to assess the benefits the coconut farmers received. The findings indicate only 1.9 percent farmers have benefited either from agriculture or horticulture department while 98.1% farmers did not get any benefit or help.

When asked about the problems that they encounter, the farmers said low harvesting due to climate problem, low rate of coconuts, poor quality of coconuts, insects are the major problems that they face. When it is asked on their poor interest in coconut husk trade or the reasons for poor husk business, majority viewed low cost of coconut husk is the key issue.

The survey assessed the farmers are looking to government help and encouragement besides ensuring a good selling price. Therefore, financial help, free fertilizers, collection of coconuts through cooperative societies are the major expectations of the farmers. In order to involve younger generation, the farmers opined to create awareness about coconut and coir products, introduce new schemes, provide financial help, promote hybrid coconut cultivation, provides training for coconut cultivation and activities relating to the coir industry.

### **Status of Coir Industries in India**

As on 31<sup>st</sup> March 2015, there are 15235 industries / units registered with the Coir Board. The study reveals the industries / units are concentrated in two states i.e., Kerala and Tamilnadu. Out of the total 15235 units, 7 units are public sector units. The public sector units are found in Kerala (3 units), Karnataka (2), Odisha (1) and Tamilnadu (1). Although there is an incremental growth but in overall terms, spatial growth has happened in the country and efforts must be taken by the Coir Board to expand the industry in all coconut producing states.

Out of the total, Kerala represents 57.85 percent while Tamilnadu's share is 25.83 % of total industries. Three more states are coming up in the Coir business. They are Odisha (share 5.28% of total industries), Karnataka (4.52%) and Andhra Pradesh (5.04%). The number of coir industries in other coconut producing states is very less looking at the potentials of the state.

The study wanted to assess the trend in setting up of the coir industries. A comparison is made with the Coir Board data of 2009-10. The Annual Report of Coir Board shows the share of South India was 93.89 percent in 2009-10 and this has decreased marginally to 93.46 percent in 2014-15. The share of Eastern states in 2009-10 was 5.07 percent, increased to 5.48 percent.

### **Number of Coir Units in India (as per the State Government)**

The study also collected data from Coir Producing State Government (s) and the UT (s) during the course of the survey. The findings reflect there is a mismatch in numbers available with Coir Board and the state government(s) on number of industries. The Coir Board data (barring Tamilnadu) suggests there are 11385 functional units while the State government data suggests

8751 industries - a gap of 2634 industries. The study observed the Coir Board should conduct an Industry Census to generate database of the functional industries.

### **Sample Survey of Coir Industries/ Units: The findings**

A sample survey was conducted to ascertain the status of the coir industries in the country. A total of 171 Coir Industries (1.1 % of the total industries) were surveyed from 14 coir producing states. The study assumes that 1.1 % sample units are representative of the whole universe and thus considers the views generate through this sample universe represents the views of the whole industries. The findings of the industry / unit study are described below:

#### **Category of Industries**

76.6% industries have small scale operation, followed by medium scale (18.1% industries) and large industries (5.3% industries). This means 94.7 % industries are MSME units. More number of large scale industries is functional in Karnataka, Kerala, Tamil Nadu and Odisha.

#### **Ownership of Coir industries**

With regard to ownership, the study found 57.3% industries are owned by private organized sector, followed by private unorganized sector (15.8%), Co-operatives (3.5 %) and SHGs (1.8 %). The share of household industries linked with cooperatives is 1.2 % while household industries not linked with cooperatives is 6.4 % of the total industries.

#### **Activities of Coir industries / units**

The study found 33.3 % units are engaged in fibre extraction / defibring activity while 23.4 % industries are engaged in coir yarn production through traditional methods while 35.1 % units are modernized / automatic coir yarn production units. 13.5% industries are engaged in Coir Mats ( Frame Type), followed by Coir Pith Processing (6.4%) , Coir geo-textiles ( 1.8%), Semi-Automatic Powerlooms ( 1.2%) and Automatic Powerlooms ( 0.6%).

### **Annual turnover (for the year 2014-15)**

The study found 83 % units have annual turnover of less than 50 lakh per annum. Out of which the turnover of 19.3% industries is less than Rs 5 lakh and turn-over of 44.4 units is between Rs 5 lakh to Rs 10 lakhs. The survey again found turn-over of 17% units is above Rs 50 lakh.

### **Profit Margin**

The study reveals all existing coir industries are running on profit. The profit margin revolves around 5 percent to 30 percent. 74 percent industries said their profit margin is within 10 percent while 17 percent industries said it is in the range of 11 to 20 percent while 9 percent industries said profit margin is more than 20 percent in the year 2014-15.

### **Problems faced for getting trained manpower / labour for the industry**

The survey indicates 60.2% industries face problems in getting trained manpower or labourer while 39.8% industries do not face problems. This indicates a large number of industries face manpower problem but they sort out by providing good salary to the skilled workers.

### **Technical or financial assistance for the Coir activities like coir spinning etc**

38.6% coir industries informed that they have got any technical or financial assistance from government bodies for the activities like coir spinning, handicraft making, etc., while majority (61.4%) industries informed that they have not got any technical or financial assistance.

### **Technology Status of the Coir Industries**

The study intended to assess the status of technology. The findings say 33.3% coir industries are fully mechanized, while 36.8% industries are partially mechanized, and 29.8% industries are not mechanized and traditional methods are used. When asked the reason for not opting for modernization, the partial and non-mechanized industries said lack of finance and unavailability of working capita are the key reasons. It is understood that a few industries have applied for / shown interest to procure moderinsed fibre extraction and fibre cleaning machines.

### **Procurement of husk and Utilization of coconut husks by existing machines and manpower by the industries**

The study gathered that majority coir industries are procuring husks from the local dealers and local husk suppliers. As findings suggest, 58.3 % industries procure husks from local dealers, 25.1% from local farmers, co-operatives (8.1%) and procurement from other states through suppliers (4%). As indicates, husk collection is primarily done from local areas.

With regard to utilization, 78.9 % units opined their existing machines and manpower are fully utilized with the available husks while 21.1 % industries said the existing machines and manpower are not fully utilized.

### **Quantity of fibre used and utilization of coir fibre by existing machines and manpower by the industries and reason for low utilization**

The findings indicate 52.1 % industries use less than 1000 kg fibre per annum while 25.1 % industry consumes fibre in the range of 1000 kg to 3000 kg per annum. The findings indicate 22.8 % industries consume more than 10000 kg fibres per annum.

65.5 % units opined their existing machines and manpower are fully utilized with the available coir fibres while 34.5 % industries said the existing machines and manpower are not fully utilized. This shows the scarcity of coir fibre is felt by 34.5 % industries in the country. When asked to cite the reasons for low utilization of coir fibres, 20.3 % units said getting labour is one of the topmost challenges before the industry. This is followed by unavailability of husk (18.7%), lack of finance (13.6%), poor quality of husk (11.9%) and repayment of loan (8.5%).

### **Utilization of coir yarn by existing machines and manpower by the industries and reason for low utilization**

65.5 % units opined their existing machines and manpower are fully utilized with the available coir fibres while 34.5 % industries said the existing machines and manpower are not fully utilized. This indicates, scarcity of coir fibre is felt by 34.5 % industries in the country. When asked to cite the reasons for low utilization of coir yarn, 15.4 % units said poor quality of yarn is one of the topmost challenges before the industry. This is followed by unavailability of fibre



(12.8%), lack of finance (12.8%), low market demand (12.8%), unavailability of domestic market (11.5%), repayment of loan (10.3%) and unavailability of export market (9%).

### **Percentage of Coir products Sold vis-à-vis Production**

The study ascertained that almost all raw-materials and value added products produced by the Coir Industries are sold in the market. The production and selling data for the year 2014-15 was analyzed. The problem of backlog or non-utilization of coir products produced by the coir industries is not felt during the survey.

### **Availability and Adequacy of Electricity**

The survey intended to ascertain whether electricity is available to the industry or not. Further it intended to find out if electricity is available, then its adequacy in meeting the demand of the industries. The survey found 70% viewed electricity is available to the unit while 27% industries said they do not have connections while 3%. Units are running on DG sets. With regard to adequacy of electricity supply, the survey observed 19 % units opined the electricity available for their unit is adequate to meet the demands while 81 % units said it is inadequate to meet the demand of the industry.

### **Employment in Coir Industries (all India)**

The industry employs about 7 lakhs of coir workers and majority of them are from rural areas belonging to economically weaker sections of the Society. Women constitute 70% of the workforce and primarily engaged in spinning and household industries. In organised industries, the participation of women is observed to be more than men in permanent, contractual (temporary) and as daily wage labourers.

The study reveals, a total of 719883 people are working in the coir industry in the year 2014-15. If one compares the data with 2013-2014, the growth rate revolves around 1 percent. The same trend is observed (annual growth rate of 1 percent) while comparing the employment data of 2010-2011 and 2011-2012, 2012-2013 and 2013-2014. The data indicates younger generation / new people participation is less in the coir industry. State-wise analysis indicates Kerala tops the list with share of 65.28 percent, followed by Tamilnadu (18.05 percent), Andhra Pradesh (7.36

percent), Odisha (4.72 percent) and Karnataka (4.16 percent). The other states have not succeeded in generating much employment in coir industries.

### **Number of Workers per Coir industry/ Unit**

With regard to share of workforce in registered units, the study observed as permanent employee, the share of female segment (52.91%) is more than the male counterpart (47.08 %). On temporary category, same trend prevails. The female share is 56.66 % while male share is 43.33%. As daily wage worker in the industry, the female share is 55.77% while the male share is 44.22%. Overall, in the coir industry, male share is 47.08% while the share of women is 52.91%. Finally, the survey estimates the 15235 registered industries provide employment to 36 % (out of 719883 workers) coir workers currently engaged in the industry in different capacity at different levels.

The employment statistics per unit reflects coir industry provides employment to 17 persons where as the fourth MSME census estimated MSME units has 5.95 % employees per unit in organised and 2.06 % in unorganised sector. This indicates the sector plays an important role in providing employment and helps the country enormously providing livelihood opportunities and contribution to the GDP.

### **Education of the workers**

With regard to education profile of workers, the findings indicate 35.1% workers are illiterates while 15.% are educated upto matriculation, 16.5 % are educated upto higher secondary and 7.2 % workers are educated upto graduation and above.

### **Age group of workers employed in the coir industries / units**

The survey found 33% workers are in the age group of 26 to 35 years, (39.2%) of workers are in the age group of 36 to 45 years, 15.4% workers are above 45 years of age. With regard to participation of younger generation in the coir industry, the findings indicate the participation is 12.4 percent.

### **Participation of younger generation in coir industries**

When asked to the industries whether the younger generation participate in coir industries, only 12.9% industries reported that the younger generation is participating in coir industries, while most (87.1%) industries reported that the younger generation is not participating in coir industries. The industries which reported that the younger generation is participating in coir industries, most of them were found in Andhra Pradesh and Karnataka. The industries which reported that the younger generation is not participating in coir industries further stated that low income, hard work, latest machines in the industries, interest in different jobs, education are the main reasons for which younger generation is not participating in coir industries.

### **Years of involvement**

The study reveals 69.2% workers are involved in coir work for five years or more, while 26.6% workers have been involved in coir work for three to four years. Only 4.2% workers have been involved in coir work only for last two years. This indicates there is intake in coir industries and the old workers are sufficient to work in the existing coir industries.

### **Working Hours**

The survey observed 73.7% workers work for eight hours in a day, while 18.7% workers work for less than eight hours in day, and 7.6% workers work for more than eight hours in a day. The findings reveal, eight hours duration is followed by majority coir industries across the country.

### **Wages of Coir workers and Payment**

The study further tried to collect information pertaining to wages of coir workers in various states. The findings reveal the age rate of coir workers is not same. The rate varies from state to state. It is observed the government notifications on wage rate are not followed by the industry as well. While comparing the wage rate of the states, the findings reveal the wage rate is highest in Kerala and lowest in Tripura. The survey finding illustrates that majority of the workers (63.4 %) get the payment on monthly basis, while 36.6% workers get payment on daily basis.

### **Average monthly salary of regular staffs in the coir industries**

The data pertaining to salary / income was obtained from the industries / units. It is estimated that 81.9% industries pay an average salary of Rs 5000 to Rs 10000 to a regular permanent staff while 7.6% industries pay upto Rs 5000. More than Rs 10000/- as salary is being paid by 4.1% industries to the permanent staffs. Same amount is being paid to contractual staffs. With regard to daily wage labourers, 43.9% industries pay an average wage in the range between Rs 200 to Rs 300 while 21.1% industries pay less than Rs 200/- per day, 8.8% industries pay more than Rs 300/- per day. The study observed, in many states, women gets lesser daily wage than male segment. Compare to other states, the daily wage of workers are paid better (Rs. 300 and above) in Andhra Pradesh, Kerala and Tamil Nadu.

### **Type of training received by the coir workers**

The findings indicate, out of the total workers, 18.5% reported that they have not got any training so far. On the other hand, 81.5% workers reported that they have undergone training, but from their respective industries. While 67.5% coir workers have got general coir work training while 11.9% have got training on yarn, mat making and colouring.

### **Workers well equipped to handle modern technologies**

The study indicates 77.3% coir workers are well equipped to handle modern technologies, while 4.6% workers are partially equipped to handle modern technologies. At the same time, 18% coir workers found to be not equipped to handle modern technologies.

### **Type of training workers intends to take to enhance skill**

The study further asked the coir workers to specify the type of training that the workers intends to take to enhance their skill to match the requirements of the modern technologies. Quiet surprisingly, 75.7 % coir workers opined that they do not require any training to for their skill enhancement. They viewed they are well-equipped to handle modern machineries. On the other hand, 12.9 % coir workers viewed they will prefer to undergo training on modern technologies / operation of automatic machines while 5.2 % talked about training on value added coir products. When asked to the workers if their factory introduces / becomes fully automatic with latest technologies, will they upgrade their skill through training and work there, almost all (96.9%)

workers said that they will upgrade their skill through training at their workplace. When the survey intended to know about the problems the workers face while working in the coir industry, it was noticed that low salary, insufficient income, unavailability of raw material, and electricity problems are the major problems the workers generally face.

### **Facilities received by Coir Workers**

The study wanted to assess the facilities that the coir workers have currently availed either from the industry or the government. 45.9% coir workers said they received insurance facilities from their respective coir industry / unit while 54.1% workers said they have not availed insurance facilities. The study intended to find out bearing insurance support, whether the coir industries provide any support to the coir workers or not. The findings reveal 49 % workers opined the coir industries provide them facilities / support in times of need while 51 % said they do not provide any support. With regard to government support, the study observed almost 99 % workers said the government has not provided support / facilities. The study understands although the workers are complaining that the benefits have not reached but in reality, the Coir Board is concerned and thus, has announced several policies and programme for the workers.

With the help of Coir Board, coir workers are getting fair rates for their products which is fixed from time to time taking into account fluctuations in the market rate of raw material, wages enhancement etc. Coir Board has introduced a Human Resource Development Programme for the enhancement of entrepreneurship which includes different areas such as quality management, salesmanship, marketing networks, consortium approach etc. A Group Personal Accident Insurance Scheme for Coir workers is being implemented by the Coir Board for the welfare of the Coir Workers. A poor response to the policies and programme is felt may be due to lack of awareness of the workers on the benefits available.

The study, further, observed 11.3% coir workers have awareness on Pradhan Mantri Jan Dhan Yojna, Pradhan Mantri Jeewan Jyoti Bima Yojna, and Pradhan Mantri Suraksha Bima Yojna while 89.7 % workers showed their ignorance about the new schemes.

## **Export of Coir and the Challenges**

The study indicates continuous growth is seen in the export of coir and coir products in the last five years. In 2010-11 the total export was 321016 MT which has increased to 62666 MT Coir pith is the major export item and has increased more than 100% export has increased in the term of quantity. Coir fibre is another continuous increasing item. The exports of Coir and Coir products from India during the year 2014-15 registered a record of Rs 1630.33 crores with an increase of over Rs 154 crores from the previous year. The total exports of coir and coir products from the country were worth Rs 1476.03 crores in 2013-14.

During the year 2014-15, 626666 MT of coir and coir products were exported from the country as against 537040 MT exported during the preceding year. The increase in quantity and value works out to 16.7% and 10.5 % respectively in comparison with 2013-14 figures. While coir pith, coir fibre, handloom mat, coir rope, curled coir and coir rugs and carpets registered a growth ranging from 12 % to 45 %, coir yarn, tufted mat, power loom mat, handloom matting, coir geo-textiles and rubberized coir recorded a decline ranging from 5 to 51 %.

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

Coir fibre, with export earnings of Rs 419.23 crores, constitutes 26% of the total export of coir products. Coir pith with an export of Rs 432.95 crores constituted to 27% of the total exports. All other value added items put together constitutes 47% of the total exports. In 2014-15, coir and coir products from the country were exported to 115 countries. Out of which China topped with 28.6 % in value and 39% in quantity and USA emerged as second with a share of 21.3% in value and 12.4% in quantity.

The growth analysis for the year 2013-14 and 2014-15 suggests there is an overall upward trend in export. Highest growth is witnessed in Coir Rugs & Carpets which constitutes 45.2% in

quantity and 37.8% in value. Second highest growth is observed in coir fibre which constitutes 26% in quantity and 27.5% in value. The overall export scenario reflects a positive trend in export of coir fibre and coir pith while export of value added products market is decreased.

The worrisome factor is high growth trend observed in the export of coir fibre, coir pith and rubberized coir while the growth in export of coir yarns and other value added coir products are not catching up. The development that we witness in terms of growth in the coir export market is not a positive trend. If one analyses data, it shows the export of geo-textiles and handloom matting have witnessed a downward trend. Thus, initiatives may be taken to increase exports of value added products besides raw-materials such as coir fibre and coir pith.

### **Inter-State Movement of Coir Fibres and Value Added Products**

On movement of coir fibres, it is observed, Tamilnadu state is known as coir fibre generation state in India. More than 70% of total production of coir fibre is being generated from the Tamilnadu. Approximate 30-35% of coir fibre is being exported to the other countries from Tamilnadu and rest 65-70% is being used for domestic consumption. Approximately, 10% of total is being used for yarn and other coir products and rest 30% of total production is being sent to the other states.

Kerala is totally depending on Tamilnadu in terms of coir fibre. Very little quantity fibre is being produced in Kerala and Kerala is procuring approximate 90% of coir fibre from Tamilnadu of total consumption in the state. Fibre produced by the Karnataka is being used by self in manufacturing of yarn and other coir products. Coir fibre is being used for yarn, curled coir manufacturing and various value added coir products. In other words it may be said that 100% of coir fibre and yarn are being consumed by the state itself and 10-15% of fibre is also procured from Tamilnadu as informed by various stakeholders.

Andhra Pradesh is another state, known as fibre generation state and act as a source to provide fibre to the north Indian states. Approximate 60% of coir fibre is consumed by self for producing yarn and curled coir and 40% of coir fibre is being sent to other north Indian states. Likewise, a very little quantity of fibre is being produced in the West Bengal state and consumed by self in

producing coir products. Odisha is another state engaged in producing coir fibre and most of the quantity produced in the state is being used in the state for the manufacturing yarn and other coir products. Only 20% is being sent to the West Bengal and 10-15% to other states. Assam, Maharashtra, Tripura, Goa, Lakshadweep etc where coir fibre is being produced in very little quantity is being consumed by self for manufacturing of coir products as informed by the various stakeholders.

On movement of Coir Yarn, the study observed Kerala and Tamilnadu are major producers of yarn and the varieties of coir yarn produced are Ashtamudi, Anjengo, Mangadan, Artary, Vaikom, Koilandy, Arror Sp, Muppine and Rope Yarn. Tamilnadu is the major exporter of coir yarn in India. After export the quantity available for domestic consumption 30-40% is being consumed by the state and approximate 60-70% yarn are being sent to Kerala, Maharashtra, and Karnataka etc. Yarn produced by Kerala is being used for value added coir products. Coir yarn produced by Karnataka is being used for self consumption and approximate 20-30% being sent to other States like Maharashtra, Gujarat etc. Andhra Pradesh is another source of yarn and curled coir and about 10-20% is being used for self consumption and rest of the quantity is being sent to West Bengal and other north Indian states. Odisha state is providing yarn and curled coir. About 40-50% is consumed by the state and rest quantity is being sent to West Bengal and other north Indian states. Other states like West Bengal, Maharashtra, Goa, Lakshadweep, Assam, Tripura etc are producing yarn for self consumption.

On movement of value added products, the study reveals Kerala is known as the state of coir products in India and highly skilled manpower is available for manufacturing of coir products. More than 50% of coir products are exported from Kerala and rest value added products are sold in the domestic market. Kerala is supplying coir value added products to all parts of the country.

Tamilnadu and Karnataka are also supplying value added products to all parts. About 80% of coir products manufactured in Karnataka are being sale in Karnataka state only. Being a tourist state and state government intervention, Karnataka is having more 30 state government coir show-room to sale coir product in most of the city. Due to the demographical reason Karnataka is the main source for Maharashtra and Gujarat and nearby states. Some of the value added



products are being exported from the Karnataka but extract data is not available and most of the products being sale in Karnataka. As the coir fibre or yarn is not being produced in required quantity therefore Odisha is become main source of coir products for West Bengal. Coir Products manufactured in Maharashtra, Goa, West Bengal, Lakshadweep, Assam, Tripura, Andaman & Nicobar Islands etc is being used in the state only.

## **Recommendations**

### **Utilization of Coconut Husks**

The study observed only 28.41% husks are utilized by the coir industry. Considering the seriousness of the issue, the State governments of Tamil Nadu and Karnataka have issued government orders banning the use of coconut husks as a fuel in brick units and similar other units. Other coconut producing States may be asked to follow the initiatives taken by the Governments of Tamil Nadu and Karnataka. The Coir industry has to muster at least 60% of the total coconut husks produced in the country for fibre extraction. Further, there is no scheme available to promote husk collection / extraction. The government may consider coming out with an incentive package. The government with the help of state government may promote to establish Husk Banks in all coconut concentrated districts of the country through PPP mode. Establishment of husk banks is certain to improve the utilization percentages of husks. The study also observed local dealers are the major source for procuring coconut husks by the coir industries. Direct sale of coconut husks to the industries by the farmers is limited to less than one-fourth of the total sale. The government may come out with a plan to directly engage the farmers in husk trade. Their direct engagement will not only help the farmers to earn more money but will also ensure high utilization of husks.

### **Establish more Fibre Extraction Units**

The study understands fibre extraction is of high importance to tap the available resources (husks). The government could have taken effective steps to establish fibre extraction units in the coconut producing states.

### **Set-Up New Coir Industries**

Although the coconut producing states has abundant raw-materials (coconut husks) but number of defiber plants and coir industries are comparatively very less. Initiatives may be taken by the Coir Board with active support of the state government to establish more number of coir industries in the state (s) based on their viability.

### **Up-Gradation in existing Technology**

Another cause of concern for the traditional coir industry is the age old equipments and processes practiced in the industry. Apart from technology, there must be thinking on the repair and upkeep of the existing machinery and there should be a maintenance department to repair the defunct machines. The technology currently used in Coir Industry and Coir Yarn production is partially mechanised and the sector is dependent on skilled manpower. Therefore, attention may be given by the government to equip the factories with modern equipments so that production becomes more and requirement of skilled manpower goes drastically down.

Coir pith generated during the process is not utilized and the technology of coir pith composting may be incorporated and composted coir pith may be utilized locally for nursery in green house for cultivation of vegetables. The coir pith composting technology can be made available and the green house cultivation activity may be taken up with the support of agricultural department. Besides, Automatic Coconut de-husking machine, conveyor system, mobile fibre extraction machine, anugraha loom for weaving geo-textiles, anupam loom, frame mats, coir jewellery unit, coir composite gift article making machine, automatic coir spinning machine and dyeing unit are other modern technologies which should be considered for improving efficiency and modernize the technologies in Husk Collection, coir fibre & coir yarn production and producing value added coir products in the country.

### **Improvement in Power Supply**

Electricity is a critical factor in the coir industry. There is scarcity of electric supply and the coir industries are facing acute problem on regular basis. To start with, the Coir Board may consider assistance in two areas: (a) Generator Subsidy: The Coir Board may consider to provide subsidy to coir units who purchase Generator sets up to 320 KVA capacity. The government may

consider for a Generator Subsidy at 25% of the cost of the generator set, subject to a maximum of Rs.5 lakh and (b) Power Tariff Subsidy: The Coir Industries may be made eligible for sanction of 20% of total electricity charges for the first 60 months from the date of commencement of production or from the date of power connection, whichever is later. This may be made available to all new industries set up in commercial and rural areas and existing industries who have taken up substantial expansion / diversification of their existing activities.

### **Disposal of accumulated Coir Pith**

Accumulation of Pith even where the defibering operations are taken up, is one of the critical gaps due to lack of efforts for utilizing the pith in Lakshadweep, Kerala etc, though successful pith utilization for block making for export purpose has been done in Tamilnadu. A strategy for disposal of coir pith accumulated in the coir production centres has to be evolved and implemented. Mechanisms must be put in place so as to convert the accumulated pith into useful organic manure or growing medium at the point of production and popularization of coir pith as green house substrates.

### **Remove Spatial distribution of Coir Industries**

The study observed the coir industries are spatially distributed in India. Out of the total industries, 83.07 industries are located in two states i.e., Kerala and Tamilnadu which has the potential to extract 61.22 percent available husks for commercial use. This clearly indicated geographical distribution of industries is lopsided and effective steps must be taken to set up of industries in other potential states to spread coir trade.

### **Census of Industries**

The study recommends the Coir Board should conduct a Coir Industry Census to collect accurate information on number of functional coir industries / units in the country.

### **Shortage of Skilled Workers**

The study found that —shortage of Workers is the most significant production problem faced by both small and medium size coir units of the study area. Many a times the units in order to manage / continue productions hire manpower with higher price. Hence, it is suggested that the

state government as well as the Coir Board may encourage the entrepreneurs to start manufacturing value-added coir products like mats, rugs, maurzouks, carpets etc., which will help them to earn more and enable them to pay attractive wages to their workers. If attractive wages are paid, more workers will be attracted towards the coir units even during the peak-agricultural seasons. Thereby, the major problem of shortage of workers may be solved. The Coir Board with the support of the State government may depute skilled manpower to get training from NCDTC or CCRI, Kalavoor in Kerala to get training in all diversified products. These persons after getting training may act as Master Trainers at the state level. The Coir Board through the State Government should conduct Demonstration and Production programmes continuously with the help of Mobile Coir Fiber Extraction Machines with the help of SHGs, NGOS, Artisans and Co-operatives. Coir Technology Incubation Centres may be established to provide training and create new enterprises. The schemes of National Skill Development Corporation and National Small Industries Corporations may be linked with Coir trade.

### **Tapping of Younger Generation**

There is a need to modernize the industry by popularizing modern machinery/equipments widely. Mechanisation has made a little impact in coir yarn spinning notwithstanding the R&D efforts made in this direction. What is needed is high end mechanization of spinning to yield quantum production to balance the productivity of the PVC/Rubber tufting units to attract younger population to join the trade/ industry.

### **Artisans/ Workers Welfare and Social Security**

The study observed only 11.3% coir workers have awareness on Pradhan Mantri Jan Dhan Yojna, Pradhan Mantri Jeevan Jyoti Bima Yojna, and Pradhan Mantri Suraksha Bima Yojna. Awareness camps and Enrolment Camps may be conducted at district / cluster level to facilitate coir workers to enrol under “Pradhan Mantri Suraksha Bima Yojana” and Pradhan Mantri Jeevan Jyoti Bima Yojana”. The Coir Board may issue Artisan Credit Card to facilitate adequate and timely assistance from the banking institutions to the artisans to meet their credit requirements of both investment needs as well as working capital, in a flexible and cost effective manner. Further, holidays are not given on important national and religious festival days. The national holidays may be declared as paid holidays to the coir workers. District Level Awards to Coir

Artisans & Celebration of Coir Week may be celebrated to encourage the coir artisans for creation of better and innovative products and District / State Level Coir Competition may be conducted. The Coir Board may consider to reimbursement of T.A. /D.A./Carrying cost of their products to the Coir Artisans for attending Fairs /Exhibitions and finally, the Coir Board may consider payment of Old Age Pension to Coir Industry Artisans.

### **Establishment of R & D Fund**

Research & Development efforts should be directed to continuously produce newer products at competitive rates. R & D into improved and efficient extraction and processing of fibres with low cost, appropriate technology, as well as yarn spinning techniques and technology, keeping overall global pricing as well as minimum wage issues in mind may be given adequate focus. The Coir board may consider for establishing R & D Fund which could be used to finance R&D for specific needs identified by industry. The R&D project may be awarded after invitation of bids to individual institutions, consortium of institutions or individuals. The Fund may also assist private firms in acquiring technologies on cost sharing basis subject to ceilings in individual cases.

### **New Usages of Coir**

The coir industry still considered as a traditional industry. The mindset of the people has not changed. There is lack of awareness of the people on usages of coir in new areas. So, efforts / initiatives may be taken by the government to switch from producing traditional products to new and innovative areas such as building & constructions, organic manures, plywoods, garments and transportations. At present coir composite building material has a very insignificant slice but it carries potential to generate huge amount per annum.

### **New Product Design and Development**

Coir has to be made competitive through design development, quality upgradation and technological upgradation. Coir has multi various applications like door mats, mattings, carpets, Geotextiles, Rubberised fibre, Curled coir, Coir wood, Garden articles, handicrafts, etc. The new products produced should be popularized extensively in India and abroad. The activities should be linked with National Manufacturing Competitiveness Programme (NMCP) for the MSMEs which aimed

at improving the processes, designs, and technology and market access. Aggressive awareness drives may be taken up to inform people about the multiple usages of coir products. It is also recommended design institutes such as NID and NIFT may be engaged to develop new and better coir products.

### **Standardization of Process and Product**

Despite being of the largest consumer markets in the world, there is no standard design sizing system for process as well as product in coir and products of coir. Process and products may be standardized with the consultation industry expert, CCRI and Coir board etc. The coir industries must go for accreditation of coir products that they produce to maintain. The study recommends the following interventions (a) Standardisation and certification and (b) networking with technical, resource and market agencies such as ICAR, ICFRI, RRL, CBRC, SITRA, CSIR, etc. It is also recommended Coir board may develop a credible mechanism to ensure improvements in quality and productivity. The Board may consider launching Manufacturing Competitiveness Programme run by the Ministry of Small and Medium Enterprises for all SMEs.

### **Eco-Labeling of Coir Products**

Coir is a natural fibre which is environment friendly too. Coir products are bio-degradable and hence do not pollute the environment. However, the USPs of Coir has not been popularized for leveraging the market potential for coir products. Eco-labeling of coir products has to be taken up through Ministry of Environment & Forest for using as a tool in the export market promotion.

### **Consider Coir Industry as a Priority Sector under MSME**

According to the latest Economic Survey, Indian SMEs employ close to 40% of India's workforce. Over 3.25 lakh jobs were generated in the MSME sector during the period between April 2011 and February 2012. The growth trend is not reflected in coir sector as many state governments have not taken coir industry as priority sector in their respective state industrial policies. The Coir Board may contact each of the coconut producing states to include coir industry as priority sector (particularly high coconut producing districts) in their respective MSME policies. The Coir Board may conduct quarterly meetings with the State Directorate of Industries to give adequate emphasis to coir industry at the state level.

### **Provide Financial Support to Coir Industries**

Inadequate Finance is a major production problem faced by small coir units. Hence, it is suggested that the government may encourage the Commercial banks, Co-operatives banks and other financial institutions to offer loan facilities at subsidised rates of interest, especially to small coir units to meet out their working capital requirements during peak seasons. The SLBC reports on Bankers performance on lending to REMOT scheme suggests barring Kerala, in none of the states the Bankers have shown proactive role to provide loans to the Coir units. The Coir Board may take up the matter with the Ministry of Finance, Government of India to ensure finance to Coir MSMEs. The other issues that the Board may discuss with the Bankers are relating to enhancement of moratorium period to ensure recovery of NPAs, speed up in process of approval and take appropriate action in a time bound manner on applications received for loan. It is also suggested that the Commercial banks, Co-operative banks and financial institutions may conduct —Coir Loan Melas by considering their financial difficulties in operating coir units. By doing so, the above said problem may be solved.

### **Export Trend**

Large Scale export of coir fibre from India to China is posing a potential threat in the international market. This trend is happening because China is procuring raw-materials from India and producing value added products in China and selling the products in the same market. In the process, India is losing the market share, hence losing profits. Thus, the government may take a decision on Chinese incursion in coir raw-materials trade. The study perceives to promote coir trade, value addition should be considered as key and thus, efforts must be augmented for promoting the export of value added products than raw-materials like coir fibre.

### **Incentives under Foreign Trade**

The Union government may consider providing enhanced support to coir industry under the Foreign Trade Policy of the Government. Increased incentives under the Foreign Trade Policy will make Indian Coir globally competitive. The DGFT may take a quick decision to allow increased incentives to Coir geo-textiles and Coir pith as these products are low valued items.

The government has taken some steps to increase the production and exports of coir and coir products. Coir and coir products are incentivised at around 2 – 5% under the Focus Product Scheme (FPS), and at around 3 – 4% under the Focus Market Scheme (FMS). The government may begin eco-labelling of coir products and take initiatives to declare Pollachi in Tamil Nadu as a Coir Hub of export excellence in Coir and Coconut products.

### **Announcing Fiscal Measures**

The study recommends the following fiscal measures for coir and coir products: (a) 100% exemption on custom & excise duties on the import of plant & machinery, consumables, embellishments on natural fibres for enhancing the quality, (b) 50% capital subsidy for entrepreneurs promoting coir industries, (c) Tax holidays for manufacturing and exporting units for 10 years and (d) Interest subsidy for establishments (like TUFs). It also recommends that the government may consider for providing support for setting up feeder units for large industries for commercial feasible exploitation of coir fibres.

The Coir Board may consider exemption of coir and coir products from the purview of VAT and excise duty. The Government of Kerala has exempted Coir and Coir products from the purview of VAT to facilitate enhanced consumption of coir in the domestic market. The response of the industry is felt positive. The same policy may prevail on other coir producing states for ensure sustenance of the traditional as well as highly-labour intensive coir industry. With regard to the supply of machinery items for manufacture of coir / spinning coir yarns / producing value added products, the government may consider to exempt excise duty on machineries. This may facilitate new age entrepreneurs to join the coir industry and certainly, the windfall gain for the coir sector will be immense.

### **Linkages with other government schemes/ programmes**

In order to promote the coir industry at large, the Coir Board may consider coming with new schemes or establish linkages with similar schemes of Government of India or State Government (s). The study recommends interventions by providing schemes such as (a) Raw-material Assistance Scheme (in line with the scheme run by NSIC), (b) Husk Bank Scheme, (c) Interest Subsidy Scheme (as run by DIPP, Government of India), (d) Freight Subsidy Scheme (for



transporting husks), (e) a scheme covering financial support for training and handholding, provision of loan and credit linked back ended composite subsidy and (f) a new scheme to establish Coir Call Centre (CCC). The Coir Board may launch Coir Call Centre across the country to answer queries asked by people on gathering knowledge on coir industry, product specific awareness and to deliver hand-holding, technical and marketing services to the coir industry. The purpose of these call centers will be to respond to issues raised by coir producers and other people, instantly, in the local language. Besides, the activities of the coir sector should be integrated with scheme of National Small Industries Corporation (NSIC), NCDC, schemes of NABARD (National Bank for Agriculture and Rural Development), schemes of Small Industries Development Bank of India (SIDBI), other schemes of Ministry of MSME, Government of India and schemes of various state government(s) for promotion of MSME industries.

### **Strengthening of Agencies and awareness campaigns**

The Coir Board may have to create a greater awareness on the USPs of the product by giving wide publicity regularly organizing exhibitions and road shows. Coir industry need higher credit facilities through financial institutions at lower interest rates. The Banks are not forthcoming in providing loans to the coir artisans/entrepreneurs and this has affected the implementation process. The Coir Board may take up the issue with Ministry of Finance, Government of India.

### **Aggressive Marketing of Coir Products**

Looking at the market size both at domestic and international market, India should take leverage of the domestic market potential so that the market for coir products can be enlarged to a great extent. The government should prompt initiatives to popularise value added coir products and emphasize on innovations on use of coir products especially in sectors such as construction, organic manure (farming) and coir wood.

The Government of India may facilitate the coir sector to actively participate in the international fairs, delegations abroad, Buyer Seller Meets etc. to tap the vast potential available for coir products in the world market. The Export Market Development Scheme should be more flexible and made accessible to all in coir sector irrespective of the turnover. The government may go for

institutional selling of coir and value added products. To start with, the government may think of Government departments and PSUs to consume coir and coir products.

The government may also take lead in fostering the friendly relations by India with other coir producing countries so as to avoid unhealthy competitions in the international market for coir products. The government may draw a strategy for joint marketing initiatives by the coir producing countries for dictating terms with the buying countries by transforming coir from the buyers' market to sellers' market. In the domestic market, coir should be popularized vigorously. The ultimate aim is to reach out all households of the country. The slogan coined by the Govt. of Kerala "One house, One Coir product" should be popularized for achieving market development.

Success of apparel industry in countries like China, Bangladesh and Srilanka are vastly attributable to the effort of buying houses. The same "buying house" concepts may be used in coir sector and this may be worked as one of the new scope to promote coir. Warehouses may be opened specially for products in key markets including US, UK and other Countries who imports coir and allied products. Along with other marketing offices, warehouse can be used to stock standard products which can be finished in respective locations and supplied to customers much faster. This will help in reducing long lead times faced by exporters.

For promotion of products made from coir, study recommends the followings, (a) focus on brand building measures and promotion campaigns such as —Go Green – "Green India", etc, (b) launch an exclusive International Show on the Green coir Products, (c) buy back arrangements – sourcing, facilities, and retailers across the globe to ensure consistent availability of coir products etc., (d) regular study and promotional (exposure) tours, (e) promotional shops for exclusive coir products at all the Indian Airports, Railways and Malls, (f) being the bearers of Indian tradition and culture, coir handicraft products are major attraction for tourists. It is recommended that handicraft bazaar like Delhi Haat may be created in major tourist places, (g) advertising campaigns for Coir products should be done to market the product overseas, (h) the ad campaigns can also blend other forms of eye-catching marketing means to establish and create larger product awareness. e.g. Kiosk ads, free standing bill board and road shows are now widely

spread forms of neo-marketing and (i) designing, marketing and Sales of the Coir products may be considered in PPP mode.

### **E-Commerce Platform**

Internationally e-commerce has emerged as a highly successful and efficient business model. It is recommended that active coordination should be done with various large international online marketing platforms such as eBay, Amazon, etc. to promote exports of products through them.

### **Brand Building and Promotion**

The study observed most of the manufacturing units have small capacities and low manufacturing efficiencies. So, there is a need to facilitate rapid growth and modernization of existing firms with potential for success. In order to realise the Prime Ministers vision “Make in India with “Zero Effect; Zero Defect”, the government may launch large-scale advertisement campaigns as Hon’ble Prime Minister promoted *Khadi* in the recent past.

### **Presence of Coir Board**

The study team recommends the Coir Board may consider establishing sub-regional offices in states such as Gujarat, Tripura, Goa and Pondicherry. This is certain to boost in creating more number of coir industries / units in the states. The recent decision of the Coir Board to establish sub-regional offices at Port Blair and Maharashtra has resulted in promoting coir industries in these two states. In Andaman & Nicobar Islands, three entrepreneurs have applied to establish coir units and in Maharashtra, the State government has become active and coir cluster at Kodal will start production shortly. The study recommends the sub-regional and regional offices of Coir Board should conduct periodic awareness camps in coconut producing districts and the state and district level officers linked with MSME may be contacted frequently to promote coir and coir products and get State Government’s support.