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Women Participation In Coir Sector – A Study In Alappuzha District Of Kerala

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Abstract: Kerala is the home for Indian Coir industry, which provides livelihood to millions of people, especially in the rural areas. Coir, obtained from coconut husk is used as the raw material for manufacturing various products like mats, ropes, geotextiles, etc. Nearly 61 per cent of coconut production and over 85 per cent of coir products are from Kerala. The sector provides livelihoods to around 1.5 lakh workers, with women constituting 80% of the workforce. Women play a crucial role in coir production, engaging in various activities that sustain this traditional industry. This study explores the participation of women in Kerala's coir sector, focusing on its contributions, challenges, and impact on livelihoods.

The findings reveal that while over 61% of workers rely on coir as their main occupation, low incomes, limited market access, and raw material shortages pose significant challenges. Additionally, most workers face health issues like respiratory problems due to unsafe working conditions. Support from coir co-operative societies and self-help groups is vital, but gaps in awareness and access to government schemes remain. The study highlights the need for better wages, safer workplaces, skill development programs, and improved market opportunities to strengthen women's participation and the sector's overall impact.

Keywords: Coir, Coir products, Coir Board, Women Empowerment

I. INTRODUCTION

Coir industry is one of the major cottage industries in India that helps in the employment generation and livelihood of major coconut growing states and union territories such as Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Goa, Orissa and Pondicherry. As of 2022-2023, the annual production of coir fibre was 7,91,000 MT and it created employment for about 7.5 lakh persons (out of which 80% are women). In 2023, the export of Indian coir products was destined for more than 100 countries with USA being the largest importer in terms of value and China being the largest importer in terms of quantity. (*Coir Board, Government of India*).

Kerala is the birthplace of Indian coir industry, accounting for 61 per cent of coconut production and over 85 per cent of coir products. Coir sector in Kerala provides employment for about 1.5 lakh coir workers, of which 80 per cent are women. The production and export of coir products in Kerala has declined over the years due to labour shortages, increased production costs and unnecessary government intervention. But, the emergence of self-help groups and entrepreneur friendly policies in Kerala is helping to revive Kerala's coir industry. Moreover, the upcoming Vizhinjam mother port in Kerala will also help in improving the production and export potential of coir products.

Even though Kerala is the land of coconut trees and coir related activities are one of the livelihood activities of rural people, a declining trend is observed in the production and export of coir products in Kerala. Also, 80% of the total work force in this sector are women. Both Central and State governments are providing various schemes to promote coir related industries in the state. In spite, of all these initiatives and involvement of various institutions like self-help groups, a declining trend is observed in coir production (*Economic Review, SPB, Government of Kerala, 2024*). So, conducting a study on women participation in this sector would be beneficial.

II. LITERATURE REVIEW

More than two-thirds of the world production of coir and coir products are from India. Indian coir sector has a major contribution to the economy of its coconut producing states. The coir sector in India is very diverse and it involves households, co-operatives, NGOs, manufacturers and exporters. (*Sambasivan & Vennilaashree, 2018*) It provides employment for about 7.5 lakh people and the exports from this industry are around Rs. 70 crores. The Indian coir product exporters have numerous opportunities to grasp the market share in international market. (*Poornimadevi, 2017*)

The Indian coir business started from Kerala, which produces more than 85% of coir goods and 61% of coconuts. The first coir factory in India was started in Alleppey in 1859 by James Darragh for the production of coir mats, matting and other floor coverings. (*Anu & Sebastian, 2018*) The word 'Kera' means coconut and Kerala means the land of coconut. About half of the coir husk available in Kerala is utilised for making coir products. (*Kerala tourism*). Coir industry in Kerala serves as a major source of employment and income generation for a major segment of village especially the economically weaker sections of the population. (*Coir board, Government of India*). It employs around 1.5 lakh workers with 80% of the workforce being women. (*Economic Review, SPB, Government of Kerala, 2024*) The women are mainly involved in the yarn-spinning sector and the men in the product-weaving sector. (*Joben & Biju, 2023*) There are large numbers of household units in Kerala who weave products in the premises of their houses with 2 to 8 looms in a shed. The products made by them are supplied to the cooperative societies or exporters. (*Pratheesh, 2021*) In Kerala, around 45% of the net cropped area is coconut cultivation that is around 10.05 lakh hectares. The total coconut output estimated is around 5759 million nuts annually. Ashtamudi, Anjengo, Mangadan, Artary, Vaikom, Koilandy, Arror Sp, Muppine and Rope Yarn are the different varieties of coir yarns produced in Kerala. Matts, Matting, Rubberised Coir products, Mattresses, Pillows, Cushion, Coir Geo Textiles, Tuffesi Mats, Coir pith, Rugs, Carpets and Curled Coir are the varieties of coir products produced & exported from Kerala. About 90% of domestic consumption and 95% export of Indian coir is from Kerala. (*Ministry of Science and Technology, Government of India*).

The State Public Sector Undertakings and private entrepreneurs are involved in the export of coir and coir products. The Kerala State Coir Corporation and Foam Matting (India) Limited along with Coirfed are managing the export of coir products. Coirfed (The Kerala State Co-operative Coir Marketing Federation) is a key player in the coir industry in India. Its primary objectives are to promote the co-operative societies that produce coir, manufacture and trade coir products, as well as market coir and coir products. Since 2015-16, the exports from these agencies have been increasing continuously. (*Economic Review SPB Government of Kerala, 2024*)

III. RESEARCH METHODOLOGY

The objectives of the study are as follows:

- a) To understand the contribution of coir sector in the livelihood of women.
- b) To understand the role of local institutions in women participation in this sector.
- c) To understand the awareness of women on various government coir schemes.

The universe of the study is Alappuzha district of Kerala. There are 12 block panchayats in Alappuzha district. Among the 12 block panchayats, one of them with high coir production is chosen as the sample. The sample block panchayat chosen is Muthukulam. A total of 10 Coir Cooperative Society comes under Muthukulam block panchayat with around 300 coir workers.

A sample of 170 coir workers selected at random will be interviewed by a pretested questionnaire. This is calculated using a sample size calculator for 95% confidence level and 5% confidence interval.

Both qualitative and quantitative data will be collected.

Theoretical Framework – Livelihood

DFID SLF (Sustainable Livelihood Framework) defines livelihood in terms of five capital This study will look into the access to these five capitals by rural women working in coir sector. The framework also mentions about the local institutions that facilitate the linkage to these five capitals. Self Help Group is one of the local institutions that facilitate social interaction – social capital. Similar is the case with co-operative society.

Data Collection Methods

A pretested questionnaire was used to collected data from coir workers.

The discussions with the board members of coir cooperative societies was conducted with the help of an interview guide.

The collected data was analyzed by using suitable statistical tools.

A Chi square test was conducted to understand the relationship between years of experience as whether coir work is their main occupation as well as to understand the association between awareness and actual utilisation of government coir schemes

An Independent Sample T-test was conducted to understand the effect of subsidies availed on the income of the beneficiaries (coir workers)

IV. DATA ANALYSIS

a) Profile of the respondents or coir workers

It was understood that those who are engaged in coir sector activities are dominated by married women, belonging to OBC category, within an age group 40 to 60 years, with an education of basic schooling.

b) Contribution of coir sector to the Livelihood

The data indicates that coir income is primarily used for essential expenditures like healthcare and household needs. While a smaller proportion of respondents invest in education expenses. The allocation for personal purchases is very less, emphasizing the financial constraints of coir workers in meeting basic expenses.

Therefore, it is understood that while the coir sector is a primary occupation for over 60% of workers, its income contribution is limited. A paired t-test confirms that coir income is significantly lower than earnings from other livelihoods, making diversification into activities like agriculture and cattle rearing essential for many coir workers.

c) Awareness on government coir schemes and role of local institutions in coir sector

To promote the growth and sustainability of the coir sector, the Government of India, through the Coir Board, has introduced several schemes aimed at empowering coir workers. The study was conducted on understanding the outreach of these schemes.

- **Scheme awareness:** About 48% of respondents are aware of government coir schemes whereas 52% of respondents are not aware of government coir schemes. This indicates that a slightly larger proportion of coir workers are not aware of government coir schemes, highlighting the need for improved outreach efforts to ensure more widespread knowledge of such schemes.
- **Subsidy or equipment availed by respondents:** From the data it is understood that, about 45% of respondents have availed subsidies or equipment whereas nearly 55% of respondents have not availed subsidies or equipment. This indicates that more than half of the respondents did not utilize the subsidies or equipment available, suggesting potential barriers to access, lack of awareness, or procedural challenges in availing these benefits.

To understand the association between awareness and actual utilisation of government coir schemes a **Chi square test** was conducted.

Here we test the null hypothesis

H₀: There is no significant association between awareness of schemes and the availing of subsidies or equipment.

H₁: There is a significant association between awareness of schemes and the availing of subsidies or equipment.

Contingency Tables

AWARENESS ON GOVT. SCHEMES IN COIR	ANY SUBSIDY/ EQUIPMENT AVAILED		Total
	No	Yes	
No	77	11	88
Yes	0	82	82
Total	77	93	170

χ^2 Tests

	Value	df	P
χ^2	131	1	< .001
N	170		

Here the $p < 0.001$ which shows a highly significant association between awareness of government schemes and availing subsidies/equipment. Individuals who are aware of the schemes are far more likely to avail subsidies or equipment compared to those unaware. The significant p-value indicates that this relationship is unlikely due to chance.

Thus, increasing awareness of government schemes can lead to higher utilization of subsidies and equipment in the coir industry.

To understand the effect of subsidies availed on the income of the beneficiaries (coir workers), an independent samples T-test was conducted.

Here we test the null hypothesis

H_0 : There is no difference in income between beneficiaries receiving support and those not receiving support.

H_1 : Income is higher for beneficiaries receiving support from local institutions.

Independent Samples T-Test

Independent Samples T-Test

		Statistic	df	p
ANNUAL INCOME FROM COIR	Student's t	-6.64	168	< .001

Note. $H_a: \mu_{No} \neq \mu_{Yes}$

Since the p-value is less than 0.001, the result is statistically significant. This indicates that there is a significant difference in annual income from the coir sector between the two groups (workers who received subsidy and those who doesn't). The negative t-value suggests that the group coded as "No" (did not receive support) has a lower mean income compared to the group coded as "Yes" (received support).

Therefore, it is understood that support from local institutions has a positive impact on annual income in the coir sector.

- **Membership on Self Help Group:** From the data, it was understood that 90% of respondents are members of self-help groups (SHGs), indicating strong participation in collective initiatives that may provide financial and social support. However, 10% of respondents are not part of any SHG, suggesting there is still a small portion of workers who may not be accessing the benefits of such groups. This highlights the importance of encouraging broader participation in SHGs to ensure all workers can benefit from the opportunities and support they offer.

V. FINDINGS & SUGGESTIONS

The findings of the study are as follows:

- Demographics:** The majority of workers are middle-aged (40-60 years), with minimal participation from younger generations or elderly individuals. Most of the respondents have only basic schooling, indicating low education levels. The workforce is predominantly from the OBC community, and all respondents are married.
- Livelihood contribution:** Coir work is the primary occupation for over 61% of respondents, highlighting its importance as a major livelihood source. But the income from coir activities is generally low, with nearly 39% earning less than ₹5,000 annually.
- Role of local institutions:** Coir co-operative societies provide support such as bonuses, safety kits, scholarships, and insurance, yet their reach and impact could be improved. Self-help groups (SHGs) have strong participation of women from coir sector and it helps in financial and social empowerment.
- Challenges in coir Sector:** Limited market access, low wages, and raw material shortages are the major challenges in Kerala's coir sector. Almost all workers face health issues, majorly respiratory problems and joint pain. This can be due to exposure to dust, fibers, and physically demanding work conditions. Lack of workplace safety measures and protective equipment can lead to health risks.

The suggestions of the study are as follows:

- a) Attracting younger workers: Promote coir sector entrepreneurship and skill development programs to attract the younger generation. Highlight export potential and financial opportunities within the sector to create interest.
- b) Improving income levels: Increase wages for coir workers to make the sector more sustainable as a primary livelihood. Facilitate better market access to increase earnings from coir products.
- c) Health and Workplace Safety: Implement workplace safety measures, such as providing protective gear and reducing dust exposure. Conduct regular health check-ups and occupational safety training for workers.
- d) Strengthening Institutions: Enhance the outreach of coir co-operative societies to ensure more workers benefit from subsidies, equipment, and support programs. Encourage full participation in SHGs and expand their initiatives to cover more workers.
- e) Diversification and Sustainability: Support livelihood diversification through coir-based activities like value-added products. Foster partnerships with markets and exporters to ensure consistent demand and higher returns.

By addressing these areas, the coir sector can be strengthened to provide better livelihoods, improved working conditions, and enhanced economic contributions.

VI. CONCLUSION

The coir sector serves as a significant livelihood source for rural women, enabling them to support essential family needs and invest in assets despite financial constraints. Through its contributions to the five livelihood capitals, the sector promotes both economic and social stability. However, challenges such as low wages, health risks, and limited access to markets and resources hinder its full potential. Strengthening cooperatives and SHGs, improving access to government schemes, and fostering skill development and market linkages are essential to enhance the sustainability and inclusivity of the sector.

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