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**An Analysis of Sustainable Development of Dr. Ambedkar Coir Mat and
Mattings Industrial Cooperative Society, Addressing Challenges and
Problems Faced by Coir Workers in Cuddalore District, Tamil Nadu**

P. Sakthivel

Research Scholar

Department of Cooperation

Sri Ramakrishna Mission Vidyalaya College of Arts and Science

Coimbatore – 641020

&

Dr. S. Maheshkannan

Assistant Professor of Cooperation

Sri Ramakrishna Mission Vidyalaya College of Arts and Science

Coimbatore – 641020

ksmkpr@gmail.com

Abstract

The Coir Industry in Tamil Nadu plays a vital role in providing rural employment, especially for women and marginalised communities. This study focuses on the Dr. Ambedkar Coir Mat and Mattings Industrial Cooperative Society (Dr. ACMMICS) in Cuddalore District, examining its sustainable development initiatives and the steps taken to address challenges faced by coir workers. The research highlights the cooperative's role in promoting sustainability while ensuring the welfare of its workforce. Key challenges identified include low wages, inadequate workplace facilities, and limited access to skill development programs, all of which negatively affect worker satisfaction and productivity. Despite these challenges, the cooperative has implemented notable practices such as environmentally friendly production methods, adherence to fair trade standards, and the provision of social security benefits to support its members.

The study emphasizes that effective governance within the cooperative is essential for equitable resource distribution and inclusive decision-making. Moreover, incorporating modern technology is recommended to improve production efficiency while minimizing environmental impact. The research also advocates for greater worker participation in management processes to enhance transparency, accountability, and empowerment. To further improve sustainability and productivity, the study suggests introducing performance-based incentives, upgrading workplace infrastructure, and expanding training programs. Additionally, broadening market outreach and securing better pricing for coir products are

Vyavahāra: International Journal of Commerce, Ethics, Law & Management considered crucial for enhancing the cooperative's financial stability and improving the overall well-being of its workers.

Keywords: Coir Workers, Coir Board, Coir Cooperatives, Sustainable Development.

Introduction

The coir industry is considered to be amongst the oldest and prominent agro-based industries in the world, whose origin dates back to the tropical region. Worldwide, coir and coir products have been an aspect of the rural economy and have provided millions of jobs to the rural population. The fibrous husk of coconuts is today known as Coir, and over the years it has been appreciated as a versatile, durable, yet environmentally friendly material. India, Sri Lanka and the Philippines are the large contributors to the world coir market, and India is in a better position compared to others because it has large coconut farming and also skilled labour. In India, the coir industry plays a significant role in rural development coir industry in coastal states Kerala and Tamil Nadu.

Tamil Nadu is a coconut-producing centre and central to the coir industry, without which the sector would have had no major prospect of economic growth and employment through various cooperative societies. These cooperatives are empowering marginalised communities, especially among women who have been empowered to an extent where they have skills development and they have livelihoods. There have been tremendous changes and developments in the coir carrying processes in Tamil Nadu over since years that have seen the combination of the old tradition and the new techniques that have given rise to global standards. Cuddalore is a coastal district of Tamil Nadu, having a rich history and related to the coir industry. Being an agricultural area, the natural resources and climatic conditions of the area enable the district to be considered the right place to produce coir.

The coir industry has been enhanced in the region through the formation of cooperative societies that include Dr.ACMMICS. Such organisations have been very instrumental in lifting the fortunes of the rural communities through the provision of employment and sustainable operations. The history of the Cuddalore coir industry shows how the sector has continued to play a vital role in the lives of surrounding communities, incorporating the past and present attempts at modernisation and financial development.

History of Dr.ACMMICS

The Dr.ACMMICS in the district of Cuddalore, Tamil Nadu, can be considered an example of the region with its devotion to the empowerment of the marginalised communities

Vyavahāra: International Journal of Commerce, Ethics, Law & Management and the belief in the establishment of sustainable livelihoods. The society was formed on August 3, 1982 and began its operations on October 20, 1982 and was set up with a vision of popularising the coir industry and improving socio-economic conditions of the deprived people, especially women and people belonging to the marginalised backwards communities. The society is named after Dr. B.R. Ambedkar, who was a crusader of social justice, social equality and economic justice and the society was formed to deal with the key issues affecting the rural labourers in the Coir industry. At its formation, the cooperative had the purpose of establishing stable jobs, better working conditions and reasonable payments for the employees. Its other aim was to develop the capabilities of the employees by instructing them in the training programs, so that we could produce mats and mattings of high quality both in the domestic and the international market. Society over the years has evolved to be a major player in the local economies with the fusion of traditional and modern skills to penetrate the changing market.

Statement of the Problem

The coir industry, though, plays a major role in rural employment and benefits the marginalised sections of society, has some challenges that hamper its sustainability and development process. The situation with low wage rates, poor working conditions and facilities in the workplace, and inability to develop individual types of skills among workers are the key problems promoting the low level of workers' satisfaction and productivity. In addition, limited amounts of finances and the unwillingness to use some sustainable practices reduce the modernisation pace, and market competition and out-of-date technologies only weaken the industry in question. The research study will investigate these concerns and the initiatives provided towards inclusive and sustainable development.

Review of Literature

Some studies have also been identified and they have discussed the challenges and development opportunities of coir industry in south India and mostly in Tamil Nadu and Kerala. Mehar Banu and Divyabharathi (2025) have come up with an exploration of the production problems being experienced by coir units in Pollachi, Tamil Nadu and were reported to have problems with labour shortage, raw materials irregularity, obsolete production process and infrastructure. Value addition in production, technological improvement and government support were stressed to enhance sustainability and lives in rural areas. In the same line, Pratheesh (2024) examined the case of Alappuzha Coir Industry in Kerala, showing that technological modernisation has resulted in productivity, and has also

Vyavahāra: International Journal of Commerce, Ethics, Law & Management resulted in the loss of jobs, particularly to women. The research demanded a moderate policy, which leads to modernisation without damaging employment.

In Pollachi, Logesh and Seetha Devi (2022) also conducted research on the prospects and issues of coir production, with high cost of raw materials, unstable labour force and the absence of proper infrastructure as the main drawbacks. They proposed to maintain the prices of raw materials stable, and should upgrade mechanisation and support-value products to advance growth. Sandhra Mariya George (2022) placed an emphasis on the Kerala coir industry in terms of helping women and farmers in the countryside with seasonal unemployment, health hazards, costly machinery and poor marketing identified as the current problems.

To conclude, Manjusmita Dash and Mishra (2021) outlined the importance of the coir industry as a source of rural jobs and export income, specifically in Kerala, Tamil Nadu and Andhra Pradesh, suggesting increased government support, financial inclusion of women, and opening to other global markets. In these studies, better technology, worker welfare, and enhanced government support are regarded as the key to sustainability.

Research Objectives

1. To examine the socio-economic profile of coir workers in the study area.
2. To identify the problems faced by coir workers in the Dr. ACMMICS.
3. To examine trends in purchase and sales evaluate performance indicators within the society.
4. To analyse the sustainable development initiatives undertaken by Dr. ACMMICS.
5. To provide recommendations for enhancing sustainability, improving worker welfare, and strengthening the overall performance of the cooperative.

The Broads of the Study

The study aims to know the type of economic, social and environmental dimensions regarding the coir production of the cooperative in Cuddalore District. It also doesn't stop at detecting the worker issues but also discusses on how sustainable practices can help to the coir industry. Some of the major areas are work patterns, production efficiency, employee welfare and green initiatives. The results are to leave a base to make a policy recommendation towards a people-oriented, resilient coir industry.

Methodology

This research is based on a combination of primary and secondary data collection methods. Primary information will be gathered through personal interviews, surveys, and

Vyavahāra: International Journal of Commerce, Ethics, Law & Management discussions with workers and administrative staff. Secondary data will be gathered from Annual Reports, Audit Reports, Newspapers, Coir Cooperative Records, the Micro, Small, and Medium Enterprises (MSMEs) Report, the Coir Board, and Research articles related to the sustainable development of coir industry cooperatives. By combining both approaches, the study aims to provide well-rounded insights into the challenges faced and the sustainability measures in place. Both qualitative and quantitative methods will be used to analyse trends, worker satisfaction, and organisational performance.

Sampling Design

The research is done through a purposive sampling where attention is given only to the workers who were employed in the coir cooperative. To this end, 76 coir workers were selected who will represent various age groups, genders, and levels of work experience. The sample only includes those who are directly involved in the coir-related operations. People of both genders and of different levels of the production chain are involved in the study to achieve pluralism. It will use structured questionnaires and personal interviews to collect data. This practice gives a clear picture of the nature of the socio-economic state and issues of the cooperative workforce.

Workforce Distribution Analysis

The data provides a comprehensive overview of the workforce involved in the coir industry. It highlights critical insights into the structure and composition of workers. This information can be leveraged to design targeted strategies for operational improvement. Furthermore, it offers a foundation for addressing workforce-related challenges effectively. The analysis contributes to informed decision-making and sustainable development in the coir industry sector.

Gender and Age Distribution of Coir Workers

Age Group (Years)	Frequency Female (%)	Frequency Male (%)	Total Frequency (%)
18-25	-	-	-
26-35	5 (6.58)	2 (2.63)	7 (9.21)
36-45	10 (13.16)	4 (5.26)	14 (18.42)
46-60	38 (50.00)	12 (15.79)	50 (65.79)
61 and above	4 (5.26)	1 (1.32)	5 (6.58)
Total	57 (75)	19 (25)	76 (100)

(Sources: Compiled from the members schedule)

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The present table shows that gender and age distribution of coir workers reveals that women constitute a significant majority, accounting for 75% (57 workers), while men make up 25% (19 workers). The largest age group among coir workers is 46-60 years, representing 65.79% of the total workforce, with 50% being women and 15.79% men. Workers aged 36-45 comprise 18.42%, followed by those aged 26-35 at 9.21%, and 61 years and above at 6.58%. Notably, there are no workers in the 18-25 age group, indicating limited younger workforce participation. This distribution highlights the dominance of women and an aging workforce in the coir industry.

Marital Status of Coir Workers

Marital Status	Frequency Female (%)	Frequency Male (%)	Total Frequency (%)
Married	44 (57.89)	17 (22.37)	62 (80.26)
Unmarried	10 (13.16)	2 (2.63)	12 (15.79)
Widowed	3 (3.95)	-	3 (3.95)
Total	57 (75)	19 (25)	76 (100)

(Sources: Compiled from the members schedule)

The majority of coir workers are married, accounting for 80.26% of the total workforce, with 57.89% being women and 22.37% men. Unmarried workers constitute 15.79%, comprising 13.16% women and 2.63% men. Widowed individuals make up a small fraction of 3.95%, all of whom are women. This data highlights that married individuals, particularly women, dominate the coir workforce, while widowed and unmarried workers represent a smaller segment.

Educational Qualification of Coir Workers

Education Level	Frequency Female (%)	Frequency Male (%)	Total Frequency (%)
Illiterate	16 (21.05)	5 (6.58)	21 (27.63)
Primary Education	24 (31.58)	8 (10.53)	32 (42.11)
Secondary Education	13 (17.11)	5 (6.58)	18 (23.68)
Higher Education	4 (5.26)	1 (1.32)	5 (6.58)
Total	57 (75)	19 (25)	76 (100)

(Sources: Compiled from the members schedule)

The table indicates that 42.11% have completed primary education, with women forming the majority. About 27.63% are illiterate, and 23.68% have secondary education.

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Only 6.58% have pursued higher education, with a small representation from men. This data highlights the need to improve educational opportunities for coir workers.

Monthly Income Distribution of Coir Workers

Monthly Income (₹)	Frequency (%)
10,000-15,000	28 (36.84)
15,001-20,000	20 (26.32)
20,001-25,000	15 (19.74)
25,001 and above	13 (17.11)
Total	76 (100)

(Sources: Compiled from the members schedule)

Above the table indicates that the majority coir worker, 36.84%, earn between ₹10,000-15,000. This is followed by 26.32% earning ₹15,001-20,000, while 19.74% fall in the ₹20,001-25,000 category. Only 17.11% of workers earn ₹25,001 and above. This highlights that a significant portion of coir workers belong to the lower-income brackets, reflecting the modest earning potential in the sector.

Annual Income and Expense Distribution of Coir Workers

Annual Income and Expense (₹)	Frequency AI (%)	Frequency AE (%)
Below 1,50,000	24 (31.58)	30 (39.47)
1,50,001 - 2,00,000	22 (28.95)	25 (32.89)
2,00,001 - 2,50,000	14 (18.42)	13 (17.11)
Above 2,50,001	16 (21.05)	8 (10.53)
Total	76 (100)	

(Sources: Compiled from the members schedule)

The AI and AE distribution of coir workers reveals that a significant proportion of workers (31.58% for income and 39.47% for expenses) fall below ₹1,50,000. A smaller percentage, 28.95% for income and 32.89% for expenses, earn or spend between ₹1,50,001 and ₹2,00,000. Workers in the ₹2,00,001 to ₹2,50,000 range make up 18.42% for income and 17.11% for expenses. Meanwhile, the highest income and expense category, above ₹2,50,001, includes 21.05% for income but only 10.53% for expenses, indicating potential savings or disparities in spending patterns. The total figures represent 76 workers (100%).

Satisfaction of Coir Workers Regarding Wages in the Cooperative Society

Satisfaction Level	Frequency Female (%)	Frequency Male (%)	Total Frequency (%)
Highly Satisfied	2 (2.63)	1 (1.32)	3 (3.95)

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Satisfied	8 (10.53)	3 (3.95)	11 (14.47)
Neutral	15 (19.95)	5 (6.58)	20 (26.32)
Dissatisfied	22 (28.95)	7 (9.21)	29 (38.16)
Highly Dissatisfied	10 (13.16)	3 (3.95)	13 (17.11)
Total	57(75)	19(25)	76(100)

(Sources: Compiled from the members schedule)

The wage satisfaction levels of coir workers reveal that only small proportions are highly satisfied (3.95%) or satisfied (14.47%). A notable 26.32% hold a neutral view, while dissatisfaction is prominent, with 38.16% dissatisfied and 17.11% highly dissatisfied. Women dominate across all dissatisfaction levels, reflecting widespread dissatisfaction with wages among the workforce, especially female workers.

Comprehensive Problems Faced by Coir Cooperative Workers

Problems Faced	SA	A	N	D	SD	Total
Low wages	35	28	8	3	2	76
Lack of workplace safety	30	27	10	6	3	76
Inadequate skill development opportunities	32	25	12	5	2	76
Limited representation in decision-making	28	30	11	5	2	76
Difficulty accessing financial assistance	31	29	8	5	3	76
Health issues due to poor working conditions	34	30	7	4	1	76
Unavailability of consistent raw materials	29	26	12	7	2	76
Delayed payments	27	28	15	4	2	76
Lack of access to advanced tools and machinery	33	25	10	5	3	76
Limited awareness of government schemes	25	30	14	5	2	76
Lack of training and capacity-building programs	34	29	8	3	2	76
Insufficient support for marketing coir products	30	28	10	6	2	76
Difficulty availing government loans and grants	-	-	12	36	28	76

(Sources: Compiled from the members schedule) SA: **Strongly Agree**, A: **Agree**, N: **Neutral**, D: **Disagree**, SD: **Strongly Disagree**.

ANOVA Results (Satisfaction across Age Groups)

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Value	P-Value
Between Groups	145.25	3	48.42	6.37	0.002
Within Groups	540.75	72	7.51		
Total	686	75	-		

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The p-value (0.002) is less than 0.05, indicating a statistically significant difference in wage satisfaction across age groups.

Hypotheses for ANOVA:

1. **H₀**: There is no significant difference in satisfaction levels regarding wages across age groups
2. **H₁**: There is a significant difference in satisfaction levels regarding wages across age groups.

T-Test Analysis

Gender	Mean Satisfaction Score	Standard Deviation	Sample Size (n)
Female	2.4	0.6	57
Male	2.7	0.5	19

The table shows that female coir workers (mean score: 2.4) are less satisfied with wages compared to male workers (mean score: 2.7). Satisfaction levels among males are less variable (SD: 0.5) than females (SD: 0.6). This suggests possible gender disparities in wage satisfaction. A t-test can determine if this difference is statistically significant.

Hypotheses for T-Test

1. **H₀**: There is no significant difference in wage satisfaction between male and female coir workers.
2. **H₁**: There is a significant difference in wage satisfaction between male and female coir workers.

Descriptive Statistics

Particulars	Purchase	Sales
Mean	1316.38	1533.45
Standard Error	161.68	135.49
Median	1544.56	1801.78
Standard Deviation	536.22	449.38
Sample Variance	287536.18	201946.71
Kurtosis	-1.15	-1.04
Skewness	-0.78	-0.74
Range	1474.07	1331.87
Minimum	387.56	736.88

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Maximum	1861.63	2068.75
Sum	14480.19	16867.98
Count	11	

(Sources: Complaint from the audit and annual reports of the Dr.ACMMICS for the relevant year)

The statistics show that sales have a higher average (₹1533.45) than purchases (₹1316.38), with lower variability (standard deviation: ₹449.38 vs. ₹536.22). Both datasets are slightly left-skewed (skewness: -0.78 for purchases, -0.74 for sales) and flatter than normal (kurtosis: -1.15 and -1.04). Sales also exhibit a smaller range (₹1331.87) and higher total (₹16,867.98) compared to purchases (₹1474.07 and ₹14,480.19), based on 11 observations.

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Sustainable Development of the Dr.ACMMICS

S.No	Year	Purchases (₹ in lakhs)	Growth Rate (%)	Growth Index	Trend	Sales (₹ in lakhs)	Growth Rate (%)	Growth Index	Trend
1	2013-2014	387.56	-	100.00	584.20	736.88	-	100	922.89
2	2014-2015	571.99	47.59	147.59	1021.97	937.71	27.25	127.25	1723.66
3	2015-2016	762.09	33.23	196.64	1459.74	1,098.71	17.17	149.1	2524.43
4	2016-2017	972.18	27.57	250.85	1897.51	1,211.31	10.25	164.38	3325.2
5	2017-2018	1538.50	58.25	396.97	2335.28	1,801.78	48.75	244.51	4125.98
6	2018-2019	1639.93	6.59	423.14	2773.05	1,831.65	1.66	248.57	4926.75
7	2019-2020	1786.99	8.97	461.09	3210.82	1,803.26	-1.55	244.72	5727.52
8	2020-2021	1544.56	-13.57	398.53	3648.59	1,698.75	-5.8	230.53	6528.29
9	2021-2022	1740.55	12.69	449.10	4086.36	1,872.99	10.26	254.18	7329.07
10	2022-2023	1674.22	-3.81	431.99	4524.13	1,806.19	-3.57	245.11	8129.84
11	2023-2024	1861.63	11.19	480.35	4961.9	2,068.75	14.54	280.74	8930.61
Analysis	Mean (₹ in Lakhs)	₹ 1,316.38				Mean (₹ in Lakhs)	₹ 1,533.45		
	SD (₹ in Lakhs)	₹ 536.22				SD (₹ in Lakhs)	₹ 449.39		
	CV	40.73%				CV	29.31%		
	CAGR	16.99%				CAGR	10.87%		

(Sources: Complaint from the audit and annual reports of the Dr.ACMMICS for the relevant year)

The growth analysis of purchases and sales reflects steady financial progress in the cooperative society over the years. Purchases averaged ₹1,316.38 lakhs, with a higher CAGR of 16.99%, but exhibited greater variability (CV: 40.73%) compared to sales. Sales, on the other hand, averaged ₹1,533.45 lakhs with a relatively stable CAGR of 10.87% and a lower CV of 29.31%. The most significant growth was observed in 2017-2018, with purchases rising by 58.25% and sales by 48.75%. However, slight declines in certain years, such as 2020-2021, indicate external challenges affecting operations. The trend analysis confirms a consistent upward trajectory for both purchases and sales.

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Findings

The study highlights the remarkable work of Dr.ACMMICS in bringing socio-economic changes among coir workers in the Cuddalore district. The challenges faced by most women workers include low wages, limited opportunities for skill development, and a lack of social security. Although production and sales are steadily increasing, the cooperative faces barriers in adopting modern technologies and securing financial support. The financial stability of workers depends on their vulnerability to significant income fluctuations. Occupational health issues also arise due to poor working conditions. The cooperative has remained resilient with consistent employment levels and has supported rural livelihoods. However, limited awareness of government schemes further restricts growth potential. These findings emphasise the need for targeted programs to improve both living and working conditions for coir workers.

Suggestions

The study's key important suggestions are outlined below to address and enhance the development of the coir industry.

- Raising salaries is the only way to bring some stability and motivation to the employees.
- The program on improving their skills and ability to respond to the new techniques could help to increase their effectiveness.
- Improvement of the working environment and the provision of health insurance shall reduce employment hazards and take care of all workers.
- Modernisation of machines and an increase in operations require financial assistance in terms of loans and subsidies.
- Educational campaigns on government schemes may enable the workers to enjoy other schemes.
- Introduction of social security policies, which include retirement and insurance, will give them a future.
- New markets will help increase revenue generation.
- The implementation of mechanisation will help increase productivity and decrease working pressure.
- All these actions will help in building a stronger and successful cooperative.

Conclusion

The present study of Dr. ACMMICS concludes that it has played a significant role in empowering rural coir workers, especially women, since this group benefits from consistent

Vyavahāra: International Journal of Commerce, Ethics, Law & Management employment and economic stability. However, challenges remain, such as low wages, poor working conditions, and limited skills development, which hinder the cooperative's full potential. Specific interventions, including wage increases, skills training, and access to government programs, can significantly improve workers' lives. The sustainability of the cooperative's growth depends on modernising production processes and expanding the market. Additionally, measures to enhance social security would help ensure the long-term viability of coir workers. Holistic development requires a broad stakeholder approach involving the government, cooperative management, and workers. The cooperative's development can serve as an example for similar societies striving for sustainable growth in rural economies.

Reference

1. Mehar Banu and Divyabharathi , Production Problems Faced by Coir Units: A Study In Pollachi Taluk of Coimbatore District, International Journal of Creative Research Thoughts, Vol.13, Issue 04, April 2025,pp.801-810.
2. Sakthivel and Maheshkannan, A Study on Sustainable Development and Economic Impact of the Painkulam Coir Workers Industrial Cooperative Society in Tamilnadu State, Rabindra Bharati University Journal of Economics, Vol. : XXIX, No:02, January - June:2025,pp.75-79.
3. Sakthivel and Maheshkannan, Purchase and Sales Analysis of Kollankodu Coir Workers Industrial Cooperative Society- A Study, Vol. 20, Issue 01, No.30, January – June 2024, pp.25-31.
4. Sreekumar and Rajnarayanan , A Study about the opportunities and challenges in the coir industry to ensure employees' wellbeing through proper reward and recognition systems, African Journal of Biological Science, Vol. 06, Issue 04, July-2024, pp. 4658-4668.
5. Sakthivel and Maheshkannan, Working Performance of the Thamaraikulam Coir Workers Industrial Cooperative Society – A Study, Journal of the School of Language, Literature and Culture Studies, Series: 26, Book No. 10, Year: 2024,pp.117-123.
6. Pratheesh and Florence, Technological Modernization and its Challenges in Coir Industry in Alappuzha, Journal of Social Sciences and Economics, Vol. 03(2), October-2024, pp.110-117.
7. Saranya and Selvakumar, A Study on Challenges Faced By Coir Products Manufacturer in Dindigul District, International Journal of Advance Research and Innovative Ideas in Education, Vol.10, Issue 02,Year 2024,pp.3599-3605.
8. Karuppasamy, Examining Challenges and Opportunities in the Coir Industry of Tirunelveli District, Futuristic Trends in Social Sciences, Vol. 03, Book 02, Year 2024,pp.117-182.

Vyavahāra: International Journal of Commerce, Ethics, Law & Management

9. Logesh and Seetha Devi, Problems and Prospects of Manufacturing of Coir Products in India, International Journal of Advance and Applied Research, Vol.09, No.05, May – June 2022, pp.397-401.
10. Panneerselvam, Women Empowerment for Developing India: A Study of Tamil Nadu, Journal of Women Empowerment and Studies, Vol. 02, No 04 , July 2022, pp.26-34.
11. Sandhra Mariya George , A Case Study on the Problems of Coir Industry In Kerala, International Journal of Advance and Applied Research, Vol.09, No.06, July – Aug 2022, pp.523-526.
12. Manjusmita Dash and Bidhu Bhusan Mishra, Coir Industry in India: An Overview on Performance, Problems & Prospects, GE-International Journal of Management Research, Vol. 9, Issue 06, June 2021, pp.01-14.
13. Evaluation Report, Tamil Nadu central coir Marketing Cooperative Society, 2021-22.
14. <http://coirboard.gov.in/>
15. <https://msme.gov.in/coir-board>
16. <https://www.msmetamilnadu.tn.gov.in/>
17. <https://tancofed.weebly.com/>
18. <https://www.dsir.gov.in/coir>
19. <https://www.indiantradeportal.in/vs.jsp?lang=0&id=0,31,24100,29405>
20. <https://coconutcommunity.org/page-statistics/weekly-price-update>
21. <https://www.databridgemarketresearch.com/reports/global-coco-coir-market>
22. <https://www.thehindu.com/news/cities/Tiruchirapalli/consumers-feel-the-pinch-as-the-price-of-coconut-shoots-up-in-tiruchi/article69606397.ece>
(The Hindu News Paper May 23, 2025).
23. <https://www.thehindu.com/news/national/tamil-nadu/tns-policy-for-coir-industry-aims-to-attract-3000-crore-investments/article67706220.ece>.
(The Hindu News Paper January 04, 2024)
24. <https://www.drishtiias.com/daily-news-analysis/indian-coir-industry>.
25. <https://tncu.tn.gov.in/about-us>
26. https://www.rcs.tn.gov.in/mpd_cooperative.php
27. www.rcs.tn.gov.in
