

Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

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ABSTRACT

Environmental sustainability remains a critical concern globally, with issues such as pollution, land degradation, and excessive plastic use threatening ecological balance. Human activities are the primary drivers of these challenges, often resulting in disasters like floods and soil erosion. Effective waste management is crucial to mitigate such environmental risks. In Kerala, the Haritha Karma Sena (HKS), plays a vital role in promoting cleanliness, environmental awareness, and sustainable waste management through activities such as collection, segregation, recycling, and disposal of household and commercial waste. HKS engages local communities, including Kudumbashree women, and provides training to workers to efficiently handle waste. This study focuses on Haritha Karma Sena workers in Kothamangalam Taluk, examining their socio-economic status and the challenges they face, including worksite, and work-related issues. The study aims to identify barriers that may hinder the effective functioning of HKS and offer insights for policy interventions to strengthen sustainable waste management practices. Findings from this research are expected to guide the government and local authorities in supporting HKS workers, thereby contributing to Kerala's broader goals of sustainability and environmental protection.

Keywords: Haritha Karma Sena, sustainable development, waste management, socio-economic status, environmental sustainability, Kerala, community engagement

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1.1 INTRODUCTION

Ecosystems provide the essential support for all life on Earth. The air we breathe, along with forests, oceans, and wildlife, forms an integral part of the environment. Increasingly, individuals, organizations, and governments are adopting sustainable practices to reduce the harmful impacts of human activities and to promote a cleaner, waste-free environment. The project engages local communities, particularly women from the Kudumbashree network, in activities such as waste collection, segregation, recycling, and proper disposal of household and commercial waste. Haritha Karma Sena aims to foster public awareness on environmental conservation, reduce the negative impacts of mismanaged waste, and contribute toward a cleaner and greener Kerala. By integrating community participation, training, and localized environmental management, the initiative addresses key issues such as plastic pollution, improper waste disposal, and biodiversity preservation. HKS plays a vital role in supporting the Sustainable Development Goals by promoting cleanliness, ecological balance, and responsible environmental practices at the grassroots

level. The program exemplifies a successful model of combining government-led action with community engagement to achieve sustainable development objectives.

1.2 Haritha Karma Sena (HKS)

Haritha Karma Sena is a collective of workers from the kudumbashree network, working for local self governments for the collection, sorting, and delivery of inorganic waste to authorized agencies for processing and end disposal. Established in 2017 as a micro-initiative of Kudumbashree under the Nava Kerala Karma Paddhathi. Haritha Karma Sena is a community-based initiative in Kerala focused on sustainable waste management and environmental protection. The program involves the systematic collection and segregation of inorganic waste, ensuring that such materials are delivered to authorized agencies for scientific and environmentally safe treatment. In addition, HKS establishes and maintains support systems for in-situ management of biodegradable waste, promoting eco-friendly disposal at the source. The initiative also provides green protocol services aimed at minimizing overall waste generation and

Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

encourages practices that reduce environmental impact. Furthermore, HKS implements measures to facilitate the recycling and repurposing of waste materials, thereby promoting a circular approach to resource management. Through these comprehensive activities, Haritha Karma Sena not only enhances cleanliness and hygiene but also fosters community participation in sustainable development efforts across Kerala.

1.3 REVIEW OF LITERATURE

- **Rajesh Kumar Singh (2018)¹** reported that support from the Gram Panchayath was a crucial factor in ensuring the effective implementation of waste management programs. In contrast, Haritha Karma Sena workers in Kerala faced several challenges, including limited cooperation from households and the absence of first aid facilities at worksites.
- **Annu Devi et al. (2018)²** identified a lack of support from fellow workers, inadequate worksite infrastructure, and the absence of first aid facilities were the key challenges faced by MGNREGA participants. These findings underscore the importance of institutional support and adequate worksite provisions to enhance the effectiveness of development programs implemented to ensure environmental protection of Kerala.
- **Dilsha KS et al. (2019)³** observed that inadequate sanitation facilities and high temperatures were the primary challenges encountered by workers in the study area. The study concluded that the local panchayath played a supportive role in alleviating these difficulties, helping workers to carry out their responsibilities more effectively under the programme.
- **Bagirathi Panda (2022)⁴** analyzed that MGNREGA played a significant role in rural development practices in India. The programme was instrumental in promoting development in the state of Assam, contributing substantially to employment generation and the formation of social capital. Through these mechanisms, MGNREGA supported the growth and development of the rural economy in Assam.

1.4 SIGNIFICANCE OF THE STUDY

This research focusing on the challenges faced by Haritha Karma Sena workers, identifies critical problems in the waste management system of Kerala. By examining issues such as inadequate infrastructure, limited support from households, and insufficient worksite facilities, the research highlights areas that require immediate attention. Understanding these challenges provides a basis for developing targeted strategies to strengthen waste management practices and improve the working conditions of HKS workers.

The findings can inform policy decisions and planning to enhance the efficiency and effectiveness of waste management initiatives. Moreover, addressing these challenges contributes not only to sustainable development at the local level but also supports broader environmental goals, including climate change mitigation and responsible resource management.

1.5 STATEMENT OF THE PROBLEM

The critical reviews of literature indicate that there is a big gap in existing literature as regards to Haritha Karma Sena workers in state of Kerala. It is hoped that the findings of the study would help the government to find solutions for the problems faced by the Haritha Karma Sena Workers in Kothamangalam Taluk. To have the full picture of Haritha Karma Sena in Kerala and to fill the research gap, the present study titled "Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk." has been proposed.

1.6 SCOPE OF THE STUDY

The Haritha Karma Sena members, who are working tirelessly to make our own Kerala waste-free, have collected 50190 tons of inorganic waste from our state and handed it over to the Clean Kerala Company in the last one year. Haritha Karma Sena members received Rs. 341 crores as user fees for waste collection during 2025-26. The study attempts to investigate the socio-economic status, the motivational factors and the various problems faced by the Haritha Karma Sena Workers in Kothamangalam taluk. The assessment has been made by considering the opinions of sample respondents. Sample respondents include the Haritha Karma Sena workers in Kothamangalam Taluk, who have a minimum experience of 6 months in this programme. In 2026, the total number of Haritha Karma Sena Workers in Kerala stood at 35,214 the Ernakulum blazed the path with 3864 Workers. The number of Haritha Karma Sena workers in Kothamangalam region especially Nellikuzhy panchayath and Kothamangalam Municipality includes 107 Workers. The study focused ward no. 2 and 8 of on Kothamangalam municipality and ward no. 3 and 6 of Nellikuzhy panchayath.

1.7 OBJECTIVES OF THE STUDY

To study the Socio-Economic Status of Haritha Karma Sena workers in Kothamangalam Taluk..

To analyse the worksite and work related problems faced by Haritha Karma Sena in Kothamangalam Taluk.

1.8 HYPOTHESIS OF THE STUDY

Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

- **H₀₁:** There is no significant difference among the work related problems faced by Haritha Karma Sena in Kothamangalam Taluk.
- **H₀₁:** There is no significant difference among the work site problems faced by Haritha Karma Sena in Kothamangalam Taluk

1.9 RESEARCH METHODOLOGY

Research methodology is way to address the research problem systematically. The following methodologies were adopted for conducting the study:

Population of the study

Population of the study consists of Workers of Haritha Karma Sena in Kothamangalam Taluk, who have a minimum experience of 6 months in Haritha Karma Sena programme.

Selection of sample

Sample size for the study is **100 respondents** are from ward **no. 2 and 8** of Kothamangalam municipality and ward no. 3 and 6 of Nellikuzhy Panchayath. The study is conducted on those workers who have an experience of **minimum period of 6 months**. The sample was selected by adopting **convenience sampling method**.

Data collection

The data required for the study are collected from both primary and secondary sources.

a) Primary data

Primary data are those data which is collected directly from the respondents and they are original in character. **Questionnaire method** was used to collect primary data.

b) Secondary data

Secondary data are those data which are already collected by someone for the same purpose and are available for the present study. Secondary data were collected mainly from journals, books, articles, newspapers, websites etc.

1.10 TOOLS FOR ANALYSING THE DATA

Keeping in view the objectives of the study, the collected data were categorized, analysed and interpreted. SPSS version (20) software was used for the purpose of analysing the collected data. Statistical tools like Frequency, percentages and Friedman Repeated Measures Analysis of Variance on Rank test were applied for analysing the collected data and to examine the significance of variation in the opinion among Haritha Karma Sena Workers in Kothamangalam Taluk.

1.11 PERIOD OF THE STUDY

The study was conducted during the month of September 2025/January 2026

SOCIO-ECONOMIC STATUS OF HARITHA KARMA SENA WORKERS IN KOTHAMANGALAM TALUK.

- The age wise distribution of the respondents. Majority (61%) of respondents fall under the age group of below 50 years, 30% of the respondents belongs to the age group of 50-60, 18% aged between 30-40 years.10% respondents belong to age group of 60 years and above.1% of respondent belong to age group of below 30.
- Haritha Karma Sena workers in Kothamangalam Taluk are from rural area. The religion of majority (60%) of the respondents. are from Hindu religion. 21% of respondents belongs to Muslim community and 19% of respondents are from Christian community.
- 63% of the Caste category of the Haritha Karma Sena workers of Kothamangalam Taluk belong to OBC category, 19% of respondents belong to SC/ST category and 18% belong to general category.
- Type of ration card used by Haritha Karma Sena workers of Kothamangalam Taluk fall under BPL category.
- Majority of the respondents (91%) are married.4% of respondents are widow and the remaining 5% of respondents are either divorced or unmarried.
- Majority of the respondent's (82%) is having 3-6 members in their family.17% of workers having 6 and above members in their family and only 1% of respondent's having less than 3 members in their family.
- Majority (64%) of respondents having the educational qualification of SSLC.29% of the respondents having PDC/Plus two and 7% of the respondents having below SSLC as their educational qualification.
- 62% of respondents have monthly earnings less than 7500, 38% of respondents have monthly income in between 7500-15000.
- Majority of respondents (86%) have their own house and 14% of respondents are living in rented house.
- 51% of respondents have a work experience in Haritha Karma Sena about 2-4 years and 49% of respondents have experience of less than 2 years.
- 42% of respondents have land holdings of 5-10 cent.35% of respondents have 10-15 cent and 23% of respondents have less than 5 cent.
- 81% of workers get information about Haritha Karma Sena project from the Meetings organized by Panchayat /Municipality.18% of respondents knew from Neighbours and only 1% knew from friends/ relatives.
- Majority (66%) of the workers joined Haritha Karma Sena due to unemployment.15% of workers joined

Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

because of poverty, 11% joined due to influence of panchayat/municipality. only 8% of respondents joined the project for getting mental satisfaction.

H₀₂: There is no significant difference in work site problems faced by Haritha Karma Sena Workers in Kothamangalam taluk.

Table 2 FREIDMAN TEST FOR MEASURING SIGNIFICANT DIFFERENCE AMONG MEAN RANKS OF WORKSITE PROBLEMS FACED BY WORKERS

WORKSITE PROBLEMS	MEAN RANK	CHI-SQUARE VALUE	
I face problem with my co-workers	2.98	511.95	<.001**
I face problem with my superior	3.12		
I don't get proper first aid facilities	6.29		
I don't have proper drinking facilities	6.26		
I don't have proper toilet facilities	7.36		
I face problem partiality of superior	3.27		
I face problem in food intervals	3.23		
I face problems when getting instructions from more than one mate at a time in worksite	3.51		

Source: Primary data

**** Denotes significant at 1% level**

Since the P value is less than 0.01 the null hypothesis is rejected at 1% level of significance. Thus we can reach a conclusion that,

most of the workers have differences in their worksite problems.

Based on the mean rank "I don't have proper toilet facilities" (7.36) is the major problem faced by workers at site and another problems faced by the workers are "I don't get proper first aid facilities" (6.29) and "I don't have proper drinking water facilities" (6.26). The least being "I face problem with my co-workers" (2.98).

It is inferred that the Haritha Karma Sena workers in Kothamangalam Taluk don't have proper toilet facilities at worksite.

H₀₂: There is no significant difference in work related problems faced by Haritha Karma Sena Workers in Kothamangalam taluk.

Table. 3 Freidman Test for Measuring Significant Difference Among Mean Ranks Of Work Related Problems Faced By Workers

WORK RELATED PROBLEMS	MEAN RANK	CHI - SQUARE VALUE	
I face the problem in getting timely wages	1.82	288.51	<.001**
I face problem due to inadequate supply of glouse, boots and other equipments	2.38		
I face problem while working in the hot weather condition	4.42		

Source: Primary data

**** Denotes significant at 1% level**

Since the P value less than 0.01 the null hypothesis is rejected at 1% level of significance. Thus we can reach at a conclusion that, most of the workers have differences in their work related problems.

Based on the mean rank "I face problem while working in the hot weather condition" (4.42) is the most significant problem faced by workers, followed by "I have problem of long distance to the worksite from my hometown" (4.26), and the least faced problem is "I face the problem in getting timely wages" (1.82).

Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

Thus study concludes that the workers of Haritha Karma Sena in kothamangalam taluk face difficulties to work in the hot weather condition.

1.12 FINDINGS AND SUGGESTION

In the light of the findings, several measures are suggested to improve the effectiveness of Haritha Karma Sena and strengthen the administrative framework of local self-government institutions. Provision of adequate toilet facilities at worksites should be prioritized, as it is a basic necessity highlighted by workers, including the need to improve existing amenities at Material Collection Facilities (MCFs). Ensuring access to safe drinking water is equally important; local bodies should either facilitate availability at worksites or adopt suitable administrative measures to address the difficulties faced by workers in carrying sufficient water. Further, the availability of first aid facilities at all worksites must be ensured to address immediate health needs. Since workers operate in groups across different wards, the designated group in-charge should regularly report any shortages in first aid supplies to the panchayat or municipality and ensure timely care and treatment of minor injuries. These measures would contribute to a more supportive and efficient working environment for Haritha Karma Sena members.

The findings explicitly aligned with the Sustainable Development Goals (SDGs) formulated by the United Nations. In particular, the issues identified in the study correspond closely with SDG 6 (Clean Water and Sanitation), SDG 3 (Good Health and Well-being), SDG 8 (Decent Work and Economic Growth), and SDG 11 (Sustainable Cities and Communities). The lack of adequate toilet and drinking water facilities, along with insufficient first aid provisions, highlights existing gaps in achieving SDG 6 and SDG 3, which emphasize access to safe sanitation, clean water, and essential health services. While the involvement of Haritha Karma Sena contributes to employment generation in line with SDG 8, the persistence of unfavorable working conditions indicates the need for improvements in job quality, safety, and worker welfare. Additionally, the role of these workers in waste management supports the objectives of SDG 11 by contributing to environmentally sustainable and resilient communities. Therefore, addressing these challenges through strengthened infrastructure, effective administrative mechanisms, and enhanced welfare measures can simultaneously improve worker well-

being and support progress toward the attainment of these interconnected global goals.

1.13 CONCLUSION

The study concludes that participation in Haritha Karma Sena has provided meaningful employment opportunities for workers, helping many transition from unemployment to a source of income that supports their basic needs and improves their standard of living. Most workers joined the programme due to poverty and unemployment, and it has generally met their demand for work. However, the study also identifies several challenges affecting worker well-being and programme effectiveness, including inadequate toilet, drinking water, and first aid facilities at worksites, difficulties arising from long distances to work and harsh weather conditions, as well as financial and personal constraints. Addressing these issues through targeted measures by panchayats and municipalities such as improving infrastructure, ensuring access to essential facilities, and strengthening administrative support can enhance the overall efficiency of the programme and promote the welfare of its workforce.

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Promoting Sustainable Development in Kerala: Challenges of Haritha Karma Sena Workers in Kothamangalam Taluk

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