International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 10 Issue: 11 | Nov - 2026 SJIF Rating: 8.659 ISSN: 2582-3930

Recycling Awareness and Practices: A Survey-Based Study of Public Perception and Sustainable Waste Management

[1] O. PARVIN, [2] K. CHANDHINI, [3] B. SUJITH KUMAR

[1&2] UG, Students (B.Sc-Data Science), Dept. of Computer Science, Loyola Degree College (YSRR), Kadapa.AP

[3] Lecturer in Dept of Computer Science, Loyola Degree College (YSRR), Kadapa.AP

Corresponding Author: sujith0624@gmail.com

ABSTRACT

Recycling is an important part of responsible waste management. It helps reduce the amount of waste sent for disposal, encourages the reuse of useful materials, and supports a cleaner environment. This Community Service Project focuses on recycling habits among the people of K. Velamavaripalli. It is designed to understand how residents handle household waste, whether they reuse materials such as paper, plastic, glass and metal, and what they know about waste segregation and recycling.

The project uses a simple Yes/No questionnaire and direct interaction with residents. The survey can examine household practices, awareness of recycling, participation in cleanliness activities, and residents' views about improving recycling facilities. The results section should be completed using the answers actually collected from respondents. This report does not claim that a particular response rate or finding has been measured before the field survey is completed.

The study may help identify common practices and areas where awareness or local facilities could be improved. Suggestions can then be developed to encourage waste separation, reuse of materials, safe disposal, and community participation in keeping the village clean.

Keywords

Recycling habits, household waste, waste segregation, reuse, environmental awareness, community participation, K. Velamavaripalli.

1. INTRODUCTION

Waste is generated in everyday life through food preparation, shopping, packaging, household cleaning and the use of paper, plastic, glass and metal products. When waste is mixed together or discarded carelessly, useful materials may be lost and surroundings can become dirty. Recycling and reuse are practical ways to reduce avoidable waste and make better use of resources.

Recycling generally means collecting and processing used materials so that they can be made into new products. Reuse means using an item again instead of throwing it away. Waste segregation means separating different kinds of waste at the point where they are produced, such as keeping biodegradable kitchen waste separate from dry recyclable materials. These practices are easier when households understand what to separate and have access to suitable collection or disposal arrangements.

Community participation is important because waste management does not depend only on local authorities. Household decisions—such as reusing bags, selling old newspapers, separating waste and avoiding littering—also influence the cleanliness of a neighbourhood. Awareness programmes and convenient collection services can support better habits.

This paper studies recycling habits among residents of K. Velamavaripalli. Through a simple questionnaire, it aims to document what people report doing at home, what they know about recycling, and what improvements they believe would help the community.

2. OBJECTIVES OF THE STUDY

- To understand residents' awareness of recycling and its benefits.
- To identify common household practices for reusing and separating waste.
- To learn how people handle paper, plastic, glass, metal and kitchen waste.

3. STUDY AREA

The study area for this Community Service Project is K. Velamavaripalli. The survey is intended to involve residents from the village and record their answers about household recycling habits. Any description of local waste collection services, facilities or programmes should be added only after it has been confirmed through observation or by asking residents or the relevant local authority.

4. RESEARCH METHODOLOGY

4.1 Type of study

This is a descriptive community survey. It uses short Yes/No questions to record residents' reported knowledge and practices related to recycling.

4.2 Area of Study

The geographical coordinates for **K. Velamavaripalli village** (located in the Pulivendula Mandal of the YSR Kadapa district, Andhra Pradesh)

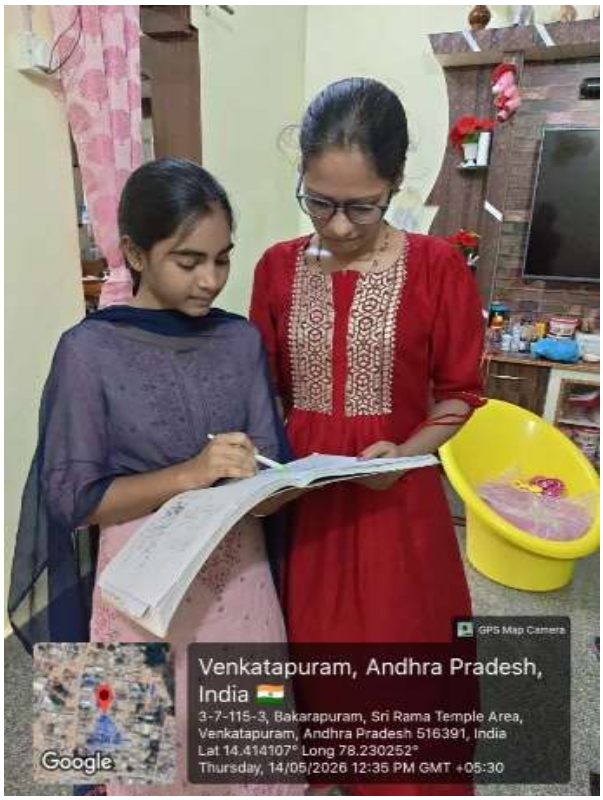
- **Latitude:** 14° 22' 59.97" N (or **14.3833° N**)
- **Longitude:** 78° 13' 7.86" E (or **78.2189° E**)



4.3 Data collection

Primary data should be collected by speaking directly with residents and recording their answers. Secondary information may be taken from reliable books, official waste-management guidance or research articles. The source and date of any secondary information should be recorded.



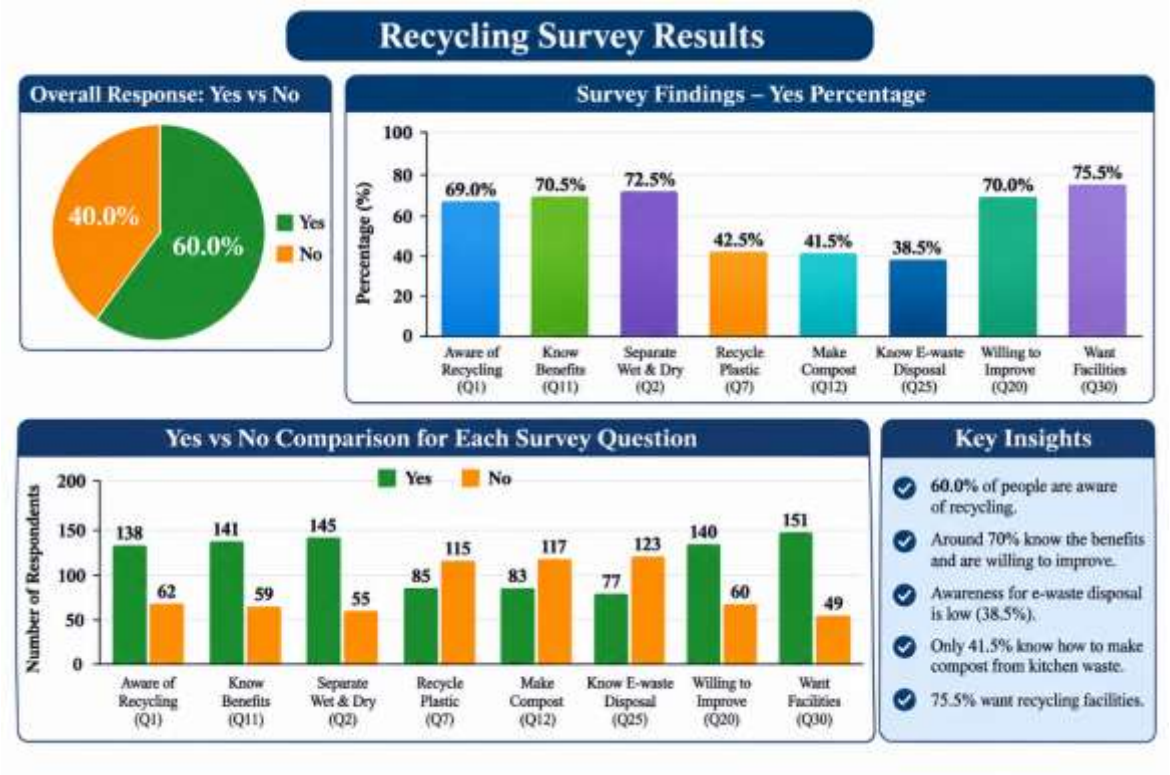

GPS Map Camera
Venkatapuram, Andhra Pradesh, India
3-7-115-3, Bakarapuram, Sri Rama Temple Area, Venkatapuram, Andhra Pradesh 516391, India
Lat 14.414107° Long 78.230252°
Thursday, 14/05/2026 12:35 PM GMT +05:30
Google


GPS Map Camera
Venkatapuram, Andhra Pradesh, India
3-7-112, Sri Rama Temple Area, Bakarapuram, Venkatapuram, Andhra Pradesh 516391, India
Lat 14.413938° Long 78.23038°
Thursday, 14/05/2026 01:11 PM GMT +05:30
Google


GPS Map Camera
Venkatapuram, Andhra Pradesh, India
3-7-115-3, Bakarapuram, Sri Rama Temple Area, Venkatapuram, Andhra Pradesh 516391, India
Lat 14.414102° Long 78.230258°
Thursday, 14/05/2026 12:36 PM GMT +05:30
Google

5. Survey Analysis

Survey finding	Yes	Percentage
Aware of recycling (Q1)	138	69%
Know benefits of recycling (Q11)	141	70.5%
Separate wet and dry waste (Q2)	145	72.5%
Recycle plastic bottles (Q7)	85	42.5%
Make compost from kitchen waste (Q12)	83	41.5%
Know how to dispose of e-waste (Q25)	77	38.5%
Willing to improve recycling habits (Q20)	140	70%
Want recycling facilities (Q30)	151	75.5%



The pie chart illustrates the overall distribution of Yes and No responses across the eight selected survey questions. Out of 1,600 total responses, 960 (60%) were Yes responses, while 640 (40%) were No responses. This indicates that the respondents demonstrated a relatively positive level of recycling awareness, knowledge, and willingness. However, the considerable proportion of No responses highlights the existing gaps in recycling knowledge and practices, particularly in plastic recycling, kitchen waste composting, and electronic waste disposal.

The bar chart presents a comparative analysis of Yes and No responses across the eight selected survey questions. The results indicate that waste segregation (72.5%) and demand for recycling facilities (75.5%) received relatively high positive responses. However, knowledge of e-waste disposal (38.5%), kitchen waste composting (41.5%), and plastic bottle recycling (42.5%) showed comparatively lower percentages. These findings highlight variations in public awareness and recycling practices, providing an overview of the respondents' knowledge and perceptions regarding sustainable waste management.



6. CONCLUSION

The survey findings reveal that public awareness and willingness towards recycling are relatively encouraging; however, the adoption of proper recycling practices remains inadequate. Among the 200 respondents, 69% reported being aware of recycling, while 70.5% understood its benefits. Furthermore, 72.5% of respondents reported separating wet and dry waste, indicating a positive level of awareness regarding basic waste segregation.

However, the findings highlight significant gaps in practical recycling activities. Only 42.5% of respondents reported recycling plastic bottles, while 41.5% knew how to prepare compost from kitchen waste. Awareness regarding proper electronic waste disposal was particularly low, with only 38.5% of respondents reporting knowledge of appropriate e-waste disposal methods.

Despite these challenges, public willingness to improve recycling behavior is promising. Approximately 70% of respondents expressed willingness to improve their recycling habits, and 75.5% indicated a need for better recycling facilities.

Overall, the study identifies a gap between recycling awareness and the consistent implementation of sustainable waste management practices. The findings suggest that increasing awareness alone is insufficient. Practical education, accessible recycling infrastructure, community participation, and institutional support are essential to encourage responsible waste management.

The paper concludes that a combination of public awareness programmers, practical demonstrations, waste segregation initiatives, and accessible recycling facilities can significantly contribute to developing sustainable recycling habits and promoting environmental responsibility among individuals and communities.

"Recycling should not remain merely an environmental awareness concept; it must become a regular practice in everyday life. By combining public education, accessible infrastructure, and active community participation, society can move towards effective waste management and a sustainable environment.

7. REFERENCES

1. Sewak, A., Kim, J., Rundle-Thiele, S., & Deshpande, S. (2021). Influencing household-level waste-sorting and composting behaviour: What works? A systematic review (1995–2020) of waste management interventions. Waste Management & Research, 39(7), 892–909. https://doi.org/10.1177/0734242X20985608

2. Awino, F. B., & Apitz, S. E. (2024). Solid waste management in the context of the waste hierarchy and circular

economy frameworks: An international critical review. Integrated Environmental Assessment and Management, 20(1), 9–35. https://doi.org/10.1002/ieam.4774

3. Trushna, T., Krishnan, K., Soni, R., Singh, S., Kalyanasundaram, M., Annerstedt, K. S., et al. (2024). Interventions to promote household waste segregation: A systematic review. Heliyon, 10(2), e24332. https://doi.org/10.1016/j.heliyon.2024.e24332

4. Massoud, M., Lameh, G., Bardus, M., & Alameddine, I. (2021). Determinants of waste management practices and willingness to pay for improving waste services in a low-middle income country. Environmental Management, 68(2), 198–209. https://doi.org/10.1007/s00267-021-01472-z

5. Troschinetz, A. M., & Mihelcic, J. R. (2009). Sustainable recycling of municipal solid waste in developing countries. Waste Management. https://doi.org/10.1016/j.wasman.2008.04.016

6. United Nations Environment Programme. (2023). Towards Zero Waste: A Catalyst for Delivering the Sustainable Development Goals. UNEP. https://wedocs.unep.org/handle/20.500.11822/44102

7. World Bank. (2018). What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. World Bank Group. https://doi.org/10.1596/978-1-4648-1329-0