Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

REDUCE,REUSE,RECYCLE

A COMMUNITY SERVICE PROJECT REPORT

Submitted by

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Under the Guidance of

Dr.PRASANNA.R

in partial fulfillment for the award of the degree

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in

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BONAFIDE CERTIFICATE

Certified that this community service project report entitled "**REDUCE,REUSE,RECYCLE**" is the bonafide work of "**M.SHANMUKHA MANI(21UEEA0077), L.PAVAN KUMAR REDDY(21UEEA0** and **P.MARUTHI RAM(21UC0260)**" who carried out the project work under my supervision .

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INTERNAL EXAMINER

EXTERNAL EXAMINER

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TABLE OF CONTENTS

ABSTRACT vi

LIST OF TABLES vii

LIST OF FIGURES viii

LIST OF ABBREVIATIONS ix

1 INTRODUCTION OF THE COMMUNITY 1

1.1 OVERVIEW OF THE VILLAGE 1

1.1.1 Common Issues in the Village 2

1.2 CERTIFICATE FROM THE OFFICE OF COMMUNITY 3

2 APPROACH FOR SURVEY 4

3 LITERATURE SURVEY 7

3.1 INTRODUCTION 7

3.2 AIM AND OBJECTIVE 7

3.3 ABOUT THE DISTRICT 8

4 METHODOLOGY TO SOLVE THE PROBLEM 12

4.1 OVERVIEW 12

4.1.1 Benefits of Waste managenment 12

4.1.2 Automatic Dustbin Top Door Opening System USing IOT 13

4.1.3 Source Code 14

5 SURVEY ANALYSIS 17

5.1 SURVEY ANALYSIS GRAPH 18

5.2 SUMMARY OF SURVEY 20

6 GEO TAGGED PHOTOS 22

7 CONCLUSION 25

REFERENCES **26**

ABSTRACT

Waste management has become a critical global issue in the 21st century as urbanization and industrialization continue to accelerate. The exponential increase in waste production poses significant environmental, social, and economic challenges. This abstract provides an overview of the key themes and insights explored in the field of waste management, emphasizing the need for sustainable approaches and innovative solutions .

The abstract begins by outlining the escalating scale of the waste problem, highlighting the strain on natural resources, ecosystems, and public health. It underscores the urgency of rethinking traditional waste management practices in favor of more environmentally friendly and socially responsible approaches [1]

the challenges inherent in waste management, including issues related to waste collection, disposal, and recycling. It emphasizes the importance of policy and regulatory frameworks, as well as public awareness and participation, in addressing these challenges effectively.

The abstract also examines emerging strategies and innovations in waste management, such as circular economy models, waste-to-energy technologies, and advanced recycling techniques. These strategies aim to reduce waste generation, promote resource efficiency, and minimize the environmental impact of waste disposal.

In conclusion, this abstract highlights the interdisciplinary nature of waste management, involving fields like environmental science, engineering, public policy, and social sciences. It underscores the need for collaborative efforts from governments, industries, and communities to create a more sustainable and resilient waste management system that mitigates environmental harm and maximizes resource utilization. The presented research and insights in this abstract contribute to the ongoing discourse on sustainable waste management, seeking to inspire transformative change for a cleaner and more sustainable future.

LIST OF TABLES

2.1 ACTIVITY LOG 4

5.1 SURVEY DETAILS 19

LIST OF FIGURES

1.1 Survey Location Overview 1
1.2 Permission Letter from Panchayat Office 3

3.1 Waste Production in the Village 8
3.2 Local villagers Survey Report 9
3.3 Local Streets of Morai 10

4.1 Benefits Of waste management 13
4.2 Block Diagram of Prototype 15
4.3 Simulation of Smart Dust Bin 16
4.4 Hardware prototype 16

5.1 Daily Usage of Waste in Morai 18

6.1 Feedback from villagers 22
6.2 Identification of Problem 23
6.3 Survey Report 24

LIST OF ABBREVIATIONS

IOT	-	Internet of Things
AI	-	Artificial Intelligence

CHAPTER 1

INTRODUCTION OF THE COMMUNITY

1.1 OVERVIEW OF THE VILLAGE

Morai is a village located in the Avadi taluk of Chennai district, Tamil Nadu, India. It is situated about 30 kilometers from the city of Chennai. The village is home to a number of temples, including the Veerapuram near Morai Temple, which is dedicated to the Hindu deities Veeraperumal and Nera Morai Amman.

The village is also home to a number of educational institutions, including the Veltech University and the Veerapuram Government Higher Secondary School.

- Population: The village has a population of about 10,000 people.
- Languages: The main languages spoken in the village are Tamil and Telugu.
- Religion: The majority of the population is Hindu.
- Economy: The main occupations in the village are agriculture, fishing, and small businesses.

Figure 1.1: Survey Location Overview

Morai, a town located in the northern district of the Chennai Municipal Corporation, is emerging as a significant hub for industrial, commercial, and residential development. Veerapuram is witnessing substantial industrial and commercial growth. The presence of numerous companies and industries provides a wide range of job opportunities for the local population. This development contributes to the economic growth of the area and attracts individuals from neighboring regions seeking employment. Veerapuram is home to several educational institutions that offer higher education opportunities. This includes schools, colleges, and technical institutes, ensuring that the local youth have access to quality education. This educational infrastructure is vital for the overall development of the town. The availability of good transportation facilities in Veerapuram makes it accessible and well-connected to other parts of Chennai and nearby areas. The Chennai Metro Rail station and multiple bus stations play a crucial role in providing convenient commuting options for residents. This connectivity is essential for both daily commutes and the mobility of goods and services, further boosting the commercial activity. Veerapuram offers a diverse range of housing options, including houses and apartments, making it a suitable residential area for families. The growing economy and job opportunities in the region are attractive to individuals and families looking for a place to settle down. This, in turn, contributes to the development of a thriving community. [2]

Morai's growth is complemented by the presence of various businesses and restaurants that cater to the daily needs and preferences of its residents. This includes grocery stores, healthcare facilities, entertainment venues, and dining options. The availability of essential services adds to the convenience of living in the area. With its ongoing development in various sectors, Veerapuram holds significant growth potential. The combination of industrial and commercial opportunities, educational institutions, transportation networks, and residential options creates a favorable environment for the town to continue expanding. As more businesses and residents choose to invest in Veerapuram, the town is likely to thrive and evolve further.

1.1.1 Common Issues in the Village

• Waste management:There is no proper place to store the Daily waste of the village and the behind of roads the daily waste is in large amount.panchayithi is unable to collect the waste from different locations.

• Road improvement: The government is investing in road improvements to address traffic congestion.

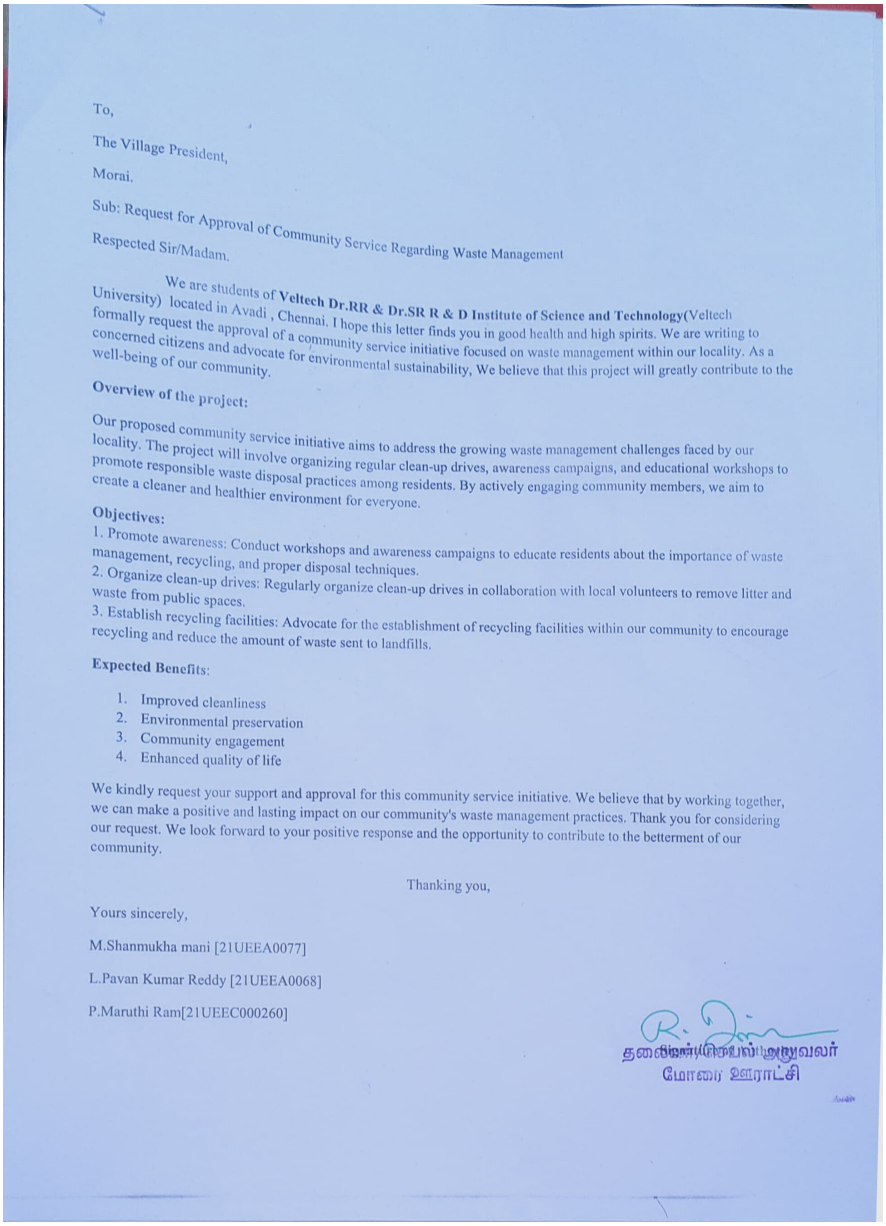
• Infrastructure development: The government is investing in infrastructure development, such as schools and hospitals.

• Poverty alleviation: The government is providing financial assistance and other support to help people living in poverty.

• Lack of Access to Clean Drinking Water: Many villages lack access to a reliable source of clean and safe drinking water. This can lead to waterborne diseases, such as cholera and dysentery, which can

be particularly harmful to children and the elderly.

1.2 CERTIFICATE FROM THE OFFICE OF COMMUNITY



To,

The Village President,

Morai.

Sub: Request for Approval of Community Service Regarding Waste Management

Respected Sir/Madam.

We are students of **Veltech Dr.RR & Dr.SR R & D Institute of Science and Technology**(Veltech University) located in Avadi , Chennai. I hope this letter finds you in good health and high spirits. We are writing to formally request the approval of a community service initiative focused on waste management within our locality. As a concerned citizens and advocate for environmental sustainability, We believe that this project will greatly contribute to the well-being of our community.

Overview of the project:

Our proposed community service initiative aims to address the growing waste management challenges faced by our locality. The project will involve organizing regular clean-up drives, awareness campaigns, and educational workshops to promote responsible waste disposal practices among residents. By actively engaging community members, we aim to create a cleaner and healthier environment for everyone.

Objectives:

1. Promote awareness: Conduct workshops and awareness campaigns to educate residents about the importance of waste management, recycling, and proper disposal techniques.
2. Organize clean-up drives: Regularly organize clean-up drives in collaboration with local volunteers to remove litter and waste from public spaces.
3. Establish recycling facilities: Advocate for the establishment of recycling facilities within our community to encourage recycling and reduce the amount of waste sent to landfills.

Expected Benefits:

1. Improved cleanliness
2. Environmental preservation
3. Community engagement
4. Enhanced quality of life

We kindly request your support and approval for this community service initiative. We believe that by working together, we can make a positive and lasting impact on our community's waste management practices. Thank you for considering our request. We look forward to your positive response and the opportunity to contribute to the betterment of our community.

Thanking you,

Yours sincerely,

M.Shanmukha mani [21UEEA0077]

L.Pavan Kumar Reddy [21UEEA0068]

P.Maruthi Ram[21UEEC000260]

தலைவர்/கிராம நிர்வாக அலுவலர்
மோரை ஊராட்சி

Figure 1.2: Permission Letter from Panchayat Office

CHAPTER 2

APPROACH FOR SURVEY

A survey involves a systematic approach to gather valuable data. Begins by clearly defining your survey's objectives, outlining the specific information or insights you seek. Identify your target audience, considering demographics and other relevant factors, and choose an appropriate survey method. We have approached our survey as mentioned follow:

Table 2.1: ACTIVITY LOG

Day	Date	Activity	Outcome
Friday	06/10/23	First trip to Village	Permission for Survey
Friday	06/10/23	Survey and Info. Gathering	Problem Identification
Friday	20/10/23	Second trip to Village	Obtain Solution
Friday	20/10/23	Solution Discussion	Spread Awarness
Friday	20/10/23	Final Report	Conclusion

Conducting a successful survey involves a systematic approach that begins with the clear definition of your survey's objectives and the specific information or insights you aim to gather. It's essential to identify your target audience, considering demographics and other relevant factors, as this forms the foundation for tailoring your survey questions and distribution method. Choosing an appropriate survey method, whether it's online surveys, phone interviews, or face-to-face interactions, should align with your objectives and audience. Thoughtful design of survey questions, including various question types, is crucial for effective data collection. Before launching the survey, pre-testing helps refine the questions and survey flow. Once the data is collected, meticulous analysis reveals patterns and insights. The results should be presented in a clear report, and subsequent actions should be taken based on these findings. Maintaining ethical standards throughout the process and establishing

a feedback loop with participants ensures that your survey efforts are not only data-driven but also respectful and continuously improving.

Beginning a survey involves a structured and strategic approach to gather valuable data and insights. First and foremost, it's essential to clearly define the survey's objectives. This means identifying precisely what information or insights you seek to obtain. A well-defined objective serves as your survey's North Star, guiding all subsequent decisions and actions.

Once you've established your objectives, the next crucial step is to identify your target audience. This involves considering demographic factors such as age, gender, location, income, and other relevant characteristics that pertain to the purpose of your survey. Understanding your audience is vital because it allows you to craft survey questions and choose a distribution method that resonates with your participants.

Choosing the most appropriate survey method is the next critical decision. There are various methods to consider, including online surveys, phone interviews, face-to-face interactions, focus groups, or mail-in questionnaires. Your choice should align with your survey objectives and the preferences of your target audience.

With your audience and method in mind, the next step is to design the survey questions. The questions you create must be clear, unbiased, and directly linked to your survey objectives. Utilize a variety of question types, such as open-ended, closed-ended, and multiple-choice questions, to capture a comprehensive range of responses.

Before officially launching the survey, conducting a pre-test is a valuable practice. This involves administering the survey to a small group to identify any issues with the questions or survey flow. Pre-testing allows you to refine the survey instrument, ensuring that it's as effective as possible.

Once you've addressed these foundational elements, it's time to choose a distribution method. Depending on your survey type, this could involve sending online surveys via email, sharing them on social media or your website, conducting phone interviews, or arranging face-to-face interactions. Select a distribution method that is both practical and cost-effective, given your target audience.

Data collection is a pivotal phase in your survey process. It's crucial to implement your chosen distribution method effectively, ensuring that participants can easily and conveniently provide their feedback.

After gathering the data, the analysis phase begins. This involves using data analysis tech-

niques to extract meaningful insights. You may need to apply statistical analysis if your survey is more quantitative in nature. Look for patterns, trends, and correlations in the responses, as these hold the key to understanding your data.

Once you've analyzed the data, the next step is to report and interpret your findings. Summarize the survey results in a clear and comprehensible report. Interpret the results, draw conclusions, and make recommendations based on the data. Visual aids, charts, and graphs can be valuable in presenting your findings in an accessible manner.

Taking action based on the survey findings is the ultimate goal. Use the insights you've gained to inform decision-making, policy changes, product improvements, or any other actions that align with your survey objectives. Remember that the ultimate purpose of conducting a survey is to drive positive change.

Maintaining an ethical approach throughout the survey process is essential. This involves ensuring informed consent, protecting participant confidentiality, and using honest and unbiased questioning techniques. Ethical considerations are fundamental to maintaining trust and integrity in your survey efforts.

Finally, establishing a follow-up and feedback loop with participants is a valuable practice. Keeping communication open with your target audience and seeking their feedback on how the survey results are being implemented can build trust and improve future survey efforts. This ongoing engagement demonstrates that you value their input and are committed to using it to drive positive outcomes.

CHAPTER 3

LITERATURE SURVEY

3.1 INTRODUCTION

Waste management in rural villages is an indispensable aspect of environmental sustainability and public health. As urbanization expands, many villages worldwide grapple with challenges associated with waste generation, collection, and disposal. This literature survey aims to provide an overview of the existing knowledge and practices in waste management within village settings. It explores a range of research, policies, and community initiatives that address the unique challenges and opportunities that rural areas face. [3]

3.2 AIM AND OBJECTIVE

The aim of this study is to comprehensively assess and enhance waste management practices in rural villages by conducting a literature survey and empirical research. We will begin by delving into existing knowledge and practices in village waste management, examining key themes, challenges, and best practices from prior research. Additionally, we will analyze the current waste management practices in a specific village or region as a case study to understand the prevailing challenges and opportunities. Our objectives also include investigating the regulatory frameworks, community engagement, innovative technologies, sustainability, and economic viability of waste management in rural settings. By accomplishing these objectives, we aim to provide practical recommendations and strategies for more effective and sustainable waste management, thus fostering cleaner and healthier environments in rural villages.The aim of this study is to comprehensively assess and enhance waste management practices in rural villages by conducting a literature survey and empirical research. We will begin by delving into existing knowledge and practices in village waste management, examining key themes, challenges, and best practices from prior research. Additionally, we will analyze the current waste management practices in a specific village or region as a case study to understand the prevailing challenges and opportunities.

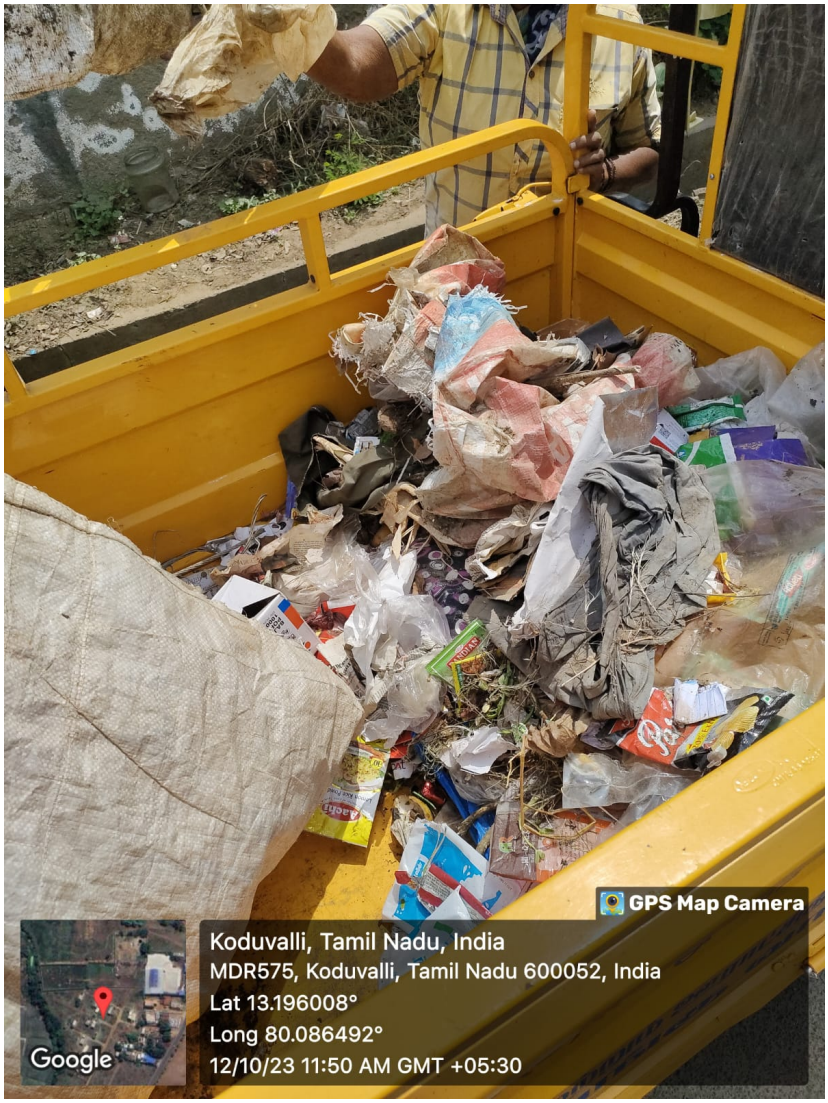


Figure 3.1: Waste Production in the Village

3.3 ABOUT THE DISTRICT

According to Census 2011 information the location code or village code of Morai village is 629163. Morai village is located in Ambattur taluka of Thiruvallur district in Tamil Nadu, India. Thiruvallur and Ambattur are the district sub-district headquarters of Morai village respectively. As per 2009 stats, Morai village is also a gram panchayat.

The total geographical area of village is 1163.09 hectares. Morai has a total population of 10,873 peoples, out of which male population is 5,462 while female population is 5,411. Literacy rate of morai village is 73.96 percent out of which 78.95 percent males and 68.93 percent females are literate. There are about 2,718 houses in morai village. Pincode of morai village locality is 600055.

Avadi is nearest town to morai for all major economic activities, which is approximately 10km away.

Figure 3.2: Local villagers Survey Report

Morai, a village in the southern Indian state of Tamil Nadu, faces the challenges of waste management like many other rural areas. Waste management in Morai is vital for maintaining a clean and healthy environment, reducing environmental pollution, and promoting the well-being of its residents. While Morai may not have the extensive resources and infrastructure of urban centers, it still benefits from local efforts and initiatives aimed at efficient waste management.

Waste collection and segregation are fundamental components of waste management in Morai. Households and local authorities collaborate to ensure that waste is separated into recyclables and non-recyclables, allowing for more sustainable disposal methods. Recycling efforts may include materials like plastics, paper, and glass.

One key aspect of waste management in Morai is community engagement. Local residents often participate in clean-up drives and awareness campaigns to promote responsible waste disposal and recycling. These initiatives not only help keep the village clean but also contribute to environmental education and consciousness.

The village may also have a waste disposal site where non-recyclable waste is appropriately managed. This may involve practices like controlled landfilling or even exploring alternative, eco-friendly waste management options like composting.

Efforts to improve waste management in Morai should focus on increasing recycling rates, ensuring that waste collection is regular and efficient, and raising awareness among the local population about the importance of responsible waste disposal. Collaborative projects involving local government bodies and community organizations can help address these challenges and create a more sustainable waste management system in Morai, ensuring a cleaner and healthier environment for all its residents.[4]

Community engagement plays a significant role in waste management. Various non-governmental organizations and community groups organize cleanliness drives, awareness campaigns, and workshops on responsible waste disposal. Such initiatives foster a sense of responsibility among Morai's residents, promoting a culture of cleanliness and sustainability.Non-recyclable waste disposal is another crucial aspect of waste management in Morai. The village may have designated waste disposal sites or small-scale landfill areas. However, given the environmental concerns associated with landfills, there is an increasing interest in exploring alternative waste management methods, such as composting of organic waste or adopting waste-to-energy technologies.

While Morai faces challenges typical of rural waste management, there is a growing emphasis on sustainability and environmentally responsible practices. Collaborative efforts between local authorities, community organizations, and the residents themselves are key to addressing these challenges and creating a more efficient and eco-friendly waste management system in Morai. By continuously working towards cleaner and healthier surroundings, Morai is taking steps to ensure the well-being of its residents and the preservation of its natural environment.

Figure 3.3: Local Streets of Morai

Recycling efforts in Morai focus on materials like plastics, paper, glass, and sometimes organic waste. Residents are often encouraged to sell recyclables to local scrap dealers, creating a small-scale recycling ecosystem that benefits both the environment and the local economy.

The waste disposal methods in Morai are evolving to meet environmental standards. To reduce the environmental impact of waste, the village may explore composting initiatives, converting organic waste into valuable compost for agricultural use. This approach not only reduces the volume of waste sent to landfills but also supports local agriculture.

Additionally, waste-to-energy technologies, such as biogas plants or small-scale incinerators,

may find relevance in Morai. These technologies can generate energy from non-recyclable waste, contributing to both waste reduction and sustainable energy production.

Local authorities may also collaborate with non-governmental organizations and government schemes to improve waste management infrastructure, such as the provision of more waste collection bins or educational programs on waste segregation and responsible disposal.

The future of waste management in Morai hinges on continued community involvement, governmental support, and innovative solutions. By promoting responsible waste management practices, reducing waste sent to landfills, and fostering a cleaner and greener environment, Morai Village is working towards a more sustainable and healthier future for its residents..

CHAPTER 4

METHODOLOGY TO SOLVE THE PROBLEM

4.1 OVERVIEW

Waste management is the systematic and responsible handling of waste materials, encompassing their collection, transportation, disposal, and recycling. It plays a crucial role in maintaining public health, preserving the environment, and conserving resources. The primary objectives of waste management are to reduce the environmental impact of waste, mitigate health hazards, and promote resource efficiency. [5]

4.1.1 Benefits of Waste managenment

• **Environmental Preservation:** Reduced Pollution: Proper waste management minimizes environmental pollution, including air, water, and soil pollution, by preventing the release of harmful chemicals and toxins from waste materials. Conservation of Natural Resources: Recycling and resource recovery processes conserve valuable raw materials, reducing the need for new resource extraction and forestalling habitat destruction.

• **Energy Savings:** Waste-to-energy technologies can generate electricity or heat from waste materials, reducing the demand for fossil fuels and contributing to sustainable energy production..

• **Reduced Greenhouse Gas Emissions:** RLandfill Gas Capture: By capturing and utilizing methane gas from landfills, waste management can mitigate greenhouse gas emissions, as methane is a potent contributor to global warming.

• **Economic Benefits:** Job Creation: The waste management sector creates job opportunities in waste collection, recycling, and related industries. Resource Recovery: Recycling and reusing materials can lead to cost savings and revenue generation, reducing waste disposal costs..

• **Public Health and Aesthetics**Disease Prevention: Proper waste management prevents the spread of diseases and the breeding of disease-carrying vectors, such as rodents and insects. Improved Aesthetics: Clean and well-managed waste disposal contributes to a visually appealing and healthy living environment..

• **Resource Efficiency:** Sustainable Resource Use: Recycling and reusing materials promote re-

source efficiency, reducing the need for new resource extraction and minimizing waste.

• **Compliance and Legal Requirements** Avoiding Fines and Penalties: Adhering to waste management regulations and guidelines helps businesses and municipalities avoid legal penalties and fines.

• **Community Engagement and Education:** Awareness and Responsibility: Waste management programs encourage community engagement and raise awareness about the importance of responsible waste disposal practices..

• **Long-Term Sustainability:** Conservation of Resources: Effective waste management contributes to the sustainability of natural resources for future generations. Environmental Protection: It plays a crucial role in protecting ecosystems and biodiversity.

Figure 4.1: Benefits Of waste management

4.1.2 Automatic Dustbin Top Door Opening System USing IOT

The IoT-based Dustbin Top Door Opening System is a smart and innovative solution for improved waste disposal convenience and hygiene. Its installation process involves selecting an appropriate location, assembling the servo motor and ultrasonic sensor inside the dustbin, and connecting them to an IoT microcontroller and a Wi-Fi module. By configuring the IoT software and setting up the sensor parameters, users can remotely open and close the dustbin's top door using a mobile application or other IoT-enabled devices. Regular maintenance checks and user instructions ensure the

system's continued efficiency. This technology not only simplifies waste disposal but also contributes to a cleaner and more connected environment, making it a valuable addition to homes, offices, and public spaces.This technology not only promotes cleanliness and hygiene but also aligns with the broader trend of smart, connected living, contributing to a sustainable and efficient waste management ecosystem in both residential and public settings. Regular maintenance checks and user training further enhance the system's long-term reliability and ease of use.

4.1.3 Source Code

include ¡Servo.h¿//servo library

```
Servo servo;
int trigPin = 5;
int echoPin = 6;
int servoPin = 7;
int led= 10;
long duration, dist, average;
long aver[3]; //array for average
void setup()
Serial.begin(9600);
servo.attach(servoPin);
pinMode(trigPin, OUTPUT);
pinMode(echoPin, INPUT);
servo.write(0); //close cap on power on
delay(100);
servo.detach();

void measure()
digitalWrite(10,HIGH);
digitalWrite(trigPin, LOW);
delayMicroseconds(5);
digitalWrite(trigPin, HIGH);
delayMicroseconds(15);
digitalWrite(trigPin, LOW);
pinMode(echoPin, INPUT);
duration = pulseIn(echoPin, HIGH);
dist = (duration/2) / 29.1; //obtain distance

void loop()
```

```
for (int i=0;i¡=2;i++)  //average distance
measure();
aver[i]=dist;
delay(10); //delay between measurements

dist=(aver[0]+aver[1]+aver[2])/3;
if ( dist¡50 )
//Change distance as per your need servo.attach(servoPin);
delay(1);
servo.write(0);
delay(3000);
servo.write(150);
delay(1000);
servo.detach();

Serial.print(dist);
```

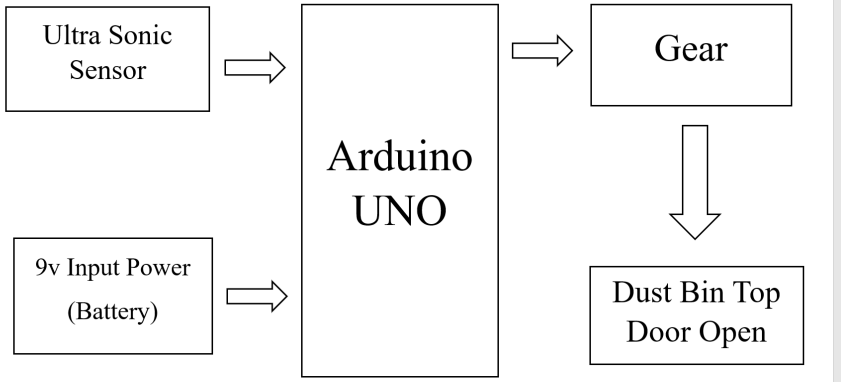


Figure 4.2: Block Diagram of Prototype

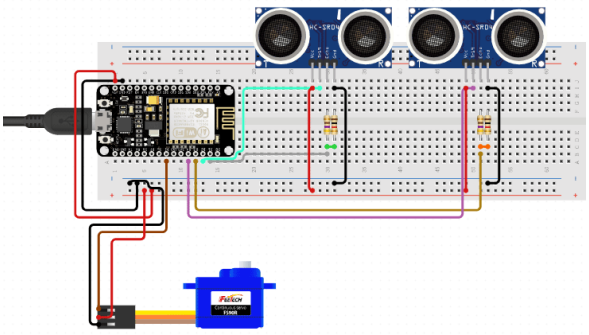


Figure 4.3: Simulation of Smart Dust Bin

Figure 4.4: Hardware prototype

CHAPTER 5

SURVEY ANALYSIS

The survey analysis of Morai Village's waste management further underscores the pressing need for improvements in the existing system. It is evident that a substantial portion of residents are dissatisfied with the current services due to issues like irregular waste collection and overflowing bins. Lack of awareness regarding waste segregation practices is a notable barrier that needs to be addressed through comprehensive educational initiatives and awareness campaigns. The prevalence of burning waste at home poses environmental concerns, necessitating a shift towards more sustainable disposal methods

An overwhelming 72 percent of respondents suggested the need for better waste collection services, emphasizing the importance of regular pickup schedules and efficient waste disposal.

Approximately 59 percent of residents called for awareness campaigns and educational programs on waste segregation, indicating a strong interest in learning and participating in sustainable waste management.

A significant 28 percent advocated for the introduction of composting facilities and incentivizing composting practices, signaling a willingness to embrace more eco-friendly waste disposal methods

5.1 SURVEY ANALYSIS GRAPH

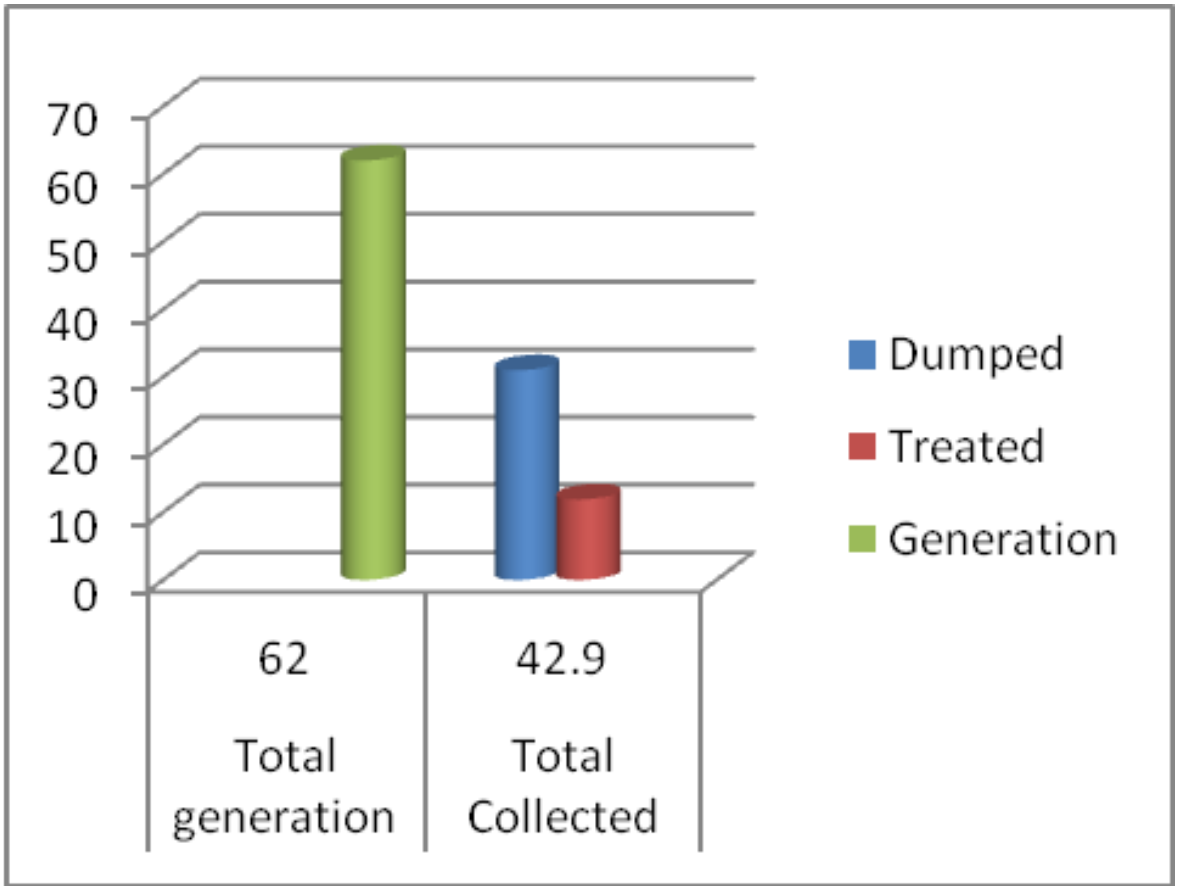


Figure 5.1: Daily Usage of Waste in Morai

However, survey data is typically presented in charts, graphs, or tables to make it more visual and easier to interpret. If you have specific data points or findings from a survey that you'd like to incorporate into a theory or if you have a particular aspect of the survey analysis you'd like to discuss further, please provide more details, and I'll be happy to assist you in creating a theory or analysis based on that specific information.Morai Village stands at the cusp of change, where tradition meets innovation, and awareness meets action. This theory encapsulates the village's evolving journey towards more efficient and sustainable waste management practices, emphasizing the need for tailored solutions, educational empowerment, and community collaboration. In harnessing this unique balance, Morai Village can forge a path toward a cleaner, more responsible, and environmentally conscious future.

TYPE OF WASTE	AMOUNT
Total Waste	100-150 kg
Plastic waste	50-60kg
Bio-Degradable Waste	20kg Approx
Glass Waste	10kg

Table 5.1: SURVEY DETAILS

In our exploration of Morai Village's waste management practices, a distinctive narrative emerges. This theory encompasses the dualism within the community – the convergence of traditional practices with emerging awareness, presenting a dynamic landscape of opportunities and challenges.

Our analysis uncovers a duality within the community. On one side, a majority leans on the convenience of community waste bins, symbolizing trust in established systems. On the other side, a substantial minority chooses to incinerate waste at home, reflecting a more self-reliant approach. The presence of this dichotomy suggests the need for tailored strategies to harmonize these contrasting habits, fostering a collective sense of responsibility for waste management.

The community's consciousness about proper waste segregation is found on a spectrum. While nearly half of the respondents exhibit familiarity with these practices, a significant portion admits to a lack of information. This continuum of awareness offers a unique opportunity for targeted educational interventions that bridge the knowledge gap, nurturing a more informed populace and thereby paving the way for improved waste management practices.

5.2 SUMMARY OF SURVEY

This survey represents a comprehensive analysis of the Morai Village, Chennai, the dynamics of waste management paint a nuanced picture, where tradition meets the winds of change. The community exhibits a dichotomy in waste disposal practices, with some residents embracing the convenience of communal waste bins while others opt for the self-sufficiency of home incineration.

The spectrum of awareness regarding waste segregation suggests a knowledge gap that can be addressed through tailored education initiatives. Dissatisfaction with current waste management services, mainly stemming from irregular collections and overflowing bins, has sparked a collective desire for structural improvements.

This shared vision of transformation is embodied in residents' calls for more dependable services, educational outreach, and composting incentives. Morai Village finds itself at a crossroads, poised for a transition towards more sustainable and efficient waste management practices, bolstered by strategic interventions and collaborative community engagement.

The community's recommendations for improvement underscore its readiness to transform its waste management landscape. Calls for better waste collection services and more regular pickups signify a collective desire for dependability. The appetite for awareness campaigns and educational initiatives highlights an eagerness to embrace sustainable practices, signaling an evolving mindset. The advocacy for composting facilities and incentives reveals the potential for a greener and more eco-conscious community.

Satisfaction levels with current waste management services reflect an undeniable imbalance. The prevalent sentiment of dissatisfaction is driven by irregular waste collection schedules and overflowing bins, signifying a dire need for structural reforms in service delivery. However, pockets of contentment amidst the chaos suggest that enhancing and expanding successful service models can lead to a more uniform and gratifying experience for all residents.

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presence of this dichotomy suggests the need for tailored strategies to harmonize these contrasting habits, fostering a collective sense of responsibility for waste management.

Morai Village stands at the cusp of change, where tradition meets innovation, and awareness meets action. This theory encapsulates the village's evolving journey towards more efficient and sustainable waste management practices, emphasizing the need for tailored solutions, educational empowerment, and community collaboration. In harnessing this unique balance, Morai Village can forge a path toward a cleaner, more responsible, and environmentally conscious future.
Dissatisfaction with the current waste management services, primarily stemming from irregular collections and overflowing bins, acts as a catalyst for change. However, it also signifies a collective aspiration for improved services and a cleaner environment. The community's recommendations for change, including regular collection schedules, educational campaigns, and composting incentives, reveal a shared vision for transformation.

Morai Village stands at a pivotal moment in its waste management journey, poised for a transition towards more sustainable and efficient practices. This transition will require collaborative efforts, involving the local community, government authorities, and environmental organizations, to forge a path towards a greener, more responsible, and environmentally conscious future.

Residents' dissatisfaction with irregular waste collection services and overflowing bins signals a pressing need for structural reforms. However, this discontent also points to a shared vision for transformation, as residents advocate for more reliable services, educational campaigns, and incentives for composting. Morai Village stands on the brink of a transformative journey towards more sustainable and efficient waste management practices. This transition will be shaped by strategic interventions and the active participation of the community, fostering a cleaner, more responsible, and environmentally conscious future

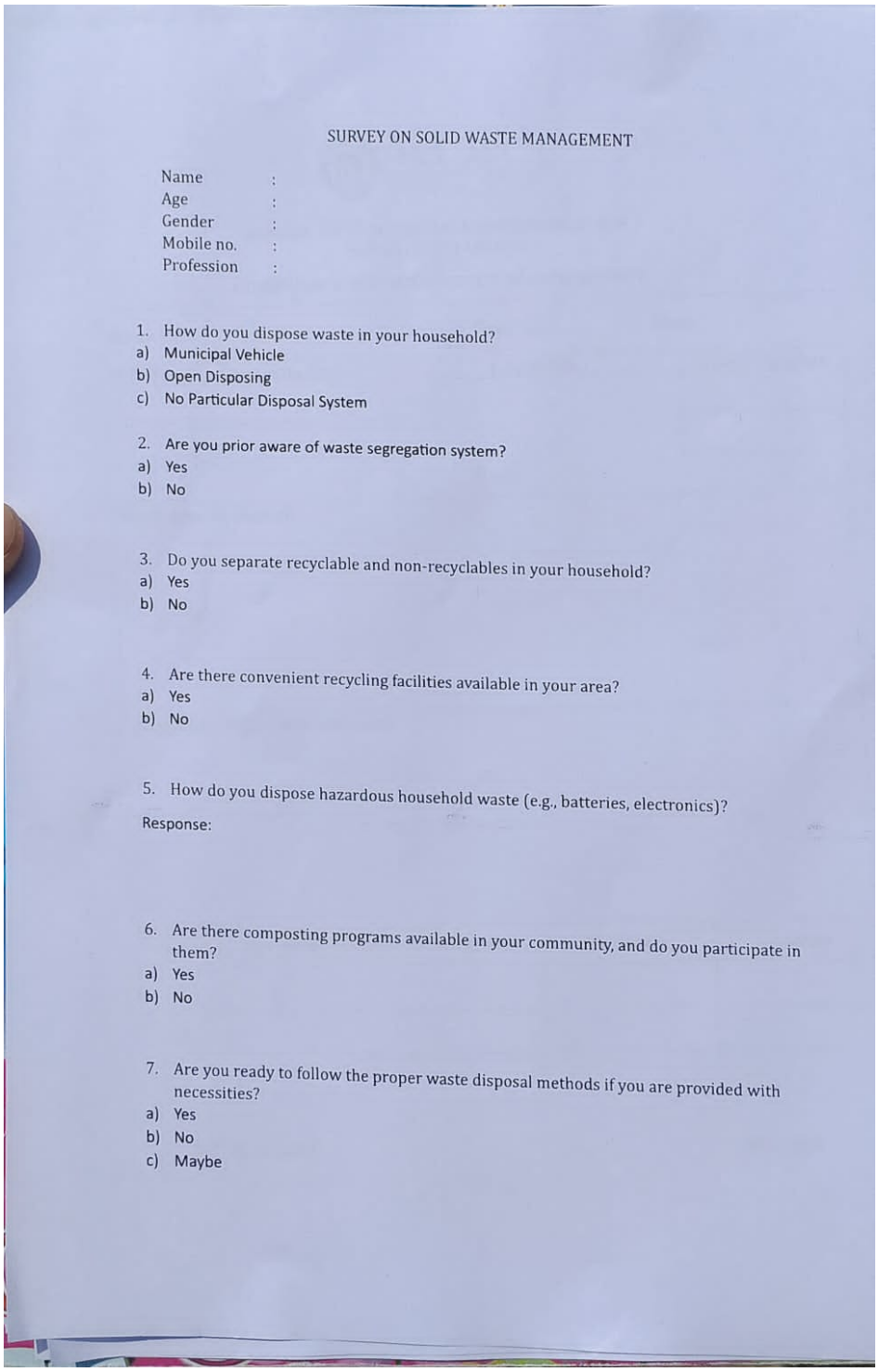
In conclusion, the survey analysis of waste management in Morai Village, Chennai, offers a comprehensive view of the current state of waste disposal practices and community awareness. The findings reveal a community at a crossroads, balancing traditional habits with emerging environmental consciousness. While the dichotomy in waste disposal methods presents unique challenges, it also underscores the potential for change and improvement. The variance in awareness levels highlights the importance of targeted educational efforts to bridge the knowledge gap.

CHAPTER 6

GEO TAGGED PHOTOS

Figure 6.1: Feedback from villagers

Figure 6.2: Identification of Problem



SURVEY ON SOLID WASTE MANAGEMENT

Name :
Age :
Gender :
Mobile no. :
Profession :

1. How do you dispose waste in your household?
a) Municipal Vehicle
b) Open Disposing
c) No Particular Disposal System

2. Are you prior aware of waste segregation system?
a) Yes
b) No

3. Do you separate recyclable and non-recyclables in your household?
a) Yes
b) No

4. Are there convenient recycling facilities available in your area?
a) Yes
b) No

5. How do you dispose hazardous household waste (e.g., batteries, electronics)?

Response:

6. Are there composting programs available in your community, and do you participate in them?
a) Yes
b) No

7. Are you ready to follow the proper waste disposal methods if you are provided with necessities?
a) Yes
b) No
c) Maybe

Figure 6.3: Survey Report

CHAPTER 7

CONCLUSION

In conclusion, this project has yielded invaluable insights into the prevailing water conditions within the designated area, with a particular focus on the municipal water supply. A comprehensive assessment has underscored the existence of several pressing water-related challenges that demand both immediate attention and innovative solutions. The significance of sustainable water utilization has been prominently emphasized, along with the urgent need to curb water leakage and the imperative of ensuring universal access to clean and healthful water sources.

A major concern that our assessment has underscored is the issue of water leakage. Inefficiencies in the water distribution system, whether due to aging infrastructure or improper maintenance, result in significant losses of water. These losses not only strain the available water supply but also waste valuable resources. It is imperative that we address this issue urgently by investing in the repair and upgrade of water infrastructure to minimize leakage.

In a broader context, we hope that the insights and solutions presented in this project will serve as a powerful catalyst for positive change. Our goal is to ignite further research and inspire proactive measures in the realm of water resource management. By sharing our findings and recommendations with the wider community and engaging stakeholders, we aim to foster collaboration and collective action. Together, we can address the water challenges at hand and work towards a more sustainable and water-secure future, where clean and safe water is accessible to all, and our environment is safeguarded for future generations.

In conclusion, this project has been a vital endeavor that has allowed us to gain deep insights into the current water conditions within the designated area, with a specific focus on the municipal water supply. Our comprehensive assessment has unveiled a range of pressing water-related challenges that demand our immediate attention and innovative solutions. Let's delve into the details of what we've learned and what we recommend.

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