



Developing and Managing Efficient Garbage Disposable System

A

Report for the partial fulfillment
for the requirement of AICTE Activity point

for

Bachelor of Engineering

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Acknowledgement

First and foremost, we acknowledge our HOD Dr. Surendra H J for their continuous support and motivation, who worked hard in shaping us. We thank our mentor Dr. Rahul Dandautiya for guiding us throughout the activity inspiring and stood behind us each day and every time. Through his guidance, only we think we able to complete our report.

We also very much thankful to village peoples of Kaiwara especially to Devatha madam (schoolteacher) for supporting and allowing us to conduct the activity

We also heartily thanks to our institute for giving us an excellent opportunity to do such a wonderful project and to have an amazing learning experience.

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1. Introduction:

The garbage disposal system was invented in 1927 by John W. Hammes, an architect working in Racine, Wisconsin. Waste management includes the activities and actions required to manage waste from its inception to its final disposal. It consists of the collection, transport, treatment, and disposal of waste, together with monitoring and regulation of the waste management process. Following are the possible ways for the waste or garbage disposal:

- a. Preventing or reducing waste generation.
- b. Recycling.
- c. Incineration.
- d. Composting.
- e. Sanitary Landfill.
- f. Disposal in the ocean/sea.
- g. Plasma gasification.

2. Aim of Activity

Disposal of garbage is a severe issue in rural areas. In rural areas, solid waste includes wastes from kitchens, gardens, cattle sheds, agriculture, and materials such as metal, paper, plastic, cloth, and so on. They are organic and inorganic materials with no remaining economic value to the owner produced by homes, commercial, and industrial establishments. Most household waste in rural areas is organic, with little inorganic material, and is non-toxic. Though solid waste generated in rural areas is predominantly organic and biodegradable, it is becoming a significant problem as the waste produced is not segregated at the source itself. This activity has been planned to achieve the following objectives

1. Community Education
2. Creating awareness among village people
3. Visiting schools and perform the activity with students and tell them regarding waste management and its benefits
4. Visiting each and every house in the village and creating awareness among small children because they are the ones who are going to save their village in the future.

3. Location Details

Kaiwara is the small town in the Chickballapur district of Karnataka state, located northeast of Bangalore, India. Kaiwara is a popular place to visit for tourists as it is very close to Bangalore, the capital of Karnataka. Free boarding and well-maintained, low-cost accommodation are available at the ashram. As the 2001 Indian census, Kaiwara's population was 5,488.

It is a historic town in the Kolar district. It was known as the Kaiwaranadu in the past ages. The Nikirli Chola Mandalan ruled it during the Chola era. However, Kaiwara existed right from the Satya-yuga and has been a holy city and a pilgrim centre since then.

In Kaiwara, we stayed in Kaiwara (Thathaiahmatta): The Kaiwara and intense divine of that place are very peaceful vibrations at his samadhi and also at Narasimha cave. He conducted many miracles during his lifetime. Free simple food is served there even today.

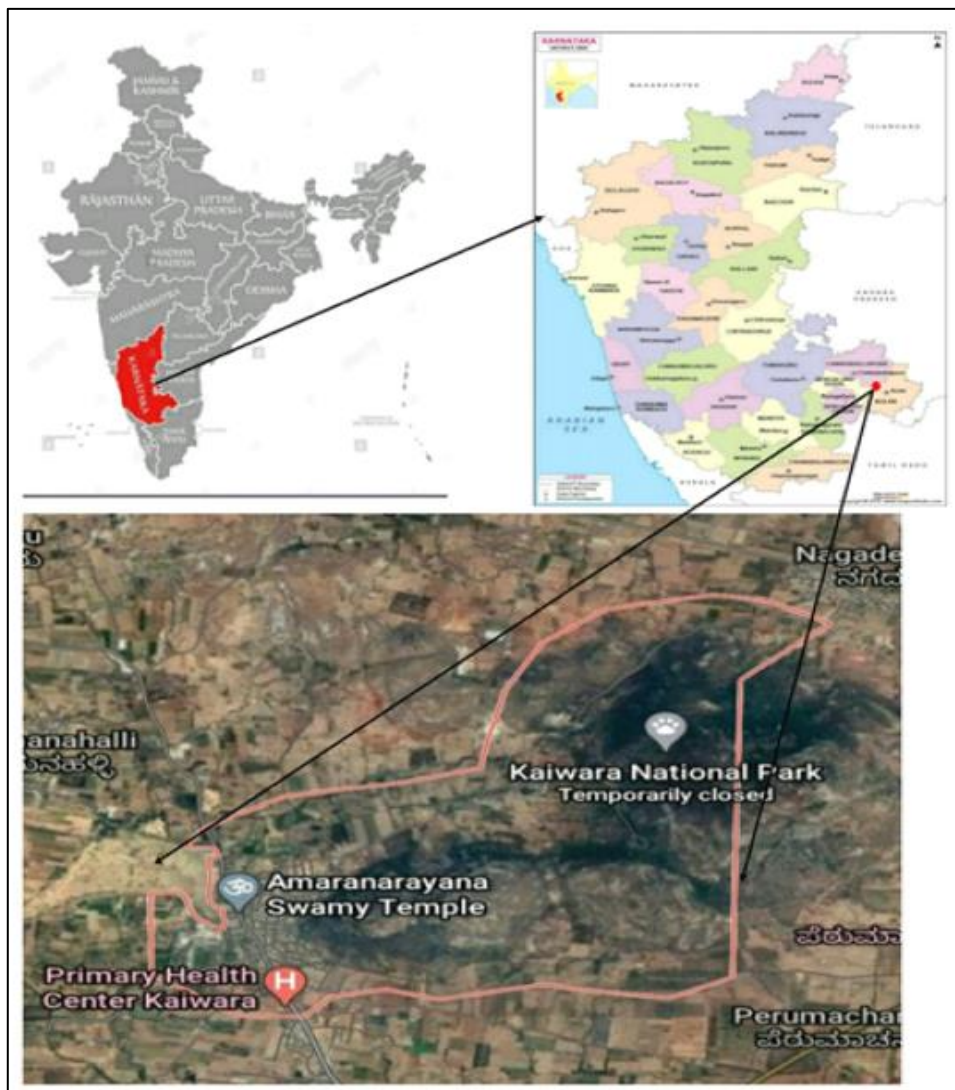


Figure 3.1 Details of the location of work

4. Schedule of Activity

A schedule is prepared, and activities are divided day-wise to perform the task properly as presented in table 4.1

Table 4.1 Schedule of Activity

Day No	Date	Time Duration	Work Processed
1	26/01/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Identify infamous spots• Interacting with local peoples
2	27/01/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Pamphlets distribution• Interacting with schoolteachers
3	28/01/2020	10 AM- 6 PM	Students orientation <ul style="list-style-type: none">• Creating awareness among the students about the garbage disposal• Interpersonal communications• It helps in a face to face situation for school children and sanitation motivators to demonstrate to the residents about what biodegradable waste (wet) non-biodegradable waste (dry)• What are recyclables?
4	29/01/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Cleaning the common campaign• Cleaning the infamous spots
5	30/01/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Creating awareness among village people
6	31/01/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Community education• Various segments of the community need to be educated• It includes, in markets, shopkeepers, etc.• This education includes: - what is a bio-degradable waste?• What is non-bio-degradable waste? Which ones are recyclables? Etc.
7	01/02/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Waste disposal from hospitals.
8	02/02/2020	10 AM- 6 PM	<ul style="list-style-type: none">• Feedback

5. Activities performed

The activities are performed as per the schedule made to achieve set targets. Day wise details of the task are presented here.

5.1 Day 1; Identifying infamous spots

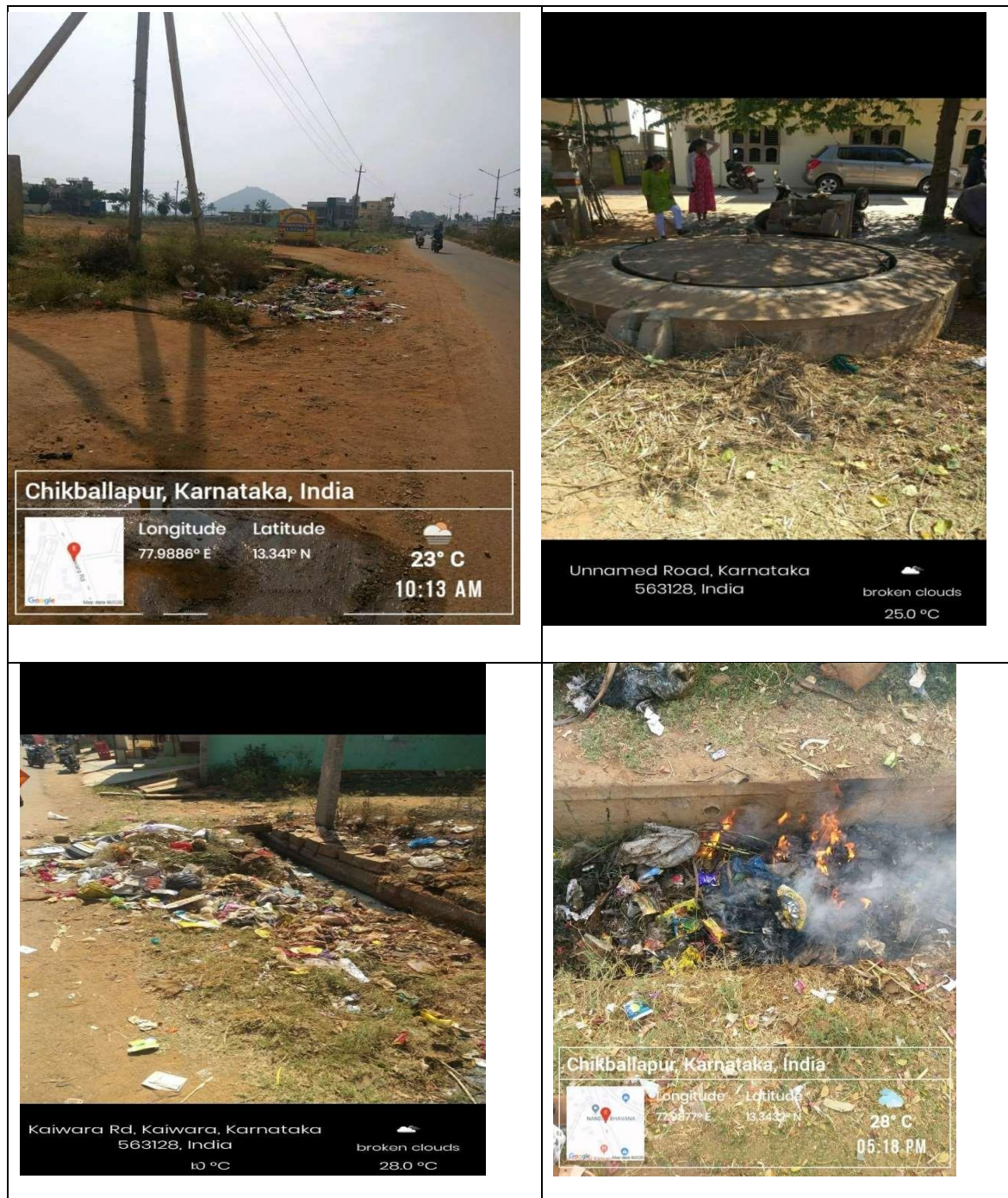


Figure 5.1 Infamous places in the village

These are some places we identified on the first day of our visit. We visited some of the places in the village-like school surroundings, road streets, roadside houses, etc. We planned for the next day's activity for respective areas and what process as to be done in those places

so that our work will be very interesting, productive and for good results. As we saw the spots of the village, we got some idea about the places and how effectively we implement our work.

5.2 Day 2; Interacting with schoolteacher

As we scheduled our time on day two for distributing the pamphlets and interacting with schoolteachers, we sincerely work to achieve our goal.

As we started our work at 10 AM, we first started distributing the pamphlets to the village people so that they the idea of our intention and about our work too. As soon as we interacted with the village people, they started responding very well to us, and with all their patience, they calmly listened to us and helped us by guiding more to do the work neatly. They helped us like guiding the routes and the best way to convey and to reach the village people and some people helped to influence the gram panchayat and School teachers also.

Now talking about the interaction between schoolteachers, principal they responded very significant to us, and they encouraged us very nicely like they gave permission to speak to the school children.

We enjoyed our day and completed our work, and we tried our level best to reach our goal as we planned the schedule.



Figure 5.2 About the awareness created by the teachers to the students



Figure 5.3 Distributing pamphlets to localities

5.3 Day 3; Student orientation at school:

As per our schedule, the day three activity was about the school orientation. Firstly, we decided on the term of references. Then we decided on the procedure and found the best way to convey the village school students as there will some students who cannot be able to understand very easily.

First, we went to primary school, and we told orally about our topic and intentions to work. We easily conveyed them, and practically, we did the work and showed them the job and made them understand what exactly called “waste disposal” and the methods of waste management. That little kids were too excited about our team, and they monitory came front to learn more about the plan to their place, surroundings, and villages clean and hygiene.

Then take a little break after lunch, we walked into the high school, and we start the same interaction with the students it was easy for us to interact with them because the students were bit matured and they quickly understood our plan.

The best part was the principal of that school gave us permission to clean their ground and school premises taking the students to help, and we did the cleaning and showed the students about segregation. We only did the segregation and taught the children. Here the snaps of work-sharing where the students, and we joined our hands to keep the surrounding clean and hygiene.



Figure 5.4 a Creating awareness among students, about how to dispose the garbage?



Figure 5.4 b Creating awareness among students about how to dispose of the garbage?



Figure 5.5 Cultural activity performed for students

5.4 Day 4; Cleaning the common campaign:

As per the schedule, our workday four was cleaning the common campaign like a footpath, front area of the house, etc. Figure 5.6 the snaps of the schedule cleaning the common campaign are presented.

Here we tried to show the various methods of waste disposal:

- Incineration
- Recycling
- Sanitary landfill
- Plasma gasification

We cleaned commonplaces, and we segregated, and we incinerated the waste products which as to be done.

Mainly, we segregated the waste as:

- Dry waste
- Wet waste
- Hazardous waste

Hence we self-contributed the dustbins to the school premises, which has the name written on it (dry waste and wet waste) so that the children can segregate the waste, and it will be accessible to the person who is the responsibility to take the garbage daily.

We neatly explained them and made them understand the process. Also, we conducted some cultural activities with the children so that they were more interacting and exciting.

Finally, we completed our day four schedule and happily left.



Figure 5.6 Students cleaned the road (awareness of cleanliness) and segregation of garbage (wet and dry waste)

5.5 Day 5; Creating awareness among village people

On day five, we aimed to create awareness among common people in that village.

So, we decided to prepare a banner about our topic (developing and managing an efficient garbage disposal system. We finally did and started our work. We carried that everywhere, and we went to every home out there, and we discussed the present situation out there about the waste disposal method.

They told that they dispose the waste about 10 km away from their home and we discussed the animal wastes, and we went in search of biogas, so we walked on and on and finally somewhere in the corner we got the biogas, and we got some idea from them, and we were so excited to see that. In figure 5.7 a and figure 5.7 b, the details are shown in the form of snaps.

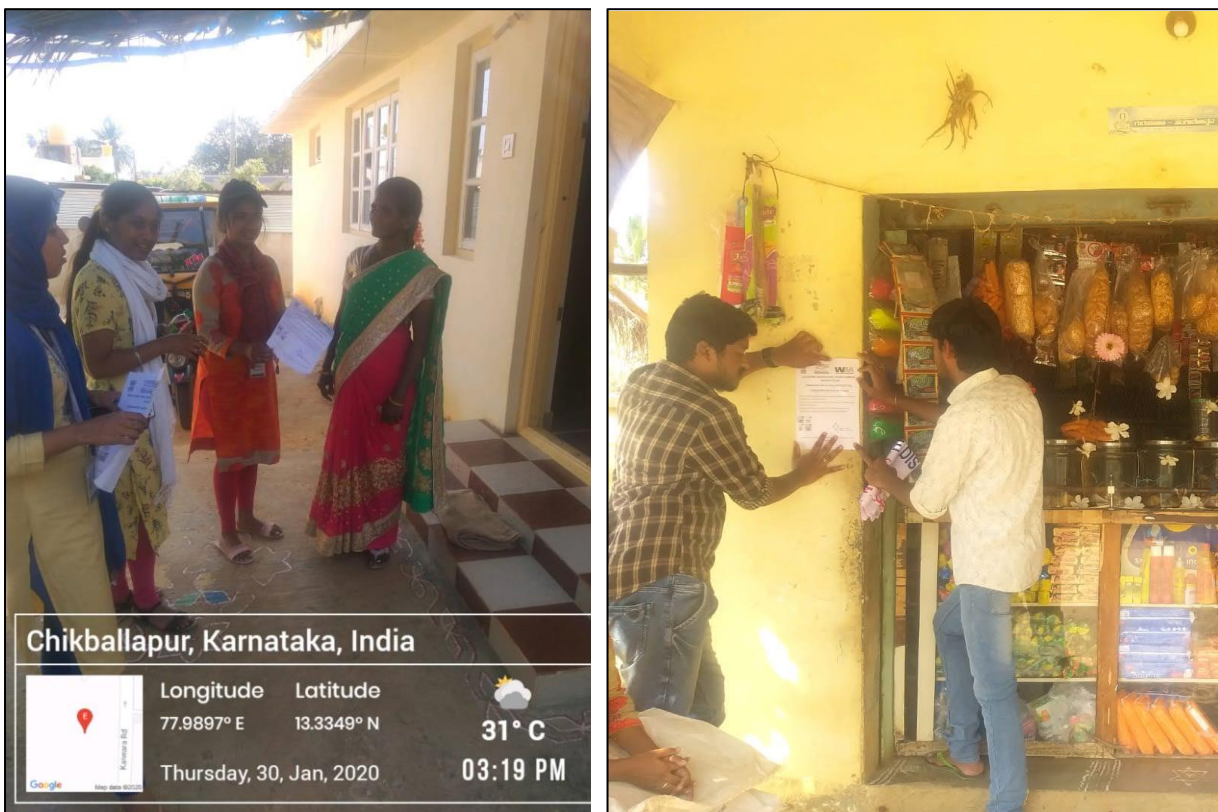


Figure 5.7 a Created awareness to village people about the garbage disposal



Figure 5.7 b Created awareness to village people about the garbage disposal

5.6 Day 6; Community education:

On day six, schedule belonged to community education i.e. provision store, medical shop, and some common local stores.

We went to nearby stores where we stayed, and we posted our banner and we discussed the garbage disposal, and we guided them to segregate the wastes. The details of that are presented in figure 5.8.



Figure 5.8 Community education

5.7 Day 7; Creating awareness in hospitals:

Here we created awareness about the waste disposal of hospital waste and about the recycling products.

We went to the government hospital of that village and discussed the topic there, and we earned the knowledge too. We tell them how to dispose of various wastes that come from the hospitals. The hospital staff said that the waste from the hospitals is majorly recyclable wastes like papers, plastic, etc. We saw the cleanliness of the hospital. We self-initiated to clean the surroundings of the hospital, and the people who work there gave the positive

reactions, and they were very satisfied, and that gave us very proud feelings and bought us happy about our work. By this, we ended the day. The figure of the corresponding visit is attached below.



Figure 5.9 Spread awareness about waste disposal in hospitals

5.8 Day 8; Feedback:

We get positive feedback from all the dwellers of the area

The villagers, the school staff villagers, shopkeepers all have appreciated our efforts towards the garbage disposal program. The people were very happy and satisfied by our work. They liked our performance and our activity. They told us were very active all the time and gave our best level. The feedback by the local authority is attached here for reference.

AICTE ACTIVITY EARNING POINTS

This is to verify that the students of Civil Engineering Department,
Atria Institute of Technology, Bengaluru, have conducted a program which is
based on Solid Waste Management and Rural Development in
village...KRIMARA..... Between 26-01-2020 To 03-02-2020 ..

Students Name:-

Chandana.V (1AT18CV007)
Preethi.N M (1AT17CV049)
Vandana.V (1AT18CV050)
Supriya.C S (1AT18CV045)
Srinivasa.M (1AT18CV043)
Nandan Reddy.B (1AT18CV027)
Nithin.P (1AT18CV029)
Rajanna.G (1AT18CV035)
Satish.T I (1AT18CV040)
Basavana Gowda (1AT18CV003)

Authority Name/Signature:- *[Handwritten Signature]*
Designation:- *[Handwritten Designation]*
Date:- 03-02-2020

[Handwritten Signature]
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ಗ್ರಾಮ ಪಂಚಾಯತ್
ಕಾರ್ಯಾಲಯ
ಕೆ.ಆರ್. ಸಿ.ಎಸ್. ರಸ್ತೆ
ಹಿರಿಯ ಬಿ.ಎ. - 563 128

Figure 5.10 a Feedback of activity performed by the local authority

AICTE ACTIVITY EARNING POINTS

This is to verify that the students of Civil Engineering Department, Atria Institute of Technology, Bengaluru, have conducted a program which is based on Solid Waste Management and Rural Development in village Banahalli Between 26-01-2020 To 02-02-2020.

Students Name:-

- Chandana.V (1AT18CV007)
- Preethi.N M (1AT17CV049)
- Vandana.V (1AT18CV050)
- Supriya.C S (1AT18CV045)
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- Nandan Reddy.B (1AT18CV027)
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- Rajanna.G (1AT18CV035)
- Satish.T I (1AT18CV040)
- Basavana Gowda (1AT18CV003)

Authority Name/Signature:- C.M.Devatha .

Designation:- A.S.Stant Teacher .

Date:- 02-02-2020 .

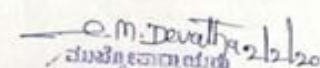

 C.M.Devatha
 ಸುಪರಿವಿಷಯಾಧಿಕಾರಿ
 ಸರ್ಕಾರಿ ಸಿಬ್ಬಂದಿ ಪ್ರಾಧಿಕಾರಣ, ಬೆಂಗಳೂರು
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Figure 5.10 b Feedback of activity performed by the local authority

6. Conclusion

This AICTE activity was a very good learning experience for us. Through this work, we able to understand how to interact with people and how we can convey our message effectively to villagers. The proper disposal of garbage is a very burning issue. We saw that in rural areas, segregation of waste is very much necessary. The villagers are unaware of the ill effects of mixing plastic waste with organic waste. This leads to the killing of many animals and adversely impacting the environment. From the house, school, or any commercial place itself, waste needs to be segregated. So, it can be disposed of at a proper designated location.