

MAHIM RETI BUNDER & MAHIM CAUSEWAY BEACH

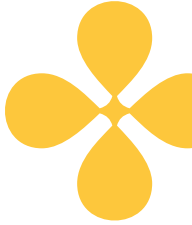


DECEMBER 2024

PRESENT STATUS

The growing urbanization in Mumbai, which is the economic capital of India, has had adverse effects on the sea, creeks, forests, rivers, and other forms of biodiversity. Due to the massive increase in population along the coastline and creeks of Mumbai, both of these elements have started to become polluted.

Several non-biodegradable substances have primarily contributed to this water pollution. Against this backdrop, it has become crucial to responsibly use such non-biodegradable materials and ensure their proper disposal. And hence there is a priority need to collect, classify and scientifically dispose of the non-degradable materials floating on the shores of Mahim Retibandar and causeway.



MEASURES

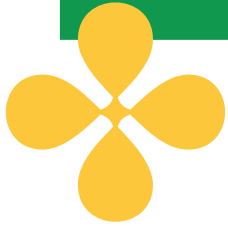
UNITED WAY MUMBAI, a non-government organization which is a society registered under the Society Registration Act, 1860 and a trust registered the Maharashtra Public Trusts Act, 1950

Samarth Bharat Vyaspeeth, Samarth Bharat Vyaspeeth is section 8 company Non-Profit Organization working in field of waste management and education for under privileged street children, and SBV is engaged in the collection and disposal/recycling of plastic waste.

To prevent water pollution, both the social organizations United Way Mumbai and Samarth Bharat Vyaspeeth, have come together and formulated an action program to implement the Beach Cleanliness Mission. Under this initiative, every day, through six safai sathis, a minimum of 7 hours is dedicated to collecting non-biodegradable materials from the coastline. Afterward, these materials are sorted at the waste management center under Samarth Bharat Vyaspeeth Project Revitalisation, where they are disposed of in a scientifically appropriate manner.



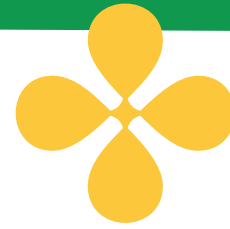
ACTION



Mahim Retibandar and Causeway are adjacent to each other and connected, covering a total area of approximately 4 kilometers. Based on the timing of the tides, it has been observed that collection activities take place at different times of the day at both locations. Accordingly, the collection campaign is carried out at Mahim Sandbar from 8 AM to 1 PM, and at Causeway from 2 PM to 4:30 PM. Collection is done every day of the week. During the collection process, different types of waste are gathered and sorted. Items like plastic bags, packaging plastics, cartons, glass, hard plastics, cloth, and other materials are collected. Afterward, the collected waste is sent daily to the waste management center under Samarth Bharat Vyaspeeth's Project on Revitalisation.



PROCESS



Once the waste reaches the waste management center under Samarth Bharat Vyaspeeth project Revitalisation, it is first spread out in the designated area for sundrying. This process typically lasts for about three to four days to allow the moisture to evaporate. Every morning and afternoon, the waste is turned over to ensure that the moisture in every part of the waste is effectively removed during sundrying.

After the waste has dried, it is sorted into different categories, such as single-use plastics, multilayer plastics, hard plastics, glass, and non-recyclable waste. The single-use plastics and multilayer plastics are processed in a dust remover machine to remove any sand or other debris. The cleaned plastics are then sent to the baling machine, where they are compacted into bales and sent for recycling.

Hard plastics and glass are manually cleaned by staff using cleaning brushes to remove any attached sand, and then they are placed in separate bags and sent for recycling. Non-recyclable waste is sent to the municipal processing center for appropriate disposal.

MOISTURE TO EVAPORATE



WASTE DRIED



DISPOSAL



SAFAI DOOT STORY



Janabai Bapu Kale has received no formal education. She is 63 years old and has two daughters and three sons. They live in Mahim Kolivada and belong to the tribal Pardhi community. Their village is located in Parbhani, Nanded, and their language is Pardhi.

Earlier, they used to live on the pavement. Later, there was a gas company in Mahim Kolivadi, where they worked for six to seven years. That gas company shut down about 35 to 40 years ago. After that, they worked under bricklayers, doing construction work on various buildings.

She got married at the age of thirteen. Her husband also did casual labor. Through his labor, they bought three acres of agricultural land in the village. After moving to Mumbai, she ensured her children received education from the ninth to the tenth grade.

Currently, she cleans sewer chambers for a living, earning ten rupees daily for that work. This work occurs twice a year, from March to May and then again in November and December.

While doing this work, they have to descend into ten-foot-deep sewers to collect garbage, from which they separate the plastic waste. They understood that this plastic could be sold, so they began collecting it and selling it.

Twenty years ago, it was difficult to find work, not just for money but to ensure they had food at home. They would go door to door asking for food since people were not giving them anything. They couldn't visit the same street every day, so they would save the collected food for two or three days to feed their children and their husband. While begging or asking for food, people would tell them to find work. However, how could they explain that they were begging because they were unable to find work? They would ask for money daily, receiving four to five rupees, but it was not enough as they needed money for certain things too. So, the locals would give them small amounts like three or four or five rupees, but five rupees was insufficient for their needs.

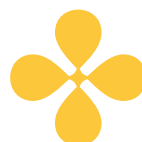
At Mahim Causeway, people started building settlements and looking for work there. Since the vehicles could only come onto the road, they took advantage of that situation. Because the vehicles weren't coming inside, they had to bring bricks, sand, and other materials on their heads, all the while their uncle was there to pay them. They would earn around twenty to thirty rupees a day from this work.

As Mumbai developed and buildings started to appear, more and more work started coming to them. They began to work under the bricklayers doing drain cleaning and sewer work.

Our brothers' children became police officers. Our work was neither permanent nor good, which always left us feeling regretful. One of my sons passed away five years ago, and my daughter-in-law is a widow. I send money to my widowed daughter-in-law every month, and I also educate my grandchildren.

UNITED WAY MUMBAI & SAMARTH BHARAT VYASPEETH BEACH CLEANUP DRIVE MONTH OF DECEMBER 2024 DATA

Date	Total Segregation Waste	Mix Plastics	Gunny Bags	Pet Bottles	Glass	Hard Plastics	Thermocol	Shoes	Rejected Waste	Sand	Moisture
1 December 2024	83.25										
1 December 2024	384.12										
2 December 2024	78.03										
2 December 2024	382.9										
3 December 2024	96.01										
3 December 2024	378.4										
4 December 2024	79.02										
4 December 2024	386.15										
5 December 2024	83.7										
5 December 2024	396.1										
6 December 2024											
6 December 2024											
7 December 2024	87.1										



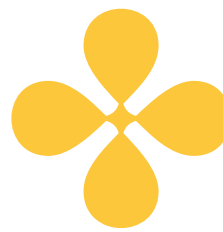
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UNITED WAY MUMBAI & SAMARTH BHARAT VYASPEETH BEACH CLEANUP DRIVE MONTH OF DECEMBER 2024 DATA

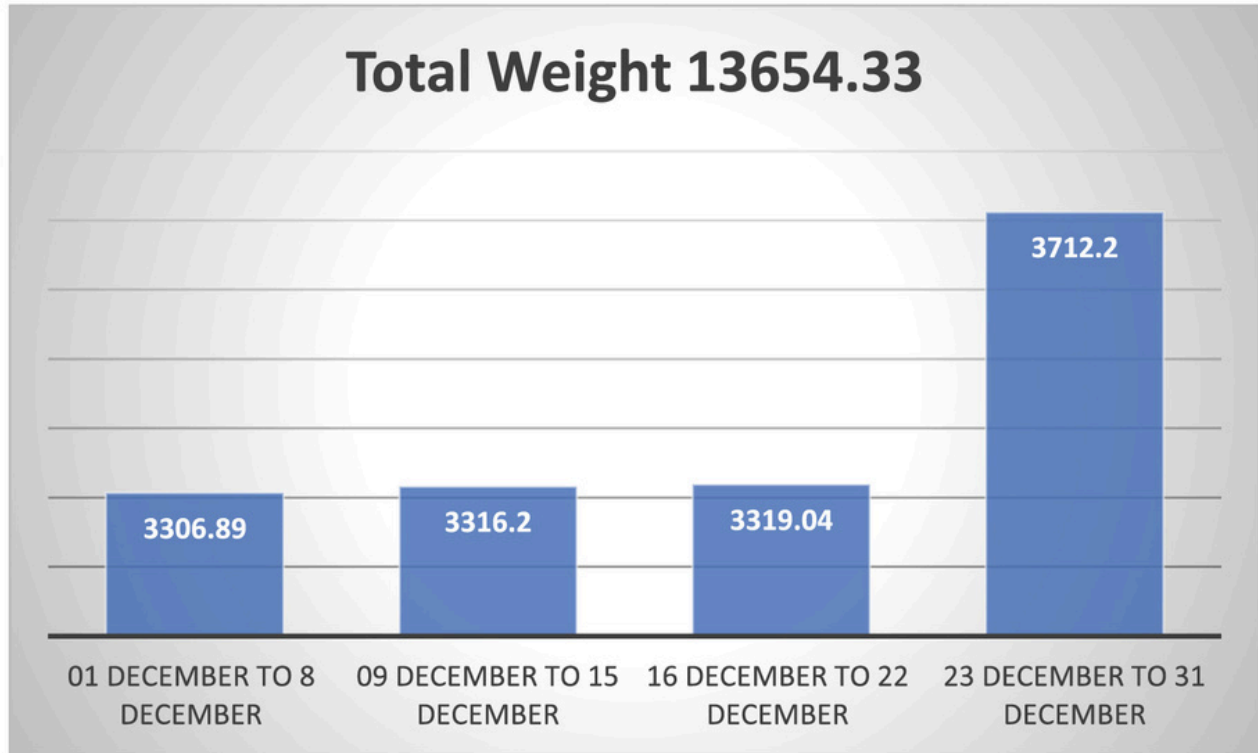


15 December 2024	402.8											
9 December to 15 December 2024 Total	3316.2	1044.7	248.7	189.02	97.49	69.3	141.92	132.6	911.9	281.77	198.8	
16 December 2024	79.15											
16 December 2024	395.7											
17 December 2024	80.2											
17 December 2024	398.6											
18 December 2024	82.04											
18 December 2024	387.8											
19 December 2024	79.41											
19 December 2024	395.06											
20 December 2024	82.9											
20 December 2024	388.31											
21 December 2024	80.04											
21 December 2024	385.15											
22 December 2024	83.6											
22 December 2024	401.08											
16 December	3319.04	962.52	182.54	199.15	232.3	132.7	165.9	149.3	829.76	265.21	199.66	

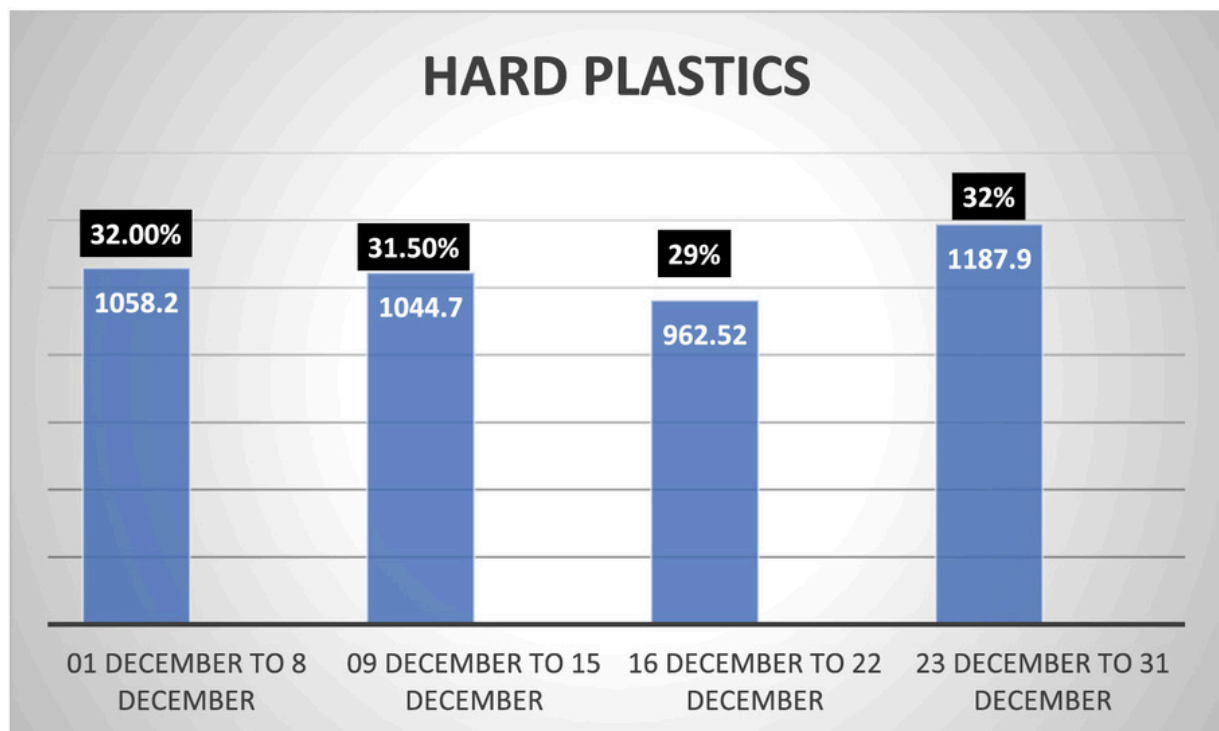


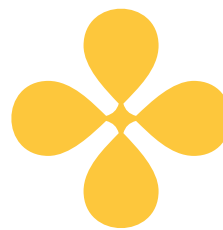


Monthly Graph

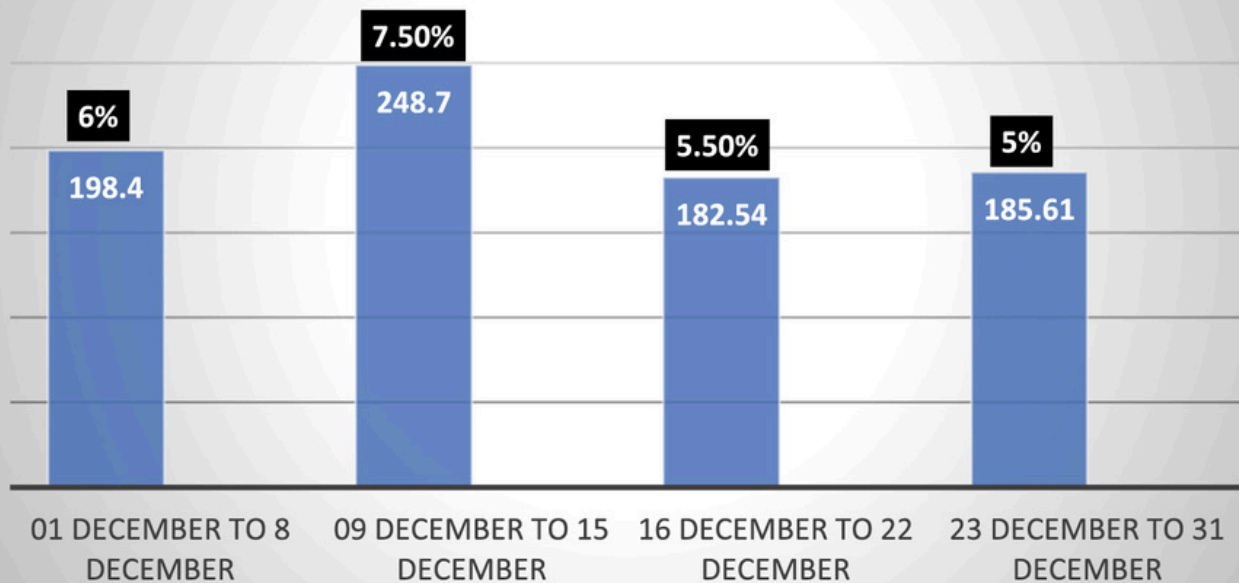


Data Analysis

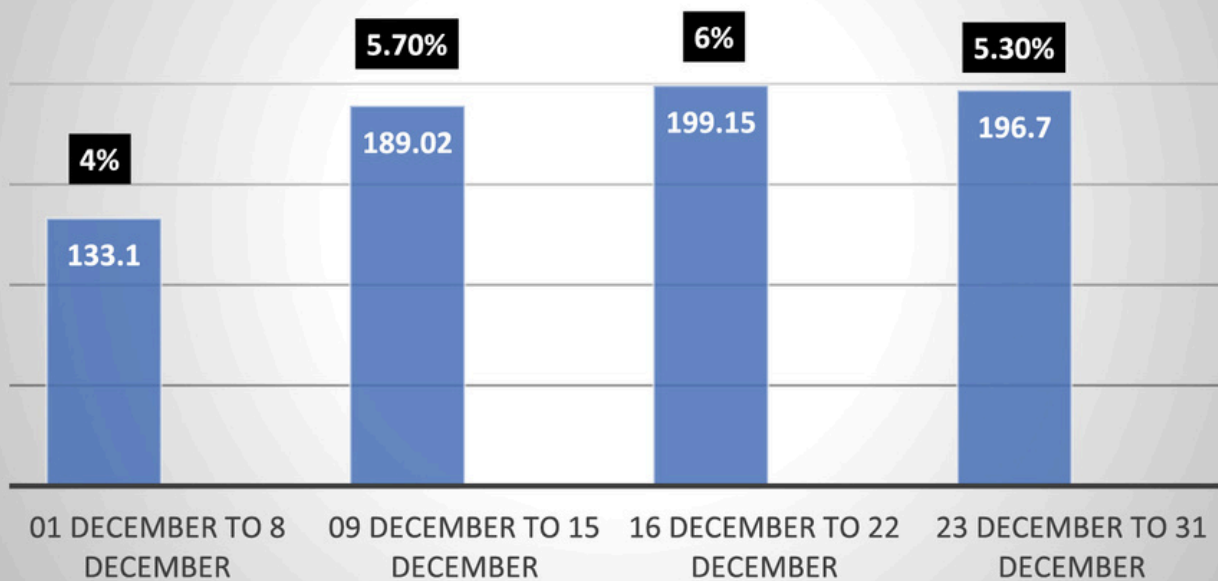


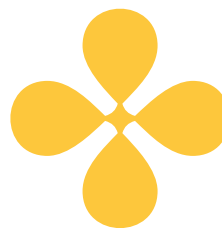


GUNNY BAGS COLLECTION

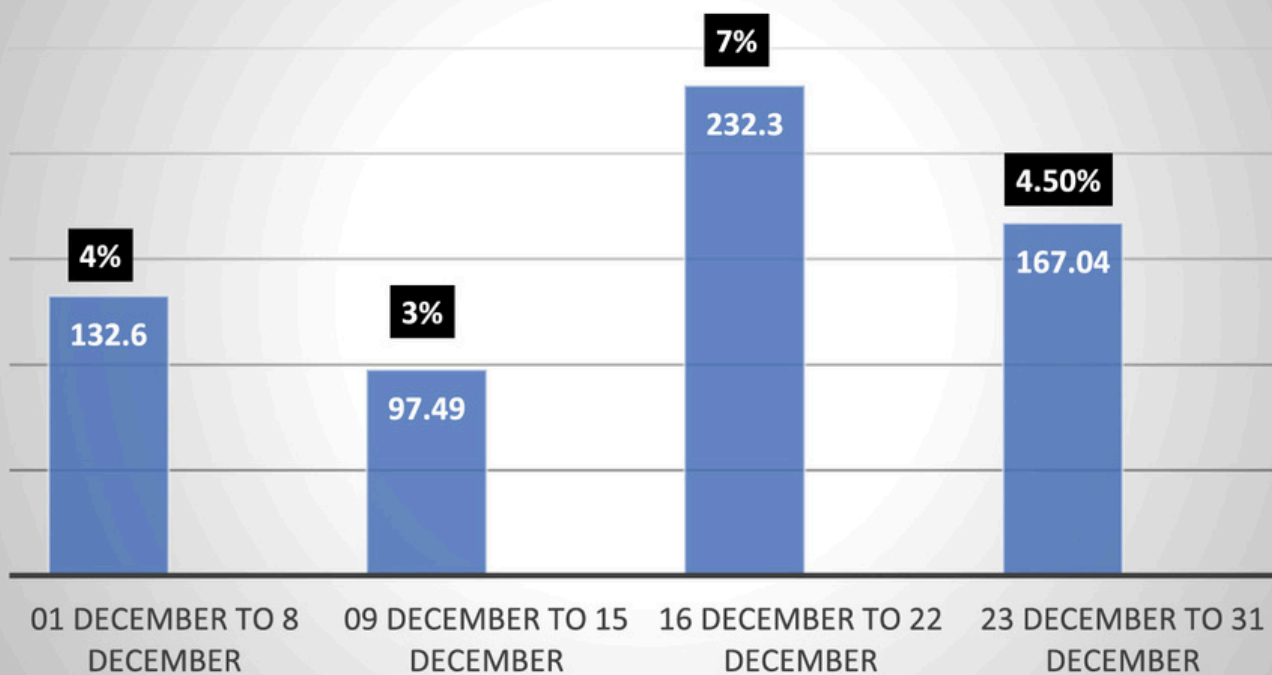


PET BOTTLES COLLECTION

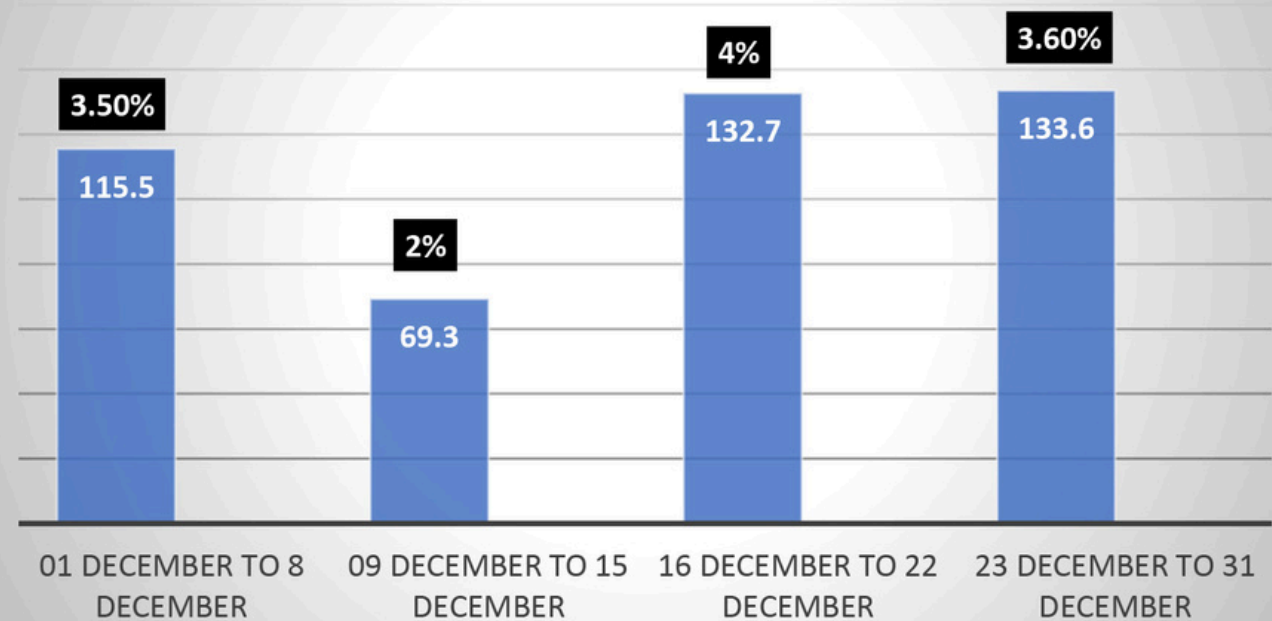


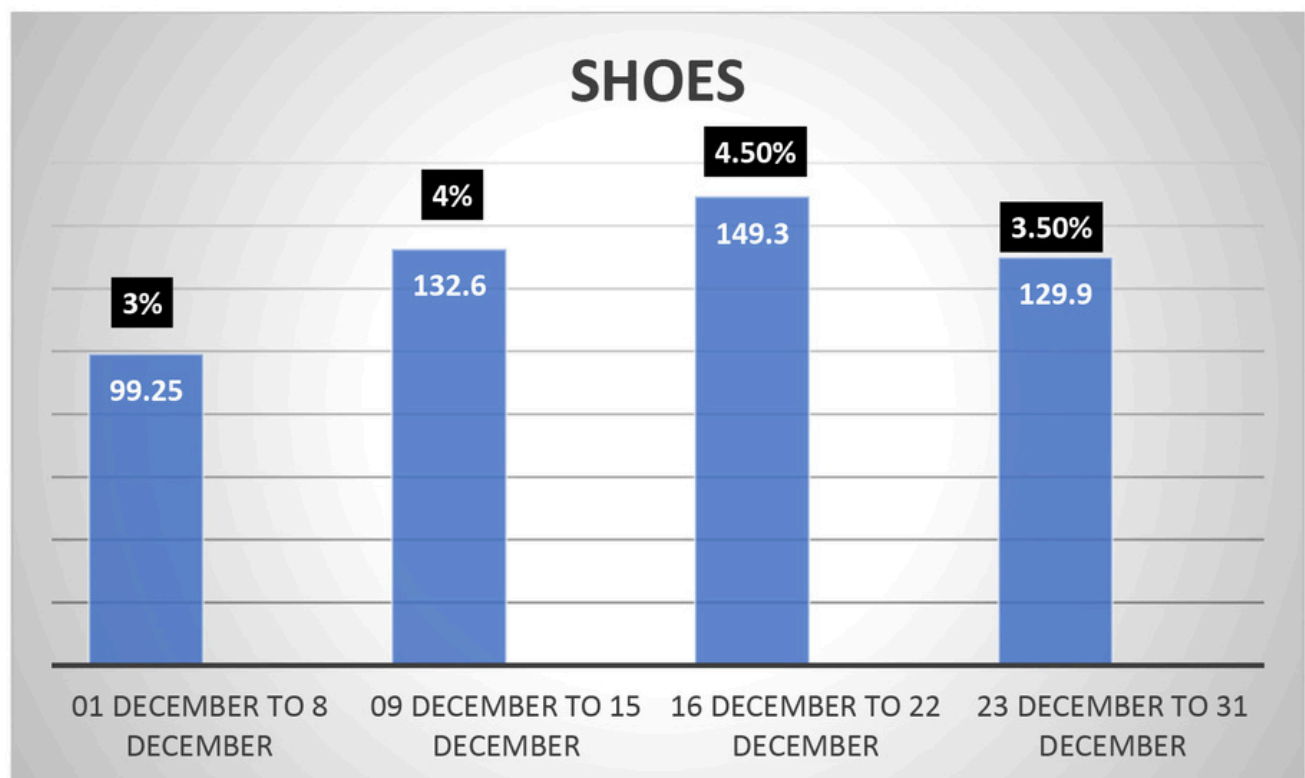
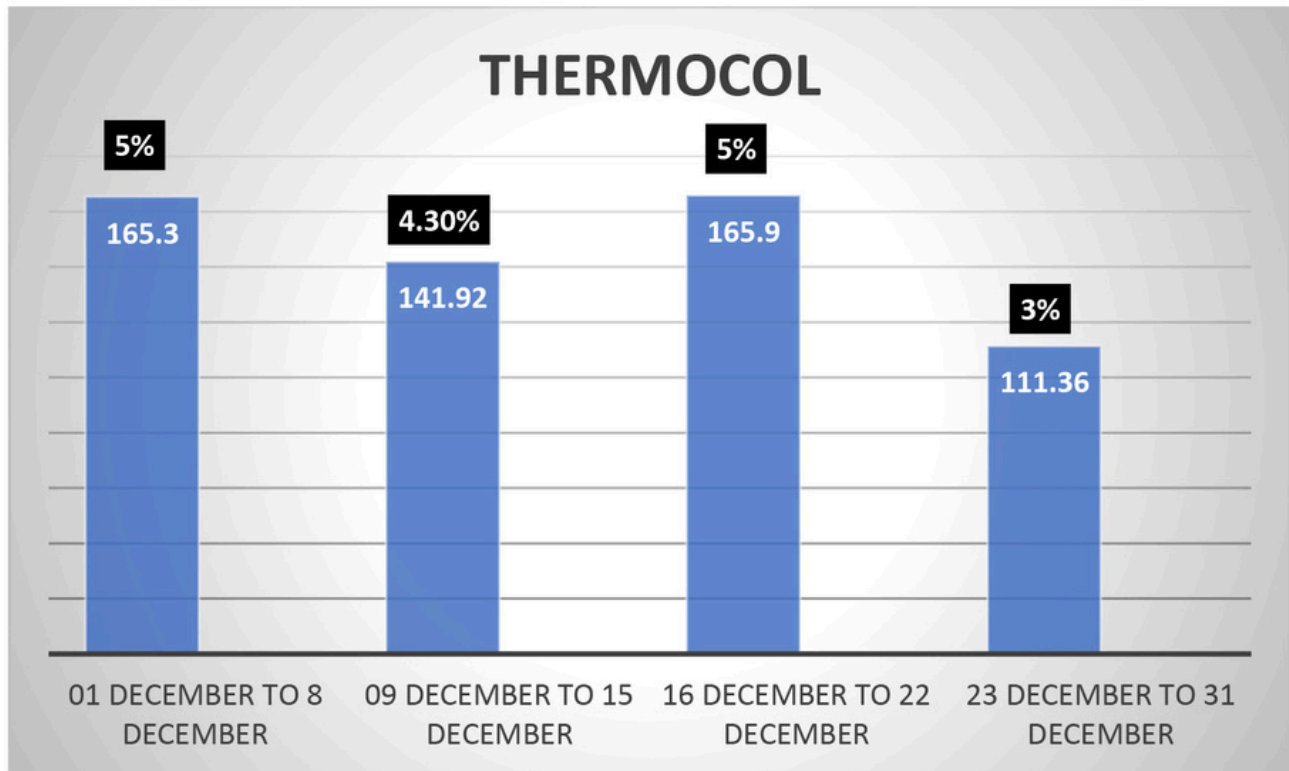
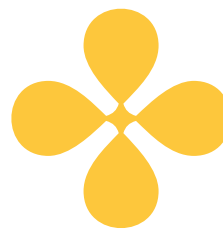


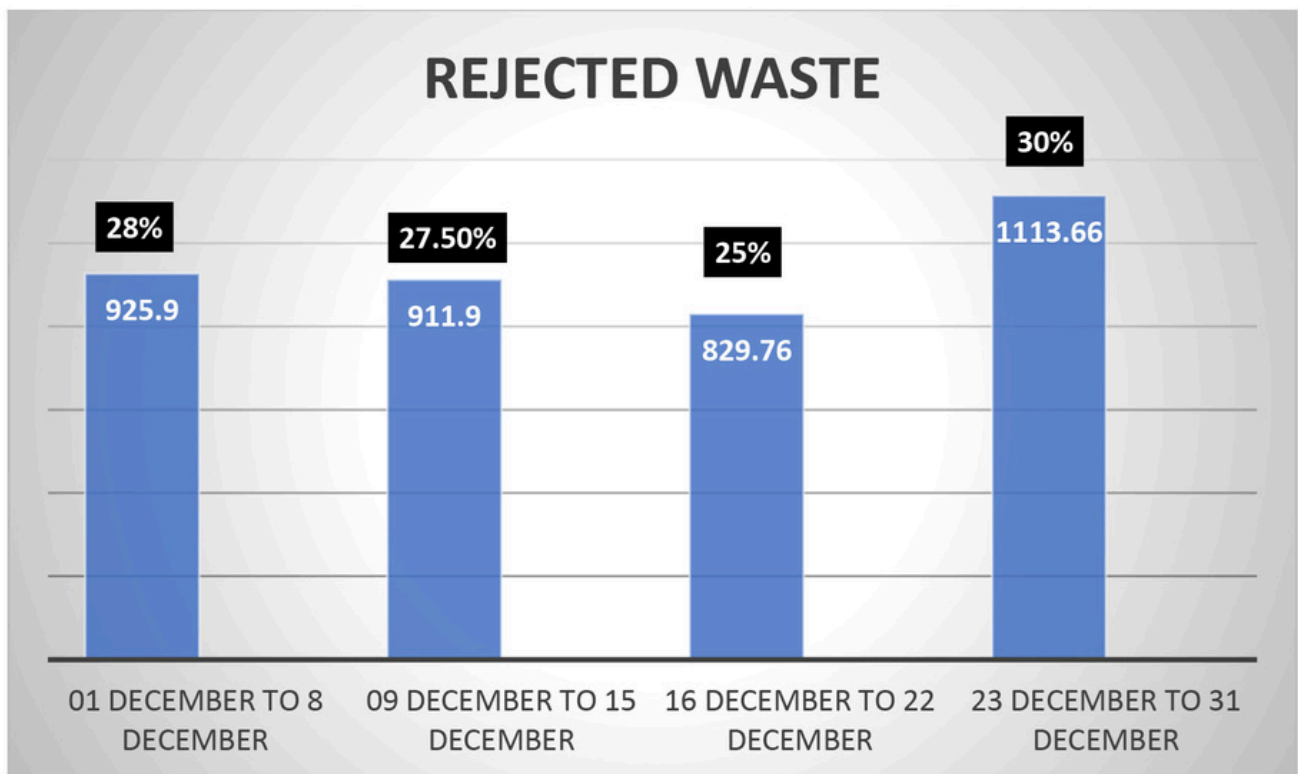
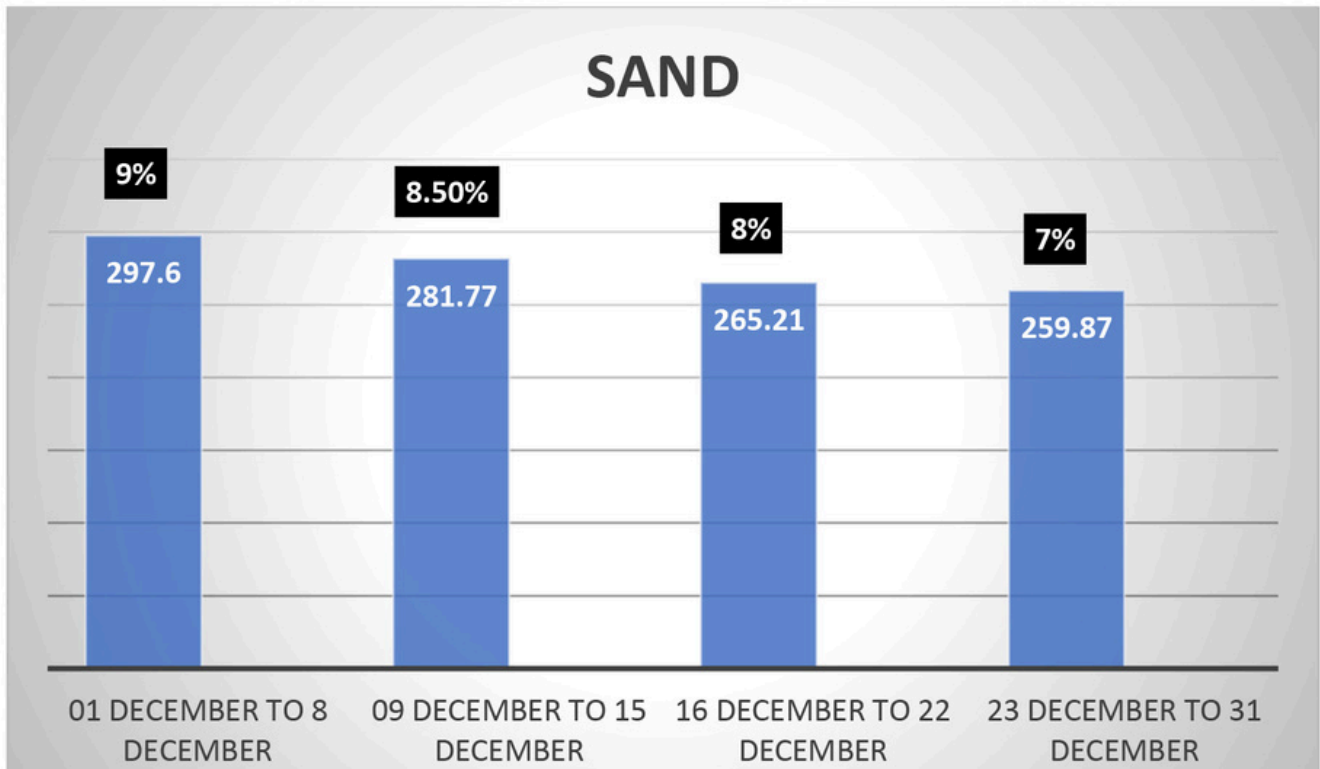
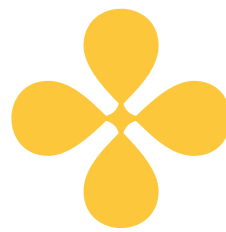
GLASS

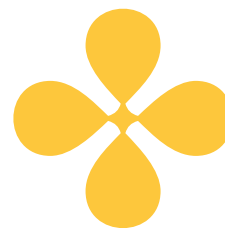


HARD PLASTIC

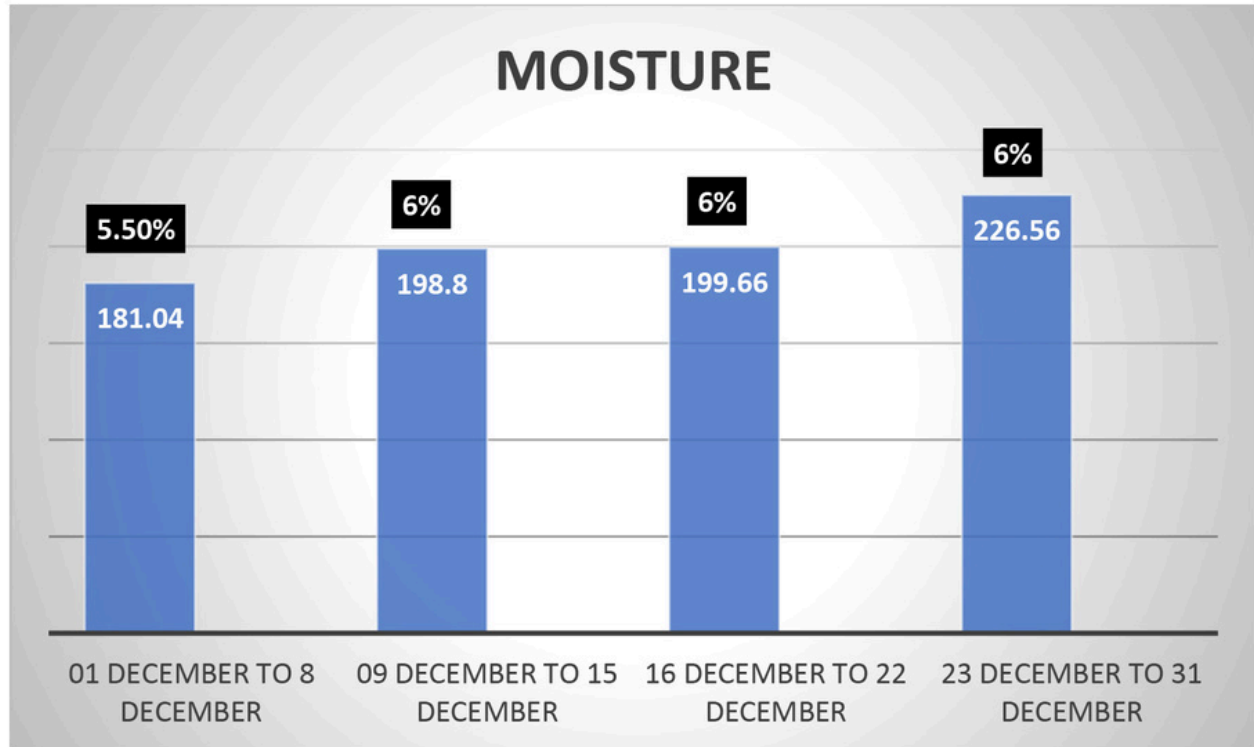




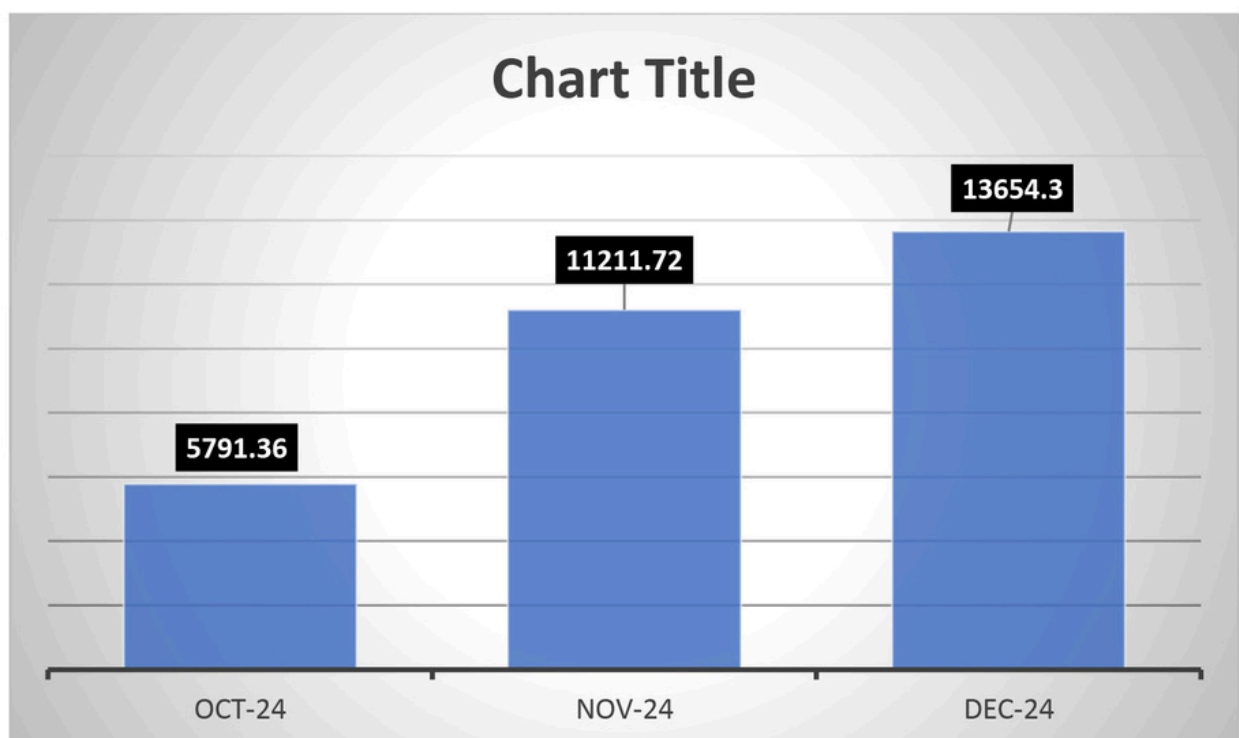


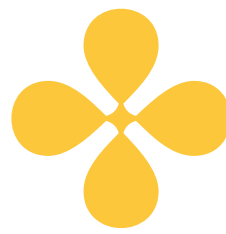


Data Analysis



Quarterly Graph





Findings

Collection Span – 1st December – 31ST December 2024

Total Working Days – 29

Total Holidays – 2

Total Working Hours - $29 \times 7 = 203$ Hrs.

Total waste collected –13654.33 KG

Waste collection per hour –67.26 KG

Waste collection per hour per Safai Sathis –11.21 KG

Total Mix Plastics –4253.32 KG

Total Gunny Bags – 815.25 KG

Total Pet Bottles –717.97 KG

Total Glass- 629.43 KG

Total Hard Plastics- 451.1 KG

Total Tharmocol- 584.48 KG

Total Shoes- 511.05 KG

Rejected Waste –3781.22 KG

Sand –1104.45 KG

Moisture- 806.06 KG



Percentage Analyzing

Percentage Analyzing

Mix Plastics – 31 %

Gunny Bags - 5.9%

Pet Bottles - 5.2%

Glass - 4.6%

Hard Plastics - 3.3%

Tharmocol – 4.2 %

Shoes – 3.7 %

Rejected Waste -28.6

Sand - 8.08%

Moisture -5.90%

REMARKS

Of the total collected waste, 45% was found to be plastic waste.

Due to the ebb tide, a large amount of sand enters the waste, and as a result, the proportion of sand in the collected waste was also significant, amounting to 8%.

A considerable amount of waste that cannot be recycled, such as waste thrown into the sea, creeks, and drainage systems, was found to make up nearly 42.5% of the total waste.

To reduce the sand content, measures have been implemented to shake off the sand while collecting the waste. Efforts will be made in the future to further reduce this percentage.

Among the plastic waste, nearly 70% was found to be packaging material. Prior to the collection, this waste had been floating in the waters of the creek and sea for at least 3 to 4 months. The packaging date and expiry date found on the plastic bags indicated that these plastics had been polluting the water for around 2 to 4 months before washing up on the shore. This indicates that the plastic waste had been contributing to water pollution for a significant period of time

