



**5RCYCLE**  
FOUNDATION

5RCYCLE FOUNDATION, A SOCIETY FOR THE PREVENTION OF POLLUTION

**2022-2023**

# **Annual Report**

Presented by  
Dr. Smita Birkar

Date:  
March 24, 2023

**SECTION-8, Companies Act (2013) Established June 1, 2020**







# 5RCYCLE turns 3 !

We started in the pandemic with a team of 3 managing only 50 Kgs of waste per month.

Today we are a dedicated team of 15 individuals managing 15000 Kgs of dry waste per month .

We have initiated the shift in the consumer mindset from dumping to responsible recycling



# Our Story

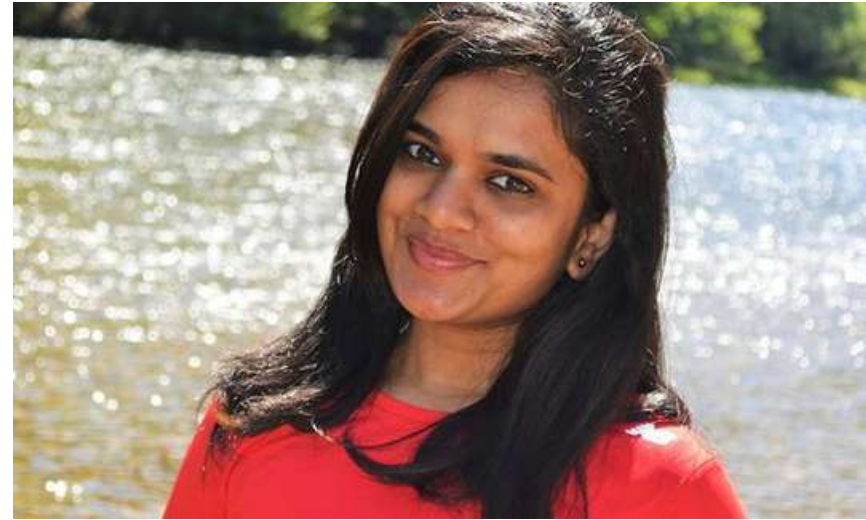
“5RCYCLE” was born from humble beginnings; when we noticed waste wasn’t being separated at the source. This oversight meant an enormous amount was unnecessarily going to landfill when instead at least half of it could have been recycled or composted. Further, continuous littering and poor waste disposal practices lead to overflowing trash cans, polluting land and water resources irreversibly.

“5RCYCLE Foundation” is a non-profit organization to promote zero waste management practices to switch from the current linear economy to a circular economy. According to the 5 R’s, four actions should be taken, if possible, prior to ‘Recycling’: Refuse, Reduce, Reuse and Repurpose.

Incorporating this methodology into your daily practices, be it business or residence, will minimize landfill waste and help maintain a balanced ecosystem. Separating waste at source (the moment at which you chuck your rubbish in the bin) helps to decrease damaging greenhouse gases and the production of virgin materials.

Thank you for playing your part, by being a part of the solution.

# Team



## **DR. SMITA BIRKAR**

Founder &  
Director

With a Postgraduate Degree in Plastics Engineering, Smita Birkar decided to venture into solid waste management to reduce the impact pollution has on the environment, wildlife and aquatic life



## **MR. SACHCHIDANAND CHATURVEDI**

Director

With over a decade of professional experience in cricket, Mr. Sachchidanand Chaturvedi decided to simultaneously venture into solid waste management with a conscious effort to protect the environment so future generations have enough food, water, and clean air.

# About us

## Mission

Promote waste segregation at source  
Create the infrastructure for waste management  
Sensitization and Behavioral Change

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## Vision

Transition from linear economy to circular economy by establishing a zero-waste management system in order to promote environment, wildlife and marine conservation

# Targeted Sustainable Development Goals

**3** GOOD HEALTH  
AND WELL-BEING



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**13** CLIMATE  
ACTION



**11** SUSTAINABLE CITIES  
AND COMMUNITIES





# Problem

- Solid waste management (SWM) has emerged as one of the most massive development challenges in urban India
- Numerous studies indicate that the unsafe disposal of waste generates dangerous gases and leachates, due to microbial decomposition, climate conditions, refuse characteristics and land- filling operations
- Lack of waste segregation at source and littering are the two main problems for inefficient waste management
- Lack of technology, expertise & inadequate infrastructure





# Summary





# Key Highlights

## Waste influenced

0.25 TPD to 0.5 TPD  
2021-22      2022-23

## No of individuals impacted

2000 to 10000  
2021-22   2022-23

## Material Recovery Facility Setup

1

## New Projects Launched ( Rural)

1

## New Projects Launched (Urban)

3

## New Technology Introduced

1



# 13 CLIMATE ACTION



Sustainable  
Development Goals



**"To ensure right education and awareness on efficient waste management practises**

Sensitized 10,000 + individuals of different age groups on waste management, importance of recycling and its impact on the environment



# Waste Management Categories



## Plastics

### Rigid Plastic :

- ☐ PET Bottles (Soft drink, *Coke, Pepsi, Bisleri* etc )
- ☐ Plastic milk containers/ Cans/Bags
- ☐ Window frames, bottles for chemicals, flooring, plumbing pipes
- ☐ Shampoo bottles/ food container/Spoons
- ☐ Ecommerce packets.

### Flexible Plastic :

- ☐ Grocery packing bags
- ☐ Namkeen /wafer./Biscuit /covers
- ☐ Thermocol
- ☐ Milk pouches

## Paper

- ☐ Shipping cartons
- ☐ Cardboard
- ☐ Newspaper
- ☐ Books
- ☐ Diaries
- ☐ Storage Cartons
- ☐ Paper boxes
- ☐ Gift Wrapping paper
- ☐ Magazines

## Glass & Metal

### Glass

- ☐ Glass bottles.
- ☐ Glass containers.
- ☐ Beverage bottles

### Metal

- ☐ Aluminum cans
- ☐ Steel utensils
- ☐ Metal Fixture
- ☐ Metal frames
- ☐ Beverage cans

## Electronic

- ☐ Home appliances such as TV, Fridge, AC etc.
- ☐ CD & Cassettes
- ☐ Printers
- ☐ Laptops/Desktops.
- ☐ Mobiles, phones
- ☐ Wires
- ☐ Headphones
- ☐ Printers

## Cooking Oil

- ☐ Cooking oil used in home
- ☐ Restaurants cooking oil
- ☐ Used oil from vendors post frying eatables in shops







11 SUSTAINABLE CITIES  
AND COMMUNITIES



**"To ensure there  
is appropriate  
infrastructure  
for waste  
collection**

Along with education we also  
provide fortnightly waste collection  
service at different areas in Mumbai!



### 3 GOOD HEALTH AND WELL-BEING



Sustainable  
Development Goals



**"To encourage  
community  
engagements for  
sustainable  
actions."**

We have organised over 1000  
recycling drives within Mumbai and  
collected over 10 metric tons of  
waste !



# Thermocole (EPS) Recycling Introduction

- Thermocole Recycling Program introduced in the city of Mumbai to allow responsible disposal and recycling of Styrofoam packaging
- "Thermocole is Recyclable" awareness campaign launched via online and offline platforms

Initiative supported by Supreme Petrochem





# Electronic Waste Recycling

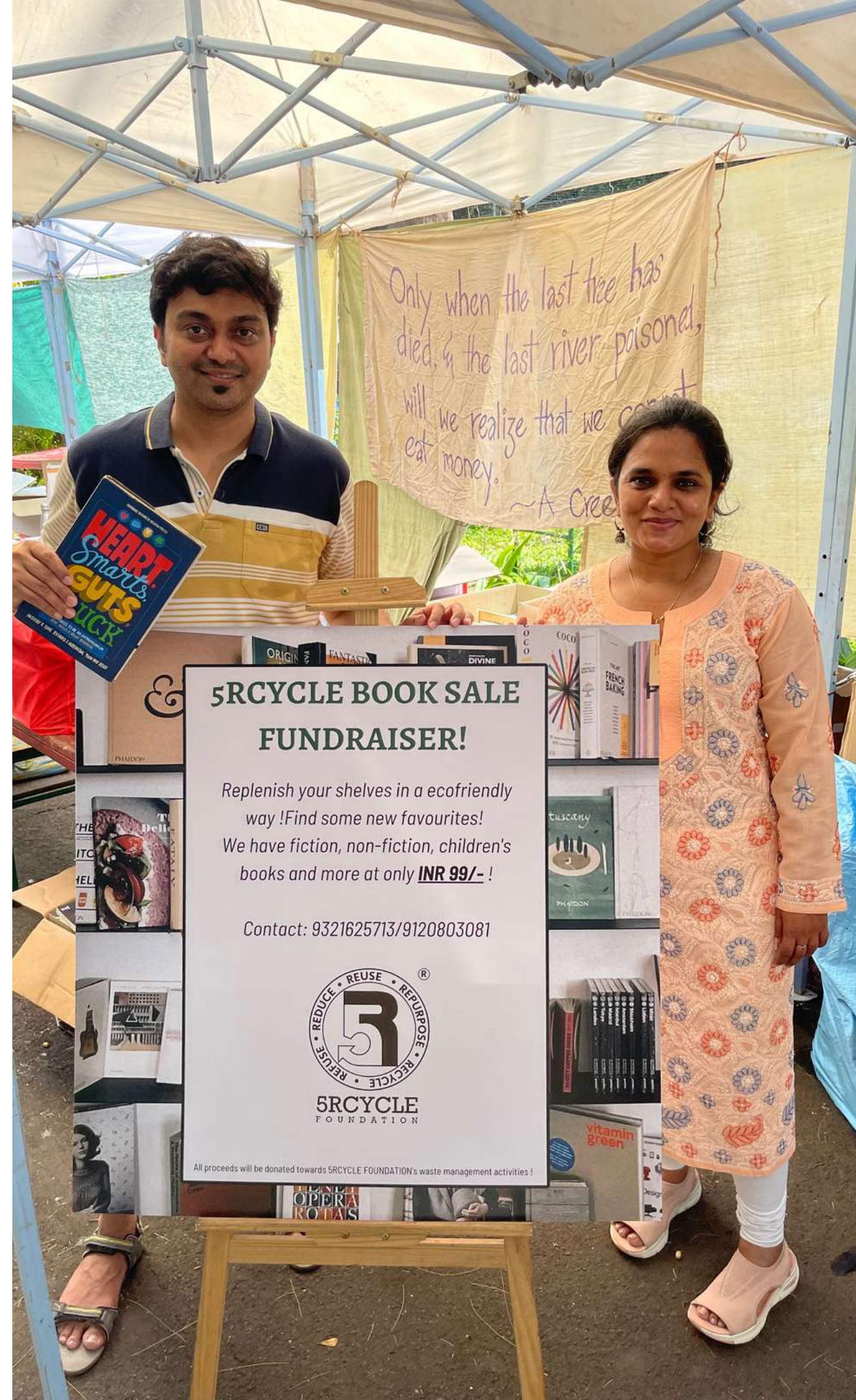


The next big waste that the world needs to tackle ! Recycling keeps devices (with deadly toxins) out of landfills and ensures the valuable parts within them can be reused to make new products.

Through our awareness programs and efficient collection infrastructure we have diverted 21000 kgs of electronic waste for responsible recycling



# Book Sale Fundraiser



Lets give a book a new life! Our fundraiser at Bandra Farmers Market have enabled us to reuse more than 200 books that would have otherwise gone to recycling! An excellent way to save on carbon footprint ♥ !



# Repurpose Used Cooking Oil



Our repurpose used cooking oil program supports not only the environment but also the health and well being of the society. This is an renewable source for the production of biodiesel , a green fuel in the beginning. Till date we have collected 100 litres of cooking oil for efficient biodiesel conversion.



# Thermocole (EPS) Recycling Technology

- EPS Melter installed at 5RCYCLE premises in June 2022 via CSR project of ICPE ( Indian Centre for Plastics in the Environment) and Supreme Petrochem Limited
- The technology allows volume reduction of Thermocole upto 90%
- Capacity: 60 kgs/hour





# Thermocole (EPS)Waste Collection

## Sources

- Residential Premises
- Electronic goods Retail Stores
- Local Municipal Corporation
- Commercial Premises
- Construction Sites
- Laboratories
- Fish Markets





# 22431 kgs Thermocole collected and recycled

- Approximately 50,000 sq.ft of space saved from landfill
- Equivalent to a football field and 16 lawn tennis courts





# Rural Waste Management

Our one of the kind project at Siddheshwar , Gram Panchayat, Pali kickstarted with an awareness session ! 100 women were sensitised on the importance of recycling and efficient waste segregation practises at home in October 2021





# Plastic Recycling Pali Raigad

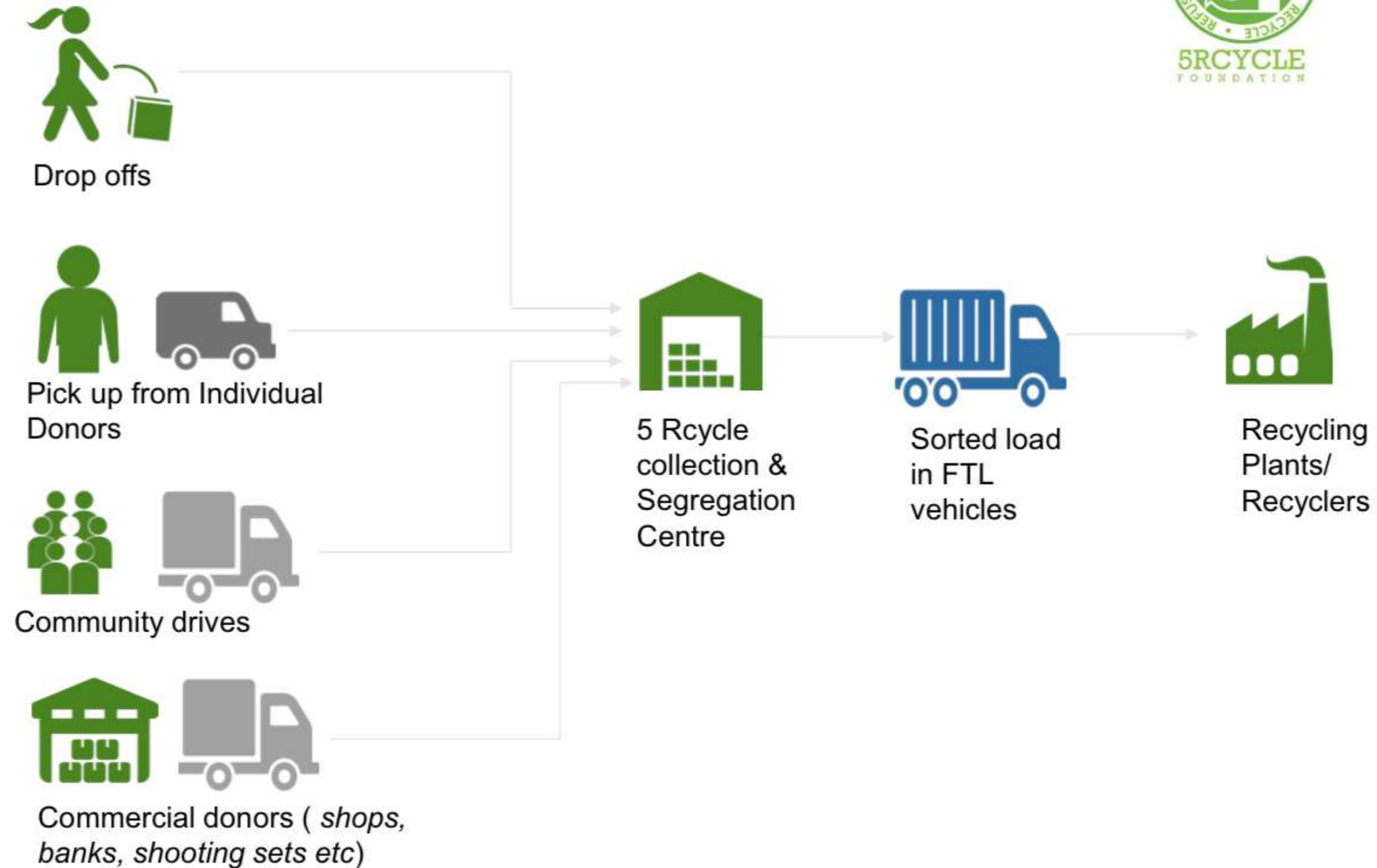
Within a span of six months over 350 kgs of plastic waste was collected from Pali village 's new material recovery facility!

After the sensitisation program every household was involved in waste segregation and the collective fefforts helped diverted this valuable waste to responsible recycling!






# Current Model







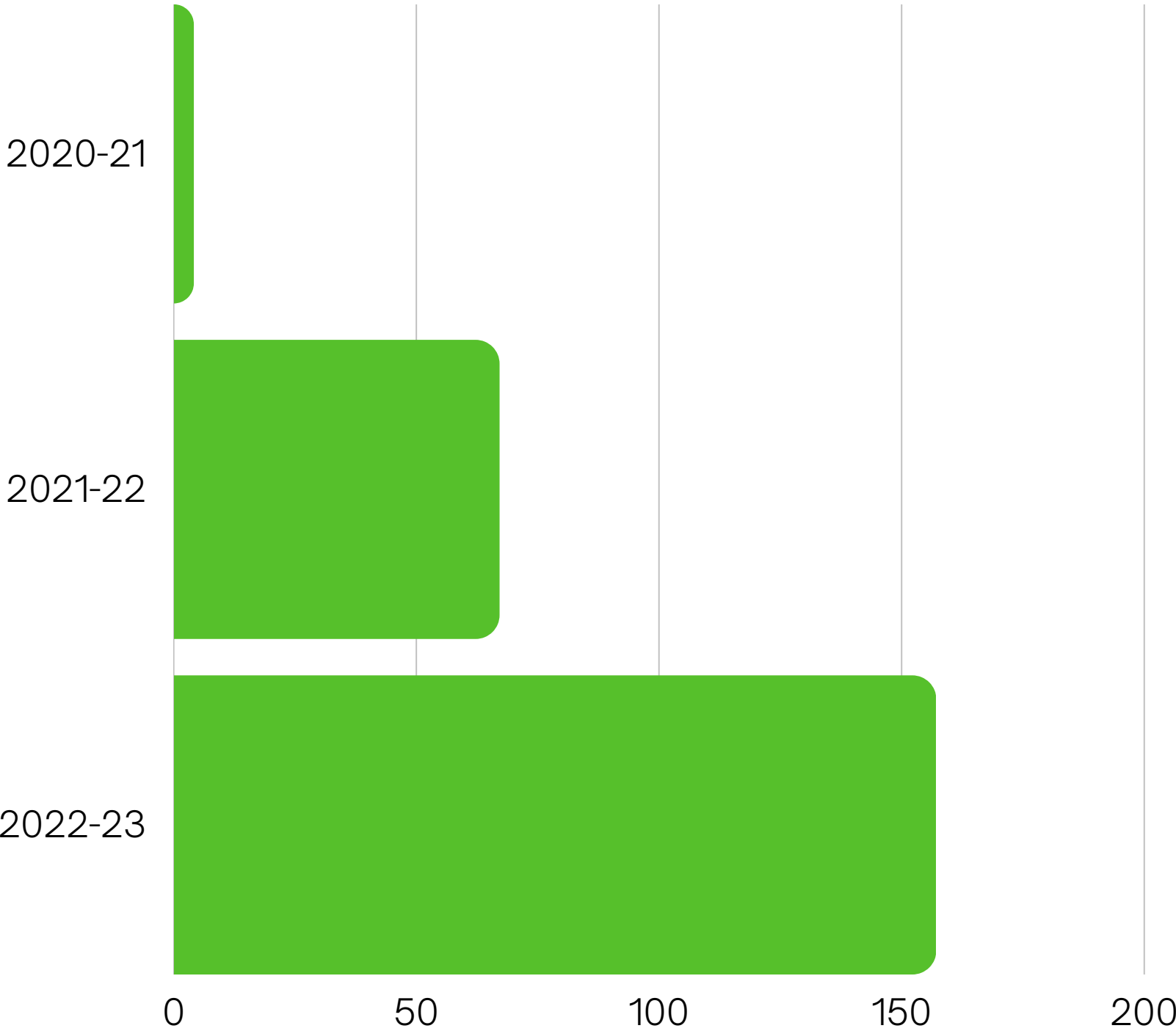
2022-2023

# Recycling Statistics



# Quantitative Progress on Annual waste collection (Metric Tons)

2020-2023

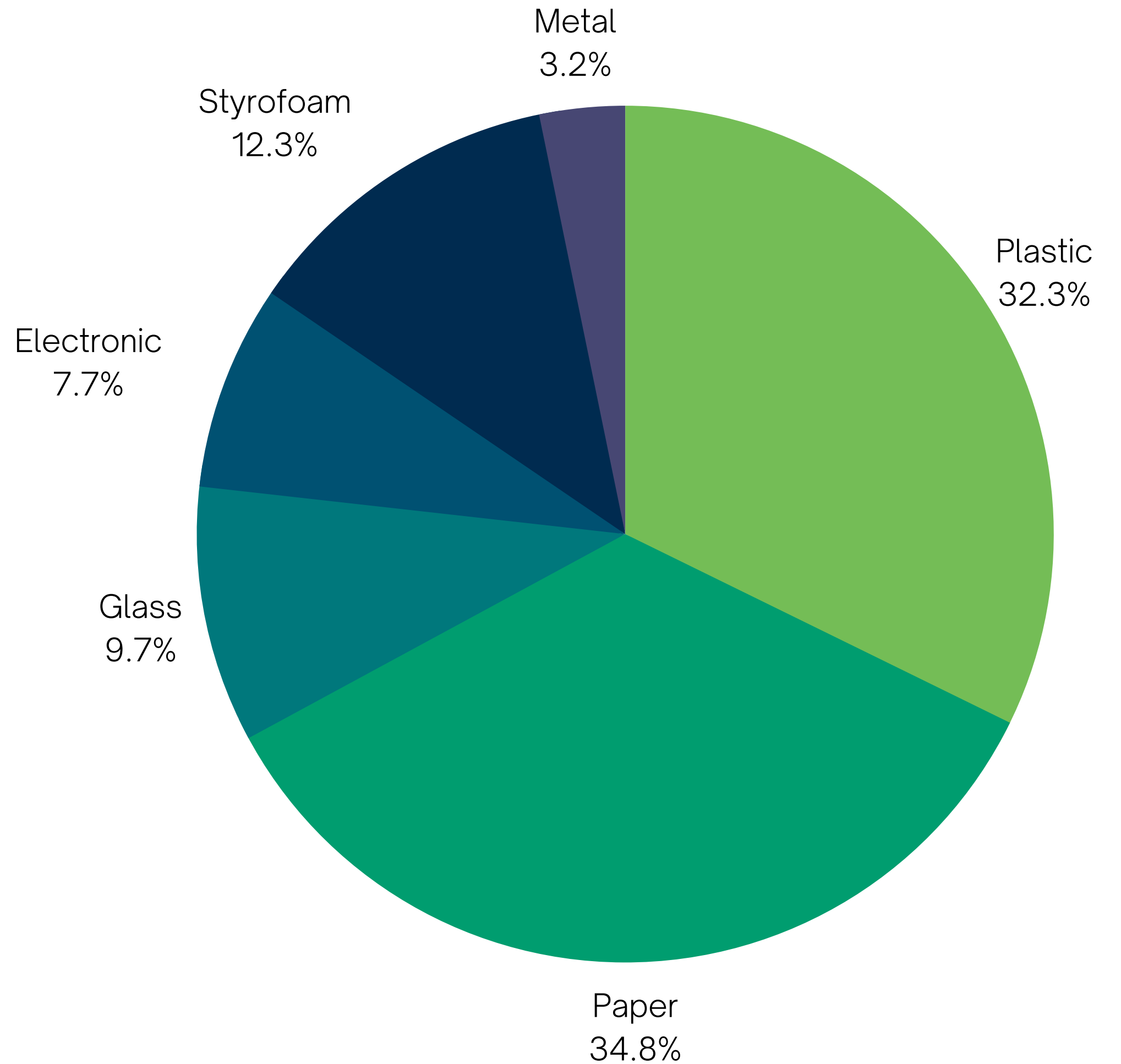




# Quantity of Waste Recycled

225 MT

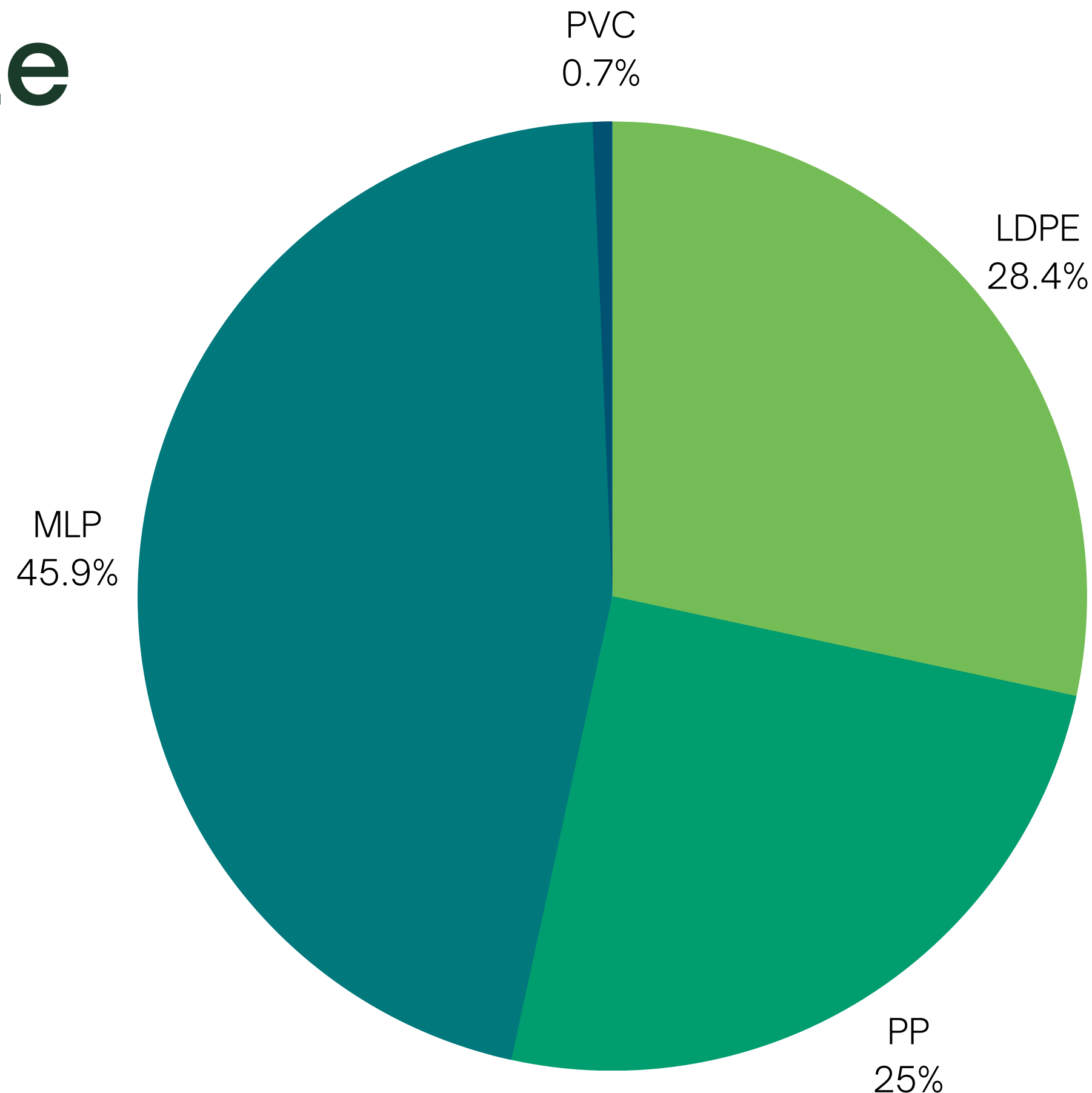
2022-2023





# Quantity of Flexible Plastics Recycled

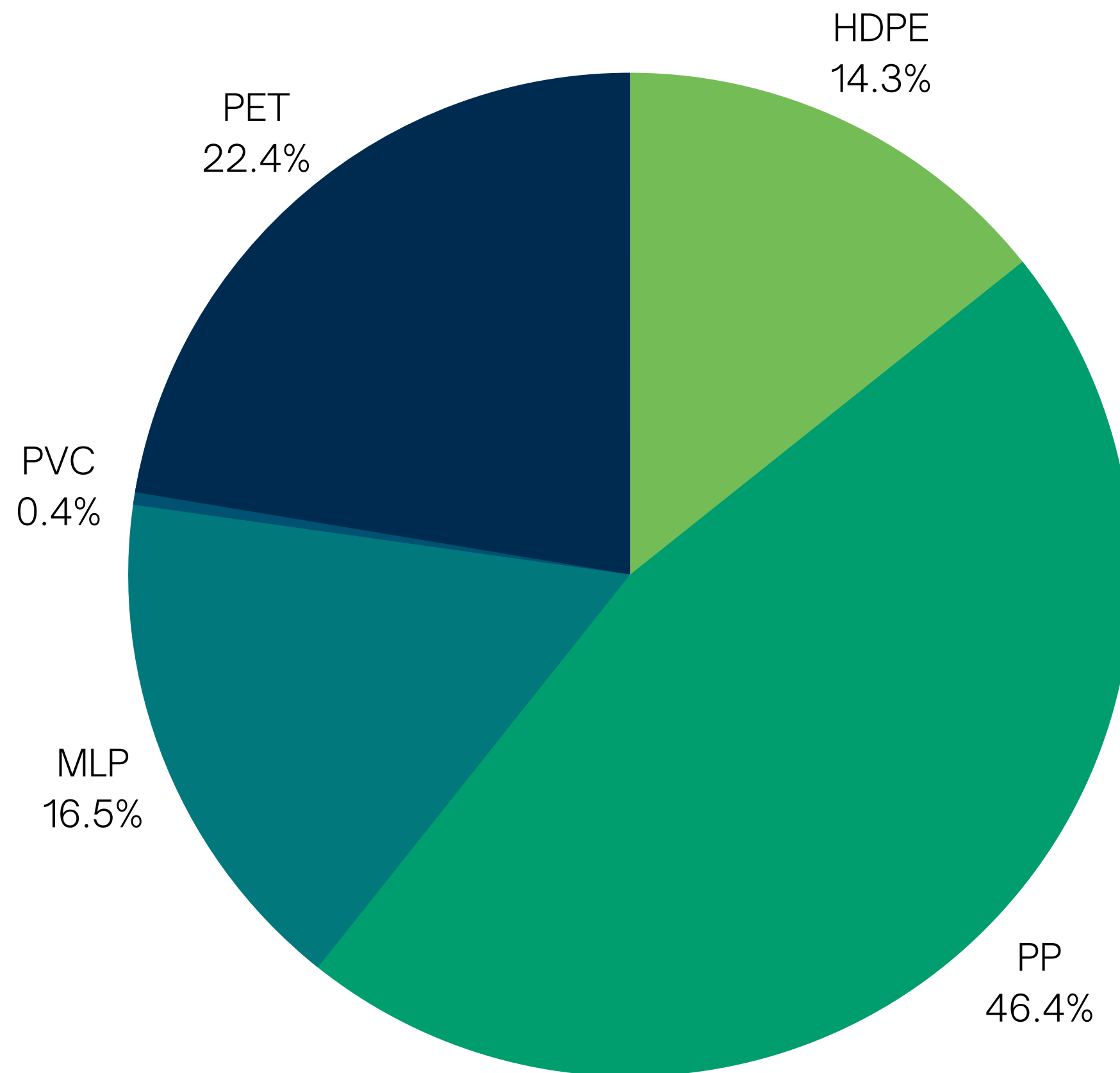
2022-2023





# Quantity of Rigid Plastics Recycled

2022-2023





# Do not waste this idea

June marks the first anniversary of 5RCycle Foundation, a non-profit dry waste aggregator that simplifies eco-friendly options for a cleaner Mumbai

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AS the rains lash Mumbai, the city readies for familiar scenes of flooded streets and clogged gutters, where the ocean spews back what we've thrown into it. Dr Smita Birkar tells us that recycling is a way to prevent drains from getting blocked, and waste from resurfacing on our shores. The Borivali West resident says, "When dry waste mixes with sewage or wet waste, it becomes useless. But if people start recycling, less garbage will be dumped in landfills and littered trash won't clog anything. Recycling will route it to the right channel, and prevent good recyclable material from getting wasted." After getting a PhD in Plastic Engineering and four years of corporate experience in the plastics industry, Dr Birkar decided to direct her knowledge to more meaningful work. That's how 5RCycle Foundation, a non-profit dry waste aggregator, came about.

## Start at the beginning

This month, as the foundation celebrates its first anniversary, Dr Birkar continues to amplify its message: "I educate people on recycling since I'm from the fraternity. Through this NGO, I can create awareness and also have infrastructure to collect dry waste and e-waste donations because people want to see action and not just words."

5RCycle grows its audience through awareness campaigns online. So far, the non-profit has received 10,000 kg of



Dr Smita Birkar at a cloth donation drive; (top, right) Dr Birkar, Ishwarya Harijan, member of 5RCycle, and chef Jade Williams. PICS COURTESY/DR SMITA BIRKAR, JADE WILLIAMS

PEOPLE

donations. Dr Birkar schedules visits to small housing societies and local stores all across Mumbai to pick up the collection, aided by a small team. "Recurring donors are very few, so we keep pushing for them by providing door-to-door service. Our consistency has worked," she narrates.

As an aggregator, 5RCycle's work is an important step in recycling. Step one, she says, should be carried about by con-



Members of a housing society in Charkop practise segregation with 5RCycle bins.

sumers. It includes cleaning and segregating the waste before donating it for recycling.

## Processes matter

Back at the foundation's centre in Kandivali West, the donated waste is categorised based on condition and material, and then routed to recycling NGOs that have the infrastructure to recycle it. Waste can be down-cycled where its elements are used at a lower functionality than the original product, or upcycled into same or high value products and sold. Dr Birkar explains, "Many recycling companies have e-commerce platforms where they sell the recycled products and are looking to develop such markets." So, if you're looking to extend the life of a product and contribute to a circular economy, buy recycled goods, she encourages.

LOG ONTO [www.5rcycle.org](http://www.5rcycle.org) or @5rcycle on Instagram



## Baking change

Chef Jade Williams, owner of Hope Bakery in Malad West, came across Dr Birkar's work via another donor's post. She took to recycling after taking a cue from the instructions posted on 5RCycle Foundation's Instagram page. It's been a month since her bakery started recycling dry waste. She notes that the bakery's garbage collection has since reduced. She says, people think it's not easy or too small a scale to make a difference but everyone needs to do their bit to make it count. Once the bakery's dry waste bin is full, she heads over to 5RCycle Foundation to donate the collection. "The centre is packed with donations," she tells us. While Hope Bakery's packaging is 99 per cent plastic-free, chef Williams strives to look for greener and affordable alternatives.

## Tips to go green

- Reduce, refuse, reuse, repurpose and recycle. This includes carrying your own bottles and cloth bags, organic waste composting, donating and thrifting clothes, and upcycling waste into planters and pen stands.
- Recycling is not done at a domestic level. Go through the right channels like local recycling partners.
- Don't forget to wash, dry and segregate dry waste before you donate it.
- Don't litter

## Start at the beginning

Today, a storyteller event featuring a line-up of popular artists like Nasir Khan, Lata Mangeshkar, and Prabhakar Barjatya to raise awareness for pandemic relief efforts.

GAYATHRI CHATURVEDI  
gayathri.chaturvedi@timesofindia.com

RECOGNISING the past, the business community has been to businesses and livelihoods. The Society with not organisation have come to a fund. The three artists in the film, Shri Prabhakar Barjatya, Usha Venkatesh, and Usha Venkatesh.

A visionary and an environmentally-conscious cricketer shares with us how their non-profit has helped Mumbai recycle



Dr Smita Birkar (right) and Sachchidanand Chaturvedi with the EPS melter-compactor that recycles thermocol

## 5RCycle Foundation - A Step Closer Towards Greener Earth

India is the second most populated country in the world & generates a soaring amount of waste globally, which is going to increase substantially in upcoming years if proper measures are not taken. It also faces major environmental challenges due to nationwide waste generation, improper disposal & lack of its treatment.

Smita Birkar a plastic engineer by profession started '5RCycle' foundation as she noticed waste wasn't segregated at source, which leading to enormous amount going to landfills instead of being recycled or composted. Having a fair amount of experience & education in the plastic industry she thought of repaying society by establishing this foundation with a motive to create awareness about proper waste management.

'5RCycle' is a non-profit organization to promote zero waste management from the current linear economy to a circular economy. According to 5R's four actions should be taken, if possible, before Recycling: Reuse, Reduce, Reuse & Repurpose. Their vision is to promote the environment, wildlife & marine conservation.

The 5RCycle has 2 verticals - one to create awareness about waste segregation



This foundation differs from others as Smita works passionately & due to her past experiences she has an up hand to educate people about the disposal of ceramics, wood, electric waste & even sanitary napkins etc.

The 5RCycle foundation organizes collection drives where dry solid waste is collected like newspapers, plastic wrappers, footwear, e-commerce plastic wrapping, plastic wrappers & containers, elec-

is held at YMCA Bandra every alternate weekend, followed by one in Juhu.

Smita says, "I have been spreading awareness about our collection drives through word of mouth & social media & webinars too. I carry various recycled products with me at the drive to give people an overview of what can be done. 600 kg waste diverted from Bandra with help of 7 collection drive at Bandra YMCA & I would like to thank Bandra YMCA for

cooking oil as it has tremendous health hazards, it can be converted into biodiesel. The cooking oil can be donated by storing in proper containers."

Smita faces many challenges as resistance to change, as people don't want to segregate waste, as it's not in the public eye so it doesn't matter & huge logistics cost involved & informal chain which uses high use plastic & dispose of low value one.

Waste if not handled properly tend to release methane gas, which is explosive & contributes to the greenhouse effect. The burning of disposed waste & plastic materials result in air pollution. Recycling can decrease the level of waste we send to landfills & save cost on waste collection & waste management thus reducing the negative environmental impact.

5RCycle foundation makes quite a lot of recycled products like upside planters from Maggi wrappers, Tetra Pak pencil stand and plans to create awareness about reducing the use of single-use plastic and replacing it with useful alternatives.

Smita pledges people to become dry waste donors and also help her cause by financially supported her at <http://5rcycle.org>.

Ad BAU

Join us Expo 2

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Jasr film: expe audi

Terro ganster





# Contact Us

For any questions or clarifications on our report.

## Certification

80G & 12A

## Website

[www.5rcycle.org](http://www.5rcycle.org)

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