Let's Transform

Reverse Supply Chain for Plastic Waste

Case Study 3: Contribution towards a Cleaner Mysuru

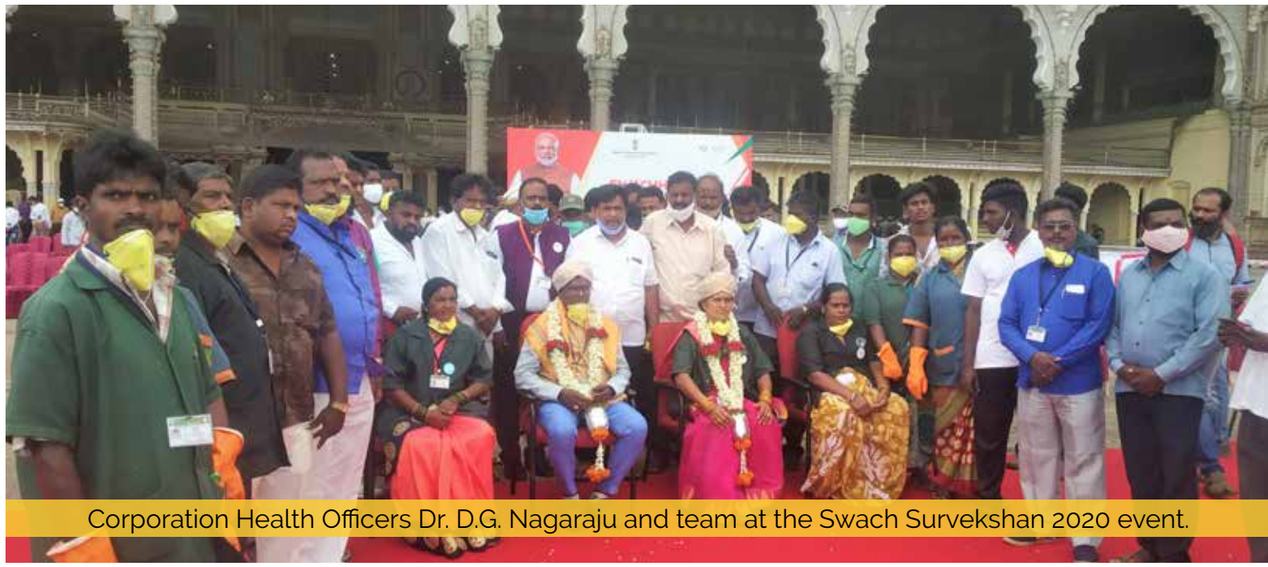
August, 2020

Mysuru City Corporation (MCC)

India's Cleanest Medium City

(3 to 10 lakh under population)

Fifth Edition of the Annual Cleanliness Survey
'Swachh Survekshan 2020'



Corporation Health Officers Dr. D.G. Nagaraju and team at the Swach Survekshan 2020 event.

Mysuru, the Garden City

source: Photo by Abhishek rana on unsplash

Mysuru, a city in the southern part of Karnataka, is located in the foothills of Chamundi Hills. It is the cultural capital of Karnataka owing to its heritage structures and palaces. Mysuru has a population of about one million and a floating population of tourists at 3.5 million each year. The city has consistently secured the top ten cleanest cities in India since 2016. Last year, Mysuru ranked 3rd in Swachh Survekshan 2019. This year it is placed as no. 1 in the medium city category.

Presently, the city generates about 400-450 tonnes of solid waste per day. The Mysuru City Corporation (MCC) has adopted a public-private partnership (PPP) model called Zero Waste Management Scheme which is a decentralized approach.

This report looks at how Saahas Zero Waste has been a part of the journey towards a clean Mysuru.

EPR for Plastics has helped Waste Management at Mysuru

Reverse Supply Chain

- Received authorisation from MCC to execute waste management initiatives in Mysuru
- The supply chain involves: MCC's door to door collection, ward level zero waste collection units, dry waste collection centres, aggregation points and dispatch to authorised end destination

Social Inclusion

- The system has contributed to development of entrpreneurs and livelihood generation
- Transition to a formal way of operations through appropriate registrations, authorisations and safe working conditions

Awareness

- Intensive sensitization has developed a revenue stream for low-value plastic which would have otherwise got landfilled
- The recovery of this plastic has supported MCC in their waste management efforts

Stages of implementation

1. Mapping supply chain (sources of waste and the nearest authorised end-destination for recycling/co-processing)
2. Enrolling waste workers/ scrap dealers/ entrepreneurs transport vendors and MCC
3. Issue purchase order, SOP and register vendor with end destinations
4. Dispatch to authorised end destinations and capture of accurate data across the supply chain.
5. Data reconciliation and obtain recycling/co-processing certificates from end destinations
6. Provide project report and certificates to the EPR client.
7. Audits during dispatches and monthly third party audit to ensure credibility of data

Stakeholders:

Role of Stakeholders

Brand owners

- Brand owners through EPR have supported a channel for collection and reverse supply of Multi Layered Laminates (MLP) which otherwise would have been landfilled or burnt in the open
- Long term purchase order from brands helped develop consistency in plastic waste collections, helped build trust with all stakeholders and created the ability to scale up operation going forward

Mysuru City Corporation (MCC)

- MCC has been successful in operating decentralised waste management systems across the city
- Supportive in sensitisation programmes and implementing segregation at source
- MCC provided support to this project by providing the required approvals for the execution of the project

End destination/ coprocessing

- End destination partners have provided support with logistics and accepting large volumes of plastic. This is a good interim solution as an end destination

Abdul Wahab Nooruddin, Entrepreneur

- The entrepreneur has provided support on the ground to create a market place for MLP in Mysuru
- Collection and dispatch of the aggregated plastic waste
- Maintains records and documentation of all transactions to ensure traceability of material
- Provide timely and fair payment to informal sector stakeholders and has contributed towards formalisation of the supply chain

Saahas Zero Waste (SZW)

- Planning and implementation of reverse logistics of plastic collection and channelization to end-destinations
- Capacity building of entrepreneur and training on waste management practices including various compliance and documentation requirements
- Introduction of the entrepreneur to MCC and other stakeholders in the waste value chain
- Providing a framework for traceability and impact measurement of the supply chain

Abdul Wahab Nooruddin

Nooruddin along with his team at the MRF.

Abdul Wahab Nooruddin is a 41 years old scrap trader who has partnered with SZW for more than a decade to enable reverse logistics of post-consumer waste from Mysuru. He has various companies including Globe Resource Management.

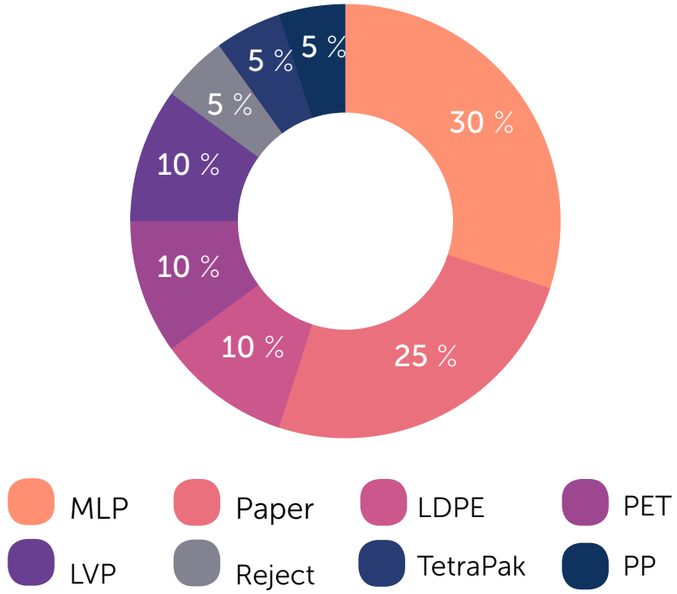
At the age of 20, after completing his second year of B.Com, Nooruddin joined his father's business of trading scrap.

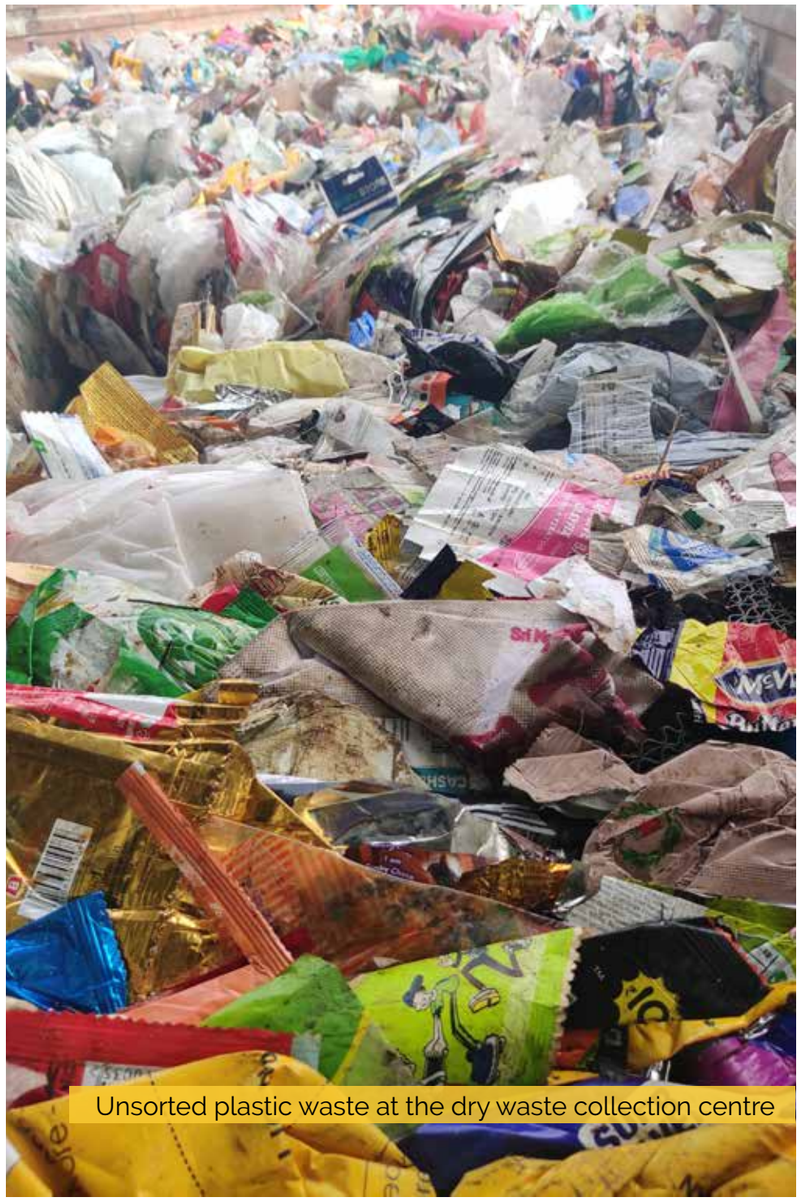
When SZW was seeking a credible partner, to establish MLP in 2017, Noorduddin saw a good opportunity and today he is a leading partner with SZW.

Journey so far...

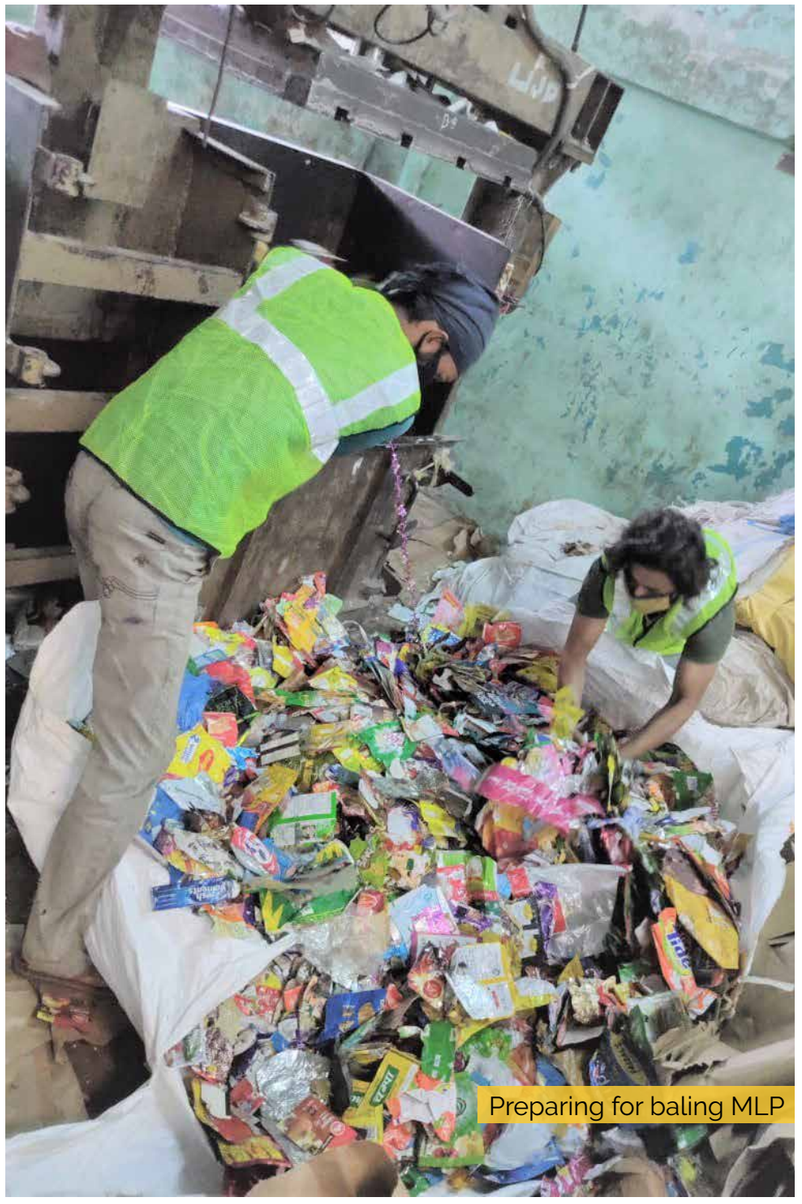
- Developed partnerships with various ULBs
- His operations have transitioned from completely manual to semi mechanised systems.
- He collects waste from Zero Waste Collection Centres of MCC.
- Currently manages 10-12 MT/ Day of dry waste.
- There are 26 field staff involved in various operational activities like sorting, loading, unloading, baling etc.
- He operates a MRF which is a 10,000sqft where he has two baling machines and one set of conveyors for sorting the waste.
- Nooruddin has been able to run holistic operations in a viable manner, due to value creation in the MLP waste stream.
- It is a positive outcome that the next generation in his family who are also professionally qualified are now moving back to his business so as to take operations to the next level in terms of scale, health and safety.

Typical Composition of Dry Waste Handled by Nooruddin

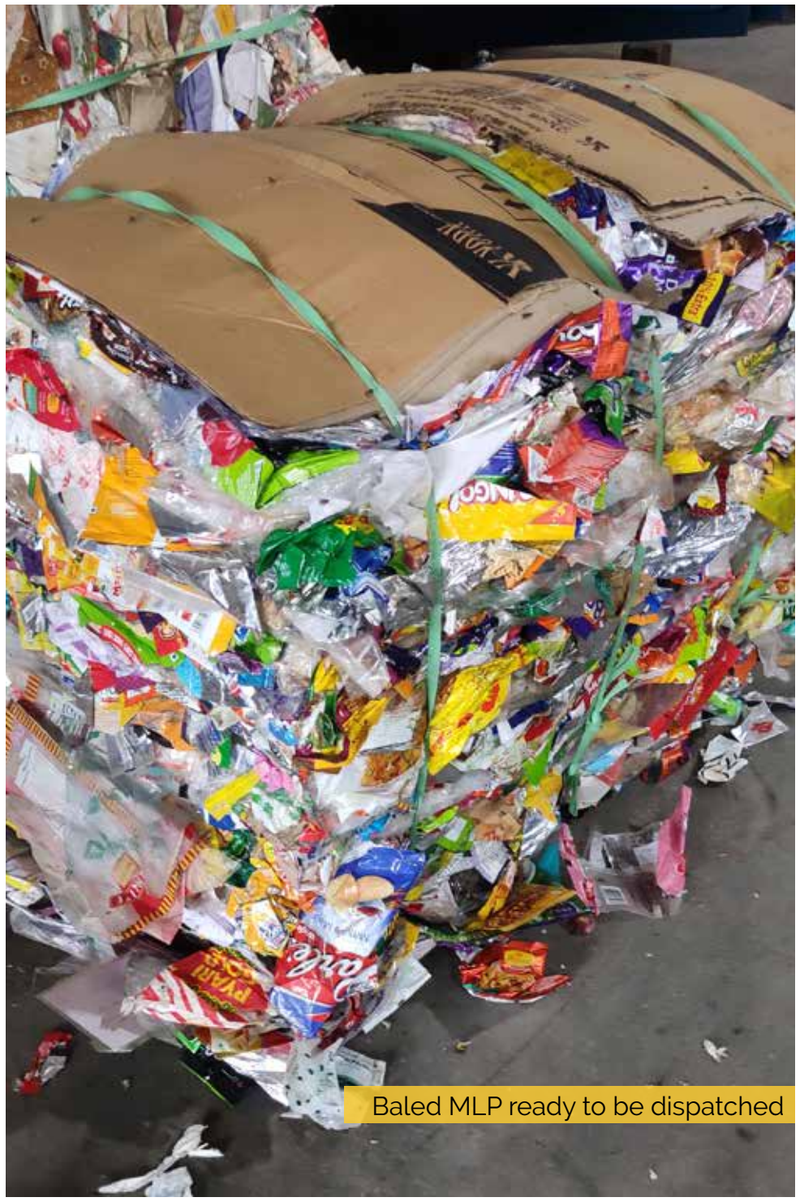




Unsorted plastic waste at the dry waste collection centre

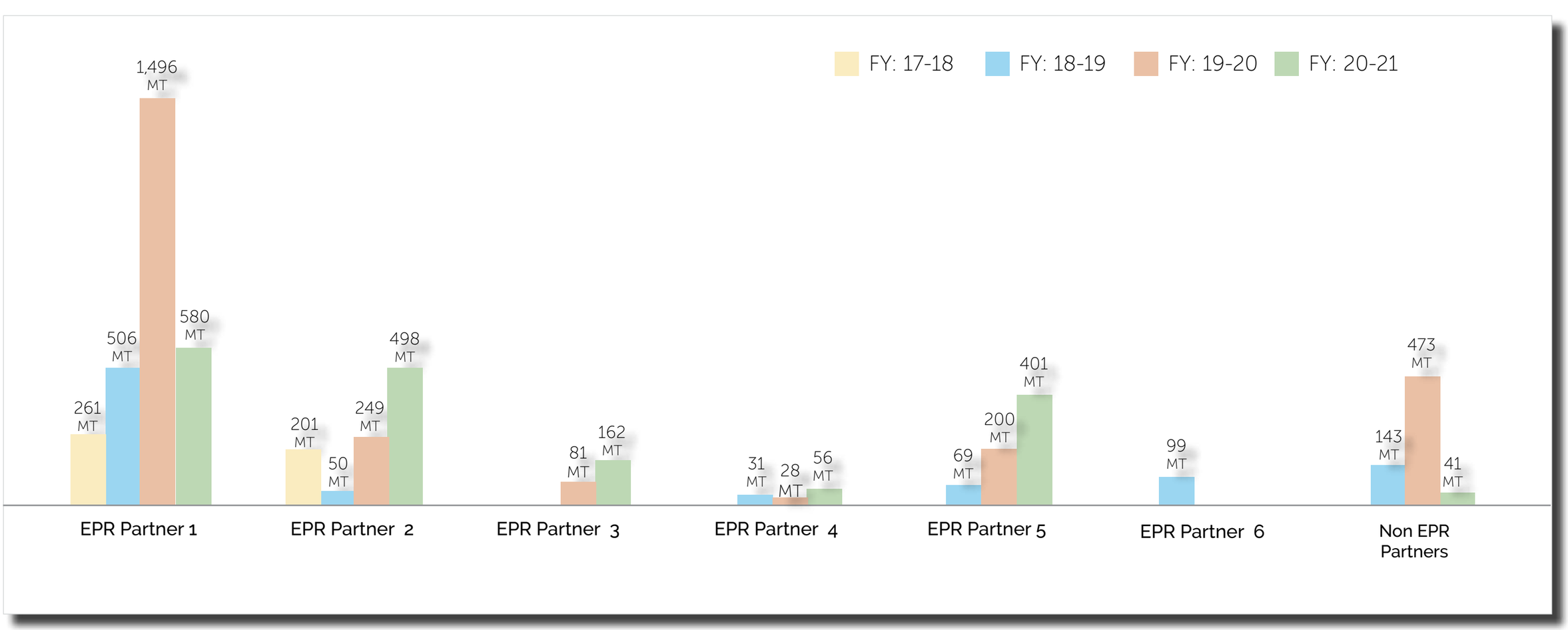


Preparing for baling MLP



Baled MLP ready to be dispatched

Distribution of support from various brands for this project between June 2017 and June 2020:



* Brand names have not been mentioned due to data confidentiality.

source:Photo by Gagan on unsplash

"Create a more transparent and accountable waste management system in Mysuru city."

- **Gurudatta Hedge (IAS)**
Commissioner of Mysuru City Corporation (MCC)

Reference: Mentioned during Karnataka Smart City Investment Summit 2020, https://www.youtube.com/watch?v=qD_VYMv-_Ss

The vision for Saahas Zero Waste is to continue to contribute towards resource recovery in Mysuru. We believe that this process will also keep Mysuru as one of the top cleanest cities in India.

Projects in the pipeline by MCC

- Set up 45 Zero Waste Management Units.
- Incorporate nanotechnology to convert plastic waste to electricity.
- Introduce RFID in the waste collection vehicles
- Install CCTV in areas where littering is happening and in waste management plants.

Environmental Impact

MLP collected at Mysore

Saved **16,537 MT** of **CO2** equivalent

Carbon removed is equivalent to **2,73,443 seedlings** planted.

Removing annual emissions from **3573** vehicles

Reference: EPA-Greenhouse Gas Equivalencies Calculator

Social Impact

Field staff at the MRF.

1
Waste Management Entrepreneur

~26
Field Staff

~40
Vendors

1
Transport Vendor

* Figures as on June,2020.

SDG Impact

Below is the impact which supports the SDG's:

To Create a Zero Waste World through Circular Economy