Baseline survey and key challenges in the Mandal

Even though the villages had waste management units where wet waste could be composted and dry waste was to be further sorted however very little waste was being processed as waste was not being source segregated. Most residents were giving mixed waste due to lack of awareness on why and how to source segregate. All the mixed waste was being sent to the dump site.

Lack of awareness on source segregation: Why and How

Narsamma from Raghavapur village:
“In our house, we put all the waste in one dabba. Every morning I either give it to the waste collection vehicle or if they don’t come, I throw it in the street, where there was always a pile of garbage.”

Residents were by and large oblivious to the concept of different categories of waste; health and environmental impact of waste dumping and burning. Although waste was becoming a key challenge, the administration and the panchayat were at a loss on how to bring about this big change in the residents.

Empowering and monitoring the waste management staff

The waste collection staff were aware of different types of waste categories but were not enforcing source segregation, they did not feel empowered to demand that and no one was questioning the staff for collecting mixed waste.

Daily monitoring of collection and processing was not happening. Collection was not regular which led to multiple blackspots on the streets. The processing units lacked proper infrastructure and safety equipment and no records were maintained for waste processing, and no one was questioned for most of the waste being dumped.
IEC (information, education & communication) activities

All age groups, different socio-economic groups, waste management staff, SHGs, ASHA workers, Anganwadis, schools and panchayat officials were sensitized and trained on SWM.

- Display boards & wall paintings
- Training and SWM-based capacity-building sessions
- Door-to-door awareness using flipcharts,
- Art and rangoli competitions
- Street plays performed by active citizens
- Videos shared on WhatsApp
- Posters in the waste unit on segregation and worker safety

Project objectives >>>

Stakeholder identification
The first step is identifying the relevant stakeholders for solid waste management in the villages. The identified stakeholders are the residents, the panchayat raj waste management staff, and the panchayat raj officials.

Training and Capacity-building
Spreading awareness, training the sanitation staff regarding health and hygiene, collection, and monitoring mechanism, and sensitizing the citizens on the impact of waste mismanagement in the villages is extremely important.

Infrastructure & Material support
The resource recovery centres (RRCs) which consist of both composting unit and dry waste collection centre lack some key equipment. Overall, the system needs support with some critical consumables and materials which will be provided under this initiative.

Disciplined waste collection
Source segregation will be effective only if all the houses are covered by the waste collection staff daily which would prevent dumping of waste and would help address the existing blackspots. The amount of waste diverted from dumpsites would also be assessed based on the percentage of households giving waste.

Monitoring and Evaluation
Source segregation, collection, and processing of solid waste should be regularly monitored to ensure efficient operations. Weighing and recording waste collected, and sorted, waste sent to different destinations, and compost produced is very important. Attendance of the staff, collection, and processing must also be maintained.

Waste dumping to Waste processing
Biodegradable waste rotting in the dumpsites is a major source of methane gas, a strong greenhouse gas, contributing significantly to global warming. Wet or biodegradable waste is converted into compost which can be used by the village farmers. Processing of dry or non-biodegradable involves sorting it into different categories, paper, plastic metal etc. which are then sent for recycling. Some waste is also sent to the Dry Waste Collection Centre of Siddipet where further sorting takes place.
Due to the collective effort of the gram panchayat, residents, and the waste collection staff, littering has reduced, more waste is getting processed, and villages are visually cleaner.

- Students from schools show active participation in any activity related to SWM.
- The residents show enthusiasm during awareness sessions, street plays, and other activities.
- Panchayat staff maintains a logbook provided by Saahas and records information on the amount of waste collected, amount of diesel consumed, attendance of waste collection staff, etc.
- The collection staff ensures residents give segregated waste, they guide them on how to segregate and report back to the Saahas team of any regular defaulters.

At Household level: Each house was given a dry waste bag for storing the dry waste. To establish a better way for tracking the number of households segregating waste, each house was numbered along with a sticker containing the number and information on 3-way source segregation. The sticker was put on every house.

At village level:
IEC awareness boards containing information on different categories of waste, health, and environmental impacts were displayed in areas where there is high public floating such as dairy farms, panchayat offices, and schools.

At the Resource Recovery Centre
A weighing scale was provided through the project to weigh the amount of dry waste collected. First aid kits and fire extinguishers were provided at the resource recovery centres of each of the 14 GPs. Furthermore, certain repair works for the RRC in Tomal GP were carried out such as the replacement of doors, roof sheets, etc. Also, the waste management staff were provided with hand gloves.

Waste collection vehicles: Loudspeakers were given to all the GP collection vehicles (tractors). A battery for the daily waste collection tractor was also provided to Seetharampally GP as per requirement. The waste collection vehicle was also provided with a dry waste bag to prevent the mixing of waste.

At compost units: Shredders were provided for shredding the dry leaves collected in the village. The existing shredder in Pullur was repaired and one shredder each was given to Raghavpur and Irkode gram panchayat respectively.

Bins for events: During public events or private functions a large amount of wet and dry waste gets generated. Therefore, 2 bins – one for dry and one for wet each with a capacity of 200 liters were provided to all the GPs to be utilized during large social gatherings.

Challenges:
Tackling domestic hazardous waste is a key challenge as there is no proper end destination to process the waste. Current practices involve burying domestic hazardous waste such as sanitary pads etc beside the area of compost units. However, research will be conducted, to arrive at an alternate means of disposal that is safe and hygienic both for nature and humans.

Best practices:
- Source segregation by the residents at the household level.
- Refusing collection of mixed waste from the residents by the daily waste collection staff.
- Daily monitoring of the segregation, collection and processing by the Saahas field team and the Panchayat.
- Active participation by the citizens.
We would like to express our gratitude towards our funding partner CGI for their enthusiastic support all through the project, from conceptualisation to execution. We would also like to acknowledge the efforts and active involvement of the panchayat members and other officials, specially all the residents without whose participation and ownership this project wouldn’t have achieved these important milestones.

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