



# A man on a mission for waste to wealth transformation

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## Introduction

Shri. Ramdas Tukaram Kokare, presently working as Chief Officer in Municipal Corporation, Karjat which has a total population of 30,000 and generates Class III Municipal Solid Waste (MSW) in the tune of 12 metric tonnes per day. Earlier during 2010 to 2015 he had served as Chief Officer at Municipal Corporation Dapoli, Maharashtra and during 2015-2017 he at Vengurla also in Maharashtra.

In 2010, Shri Ramdas came up with the idea of waste management at the source level and decided to segregate plastic waste into recyclable and non-recyclable categories. Plastic carry bags of less than 50 micron thickness were in the non-recyclable category, while bottles, packaging material of food items and wrappers were to be recycled for further usage. Local self-help groups were roped in to produce paper bags and some awareness campaigns were organized.

Furthur in April 2015, Ramdas Kokare took over as Vengurla's Chief Municipal Officer, driving the town's exemplary sanitation schemes and waste disposal projects. Under his able leadership Vengurla Municipality was declared as an Open Defecation Free (ODF) city in Maharashtra on 2nd October 2015. The solid waste management (SWM) project, initiated by Ramdas Kokare- CEO of VNP-has been highly acclaimed even by international experts. He has implemented several innovative schemes like plastic road, zero garbage, biogas etc, which are now being used in the district. He worked on the concept that there should be no landfill site. He segregated the waste not just into the dry and wet categories, but into as many as 11 categories. The segregation was done at the household level. From wet garbage, wet waste is used to generate biogas, producing 30 units of electricity per tonne, whereas dry waste is used for making briquettes. One of the machines powered by the biogas is a plastic shredding machine, provided by UNDP. It crushes up to 180 kg of light plastic every day. This waste plastic has been used as boon for road building. While plastic bags are banned, the remaining plastic is used for making roads.

## Awards/Recognitions

- 'Vasundhara Mitra' Activist' award, 2016.
- 'Best Chief Officer' Municipal Corporation, 2016
- 'NDTV, Banega Swachh India', Award felicitated by Mr. Amitabh Bachchan. 2016.
- 'Vasundhara Mitra' Activist' award, 2017.
- 'Sindhudurg Bhushan' award, 2017.
- 'Vasundhara Sanman' award, 2017.

## How was it done?

Shri.Ramdas Kokare after taking over charges in various Municipal Corporations like Dapoli, Vengurla and Karjat, he motivated staff of these institutions and guided them with clear cut ideas and proper directions. Several local institutions joined hands with Shri. Kokare, Viz,Tehsildar office, chairman of confederation of voluntary organisation, traders and local peoples, SHGs, NCC, NSS volunteers, green corps and staff of Agriculture Universities like Dr. BSKKV, Dapoli.

## Public Communication Strategy

- Complete ban on plastic bags.
- Educated the local vegetable and fruit vendors by narrating the importance of ban for about 1-1 1/2 hr daily for a week and until and unless their mindset was changed.
- Provided a viable replacement for plastic bags, provided bags made out of old sarees and paper bags.
- Bell vehicles to collect the city waste. The three belled vehicles in the morning responsible for collecting house hold wastes from which plastic/ non degradable waste is separated and crushed in plastic crush machine.
- As a part of this drive all the traders were given away a certificate and a letter of thanks for not using plastic carry bags of 50 microns or less and kitkat bags.
- The management strategy simply involved taking rounds around the city just before coming to the office and while returning home, in order to see if the city is clean. Chief Officer personally motivated his subordinates to do the same. He and his subordinates personally talked with a certain number of people daily to educate them about the importance of waste segregation.
- Panchayath also educated the local vegetable and fruit vendors by narrating the importance of plastic ban until and unless their mindset was changed.

## Segregation, Collection and Transportation

- In Vengurla, 20 municipal workers painstakingly segregate waste into 23 different categories. Wet waste is used to generate biogas, producing 30 units of electricity per tonne, which powers all the different types of machines used here. Municipal collectors pick up waste six days a week and transport it to the municipal dumping ground.
- Adequate vehicles for waste collection.
- Route maps are published on council's web site, social media and on vehicle also.

- GPS tracking for monitoring vehicle route.
- Capacity building of staff.
- Daily supervision by chief officer and official staff.
- Implementation of solid waste management Bye-law.

## Financial Strategy

In Vengurla, Machines powered by the biogas are a plastic shredding machine, provided by the United Nations Development Programme (UNDP). The machine crushes up to 180 kg of light plastic every day. Many Nationalised banks, General Insurance Corporation and Musale trust etc. extended their support for equipment, dustbins and vehicles and other machinery.

## The Impact

Under the able leadership of Shri. Kokare, Vengurla has got 12 km of “plastic” roads that earned INR 15 per kg of plastic sold to contractors for road-building in nearby areas. Different type of waste is also recycled. A briquette machine helps process dry waste such as cloth, paper, and cardboard into briquettes, which are sold to nearby industries as alternate fuels for boilers. Heavy plastic is sold to cement factories where it is melted at 3000 degrees Celsius. In addition to this, Shri. Kokare had built the capacity among the staff at village level and Municipal level. Under Vengurla Municipal Council he had undertaken several environmental programmes including tree plantation, water conservation and harvesting, turtle conservation activities made Vengurla city open defecation free, introduced eco-friendly Ganesh idols, promoted mangrove tourism and solar as well as LED lights. Implemented innovative schemes like briquette formation from garden waste and biomethanation plant, installed garbage screening machine and plastic crusher machines. Successfully converted waste dumping sites into tourist points, play grounds and cultivable lands.

## Success factor

In Vengurla, the municipal council found considerable support in the private sector with banks and insurance companies, NGOs in the area chipping in to replace plastic with cloth carry bags, and providing waste collecting vehicles, mobile toilets, dustbins etc. Constant motivation, campaigns, awareness programmes under municipal council had promoted the activities and educated the polluters.

## Conclusion

The solid waste management programme has been managed entirely from municipal council. Each month, the municipality earns sufficient amount, which is used to improve solid waste management systems in the village. To encourage reuse, unused items are dropped into a box placed under a tree, called the Tree of Humanity.

*“If we don’t effectively manage waste generated in our area, it will follow us everywhere - in the soil, in the air, and in the seas that sustain us.”*

Shri. Ramdas Tukaram Kokare