

Successful plastic waste management initiative in Aryad GP



Plastic waste menace was increasing day by day in the Aryad Grama Panchayat (GP) in Alappuzha District of Kerala a few years ago, the littering on the waysides an indication of the pollution caused by careless people. In fact, the litter spread over to the agricultural land and other open spaces causing social and health issues. The situation was such that the GP leaders of the densely populated coastal village, located beside the National Highway 66 were compelled to intervene and find a solution, in the absence of a waste management system.

In 2017, the GP that consists of 9588 households and a population of 30,983 individuals formed a Green taskforce, the first in the State to do so. They put in place a system for door-to-door collection of plastic waste across all its 18 Wards, spread over an area of 6.87 sq. kms.

The state waste management strategy which came in to force in 2016 named 'Harithakeralam Mission' facilitated the formation of a "Haritha Karma Sena (HKS)" or the Green Taskforce and the establishment of a Material Recovery Facility (MRF) and a Resource Recovery Facility (RRF) to efficiently manage solid waste.

Haritha Kiranam Plastic Smart Aryad which was launched on December 3, 2017 began collecting waste from 9588 households and 388 Institutions and commercial establishments. While the user-fee for a household was Rs. 30 per month, from institutions it was Rs. 100 per month.

Capital Investment: At the outset, the GP invested in the following: Material Collection Facility (Rs. 5 lakhs), Resource Recovery Facility (Rs. 87,78,825), Rented vehicles (Rs. 2,82,500) and uniforms and other equipment (Rs. 46,800).



Interventions by the GP: A team of 39 trained women started their mission of recovering plastics from households, commercial establishments, and institutions, equipped with infrastructural and operational support provided by the GP.

The GP also promoted source level composting of wet waste by providing composting devices at subsidised rates. In this regard, awareness programmes were organised in all wards, orienting public on source composting. This greatly reduced littering of mixed waste. Gradually, with more and more households beginning source level composting, they even began to segregate. The public rallies which were conducted in all wards promoted source segregation and facilitated handing-over of clean dry plastics to HKS. At the same time, the GP ward members and volunteers visited households with pamphlets to sensitise them on SWM issues.



Outcome: So far, 32.6 tons of plastics that were discarded as waste have been recovered. This helped the GP earn an income of Rs. 489179 from the sale of discards. While around 7000 households (80%) began to give segregated waste, 6700 households (70%) and 272 institutions (70%) paid user-fee regularly, adding to a total collection of Rs. 35,60,075 so far.

Best of all, the SWM activities generated employment for 39 women who received an average salary of Rs.4000 per month which was in addition to the income obtained from catering service and supply of steel plates and glasses, in observance of the Green Protocol. According to official data, so far Rs. 43,38,570 has been disbursed as wages among them.

Annual Business Plan: As per the GP's annual business plan, the revenue amounted to Rs.2,90,000 (User fee-Rs.2,28,000; Sale of scrap-Rs.22,000 and VGF-Rs.40,000) and the

expenditure to Rs.1,94,000 (Salary-Rs.1,82,000; Vehicle maintenance-Rs.2500; Electricity-Rs.1500; Transportation-Rs.4000 and O&M-Rs.4000).



Forward linkages: About 18500 kgs of bailed plastic have been handed over to a local scrap dealer and 12875 kgs of shredded plastic have been handed over to the Clean Kerala Company.

Monitoring: Monitoring of all SWM activities is done through a mobile application. This includes data regarding households giving waste, quantity of waste collected, user fee collection, etc.

Biodegradable waste management: To deal with biodegradable waste, more than 250 compost pits have been constructed through MGNREGS for source level composting at households. Further, community level Aerobic composting units have been installed at different locations. While the Vermi composting unit is managed by kudumbasree members, Kitchen digester bins and biogas plants have been provided to all schools and hotels and to the community at subsidised rates.



Way forward: 100% of the households will be covered under the programme in due course and user-fee collection will be enhanced to 90% of the households. Plans are in the pipeline to launch other income generating enterprises such as catering service, hiring of steel and glass utensils, and collection of paper, leather, broken glass, e-waste etc., and 100% source level composting of wet waste.