

## EFFECTIVE PWM SYSTEMS IN VILLAGES OF TAMIL NADU



At a time, when plastic waste has created a global waste challenge, the need to incorporate systems for reducing, reusing, and recycling of plastics – that would contribute to sustainable waste management is imperative. The plastic waste management (PWM) units in Panjampatty village and Mudikandanallur village are effective and worth emulating.

To address the issue of plastic waste that pollutes land, air and water, affecting all forms of life as well as the environment, the village panchayats of both Panjampatty village in Attur Block of Dindigul District and Mudikandanallur village of Sembanarkoil Block in Mayiladurai District were involved in various IEC/IPC initiatives. They underlined the way plastic litter chokes drains and their ingestion by animals is life threatening, while burning it emits harmful toxic gases. This led to the establishment of PWMs units in both villages.

## PANJAMPATTY VILLAGE

In 2013, a Plastic Waste Management Unit was set up in Panjampatty village at a capital cost of Rs.8.5 lakhs, the money used for purchase of machinery such as dust remover, shredder, and bailer. Simultaneously, a team comprising the Swachhagrahi, SHG members and Thooimai Kaavalars (sanitation warriors) carried out a door-to-door awareness campaign across the village of 2532 households and a population of 7476 to promote segregation at source and to reduce and reuse plastic waste at household level.

This helped immensely, ensuring that the PWM unit received only segregated plastic waste. Initially the unit only processed plastics from this village and sold the shredded plastic to road contractors. The unit became so successful that it is currently serving more than 200 Village Panchayats in Dindigul District.

The quantity of plastic generated per day is 250 kgs of which 150 kgs is shredded each day. Thus far, a whopping 86,000 kgs of plastic has been sold for road laying and the total revenue generated is Rs.22 lakhs. The total spend for operation and maintenance so far has been 16,47,880 and the total profit has been calculated at Rs. 5,52,120, making the annual profit Rs.1.5 lakhs.



A group of 6 women have been managing the unit. They procure plastic waste at the rate of Rs.5 per kg from the public in this village as also the neighbouring villages. They spend Rs.2,05,985 per annum on salaries, electricity, and procurement of raw materials. So far, 106 tons of plastics were shredded and sold to road contractors at the rate of Rs.25 which has earned them a total amount of Rs.22,00,000/- from the year 2013. Approximately 190 kms of rural roads have been laid with the shredded plastic.

Block and District officials monitor the PWM Unit at regular intervals. Plans are in the pipeline to extend the services of the PWM Unit to other villages and to establish similar successful business models in neighbouring blocks too.

### **MUDIKANDANALLUR VILLAGE**

Managed by the Sevvanthi Self Help Group, the PWM unit in Mudikandanallur Village was set up in 2020 at a cost of Rs.9,79,900 that went towards purchase of machinery and renovation. The District Rural Development Agency (DRDA) made some financial contribution towards the estimated amount and initial operation and maintenance as a loan.

The PWM Unit serves four habitations within the village catering to 1031 households and a population of 3664.



At the outset, the village Swachhagrahi, SHG members and Thooimai Kaavalars carried out capacity building initiatives, similar to those conducted in Panjampatty village that included door to door awareness building to promote source

segregation, reducing and reusing of plastic waste. They informed the community of the ill effects of burning plastic and the need to compost at household level.

Meanwhile, the Village Panchayat also passed a resolution at a Grama Sabha banning Single Use Plastic (SUP). Further, the Village Panchayat administration with the involvement of the SHGs, Panchayat Level Federation and Village Poverty Reduction Committee organised many rallies promoting the importance of source segregation and proper handling of waste.

A group of 3 women currently manage the PWM Unit that now serves around 57 Village Panchayats. Each day, of the 150 kgs of waste collected, around 110 kgs of plastic waste is shredded and thus far, 22 tons of plastics have been shredded and sold to road contractors at a rate of Rs.35, earning them a total of Rs.7,58,234. The annual O&M cost involving salaries and procurement of raw material comes Rs.5,29,200.

This PWM Unit is likely to extend this support to other Villages and Blocks in the future with the engagement of Swachhagrahis, Self Help Group members, PRI representatives and Thooimai Kaavalars. They have also planned to conduct several IPC campaigns to promote source segregation amongst the public.

