



Exnora Green Ambassadors

Department of Atomic Energy Townships

Kalpakkam, Anupuram and Bhavini

The Department of Atomic Energy (DAE) townships: Kalpakkam, Anupuram and Bhavini, located on the shoreline 80 km south of Chennai, accommodate the distinguished scientists and workforce of the Indira Gandhi Centre for Atomic Research (IGCAR), the Madras Atomic Power Station, Bharatiya Nabhikiya Vidyut Nigam (BHAVINI) Limited, and associated centers and institutes of energy production and research. Spread over 870 acres, the townships provide comprehensive amenities for approximately 30,000 residents who hail from every region of the country.

Since February 2008, Exnora Green Pammal (EGP) has provided solid waste management services for all residential neighborhoods, schools, sports grounds, public areas and commercial establishments in the townships. Daily, house-to-house collection of solid waste by Exnora Green Pammal's Green Ambassadors keeps the attractively landscaped campus free of litter, earning the deep appreciation of residents and authorities. By achieving substantial environmental benefits and providing full-time employment for 120 women from neighboring villages, Exnora Green Pammal demonstrates a win-win example of solid waste management in the DAE townships.



A role model for street bin-free and litter-free towns



Dr. Baldev Raj, Director, IGCAR; Mr. Prabhat Kumar, Director, Bhavini; Mr. K. Manoharan, Deputy Director, GSO; & Mr. P. Subramanian, Sanitary Inspector with Mrs. Mangalam Balasubramanian and EGP staff

BACKGROUND

According to residents, the DAE townships have not always been the showpiece of cleanliness that they are today. Determined residents and authorities deserve considerable credit for achieving the townships' remarkable transformation. Until 2008, in many parts of the townships waste collection was performed irregularly—only twice a month in some cases—so rubbish accumulated in open bins at intersections and in heaps behind apartment blocks.

In her master's thesis on solid waste management in the DAE townships, Ms. Supriya Bhanja, a Kalpakkam resident, noted that waste was openly burned, a practice that creates extremely toxic dioxins and furans which accumulate in land, livestock and people over time. Residents report that their surroundings were unsightly, smelly and plagued by pests. The waste attracted ragpickers, dogs and cattle, and created ideal conditions for the breeding of insects and rodents that spread diseases.

In 1996, Dr. S. S. Raj, a Kalpakkam resident, attended a presentation by Mr. M. B. Nirmal, founder of Exnora International, about the advantages of proper waste management. The presentation inspired her to introduce collection of source-segregated waste at Kalpakkam in order to facilitate recycling and reduce the workload of collectors. Involving the Indian Women

Scientists' Association and the Township Amenities Committee, she introduced daily, house-to-house waste collection from a few hundred houses. This initiative demonstrated that it was possible to keep neighborhoods clean. Impressed by the results, Mr. Prabhat Kumar, the director of Bhavini, introduced segregation of waste in Bhavini. He also, with Mr. Y. C. Manjunatha, the director of the Engineering Services Group, invited Mrs. Mangalam Balasubramanian, Exnora Green Pammal's founder, to prepare and submit a plan for improving waste management services in the entire townships. The plan was warmly received by the director of the Indira Gandhi Centre for Atomic Research, Dr. Baldev Raj, who gave his full support for the change. After negotiations and approval of the plan, EGP received the work order in September 2007. Preparations for implementing the plan took until the end of January 2008. 120 women were hired from nearby fishing villages and trained to become Green Ambassadors. Land was rented and a 3,000 square-foot shed was constructed for making vermicompost.

Exnora Green Pammal's operation in the DAE townships officially began on 26 January 2008. When asked to describe the change in the DAE townships, Dr. S. S. Raj exclaims, "Today it is a thousand times superior."

IMPACT AND BENEFITS

Exnora Green Pammal's goal is for India's cities and towns to rank among the world's cleanest. In the DAE townships and other localities, EGP pursues its objective of minimizing waste by encouraging the public to practice the 3Rs: Reduce, Reuse and Recycle, while simultaneously implementing solid waste management services in accordance with the Government of India's Municipal Solid Wastes (Management and Handling) Rules. This strategy of educating and involving residents in responsible waste management has yielded impressive results.

- After removing biodegradable and recyclable material from the waste stream, less than 20 percent of the township's total waste is dumped, saving land, and reducing the energy and expense of transporting waste to the dumpyard.
- Burning of waste in the townships has completely stopped.
- In 2009, EGP prevented the emission of 748 tons of carbon into the atmosphere by keeping nearly 700 tons of biodegradable, and over 1,000 tons recyclable material out of the dump. For this, EGP was awarded AAA-rated Green Business Certification from the Exnora Environmental Standard Organisation.
- 120 women from neighboring villages are employed full time as Green Ambassadors, and receive periodic health check-ups by Chettinad Health City.
- House-to-house waste collection and the removal of street bins have eliminated the presence of ragpickers within the townships.
- Through EGP's Green Generation programme students learn about the hazards of pollution and the importance of conservation, recycling and sanitation.



There is a quantum improvement in the way the township looks in respect to cleanliness. The major advantage of this system is that waste is being converted into a product, and with this system it is possible to give many people a salary and a sense of purpose. That is a very tangible benefit.

Dr. Baldev Raj, Director, IGCAR



RESIDENTS' IMPRESSIONS



Mr. G. Kuppan, Kalpakkam

When we threw our waste in the street bin, it attracted many flies and brought infection. Daily, door-to-door collection of our waste is very good for us.



Mrs. Aparupa Roy, Kalpakkam

Waste collection is very regular, and outside is fully clean. No papers in the roads. Fully clean.



Mrs. Valli, Anupuram

Previously, we put our waste in open bins. There was bad smell, and many animals rummaged through the waste. Now waste is collected at our doorstep daily, and the area is kept clean. No bad smell, no animals, no problems.



Mrs. Vasanthi, Kalpakkam

We feel many benefits. Now the neighborhood is clean, the problems are stopped, no diseases, no mosquitoes.





**AAA-rated
Green Business
Certification**

Exnora Green Pammal
4, 22nd Street
Sri Sankara Nagar
Pammal, Chennai
Tamil Nadu 600 075
044 2248 5955
greenpammal@gmail.com
mangalam.b@gmail.com
www.greenpammal.in

