

## **WASTE MANAGEMENT IN AUROVILLE**

### **DEMOGRAPHICS OF AUROVILLE – CURRENT AND FUTURE**

The following demographic statistics are derived from the Auroville Master Plan.

The current Aurovilian population is stated as 1519 persons, a fivefold increase in the last 30 years. There are 100 students/researchers in Auroville at any given time, with 1200 researchers coming to Auroville in any given year.

There are 5000 workers that provide predominantly manual labour on a daily basis to Auroville (58.5% in employed in manufacturing, 41.5% in services).

There is also an average of 1000 visitors per day to Auroville. The majority of these visitors are tourists whose key activities are visiting the Matrimandir and the Visitor Information Centre. However, there are many tourists who stay for longer periods, particularly in the cooler months of the year, December to February.

The future growth of Auroville remains uncertain in terms of a fixed rate of growth. Planners at Auroville's Future are assuming a constant growth rate of approximately 8% per year. While the aim is to create a city of some 50,000 people, the rate and type of infrastructure development will ultimately determine the rate of population increase. Environmental issues such as water storage capacity and consumption, solid waste management, and waste water management, particularly for industrial developments, will also be important factors in determining the capacity for sustainable growth.

### **WASTE MANAGEMENT AIMS AND OBJECTIVES**

The goal and aspiration of waste management in Auroville is the achievement of “zero waste”. This aspiration is one that is shared by many communities, cities and municipalities around the globe as they attempt to find ways to minimise the increasing quantity of solid waste. However the idea of zero waste is often seen pragmatically in the context of the prevailing lifestyles and resources available to each community. There is a general recognition that communities throughout the globe will produce a range of wastes for which there is no immediate resource recovery or avoidance options.

Auroville has a unique opportunity to achieve zero waste through controlling the entry of substances and materials for which there is no viable reuse or resource recovery option.

Strategies for achieving this include:

- Avoidance of unrecyclable packaging materials such as laminates and some plastics.
- Substitution of these packaging materials through the use of recyclable packaging or the supply of products through bulk dispensary.
- Consumer education in respect to what packaging is able to be recycled.
- Avoidance and substitution of products used by commercial, industrial and service units, which may be hazardous and are difficult to recover.
- The development of micro-enterprises which are able to reprocess materials that are not currently recyclable.
- The discovery and development of existing and new technologies, which recover materials that currently exist in the residual waste stream in Auroville.



The Auroville Solid Waste Management Strategy and the Village Waste Management Strategy (Auroville Area) have been written specifically to implement these opportunities.

In addition to the aspiration of “zero waste”, Auroville’s planners are currently planning for the long term infrastructure needs of the City. This will be achieved over the next two years under the auspices of the Asia Urbs project. It is recommended that the planners work in close co-operation with Eco-Service to resolve these infrastructure issues. A number of facilities will need to be planned including:

#### **Resource Recovery Centres**

These facilities will be located at strategic points where Eco-Service collectors will consolidate and process Auroville’s solid wastes. Drop off areas will also be incorporated where residents are able to deliver solid wastes to the facility outside the sphere of the regular collection service.

#### **Storage and Transfer Areas**

These sites, which may be an integral part of Resource Recovery Centres, will be the areas where bio-medical wastes, hazardous wastes, commercial and industrial wastes as well as household refuse is treated, stored and in some cases transferred to final disposal facilities. There may be some wastes, such as bio medical wastes and domestic residual wastes, which may be transported to regional waste management facilities. These facilities may include JIPMER or the proposed sub-regional landfill at Mettupalayam, in the Oulgaret Municipality.

Inert construction and demolition wastes will also require a number of storage, processing and transfer areas (up to four sites strategically located around Auroville).

With a commitment to sustainability, developments need to strive for closed loop systems, where land producing food is replenished from rich organic fertilisers produced from the organic wastes. In the higher density areas

planned, careful thought needs to be given to waste storage and collection systems within each household, and developing on-site composting operations.

We recommend that organic waste recycling be undertaken on a decentralised model. The key is reducing transport and energy use wherever possible, and utilising wastes produced on site in the development of food growing and aesthetic gardens. In areas of high density, organic waste recycling will take place close to the site of production using processes which do not compromise local amenity.

### **Final Disposal Site**

With the exception of hazardous wastes, which will be directed to a secure scientific landfill in Chennai, all other non-recyclable wastes may be disposed of at this location. Final disposal may include bio-medical waste incineration, waste to energy or secure landfill. It is unlikely that viable waste to energy technology will be appropriate for a City of 50,000 people, particularly if the zero waste goal is to be attained. It is expected that the small amount of residual waste produced each year is best suited to final disposal in a secure landfill after being fully stabilised. However, this will be further clarified through a residual waste research and development project. Bio-medical wastes can also be landfilled after autoclave sterilisation, negating the need for an expensive bio-medical waste incinerator. The final disposal site may also form a part of the Resource Recovery Storage and Transfer facility.



### A SHORT HISTORY OF WASTE MANAGEMENT IN AUROVILLE



