

## WASTE MANAGEMENT AND RECYCLING

In Trinidad and Tobago, the average person generates approximately 4 lbs of waste per day. This amounts to approximately 1,000 tonnes of waste that reaches the landfill sites per day. Apart from this, large quantities of waste are also improperly disposed of, and as a result, pollute our streets, drains, rivers, beaches and other environs.

The problem here, is that we generate too much waste, which has to be disposed somewhere, and in a manner that will not have adverse effects on our environment. The most common disposal method of solid waste is the landfilling method. As the name implies, the process involves disposing waste in an open area, where it will be compacted with tractors, and then covered with earth. So, what in fact happens is that eventually the land is "filled up", hence the name.

This, of course is an over simplified explanation of a landfill. The Handbook of Solid Waste Management by Frank Kreith, defines a Sanitary Landfill as. "an engineered method of disposing solid wastes on land in a manner that protects human health and the environment. Waste is spread in thin layers, compacted to the smallest practical volume, and covered with soil or other suitable material at the end of each working day, or more frequently, as necessary."

So, the system of landfilling is a lot more complex than just the dumping of rubbish. It involves several engineering principles and a variety of specific technologies such as, landfill liner systems, leachate collection and treatment systems, landfill gas control and recovery methods, and other monitoring systems.

You may be wondering why so much emphasis is being placed on landfilling. Well, the main reason is that, many persons may not be aware, but here in Trinidad, landfilling is our main method of final disposal. Also, landfills usually have a limited capacity or life span for accepting waste.

Beetham Landfill, which accounts for 65% of this country's waste, will reach its capacity within the next few years, thus, an alternative site or method of disposal would have to be considered

soon. Apart from the availability of land, landfill site selection is hampered by public concerns about the environment, property value and nuisance problems. Let's face it, nobody wants a landfill in their neighborhood.

For some communities, this dilemma has already reached crisis level. For others, the crisis still looms in the future. In any case, the problems associated with solid waste generation and management will not disappear, and without action they are likely to become worse. Therefore, we need to prolong the life spans of our landfills. One way of doing this, is by implementing the proper landfilling practices, as we mentioned earlier. The other way is to reduce the amount of waste that reaches the landfills.

## **NATIONAL INTEGRATED WASTE MANAGEMENT SYSTEM**

Waste is a problem that plagues all human societies and T&T is no different. However, as a small island with such a fragile ecosystem and limited land space, the problems associated with improper waste management are magnified one hundred fold. According to statistics on solid waste generation the generation rate of garbage for the city of Port of Spain is 1.54 kg/inhabitant/day.



The problems are even more acute when consideration is given to the competing land uses and the existing waste disposal method of landfilling. Therefore, the need for land to be allocated to meet this demand requires the re-examination of present day disposal and land filling methods.

The Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL) has been given the overall responsibility for waste management by central government and specific responsibility in the areas of the management of three landfill sites, industrial and commercial

solid and liquid waste collection as well as paper and cardboard recycling activities.

In order to meet these challenges, Trinidad and Tobago needs to implement a National Integrated Waste Management System (NIWMS). The NIWMS would incorporate all the component parts to establish a waste system that moves all waste from generation source to final disposal.

The objective of implementing the NIWMS is to provide proper administration for both contractual and municipal collection crews with the provision of details on types of vehicles to be used, the collection routes and times, the contract period for contracted collectors, the establishment of transfer stations and the method of final disposal.

Within this system, the accompaniment of a revised waste characterization study will also assist in the selection of appropriate management strategies and will also look at the influence of political support and public education in the formulation of a comprehensive approach.

The implementation of an NIWMS is critical to the future of proper waste management in Trinidad and Tobago. This system of waste management incorporates the principles of the 4 R's – REduce, REuse, REcycle and REthink. It also looks at the aspect of waste diversion where the different waste types and processes required for special collection, transportation and final disposal are identified.



SWMCOL views the development and implementation of a NIWMS as the single most significant action required to achieve a sustainable and economically viable waste management system for Trinidad & Tobago. To date, this system is being looked at under the auspices of the Ministry of Local Government. Several committees have been set up with key members to look at the different aspects of the Integrated Waste Management System. Implementation is

expected to be phased through the different programmes which fall under the NIWMS. This implementation is in keeping with the millennium development goals and the objectives stated in the Vision 20/20 document for environmental sustainability.