

than decreased. This is not surprising if one considers the past record of the old dumps.

Landfills require close control of leachate, litter, and fires. They must be carefully operated with good cover and tight control of the tipface, and they should be well-screened from view. Access roads to the landfill should be kept clean. There is now a new imperative on landfills for control of landfill gas. This gas can be dangerous and cause explosions, and methane, its main constituent, is a very serious contributor to the greenhouse effect. The gas can also smell and be toxic.

Most people accept the need for landfills, particularly if everything has been done to reduce and reuse the wastes prior to landfilling, but no one seems to want these facilities anywhere near them. The only way around such attitudes is for the operators of these facilities to improve their records and demonstrate to the public that the landfills can be run without causing nuisances and environmental degradation.

**Hazardous Wastes**

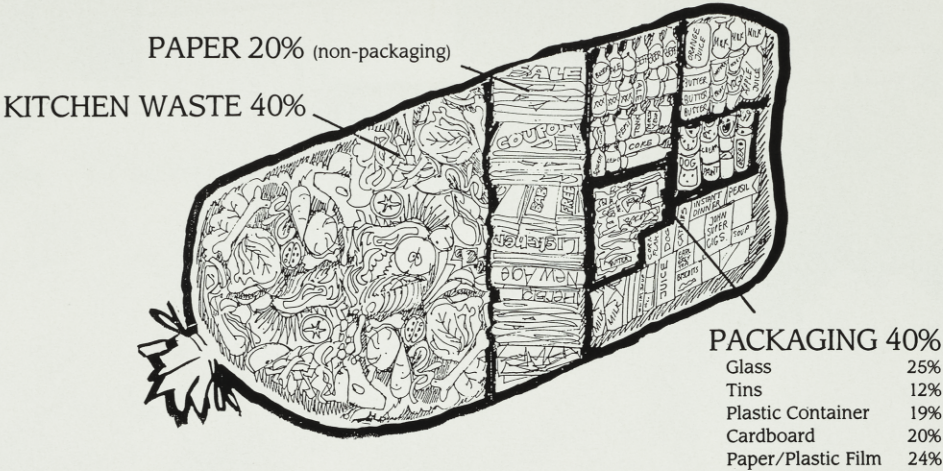
Another matter which needs urgent attention is the disposal of hazardous waste. Over the last few decades the chemical industry has thrived, producing a whole range of products which have become eagerly accepted by our consumer society. Many of these products are very useful and contribute much to our present standard of living. Many others may be of doubtful use. The production of hazardous waste is a problem that has crept up almost unsuspectingly on this thriving industry. Disposal of these wastes and the clean-up of contaminated sites are now presenting enormous and costly difficulties and much environmental degradation has occurred.

In New Zealand the amounts of hazardous waste being generated are not large, but they present some difficult disposal problems and these wastes are not generally being properly managed. The main types of industry which produce hazardous waste in New Zealand are the timber treatment, metal finishing, chemical processing, tanning, and petroleum/oil industries. These and other industries produce a wide range of wastes, including heavy metals (for example arsenic, chromium, cadmium), acids and bases, cyanides, pesticide wastes, phenols and other organic substances such as PCBs.

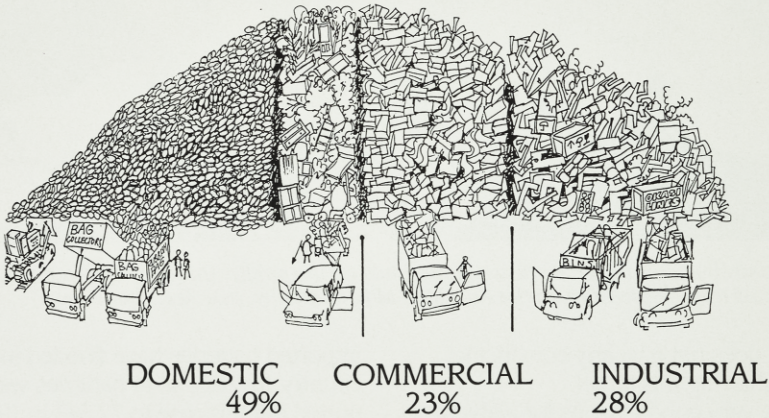
In Auckland the degradation of the Manukau Harbour with contaminants such as the pesticide chlordane, and contamination of sites in Penrose and Onehunga and elsewhere has focused attention on the problems of hazardous waste disposal. There are around 2500 industries in the Manukau catchment. 160 of these have been required to upgrade their work practices or facilities to prevent pollution.

Controls to deal with hazardous waste could take the form of licensing disposal sites, a manifest system for transport of hazardous wastes to ensure such wastes do not get "lost" en route, strong penalties for unsatisfactory disposal, and an effective programme for notifying and cleaning up contaminated sites. Clear guidelines and a good advisory service are also needed. The Government has decided to set up a Hazards Control Commission to manage hazardous chemicals and other hazardous substances such as genetically modified organisms.

**Inside the Domestic Rubbish Bag**



**Stacking Up NZ's Rubbish Mountain**



Source: Tong & Associates

**Rates of Return**

MOST FOREST & BIRD MEMBERS will recall the days when they could return a soft drink bottle to the dairy and receive a refund. For many children collecting and returning bottles provided an important source of pocket money.

Today, thanks to government reluctance to intervene in the marketplace, such incentives are history. The Ministry for the Environment has promised to review the waste problem in December 1991 to decide whether a mandatory deposit-refund system should be started.

Meanwhile, across the Tasman, South Australia is living proof that such a system works. It has the highest beverage container recycling rate in Australia. It is also the only state with mandatory deposit-refund legislation on the books.

Deposits of 5c to 10c on small containers and 20c on larger ones are refunded when the containers are returned. The result? Recycling rates of more than 85 percent for bottles and 90 percent for cans. By comparison, the return rate on cans in New Zealand is a trifling 20 percent. Figures for bottles are unobtainable.

In addition, the South Australian system appears to cater for enthusiasts of the "more market" approach. As Geoff Inglis, director of policy in the SA Department of Environment and Planning points out: "The legislation gives people an incentive to collect containers. It is a direct example of the polluter pays principle. Industry runs it and generally makes it as efficient or inefficient as it chooses."