



PROJECT UPDATE

NEWS FROM THE MINISTRY FOR THE ENVIRONMENT

FIRST NATIONAL WASTE DATA REPORT

SEPTEMBER 1997

The first *National Waste Data Report* is written for organisations and individuals who have an interest in waste management. It presents data on the generation and management of waste in New Zealand. The data is presented in relation to the form or media in which waste is generated; that is, solid, liquid, gaseous and hazardous waste.

Solid waste

Solid waste includes all waste that is generated in a solid form or converted to a solid form for disposal. The solid waste chapter provides data on landfilled waste, and limited data on cleanfilled waste, litter, waste disposed at sea, recycling, and reduction. The data highlights that:

- in 1995, approximately 3,180,000 tonnes of waste was landfilled in New Zealand of which approximately 1,420,000 tonnes is residential waste and approximately 1,760,000 tonnes is industrial waste;
- organic waste is the largest proportion of waste going to landfills and the largest proportion in residential rubbish bags and bins;
- paper and construction and demolition waste represent the next largest categories, although the construction and demolition waste disposed of into cleanfills is probably much greater than that disposed to landfills;
- potentially hazardous waste represents 8 percent of landfilled waste;
- packaging is estimated to be between 10-14 percent of the waste going to landfills;
- an estimated average of 401 kg of residential waste is generated per capita in 1995, which is 20 percent less than the average of OECD countries;
- the total quantity of litter has declined from 1986 to 1994;
- it is estimated that more than 80 percent of the New Zealand population has access to one or more recycling schemes for paper, aluminium or glass.



Liquid waste

Liquid waste includes all waste that is generated or converted to a liquid form for disposal. The liquid waste chapter provides data on wastewater and public water treatment plants drawn from the National Wastewater Treatment Plant Database, and limited data on point source and non-point source liquid waste. The main data include:

- the estimated average daily flow of New Zealand influent at wastewater treatment plants lies between 1.1 and 1.5 million cubic metres/day. In per capita terms this flow (0.41 cubic metres/capita/day) is about average internationally;
- sewage and waste water requiring treatment is generally much stronger (in terms of biochemical oxygen demand, BOD) compared to other developed countries;
- the main source of nitrogen discharges into surface water is agriculture;
- the major point sources of organic pollution (BOD) discharges into surface water in New Zealand are meat processing factories and farm dairies (cow sheds).

Gaseous waste

Gaseous waste includes small particles that can be carried by air, and gases in its associated forms, including dust, smoke, fumes, mist, and vapour. The gaseous waste chapter reports data on greenhouse gases, incineration facilities, and the Auckland Air Emissions Inventory. The main data include:

- emissions of all greenhouse gases have increased between 1990 and 1995, with the exceptions of methane and nitrous dioxide;



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- agriculture was the main source of methane and nitrous dioxide emissions in 1995;
- transport was the main source of carbon dioxide, nitrogen oxides, carbon monoxide and non-methane volatile organic compounds in New Zealand in 1995.

Hazardous waste

Hazardous waste includes information on the acceptance of hazardous waste at New Zealand landfills, regional hazardous waste surveys in the Auckland region and the Otago region, regional hazardous waste collections, exported hazardous waste, the Used Oil Recovery Programme, and contaminated sites and soil clean-up. Main data include:

- 92 percent of New Zealand landfills do not accept hazardous waste;
- liquid waste (mainly trade waste) represented about 98 percent of hazardous waste generated by 609 businesses in the Auckland Region in 1995;
- the vast majority of hazardous waste in the Auckland region in 1995 was generated by businesses in the manufacturing sector;
- approximately 142,000 tonnes of hazardous waste (solid waste component) was handled by final disposal facilities in the Auckland Region in 1995, of which the majority was landfilled;
- New Zealand approved the import of 15,000 tonnes of hazardous waste and the export of 14,701 tonnes of hazardous waste in 1995;
- over 8,000 sites were identified as potentially contaminated in 1992.

Key issues

The key issues identified in this report are:

Waste definitions

- a wide variety of waste definitions exist in New Zealand;
- waste definitions are inconsistently used in the absence of a set of legal or nationally agreed waste definitions;

Waste monitoring methods

- a number of methods are used to monitor waste;
- waste monitoring is mostly undertaken on an ad hoc basis around New Zealand;
- the *Waste Analysis Protocol* an important attempt to provide a uniform method to monitor waste, is not used consistently;

Waste data

- comprehensive data are scarce and reliability can often not be determined;
- national waste data are scarce, especially for hazardous waste, recycling, and gaseous waste;
- aggregation is often impossible because different definitions are used;
- the gathering of data is complicated by the fact that no-

body is required to provide information about quantities of waste generated, treated and disposed;

- the gathering of data at a national level is difficult as most monitoring and data gathering is undertaken by local authorities;
- in the past few years there has been an increase in waste monitoring, in particular at a regional and local level.

The data presented and the framework adopted in this report will be used as the basis for developing environmental indicators for waste, hazardous substances and contaminated sites, as part of the *National Environmental Indicators Programme*.

Further work will also be required to ensure that information on waste is improved over the next few years. Only through monitoring can the effectiveness of the Government Waste Management Policy be gauged. This analysis will occur through a three-year *National Waste Monitoring Programme*. The purpose of this programme will be to review the waste monitoring methods used in New Zealand and to determine what should be done to improve waste monitoring. By facilitating waste monitoring through refining existing methods and developing new methods, it is hoped that data collection will increase and that the data gathered are consistent nationally.

The data collected over the next three years will be summarised in the *Second National Waste Data Report* which will be published in the year 2000. The waste monitoring programme will also assist in the implementation of the indicators for waste, hazardous substances and contaminated sites. Together these will enable the Ministry to review its waste reduction goals in the future.



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