Ministry of Housing,
Spatial Planning and the Environment

Juni 2001

Factsheet

PLASTIC

Waste in the Netherlands

Each year more than 1.2 million tonnes of plastic waste are generated in the Netherlands. This includes a wide range of very different waste streams, for example packaging waste, waste from car dismantling, process waste from the plastics industry, etc. Only a small proportion - between 15 and 20% - is currently being recycled. The great majority is incinerated with energy recovery. A small proportion is used as a fuel for power stations and cement kilns. The use of waste plastics as fuels is likely to grow over the next few years.

Definition

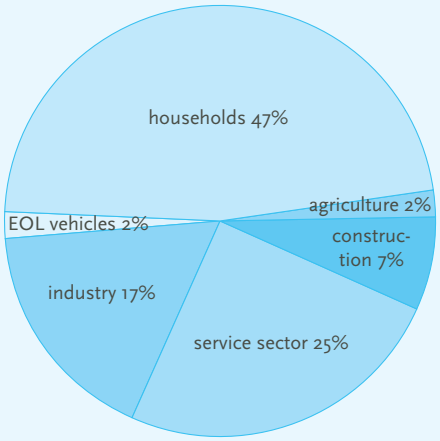
Plastics are used in many fields: as packaging, as a film in agriculture, in cars, for construction, etc. This is why plastics are found in many different waste streams, including household waste, building and demolition waste and industrial waste.

Quantities

The total amount of waste plastic generated in 1999 was 1258 ktonnes. Of this total, 254 tonnes were separated at source for recycling, the remainder being incinerated or landfilled.

Most of the modest quantity of plastic which is recycled originates from industry. Roughly 40% of the total plastic waste consists of packaging.

Origin of plastic waste in 1999
(100% = 1.020.000 tonnes)



Reprocessing techniques for plastic waste

The most desirable way of reprocessing plastic waste from the environmental point-of-view is mechanical recycling. The material is purified, melted and reintroduced as a feedstock for plastic products. One important limitation, however, is that the plastic waste must not contain too many different types of plastic (i.e. must be as homogeneous as possible) and must be reasonably clean.

A second type of reprocessing technology is where less homogeneous plastic waste streams are converted back into petrochemical feedstocks. These feedstocks may be in the form of gases or petroleum-like liquids. These technologies are used to a limited extent in some other countries, but not in the Netherlands. Plastic waste can also be used as a reducing agent in blast furnaces.

A third type of reprocessing technology involves exploiting the calorific value of the waste. Plastic waste can for example be burned in a waste incinerator or as a fuel in cement kilns or power stations. The last example is preferable from an environmental point-of-view because the energy is recovered more efficiently.

Plastic packaging

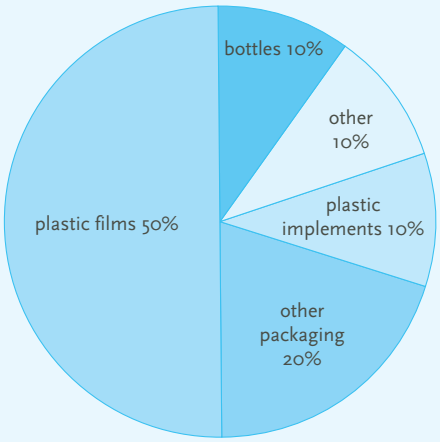
The EU Directive on packaging and packaging waste was implemented in Dutch legislation through the Packaging and Packaging Waste Regulations in mid-1997. These Regulations led to the signing of the Packaging Covenant II in December 1997. The covenant announced that the recycling rate for plastic waste will rise to at least 27%, and if possible 35%, by 2001.

Plastics in household waste

The residual household waste stream consists of 12.3% plastic. This waste consists of large and small plastic film, rigids (butter tubs, meat trays), bottles and flasks. 75% of plastic household waste consists of packaging. The environmental and economic aspects of different plastic disposal options have been studied. Based on the results of pilot projects and studies, it was concluded that house-to-house collection is not cost-effective. Drop-off systems are only considered worthwhile for the return of bottles for re-use.

Another option is to separate plastic waste (with or without other components) from household waste before it is incinerated. Two incinerators (VAM in Wijster, VAG-RON in Groningen) practise separation in this way. The recovered plastic is used as a fuel.

Plastics in household waste, by origin



Plastics in building and demolition waste

The main plastic items in building and demolition waste are window- and door-frames, insulation material and piping.

Plastic piping manufacturers have set up a system for collecting and processing their waste products: in 1998 almost 2500 tonnes of piping were collected and recycled. There is also a collection and reprocessing system for plastic materials from building exteriors. The system is funded by means of a disposal surcharge levied on new products.

Plastic films used in agriculture and horticulture

The Agricultural and Horticultural Plastic Film (Disposal) Decree requires producers and importers to set up a collection and reprocessing system for waste plastic film from these sectors. A system is now in operation for agricultural plastic films. The system is funded in part by payments made when the waste plastic is handed in, and partly by a disposal surcharge. The producers and importers of horticultural plastic film started work on a waste management scheme for this product at the end of 2000.

In support of these schemes, the landfill of agricultural films was banned on 1 January 1996 and horticultural films on 1 April 1997.

Plastics from end-of-life vehicles

The average car contains about 100 kg of plastics. At present, much of this goes through the shredder and is landfilled. A waste management system has been in operation since 1 January 1995 which seeks to increase recycling of various components (including plastics) from end-of-life vehicles. The additional costs associated with recycling and the necessary selective dismantling of vehicles are met in part by means of a disposal surcharge included in the overall price of new cars. The intention is that shredder waste should be beneficially used with effect from 2005 (mainly as fuel).

Plastic waste from industry

Most industrial plastic waste is either process or packaging waste. Because process-related plastic waste is generally homogeneous, much of it is recycled. A ban on the landfill of this waste stream came into effect on 1 January 2000.

For more information

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NB: This is one of a series of factsheets on waste in the Netherlands. The most recent edition can also be found at www.minvrom.nl

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