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Hazardous waste

More than half of all hazardous waste is not disposed of correctly.

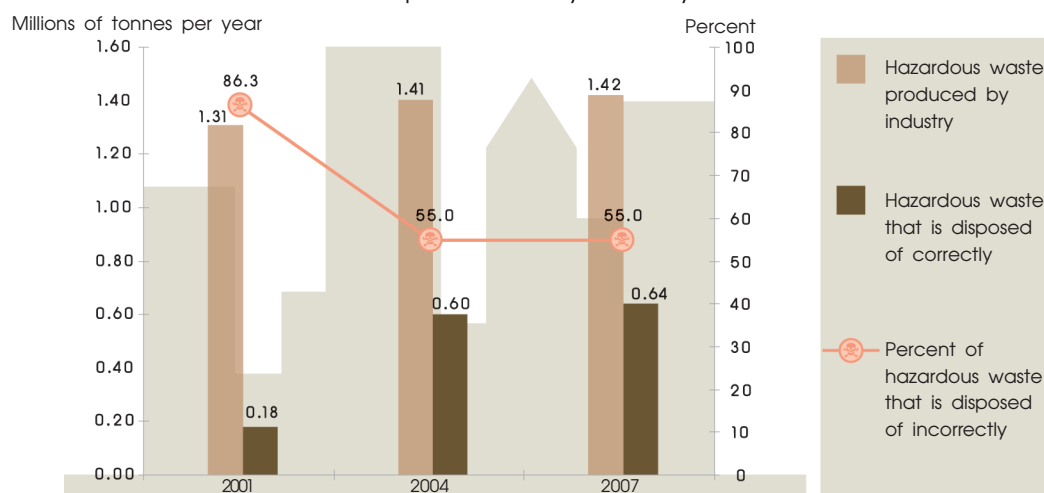
Prepared by Rangsan Pintong, Department of Pollution Control

Incorrect disposal of hazardous waste allows toxic chemicals to pollute the environment and enter food chains.

Households, communities, and factories all produce hazardous waste. In 2004, a total of 1.8 million tonnes of hazardous waste was created in Thailand. Of this waste, 55% was not disposed of correctly. There are two types of hazardous waste. The first is waste from factories such as those making metal coatings, batteries, and leather products, and includes heavy metals, solvents, and acid. The second type of hazardous waste comes from communities, including domestic and commercial activities. Prominent producers include car repair shops, ports, airports, hospitals, and farms. Hazardous materials discarded by communities include fluorescent bulbs containing mercury, light starters containing PCBs, detergents with corrosive ingredients, ammonia, pesticides, motor oil, batteries containing hydrocarbons and heavy metals, and paint thinner containing solvents. Most of these wastes are mixed in with ordinary garbage and are placed in normal landfills which are not designed to cope with hazardous products. The hazardous materials, therefore escape into the environment where they enter food chains, soil, water, and air. They affect the health of the human population and the environment, directly and indirectly. The secret burial and disposal of waste during 2004-2006 in Pak Chong District, Nakhon Ratchasima Province, Sriracha District, Chonburi Province, Huay Khwang District, Bangkok Province, and Tha Muang District, Kanchanaburi Province illustrate the fact that many dangerous wastes are still not disposed of correctly.

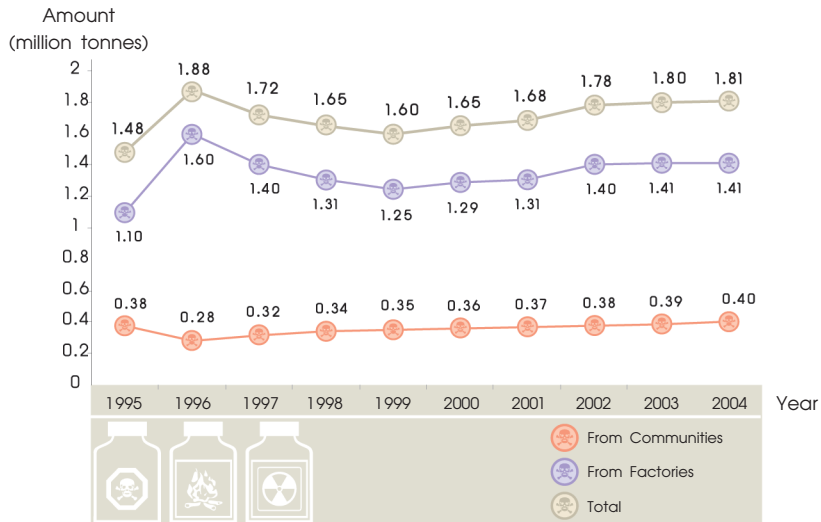
The government needs to support the rapid expansion of centers for hazardous waste control. There should be a reporting system and guidelines for the transfer of hazardous waste. There should be strict penalties for people who do not follow the regulations. The private sector should contribute by installing clean technologies and obeying the rules. The general public needs to act as the eyes and ears of the government by keeping watch for cases of incorrect disposal of hazardous waste and reporting them immediately to the authorities. The public also needs to keep abreast of current scientific information on hazardous wastes, in order to give advice to friends and relatives involved in the production of waste so that everyone can contribute to safe disposal. For instance, people need to avoid mixing dangerous wastes with ordinary garbage, and need to avoid using products that cause hazardous wastes.

Hazardous waste produced by industry, 2001 - 2007



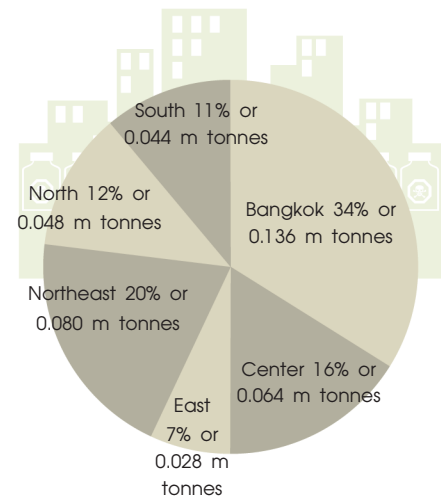
Source: Summary of Pollution in Thailand, 2001, 2004, 2006, Department of Pollution Control, Ministry of Natural Resources and Environment

Production of hazardous waste, 1995-2004



Source: Department of Pollution Control, Ministry of Natural Resources and Environment, 1995 - 2004

Hazardous waste from communities, by region, 2005



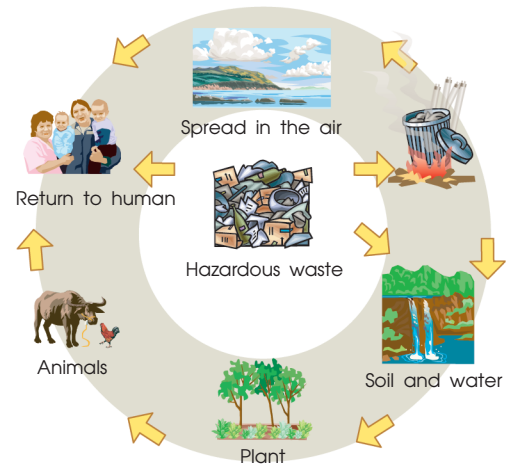
Source: Summary of Pollution in Thailand, 2004, Department of Pollution Control, Ministry of Natural Resources and Environment

Methods for disposing of hazardous waste at a hazardous waste disposal center

Method	Cost per tonne	Capacity
Treat	2,600	A 50 cubic meter facility can treat 27 cubic meters per time
Bury	2,600	A landfill of 354,000 cubic meters capacity can be used for 20 years
Produce fuel	4,500	35 Tonnes per day
Incinerator	5,300	Rotary Kiln with a capacity of 170 tonnes per day, and equipment for controlling air pollution

Source: Program to Investigate the Construction of a Center for the Disposal of Hazardous Waste, Department of Pollution Control, 2002

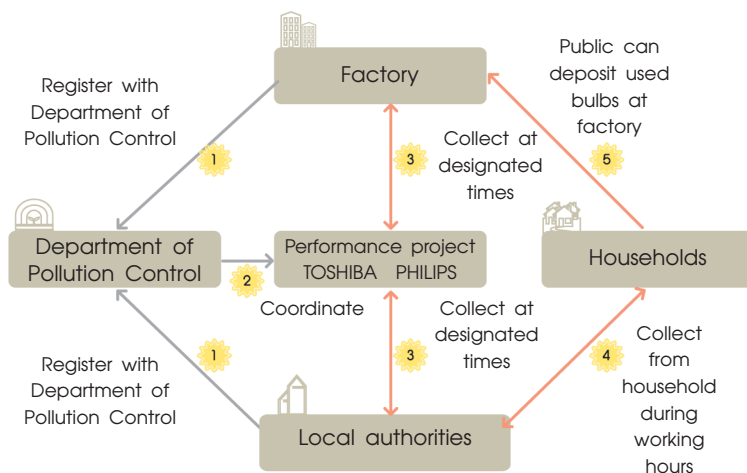
An example of the circulation of hazardous waste such as fluorescent bulbs



Source: Managing Waste from Fluorescent Bulbs in Thailand, Department of Pollution Control, Ministry of Natural Resources and Environment

System for disposing of fluorescent bulbs in Thailand

The Department of Pollution Control is responsible for the system and acts as coordinator



Source: Managing waste from fluorescent bulbs in Thailand, Department of Pollution Control, Ministry of Natural Resources and Environment

Quantities of hazardous waste from factories that were disposed of by facilities using incineration, treatment, and burial, 2004

Facilities using incineration, treatment, and burial	Tonnes
Center for Disposing of Industrial Waste, Mabtapthut, Rayong (GENCO) disposes of all types of industrial waste	68,000
Center for Disposing of Industrial Waste, Saemdam and Ratchaburi (GENCO) disposes of all types of industrial waste	75,000
The 7 Cement factories use hazardous waste to produce fuel	457,000
Recycling centers	50,000
Total	640,000

Source: Department of Pollution Control, Ministry of Natural Resources and Environment