



Waste



Photo: Kelsey Porter via RNZ
Fox Glacier Landfill Washout

Waste

Introduction

Natural resources are naturally occurring materials that form our Earth. These materials include air, water, soils, rocks, timber and plants. Our basic needs of air, water, food and shelter are supplied by these resources. If just one of these four basic needs is removed from a habitat, humans, animals and plants may suffer.

Some resources are renewable like trees, others are non-renewable or finite like oil. As earth's population increases, demand on these resources goes up and their quantity is diminishing. Most of this resource use stems from people and industries in developed countries like New Zealand, Australia, the United States and Europe.

Excess food, packaging, products and unwanted materials end up as waste in our landfills. In order to sustain our quality of life, we must conserve our resources through waste reduction, reuse and recycling.

The Earth is the foundation of all life and all life is interconnected, so taking care of the Earth and its resources should be a responsibility shared by all.

What is waste?

The Oxford Dictionary defines waste as something "to use or expend carelessly, extravagantly, or to no purpose".

Waste is classified into either organic (living matter) or inorganic (non-living matter). **Organic waste** can include food scraps, paper, grass clippings and other plant material. **Inorganic waste** includes plastics, glass, aluminium and other metals along with sand, bricks and hazardous waste.

Waste is referred to by names like rubbish, trash, junk, refuse and garbage. Humans have always produced some sort of waste.



Up until fifty years ago, waste was not a big problem. Our great grandparents conserved everything they used from food, and clothing, to wood. Goods were difficult to manufacture and transport, so nothing was wasted. Things were usually made of biodegradable material.

Since then, great advances have been made in manufacture, goods are more readily available and affordable. Cheap disposal has replaced durable goods. This trend towards a consumer oriented society has created an enormous amount of waste, this has intensified with the continual increase in world population.

As the availability of natural resources and landfill space dwindles, society must change the way it deals with waste. More efficient and environmentally sensible ways of handling waste such as reduce, reuse, and recycle will help to sustain our resources and our planet.

A history of waste — interesting periods in time

In Ancient Greece, people would cover their waste with a thin layer of dirt. This resulted in a rise in the elevation of towns and cities by 1.4 metres per century.

The earliest waste disposal sites were in Athens in around 500BC. The waste had to be disposed of at sites at least 1.5 kilometres from town.

In the Middle Ages in Europe, waste was disposed of in the city streets. The waste usually consisted of rotten food, bones and other leftovers as well as human waste. 'Gardy-loo' was a phrase used to warn people in the street about waste being thrown from a house. In the early 14th century, the mayor of London declared that no waste should be disposed of in the streets. However, the practice continued until the Black Plague of 1348; two-thirds of the population died from the disease which was spread by fleas on the rats breeding in waste discarded on the streets. After the plague swept through London, the city employed people called 'rakers' to rake waste onto boats and transport it out of the city to be buried.

During the industrial revolution in the 18th and 19th centuries many people moved into urban centres. When people lived in the country with lots of space, they were able to store material to be reused such as scrap metal or old clothes. In cities there was less space to store things for reuse. A lot of the rubbish was thrown into the waterways, most cities did not have enough waste collection for the growing population. The industrial revolution led to an increased production of materials, and waste products. Without by-laws factories would dump waste into waterways, which became a breeding ground for diseases, including

cholera. Britain began building rural landfill sites for waste disposal. The rubbish bin was invented in 1875.

In America the first landfill sites were built in 1820s; before then, swamps were used and sold as land once they were full! The first incinerator was built in 1885.

Waste in the future

As we move forward in the 21st century we are faced with environmental challenges on a new scale. Climate change is an issue affecting us all. Our rate of consumption and waste production has a direct impact on climate change. The good news is that people are becoming aware of the reasons for and impacts of the changing climate and are starting to make changes, and developing technologies for reducing waste.

In New Zealand

New Zealand produces an estimated 3.5 kg of waste per person each day! Every year 1 million tonnes of plant matter and food scraps are sent to landfill, about 320kg of organic waste per person, plus 60,000 tonnes of paper and cardboard (about 170kg per person). We also throw out many other things in a year, including, 300 million metal cans (about 80 per person) and 30 million litres of used oil.



Boyan Slat, developer of the great ocean clean up