

# Waste and recovery

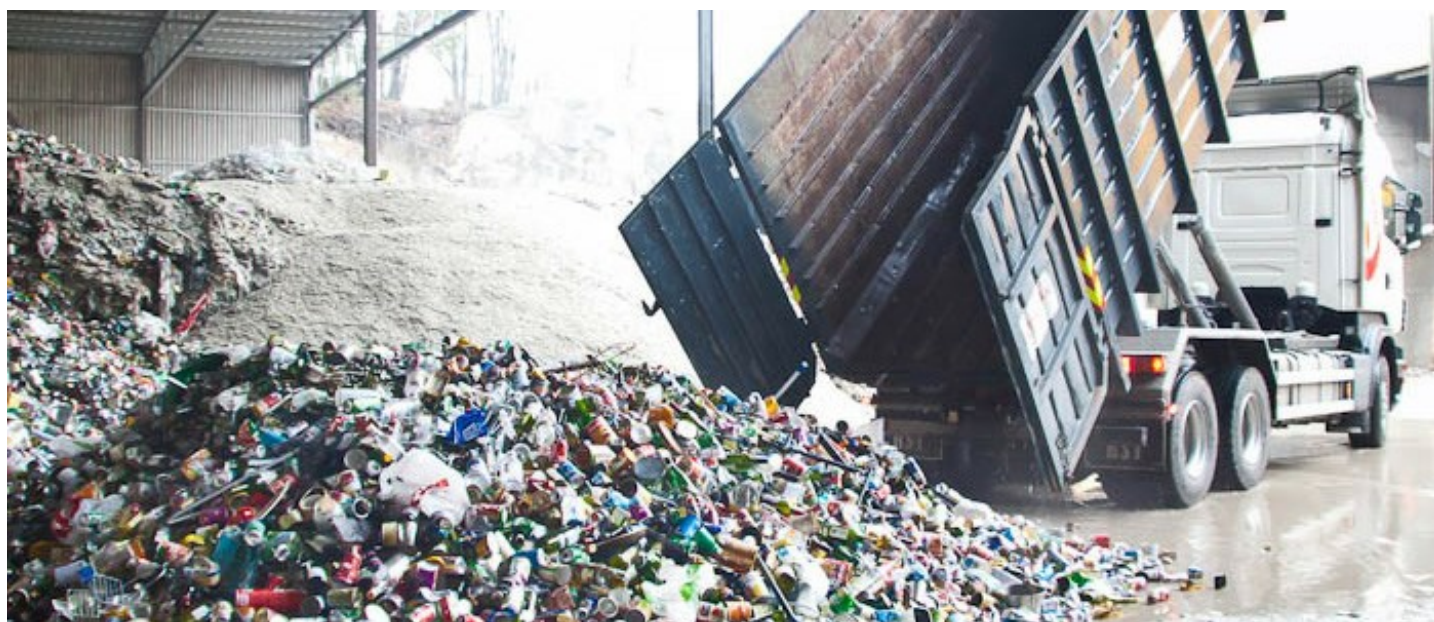
## Innholdsfortegnelse

1) Hazardous waste

# Waste and recovery

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Economic growth contributes to rising waste volumes. However, in recent years more waste has been recovered and emissions from the waste sector have been reduced.



Norsk glassgjenvinning at Onsøy. Photo: Linn Bryhn Jacobsen, the Norwegian Environment Agency

## STATE

### Increase in waste volumes, but more is recovered

A total of 11.9 million tonnes of waste was generated in Norway in 2014. This was an increase of 7 per cent from the year before. Industrial waste accounted for 22 per cent of the total waste quantity, while households contributed to 20 per cent.

We have a national target which states that the total quantity of waste shall be considerably lower than the growth in the economy. Overall, for the entire period from 1995 to 2014, the quantity of waste grew by 60 per cent, while GDP increased by less than 50 per cent.

### Much waste is recovered

Twenty years ago, it was common to landfill most of the waste in Norway. Since then, the proportion of the waste that is landfilled has decreased, while the proportion that is recovered has increased correspondingly. In 2014, approximately 80 per cent of all waste was recovered.

Waste contains resources, both energy and materials, which can be recovered in the recycling process. Material recovery involves using the materials as raw material in new production of goods and energy is also saved by not using virgin materials. Aluminium recycling is a good example of such practices. If the waste is not landfilled, but used to replace fossil fuels, greenhouse gas emissions are further reduced.

The figure shows that material recovery and incineration with energy recovery are the most common treatments today.

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Impact

## Environmental impacts of waste

The environmental impact of waste treatment and disposal depends on:

- the volume of waste produced and its composition
- the amounts illegally disposed of
- the amounts that are landfilled or incinerated
- the standards at the treatment plants

Final treatment of waste means landfilling or incineration, and the two treatment methods result in different environmental impacts.

Landfilling leads to the generation and release of methane, a greenhouse gas. Furthermore, hazardous chemicals may be released to the environment through sewage water. Landfilling also represents a threat for coming generations as emissions continue for a very long time after waste is deposited.

Incineration of waste may lead to emissions of flue gases containing hazardous chemicals, dust and acidic components.

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### DRIVING FORCES

## Economic growth results in more waste

Economic growth, or growth in production and consumption, is the key driving force behind the growing waste volumes.

Larger homes, higher housing standards, frequent redecoration and reconstruction, and increased spending on furniture, household appliances, mobile phones, PCs and clothes are typical examples of how affluence generates waste.

Our lifestyle also dictates how much waste we produce. A hectic schedule makes disposable products attractive, and buying new products can be more appealing than repairing old ones.

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### RESPONSE

## Waste management

In Norway waste is regulated in various ways, and there is an interplay between regulation at central and local levels. The central government authorities set the general framework, leaving municipalities and industry with a relatively free hand to design local collection and treatment solutions. Important waste policy instruments

The authorities have put in place a number of instruments (e.g. legislation, taxes, and economic incentives) targeted at the municipalities, business and industry.

The most important waste policy instruments are:

- municipal responsibility for household waste
- business and industry responsibility for dealing with the waste they generate, including the collection and appropriate treatment of certain types of waste products, such as ee-waste, packaging, cars, tyres, batteries, lubricating oil and PCB-windows
- regulation of landfilling and incineration in accordance with EU legislation
- waste management plans as a mandatory element for all building projects, as part of municipal administrative procedures
- ban on landfilling of biodegradable waste from 1 July 2009

So far, we have seen a positive effect especially with regard to waste recovery and reduced emissions from waste treatment. The full effect of new policy instruments is expected to increase. This particularly applies to the initiatives that require re-adjustment by the municipalities and businesses, and a change in people's habits and behaviour.

# 1. Hazardous waste

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