



## Breaking the link between economic growth and waste generation

**High levels of waste production** must be tackled as part of the move towards sustainable living. Recent research has used Sweden as a case study to assess the strength of suitable policies and strategies that are required to break the link between economic growth and waste generation.

**Over the past few decades** the amount of solid waste has grown alongside growth in Gross Domestic Product (GDP). For example, in the EU-15 the total quantity of municipal waste grew by 54 per cent per person between 1980 and 2005. In Sweden, manufacturing waste increased by 60 per cent over the same time.

Waste prevention is a top priority for the EU<sup>1</sup>, although a future target for waste reduction has not been specified at EU level. In Sweden, an assessment by the Swedish Environmental Objectives Council<sup>2</sup> suggests it will be difficult to avoid increasing quantities of waste.

This study developed two scenarios to investigate the relationship between waste generation and economic activity for the period 2006-2030 in Sweden. One scenario is based on the official projection of the Swedish economy, which is linked to historical data on different categories of hazardous and non-hazardous waste flows from economic and human activities. The other scenario adjusts the future quantities of waste generated by households, and companies' material inputs and production processes of goods that would be necessary to achieve absolute decoupling (i.e. no growth in waste whilst GDP still increases).

The results suggest that if waste generation continues according to historical figures, there will be relative but not absolute decoupling of waste quantities by 2030. That is, waste quantities will still increase but at a lower rate than growth in GDP. Of the overall waste generated, total non-hazardous waste increases by 52 per cent and hazardous waste by 72 per cent compared with an estimated growth in GDP of 67 per cent from 2006-2030.

To achieve absolute decoupling (i.e. no waste growth), waste production by firms and households must decrease relative to economic activity in the future. Waste generation related to materials used in the production of goods must decrease at about twice the historical rate; that is, a reduction of about 2 per cent per year for both hazardous and non-hazardous waste.

Waste related to production processes must decline by 1.35 and 2.09 per cent per year for non-hazardous and hazardous types of waste respectively. All household waste must be reduced by 3.36 per cent a year.

The amount of waste that must be reduced, as indicated by this study, suggests strong policy measures are required to move companies and households towards sustainable production and consumption, where waste generation is decoupled from economic growth.

For companies, policy instruments, such as a tax on virgin materials, must ensure production techniques change to those that generate less waste. For households, policy instruments, such as different VAT rates for goods and services that generate less waste, are needed to change the pattern and intensity of domestic consumption.

1. See: <http://ec.europa.eu/environment/waste/index.htm>

2. See: [www.sweden.gov.se/sb/d/5775](http://www.sweden.gov.se/sb/d/5775)

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