

# World-class waste management

Well-functioning waste management contributes to reducing climate impact and implementing the global sustainability goals and national environmental objectives.

Sweden's municipalities and Swedes are good at waste management. From sorting to collection and recycling. With this publication, we want to briefly present the development and important trends in Swedish waste management. Trends that illustrate how far we have come in Sweden, but also how far we still have to go to achieve Avfall Sverige's vision – Zero Waste.

Statistics for 2022 show that the volume of household waste amounted to 4.7 million tonnes, equivalent to 449 kg per person. This is a decrease compared to the previous year. We can also see that the amount of food and residual waste decreased by 3 percent, from 199 kg to 193 kg, compared to 2021. This is a positive development towards achieving our shared goal of a 25 percent reduction in food and residual waste between 2015 and 2025, as well as meeting both national environmental objectives and targets set by the EU. But much more needs to be done so we can reach our goal together!

The waste charge is intended to cover customer service, information and, not least, the collection and treatment of waste, as well as work at recycling centres and waste prevention efforts.

On average, a Swedish household pays SEK 6 per day for this. Swedish waste management is good value for money.

Waste management is an important societal function, with the municipalities serving as one of the main actors handling this in an environmentally safe and sustainable way as part of their public duties. The municipalities are taking action to minimise waste, promote reuse and ensure that the waste produced is recycled, recovered and managed. The rest of society also needs to take responsibility. How things are designed and produced, as well as how people consume and then sort their waste, are crucial factors in how successful waste management can be. For the efforts to be successful, everyone needs do their part and the municipalities need to continuing their responsibility for waste management.

The statistics are mainly taken from Avfall Sverige's web-based statistics system Avfall Web.

# WOULD YOU LIKE TO LEARN MORE?

See "Swedish waste management", which can be found at avfallsverige.se

Malmö, July 2023

The term household waste refer to the waste generated by households and businesses that falls under municipal waste responsibility pursuant to Chapter 15, § 20 of the Swedish Environmental Code. Compared with the concept of municipal waste, construction and demolition waste from households is included, while waste from park and street maintenance is not included.

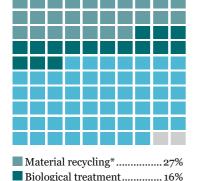
98.4%

98.4 percent of household waste was recycled in 2022. The challenge now is to reduce waste.



volume treated in 2022
5% increase compared to 2021

#### Waste treatment



Energy recovery......55%

Landfill ......1.6%

#### Waste trend

change 2001-2022

Material recycling\*

43%

Biological treatment

94%

Energy recovery

37%

-96%

Landfill

<sup>\*</sup> incl. construction material



Swedish households pay, on average, the price of an apple per day to have food and residual waste collected kerbside and to have access to recycling centres to turn in bulky waste and hazardous waste.



10%

Increase in the collection of source-separated food waste from 2018 to 2022

## **Biological treatment**

2022 > **729 Ktonnes** 1975 > **60 Ktonnes** 

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1,115% more in 2022 than in 1975

# Waste kg/person

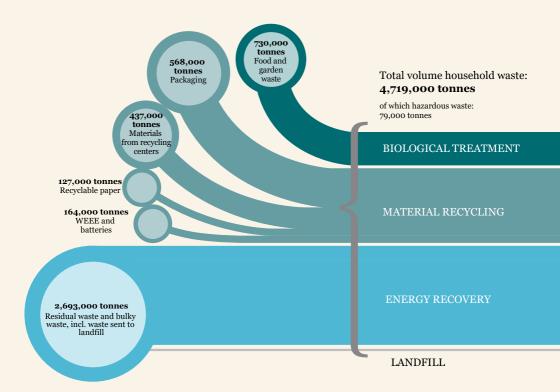
975 2022





<sup>\*</sup> incl. construction material

# Swedish household waste 2022



240 GWh vehicle gas

10 GWh heating + electricity

420,000 tonnes

digestate

co

Fuel (biogas) for 20,000 biogas vehicles that drives 15,000 km/year.

**310,000 tonnes** compost soil

907,000 tonnes raw material

ANAEROBIC DIGESTION

**COMPOSTING** 

**298,000 tonnes** loss to energy

recovery **91,000 tonnes** 

loss to landfill

900 GWh electricity

Energy recovery from waste meets the heating needs of more than

1,470,000 apartments

and the electricity needs of more than 940,000 apartments.

Landfill

0.9 GWh heating 0.04 GWh electricity

1 GWh is the energy required to cover the electricity requirements of a city the size of Lund (about 100,000 inhabitants) for eight hours.

1,000 GWh is the energy required to power all of Sweden's trains, metros and trams for five months. 5,400 GWh heating

# Avfall Sverige's vision: "Zero Waste"

Preventing the creation of waste is the top step in the waste hierarchy. It is the priority of both Swedish and European waste legislation.

The waste hierarchy order of priority is:

- · waste prevention
- reuse
- · material recycling and biological treatment
- · other recycling, e.g. energy recovery
- disposal, e.g. to landfill.

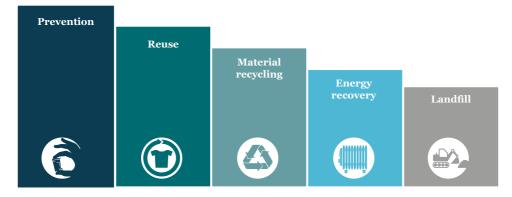
There are different methods for treating waste:

- material recycling
- biological treatment
- · energy recovery
- · landfill.

Material recovery saves energy and natural resources, thereby reducing environmental impact. Biological treatment closes the eco-cycle's loop, produces electricity and biogas, and returns nutrients to the soil in the form of digestate. Energy recovery refers to the extraction of energy from waste to provide both district heating and electricity. Landfill entails waste being stored in a manner that is safe in the long-term.

Hazardous waste can be treated using one or more of these methods, depending on its properties. Waste that may contain hazardous substances should not undergo material recycling, but should instead be phased out of the eco-cycle. Preparation for reuse is also a recycling process.

#### Waste hierarchy



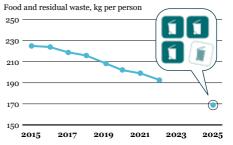
Avfall Sverige has set a target: a 25 percent reduction of food and residual waste volumes by 2025, compared to the 2015 volumes. The idea is that it will serve as an inspiration for municipalities and municipal enterprises in their efforts to reach higher up in the waste hierarchy. Municipalities are free to take up the challenge, which is tough – but realistic.

There is a strong commitment to work on both reuse and waste prevention, and more and more experience is being built up.

The volume of materials and textiles collected for reuse amounted to 33,400 tonnes in 2022. This is an increase of 210 percent since 2014, when Avfall Sverige began measuring reuse. It includes materials collected at recycling centres and other places either by the municipality itself or in cooperation with reuse operators.

The impact of consumption on the environment is becoming increasingly clear. One aspect of consumption that few people are aware of is the large amount of waste produced during the manufacture of various products – the "invisible waste". For example, as much of 86 kg of waste is generated when producing a single mobile phone. In other words, it is not always what you see that is the true heavyweight.

### Follow-up of 25/25 goal



# Materials collected for reuse 2018–2022

