



INCINERATION & LANDFILL

The bulk of EU household waste is not recycled: in 2013 around 57% of household municipal solid waste in the EU was sent to disposal [1] – an average of 275 kg per person per year. There are two main disposal routes: landfilling and incineration (with or without energy recovery).

While both options are at the bottom of the waste management hierarchy, energy from waste - ie certain forms of incineration - comes above landfill. This is used by some to justify burning waste for energy, yet it still fails to keep resources in the economy.

It also produces highly concentrated toxic fumes, and leads to bottom ashes that still need to be treated or landfilled. It also creates lock-in effects, as plants must operate with a constant supply of residual waste for 20 to 30 years to break even.

From a circular economy perspective, both landfilling and incineration represent clear failures to keep materials in our economy, to significantly reduce our import dependency on materials and also fail to lever job creation potential and alternative business models.

WHAT IS THE SITUATION?

Both incineration and landfill are regulated at the European level [2]. In addition, they are also discussed in order to set Best available Techniques Reference documents (BREFs) which aim to standardise requirements for such facilities in Europe and limit their environmental impacts.

However they are not evolving the same way. Between 2009 and 2013, incineration of municipal solid waste has increased even quicker than recycling while landfilling has been constantly reduced. This means landfill diversion has so far benefited incineration more than recycling [3].

Current policies are further tipping the scales towards incineration. In 2012, 20 Member States introduced a landfill tax, while only 8 targeted incineration [4]. Charges for it were lower than landfill taxes across the board, creating further incentives for burning waste. As a consequence several reports indicate a risk of incineration overcapacity at European level [5].

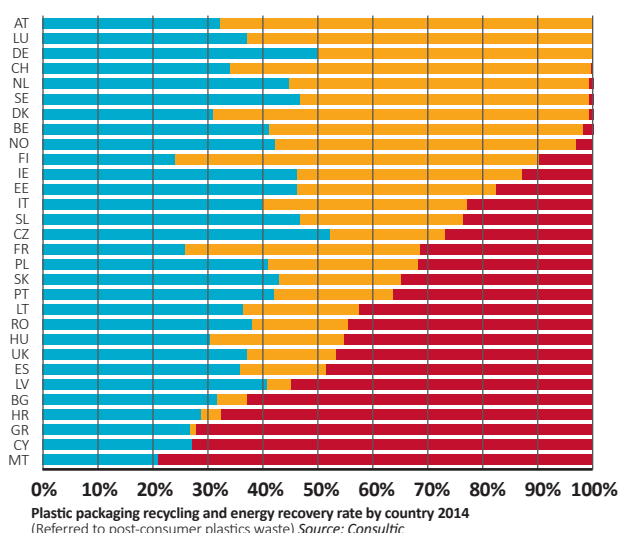
What we need now is a clear restriction on waste – particularly recyclable, compostable, and untreated waste – being sent to landfill or incinerated, even if energy can be recovered from it.

FACTS AND FIGURES

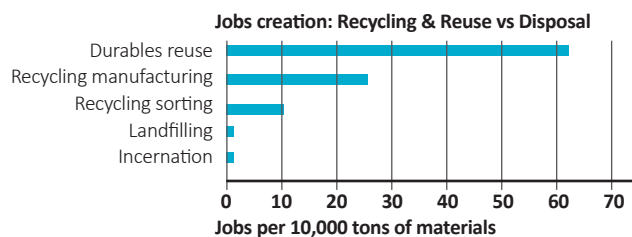
A Plastic recycling is endangered by disposal capacity, being incinerators or landfills. More incineration also represents an obstacle for increased plastic recycling.

■ Recycling rate ■ Energy recovery rate ■ Landfill rate

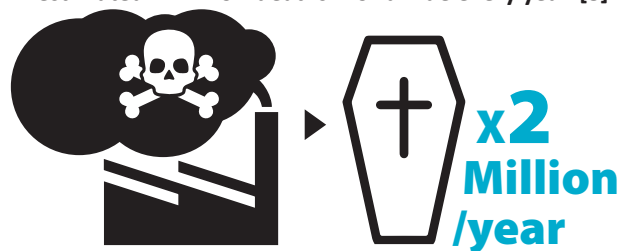
B More than 90% of materials currently disposed of in incinerators and landfills can be reused, recycled and composted. [6]



C Re-use and recycling creates many more jobs than incineration and landfilling. [7]



D Ultra-fine particles, including those produced in incinerators such as PCBs, dioxins and furans, cause an estimated 2 million deaths worldwide every year. [8]



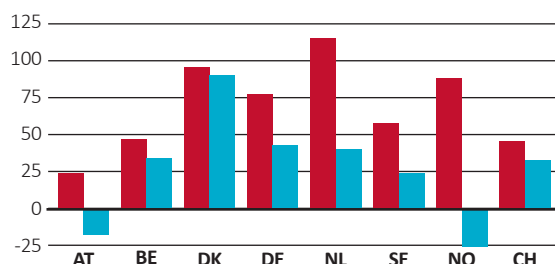
CASE STUDIES

A landfill ban alone is not enough. [9]

Landfill bans have been introduced in seven European countries. There is consistent evidence that such measures have led to increased waste-to-energy incineration rather than boosting recycling. They have also failed to promote waste prevention and reuse, particularly where supply-dependent contracts were set, where municipalities are obliged to provide a minimum quantity of waste to the incinerator. In **Austria and Norway**, landfill bans even brought decreases in recycling rates.

% Difference between the amount of waste incinerated / recycled in the year before introduction of the ban and in 2013

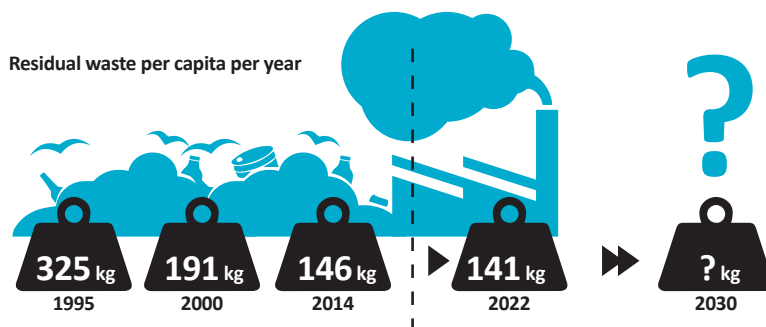
■ Waste incinerated ■ Waste recycled



The best way to limit landfill and incineration is to set a cap on residual waste amounts



The **Flemish Government** has successfully promoted reuse and recycling through restrictions on landfilling and incineration by increasing tariffs and levies for them. At the same time, Flanders introduced bans for landfilling and incineration of separated waste streams and unsorted waste [10]. These restrictions led to the highest recycling and composting rates in Europe, and to ever-decreasing amounts of residual waste [11]. The region has achieved its legal goal of maximum of 150kg of residual waste per capita per year, which is the strictest in Europe. The next legal target is 141kg by 2022 [12]. These measures open up possibilities to further reduce this amount and therefore reduce the disposal of waste in landfills and incinerators.



POLICY RECOMMENDATIONS

- Introduce a ban on landfill and incineration of untreated waste by 2020, with treatment meaning at least stabilisation of organic waste and sorting of mixed municipal waste, and the prohibition of landfilling and incineration of recyclable and compostable waste by 2025
- Set a target on maximum residual waste per capita in a staged manner between 2020 and 2030, aiming at less than 50 kg per capita per year by 2030
- An obligation for Member States to gradually increase taxes on landfill and incineration as part of the notification process for national waste management plans by the European Commission
- No EU funding for new landfills and incineration facilities
- More stringent BREFs for landfills and incinerators
- Prohibit the possibility of supply-dependent contracts in public procurement for disposal and waste treatment facilities
- Prevent Member States from using energy recovery from untreated waste to account for any part of their renewable energy achievements
- Guidance on multi-source district heating, in particular recovering industrial heat, and no EU funding for district heating relying only on waste to energy supply

FOR MORE INFORMATION

BREF-setting process for incineration – <http://eippcb.jrc.ec.europa.eu/reference/wi.html>

BREF-setting process for waste treatment – <http://eippcb.jrc.ec.europa.eu/reference/wt.html>

Zero Waste Europe – www.zerowasteurope.eu

The Potential Contribution of Waste Management to a Low Carbon Economy; Hogg and Ballinger; Eunomia; October 2015

Global Alliance for Incinerator Alternatives – www.no-burn.org



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