

“What place for waste incineration in a circular economy?”

Breakout session

15:15 – 16:30

Arendt Room



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OVAM



"What place for waste incineration in a circular economy?"

"A futureproof EU Waste Framework Directive"

zerowasteurope.eu



Breakout session:

What place for waste incineration in a circular economy?

Jane Vahk, Zero Waste Europe

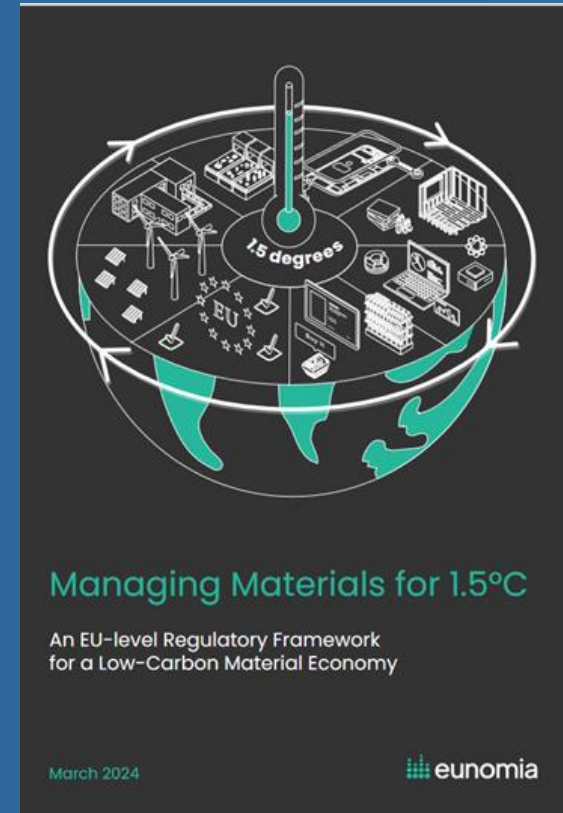


Addressing the Triple Planetary Crisis

- **Material Use Impact:** Responsible for over 55% of global greenhouse gas emissions and 90% of land-based biodiversity loss and water stress.
- **Current Policy Effectiveness:** By 2040, existing and planned policies (e.g., Fit for 55) will reduce EU emissions to 60% below 1990 levels.
- **Required Action:** To limit global warming to 1.5°C and achieve climate neutrality by 2050, the EU must cut emissions by 90-95% below 1990 levels and adhere to a strict carbon budget for 2030-50.

Building blocks for a materials policy framework

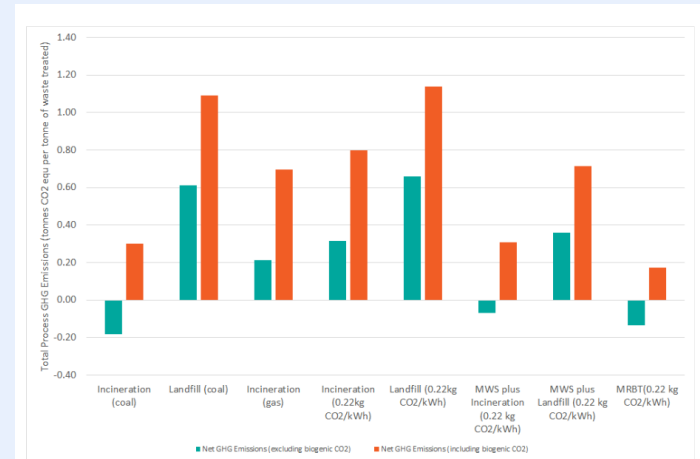
- Decarbonising material production
- Product policy
- Re-thinking the Waste Hierarchy
- A new Materials Framework Directive



Revaluating the role of waste incineration vs landfilling

1. Environmental Impact and Greenhouse Gas Emissions:

- Incineration has higher externalities compared to landfilling (GHG and other pollutants)
- Emerging evidence shows that fly ash and bottom ash from municipal solid waste incineration plants are important vectors of PFASs



Revaluating the role of waste incineration vs landfilling

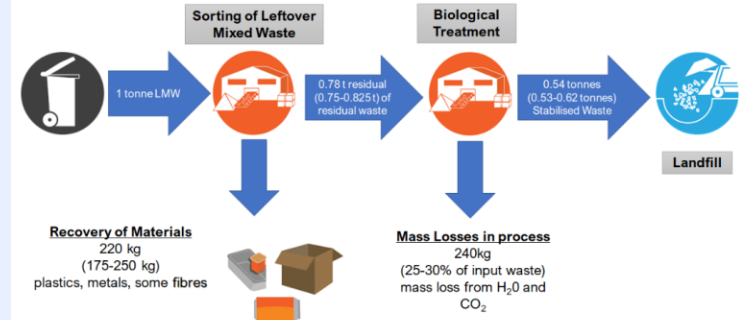
2. Potential for Improved Waste Management through Alternatives:

- Advances in sorting and biological treatment technologies have made it possible to handle mixed waste more effectively.
- Landfilling, particularly when combined with modern pre-treatment techniques like mixed waste sorting and biological stabilization, can outperform incineration environmentally and economically

Does the “formula” below make any sense to you?

$$D2D + PAYT + DRS + MWS = +90\%$$

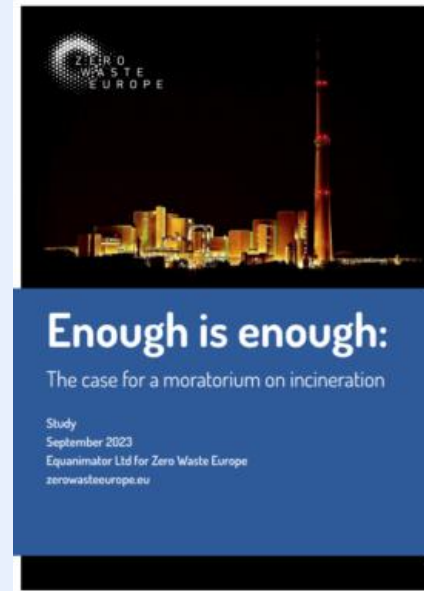
Figure E-1: Mass Flow for MRBT Process



Revaluating the role of waste incineration vs landfilling

3. Economic and Policy Considerations:

- Over-commitment to incineration infrastructure can lock in excess capacity and deter investment in more flexible and sustainable waste management solutions.
- The economic costs of incineration are generally higher than those of landfilling, and these costs are often not justified by the environmental benefits they provide.
- Additionally, the social costs, such as the impact on property values and public perception, are higher for incineration due to concerns about air pollution and the broader area of impact compared to landfills.



Policy recommendations

Figure 2: A Hierarchy for Dry Materials



Net Emissions* = Process Emissions - Avoided Emissions Potential
 Avoided Emissions Potential = Material Preservation Potential* Yield

X per tonne of material recycled

1. **Eliminate the Distinction Between Recovery (R1) and Disposal:**
 Simplify regulations by removing the classification between recovery and disposal processes to create a more streamlined waste management policy.

1. **Mandate Mixed Waste Sorting:**
 Require the sorting of mixed waste before incineration or landfilling to enhance recycling rates and reduce environmental impact.

1. **Set a Target for Reducing Residual Municipal Waste:**
 Aim to decrease residual municipal waste to less than 175 kg per capita to encourage waste reduction and improve sustainability.

1. **Achieve Zero Untreated Municipal Waste in Landfills by 2030:**
 Amend the landfill target to require Member States to take measures ensuring that municipal waste landfilled without treatment prior to landfilling is reduced to zero.



New report coming soon!



Reducing waste management's contribution to climate change

From post-landfilling methane capture to pre-landfill methane prevention

Thank you

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