Statement
On the need for a new strategy for residuals within a circular economy

November 2020

We call on the European Commission to propose **a new strategy for the management of municipal residual waste that prioritises material recovery and biological treatment** over energy recovery, in line with the goals of the new circular economy vision and the present climate emergency.

The situation

Through the Circular Economy Package, the European Union has adopted an advanced roadmap on waste management, creating a framework for EU member states. Within this framework, waste management becomes a tool to help maximise efficient management of resources, whilst continuing to strive towards environmental sustainability through the minimisation of waste and the maximisation of reuse and recycling practices.

This vision also requires a proper consideration for the management of municipal residual waste.

To achieve this new vision, materials and resources must be maintained within the system, minimising so-called "leakages" such as landfilling and waste incineration. Energy recovery from waste (through incineration or co-incineration) destroys vast amounts of resources; requires the extraction of new primary raw materials; perpetuates a linear economic model; and releases greenhouse gases (GHG) from fossil-based materials. But above all, it creates a 'lock-in' in the system which often prevents proper recycling due to the need to continually feed incinerators with a given tonnage to ensure the payback of stranded assets.
Many regions have witnessed a stagnation of their recycling rates in the last few years: they invested in incineration capacities for residual waste, which are at odds with the new, much more ambitious targets and operational scenarios devised by the Circular Economy Package.

It is not realistic to expect a circular economy model to thrive and be widely adopted when it allows itself to be undermined by incentives to the very same practices it is meant to eradicate.

A combination of material recovery and biological treatment (MRBT) is a better and more flexible approach **to the management of residuals within a circular economy,** having in mind its primary goal which, beyond an overall waste reduction, is to maximise, in time, separate collection and recycling of discarded materials, and minimise residual waste**.**
The MRBT system combines biological treatment (to stabilise fermentable materials found in residual waste) with sorting equipment (to recover materials which were not targeted - e.g. non-packaging plastics - or captured by separate collection). This approach sufficiently diverts waste from landfills thanks to the recovery of some materials and process losses from biological stabilisation.
MRBT ensures the reduction of negative impacts of residuals in landfills, in line with the strategic goals of the Landfill Directive. At the same time, it retains the flexibility required to continuously improve the performance of waste management systems. As a matter of fact, MRBT's biological treatment sections may be progressively turned into composting capacities for clean organics; and its material recovery sections may be used to process increasing amounts of clean materials from separate collections.

Our call to action

With this in mind, **we call on the European Commission to propose a dedicated EU strategy for the management of residual waste -** one that aligns the treatment with the overarching principles and strategic goals of the EU circular economy and climate agenda. Specifically, a new strategy should include:

- A European Commission Communication on the (marginal) role of Landfilling in a circular Europe.

- The definition of a common EU-wide approach for managing residuals, including the codification of “effective pre-treatment” and guidelines on the exceptional acceptance of “pre-treated waste” in a landfill.

- A EU-wide survey on technologies that may be used to recover materials from residual waste; as well as on related applications of recovered materials, current initiatives, best practices, and biological treatment sites which have already been turned into compost sites.

- Funding and legislative support for the transformation of existing Mechanical Biological Treatment (MBT) sites into MRBT ones and further revamping of both items into compost sites and clean Material Recovery Facilities for clean organics and dry recyclables.

Annex - Why a bridge strategy for residual waste: the benefits of MRBT

1. **MRBT-types of treatments are remarkably more scalable** (i.e. able to be adopted at different sizes of operational capacities) than incineration. MRBT is based on biological stabilisation and mechanical sorting systems, which are inherently modular. While Best Available Technology (BAT) incinerators incur significant diseconomies of scale, as well as being less effective, at less than 100.000-150,000 t/year, MRBT may work at much less than 100.000 t/year (many biological treatment sites operate at less than 50.000 t/year). Therefore MRBT could better address the proximity principle, and make various districts totally autonomous for residual waste management.

2. **Sites designed to operate through biological stabilisation and material recovery, are markedly cost-competitive with incineration**. Capital expenditure (CAPEX) at a BAT level may be in the range of EUR 200-400 per t/year of installed capacity, while BAT incinerators typically are around EUR 1000 per t/year and more. This implies a lower use of financial resources for residual waste management, and a larger part of the budget may be dedicated to separate collection, reuse and recycling.

3. **MRBT types of installations are typically faster to implement than incinerators**. Planning, procurement, permitting, construction and approval may typically take two years, which is much less than the time taken to have an incinerator up and running. This means “saving time” in terms of compliance with the EU Landfill Directive, and in terms of getting ready to ensure pre-treatment while minimising the negative impacts of landfills.

4. **MRBT types of installations are climate-friendly**, since through biological stabilisation they only degrade biogenic materials and recover fossil-based materials (or finally landfill them, sequestering carbon); with incineration, instead, fossil-CO2 would get fully released (and the same is true for co-incineration, which burns RDF, a large part of which is made of plastics and other fossil-based materials as synthetic textiles).

5. **MRBT systems are inherently flexible**. MRBT is made adaptable by the fact it includes:
    a. Process systems for biological stabilisation, which may modularly be adapted to process also clean organics from dedicated separate collection schemes.
    b. Equipment for optical, ballistic, magnetic separation, which may be used on different working shifts also for increasing amounts of dry recyclables from kerbside schemes.

Signatories

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Non-governmental organisations

- European Environmental Citizen's Organisation for Standardisation (ECOS)
- Društvo Ekologi brez meja (Slovenia)
- Ecological Recycling Society (Greece)
- European Environmental Bureau (EEB)
- Global Alliance for Incineration Alternatives (GAIA)
- Green Liberty (Latvia)
- Health Care Without Harm - Europe
- Humusz Szövetség (Hungary)
- Polish Zero Waste Association (Poland)
- Retorna (Spain)
- Zelena akcija / Friends of the Earth Croatia
- Zero Waste Europe
- Zero Waste Romania
- United Kingdom Without Incineration Network (UK)
- ZERO – Associação Sistema Terrestre Sustentável (Portugal)
- Zero Waste Latvija (Latvia)