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FEAD feedback to the EC Initiative on the EU Methane Strategy

FEAD, the European Federation for Waste Management and Environmental Services, representing the private waste and resource management industry across Europe, **welcomes** the new EC initiative on the **EU Methane Strategy**, as one of the instruments of the European Green Deal. Private waste management companies are major operators in this service, operating in 60% of municipal waste markets in Europe, and in 75% of industrial and commercial waste.

We understand that the EU Methane Strategy should work together with other legislative tools, notably the Circular Economy Action Plan (CEAP), in order to yield higher decrease of GHG emissions, and in particular methane emissions, while improving the circular economy in the Union. This should also result in making waste management sector a key one in the path to EU economy decarbonisation, in promoting synergies between sectors, in enabling new investments and creating economic growth and jobs. Waste management activities have a key role to play in this regard and there are still challenges that must be overcome with regard to methane emissions. **FEAD key messages include:**

- **Ensuring better data collection in order to identify more precisely the main areas of action for the methane reduction**
- **Strenghen synergies between sectors, including biogas production that can reduce methane emissions from manure, valorise waste streams and contribute to decarbonize the energy system by the production of biogas**
- **Ensuring the implementation of existing rules on landfilling and separate collection of biowaste in a homogeneous way in all EU Member States**
- **Introducing high composting targets in order to ensure more resource efficiency and recovery of biowaste**
- **Assessing the impact of an EU-wide ban on landfilling of recyclable and recoverable waste (not selectively collected, not sorted or not treated municipal waste) in order to take subsequent necessary and appropriate legislative action in line with the principles of circular economy**

According to the EC Roadmap, the main identified sources of methane stemming from the EU waste management sector are (1) the uncontrolled emissions of landfill gas in landfill sites; (2) the treatment of sewage sludge; and (3) leaks from biogas plants due to poor design or maintenance. At the same time however, **the waste management sector contributes largely to limiting GHG emissions.**

First, FEAD recognises that **better data collection** is required for future legislative action in the field. It constitutes a necessary step in order identify the main areas of action to significantly reduce manmade methane emissions.

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Second, FEAD stongly supports synergies between the agricultural, energy and waste sectors. Anaerobic digestion for biogas production is for instance an excellent measure to reduce methane emissions, valorise waste streams and contribute to decarbonize the energy system in producing biogas. Methane from agriculture is also a great oppotunity to create jobs while curbing emissions and should be further encouraged. In this regard, FEAD encourages the exploration of existing obstacles and possible incentives for stepping up methane capture from anaerobic digestion and production of biogas. FEAD welcomes the creation of an enabling framework for methane capture from agricultural waste (manure) with the perspective of synergies with the waste management sector. **Harmonised policy frameworks across the Union** for anaerobic digestion (for biogas production) should be pursued in order to achieve the desired results.

Another important measure with synergetic effect is the recovery of landfill biogas that allows to **capture** methane emissions from landfilling and **produce heat or electricity**. Landfill gas (LFG) is a natural byproduct of the decomposition of organic material in landfills. LFG is composed of approximately 50% methane, which is the primary component of natural gas, 50% CO_2, and a small amount of non-methane organic compounds. Methane is a powerful GHG, much more effective than CO_2 at trapping heat in the atmosphere over a 100-year period.[1] **Biomass** is defined in the Renewable Energy Directive 2018/2001 as "the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste".

To this regard, "the key benefit of fuels produced using regenerative energy is clearly a small carbon footprint. Among these fuels, first-generation biodiesel has a relatively low CO_2 reduction potential. However, liquefied methane produced from biomass (biogas) has extremely high CO_2 reduction potential. It should be noted that the main component of LNG is also methane; therefore, both liquefied gases are equivalent."[2] Besides, "local biomass residues and wastes can also be processed into marine liquid biomethane to make a closed loop system for remote applications in island communities."[3]

FEAD also calls for measures to be taken in order to ensure economic visibility and competitiveness of biogas/heat/electricity from biowaste, facilitating the use of quality composts, public support to investment in biowaste selective collection and related treatment facilities.
Third, in order to effectively tackle methane emissions from waste, further **ambitious measures need to be taken in order to significantly reduce methane emission from landfill**, treatment and use of sewage sludge (***FEAD*** *welcomes the relevant EC initiative*), and treatment of waste water.

FEAD welcomes the recent changes in EU legislation that **limit the disposal of biodegradable waste in landfills** and ought to have positive impact on the reduction of landfill gas. Every Member state is due to make sure that, by 2035, the amount of municipal waste landfilled is

[1] https://www.epa.gov/lmop/basic-information-about-landfill-gas#:~:text=Landfill%20gas%20(LFG)%20is%20a,of%20non%2Dmethane%20organic%20compounds.
[2] DNV-GL. (June 2019). ASSESSMENT OF SELECTED ALTERNATIVE FUELS AND TECHNOLOGIES. p. 9. Available at: https://www.dnvgl.com/publications/assessment-of-selected-alternative-fuels-and-technologies-rev-june-2019--116334 ; last accessed on 16/04/2020.
[3] IRENA - International Renewable Energy Agency. (2015). RENEWABLE ENERGY OPTIONS FOR SHIPPING - TECHNOLOGY BRIEF. p. 42. Available at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/IRENA_Tech_Brief_RE_for-Shipping_2015.pdf ; last accessed on 16/04/2020.

reduced to 10% or less of the total amount of municipal waste generated. Since disposal is at the bottom of the waste treatment hierarchy, investments made in higher steps of the ranking need to be done, in order to reduce both landfilling of waste and associated methane emissions, especially regarding collection, composting and anaerobic digestion of biowaste. However, a majority of Member States are far from being "on track". Implementing existing rules of the newly revised Circular Economy Action Plan is a priority, and key step for significantly improving the situation, in combination with the obligation of selective collection of biowaste in 2023 that also needs to be properly implemented.

Regarding GHG emissions reduction, composting plays an important role. According to an LCA study conducted by the University of Perugia, Italy, carbon sequestration for composting is calculated as 3,67 kg CO_2 avoided for each kg of stable organic carbon contained in the fertilizer.[4] In line with the principle of resource efficiency, FEAD calls for the introduction of high composting targets in order to ensure that biodegradable waste can be recovered in line with the principle of resource efficiency.

In order to safe resources and to reduce significantly methane emissions, it is essential to facilitate recycling and recovery of waste instead of landfilling as requested by the waste hierarchy. Wherever it is possible, recycling and recovery should always be preferred to landfill of waste, also for biowaste.

According to the German Federal Environment Agency (Umweltbundesamt), the greatest contribution to reducing GHG emissions in the waste sector is made by those measures that lead to lower methane emissions from landfills.[5] In this regard, European Commission should examine and assess the impact of an EU-wide ban on landfilling of recyclable and recoverable waste in order to take subsequent necessary and appropriate legislative action in line with the principles of circular economy, including EU funds, public support to selective collection, recycling/recovery facilities.

The Commission should examine and assess an EU-wide ban on landfilling of recyclable and recoverable waste **(**not selectively collected, not sorted or not treated municipal waste), to be accompanied by a strategy, measures and support to investment in selective collection schemes and facilities higher up in the hierarchy. As far as methane emissions are concerned, composting and energy recovery need support, in particular to biogas/electricity from waste. Generally speaking, it is crucial that alternative treatment options and infrastructures be readily funded and built to avoid unintended disruptions of local waste management plans.

As a conclusion, significant EU funds have to be redirected to boost investments in selective collection and proper treatment. A stronger push will be needed especially in those Member States undergoing a severe recession, while experiencing insufficient methane avoidance/recovery performances, such as large-scale landfilling.

FEAD is committed to the objectives of the Green Deal and considers the above-mentioned measures apt for providing the adequate stimuli both for addressing GHG and particularly methane

[4] Francesco Di Maria and Federico Sisani - Greenhouse Gas Emissions and Environmental Impact from Recycling the Organic Fraction of Solid Waste: Comparison of Different Treatment Schemes from a Life Cycle Perspective
[5] https://www.umweltbundesamt.de/daten/ressourcen-abfall/klimavertraegliche-abfallwirtschaft#verwertungs-und-deponierungstrends; https://www.umweltbundesamt.de/sites/default/files/medien/461/publikationen/3907.pdf.

emissions in the Union activities, and for the overall recovery of the EU economy and the enhancement of the circular economy in Europe.