

*Submission to the
European Commission*

On

The Role of Biowaste in the Emerging Circular Economy

For

Public Consultation on the Circular Economy and on the Functioning of Waste Markets

From

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1 Summary

Recycling biodegradable wastes and resource efficiency lie at the heart of the circular economy. According to the 'Communication on Future Steps in Bio-Waste Management in the European Union' (COM(2010)235) the EU produces between 118 and 138 million tonnes of bio-waste each year.

Currently, approximately 75% of this material is landfilled and only 25% is recycled into products such as compost, digestate and biofuels (e.g. biogas). Harnessing the yet unused, hence wasted potential of approximately 100 Mt of biowaste could significantly contribute to circular economy objectives:

1. It closes biological material and nutrient cycles, and reduces the linear economy of landfilling waste.
2. It produces biobased products which can replace scarce resources and fossil based products such as peat, mineral fertilizers and fossil fuels. This will reduce reliance on the importation of these resources and the use of compost will have long-term beneficial effects on soils.
3. It creates sustainable jobs at local level and job opportunities are created for future generations. Based on experience in countries with established biowaste recycling infrastructure, additional recycling of 100 Mtonnes would lead to at least 20,000 to 50,000 new green jobs.

1.1 The need for a coherent legal framework for biowaste

To achieve effective biowaste recycling and drive the development in the right direction throughout the EU and its regions, a **coherent EU waste legislation framework** in junction with consistent economic instruments and funding policies is needed.

Moving towards a more circular economy needs to be accompanied by updating the existing waste legislation in Europe.

Therefore, we call on the EU to:

- Set an **obligation for implementing separate collection of biowaste** in the member states as a guiding principle.
- **Establish targets for biowaste recycling** (biowaste recycling targets based on separate collection) as a fundamental and result-oriented driver to secure investment in sustainable recycling of biowaste.
- Develop clear and well-targeted provisions and **harmonized calculation methods** in order to help Member state administrations and municipalities to develop integrated recycling schemes.
- **Finalise the end-of-waste criteria for compost and digestate**, so as to facilitate further developments of European markets for these products.
- **Develop a comprehensive product – resource-based – waste legislation** to support the use of secondary materials recycled from organic waste.

1.2 Incremental added value from biowaste

Compost production from biowaste should be a first and preferred option for biowaste recycling, for the following reasons:

1. It is relatively easy and cost-effective to implement at individual, local, regional or supra regional level (whatever is most suitable in a given situation).
2. Compost products are very effective organic soil improvers. Many European soils (45%¹) are already short of organic matter, something which is likely to worsen if no additional measures are taken. In addition, the biobased economy will put additional demand on the production function of soils, making the recycling of healthy organic matter contents even more critical.
3. Compost production can go hand in hand with production of biogas, i.e. via processes of anaerobic digestion, if eligible organic material with sufficient biogas potential is available. This, if well designed and under suitable economic framework conditions, may increase the economic value generated per tonne of biowaste. Upgrading biogas to biomethane will be a further option for the biogas sector.
4. Compost products and digestate, as by-products from the biogas process also contain plant nutrients like NPK, which can substitute for energy consuming and non-renewable conventional sources of mineral fertilisers.
5. In addition, compost and digestate products used as a constituent in growing media can substitute for the exploitation of peatlands and bogs.
6. Besides the substantial effect on the reduction of greenhouse gas emissions from landfills, input of stabilised organic matter to soils will result in C-sequestration² – another important effect as regards mitigation of GHG emissions.

1.3 Job creation

Job creation potential from biowaste management extends well beyond other waste management practices. Introducing separate collection of biowaste and selecting composting and anaerobic digestion, over disposal and incineration give the opportunities to generate local jobs and perspectives for future generations. Both technologies need plant constructors, operators and service providers with different education background. With the estimated additional biowaste potential of 100 Mtonnes for composting and anaerobic digestion 20,000 to 50,000 new green jobs could be created.

¹<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52006DC0231&from=EN>

² http://ec.europa.eu/environment/soil/review_en.htm - The CLIMSOIL report underlines the need to sequester carbon in soils: *'The technique is cost competitive and immediately available, requires no new or unproven technologies, and has a mitigation potential comparable to that of any other sector of the economy.'*

1.4 Innovation and technological developments

New processes could further increase the benefits of biowaste recycling. Via biorefinery processes, some sources and types of biowaste may serve as a source of renewable chemicals, fibres and specific nutrients. However at this moment, many of these processes are in various development stages and have not yet been implemented on a practice scale. It is important that these biorefinery concepts are developed in conjunction with existing compost and digestate production infrastructure as:

1. Only a limited percentage of heterogeneous biowaste will technically be suitable for the production of high-value chemical substitutes, fibres etc. For the remaining part of the biowaste, compost production will technically and economically still be the preferred option and also necessary for improving soil health and closing biological cycles.
2. The existing compost and digestate production infrastructure at licensed facilities provides a solid basis of practical/operational experience in converting biowaste into value-added products, on which novel technologies can be coupled. Building on existing infrastructure and know-how will also improve the cost-effectiveness of novel technologies.

In other words: establishing EU legislation towards compost and digestate production from biowaste is an essential and no-regret step to also developing other recycling options 'on top of' compost and digestate production.

2 Specific proposals for updating existing waste legislation

2.1 Set an obligation for separate collection of biowaste in combination with biowaste recycling targets

In line with the measures proposed by the ENV Committee of the EP we fully support the proposal to:

- Introduce mandatory separate collection of biowaste by 2020.

Along with this, the wording of the current Article 22 “encouragement, as appropriate” should be changed to “Member States shall implement separate collection of biowaste”. In combination with setting national recycling targets for biowaste based on separate collection, sufficient flexibility can be provided to implement separate collection schemes in municipalities and regions where this is most appropriate (e.g. providing exemptions only for rural or scarcely populated areas and for seasonal variations), while still achieving the required targets on national level.

The targets should be harmonized with diversion targets for biodegradable waste being landfilled and the overall recycling targets.

2.2 Establish targets for biowaste recycling (biowaste recycling targets based on separate collection)

As regards the revision of the recycling targets and the provisions related to recycling and re-use, we support the following measures and amendments:

- Introduce **‘biowaste’ as a mandatory fraction in the targets** for recycling.
- **Increase the targets for recycling/preparation for re-use to 70 % of municipal waste by 2030**, based on a solid reporting method, using the same harmonised method for all Member States with externally verified statistics.
- Introduce the **same targets (70%) for all MS** and define the period in which the targets must be achieved, especially for those MS that recently entered the EU.
- **Clarify that only the transformation of biowaste from separate collection in compost and digestate shall be considered as biowaste recycling.** Materials generated from ‘Mechanical Biological Treatment’ (MBT) should not be considered as biowaste recycling.
- **Clarify the terms “recycling”, “material recovery” and “recovery”** and how the targets apply to these terms.
- **Eliminate conflict between the recycling targets and prevention targets:** By increasing the recycling targets a clear demarcation should be made against any obligations for prevention in order to eliminate confusion and double reporting.
- **The point of quantitative reporting of ‘recycling’:** On this issue we fully support the proposal of the ENV Committee of the EP: “an obligation for recyclers to report on the "input" quantities of waste

going into the sorting plant as well as on the "output" quantity of recycled materials coming out of the recycling plants, preventing the reporting of discarded waste (landfilled or incinerated) as recycled waste". On average it can be assumed that, depending on the collection scheme, waste stream and sorting technology applied, the percentage of rejects which arise from preparation for reuse/recycling would be between 10-20%, and this material cannot be recycled.

- Calling for introducing a new **waste code for separate collected biowaste from households**.

2.3 Develop clear and well-targeted provisions and harmonized calculation methods

The following aspects should be considered for calculating and reporting on achieved recycling rates:

- Reliable statistics on recycled quantities are necessary to assess achievements within the circular economy. We therefore support the adoption of ONE calculation method for recyclable quantities instead of the four methods that are currently offered (OPTION 4):

Total quantity reused & recycled MUNICIPAL waste

Generated MUNICIPAL waste

- It should include uniform conditions for the verification of compliance by establishing minimum conditions for third party verification.
- Biowaste that is home composted or fed to home / small farm animals should not be included in the calculation for achieving the recycling targets.
- Commercial and industrial waste not being included in the municipal waste collection (outside the definition of municipal waste) should be targeted, calculated and reported separately.
- We also recognise the importance of setting additional and precisely described calculation methods for the waste being prevented. Hence, a uniform and harmonised format and method for calculation and an electronic format for reporting is needed in order to allow accurate comparison across EU 28.

It is very important also to consider that the municipal waste in different MS has a different composition. In this regard the **definition of municipal waste** should be addressed as a priority to ensure the successful implementation of targets. Also in MS, the composition depends on the situation on a regional level and local practices (e.g. usage of home heating systems, export of certain waste streams). This leads to widely differing waste compositions between regions.

2.4 Finalise the end-of-waste criteria for compost and digestate

While it is noted that compost and digestate from source separated biowaste has been taken up into the scope of the revision of the Fertiliser Regulation, we are still convinced that the recycled biowaste, until it ceases to be waste, should be regulated under the umbrella of the waste legislation. The main argument here is that the entire compliance approval of biowaste processing, from its generation down to product declaration (including the EPR scheme along the entire waste chain), is under the competence of the Environment/Waste authority. Introducing “fertiliser” requirements will lead to additional administrative burden due to double competence and reporting obligations for the plant operators. This has not been assessed sufficiently and must be subject to enhanced impact assessment.

With regard to placing recycled materials on the European market, there is an urgent need to finalise the end-of-waste criteria for compost and digestate under the ‘comitology procedure’, based on the proposal worked out by the JRC-ITPS in Seville³.

2.5 Prevention of food waste

More focus should be given to the prevention of food waste from the commercial sector (food processing as well as retailers and catering institutions/restaurants) because here we find more or less constant processes with defined output. Therefore specific targets should be set for the indicated commercial sectors. A detailed and harmonised methodological guidance on how to evaluate and report on the prevention measures will be needed.

In the case of private households, prevention levels might change year on year and it could be very difficult to assess exact figures for the amount of food waste prevented and also for waste generated at household level. Further difficulties arise with regard to integrating the prevention targets into the current EUROSTAT reporting scheme on waste management and recycling. Therefore biowaste, including food waste potentially prevented in households by means of change of consumption behaviour or home composting, should:

1. be excluded from the waste regime/definition, and
2. not be subject to quantitative prevention targets.

Administrative as well as data performance constraints do not justify this data collection on household food waste against the possible quantitative success. However, awareness campaigns for better consumption of food waste from households should be an obligatory task of MSs and should be reported on.

³ <http://ftp.jrc.es/EURdoc/JRC87124.pdf> - Report EUR 26425 EN 2014 Hans Saveyn & Peter Eder: End-of-waste criteria for biodegradable waste subjected to biological treatment (compost & digestate): Technical proposals

3 Further aspects

3.1 The future of disposal of biodegradable waste: landfilling & incineration

Regarding the progressive phasing out of landfilling and incineration of recyclable waste, we support:

- The phasing out of landfilling of recyclable waste (e.g. plastics, metals, glass, paper and card board, and biodegradable waste) by 2025.
- The extension of this policy to all recoverable municipal waste by 2030.
- The allowance of an exemption for certain hazardous waste and non-recoverable residual waste and not recyclable biodegradable waste, while introducing defined biodegradability criteria to identify when landfilling is the most environmentally sound and economically feasible option.
- Limiting incineration to non-recoverable/recyclable and non-biodegradable waste by 2020.

3.2 Economic drivers

The following economic instruments should be implemented by MSs in order to promote a green circular economy:

- **Support the use of recycled organic material (like compost) in green public procurement** (green tendering should include a minimum percentage of recycled materials).
- **Support the use of recycled organic materials (e.g. compost/digestate) in agriculture and horticulture** (replacement of mineral fertilisers, replacement of peat in growing media).

The following economic instruments should be implemented by MSs in order to drive municipal waste management towards reduction of mixed waste and increased separate collection and recycling:

- **Landfill tax:** Introducing an obligation for MSs to establish an effective TAX FOR LANDFILLING of recoverable waste until landfill ban becomes effective.
- **Restricting incineration of recyclable waste through economic measures:** The total incentives for biological treatment need to be higher than the corresponding incentives for incineration with energy recovery, including feed-in tariffs for power generation and indirect incentives like tax exemptions for district heating.
- **'Pay-As-You-Throw-principle - PAYT':** Stepwise introduction of the 'pay-as-you-throw-principle' for residual waste combined with mandatory separate collection schemes for paper, metal, plastic, glass and biowaste by 2020.

3.3 Funding and vocational training

The exchange of information and training in best practice experiences on a national, regional and local level are very important tools to support authorities and waste management partners on the way towards a recycling society and zero waste. Therefore sufficient resources should be made available as follows:

- Encourage Member States to make use of available EU funding to invest in biowaste separate collection and treatment infrastructure by:
 - Prioritising EU funds towards separate collection, to projects that move waste up the EU hierarchy and towards the implementation of recycling infrastructure;
 - Simplifying the procedures for accessing EU funded educational and training programmes (projects) aimed at increasing the performance of separate collection and recycling of waste as well the sustainable use of the recycled products;
 - Allocating EU funds to implementing Quality Assurance Systems, to enhancing communication with citizens on the benefits of biowaste source separation and to create a mechanism of C and P credits for compost and digestate use.
- Establish a focussed and experience based education programme on best practice (affordable, local) separate collection systems, the treatment of biowaste and the marketing of compost and digestate as an integral part of the roadmap towards a resource efficient society.
- Ensure that the vocational training and higher education available in the regions of the European Union take account of this aim.