

ANNEX

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- **Statements of the European Compost Network (ECN)**

Ecologically Sound Use of Biowaste in the EU

Position Paper

The signatory representatives of the Member States are of the shared belief that:

Biowaste is a needed resource

Biowaste accounts for 30 % to 45 % of municipal solid waste across Europe. The total biodegradable waste arisings of municipal waste for EU 25 is estimated to be around 120 to 130 MT.

Compost and fermentation residues derived from separately collected biowaste have the potential to:

1. Contribute significantly to soil protection

Biowaste plays an important role in the recovery of organic matter and in avoiding further soil organic matter decline. It is estimated that 45 % of the soils in Europe are low (1-2 % OM) or very low (< 1 % OM) in organic carbon.

2. Substitute mineral fertilizers

Up to 10 % of the mineral fertilizer needed in agriculture can be substituted by compost (up to 500.000 t nitrogen and 300.000 t phosphate respectively). Through the recovery of separately collected biowaste, nutrients are recycled thereby saving non-renewable resources such as phosphate. In addition, the replacement of peat with compost in potting soil adds to the protection of upland moor.

3. Add to climate protection

Landfilling of biowaste is one of the major sources of methane emissions in Europe. The increase in separate collection, and subsequent treatment of biowaste in composting and biogas plants, can contribute to the reduction of methane emissions and creation of an additional carbon sink in soils, thereby supporting climate protection.

The signatory representatives of the Member States are of the shared opinion that:

- An increase in the ecologically safe use of biowaste within the EU will contribute to environmental protection and sustainable use of resources.
- The separate collection of biowaste is a pre-requisite for compost used on agricultural land, private gardens, public greens et al.

Therefore, the signatory representatives of the Member States request:

The continuation of legislative work on the ecologically sound use of biowaste in the EU covering:

- Definition of and requirements for input materials in order to guarantee a low level of potential toxic elements and impurities
- Requirements for final outlets (compost, digestion residues) including hygiene aspects
- Provable and traceable quality assurance systems for the processing of biowaste via composting or anaerobic digestion
- Provisions for the encouragement of separate collection of biowaste



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Ministerio
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EEB panel contribution – Pros and Cons for an EU wide Provision on Biowaste –

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The Question asked of all panel members is:-

Biowaste accounts for 30 % to 45 % of municipal waste across Europe. The total biodegradable waste arisings of municipal waste for EU 25 is estimated to be around 120 to 130 MT . Yet, the “waste stream” biowaste can contribute significantly to soil protection. In your opinion what would be the most effective way to increase the use of biowaste as a resource in Europe?

The most effective way is to combine the Landfill diversion targets with a concrete steer of that diverted biodegradable waste (25% by this year, 50% by 2009, 65% by 2016 - +3 years if delayed – ie 30 to 60 to 78 MT¹) to a diverse range of high quality composting options (different for urban and rural settings – ie on industrial centralised plants versus on-farm composting).

In answer to the question s- The EEB favours a legal binding framework on biowaste. Which are the main items that this framework must include?

1. **Set quantitative targets** for organic waste to be separated and composted
2. **Outline programs in the short-, medium- and long term to implement schemes for source separation** of organic waste according to different situations
3. **Set common limit values for «high quality» composted products** stemming from source separated organic waste so as to allow their marketing across Europe
4. **Promote** – through supportive programs - **home composting and** – through simplification of permitting requirements - **community composting** as activities most consistent with the «proximity principle», the reduction of waste at source and the importance of direct involvement of populations

¹ This is mostly likely an under estimate of the quantities of biowaste to be diverted by the Landfill directive targets, as it accounts only for MSW flows of biodegradable wastes. The EEA estimates 107 MT of biodegradable municipal waste were generated in 1999 (just in EU 15 + Norway) of which 66% was land filled (EEA 15/2001 topic report). Estimated from actual municipal waste data (eurostat news release 36/2004 - 11 March 2004) the total biodegradable waste arising in MSW for EU25 should therefore be around 120 to 130 MT.

5. **Outline roles and technical features of biological treatment for mixed Municipal Solid Waste or «rest waste»** as a means that could further contribute to the reduction of biodegradable waste to be landfilled; this will require also the determination of conditions and permitting requirements for the use of these materials.

Where do you see the environmental advantages of a binding framework?

1. LANDFILL.

Firstly achieving and going BEYOND The landfill diversion targets – once you have a system that WANTS biowaste – then why not divert 100% biowaste from landfill. Landfill diversions alone still leave 35% biowaste going to landfill in 2016 (or 2020).

73% GHG emissions of waste sector in EU 15 in 2003 were from landfill = approx 70 MT CO2 equivalent

Period 2003-2020 – 70 MT (million tonnes) CO2 equivalent reduction potential (or 110 MT CO2 equiv from 1990-2020). Compared to overall target of EU (assuming 30% reduction target by 2020 compared to 1990) of 1266 Mt CO2 equiv, 70MT= 9% of this

65% of 110 MT = 71.5 only **6% of 1266 Mt CO2 equiv – ie only 2/3 of benefit!**
(source Environmental Study – waste Sector's Contribution to Climate protection – Commissioned by German Federal Agency August 2005)

2. SOILS.

Desertification/fertility. Even based on conservative assumptions, it was estimated² that the **ca. 60 Mio tons of compost potential in EU25 would contribute to the maintenance of soil functioning for at least 7.5% of EU soils with less than 1% organic carbon.** So even if in itself its contribution to soil fertility may be considered as “marginal” in the bigger picture of ALL soils, it can certainly already provide for a significant and consistent amount of stabilised organic matter to be used in most critically depleted areas.

It is interesting that whilst addressing 8% of GHGs IS considered significant, addressing almost 8% of EU Soils (those with less than 1% OM) with compost is dismissed as ‘marginal’.

Lock-up/workability/less petroleum intensive fertilisers and pesticides

² Report of the Technical WGs established under the Thematic Strategy for Soil Protection, Vol, 3 “*Organic Matter*”, 2004

Promoting the Sustainable Management of Biowaste across the EU: Bridging the Policy Gaps

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Introduction

Environmental protection and enhancement is at the heart of the European Union (EU). This underpins a broad range of EU policies and legal instruments, such as: The Göteborg Strategy (2001), which establishes a number of priorities for sustainable development; the European Climate Change Programme, which sets out strategies for the EU to reduce the release of greenhouse gases; the revised Common Agricultural Policy, which requires farmers to maintain farmland in good agronomic and environmental condition; the recently published Rural Development Strategy (2006), which aims to boost rural jobs and economic growth in line with the Lisbon Agenda, and finally; the Landfill Directive (EC/31/99), which sets progressive targets for member states to reduce the quantity of biodegradable municipal waste landfilled in order to reduce emissions of greenhouse gases and promote recycling initiatives. As approximately 90% of the enlarged EU is rural in nature, biowaste management is inextricably linked to agricultural and soil management policies, and the EU's Rural Development Strategy.

The effective recycling of biowaste through composting or digestion can transform a potentially problematic 'waste' into a valuable 'product': compost. Compost can provide many benefits¹, including: improving soil structure and increasing water retention, thereby preventing erosion and desertification; reducing soil organic matter losses; acting as a temporary carbon sink; improving soil buffering capacity and its ability to retain applied fertilisers, and; increasing biodiversity by boosting soil microbial populations and reducing horticultural reliance on peat.

The European Compost Network (ECN) believes that by composting and digesting biowastes, elements of all of these EU strategies can be achieved simultaneously. A policy vacuum currently exists, whereby lack of any specific legal instrument effectively prevents these opportunities from being realised. A regulatory 'catalyst' is therefore required to provide cohesion between these various EU strategies and exploit their synergies.

¹ Organic Matter and Biodiversity. Van-Camp, L., Bujarrabal, B., Gentile, A-R., Jones, R.J.A., Montanarella, L., Olazabal, C. and Selvaradjou, S-K. (2004). Reports of the Technical Working Groups Established under the Thematic Strategy for Soil Protection. EUR 21319 EN/3, 872 pp. Office for Official Publications of the European Communities, Luxembourg.

Realising Biowastes' Potential

Biowaste management needs to be carried out **effectively** in order to ensure that the environment and human health are protected. However, businesses, communities and municipalities need to operate and compete in a global market, where significant resource constraints exist. Biowaste management thus also needs to be **efficient** and **economic**.

The ECN believes that to achieve these '3Es' a two-pronged approach is required consisting of 'Regulatory Push' and 'Market Pull'.

Regulatory Push

Developing new biowaste treatment infrastructure is time consuming and costly. Although it may be viewed by some as a small-scale 'cottage industry', it often requires complex, highly engineered systems costing in excess of €30 million that need to be operated by technically competent personnel. In many cases pay-back times can exceed 15 years. Many member states, particularly those that joined in 2004, need to develop significant infrastructure over the next five years to meet the EU Landfill Directive obligations. Without appropriate investment drivers and guidance, there is a real risk that targets will not be met and inappropriate treatment facilities built.

A framework enabling private companies and municipalities to invest in long-term strategies and build appropriate facilities is therefore urgently required. The ECN believes that establishing **binding targets for each member state** will:

- Create a critical mass, to realise resource efficiencies and create new investment opportunities within a reasonable time frame, and
- Reduce investment risks which assures the necessary funding by banks and investors

These targets should establish minimum composting / digestion levels for each member state, including provisions for the separate collection of clean feedstocks. Rather than be prescriptive in detail, each member state should be free to implement these targets in a manner that best reflects their socio-economic and demographic make-up. Such targets would be best established in a stand alone **Biowaste Directive**.

Market pull

Composting and digestion are transformation processes converting a 'waste' into a valuable 'product'. Market forces apply to composts in the same way they do to other products. Like any product, consumers require assurances about product consistency, quality and safety. The sustainable use of bio-resources relies on the confidence of farmers, food retailers, professional users and the general public. In order to protect and enhance the environment (and prevent so-called 'eco-dumping'), products need to meet pre-defined quality criteria consistently, be tested independently using standardised analytical methods, and have auditable records kept throughout the manufacturing process.

As concerns biowaste specifically it has been estimated that the separate collection and composting of the organic waste fraction alone would contribute 1.4 Megatonnes to **the creation of an additional carbon sink**.³

We know that composting and soil property advantages of compost use SAVES energy and can make important contribution to fighting climate change (0,18% lockup C in soil equivalent to overall emission to CO2 equiv. for country such as Italy in 1 year)

- Displacement of mineral fertilisers/pesticides
- Improved workability
- Improved water retention

Low contribution to energy recovery (80% water → 1,5 MJ/kg which gives almost no contrib to replacement fossil fuels)

Should such a framework include separate collection targets?

Yes – or alternatively recycling targets –with condition that there is a clear definition on recycling – ie high quality composting.

³ Reports of the Technical Working Groups Established under the Thematic Strategy for Soil Protection Vol. III

The ECN believes that by implementing a **European-wide Quality Assurance Scheme** for separately collected organic feedstocks, safeguards to protect consumers and the environment will be established. Such schemes already exist in a number of member states (e.g. Germany, Hungary and the UK). These require facility operators to implement stringent quality assurance procedures, to send compost samples off to laboratories for testing on a frequent basis, and for their procedures and test results to be audited by an independent body. These schemes help compost producers sell their products into a range of markets, including agriculture, horticulture, landscaping and hobby gardening. Importantly, they help define when composts cease to be classed as a waste, thereby creating consumer confidence and emphasising product quality.

Biowaste Treatment Options

Geographical and demographic characteristics inevitably mean that municipalities are required to adopt biowaste management strategies that meet local needs, reflecting the urban – rural composition. In many respects composting and digestion differ from other waste management processes in that it can be carried out at varying scales of size and complexity. It therefore enables regions to implement a range of different solutions: large and small-scale systems, a centralised or decentralised approach. There is no need to adopt a ‘one size fits all’ approach that characterises some alternative waste treatment or disposal methods.

These characteristics enable **integrated, flexible systems to be established** that can be adapted to local, regional and national conditions. Crucially it means that are responsive to future change. They can also bring together private companies, municipalities and individuals to work in partnership, to provide socially acceptable, competitive biowaste management solutions.

Conclusions

The ECN believes that composting and digestion should be at the heart of European biowaste management strategies. It has a proven track record, as farmers have been composting for over 4,000 years. Biowaste is a resource that is too valuable to be lost through alternative disposal methods.

A potential ‘win-win’ situation currently exists, whereby composting and digestion can transform biowaste into a valuable product, meeting not only landfill diversion targets, but other key European policy initiatives. To bridge the current policy gap and realise these synergies action is urgently required by the Commission to develop a Biowaste Directive. Specifically this needs to set binding targets for member states to compost / digest a clean, separately collected proportion of their biowaste arisings, and establish a European-wide compost quality assurance scheme. Integrated, flexible systems can be established that will result in environmental protection, environmental enhancement, economic growth and job creation.

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