Report on the Commission Green Paper on the management of bio-waste in the European Union

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PURPOSE: to present a Green Paper on the management of bio-waste in the EU.

CONTENT: national policies applying to bio-waste management differ across the Community, ranging from little action in some Member States to ambitious policies in others. This can lead to increased environmental impacts and can hamper or delay full utilisation of advanced bio-waste management techniques. The Commission wishes to investigate whether action on national level would be sufficient to ensure proper bio-waste management in the EU, or whether Community action is needed. The Green Paper aims to discuss these questions and prepare grounds for the forthcoming impact assessment which will also address the subsidiarity issue.

Bio-waste is defined as biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants. It does not include forestry or agricultural residues, manure, sewage sludge, or other biodegradable waste such as natural textiles, paper or processed wood. It also excludes those by-products of food production that never become waste. The total annual arising of bio-waste in the EU is estimated at 76.5-102 Mt food and garden waste included in mixed municipal solid waste3 and up to 37 Mt from the food and drink industry. Bio-waste is a putrescible, generally wet waste.

There are two major streams – **green waste from parks, gardens etc. and kitchen waste**. The former includes usually 50-60% water and more wood (lignocellulosis), the latter contains no wood but up to 80% water.

Waste management options for bio-waste include, in addition to prevention at source, collection (separately or with mixed waste), anaerobic digestion and composting, incineration, and landfilling. The environmental and economic benefits of different treatment methods depend significantly on local conditions such as population density, infrastructure and climate as well as on markets for associated products (energy and composts).

The Green Paper explores options for the further development of the management of bio-waste. It summarises important background information about current policies on biowaste management and new research findings in the field, presents core issues for debate, and invites stakeholders to contribute their knowledge and views on the way forward. It aims to prepare a debate on the possible need for future policy action, seeking views on how to improve bio-waste management in line with the waste hierarchy, possible economic, social and environmental gains, as well as the most efficient policy instruments to reach this objective.

The Paper also looks at the **impact of the existing regulatory measures**. Bio-waste management is already subject to a number of EU and national legislative measures including obligatory diversion from landfills (Landfill Directive), encouragement of recycling (new Waste Framework Directive), incineration and composting (Incineration Directive, IPPC Directive, and Animal By-Products Regulation) and product standards and requirements (Organic Farming Regulation, the EU Ecolabel requirements for compost, national standards). The Commission is also working on additional measures including end-of-waste criteria for compost and guidelines for bio-waste management.

With regard to environmental impacts, the Green Paper points out that biodegradable waste decomposes in landfills to produce landfill gas and leachate. The landfill gas, if not captured, contributes considerably to the greenhouse effect as it consists mainly of methane, which is 23 times more powerful than carbon dioxide in terms of climate change effects in the 100-years time horizon considered by the Intergovernmental Panel on Climate Change (IPCC).

To help reach **renewable energy targets**, energy recovery could be significantly enhanced by developments in the area of anaerobic digestion for production of biogas and by improving the efficiency of waste incineration, for example by using cogeneration of electricity and heat.

The Green Paper also notes that the **recycling of bio-waste** (e.g. compost being used on soil and for the production of growing media) can result in some environmental benefits, notably with regards to the improvement of carbon-depleted soils.

The Green Paper concludes that major data difficulties and uncertainties exist with regards to bio-waste management options, highlighted throughout the Paper. The Commission would therefore like to invite all Stakeholders to provide any data available to facilitate the subsequent Impact Assessment of different bio-waste management options. Contributions to this consultation process should be sent to the Commission by 15 March 2009.