

# ECN NEWS



EU Policy

## Biwaste at Heart of Europe's Recycled Circular Economy Package

A year has passed since the European Commission's first vice president, Frans Timmermans, called a halt to the Commission's Roadmap to a Circular Economy; a decision that caught many in the waste industry by surprise. The new package, published on 2 December, sets out a revised and '*more ambitious*' proposal, including the provision for the separate collection of biowaste.

The new Circular Economy Package is claimed to 'boost competitiveness, create jobs and generate sustainable growth'. Revisions to the Waste Framework Directive, Landfill, Packaging and Batteries Directives have been proposed, which collectively will increase recycling and reduce waste sent to landfill.

### New targets

Overall the package sets out new targets for recycling and landfilling waste, including:

- A common EU target for recycling municipal waste of 65% by 2030;
- A common EU target for recycling packaging waste of 75% by 2030;
- Material-specific targets for different packaging materials; and
- A binding landfill reduction target of 10% by 2030.

These are accompanied by measures to simplify and harmonise definitions and

calculation methods, as well as creating incentives through Horizon 2020 and structural funds.

### Separate Bio-Waste Collections

For many years ECN has lobbied for the inclusion of bio-waste targets in the revised package, so it is with some relief that Article 22 in the Waste Framework Directive will be revised to specify that: 'Member States shall ensure the separate collection of biowaste where technically, environmentally and economically practicable and appropriate to ensure the relevant quality standards for compost and to attain the targets set out in' the municipal waste recycling targets.

Despite falling short of setting specific biowaste recycling targets, ECN's Stefanie Siebert notes that: 'This is a significant step forward for Europe.'

The requirement placed on all Member States to collect biowaste separately for

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EU Commission

**Fertilisers Regulation Update**

Page 4

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ISWA Task Force Project

**Carbon, Nutrients and Soil**

Page 5

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News from ECN

**Vienna Becomes First Capital to be Awarded ECN Compost Certificate**

Page 7

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EU Programme 'FERTIPLUS'

**Mobilising the Potential for Biochar-Compost across Europe**

Page 11

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both composting and anaerobic digestion will mean that even more organic carbon and plant nutrients will be recycled and put back onto Europe's soils'. ECN's Quality Assurance Scheme is set to play a major role in ensuring the recycling of quality compost and digestate to soils. This provision is also accompanied by a change in the definition of biowaste, to increase its scope to include 'waste with similar biodegradability properties that is comparable in nature, composition and quantity'. This is in addition to the existing definition which covers 'biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, comparable waste from food processing plants'.

#### Reducing food waste

Revisions to the Waste Framework Directive also requires Member States to halve food waste by 2030, in line with the United Nations' 2030 Agenda for Sustainable Development. In aims to

'prevent food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households'. In addition, 'Member States should establish specific food waste prevention measures and should measure progress in food waste reduction'.

#### Impact

It is unclear, at present, how these changes will affect potential quantities of bio-waste available for collection. Coupled with proposed revisions to the Fertiliser Regulation (see Fertilisers Regulation Update) which are expected to be finalised in 2016, the new package seems likely to boost quality composting and anaerobic digestion across the EU. ECN will provide further analysis and updates in the New Year.

The Circular Economy Package, including briefing notes and draft Directives, can be accessed: [here](#)

## Background to the Package

The European Commission's intention to view waste as a resource was originally set out in its 'Roadmap to a Resource Efficient Europe' in 2011, which was followed by a comprehensive review of waste targets during the summer of 2013. This involved a web-based consultation to which public authorities, citizens, third sector and private organisations were able to respond.

The results of this work then fed into the Commission's legislative proposal to review recycling and other waste-related targets in the EU Waste Framework Directive, the Landfill Directive and the Packaging and Packaging Waste Directive in July 2014.



However, before the detail of these proposals were published, the Commission's first vice president, Frans Timmermans announced: 'We are also proposing to withdraw the existing proposal on the circular economy, to make way for a broader and more ambitious approach that can be more effective. We want to look beyond the narrow focus on waste and to 'close the loop' of the circular economy, for example by addressing recycling in product design and creating a market for secondary raw material'. Coming only a few days before Christmas, this decision caught many in the waste industry by surprise, leaving a feeling that the work had lost momentum.

After a few months of silence, in April 2015, the Commission published its roadmap for a Circular Economy Strategy, stating that its main policy objective 'is to create conditions for the development of a circular economy by addressing barriers and enabling the development of new markets and business models. This objective should be pursued in a more ambitious, concrete and effective way, in areas where the EU has a clear added value, thus bringing in economic, social, and environmental benefits resulting from optimised use of resources in the EU'. European citizens were consulted again during the summer; again ECN submitted a detailed response calling for greater action on bio-waste.

Finally, on 2 December 2015, a revised package was published, setting a requirement on all Member States to collect biowaste separately, and to limit the landfilling of waste.

## EU Commission News

### New Director General of DG Environment

Mr Daniel Calleja y Crespo has taken office as head of the European Commission's environment department, DG Environment, replacing Karl Falkenburg on 1 September. He leads a team of over 500 civil servants, working under the political leadership of Karmenu Vella, Commissioner for Environment, Maritime Affairs and Fisheries.



Before taking on this post, Mr Calleja, a Spanish citizen, was head of DG Internal Market, Industry, Entrepreneurship and SMEs. He has a background in law and business administration, and has extensive experience of working within

the Commission in a number of different areas since 1986. Further information about DG Environment can be found: [here](#)

## Fertilisers Regulation Update

The EU Fertilisers Regulation has been under review for a number of years, with seemingly little progress. The publication in late October of a 'Roadmap', signals the Commission's desire to finalise changes during 2016.

The Roadmap sets out the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) plans for revising the Fertilisers Regulation (EC) No. 2003/2003. It is stated that the initiative will extend the scope to include secondary and organic resources and to facilitate the cross-border market for all fertiliser materials and secondary raw materials. These include:

- Compost and digestate (based on the technical proposal for end-of waste criteria for compost and digestate published in the JRC report in 2014);
- Biomass ash;
- Struvite; and
- Biochar.

These changes are in keeping with the Commission's Circular Economy Package, noting that: 'The Fertilisers Regulation revision aims at establishing a regulatory framework enabling production of fertilisers from recovered biowastes and other secondary raw materials. This would boost domestic sourcing of plant nutrients which are essential for a sustainable European agriculture, including the critical raw material phosphorus.'

### Optional Harmonisation

At a meeting held on 27 November, the Commission discussed these revised proposals, although text of the revised Regulation was not made available. The Commission suggested following an 'optional harmonisation' approach, where producers of fertilisers may choose to follow the requirements of the Regulation and market their products as 'EU Fertilisers', or continue to market their products under national rules. In practice, this means that the two systems may operate in parallel. Notably only waste materials where end-of-waste criteria have been established will be

eligible as input materials.

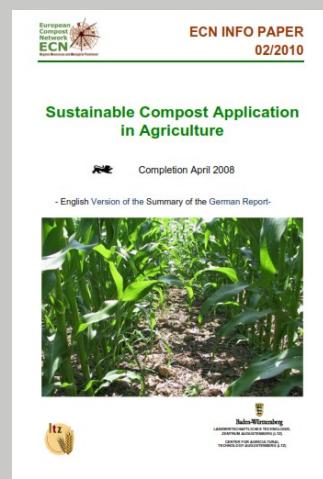
The structure (architecture) of the revised proposals presented at the meeting indicated that different 'component material categories' (i.e. input materials) will be subjected to different safety requirements. For compost and waste-derived digestate, the input materials, processing methods and product quality will be subject to end-of-waste criteria based on the final proposals made by the JRC in 2014. Digestate derived from non-waste crops will be subjected to internal producer control through self-certification.

### New Proposal in 2016

The text of the revised Regulation is currently with the Commission's legal services. It is anticipated that there will be a further stakeholder consultation in 2016 before the final legislative proposal is sent to the Parliament and Council.

The Roadmap can be accessed: [here](#)

### Sustainable Compost Application in Agriculture



ECN Info Paper can be downloaded [here](#).

## Carbon, Nutrients & Soil

The value of carbon in compost and digestate is largely ignored, according to a recent report published by the International Solid Waste Association in November. The report, authored by ECN co-founder Dr Jane Gilbert, was one in a series of publications addressing resource management and the circular economy.

The project was carried out by the ISWA Task Force on Resource Management, who investigated the flows and consumption of secondary raw materials as part of a circular economy. In total, six reports have been published, each accompanied by a short video of the author describing their work. The package was officially launched at a seminar in Brussels on 3 November at the offices of the European Economic and Social Committee.



Report 4 focusses specifically on Carbon, Nutrients and Soil. It provides an overview of the potential quantities of organic wastes produced by OECD countries every year, then makes estimates of how much nitrogen and carbon they contain. It describes how they can be extracted, modified or transformed through biorefining/biotechnology processes into a range of

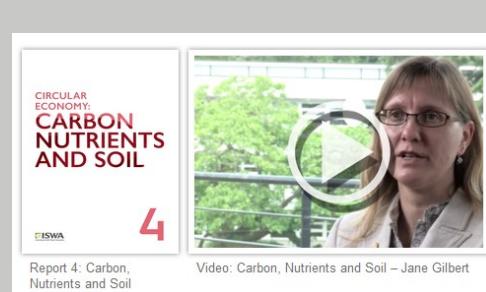
different products, including high value bio-based speciality chemicals, commodity chemicals and lower value compost/digestate.

Recognising the importance of soils and the continued loss of soil organic matter, the report stresses the need for the value of organic carbon in compost and digestate to be quantified. At present, only about 30% of the fertilizing potential in compost/digestate is realised in sales, whilst the benefits of carbon and the improvements they can make to soil are largely ignored.

The report concludes that in order to realise the untapped potential benefits of organic wastes in OECD countries, separate collection schemes need to be extended and contaminant removal improved. Organic waste processing to manufacture valuable bio-based products will require an improvement in skills and technical competencies, coupled with effective communications.

Copies of the reports can be accessed: [here](#)

The ECN Presentation on the Role of Biowaste in the Emerging Circular Economy can be downloaded: [here](#)



The report is available as a [PDF](#) and is accompanied by a short [video](#).

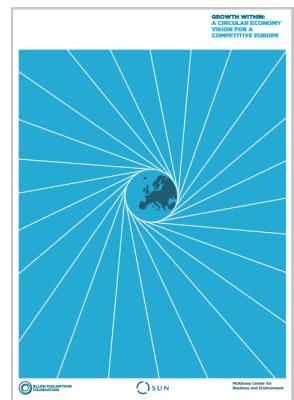


The work of the Task Force is accompanied by a video: [The Golden Resource](#)

## Report

# Circular Economy Vision for a Competitive Europe

The Ellen MacArthur Foundation has released a report investigating ways in which Europe can move towards a circular economy. Published in June, it is intended to ‘provide a fact base for European leaders on the trade-offs involved in a transition to a circular economy and potential ways forward’.



‘Growth Within: A Circular Economy Vision for a Competitive Europe’ describes a comparative study of the employment impacts of a circular economy transition. It included an in-depth analysis of three human needs: mobility, food and housing that collectively account for 60 % of European household spend and 80 % of resource use. It was based on extensive desk research, over 150 interviews and economic modelling.

The authors conclude that ‘a circular economy, enabled by the technology revolution, allows Europe to grow resource productivity by up to 3 percent annually’. A circular economy could result in overall benefits of €1.8 trillion by 2030, or twice the benefits seen on the current development path (€0.9 trillion).

A copy of the report can be accessed: [here](#)



## Policy Report

# Rethink Organic Waste: Canada’s Circular Strategy for Organics

A policy report, ‘ReThink Organic Waste: A Circular Strategy for Organics’, was published in October by the Ontario Waste Management Association, Canadian Biogas Association and Compost Council of Canada. It sets out a path for the Canadian government to embrace a circular economic approach to organic waste management.

The report builds on documents and reports issued over many years, and sets out a series of recommendations for action by Government. Its main focus is organics residuals, highlighting that although some progress has been made in recent years, significant resources are still lost through disposal. In order to

maximise value from the organic waste stream, it draws attention to a number of factors that need to be addressed by both government and stakeholders.

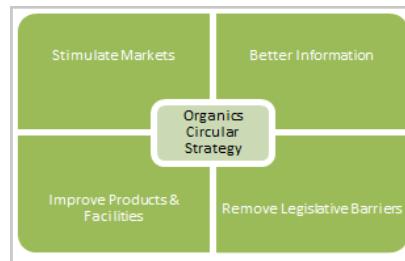
A series of 11 recommendations are made, which include actions aimed at stimulating markets, improving waste definitions and data capture, reducing legislative and regulatory

barriers, and improving the value of products and the functioning of facilities.

Susan Antler, Executive Director of the Canadian Compost Council, commented: ‘Ensuring the government understands the waste management sector’s perspective will be important especially given the new waste reduction

and diversion strategy and legislation expected to be introduced before the end of the year.’ Overall, the report aims to improve resource efficiency, reduce Canada’s environmental footprint, increase productivity, and drive local jobs and economic growth.

A copy of the report can be accessed: [here](#)



# Vienna Becomes First Capital to be Awarded ECN Compost Certificate

Representatives from the City of Vienna were awarded with ECN's certificate of conformance for compost quality during the SusGro 2015 conference held in Vienna in September. The Viennese composting facility has become the first capital in Europe to produce compost according to the harmonised European quality standard of ECN's Quality Assurance Scheme.

The Lobau facility has been composting green waste in open-air windrows since 1991. Green bins and skips located at Vienna's 19 waste collection centres, coupled with door-to-door collections from about 80.000 properties, provide botanical green waste. The plant has an approved annual capacity of approximately 150.000 tonnes and produces compost of the highest quality class 'A+' (according to the Austrian Compost Ordinance), which fulfils the quality criteria of the European Organic Farming Regulation.

The Lobau facility has been certified to the Austrian Compost Quality label of Kompostgüteverband Österreich (KGVÖ, the Austrian Compost Quality Organisation) since 2002.

As KGVÖ became the fourth European Quality Assurance Organisation to be awarded with the conformity label of ECN's Quality Assurance Scheme for Compost and Digestate (ECN-QAS) in May 2015, this means that it is entitled to award the European quality label for compost to participating composting plants.

The certificate was awarded by Dr Stefanie Siebert, ECN's Quality Manager, and Horst Müller, General Manager of KGVÖ, in Vienna's town hall.



From left to right: Andreas Baumgarten (Austrian Agency for Health and Food Safety AGES), Horst Müller (KGVÖ, AT), Stefanie Siebert (ECN Executive Director), Erich Valentin (Member of the Municipal Council), Wojciech Rogalski (M48, City of Vienna, AT).

Further information about the Lobau composting plant can be accessed: [here](#)

Further information about the ECN-QAS can be accessed: [here](#)

**35 composting and digestion plants in Europe certified within the European Quality Assurance Scheme**

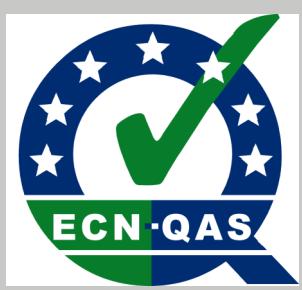
**Plants certified by KGVÖ, Austria:**

1 Green composting plant

**Plants certified by VLACO, Belgium:**

5 Composting plants for vegetable, fruit and garden waste (vfg-compost),

18 Green composting plants and 11 Anaerobic digestion plants



## Study tour Success

Twenty-one participants attended a two day study tour to see first-hand how food waste in Milan, Italy, is collected separately and treated. The course, co-organised by the Italian Composting and Biogas Association (CIC) and European Compost Network (ECN), attracted delegates from as far afield as Costa Rica.

The tour focussed on Milan's separate collection scheme, first introduced 2012. The city now has the highest capture rate for food waste in Europe, yielding an average of 95 kg of food waste per inhabitant per year using door-to-door collections employing biodegradable plastic bags and bins. In total, about 130.000 tonnes of food waste a year are delivered to an anaerobic digestion plant with a post-composting step. The compost is quality assured by CIC.

### Visit of AD/composting plant

The study tour was accompanied by several site visits, such as Novamont's research centre in Novara, and the AD/composting site 'Montello' in Bergamo.



Visiting the separate collection of food waste in Milan

Novamont is one of the leading producers of biodegradable plastic bags in Europe, whilst the Montello facility is one of Italy's jumbo-plants, having a treatment capacity of 300.000 tonnes per year.

### Seminar on organising separate collection of biowaste

The second day's tour took place at the headquarters of CEM Ambiente, the intercommunal organisation of 49 municipalities in the region of Lombardia. CEM Ambiente is responsible



The tour participants at CIC's technical offices in Milan, Italy

for managing the municipal solid waste of 460.000 inhabitants, achieving 70% separate collection of MSW. Presentations were given by CIC's technical team, focussing on how food waste collection schemes can be implemented efficiently and successfully in different municipalities, the associated costs related to the systems, and how the quality of input materials can be improved by waste analyses. The participants of the tour actively participated in an exchange of views and technical details with the Italian experts.

### Visit of EXPO 2015

The third day took place at EXPO 2015, the Universal Exhibition in Milan, where more than 140 countries showcased their technologies, focusing on the topic "Feeding the Planet, Energy for Life".

Further information about the Italian biowaste and recycling sector can be found in the CIC annual report: [here](#)

# MBT Issue Paper Published

ECN Issue Papers summarise key concepts and technical information for both members and interested stakeholders. This latest paper, developed by ECN's working group on Integrated Waste Management, summarises the main aims and ways in which mechanical biological treatment (MBT) can be used to treat residual waste.

MBT is a term that describes a range of different technology configurations used to treat residual (mixed) waste prior to landfill. The paper describes the three main approaches (aerobic stabilisation, anaerobic digestion and biological drying), highlighting their benefits and how they can reduce biodegradability. It then sets out the main features of MBT and how it can be integrated with other waste treatment and recovery/disposal methods. Finally the paper notes that the stabilised 'compost like outputs' may be used on non-agricultural land such as land reclamation projects.


**European  
Compost  
Network**  
**ECN**  
 Europe's Bioeconomy & Circular Transition

**ECN ISSUE PAPER**

No.\_01\_2015

## ECN Working Group "Integrated Waste Management"

### Mechanical and Biological Treatment (MBT)

The EU landfill directive requires a reduction of 50% of biodegradable waste which is landfilled (Art.3). The major impact will be on organic waste, but its degree depends on the method as it will be treated. In order to meet the targets, the EU has decided to ban the landfilling of all municipal solid waste (MSW) by 2035. This means that the waste stream must be changed. The waste design incorporating methane capture, substance removal and other escape to the atmosphere will be required. The waste stream will have to be changed to a more biodegradable waste stream. Biodegradable waste at low efficiency can be treated at the source while it will be required to treat the target of the EU directive at high efficiency. This will mean that the waste stream will have to be changed.

Introducing the European Compost Network (ECN) MBT is a generic term for the integration of a wide range of waste management processes. It is a process that links the collection of waste to reduced or reduced waste products.

There are different techniques and approaches for MBT systems and they may be combined:

- Aerobic composting
- Anaerobic digestion (either or after final aerobic stabilisation)
- Biogas energy

What is common about them is that there is no mechanical processing of the waste. This will be through some form of dry screening, either shredding and residue treatment to separate the materials from each other or through biological treatment. The differences are in the degree of biological treatment (or aerobic) and the heating (thermal treatment) or drying (heat treatment) treatment length, or processing complete like a composting plant.

The following diagram shows the main components of an MBT system. The first stage is the sorting required to fit the MBT principle. This means that the waste which any recycling could be straightforward treated and sent to landfill. This stage is a right angle of development of a waste treatment plant. The second stage is the separation of the remaining waste into two streams. One stream would only need an outlet for materials to process the others like further refined landfill (FDF) etc. The reduction of the amount of waste sent to landfill is the key technology and the defining feature.

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The paper was published in August and can be accessed: [here](#)

## Technical

# **Background Paper on Oxo-Biodegradable Plastics Published**

European Bioplastics, Europe's membership body advancing the objectives of the growing bioplastics industry, has recently launched a background paper setting out its position on "Oxo-Biodegradable" Plastics and Other Plastics with Additives for Degradation

The paper discusses the various biodegradation standards, and concludes that: 'Additive-mediated conventional plastics cannot biodegrade as defined in industry accepted standard specifications such as ASTM D6400, ASTM D6868, or EN 13432'. It criticises degradation, stating that it is fragmentation in disguise, then describes some of the problems associated with the end of life of these products, including the formation of micro-plastics. Finally, European Bioplastics stresses its support for 'legislative proposals to enforce responsible (marketing) claims concerning the end-of-life of products and materials'.

An illustration of a woman with blonde hair tied back, wearing a dark t-shirt and light-colored pants, pushing a shopping cart filled with groceries. She is looking at a bag of flour on a supermarket shelf. A speech bubble from her says, "Search good, but what exactly does it mean? Can I reuse the bag many, many times?" The background shows other grocery items like eggs and bread on shelves.

The document can be accessed: [here](#)

## France Moves Towards Separate Bio-Waste Collections

The French government has set out a clear direction for the management of bio-waste in its new regulation ‘On the Energetic Transition Towards Green Growth’. It aims to define general objectives for achieving environmental goals and fighting climate change.

The regulation (LOI n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte), published on the 17 August, makes specific reference to the circular economy. It includes specific requirement for the treatment of bio-waste (Article 70 Chapter V Part I Point 4), namely:

- Increasing the recycling target for household waste to 55 % by 2020 and to 65 % by 2025;
- Introducing separate collection for organic waste for all producers by 2025. Every citizen has to avoid organic waste in residual waste;
- Municipalities have to provide technical solutions for composting locally or to introduce a separate collection system for bio-waste; and
- With the introduction of separate collection of bio-waste, there will be no further support for the development of mechanical biological treatment plants for the treatment of non-source separated bio-waste.

The French law ‘On the Energetic Transition Towards Green Growth’ is available [here](#)

## Croatia Urged to Promote Recycling

Croatia’s Zero Waste coalition, made up of 54 environmental NGOs lead by Zelena akcija (Friends of the Earth Croatia), has criticised plans by the Croatian Ministry of Environmental Protection in the draft national Waste Management Plan 2015-2021.

The plan, which in the view of the coalition, is biased in favour of mixing and incinerating waste, should instead be based on reducing, re-using and recycling waste. As Croatia only has a recycling rate of about 15%, it is thought that the plan would not deliver the recycling rates

quantities. ‘A regional system of waste management centres and incineration has been chosen without feasibility, environmental or health impact analyses’ noted the coalition.

Activists from Zelena akcija / Friends of the Earth Croatia organised a protest during October in which a figure resembling the Minister for Environmental and Nature Protection, Mihael Zmajlović, fed recyclable materials and bank notes into a barrel emitting thick smoke. The action, accompanied by a ‘No Waste Incineration!’ banner, symbolised the Minister’s responsibility for the negative impacts that would be caused by the plan if it were to be approved.

Further information can be found: [here](#)



Activist from Zelena akcija disguised with a mask of Minister Mihael Zmajlović,

required under the Waste Framework Directive. It is claimed that the draft plan is based on incomplete data on waste

## Mobilising the Potential for Biochar-Compost across Europe

A paper, published in June, describes the potential for manufacturing biochar-compost across Europe. The researchers, who are part of a consortium involved in the EU-funded FERTIPLUS project, estimated the potential quantities of compost and biochar that could be manufactured and applied to Europe's soils.

The paper summarises the potential quantities of bio-waste that could be captured from Europe's municipal waste, along with estimates of sewage sludge, agricultural and forestry residues. Overall, somewhere in the region of 88 million tonnes a year of municipal bio-waste is generated, with between 30-50 million tonnes from industrial sources. Biochar is charcoal manufactured for use as a soil amendment, and is made from woody material. The researchers estimate that about 8 million tonnes of biochar could be produced every year from municipal sources, which could then be added to an estimated 32 million tonnes of manufactured compost as an amendment (totalling 40 million tonnes). The benefits of mixing biochar into a composting mix include accelerating the composting process, reducing losses of nitrogen and carbon, and creating a product rich in carbon, nutrients and micro-organisms. Applying this estimated 40 million tonnes of biochar-

compost blend to agricultural land at a rate of 10 tonnes / hectare, means somewhere in the region of 4 million hectares (equivalent to 3.7% of all arable land in the EU) of soil could benefit from its application annually.

In addition to these estimates, the paper also discusses the influence of EU legislation on the regional and local management of organic waste, describes a number of organic waste collection systems, and sets out a number of policy recommendations. The latter include:

- Obligatory rules to treat municipal organic waste;
- Obligatory information on biochar and compost products; and
- Recognising and supporting voluntary certification schemes.

The paper 'Organic Waste for Compost and Biochar in the EU: Mobilizing the Potential' was published in the open access journal Resources (2015) 4, 457-475; doi: 10.3390/resources4030457.

It can be accessed: [here](#).

### About EU-Project FERTIPLUS

The general objective of FERTIPLUS is to identify and develop innovative strategies and technologies to:

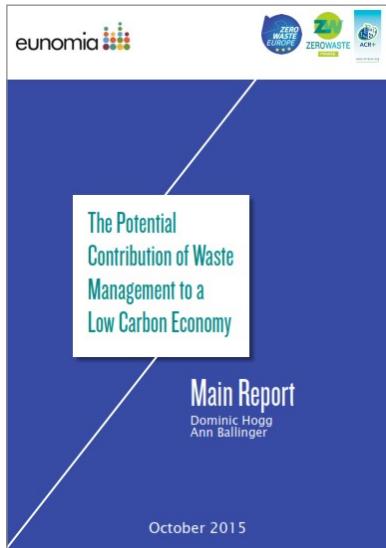
1. Reduce and replace the application of mineral fertilizers and agrochemicals and;
2. Stimulate industry to implement necessary and cost-effective organic waste treatment and recycling processes to produce safe compost and biochar that allow agriculture to improve the efficient utilization of nutrients.

The strategic goal of this project would be to support the European Union by providing the necessary tools and quality standards for the design and implementation of future strategies for transitions to a safe and sustainable recycling of urban and farm organic wastes as fertilizers and soil amendments.

As an outcome of the project several leaflets were published. Project leaflets can be accessed [here](#). Further information: [FERTIPLUS website](#)

## Waste Management in a Low Carbon Economy

A report launched in October by Zero Waste Europe, in partnership with Zero Waste France and ACR+, highlights the role waste prevention and improved waste management can play in reducing greenhouse gas emissions and the development of a low carbon economy.



The authors, Dominic Hogg and Ann Ballinger of Eunomia Research & Consulting, reviewed the methodological issues with reporting emissions from waste management, the carbon impacts of a range of waste prevention and management activities, and the effects of a number of key policies. They scrutinised the ways in which greenhouse gas emissions are accounted for by the United Nations Framework Convention on Climate Change, noting that: 'The benefits associated with the use of compost/digestate, including benefits associated with the reduced

requirement for the manufacture of fertiliser, or the increase in soil carbon that might result from the application of compost to soil' do not appear under the waste part of the inventory.

The report contains eleven recommendations, which call for waste policies to be redesigned in order to prioritise waste prevention, reuse and recycling, and to reallocate climate finance subsidies which are currently supporting energy generation from waste.

The report is available (en/fr) [here](#)

## Compost Reduces Soil Methane Emissions



Modern farming practices have been shown to reduce agricultural soil's capacity to absorb methane, which has important climate change implications. By investigating the effect of applying exogenous organic matter, Dutch researchers demonstrated that compost was able to stimulate the absorption of methane by agricultural soils.

Two types of aerated Dutch soils were investigated: a sandy loam and clay. The researchers applied a range of different soil conditioners (sewage sludge, aquatic plant material, compost, wood material and compressed beet leaves) at amounts typical of intensive agricultural practices. The experiments were carried out in a laboratory over a two-month period, where flows of methane and carbon dioxide were measured.

They found that all the organic amendments increased methane uptake by the soils, however, compost showed the greatest effect on both test soils; capable of offsetting approximately 16%

of net emitted carbon dioxide. The effect was thought to be due to stimulating indigenous soil methanotrophic bacteria by providing nutrients, as well as introducing new methanotrophs. The researchers suggest that these effects should be investigated in field-based experiments.

A number of recommendations were made for agricultural soil management strategies to reduce greenhouse gas emissions, which include the repeated application of compost.

A summary of the research can be downloaded: [here](#)

## Mediterranean Compost Resources Published



SCOW (Selective Collection of the Organic Waste), a project funded by the ENPI CBCMED Programme, has published a number of resources aimed at Mediterranean countries. The project aims to develop low cost, technically simple and high quality biowaste collection and recycling models in territories with touristic areas and agricultural activity.

### Handbook for small scale composting facility management

This handbook is aimed at composting site managers and those involved in the operation of small scale plants. It provides information and makes recommendations on how to operate small scale composting facilities effectively, as well how to manage any adverse incidents.

The document covers all stages and activities that take place at small scale composting facilities. The document can be accessed: [here](#)

### SCOW WebGIS

The SCOW WebGIS is an online map that displays operational composting facilities participating in the SCOW project. Each plant is accompanied by an attribute table, setting out the parameters and characteristics of the facility. The system also includes an advance search tool based on the main facility parameters.

The website can be accessed: [here](#)



### 16th International Conference “Rural-Urban Symbiosis”

## RAMIRAN 2015

The 16th International RAMIRAN conference took place in Germany for the first time at the Hamburg University of Technology (TUHH). The conference was organized by the Institute of Wastewater Management and Water Protection in cooperation with TuTech Innovation GmbH.

RAMIRAN is the scientific network on organic residues and their application in agriculture. RAMIRAN 2015 focused on “Rural-Urban symbiosis”: The products manufactured on basis of agricultural resources in rural areas are used mainly in urban areas. The whole process results inter alia in residues, which are currently mainly disposed of or inefficiently used. The conference contributed to close the cycle – from production via consumption up to residue utilization. The covered thematic areas included: “Quality fertilizers from residues”, “Sustainable soils”, “Advances in emission prevention”, “The bioresource challenge”, or “Sustainable regions”.

The conference followed a special approach of the European Commission’s joint research centre in Ispra regarding Nitrogen neutrality of food, which results in a 9 % lower Nitrogen and land use footprint and a 17 % lower CO<sub>2</sub> footprint compared to an earlier conference.

230 participants, from more than 35 countries took part in the conference. This year about 5 % of the participants came from Asia and 5 % from Africa. The extension into Eastern Europe also increased.

The website and the abstract book can be accessed: [here](#)

## Announcement

# ORBIT 2016



## Important Dates

Submission of abstracts:	31 December 2015
Notification of abstract acceptance:	1 January 2016
Early registration deadline:	29 February 2016
Full paper submission:	31 March 2016

**ECN's next ORBIT conference will be held in Heraklion, Crete on 25th to 28th May 2016. Focussing on the 'Circular Economy and Organic Waste Management', it is the tenth biennial conference on Organic Resources and Biological Waste Treatment, signalling 20 years of excellence in scientific research and professional networking.**

ORBIT 2016 will be organised by: Harokopio University of Athens (Prof. Dr. Katia Lasaridi); the Technological Educational Institute of Crete (Associate Prof. Dr. Thrassyyoulos Manios); and, ECN.

The Conference will run parallel oral and poster sessions, with sessions including:

- Composting and anaerobic digestion technologies and processes;
- Food waste prevention;
- Bio-based economy and the biorefinery concept;
- MBT: technologies and products;
- Energy recovery from biomass / biofuels;
- EU policies and strategies for sustainable organic resources and waste management – the challenge of circular economy; and
- Climate change, LCA and decision support tools.

Further information is available on the Conference website:  
[www.ORBIT2016.gr](http://www.ORBIT2016.gr)

The ORBIT 2016 organizing secretariat can be emailed at:  
[info@orbit2016.gr](mailto:info@orbit2016.gr)



15. - 24. January, Berlin (DE)

#### International Green Week

The IGW is the point of origin for the Global Forum for Food and Agriculture (GFFA) with more than 70 departmental ministers. Producers from all over the world come to IGW to test market food and reinforce their brand image. Following consumer trends, regional sourcing plays an increasingly important role. Renewable resources, organic agricultural, rural development and gardening continue to gain importance at International Green Week.

Further information: [here](#)

25-26 January 2016, Rotterdam (NL)

#### Unwrapping the Package – towards a Circular Economy in Europe

The objective of the Stakeholder Event on 25 January is to discuss challenges and opportunities for the circular economy in Europe, based on practical experiences. These discussions should facilitate identification of common priorities for national and EU policy, and provide input for discussions in the Council of Ministers on the Commission proposal for a circular economy (Plenary session and discussions).

In a closed session on January the 26th, policymakers from national Member States and the EU Commission will be invited to consider how national and EU policies, as proposed in the Circular Economy package, will help to achieve common objectives at the national and EU level.

Further information and pre-registration: [here](#)

25. - 28. January 2016, Jacksonville (USA)

#### US Composting Council – 24th Annual Conference

Join the world's largest composting conference and exhibition for the organics management industry. Hear the latest from industry leaders about solving challenges in collecting organics, manufacturing and using compost, and producing renewable energy from organics.

Further information: [here](#)

16-18 February 2016, Nürnberg (DE)

#### Biogas Convention

The start of the new concept takes place in February 2016 with a BIOGAS Convention - Conference in Nuremberg without a trade fair instead of an event in Leipzig. In February the German Biogas Association will be offering an extensive conference program on the latest developments in research and technology, legal and safety-relevant issues. The supporting program in the evening in addition to the general meeting of the German Biogas Association will promote intensive personal exchanges and networking between the participants.

Further information: [here](#)

3-4 May 2016, Dublin (IR)

#### GORC 2016 – Global Organic Resources Congress

Organised by Cré and the ECN this event will examine the opportunities in the organic waste sector, composting and anaerobic digestion sector, with a strong focus directed on the emerging bioeconomy sector. The bioeconomy has the potential to provide many new opportunities to manage organic resources and get high value products from waste products. The event will have a session on healthy soils, which will highlight the benefits of using quality compost/digestate in the production of sustainable food production.

Further information: [here](#)

25-28 May 2016, Heraklion, Crete (GR)

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Further information: [here](#)

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