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PHOTOS

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ISSUE-NO.

02_18

DATE

05.12.2018

EU POLICY

First Steps Taken in Road to an Urban Bioeconomy

Following adoption of the revised waste package by the European Council in May, a one-day workshop was held to debate how bio-waste could successfully be collected and treated as part of Europe's Circular Economy Package. The workshop was organised by the City of Oslo in collaboration with EURO CITIES, the European Compost Network, Municipal Waste Europe, and the EU Urban Agenda Partnership on Circular Economy and was held on the 28 May 2018 at Norway House, Brussels.

More than 80 delegates heard about some of the barriers and solutions that are likely to be encountered along the way. Representatives of the European Commission, EURO CITIES, European Compost Network, Urban Agenda Partnership for Circular Economy, Municipal Waste Europe and the City of Oslo spoke about research, innovation and successful case studies for improving bio-resource management in urban areas.

Håkon Jentoft, City of Oslo, highlighted the potential within cities for improved utilisation of bioresources, noting that: *"Cities have identified both barriers and possible solutions for better management of these valuable resources. It is important to help cities through an improved legal framework, access to funding and knowledge to kick start this potential. This needs to be done in partnership with all stakeholders, including citizens, industry, farmers and national and EU authorities."*

Throughout the day, nine factors were identified as being important in helping member states implement the transition towards improved collection and treatment of bio-waste, along with a 'call to action' from various European stakeholders. The nine factors are summarised in the figure on page 2.

Vanya Veras, Municipal Waste Europe, noted: *"Europe's new waste legislation recognises the value of bio-waste as a source of valuable resources. This will open the door to investment in more separate collection and better management of bio-waste, resulting in building climate resilience and contributing towards the circular bioeconomy. To be successful, we must communicate across value chains and administrations to build recognition of the value of these bioresources. The importance of good governance at local level will be crucial."*

ECN will continue to work towards implementing these recommendations. A summary of the recommendations can be accessed: [here](#)





CONTINUE PAGE

9 Recommendations towards a European Circular Bioeconomy





EU COMMISSION

Revised Bioeconomy Strategy Published

A revised strategy setting out a three-tiered plan to bolster the EU's nascent bioeconomy was published by the European Commission in October, updating the previous strategy of 2012. The new strategy builds upon the original plan by taking into consideration the renewed Industrial Policy Strategy, the Circular Economy Action Plan and the Communication on Accelerating Clean Energy Innovation.

The original strategy established five key themes, which aimed to make the EU more innovative and resource efficient (see figure); however, following an in-depth review into their effectiveness, the Commission has suggested that their scope needs to be widened in order to accommodate current and future EU priorities. The strategy is in two parts, comprising a communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions, and an in-depth working document aimed at Commission staff.



WHAT IS THE BIOECONOMY?

The bioeconomy covers all sectors and systems that rely on biological resources (animals, plants, micro-organisms and derived biomass, including organic waste), their functions and principles. It includes and interlinks: land and marine ecosystems and the services they provide; all primary production sectors that use and produce biological resources (agriculture, forestry, fisheries and aquaculture); and all economic and industrial sectors that use biological resources and processes to produce food, feed, bio-based products, energy and services.

The new strategy establishes 14 key actions, which are centred around a three-tiered action plan:

- Strengthen and scale up the bio-based sectors, unlock investments and markets;
- Deploy local bioeconomies rapidly across the whole of Europe; and
- Understand the ecological boundaries of the bioeconomy.

The strategy repeatedly acknowledges the importance of bio-waste, noting that: "industrial symbiosis and innovative industrial bio-based processes contribute to the greening of industries and

development of circular bioeconomies and products, for instance by innovating the way cities add value to their significant share of bio-waste".

Of the three tiers, the first relating to the bio-based sector make reference to:

- The promotion and development of standards, which can serve to verify the products' properties, as a basis for existing voluntary labels; and
- The development of substitutes to fossil resources, in particular bio-based, recyclable and marine biodegradable substitutes for plastic.

These actions dovetail with ECN's own activities in promoting the ECN Quality Assurance Scheme (ECN-QAS) and the recent establishment of its Task Group 'Compostable Materials'.

Furthermore, the tier to deploy local bioeconomies rapidly across Europe, states that: "*The Urban bioeconomies pilot will enable 10 European cities to turn organic waste from a societal problem into a valuable resource for the production of bio-based products.*" The pilot project on carbon farming also aims to encourage Member States to establish a fund to buy carbon credits from farmers and forest owners who implement specific projects that aim at increasing soil and biomass carbon sequestration and/or reducing emissions in the livestock sector or that are related to fertiliser use.









CONTINUE PAGE

In addition, there is also a section in the Commission's working document specifically relating to bio-waste, which makes the link between this strategy and the recently adopted Circular Economy Package.

"The contribution of the bioeconomy to the circular economy has been assessed and recognised as very significant."

Clearly, there is a lot in this document that will be of interest to ECN members. Although the strategy will not entail any budgetary or legislative commitments for the next Commission, it prioritises existing funds, such as Horizon 2020, which will fund, amongst other things, a EUR 100 million Circular Bioeconomy Thematic Investment Platform and an EU bioeconomy policy support facility for Member States.

STRENGTHEN AND SCALE-UP THE BIO-BASED SECTORS, UNLOCK INVESTMENTS AND MARKETS

-  **Mobilise stakeholders in development and deployment of sustainable bio-based solutions**
-  **Launch the EUR 100 million Circular Bioeconomy Thematic Investment Platform**
-  **Analyse enablers and bottlenecks for the deployment of bio-based innovations**
-  **Promote and develop standards, labels and market uptake of bio-based products**
-  **Facilitate the development of new sustainable biorefineries**
-  **Develop new biodegradable products, including bio-based plastic substitutes**

[The first tier to support bio-based products and markets](#)

A copy of the Bioeconomy Strategy and supporting documents can be accessed: [here](#)

EU TRILOGUE NEGOTIATIONS

Agreement Reached on EU Fertilisers Regulation

Following lengthy negotiations over many years, a compromise agreement was finally reached on updates to the EU Fertilisers Regulation during trilogue negotiations on the 20 November. This concludes many years of work aimed at improving and updating the previous regulation.

The Fertilisers Regulation EC 2003/2003 was intended to ensure that there was an internal market for fertilisers across the EU but was limited in scope to mineral fertilisers. Background work by the European Commission, which included end-of-waste proposals for compost and digestate, led to the inclusion of recycled organic-based products.

ECN has been actively involved in the negotiations, inputting technical expertise and members' views to the Commission. Prior to the 20 November meeting, ECN

contacted the representatives of the EU institutions participating in the trilogue negotiations, highlighting some concerns. These included proposals that:

- Bio-waste needs to be excluded from component material category (CMC) 2;
- The proposed time-temperature profiles for sanitation of bio-waste need to be slightly altered; and
- Limit values for 'Escherichia coli or Enterococcaceae' need to be deleted.

It is understood that the fertiliser industry lobbied hard to ensure that limit values for cadmium concentrations would not be set too low, as rock phosphate is often naturally high in this element.

At the time of ECN News going to press, the precise details of the negotiations have yet to be published. However, it is understood that a limit of 60 mg/kg P2O5 on the cadmium content in phosphorus fertilisers will be set.

Assuming that the proposals are adopted by the European Parliament and Council, then both compost and digestate that meet the requirements of the Regulation will be able to be marketed across the EU as a CE-marked fertilising product.

It is anticipated that the Commission will also issue a technical guidance document to facilitate its implementation.

TIME SCHEDULE

It is expected that the proposal will be finally adopted in the EP responsible Internal Market and Consumer Protection (IMCO) Committee ([Draft EP Legislative Resolution 14/11/2018](#)) and in the COREPER until the end of the year. Then it will be forwarded for final adoption in the European Parliament Plenary at the beginning 2019.

Further information: [here](#)



EU COMMISSION

Early Warning Report Issues to Member States

In September, the European Commission published a review of how well Member States have applied EU waste legislation, including the Waste Framework and Landfill Directives. The review included an in-depth look at recycling performance and waste policies, which led to an 'early warning' notice being issued to 14 Member States who are at risk of missing the 2020 preparation for re-use/recycling target for municipal waste.

The report was based on studies conducted by a number of parties, including the European Environment Agency and Eunomia Research and Consulting, and relied on information provided in national implementation reports for the period 2013-2015. It covered several waste streams, including municipal waste, construction and demolition waste, hazardous waste, waste electrical and electronic equipment and packaging waste. Scenario modelling for municipal waste also indicated that some Member States would be unable to reach the 50% target by 2025.

The report highlights some policy interventions for each waste stream. Notably for municipal waste, it suggests that Member States "Introduce mandatory requirements to sort bio-waste, and ensure that planned or existing treatment infrastructure matches the collection systems".

Member States at Risk of Missing the 2020 Target of 50% Reuse/ Recycling of Municipal Waste

Bulgaria, Croatia, Cyprus, Estonia, Finland, Greece, Hungary, Latvia, Malta, Poland, Portugal, Romania, Slovakia and Spain.



Recommendations for improvement

On a positive note, the Commission notes that: *"Good progress is possible if the Member States concerned take action urgently to implement the actions identified in this report and the accompanying country-specific reports. More effective separate collection, efficient EPR schemes, economic instruments such as landfill and incineration taxes and improved data quality are all crucial to ensuring compliance with EU waste legislation, now and in the future".*

A copy of the report and associated country reports can be accessed: [here](#)



WORLD BIOGAS ASSOCIATION/ C40 CITIES CLIMATE LEADERSHIP GROUP

Global Food Waste Management - An Implementation Guide for Cities

As an estimated one third of food produced for human consumption is either lost or wasted, food waste is acknowledged to be both an important contributor to global greenhouse gas emissions and loss of valuable resources. With this in mind, the World Biogas Association and C40 Cities Climate Leadership Group have published a guide for cities on how to reduce, collect and treat food waste. Drawing on case studies and examples from around the world, it highlights practical ways in which municipalities can implement separate food waste collection and treatment schemes.

The report provides a useful overview of the sources of food waste and ways in which it can be prevented, then provides a series of case studies outlining examples of food waste collection schemes in cities,

such as: Auckland, New Zealand; Cajica, Colombia; Seoul, South Korea; and, Milan, Italy.

Some of the different options that can be used to treat food waste are described, including their advantages and disadvantages. This includes anaerobic digestion (AD), composting, liquefaction (disposal to sewer) and rendering. The document then dedicates two separate chapters to the AD process and its products. Finally, the authors set out a number of policy recommendations aimed



at improving food waste management (see box).

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

WBA POLICY RECOMMENDATIONS

- Undertake large-scale food waste awareness-raising and prevention campaigns;
- Require businesses to separately collect food waste;
- Provide separate collections of food waste to households; and
- Require use of all food waste in line with the food management hierarchy, whether this is through use as animal feed, composting or AD.

FACHVERBAND BIOGAS

Digestate as Fertilizer Brochure Published

The beneficial properties of anaerobic digestate have been summarised in a new 66-page brochure, 'Digestate as Fertilizer'. Published by the German Biogas Association (Fachverband Biogas) in cooperation with the German Corporation for International Cooperation (GIZ), the Indian Biogas Association (IBA), and ECN, it provides a comprehensive summary of the main properties of digestate and how it is manufactured.

The brochure explains simply, but effectively, how digestate is produced, and how it can be upgraded and applied to land. The text is accompanied by a series of symbols used to denote different stages of digestate processing and application, which

enables consistent referencing throughout the text. The different technologies used to upgrade digestate are also described in detail, accompanied by illustrations and/or photographs.

The brochure is relevant to both Europe and developing countries, describing the legal context in Germany and Europe, and summarising ECN's quality assurance scheme for digestate. Case studies are also drawn from Uganda, India and Costa Rica, which illustrate how AD can be successfully applied in low income countries.

Finally, the brochure contains a list of reference plants and associated key data, and company directory.



The brochure is available in both German and English and can be accessed: [here](#)

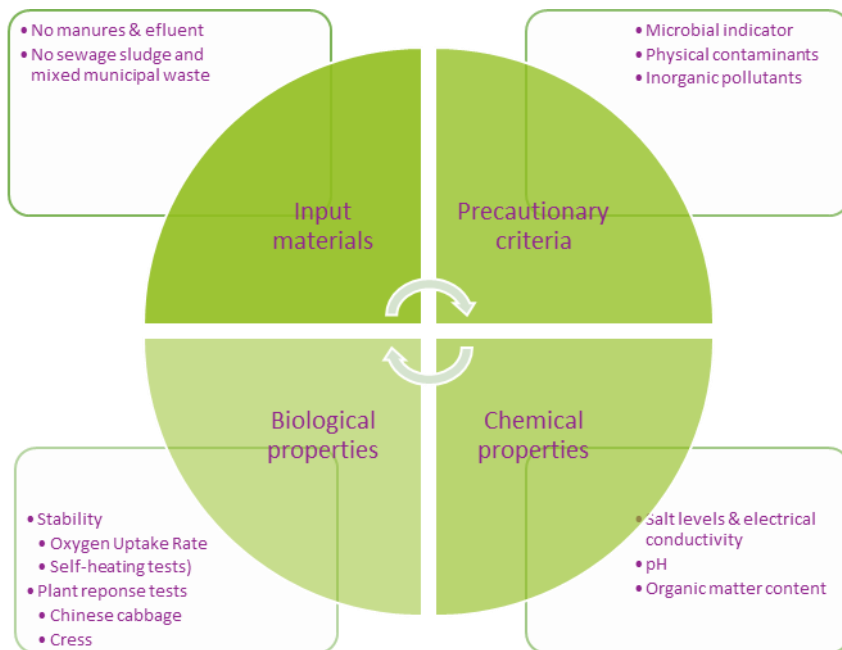


ECN-QAS

ECN Launches Growing Media Specification

ECN's Guideline Specification for the Use of Quality Compost in Growing Media was published in September following extensive consultation with compost producers, the growing media industry and ECN's Task Group 'Growing Media & Horticulture'.

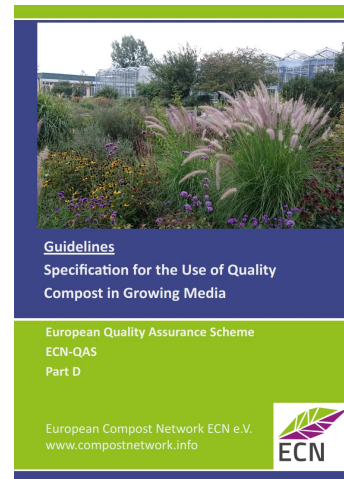
testing are also specified. Compost manufacturers are also advised to declare and label their products with sufficient information as may be required by a growing media manufacturer (such as nutrient content and liming potential). Minimum criteria include declarations that



The guidelines form part of ECN's European Quality Assurance Scheme (ECN-QAS) and set out desirable quality criteria that are recognised as being important in the formulation of horticultural growing media. They are more stringent than the quality criteria specified in Part C I of the ECN-QAS, which defines compost certification criteria.

The guidelines cover input materials, limit levels for contaminants, minimum quality criteria and labelling of the product as shown in the figure. In addition, a number of new test methods for electrical conductivity, sodium and chloride ions, compost stability and plant response

the compost's properties fall below the defined limit levels for a number of properties, including: electrical conductivity, pH, stability and plant response tests.



The guidelines also contain useful information on the blending of compost into growing media and some of the factors that compost producers should take note of.

Stefanie Siebert, ECN's Executive Director, commented: *"These guidelines set out criteria that can be used by member states, both within and outside of the EU, to help incorporate quality composted products into growing media mixes. They have been released at an important time for the European compost industry, as agreement has recently been reached on the EU Fertiliser Regulation and Norway plans to phase out peat in horticultural growing media."*

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

HORTICULTURAL GROWING MEDIA

Quality assured compost can be used as a constituent in horticultural growing media, where it may be blended with other materials (such as peat, bark or loam) to create a substrate suitable for germinating seeds, propagating cuttings and growing plants.

Growing media may be used by both professionals and amateurs in horticulture and hobby gardening applications.



FLANDERS/BELGIUM

Reducing your carbon footprint by using compost and digestate!

Did you know that using compost and digestate helps reducing your carbon footprint? Isn't that terrific? Vlaco thought so too! Vlaco developed a CO₂ tool with a handy app to formulate the average (avoided) footprint, in terms of CO₂-equivalents, linked to the use of Flemish compost or digestate

By applying compost and digestate, all types users can make a significant contribution to the environment. Compost and digestate lead to improving soils, the closing of cycles and the realisation of climate objectives! Thanks to Vlaco's CO₂ tool, footprint reductions are calculated in a matter of seconds. Ideal for users to come out, inspire others and make them think.

For whom it is interesting?

Through the Covenant of Mayors, most of the Flemish cities and municipalities are committed to reducing CO₂ emissions. General objective here is to reduce greenhouse gas emissions on the territory by at least 20% by 2020. The covenant is an initiative of the European Commission and therefore also has an important European impact. It is a good way to outline and communicate local energy policy efforts to reduce greenhouse gas emissions. Municipalities can further reduce this footprint by using compost and dried digestate in the construction and maintenance of their public green space.

Farmers are also actively looking for ways to produce (even) more sustainably. In 2017, Flemish farmers purchased 120,000 tonnes of compost and approximately 1,000,000 tonnes of digestate products. With this they are doing a good deed for the climate, because they save no less than 100,000 tons of CO₂.

Why is the CO₂-tool interesting?

Vlaco believes the composts and

digestates produced by its members is a very valuable circular product. This tool is helpful in representing the circular value of compost and digestate and places it into the context of the climate change. It is based on sound scientific data and has been validated by OWS en Vinçotte.

Vlaco's CO₂ tool is a perfect channel for this and also very easy to use. Via the app, users have to fill in a limited amount of parameters: the type and quantity of product and the product application.

The footprint 'gain' is immediately calculated as the number of kg CO₂ equivalents saved.

You also get a sense of the results by:

- the conversion to CO₂ emissions into ... kilometres travelled by an average private car
- the equivalent in emissions of... times a plane trip (H/T) Brussels-Barcelona

"The intention is to draw extra attention to the CO₂ profit. The comparison with kilometres driven or flown tells us more than CO₂ equivalents," says Vlaco-coordinator Kristel Vandenbroek. "By using compost and digestate, you do contribute to climate solutions."

"The ease of use of the app contrasts sharply with the complexity of the construction of the underlying CO₂ tool," says project coordinator Christophe Boogaerts of Vlaco. "That was also our intention. We aim for maximum usability and the same amount of user comfort. Behind it lies a scientifically based engine that seamlessly translates the use of compost and digestate into the

OVER VLACO VZW | KENNISCENTRUM | VERKOOPPLAATS | FAQ | CONTACT | NL | FR | EN

Onafhankelijke certificering | Compost gebruiken | Digestaat gebruiken | Thuiskringlopen

CO₂-app

Eindproduct: Compost

Type compost: Groencompost

Hoeveelheid (kg): 0

Soortelijk gewicht compost = 0,65 kg per liter

Toepassing: Akkerbouw

BEREKEN DE VOETAFDRIJK WINST

avoided greenhouse gas emissions."

The tool was developed by Vlaco and made available to its members (processors of organic-biologic waste). Moreover a handy application, the CO₂-app, was put online for everyone to get a sense of their personal reduced footprint following digestate or compost use.

Link to app: <https://www.vlaco.be/co2app>





NORWAY

Norway Commits to Phase Out Peat Use

In a statement released in October, the Norwegian Environment Directorate (Miljødirektoratet) committed to the phased elimination of peat in growing media for amateur users by 2025 and professional horticulturalists by 2030.

It follows a four-year pro-compost campaign by the Norwegian waste management association, Avfall Norge, alongside two NGOs 'Future in Our Hands' (Framtiden i våre hender) and 'Sabima', a Norwegian nature conservation organisation. Together they documented the high peat content in everyday growing media products and pledged their support for alternatives such as compost. The initiative was also backed by a local campaign group opposing a planning application for a new peat mining facility near to Oslo airport.

"As a consequence, the case caught national media interest focusing on the 'surprising' news that bringing back a bag of growing media 'soil' from the garden centre wasn't as environmentally friendly as customers might have thought", says Henrik Lystad, assistant director at Avfall Norge. Throughout 2015-16 several gardening programmes on television aired follow-up features on the topic.

A positive outcome of the campaign has been closer co-operation between the national growing media industry and the composting industry, with every garden centre now offering 100 % peat free growing media alternatives. According to surveys conducted by Avfall Norge, the demand for compost has increased steadily in recent years. In 2017 industrial composters were asked how the demand for compost-based products had changed over the last two years, with 16% replying that demand had gone up significantly, 30% stating it was slightly up, 49% unchanged and only 5% slightly down.

The plan to eliminate peat use in Norway will involve the development of *"replacement products through research and innovation, which do not adversely affect climate, natural diversity and other environmental values"*, noted environmental minister Ola Elvestuen. *"It will be made in collaboration with the peat, horticulture and waste industries, and will also improve branding of the products"*. Recognising that professional growing media users need demanding technical products, the proposal provides a longer time scale for professional products (2030) compared to amateur products (2025).

ECN's Executive Director, Dr Stefanie Siebert, commented: *"This is encouraging news, and we are confident that ECN's recently published Growing Media Specification will prove to be a useful tool to help Norway achieve its aims"*.

A copy of the press release (in Norwegian) can be accessed: [here](#)

A copy of the Avfall Norge report on peat content in Norwegian growing media (in Norwegian) can be accessed: [here](#)



UK / BSI / PAS 100

UK's Compost Standard Revised

The UK's compost standard, PAS 100, has recently been reviewed and revised to update it following feedback from end users and the composting sector.

PAS stands for 'Publicly Available Specification' and is an industry standard published by the UK's standards setting body, the British Standards Institute (BSI). First published in 2002, it evolved out of the former Composting Association's

standards for compost and is used as the basis for the current Compost Certification Scheme.

The revised standard includes the introduction of requirements for setting up a Safety and Quality Control System to control hazards affecting both the quality and safety of compost. It contains a new 'compost quality' clause requiring compost producers to agree in writing with

customers any quality requirements that are more stringent or wider ranging than the minimum baseline quality requirements specified in the PAS.

Further information about the PAS and the UK Compost Certification Scheme can be accessed: [here](#)



FRANCE

Fifty Measures for a 100% Circular Economy in France

A roadmap setting out how France can transition to a 100% circular economy was published during the summer by the French Ministry for an Ecological and Solidary Transition, and Ministry for the Economy and Finance. Inland published its new waste management plan in December, replacing the previous plan which came to an end in 2016.

Roadmap actions to address bio-waste

ACTION 36 : ADAPT WASTE REGULATIONS TO PROMOTE THE CIRCULAR ECONOMY
ACTION 37: FACILITATE END-OF-WASTE STATUS

- Simplify nomenclature of classified installations, notably for methanation (AD), composting, sorting-transfer-grouping of waste, biowaste and green waste
- Put in place end-of-waste criteria for fertilisers and quality cultivation media (excluding sludges from water treatment plants)

ACTION 24: RECOVERY OF ALL QUALITY BIOWASTE

- Aimed at the agricultural sector
- Strengthen existing standards for recycled fertilisers
- Encourage the use of fertilisers from renewable resources

ACTION 23: BIO-WASTE SORTING AT SOURCE

Implement by easing restrictions.

- A two stage plan:
- Restaurants, community canteens
- Households

The 44-page document is aimed at helping France implement structural changes to move towards a circular economy. It sets five key objectives shown in the diagram, which are supported by four key themes:

- A Roadmap for Better Production;
- A Roadmap to Better Consumption;
- A Roadmap for Better Managing Our Waste; and
- A Roadmap for Mobilising all Actors.

Each theme has an accompanying set of actions, aimed at three separate stakeholders: consumers and citizens, companies and state/local authorities.

FOOD WASTE

The roadmap for better consumption aims to 'intensify the fight against food waste'. Stating that it will:

- Require caterers to assess processes to reduce food waste;
- Require supermarkets larger than 400 m² to propose donation agreements to charities;
- Require operators in the agri-food sector to publish their commitments to reduce food waste;
- Revise the scope and methods for setting expiry dates on food products; and
- Develop educational models to

incorporate into the French national education system.

BIO-WASTE

The roadmap for better waste management makes specific reference to bio-waste, stating that France should: *"Take biowaste out of bins, as this form of waste amounts to 22 million tonnes that can be recovered"*.

The roadmap places an emphasis on the separate collection of bio-waste through the easing of restrictions. It proposes a two-stage plan to initially address the collection of bio-waste comparable to household biowaste (such as at restaurants, community canteens, etc.), then to extend this to include household bio-waste.

It recognises the importance of the agricultural sector, and specifically actions the: "recovery of all quality biowaste". The roadmap suggests that a "nationally agreed 'confidence pact' will be drawn up in 2018 to set up virtuous production chains for fertilizers and growing cultures (composts and digestates in particular) from the circular economy". It aims to support this by strengthening existing standards for fertilisers made from recycled materials, noting that care must be taken to "not to degrade the value

created thanks to sorting by mixing uncontaminated organic matter (raw or sorted at source) with lower-quality biowaste".

It also aims to encourage the use of fertilisers from renewable resources in agricultural production, remove the waste status of fertilisers produced from high-quality recycling processes, and revise the labelling of fertilisers, such as composts and digestates, to highlight their agronomic qualities.



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



REPORT

ISWA 2018 Congress

Over 1,600 delegates attended the 2018 congress of the International Solid Waste Association in Kuala Lumpur in October. The conference was organised by the Waste Management Association of Malaysia with the theme of 'Sustainable Consumption Towards Waste Minimization'.

BIOLOGICAL TREATMENT SESSION

Although the conference spanned the entire waste management sector, organic waste did feature. The ISWA Working Group on Biological Treatment of Waste (WGBTW), which is chaired by **Dr Marco Ricci**, held a curated session on Approaches to Training on Separate Collection and Composting. Delegates heard from former ECN Chair, **Dr Jane Gilbert**, on how ISWA created a network for knowledge sharing on biowaste recycling, which involved workshops in Tunisia, China and Brazil. Marco described examples of communication initiatives at the start of separate bio-waste collection schemes in Italy. Finally, **Johannes Biala** of the Centre for Recycling of Organic Waste and Nutrient, at the University of

Queensland, Australia, described some Australian initiatives and communicating with the agricultural sector.

BLACK SOLDIER FLIES

The propagation of black soldier fly larvae on bio-waste was presented by Swiss researchers **Moritz Gold** and **Adeline Mertenat** of EAWG/Sandec. As the larvae are easy to cultivate (especially in warm countries), and are high in lipids and protein, they are a useful means of converting bio-wastes into animal feed. The researchers estimated that 8 kg of bio-waste could yield about 6,000 fly larvae, which is enough to feed about 1 kg of fish.

PUBLICATION AWARDS

The ISWA congress also celebrated some of the best publications on waste management in 2018. Dutch professor and creator of the waste hierarchy, **Ad Lansink**, won first prize for his book 'Challenging Changes, Connecting Waste Hierarchy and Circular Economy'. 'Making Waste Work: A Toolkit' by **Zoë Lenkiewicz** and **Mike Webster** from



WasteAid UK won third prize. This publication is aimed at developing countries and contains chapters on organic waste management, including composting, vermicomposting and anaerobic digestion. The toolkit can be downloaded: [here](#)

ANNOUNCEMENT

The ISWA World Congress in 2019 will be held in Bilbao 7-9 October 2019 under the slogan: Circular Economy: what are you doing?

This year the Congress organising partner is the ECN member ATEGRUS®, the Spanish Technical Association for Waste Management and Environment, and is the Spanish National Member of the International Solid Waste Association. Further information about ISWA 2019 can be accessed: [here](#).





ANNOUNCEMENTS

World Resource Forum, Antwerp, 24 – 27 February 2019

ECN will be co-hosting a workshop on 'Marketing Tailor Made Compost and Digestate-Based Products' at the World Resources Forum's conference in February. The workshop will involve ECN and VLACO, the Flemish bio-waste organisation, under the conference theme 'Circular Bio-Economy and Bio-Based Materials'.

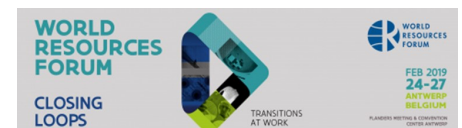
The workshop aims to bring together stakeholders from the waste and growing media sector, policy makers and researchers to introduce and discuss ECN's new guidelines for the specification of quality compost for use in growing media and to present success stories on the use

of compost in agricultural and horticultural systems.

Planned presentations include:

- ECN-QAS Guidelines for the specification of quality compost for use in growing media;
- How research is the foundation of product differentiation of compost and digestate in Flanders; and
- Testimony from a growing media manufacturer.

The World Resource Forum is an independent non-profit international organisation that serves as a platform connecting and fostering knowledge exchange on resources management



amongst business leaders, policy-makers, NGOs, scientists and the public. The conference 'Closing Loops – Transitions at Work' will be held in the Flanders Meeting & Convention Centre, Antwerp, and is being organised in conjunction with international partners such as UN Environment and the European Commission.

Further information about how to register is available: [here](#)

Nordic Biogas Conference, Oslo, April 9-11

The seventh Nordic Biogas Conference will be held in the European Green Capital for 2019, Oslo, on the 9-11 April. Organised by leading representatives from the biogas industry from all five Nordic countries, it will have over 30 speakers, and anticipates attracting between 300-500 delegates.

The opening session will focus on economics and moving towards a carbon neutral society, with keynote presentations on: Climate change and its impacts; Global economics and market outlook. The shift from fossil to renewable energy; and, "Biogas - more than 'just' energy. The need for a safe nutrition cycle to

make food production sustainable and circular".

Early bird registration is in place until the 4 January, offering a delegate rate at 60% of the full price.

The call for abstracts is open until the 15 December.

ISWA BEACON CONFERENCE 8 & 9 APRIL

The NBC will also co-host the International Solid Waste's Beacon Conference and compost practitioner day on the 8 and 9 April, which will be subject to separate registration. This will be made available on the ISWA website: [here](#)



NBC REGISTRATION

Further information about the NBC can be accessed: [here](#)

Information about submitting an abstract can be accessed: [here](#)

Indoor exhibition / registration: Haagen Klette Lunde:
haagen.klette.lunde@gyro.no

Sponsorship / outdoor exhibition: Jens Måge: jens.maage@avfallnorge.no



12-13 Februar 2019

MÜNSTER (DE)

16. Münsteraner Abfallwirtschaftstage

The conference on Waste Management will discuss current topics with competent speakers, exchange views with experts on developments and experiences, and find out about the latest news from the field at the accompanying trade exhibition. (in German language)

[>> Further information](#)

24-27 February 2019

ANTWERP (BE)

World Resources Forum

The World Resources Forum 2019 'Closing Loops - Transitions at work' is hosted by the Public Waste Agency of Flanders (OVAM). The World Resources Forum and OVAM, will present inspiring keynotes and global sessions, challenging workshops. ECN / VLACO are co-organising the Workshop: Marketing tailor made compost and digestate-based products). Fascinating site visits in close collaboration with dozens of partners and stakeholders are offered to the participants.

[>> Further information](#)

9-10 April 2019

OSLO (NO)

7th Nordic Biogas Conference

The Nordic countries have an advanced use of biogas for transportation and biofertilizer for the agriculture. The conference will show-case both the today's and tomorrow's solutions in biogas.

The conference includes plenary presentations, parallel and a poster session and ECN is going to organise a specific session on digestate. A

study tour and a training seminar are also offered to the attendees.

[>> Further information](#)

9-11 April 2019

KASSEL (DE)

31. Kasseler Abfall- u. Ressourcenforum

The conference topics are Biowaste and substance-specific recycling. During the 3 days different topics of Circular economy and Fertilisers are discussed in a wide range of sessions (in German language)

[>> Further information](#)

16-18 April 2019

SOFIA (BG)

Waste Management & Recycling

Being among the prominent initiatives in the South-East European Region, the event is a meeting point for industry players from production, commercial and public sectors, municipality and state administration representatives. For its 15 years existence, it has successfully paved the way for advanced technologies and knowledge to the growing South-East European market. In 2018 edition, there were exhibitors from 11 countries & 3.500 trade visitors; speakers & attendees from 19 countries.

[>> Further information](#)

5-11 May 2019

CANADA, USA, INTERNATIONAL

International Compost Awareness Week

International Compost Awareness Week (ICAW) is the largest and most comprehensive education initiative of the compost industry. It

is celebrated nationwide and in other countries each year during the first full week of May.

Started in Canada in 1995, ICAW has continued to grow as more people, businesses, municipalities, schools and organizations are recognizing the importance of composting and the long-term benefits from organics recycling.)

[>> Further information](#)

13-17 May 2019

BRUSSELS (BE)

EU Green Week 2019

The next edition of EU Green Week will put this process of environmental implementation into the spotlight.

EU Green Week 2019 will include events across Europe, with the official opening event on 13 May in one of the EU Member States and a high-level summit in Brussels from 15 to 17 May.

[>> Further information](#)

7-9 October 2019

BILBAO (ES)

ISWA World Congress 2019

This global meeting will be based on a scientific programme focused on sustainable waste management, circular economy and resource efficiency. The participants will be welcome to share their critical thinking and to discuss creative ideas on the featured issues of the Congress.

[>> Further information](#)