ECN NEWS

2018/01

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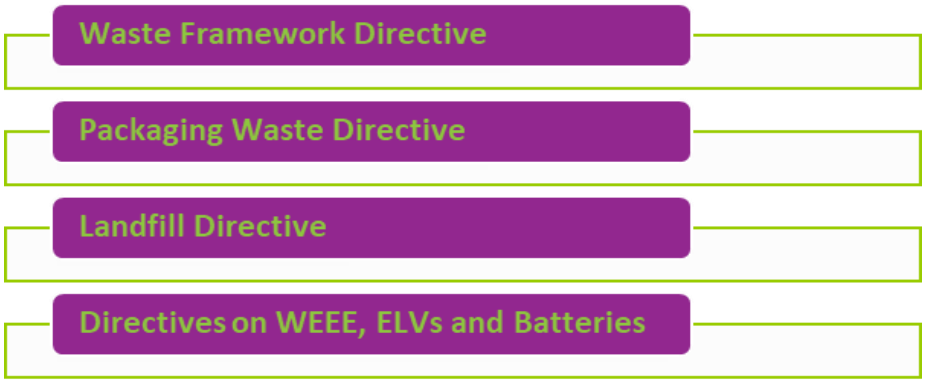
EU COMMISSION / COUNCIL / PARLIAMENT - PROVISIONAL AGREEMENT

Mandatory Separate Collection of Bio-Waste by 2023

After many years of campaigning by ECN, the separate collection of bio-waste is set to become mandatory across the EU. A provisional agreement reached on the 18 December between the Estonian presidency and representatives of the European Parliament, means that EU member states will be required to put in place measures to collect bio-waste separately by 2023.

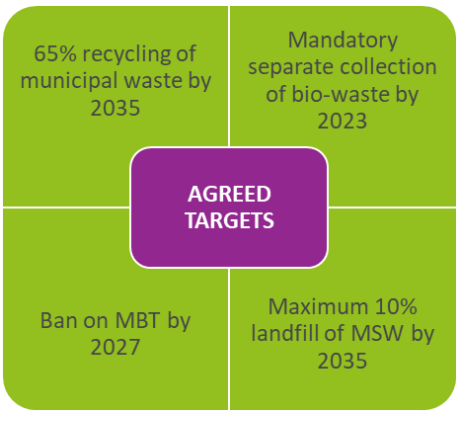


Elements of the Waste Package

The agreement was reached in the sixth trilogue discussions between the Council and Parliament, and formed part of the waste package proposals published by the Commission in December 2015. It amends six pieces of legislation, including the Waste Framework Directive.

The agreed proposals are set to establish a new municipal waste recycling rate of 65% by 2035, as well as a maximum of 10% landfilling of municipal waste by 2035. These will be accompanied by revised definitions and calculation methodologies for municipal waste recycling.

Of importance to ECN members will be the obligation to implement the separate collection of bio-waste as of 31 December 2023, as well as strengthening the provisions on the clause technically, economically, environmentally practicable 'TEEP'. The position also confirmed the phasing out of mechanical biological treatment (MBT) by 1 January 2027.



Key Features of the Provisional Agreement

The final analysis and endorsement on behalf of the Council is planned for the first quarter of 2018 under the Bulgarian presidency, and ECN is awaiting final approval of the consolidated text shortly.

EU POLICY

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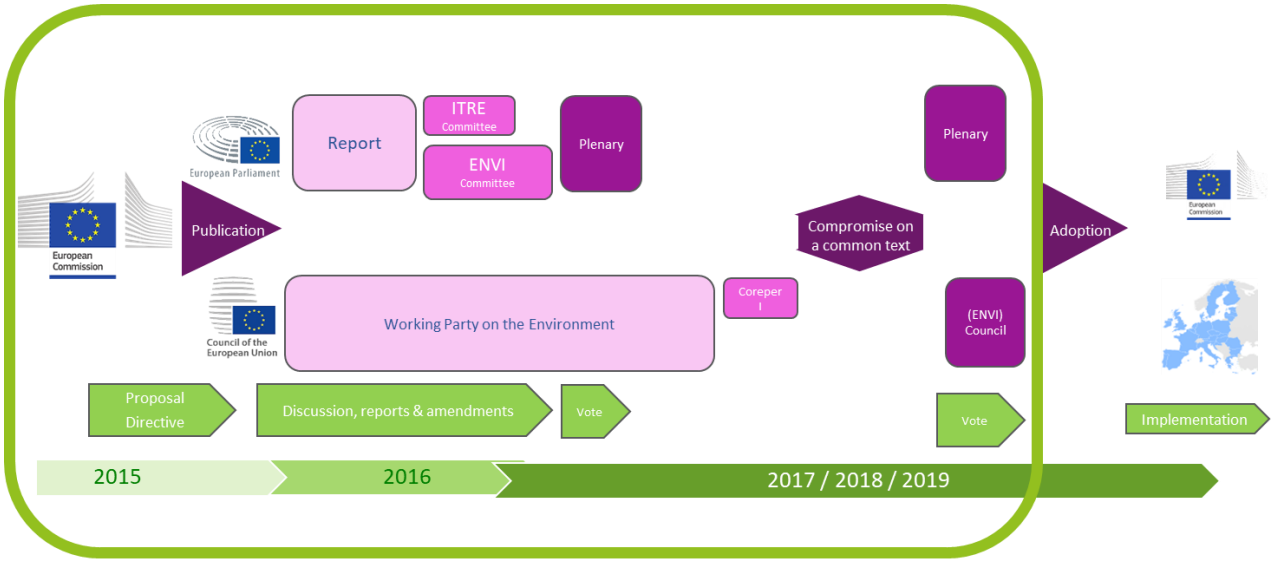


State of the Play on the Circular Economy Package - Waste Proposals

Time line

- **Text adoption in COREPER on 23/02**
- **ENVI vote on 27/02**
- **Plenary vote by EP on 16 - 17/04**
- **Publication in Official Journal (OJ) June or July**
- **Transposition during 24 months until June/July 2020**

UK OPPOSITION TO HIGHER RECYCLING RATES

NGOs Greenpeace and the European Environmental Bureau have reported that UK officials were unable to support an EU-wide target of recycling 65% of all municipal waste by 2035. The disclosure comes following leaked notes from an EU delegation seen by Unearthed, the environmental journalism project funded by Greenpeace UK.

Diplomats from three other EU nations, speaking on condition of anonymity, agreed that UK officials had voiced opposition to the binding recycling target. One told Unearthed the UK had been "quite blunt".
The EEB commented that the UK is "*Saying one thing and doing another*", but noted that "*other EU countries have already reached a rather underwhelming compromise on the new recycling target, so it is unlikely the UK will be able to water it down even further*."

The UK is set to leave the EU in March 2019, and it is unclear if it will adopt the new provisions in the Waste Framework Directive.

The Unearthed article can be accessed: here.
The EEB article can be accessed: here.

EU COUNCIL

Trilogue Negotiations on Fertiliser Regulation to Begin

Following years of preparation, the European Council finally agreed on a draft mandate to amend the Fertilisers Regulation on the 20 December 2017. This mandate enables the Bulgarian Presidency of the Council to start negotiations with the European Parliament, Council and Commission in 2018.

The draft Regulation sets out requirements for placing fertilising products on the EU market. These requirements will include obligatory maximum contaminant levels, the use of defined component material categories and labelling requirements.

ECN has been actively involved in the development of the draft Regulation, highlighting potential problems and providing expert knowledge based on experience in operating the ECN quality assurance scheme.

Despite some successes, ECN will continue to lobby with the negotiation partners of the Council, the Parliament and the Commission to ensure that the best possible outcome for our members will be achieved. In particular, we will continue to:

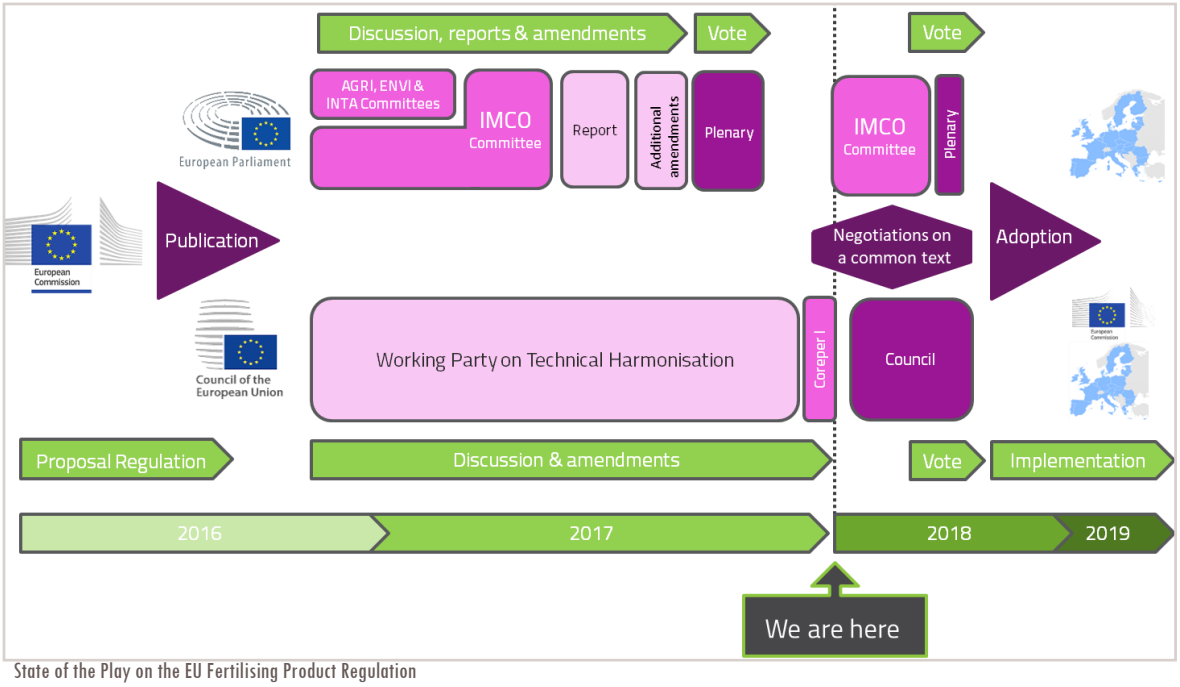
- Seek clarification on input materials;
- Aim to prevent over-regulation with the implementation of the quality assurance procedure for compost and digestate;
- Request that the limit values for the microbial contaminants Escherichia coli / Enterococcaceae are deleted for inorganic fertilisers, organic soil improvers and growing media; and
- Ensure greater flexibility in the proposed time/temperature profiles.

The first trilogue meeting on 25 January was held as an exploratory round, where the participants took note of the state of play and sketch the steps to be taken in the future. The next trilogue meeting will take place on 20 March. The trilogues will be attended by representatives of the Council Presidency, an European Parliament delegation made up of the rapporteur, shadow rapporteurs and their assistants, as well as representatives of the European Commission.

ECN will continue to update members on the Fertilisers Regulation throughout the trilogue negotiations, both by email and on the ECN website.

Papers and information will be uploaded onto the members' only part of the website: https://www.compostnetwork.info/welcome-members-area/ecn-task-groups/area-european-policy/tg-fertilisers/

Further information on the regulatory process can be accessed: here.



State of the Play on the EU Fertilising Product Regulation

CLARIFICATION BY DG ENVIRONMENT

Potential Loop Hole Closed Due To Clarification Obtained By ECN: Plant materials (grass clippings) are defined as bio-waste

In a letter (19/10/2017) to the Commission's DG for Internal Market, Industry, Entrepreneurship and SMEs in October, ECN highlighted a potential problem with the draft Regulation, which may have had serious consequences for members.

Publication of the draft report in July 2017 and voting by Commission committees in October could have resulted in the exclusion of bio-waste materials from CE marked fertilising products, which would have undermined the EU's Circular Economy Action Plan.

ECN highlighted the problem that plant materials as bio-waste could be classed as a Component Material Category 2 (CMC2). Due to the way the Regulation has been drafted, this would have potentially created a regulatory loop hole, meaning that bio-wastes would not need to be processed through composting and anaerobic digestion and therefore treated in accordance with processing standards laid down for CMC3 (compost) or CMC5 (digestate).

In its reply in December, the Commission confirmed that *"CMC2 aims to cover pure plants parts (e.g. bark, coconut shells). If there is a risk that plants, plant parts or plant extracts contain other materials and contaminants, they would not qualify under CMC2."*

Furthermore, the Commission also clarified that *"biowaste as defined in WFD [the Waste Framework Directive] is clearly covered in CMC3 and identifies specific recovery rules"*.

This means that processing controls will be required for the composting or anaerobic digestion of bio-wastes that will end up as CE marked fertilising products (compost and digestate).

ECN request for clarification on possible inclusion of plant material falling under the definition of bio-waste

The Commission's proposal on the EU Fertilising Product Regulation defines in Annex II the Component Material Category on plant materials as follows:
CMC 2: NON-PROCESSED OR MECHANICALLY PROCESSED PLANTS, PLANT PARTS OR PLANT EXTRACTS

1. A CE marked fertilising product may contain plants, plant parts or plant extracts having undergone no other processing than cutting, grinding, centrifugation, pressing, drying, freeze-drying or extraction with water.
2. For the purpose of paragraph 1, plants are understood to include algae and exclude blue-green algae.

ECN's main concern is that the inclusion of these "non-processed or mechanically processed plants, plant parts or plant extracts" might lead to the undermining of the definition of waste and explicitly the definition for bio-waste as given in Directive 2008/98/EC.
A clear reference to Directive 2008/98/EC is therefore needed in the definition for CMC 2, in order to make it absolutely clear that plant materials as defined as 'bio-waste' do not come under 'CMC 2' or 'CMC 4' and therefore do not require processing under controlled conditions such as those required for component materials according to 'CMC 3' (compost) or 'CMC 5' (digestate other than energy crop digestate).
If the definition of bio-waste will continue to be undermined as shown through the above described cases, this would bring severe consequences to the environmental safety of municipal waste management, and will lead to:

- The uncontrolled use of plant materials including invasive plant species such as Japanese knotweed, which can be further distributed;
- The labelling of garden and park waste as CE marked material which can be transported cross border which could consist of diseased plant materials.

ECN therefore asks the Commission to take the appropriate next steps to prevent these consequences and ensure a sustainable and sound environmental use of garden and park waste in the EU.

EC COMMUNICATION PUBLISHED

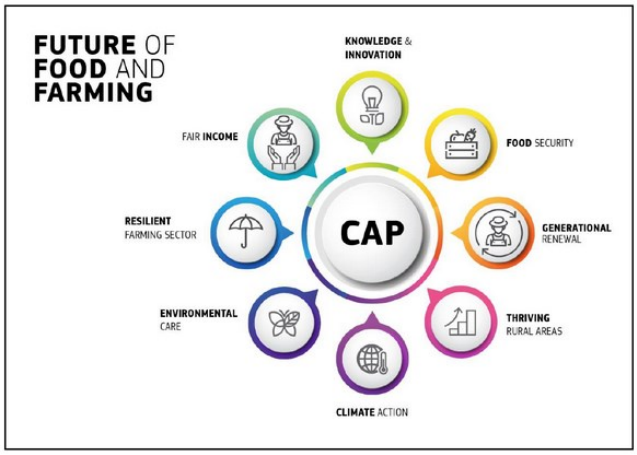
Changes to the Common Agricultural Policy Announced

The Future of Food and Farming, a communication by the European Commission, was published at the end of November last year. Setting out a vision for revising the Common Agricultural Policy (CAP), it includes a new delivery model and proposals to reduce greenhouse gasses, increase biodiversity and invest in modern technology.

The Common Agricultural Policy (CAP) is one of the EU's oldest policies, providing subsidies to Europe's farmers since 1962. Whilst the current CAP aims to support the agricultural sector to produce a secure supply of quality, safe food, it is in need of modernisation to ensure that it is fit-for-purpose for the 21st century.

The communication suggests that the EU should retain its role in setting the overall policy objectives (such as climate change and meeting the United Nation's Sustainable Development Goals), whereas member states should take a greater role in the ways in which they meet these objectives and associated targets. The Commission notes that: "*Greater subsidiarity would make it possible to better take into account local conditions and needs*".

The communication does not contain detailed suggestions as to how the CAP will be amended; rather, it sets out the Commission's thinking on the ways in which the key policy objectives will be met. With regard to meeting the EU's environmental and climate objectives, it suggests replacing the current three policy instruments (cross compliance, green direct payments and voluntary agri-environmental and climate measures) with a more targeted and flexible approach, in which individual member states define their own quantifiable targets.



The document notes that the "*Commission will explore how to cater for measures that yield high EU environmental added value, such as … organic farming, as well as individual or collective schemes aimed at soil health, biodiversity and river basin stewardship*". In addition, it makes specific mention of introducing measures to reduce food waste and food losses through improving food production and processing technologies, as well as supporting initiatives that transform traditional produce-use-discard consumption patterns into a circular bio-economy.

The Commission plans to work on developing these proposals during the early part of 2018, with a proposal expected before the summer of 2018. Further information about the CAP proposals can be accessed: here.

VISIONS OF A SELF-RENEWING AGRICULTURAL SECTOR

A vision of how the CAP can be modernised to better serve the needs of European citizens was set out in a talk in October in Wurzburg, Germany, by Professor Cees P. Veerman, Chair of the European Commission's Agricultural Markets Task Force.

In his talk, Prof Veerman acknowledged that the primary producer in the food chain is weak, and that changes need to be made to the way agriculture is funded. He noted that changes to agricultural practices to increase soil organic matter content can also simultaneously reduce greenhouse gas emissions: carbon management therefore becomes part of the solution instead of being part of the problem.

He also suggested that:

- New ways of managing soils, based on current crop rotation practices, can be developed, in which long term partnerships between livestock and arable agriculture are established;
- The digestion of manures and organic wastes is a proven technology and can be a profitable business venture for farmers; and
- Biotechnology opens up some exciting new possibilities.

Further information about Prof Veerman and the Agricultural Markets Task Force can be accessed: here

EU COMMISSION

ECN Helps Align the Renewable Energy Directive with the Circular Economy

Lobbying by ECN and partner European organisations resulted in proposals for revising the Renewable Energy Directive being tightened by the European Parliament. Voting on the 17 January 2018, MEPs signalled that Member States should ensure that renewable energy generated from mixed municipal waste does not receive subsidies.

The European Commission published proposals to revise the EU's Renewable Energy Directive (2009/28/EC) in November 2016, forming part of a package of measures aimed at delivering 'Clean Energy for All Europeans'. A number of European organisations, led by Zero Waste Europe, highlighted a potential anomaly that could result in unsorted municipal waste contributing towards renewable energy targets. In a joint letter to members of the Parliament's Industry, Research and Energy Committee, they highlighted this anomaly and explained how it would contradict the principles set in the waste hierarchy, incentivising the combustion of waste materials, rather than promoting waste prevention, re-use and recycling that currently receive no subsidies.

Janek Vahk, Development and Policy Coordinator at Zero Waste Europe, stated: ***"The Parliament sent a clear signal to the Member States: waste prevention and recycling must be the priority option when developing policies for renewable energy, including the support schemes."***

Revisions to the Directive are set to be fiercely debated by the Council over the coming months.

Further information on the Renewable Energy Directive can be accessed: here. The joint letter can be accessed: here.

Bioeconomy Strategy Reviewed

A recent review of the European Commission's 2012 Bioeconomy Strategy and Action Plan identified that its objectives have been adopted in numerous national and regional bioeconomy strategies both inside and outside of the EU. Although the report is not a formal policy review, it provides a useful evaluation of the extent to which the five main policy objectives of the strategy have been met.

The 2012 strategy "Innovating for Sustainable Growth: A Bioeconomy for Europe" set out to *'to pave the way to a more innovative, resource efficient and competitive society that reconciles food security with the sustainable use of biotic renewable resources for industrial purposes, while ensuring environmental protection'*. It established five policy objectives, spanning food production, resource use, climate change and the economy.

The review found that the 2012 strategy is delivering on its key action plan, and has successfully mobilised research and innovation funding. In particular, funding within member states and dedicated funding through Horizon 2020 have been mobilised, as well as the development of standards for bio-based products and the launch of the BioBased Industries Joint Undertaking.

The report also notes that "*Further mobilisation of investments is still needed, which requires a stable regulatory environment*". For example, private sector investment in integrated bio-refineries will require specific support and a stable regulatory environment due to the high capital investments and technological and market risks involved.

"The current policy context highlights the need for a sustainable, circular bioeconomy"

Overall, the review concluded that recent advances in circular economy thinking and publication of the United Nations' Sustainable Development Goals, means that the relevance and focus of the bioeconomy strategy needs to be reviewed in order to better take them into account. It noted that *"The current policy context highlights the need for a sustainable, circular bioeconomy"*, recommending that improved monitoring and assessment frameworks are needed to assess progress in the development of sustainable biomass supply and demand.

Copies of the report, published in November 2017, can be accessed: here.

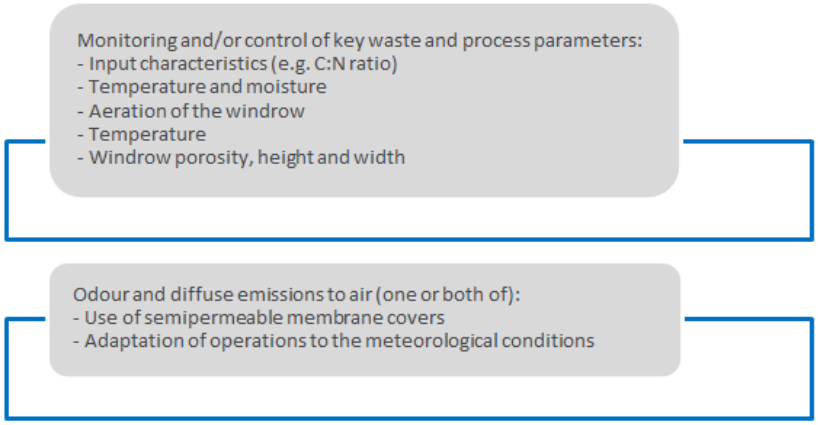
Defining the Bioeconomy

The strategy defined the bioeconomy as "the production of renewable biological resources and the conversion of these resources and waste streams into value added products, such as food, feed, bio-based products as well as bio-energy".

EU COMMISSION

Final Draft BREF for Waste Treatment Published

The European Commission's Joint Research Centre published its recommendations for introducing Best Available Techniques (BAT) for Waste Treatment in October. The document, which extends to 859 pages, covers a wide range of waste treatment techniques, including biological treatment, and has been developed as part of the Industrial Emissions Directive 2010/75/EU (Integrated Pollution Prevention and Control).



BAT conclusions for aerobic treatment

The BAT reference document (which is also referred to as a BREF), is one of a number of different documents covering a wide range of industrial sectors. It is a working draft of the European IPPC Bureau (of the Commission's Joint Research Centre) and has been developed in conjunction with a technical working group.

The BREF sets out best practice techniques to reduce emissions from waste treatment installations, permitted under the Industrial Emissions Directive. Once finalised, the BATs listed within the BREF would need to be taken into account in the permitting and operation of relevant facilities:

- Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day; or
- Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day.
- Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day. When the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day.

The document includes a detailed technical description of biological treatment techniques and emissions to the air and water, including composting, anaerobic digestion and mechanical biological treatment (MBT) plants.
The BREF sets out proposals for 'Best Available Techniques' (BAT) at all waste treatment facilities, which include managing environmental performance, waste characterisation and storage (see inset).

The BREF sets out sector-specific conclusions for each type of waste treatment process. Those covering the biological treatment of waste include:

- **Overall environmental performance** - Selecting the waste input in order to reduce odour emissions and to improve the overall environmental performance;
- **Emissions to air** - Using a biofilter, scrubber or fabric filter in order to reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H_2S and NH_3;
- **Emissions to water and water usage** - Segregating water streams, recirculating water, and minimising the generation of leachate.

BAT conclusions have been suggested for different biological treatment techniques. Those for aerobic treatment are summarised in the diagram above.

A meeting of the IED Article 13 Forum (technical expert working group) took place on the 19-20 December 2017 to agree the text; however, final approval of the BAT conclusions will now need to be made by the IED Article 75 committee during 2018.

A copy of the waste treatment BREF can be downloaded here.

Summary of the general BAT conclusions: Overall Environmental Performance				
Implement an environmental management system	Implement waste characterisation, acceptance, tracking and output quality management system	Establish and maintain an inventory of waste water and waste gas streams	Ensure that all waste is adequately stored	Establish and implement waste handling and transfer procedures

PUBLICATIONS

RESEARCH

Professional Tunnel Composting and Anaerobic Digestion Found to Inactivate the Invasive Plants Tiger Nut Sedge and Japanese Knotweed

A study investigating the destruction of both Japanese knotweed and tiger nut sedge during composting and anaerobic digestion was published by Swiss researchers last summer. The aim of the study was to investigate whether Japanese knotweed and tiger nut sedge would survive during composting and anaerobic digestion, and therefore present a risk of transmission when the resultant compost or digestate is spread to land.

Japanese knotweed (Reynoutria japonica) and tiger nut sedge (Cyperus esculentus) are invasive plant species that create problems across Europe. Japanese knotweed was originally introduced to Europe from East Asia as an ornamental plant, and has since spread across most of the continent; it is particularly destructive due to its strong root system, which can damage buildings (including concrete structures) and roads. Tiger nut sedge on the other hand, is native to parts of southern Europe, but it is also becoming increasingly problematic in more northerly parts, as it is very difficult to remove from fields once it has taken hold.

TERMINOLOGY

Cyperus esculentus is also called:
chufa sedge, nut grass, yellow nut sedge, tiger nut sedge, or earth almond

Reynoutria japonica (synonym Fallopia japonica) is also known as:
Asian knotweed or Japanese knotweed.

The researchers investigated the effect of a range of factors on the survival of Japanese knotweed rhizomes and stems, and tiger nut sedge rhizome nodules. They investigated: the effect of oxygen availability (aerobic vs. anaerobic conditions), temperature (mesophilic vs. thermophilic) and the effect of biological activity inside the composting mass or digestion slurry (by enclosing the plants in either a waterproof plastic or nylon – water permeable - mesh bag).

Composting was carried out at two composting plants: a commercial tunnel composting system and an open-air windrow system, with the nylon mesh and polyethylene bags placed at different distances from the ground and edge of the composting piles. Samples were removed after one and three weeks, and the proportion of germinable parts determined under controlled conditions and compared against a control.

Digestion was carried out in laboratory-scale fermentation vessels, with the bags placed at either 37 °C for 7 and 21 days (mesophilic fermentation) and at 55 °C for 7 and 14 days (thermophilic fermentation). Germination was then assessed under controlled conditions.

Based on the results obtained, the researchers made the following conclusions:

- The rhizomes of Japanese knotweed and the nodules of tiger nut sedge were both inactivated by professional (tunnel) composting or fermentation (anaerobic digestion);
- Survival of both species was possible in open windrow composting systems when the samples were placed near the outermost edge of the pile. However, regular turning of the material would ensure that all material would be incorporated into the centre of the composting mass, thereby ensuring it is destroyed;
- Potential exists in open-windrow composting carried out in fields for the underlying soil to become contaminated. In order to prevent this, the researchers suggest that:
  - Feedstocks know to contain either Japanese knotweed or tiger nut sedge should be incorporated into the centre of the windrow; and
  - Operators should remain vigilant and check whether growth of these plants are observed along the sides of the windrows, then eliminate them immediately.
- Thermophilic digestion was sufficient to inactivate both plant species after one week; and
- There is the possibility that tiger nut

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PUBLICATIONS

CONTINUE PAGE

sedge nodules could survive one week in a mesophilic anaerobic digester, although they were inactivated after three weeks at 37 °C.

The rhizomes of Japanese knotweed and the nodules of tiger nut sedge were both inactivated by professional tunnel composting or anaerobic digestion

Main conclusion of the research

Japanese knotweed rhizomes (L) and bagged samples inserted into the composting mass (R)

The researchers suggest that operators of composting and anaerobic digestion facilities should take care to ensure that hygienised compost or digestate should not come into contact with incoming feedstocks, as this has the potential to contaminate the finished product.

The principal investigator was Dr Jacques Fuchs (FiBL). The report, published in July 2017, is available in German and French, and can be accessed: here.

EC REPORT

Oxo-Degradable Plastics Are Not a Solution for the Environment

The European Commission has taken the bold step to start a process to restrict the use of oxo-degradable plastics across the EU. This forms part of the European plastics strategy and was set out in a report released on the 16 January 2018.

Oxo-degradable plastics, which may also be called oxo-plastics or oxo-biodegradable plastics, are conventional polyethylene plastic into which an additive has been mixed that helps speed up its fragmentation into smaller particles. The process is usually triggered by either heat or ultraviolet light and causes the polymer to break down into small pieces.

Marketing claims by industry has resulted in oxo-degradable plastic bags being sent to composting plants, where they have contaminated compost and created operational problems. There is also wider concern about their role in littering and their effects on the marine environment, where they degrade into microplastics with the potential to enter the human food chain.

As part of the revised Packaging and Packaging Waste Directive in 2015 (which is aimed at reducing the consumption of lightweight plastic carrier bags), the European Commission has reviewed the role of oxo-degradable plastics. This report to the European Parliament and Council is a result of that mandate and is based on a study carried out by Eunomia published in April 2017. It forms part of the EU-wide Plastics Strategy published at the same time.

The Commission examined the impact of oxo-degradable plastic on the environment over and above its use in plastic carrier bags. It addressed three main issues:

- The biodegradability of oxo-degradable plastic in various environments,
- Environmental impacts in relation to littering, and
- Issues related to recycling.

The report highlighted the significant uncertainties surrounding the rate and degree of fragmentation in the open environment, as ambient conditions (such as temperature, moisture and sunlight) and exposure of the polymer to these variables cannot be predicted or standardised. The Commission concluded that evidence is not available to conclude how these polymers will behave in real world situations.

The Commission is also clear in its conclusion that oxo-degradable plastics create problems at composting and anaerobic digestion facilities, stating:

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PUBLICATIONS

Composting & AD

- Oxo-degradable plastic is not suitable for any form of composting or anaerobic digestion.
- It will not meet the current standards for packaging recoverable through composting in the EU.
- Remaining plastic fragments and potentially generated microplastics might adversely affect the quality of the compost.

Marine Environment

- Biodegradation in the marine environment is expected to be much slower than in land based open environments.
- There is the risk that plastic fragments remain for a very long period in the marine environment and cause significant environmental damage and potential negative health impacts.

Recycling

- Significant concerns exist within the recycling industry that oxo-degradable plastic negatively affects the quality of recycled plastics.
- The presence of oxo-degradable plastic in a conventional plastic recycling system can lead to poor quality recyclate.
- Currently available technology cannot ensure identification and separate sorting of oxo-degradable plastic by re -processors.

"*The evidence also suggests that oxo-degradable plastic is not suitable for any form of composting or anaerobic digestion.*" European Commission (2018)

It concludes that *"oxo-degradable plastic contributes to microplastics pollution and therefore poses environmental risks".* Noting that a *"wide range of scientists, international and governmental institutions, testing laboratories, trade associations of plastics manufacturers, recyclers and other experts have therefore come to the conclusion that oxo-degradable plastics are not a solution for the environment and that oxo-degradable plastic is not suited for long-term use, recycling or composting".*

As part of the European plastics strategy, the Commission will begin a process to restrict the use of oxo-plastics in the EU.

The report from the Commission to the European Parliament and the Council on the impact of the use of oxo-degradable plastic, including oxo-degradable plastic carrier bags, on the environment, 16.1.2018 COM(2018) 35 final can be accessed: here.

The final report of the study on the impact of the use of "oxo-degradable" plastic on the environment by Eunomia is available on the Commission's webpage: here.

LEADING ORGANISATIONS CALL FOR OXO-DEGRADABLE PLASTIC PACKAGING TO BE BANNED

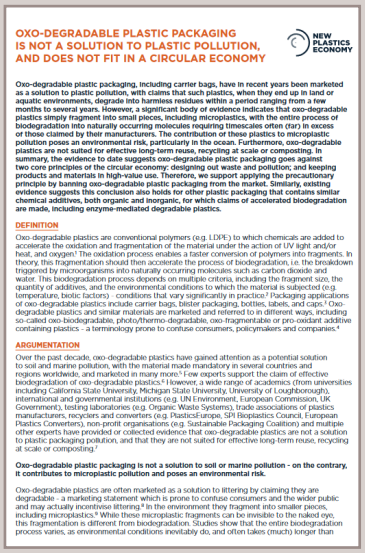
ECN joined a call by the New Plastics Economy for oxo-degradable plastic packaging to be banned until sufficient scientific evidence has been gathered to determine its biodegradation in different environments.

The paper was written by the New Plastics Economy, an initiative of the Ellen MacArthur Foundation in the UK, and was signed by over 150 scientists, testing laboratories, companies, NGOs, individuals and trade associations.

It sets out some of the issues associated with the use and environmental impact of oxo-degradable plastic packaging, noting that it is:

- Not a solution to plastic pollution, and does not fit in a circular economy;
- Not a solution to soil or marine pollution - on the contrary, it contributes to microplastic pollution and poses an environmental risk; and
- Not suited for long-term reuse, recycling at scale or composting. Hence, it does not allow materials and products to be kept in high-value use.

The statement was published in 2017 and is available: here.



OXO-DEGRADABLE PLASTIC PACKAGING IS NOT A SOLUTION TO PLASTIC POLLUTION, AND DOES NOT FIT IN A CIRCULAR ECONOMY

NEW PLASTICS ECONOMY

Oxo-degradable plastic packaging, including carrier bags, have in recent years been marketed as a solution to plastic pollution, with claims that such plastics, when they end up in land or aquatic environments, degrade into harmless residues within a period ranging from a few months to several years. However, a significant body of evidence indicates that oxo-degradable plastics simply fragment into small pieces, including microplastics, with the entire process of biodegradation into naturally occurring molecules requiring timescales often (far) in excess of those claimed by their manufacturers. The contribution of these plastics to microplastic pollution poses an environmental risk, particularly in the ocean. Furthermore, oxo-degradable plastics are not suited for effective long-term reuse, recycling at scale or composting. In summary, the evidence to date suggests oxo-degradable plastic packaging goes against two core principles of the circular economy: designing out waste and pollution; and keeping products and materials in high-value use. Therefore, we support applying the precautionary principle by banning oxo-degradable plastic packaging from the market. Similarly, existing evidence suggests this conclusion also holds for other plastic packaging that contains similar chemical additives, both organic and inorganic, for which claims of accelerated biodegradation are made, including enzyme-mediated degradable plastics.

DEFINITION

Oxo-degradable plastics are conventional polymers (e.g. LDPE) to which chemicals are added to accelerate the oxidation and fragmentation of the material under the action of UV light and/or heat, and oxygen.[1] The oxidation process enables a faster conversion of polymers into fragments. In theory, this fragmentation should then accelerate the process of biodegradation, i.e. the breakdown triggered by microorganisms into naturally occurring molecules such as carbon dioxide and water. This biodegradation process depends on multiple criteria, including the fragment size, the quantity of additives, and the environmental conditions to which the material is subjected (e.g. temperature, biotic factors) - conditions that vary significantly in practice.[2] Packaging applications of oxo-degradable plastics include carrier bags, blister packaging, bottles, labels, and caps.[3] Oxo-degradable plastics and similar materials are marketed and referred to in different ways, including so-called oxo-biodegradable, photo/thermo-degradable, oxo-fragmentable or pro-oxidant additive containing plastics - a terminology prone to confuse consumers, policymakers and companies.[4]

ARGUMENTATION

Over the past decade, oxo-degradable plastics have gained attention as a potential solution to soil and marine pollution, with the material made mandatory in several countries and regions worldwide, and marketed in many more.[5] Few experts support the claim of effective biodegradation of oxo-degradable plastics.[6] However, a wide range of academics (from universities including California State University, Michigan State University, University of Loughborough), international and governmental institutions (e.g. UN Environment, European Commission, UK Government), testing laboratories (e.g. Organic Waste Systems), trade associations of plastics manufacturers, recyclers and converters (e.g. PlasticsEurope, SPI Bioplastics Council, European Plastics Converters), non-profit organisations (e.g. Sustainable Packaging Coalition) and multiple other experts have provided or collected evidence that oxo-degradable plastics are not a solution to plastic packaging pollution, and that they are not suited for effective long-term reuse, recycling at scale or composting.[7]

Oxo-degradable plastic packaging is not a solution to soil or marine pollution - on the contrary, it contributes to microplastic pollution and poses an environmental risk.

Oxo-degradable plastics are often marketed as a solution to littering by claiming they are degradable - a marketing statement which is prone to confuse consumers and the wider public and may actually incentivise littering.[8] In the environment they fragment into smaller pieces, including microplastics.[9] While these microplastic fragments can be invisible to the naked eye, this fragmentation is different from biodegradation. Studies show that the entire biodegradation process varies, as environmental conditions inevitably do, and often takes (much) longer than

EUROPEAN COMMISSION STRATEGY

Role for Compostable Plastics in Europe's Plastics Strategy

The European Commission published its long-awaited plastics strategy on the 16 January 2018. The 'European Strategy for Plastics in a Circular Economy', sets out the Commission's thinking on how to create a circular plastics economy, making specific reference to both biodegradable and compostable plastics.

The communication describes the significant problems associated with the production and consumption of plastics, especially single use products, noting their negative effect on the environment and the increasing awareness of the harmful effects of microplastics.

The strategy describes a strategic vision for transforming the use of plastics at the EU level, and includes a number of key commitments for action. The Commission notes that "key players should work together to:

- improve design and support innovation to make plastics and plastic products easier to recycle;
- expand and improve the separate collection of plastic waste, to ensure quality inputs to the recycling industry;
- expand and modernise the EU's sorting and recycling capacity;
- create viable markets for recycled and renewable plastics."

The Commission makes specific reference to plastics with biodegradable properties. It notes that "*compostable plastic bags to collect organic waste separately, have shown positive results; and standards exist or are being developed for specific applications.*" However, there remain potential negative impacts if biodegradable products end up in the wider environment (in particular, the seas and oceans) and in conventional plastics recycling processes. The Commission stresses the need for a "well-functioning separate collection system for organic waste".

"For consumer applications, the existence of a well-functioning separate collection system for organic waste is essential" European Commission

To allow adequate sorting and avoid false environmental claims, the Commission will propose harmonised rules for defining and labelling compostable and biodegradable plastics. It will also develop lifecycle assessment to identify the conditions under which the use of biodegradable or compostable plastics is beneficial, and the criteria for such applications. Notably, the Commission has also stated its intent to *"restrict the use of oxo-plastics in the EU"* (see the article 'Oxo-Degradable Plastics Are Not a Solution for the Environment').

The Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions is accompanied by an annex setting out a list of future EU measures to implement the Strategy. Both documents can be accessed: here.

A VISION FOR EUROPE'S NEW PLASTICS ECONOMY

A smart, innovative and sustainable plastics industry, where design and production fully respects the needs of reuse, repair, and recycling, brings growth and jobs to Europe and helps cut EU's greenhouse gas emissions and dependence on imported fossil fuels.

In Europe, citizens, government and industry support more sustainable and safer consumption and production patterns for plastics. This provides a fertile ground for social innovation and entrepreneurship, creating a wealth of opportunities for all Europeans.

PUBLICATIONS

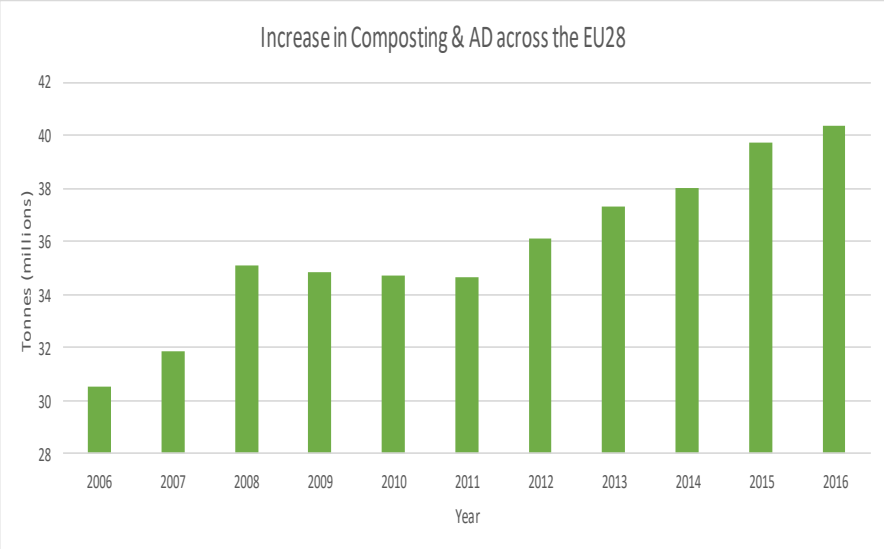
EUROSTAT

Composting and AD Continue to Increase Across the EU28

Latest statistics released by the EU's statistical office, EUROSTAT, show that composting and anaerobic digestion has increased by 184% between 1995 and 2016 across the EU28. The official figures also show that an additional 600,000 tonnes of bio-waste were composted / digested between 2015 and 2016, increasing the total from 39 to 40 million tonnes, respectively.

The figures, released on the 23 January 2018, also showed that 17% of municipal waste was composted / digested and 30% recycled in 2016, whilst incineration and landfill accounted for 27% and 25%, respectively.

On average, municipal waste generation per capita was 480 kg in 2016, down by 9% compared with its peak of 527 kg per person in 2002. Citizens in Denmark, Malta, Cyprus, Germany and Luxembourg were found to generate the most.



Growth in composting & AD across the EU28

A more in-depth analysis of these data will be included in the next issue of ECN News.

Further information, including a link to the statistics, can be accessed: here.

EU COUNCIL

European Council Reaches Agreement on Eco-Innovation

At a meeting in December 2017, the European Council reached a wide-ranging agreement on eco-innovation. Setting out its proposals and requests to the Commission, it covers areas such as product policy, transparency and digital tools.

The Council made specific requests to the Commission, calling for a non-toxic environment, which would require *"innovative sorting of waste and techniques to decontaminate waste and raw materials, and the availability of information to consumers, producers and recyclers on these substances found in products".*

It also emphasised the importance of eco-innovation in increasing the recycling rate of plastics and called on the Commission to further investigate *"substituting non-renewable and fossil-materials-based plastics with alternatives, such as bio-based materials".*

The Council concluded that it *"looks forward"* to delivery of the Circular Economy Action Plan, particularly with regard to plastics.

A copy of the report can be accessed: here.

A short video explaining 'What is Eco-innovation?' can be accessed: here.

ECN-QAS

ECN's Certificate of Compost Quality Awarded to Italian Compost and Biogas Consortium

The Italian Composting and Biogas Consortium (CIC), has been awarded ECN's 'Certificate of Conformity' for successfully demonstrating compliance with ECN's European Quality Assurance Scheme for Compost and Digestate.

Following successful auditing last year by ECN's quality manager Stefanie Siebert, the certificate was awarded to CIC's General Manager, Massimo Centemero, on 18 January 2018. Certification confirms that those composting facilities in Italy complying with CIC's own quality assurance scheme for compost, also comply with the requirements for compost as laid down in the ECN quality assurance scheme.


CERTIFICATE OF CONFORMITY

According to the conformity assessment of the European Quality Assurance Scheme for Compost and Digestate the European Compost Network ECN e.V. awards the conformity label of ECN-QAS

CERTIFIED ORGANISATION ECN·QAS

to

CONSORZIO ITALIANO COMPOSTATORI

Quality Assurance Organisation

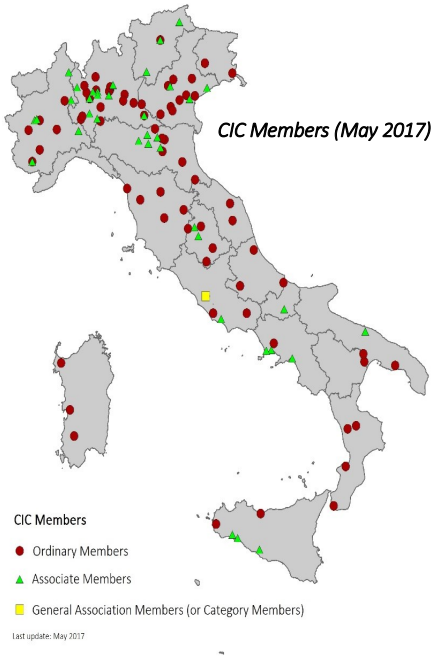
The Certified Organisation is qualified to award the ECN-QAS label to quality products according to
ECN-QAS for Compost
ECN-QAS for Digestate

Date: 18.01.2018

Chair of ECN e.V. Chair of ECN Quality Committee

www.ecn-qas.eu

According to CIC, in 2015, there were 261 operational composting plants and 47 anaerobic digestion (AD) facilities designed to recycle bio- and other organic wastes. The sector has reached a total treatment capacity of about 8,1 M tonnes, sufficient to recycle all organic waste collected separately in Italy. However, despite there being an overall treatment capacity capable of accommodating anticipated



future growth, an unbalanced distribution of facilities has been observed across Italy, with growing demand for new installations in the southern regions.

In 2015, there were 64 composting facilities associated with CIC having a total treatment capacity of at least 2,2 M tonnes, with each accepting an average of around 37.000 tonnes of waste a year. The number of combined AD and composting plants increased steadily during the last decade, whilst there was a decline in the number of composting-only plants. In 2015, 47 AD plants were in operation, having a total authorised treatment capacity of 3 million tonnes of bio-waste; the majority of these being AD facilities integrated with post-aerobic composting of digestate. Out of this 47, 21 AD facilities are members of CIC, having a with a total treatment capacity of 2,15 M tonnes a year. In total, this is equivalent to about 70% of the current capacity for anaerobic digestion of bio-waste in Italy.

CIC has estimated that the total production of compost in 2015 was in the region of 1,76 M tonnes.

Further information on CIC can be accessed: here.

The latest country report from Italy can be downloaded: here.

COUNTRY REPORTS

ITALY

Less than 3% Paper Found in Italian Food Waste Collections

A study by the Italian Composting and Biogas Consortium (CIC) has quantified the amount and types of paper products that are unintentionally co-collected with separate food waste collections in Italy. Carried out in conjunction with the Italian national extended producer responsibility consortium for recovery and recycling of cellulose packaging (COMIECO), it involved the analysis of food waste destined for either composting or anaerobic digestion.

Around 1,300 samples were taken and paper-based (cellulosic) items extracted and categorised into six different categories: four types of packaging including multi-layer packaging for beverages, graphic paper and mixed paper (which mainly consist of napkins, tissues, etc.).

CIC - CONSORZIO ITALIANO COMPOSTATORI
ASSOCIAZIONE ITALIANA PER LA PRODUZIONE DI COMPOST E BIOGAS

The study found that somewhere between 2-3% of the total (wet) mass of waste collected was paper-based, which was equivalent to approximately 75 thousand tonnes a year across the whole of Italy. In terms of producer responsibility, this only increased the quantity collected by COMIECO's EPR scheme by 2.4%.

The main paper category was found to be packaging items (20%), followed by graphic paper (7%), with the remainder comprising mixed paper; multi-layered items formed less than 1.5% of the samples.
The data showed that there was a positive correlation between overall contamination in the food waste collections and paper waste: that is, the more contamination (plastics, glass, metal and other inert materials), the more paper.

The results will be used by CIC and COMIECO to prepare a joint good practice guide on the management of cellulosic items that can be co-collected with food-waste for recycling in industrial anaerobic digestion and composting plants.
An English summary of the report can be accessed: here.

BELGIUM/FLANDERS

Compost Success in Flanders

Compost was chosen as the Leading Recycler of 2017 ("Recyclagetopper 2017"), at the sixth Waste and Recycling congress in Leuven last October, organised by the Flemish Waste and Recycling sector.

Vlaco, the Flemish composting and anaerobic digestion organisation, received the award on behalf of its members. Kristel Vandenbroek, project co-ordinator at VLACO and ECN Board member, commented: *"It is a great recognition that compost was chosen as the leading recycler. Because it is a "classic", people don't always think about it."*

Vlaco attributed this merit to its members, the compost producers, who have been working for years to produce compost of the highest quality. Vlaco sees this as an important sign for the large role compost can play in the circular economy within Flanders and Europe.

Other nominees in this category included paint made from paint residues, an alternative garden bench (made from 100% recycled plastics), a building block made from, among other things, ash (and absorbing CO2 in the production process), and a 100 % recycled plastic beverage bottle.

Further information about VLACO can be accessed here.

vlaco
Meer halen uit de biologische kringloop

Certificate awarded to Vlaco

The country report for Flanders can be downloaded here.

COUNTRY REPORTS

FINLAND

Finland's New Waste Management Plan

Finland published its new waste management plan in December, replacing the previous plan which came to an end in 2016.

The new plan sets out a strategy for the country up to 2023, and incorporates the targets set in the upcoming EU Waste Framework Directive.

The most key targets for bio-waste management include:

- Reducing food waste to 50 % by 2030;
- Recycling at least 60 % of bio-waste by 2023;
- Expanding the use of recycled fertilisers and reducing reliance on the use of fertilisers produced from virgin materials;
- Creating a voluntary quality management system for recycled fertilisers; and
- Recycling a minimum of 55 % of municipal waste by 2023.

Further information on Finland's waste policy can be accessed: here.

The national waste management plan can be acccessed: here.

Further information about Biolaitosyhdistys (the Finnish association for biological waste treatment) can be accessed here.

The country report can be downloaded here.

Efficient Nutrient Recycling in Finland requires Policy Reform

According to a recent Finnish study, a reform of national policy is required to bring about more efficient utilisation of nutrients. The study, commissioned by the Finnish Ministry of the Environment and Ministry of Agriculture and Forestry, concluded that guidance should be developed to better support the processing of organic wastes, such as manure, into recycled fertiliser products.

The report *'Towards a breakthrough in nutrient recycling – State-of-the-art and recommendations for developing policy instruments in Finland'* was compiled by a group of experts. They reviewed ways in which nutrient recycling could be improved and concluded that national policies require reform. They suggested that this could take the form of a single statute covering all types of fertilisation by developing, for example, a nitrate decree. Furthermore, they also proposed that the EU agri-environmental scheme in Finland in its current form should be abandoned.

In Finland, manure from domestic animals alone contains so much phosphorus that, if utilised efficiently, it could cover the entire phosphorus demand of cultivated plants across the whole of the country. However, thousands of tonnes of inorganic fertilisers are used every year, contributing towards pollution of water courses, including the Baltic Sea.

Sanna Marttinen, Secretary General of the Finnish Partnership for Research on Natural Resources and the Environment (LYNET) commented that: *"The goal of normative guidance should be to use nutrients according to the needs of plants, and regulation should support the replacement of conventional inorganic fertilisers with recycled nutrients. Regulation must be simple and appropriate, both within the EU and at national level. In order to improve nutrient recycling, information systems must also be developed".*

The report was compiled by researchers at the Natural Resources Institute Finland (Luke) Finnish Environment Institute (SYKE), VTT Technical Research Centre of Finland and Finnish Food Safety Authority Evira, and can be accessed: here.

A separate policy brief 'Nutrient recycling – from vision to practice', which is in English, can be assessed here.

ANNOUNCEMENT

Second Circular Economy Conference 20 and 21 February 2018

The 2nd annual conference of the European Circular Economy Stakeholder Platform, hosted by the European Commission and the European Economic and Social Committee, will take place on 20 and 21 February 2018.

This is a joint initiative by the European Commission and the European Economic and Social Committee and will involve two days of breakout sessions and panel discussions.

Further information can be accessed: here.

ISWA 2018 Kuala Lumpur 22 – 24 October 2018

This year the annual congress of the International Solid Waste Association (ISWA) will be held at the Kuala Lumpur Convention Centre in Malaysia on the 22 – 24 October.

The deadline for submission of abstracts has been extended to the 31 March 2018. Further information about abstracts can be accessed: here.

ISWA's working group on biological treatment are currently planning a dedicated session and a possible training course. ECN members will be notified of this is due course.

Information about the congress can be found here.

Recycled Organics - The Circular Economy in Action 2 – 4 May 2018

The annual conference of the Australian Organics Recycling Association (AORA) takes place in the Convention and Exhibition Centre of Brisbane in Australia.

The deadline for submission of abstracts has been extended to the 28 February 2018. Further information about abstracts can be accessed: here.

This three-day event will comprise of one day of specialised professional development workshops; a conference day with keynote speakers, panels, case studies and focussed sessions; followed by a full day of site tours and equipment demonstrations. A trade exhibition is also part of the event.

Full details about the event program will be published here as they become available.

EVENTS

20-21 February 2018
BRUSSELS (BE)
Second Circular Economy Conference
This is a joint initiative by the European Commission and the European Economic and Social Committee and will involve two days of breakout sessions and panel discussions.

>> Further information

15-16 March 2018
PISA (IT)
Fourth International Conference on Waste Management (ICWM)
The conference on Waste Management will discuss about biowaste and food waste prevention in the circular economy. The objective is to discuss - along with national and international experts, businesses, NGOs and institutions - the valorization of organic waste and maximization of food waste prevention.
Participation in the conference is free of charge.

>> Further information

27-28 March 2018
VOREPPE (FR)
7ème Journées Territoires & Biodéchets 2018
Separate collection of bio-waste: Key element of the circulare economy in France

>> Further information

27-29 March 2018
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 14 years existence, it has successfully paved the way for advanced technologies and knowledge to the growing South-East European market. In 2017 edition, there were exhibitors from 14 countries & trade visitors from 30 countries; speakers & attendees from 16 countries.
This is the first time that ISWA will collaborate with the 'Save the Planet' Expo.

>> Further information

10-12 April 2018
KASSEL (DE)
30. Kasseler Abfall– und Ressourcenforum
The conference topics are Biowase and substance-specific recycling. During the 3 days different topics of Ciruclar economy and Fertilisers are discussed in a wide range of seesions (in German language)

>> Further information

May 2018
MUNICH (DE)
IFAT 2018
World's leading trade fair on Water, Sewage, Waste and Raw Materials Management

>> Further information

21-25 May 2018
BRUSSELS (BE)
EU Green Week 2018
'Green Cities for a Greener Future' - A growing number of Europeans are living in urban areas (estimated to be at 80 % by 2020). This has many consequences for issues such as the use and management of natural resources, urban mobility, energy and waste management. The green economy is also growing fast, and cities are competing to attract and retain talent.

>> Further information

11-12 June 2018
HELSINKI (FI)
3rd European Sustainable Phosphorus Conference
Update on implementation of the EU Commission Consultation on Sustainable Phosphorus 2013

>> Further information

10-14 September 2018
AUSTRIA (AT)
ISWA/100ZWE/KBVOE/ECN
Study tour on Bio-Waste Management

>> Further information

22-24 October 2018
KUALA LUMPUR (MYS)
ISWA
This year the annual congress of the International Solid Waste Association (ISWA) will be held at the Kuala Lumpur Convention Centre in Malaysia on the 22 – 24 October.

>> Further information
