

Perspektiven und Herausforderungen bei der CE-Kennzeichnung von Komposten und Gärprodukten gemäß EU-Düngeprodukte- Verordnung

Stefanie Siebert, Executive Director of ECN



European Compost Network



Vision

Living well within the limited resources of the planet and respecting the organic cycle



Mission

Leading the organic recycling industry through our focus on separate collection of biowaste, quality assurance for compost and digestate and to keep our soils healthy



Values



Pillars



Quality Assurance



Advocacy



Market



Innovation



Circularity &
Sustainability
is at the heart
of everything
we do

66 Members from 28
European Countries

≈ 48 M tpa
Treatment Capacity

> 4.500
Composting &
Anaerobic Digestion
Plants

ECN Board

ECN Board 2022

- **Kristel Vandenbroek (BE, VLACO)** - Chair
- **Massimo Centemero (IT, CIC)** - Vice-Chair
- **Irmgard Leifert (DE, BGK)** - Treasurer
- Susana Lopes (Lipor, Portugal)
- Domantas Tracevicius (LT, NGO Ziedine ekonomika)
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- Arjen Brinkmann (NL, BVOR)
- Jens Måge, (NO, Avfall Norge)
- Horst Müller (AT, KBVÖ)

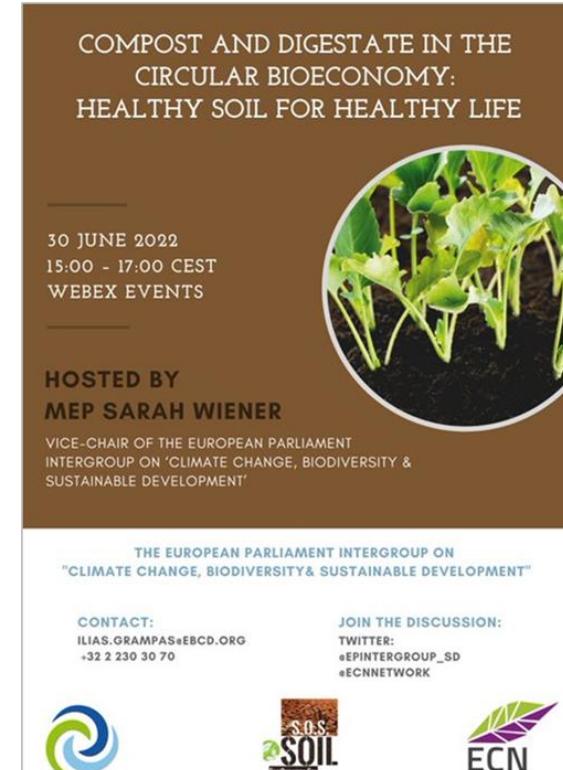


Annual Meeting 2022



The Annual Meeting (AM) 2022 took place on the 30 June 2022 in Brussels in conjunction with

- the celebration of ECN's 20th Anniversary, and



COMPOST AND DIGESTATE IN THE CIRCULAR BIOECONOMY:
HEALTHY SOIL FOR HEALTHY LIFE



30 JUNE 2022
15:00 - 17:00 CEST
WEBEX EVENTS

HOSTED BY
MEP SARAH WIENER

VICE-CHAIR OF THE EUROPEAN PARLIAMENT
INTERGROUP ON 'CLIMATE CHANGE, BIODIVERSITY &
SUSTAINABLE DEVELOPMENT'

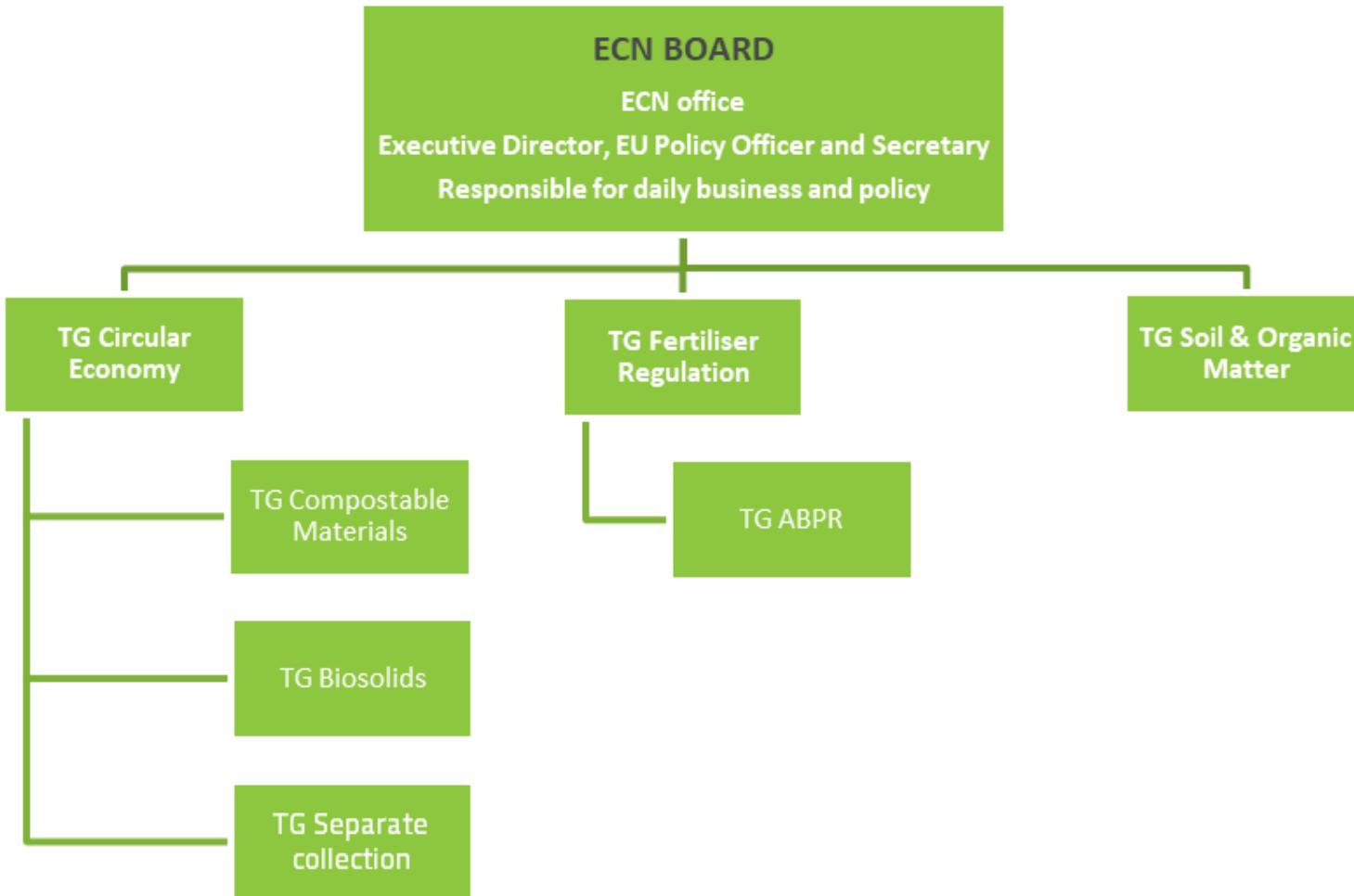
THE EUROPEAN PARLIAMENT INTERGROUP ON
"CLIMATE CHANGE, BIODIVERSITY & SUSTAINABLE DEVELOPMENT"

CONTACT:
ILIAS.GRAMPAS@EBCD.ORG
+32 2 230 30 70

JOIN THE DISCUSSION:
TWITTER:
@EPINTERGROUP_SD
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Area European Policy



- **TG Circular Economy** - Chair: Stefanie Siebert (ECN), Participants: all Board Members
- **TG Compostable Materials** - Chair: Marco Ricci-Jürgensen (CIC, IT), 38 participants
- **TG Biosolids** - Chair Vacancy, 23 participants, (pausiert)
- **TG Separate Collection** - Chair: Steffen Walk (TU Hamburg-Harburg, DE), 21 participants
- **TG Fertiliser Regulation** - Chair: Irmgard Leifert (Reterra Service GmbH, DE), 33 participants
- **TG ABPR** - Co-Chairs: Percy Foster (CRÉ, IE) and Wim Vanden Auweele (Vlavo, BE), 13 participants
- **TG Soil & Organic Matter** - Chair: Alberto Confalonieri (CIC, IT), 26 participants
- **TG Quality Assurance** - Chair: Wim Vanden Auweele (Vlaco, BE), 33 participants

Biowaste & The Circular Bioeconomy

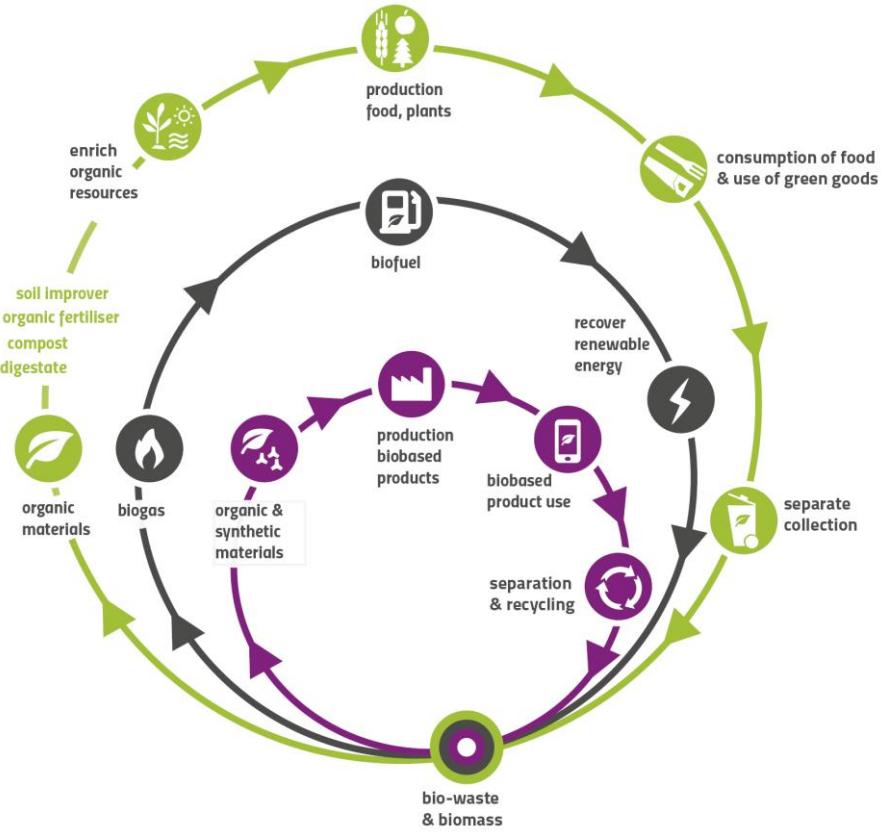
BIOWASTE



A Cross-Cutting Resource

European Green Deal
Bioeconomy Strategy
Biodiversity Strategy
Farm to Fork Strategy
Soil Strategy
Waste Framework Directive
Zero Pollution Action plan

BIOWASTE in the Circular Bioeconomy



EU Policy Approach - The EU Green Deal

Carbon Neutral Economy 2050

Climate law

- GHG emissions reduction from source
- GHG emissions removal from the atmosphere in natural sinks – e.g. in soil

Farm to Fork Strategy 2020

- Reducing mineral fertilisers and pesticides; increasing organic farming

Biodiversity Strategy 2030

- 30 % restoring land and increasing organic farming

CE Action Plan

2020

- New chemicals strategy for sustainability

2021

- Green Public Procurement (GPP) criteria and targets in sectoral legislation with mandatory reporting
- Industrial Emission Directive: Revision
- Unintentional release of microplastics: labelling, standardisation, certification and regulatory measures
- Waste Shipment Regulation: Revision

2022

- Harmonised model for separate collection and labelling of waste

2023

- Regulatory framework for certification of carbon removals

- 65 % recycling target for municipal waste by 2035
- Mandatory separate collected or separated at source by 2023
- Ban on Mechanical biological Treatment from Recycling by 2027
- Landfill target Maximum 10 % of municipal solid waste by 2035

EU Green Deal & CE

**Waste
Framework
&
Landfill
Directives**

**Fertilising
Products
&
Animal By-
Products
Regulation**

**Farm to Fork
&
Sustainable
Carbon
Cycles**

**Soil Health
Law
&
Biodiversity
strategy**

- Integrated Nutrient Management Action plan (INMAP)
- Reduce nutrient losses by at least 50 % without deterioration in soil fertility
- Reduction of fertiliser use by at least 20 %
- Carbon farming practises & carbon removal schemes

- Boosting organic matter (biowaste) recycling from biowaste
- Integration of organic fertilising products into the scope of the new Regulation
- Introducing harmonised EU rules for products diverting from organic waste materials
- CE marking and free trade for organic fertilising products across EU
- Optional harmonisation
- End point in the manufacturing chain for ABP-derived materials

- Soils should be in a healthy condition by 2050
- 60-70 % of soil ecosystems in the EU are unhealthy and suffering from continuing degradation
- 12,7 % of Europe is effected by moderate to high erosion
- EU Soil Health Law by 2023
- Identifying Soil health indicators & Soil Health Certificate
- 30 % restoring land and increasing organic farming (25% organic farmland by 2030)

EU Fertilising Products Regulation - Düngproduktverordnung

- EU Fertilising Product Regulation entered into force on 16/07/2022

[Consolidated Version of EU FPR 16/07/2022](#)

- Frequently Asked Questions - as implementation guidance

[Consolidated version from 15 July 2022](#)

- Blue Guide on the implementation of the product rules (29/06/2022)

[Blue Guide on the implementation of the product rules 2022](#)

- Standardisation process EU FERT



Team of DG Grow

→ **EU weite Abfallende-Kriterien für Kompost und Gärprodukte**

Structure of the EU Fertilising Products Regulation (FPR)

Exhaustive list of Component Materials Categories **CMC** (11)

- Quality
- Safety
- ...

CMC 3 Compost
CMC 5 Digestates other than from energy crops

Exhaustive list of Product Function Categories **PFC** (7)

- Quality
- Safety
- Declaration
- ...

PFC 1 A. Organic fertiliser
PFC 3 A. Organic Soil Improver
PFC 4 Growing Media
PFC 7 Fertilising Products Blends
www.compost-digestate.eu

Conformity assessment procedure related to 'CMC/PFC' combination

- Modul A - D1
- Declaration of conformity

Modul D.1
Quality Assurance of Process and Products

PFC1(A)(I)/(II) – Anforderungen an Organische Düngemittel

	PFC 1 (A)(I)	PFC 1 (A)(II)
Criteria	Solid	Liquid
Corg	≥ 15 %	≥ 5 %
Nitrogen (N)	≥ 2,5 %*	≥ 2 %
Phosphorus (P_2O_5)	≥ 2 %*	≥ 1%
Potassium* (K_2O)	≥ 2 % *	≥ 2 %
SUM (NPK)	(1/1/1) ≥ 4	(1/1/1) ≥ 3 %

All values based on fresh matter

* As a minimum one of the three nutrient contents have to been reached



- Gärprodukte erreichen die Mindestnährstoffgehalte für Organische Düngemittel nicht
- Kompost auch nicht



Kompost und Gärprodukte können nicht als CE markiertes organisches Düngemittel in Verkehr gebracht werden!

PFC3(A) – Anforderungen an organische Bodenverbesserer

	EP
Dry matter	$\geq 20\%$
Corg	$\geq 7,5\%$
Composition	<p>An organic soil improver shall consist 95% of material of solely biological origin</p> <p>including peat, leonardite, lignite and humic substances obtained from them</p> <p>but excluding other materials which are fossilized or embedded in geological formations.</p>
All values based on fresh matter	



- Kompost und feste Gärprodukte erfüllen die Kriterien



- Flüssige Gärprodukte erfüllen die Kriterien nicht



Kompost und feste Gärprodukte können als CE gekennzeichnete organische Bodenverbesserer in Verkehr gebracht werden, aber.....

Weitere Anforderungen an organische Düng- und Bodenverbesserungsmittel

Criteria	PFC 1 (A)(I)/(II)	PFC 3 (A)
	Organic fertiliser	Organic soil improver
Cd (mg/kg dm)	1,5	2
Cr IV / Cr (mg/kg dm)	2 / -	2 / -
Hg (mg/kg dm)	1	1
Ni (mg/kg dm)	50	50
Pb (mg/kg dm)	120	120
Cu (mg/kg dm)	300	300
Zn (mg/kg dm)	800	800
As /mg/kg dm)	40	40
$\text{C}_2\text{H}_5\text{N}_3\text{O}_2$ (g/kg dm)	absent	-
<i>Salmonella</i> spp.	absent	absent
<i>E. Coli</i> / Enterococcaceae (CFU/g)	≤ 1000	≤ 1000



- Kompost und Gärprodukte erfüllen die Kriterien



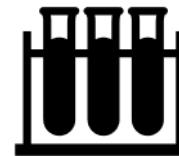
- Analysemethode für E.Coli muss angepasst werden

Weitere Anforderungen für Kompost und Gärprodukte

Criteria	Fertilisers Reg. Digestate	Fertiliser Reg. Compost
	(CMC 5)	(CMC 3)
PAH ₁₆ (mg/kg dm)	6	6
Weed seeds (seeds /L)	-	-
Impurities (% dm)	≤ 0,5 ^{x1}	≤ 0,5 ^{x1}
Stability		
Oxygen Update rate [OUR] (mmol O ₂ / OM *h)	25	25
OUR/Rotting degree /Residual Gas potential (liter biogas/g volatile solids) / organic acids (mg/l)	-/≤0,25/-	III/-/-



- Kompost und Gärprodukte weisen niedrigere Fremdstoffgehalte auf.



- Zusätzliche Untersuchung von organischen Schadstoffen (PAH₁₆)
- Stabilitätskriterium ‚OUR‘ in Gärprodukten schwer zu erfüllen
- Stabilitätskriterium ‚OUR‘ für Frischkomposte nicht erreichbar.

^{x1} no more than 3 g/kg (DM) of macroscopic impurities above 2 mm in any of the following forms: glass, metal or plastics, and from 16/07/2026 plastics above 2 mm shall be no more than 2,5 g/kg (DM), and re-assessed by 16/05/2029

Input- und Prozessanforderungen für Kompost und Gärprodukte

	Fertiliser Regulation	
Input material	<p>Bio-waste, source separated, ABP cat. 2 & 3, excluding sewage sludge, industrial sludges and mixed municipal waste</p> <p>Plus a liquid or non-liquid microbial or non-microbial extract made out of compost; and</p> <p>Unprocessed and mechanically processed residues from food production industries, except ABPR materials</p>	<ul style="list-style-type: none">  ▪ „Sauberer“ Input  ▪ Keine Schlämme aus der Nahrungs- und Futtermittelindustrie als Input zulässig ▪ Für ABP Materialien müssen die Standardprozessanforderungen nach der EU ABPR eingehalten werden (70°C/1h 12mm)
Process criteria for digestate	<p>a) Thermophilic at 55 °C/24 h/hydraulic retention time of 20 days</p> <p>b) Thermophilic at 55 °C incl. pasteurisation step 70 °C-1h</p> <p>c) Thermophilic at 55 °C followed by composting</p> <p>d) Mesophilic at 37-40 °C incl. pasteurisation step 70 °C-1 h</p> <p>e) Mesophilic at 37-40 °C followed by composting</p>	
Process criteria for compost	<p>70 °C ≥ 3 days</p> <p>65 °C ≥ 5 days</p> <p>60 °C ≥ 7 days</p> <p>55 °C ≥ 14 days</p>	 <p>Kompost und Gärprodukte aus Küchenabfällen (Biotonne) können nicht als CE gekennzeichnete Produkte auf den Markt gebracht werden!</p>

Animal By-Product Regulation / EU FPR



Kompost und Gärprodukte aus Küchenabfällen (Biotonne) können nicht als CE gekennzeichnete Produkte auf den Markt gebracht werden!

- Standardprozessanforderungen nach der EU ABPR (70 h/1 h/12 mm)
- Nationale Regelungen nicht anwendbar

Lösung

- Validierung alternativer Prozessanforderungen (Zeit/Temperatur) als Standardprozessmethode in EU ABPR

European Food and Safety Authority (EFSA) Antrag

- ECN Antrag für alternative Zeit/Temperatur Anforderungen in der Tunnelkompostierung
 - 60 °C /48 h <200 mm
 - 55 °C /72 h <200 mm

Animal By-Product Regulation / EU FPR

European Food and Safety Authority (EFSA) Antrag 2019

- ECN Antrag für alternative Zeit/Temperatur Anforderungen in der Tunnelkompostierung
 - 60 °C / 48 h <200 mm
 - 55 °C / 72 h <200 mm
- Neuer ECN Antrag für alternative Zeit/Temperatur Anforderungen in der Tunnelkompostierung bis Ende 2022
 - 60 °C / 48 h <200 mm
 - 55 °C / 72 h <200 mm
 - Mit Nachweis das thermoresistente Viren reduziert (3log reduction) werden



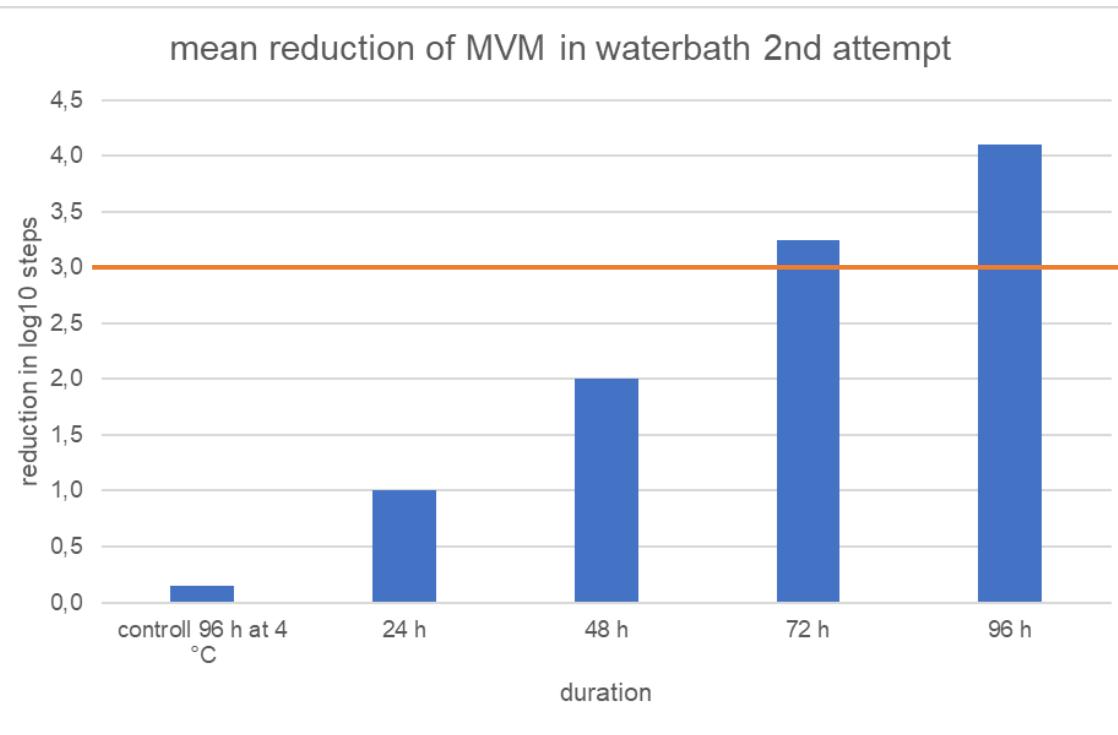
- **Antrag von EFSA abgelehnt in 2019**
- **Kein Nachweis das thermoresistente Viren (wie Parvoviren) reduziert werden (3log reduction)**



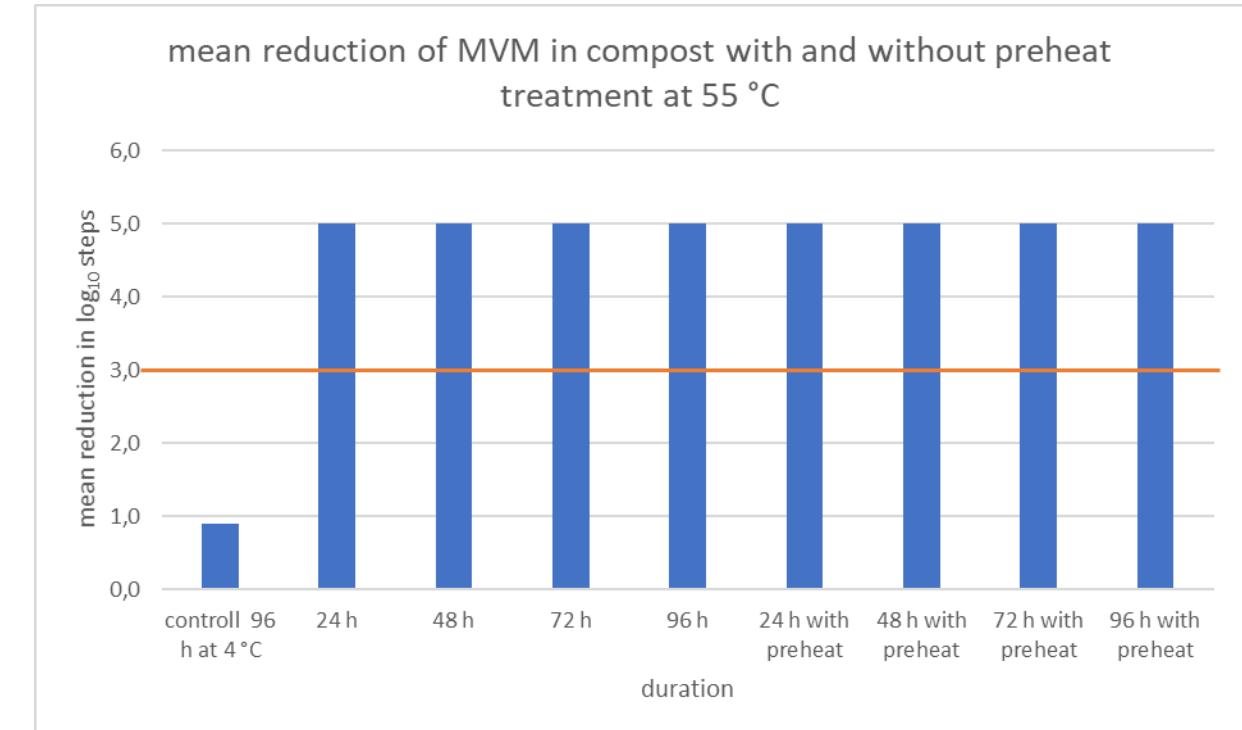
- **Laboruntersuchungen der Universität Hohenheim bestätigen die Reduzierung der thermoresistenten Viren bei den vorgeschlagenen Zeit/Temperaturprofilen im Kompostmaterial**

Ergebnisse der Universität Hohenheim¹

Mittlere Reduktion von MVM in Medium im Wasserbad



Mittlere Reduktion von MVM in Kompost mit und ohne Vorwärmphase



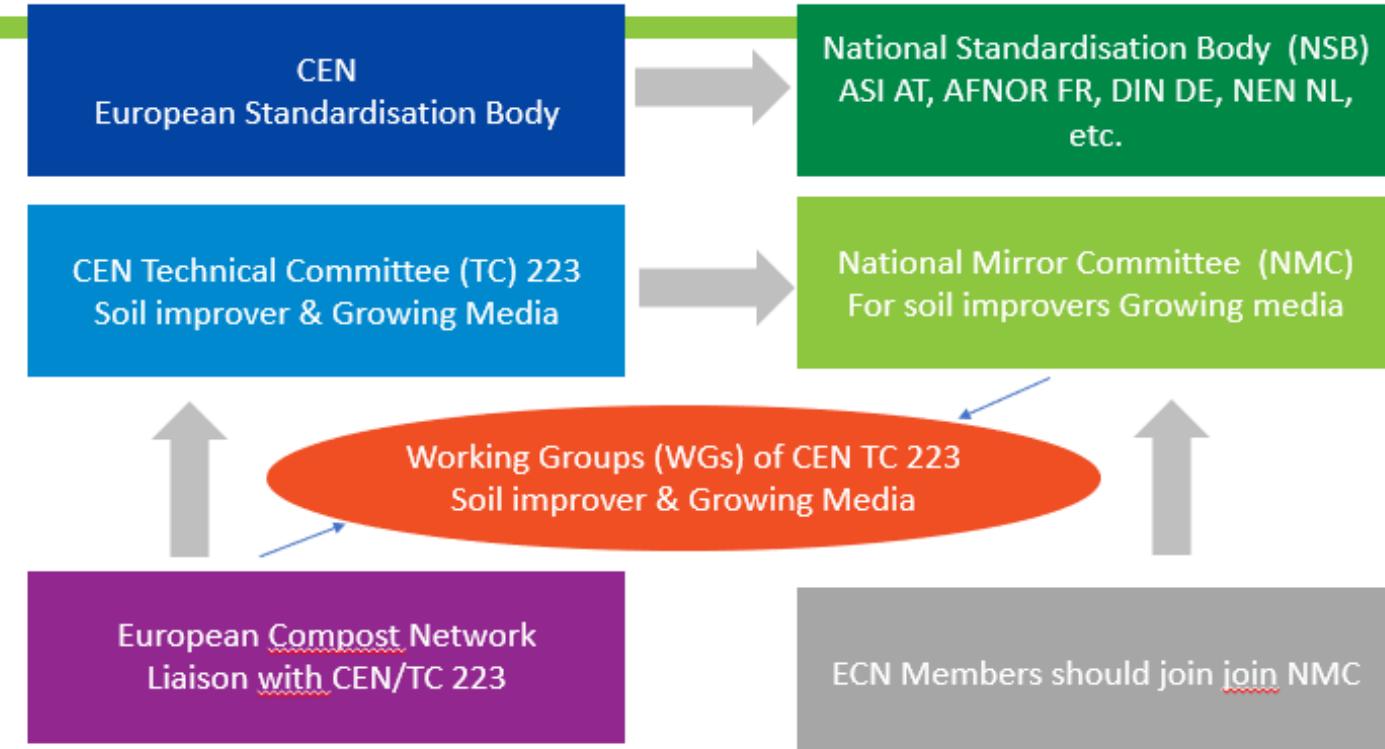
Nachweis 3log Reduktion:

Thermoresistente Viren werden bei 60 °C / 48 h und 55 °C / 72 h reduziert!

Normungsprozess

Standardisation process

- 68 analytical methods have to be developed to European standards (EN) under the EU Fertilising Product Regulation
- Technical Specifications April 2022 - Non-validated methods
- Standards April 2024 - Methods need to be validated in approved labs



State of the process

- Nomination of project leaders for interlaboratory studies
- Nomination of laboratories to take part in the interlaboratory trials

Parameters of relevance for ECN

- Sampling (solid and liquid materials)
- Process parameter (Time-temperature measurement)
- Stability (OUR, SHT, RBP)
- Impurities (glass, metal, plastics)
- Organic contaminants (PAH)

Qualitätssicherung & Konformitätsbewertung

FROM WASTE TO PRODUCT



Quality Assurance is a pre-condition for placing compost- or digestate-based fertilising products on the European Market



kompost
& biogas
verband



KBVÖ Austria

BGK Germany



VLACO Belgium



CIC Italy

Konformitätsbewertung nach EU FPR

- Externe Kontrolle/Konformitätsbewertung des Qualitätssicherungssystems durch eine akkreditierte Organisation  
- Eingeschränkte Verfügbarkeit an Qualitätssicherungssystemen für Gärprodukte (Vlaco, BE; BGK, DE; Certification Centre of Recycled Materials, EE) 
- Keine oder limitierte Erfahrungen der notifizierten, akkreditierten Konformitätsbewertungsstellen 
- Erfahrungsaustausch und Durchführungsregelungen durch EU Koordinationsgruppe für notifizierte Konformitätsbewertungsstellen 
- Bisher keine nationale Qualitätssicherungsorganisation (akkreditiert) und notifiziert 
- Mögliche Zusammenarbeit mit akkreditierten und notifizierten Organisationen 

Notifizierte Konformitätsbewertungsstellen

Body type ▲	Name ▲	Country ▲
☒ NB 2806	CerTrust Kft.	Hungary
☒ NB 2947	Inspectorate Estonia AS	Estonia
☒ NB 2949	Instytut Nadzoru Technicznego Sp. z o.o.	Poland
☒ NB 2929	Kiwa VERIN B.V.	Netherlands
☒ NB 1326	LIMITED LIABILITY COMPANY LATVIAN CERTIFICATION CENTRE (LATCERT)	Latvia
☒ NB 1434	POLSKIE CENTRUM BADAN I CERTYFIKACJI S.A.	Poland
☒ NB 2832	Stichting EMCI Register (trading as EMCI Register & EFCI Register)	Netherlands
☒ NB 1749	TNO Defense, Security and Safety	Netherlands
☒ NB 0906	TUV AUSTRIA HELLAS LTD	Greece

Liste der notifizierten Konformitätsbewertungsstellen in der NANDO Datenbank:

https://ec.europa.eu/growth/toolsdatabases/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=159361

Perspektiven & Herausforderungen für Kompostierer und Vergärer

	Stärken	Schwächen
Interne Faktoren	<ul style="list-style-type: none"> ▪ Ende der Abfalleigenschaft: Produktstatus ▪ Schaffung neuer Märkte und neue Kunden ▪ Vermarktung über EU-Ländergrenzen (ohne gegenseitige Anerkennung) ▪ Höhere Akzeptanz aufgrund des Produktstatus insbesondere bei Erden- und Substratherstellern und im Landschaftsbau ▪ Höhere Produktpreise 	<ul style="list-style-type: none"> ▪ Unklarheiten über die rechtlichen Anforderungen der EU FPR & ABPR ▪ Abschätzung der mittel- bis langfristigen Nachfrage der CE Produkte ▪ Kostenabschätzung der CE Zertifizierung ▪ Entwicklung der Produktionskosten (Energie, Maschinen, Personal) ▪ Abschätzung der Preisentwicklung der CE Produkte
	Chancen	Nachteile
Externe Faktoren	<ul style="list-style-type: none"> ▪ Politischer Wille das Recycling von Bioabfall zu stärken mit dem Ziel primäre Ressourcen für die Produktion von Düngemitteln und Substraten zu ersetzen ▪ Schaffung neuer Absatzmärkte (erhöhte Nachfrage der Erdenindustrie für Torfalternativen, Ausbau des Ökologischen Landbaus und der organischen Landwirtschaft, Ausbau bio-basierter Produkte (Bioökonomie) ▪ Generierung zusätzlicher Einnahmen (CO₂ Zertifikate, reduzierte Steuern) 	<ul style="list-style-type: none"> ▪ Verzögerungen bei der Implementierung der EU rechtlichen Anforderungen und Nachbesserungen (delegated acts) der EU FPR ▪ Verzögerung bei der Entwicklung von harmonisierten Methoden (EU Normen) (Gründe: fehlendes Interesse von MS, Laboren, Produzenten, Personalkapazitäten) ▪ Fehlende Unterstützung der nationalen Behörden die Notifizierung von Konformitätsbewertungsstellen voranzutreiben. ▪ Keine signifikante erhöhte Nachfrage nach CE Produkten

Perspektiven und Herausforderungen für Kompostierer und Vergärer

Beurteilung der CE Vermarktung für Kompost und Gärprodukt

	Stärken	Schwächen
Grüngut Kompost	+++ + +	
Biogut Kompost	+ + +	--
<ul style="list-style-type: none"> ▪ Frischkompost ▪ Fertigkompost 	+ + + + + 	---- -
Gärprodukt <ul style="list-style-type: none"> ▪ Gärprodukt fest ▪ Gärprodukt Flüssig 	+ (+) + +	- (-) --- -----

KEY CHALLENGES

- Enforcement: implementation of biowaste separate collection (esp. food waste)
- Binding recycling target for separate collected/source separated municipal biowaste
- Separate collection/recycling target for commercial and industrial biowaste

Waste
Framework
Directive

Fertilising
Products
&
Animal By-
Products
Regulation

- Including compost & digestate from biowaste in carbon farming practises, carbon removal schemes
- Replacement of mineral fertilisers with high-quality recycled organic materials
- Recognition of soil organic matter in the Integrated Nutrient Management Action Plan

Farm to Fork
&
Sustainable
Carbon Cycles

Soil Health Law
&
Biodiversity
strategy

- Unsuitable ABPR treatment requirements for food waste from kitchen (Cat. 3)
- Exemption of sludges from food & feed processing industries as input material for composting & AD
- Unbalanced requirements in the conformity assessment procedures for compost & AD

- Maintaining & improving soil organic matter
- Recognition of carbon sequestration potential of compost and solid digestate
- Replacement of peat in growing media with high-quality recycled organic materials (compost & solid digestate)

EU CE & Green Deal

ECN's Data Report 2022

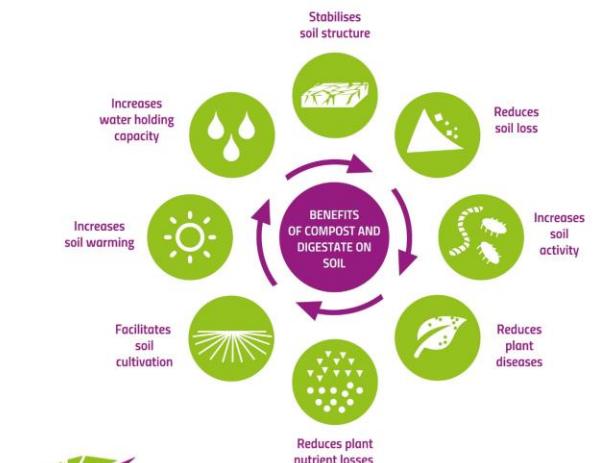
Comprehensive survey in 2021



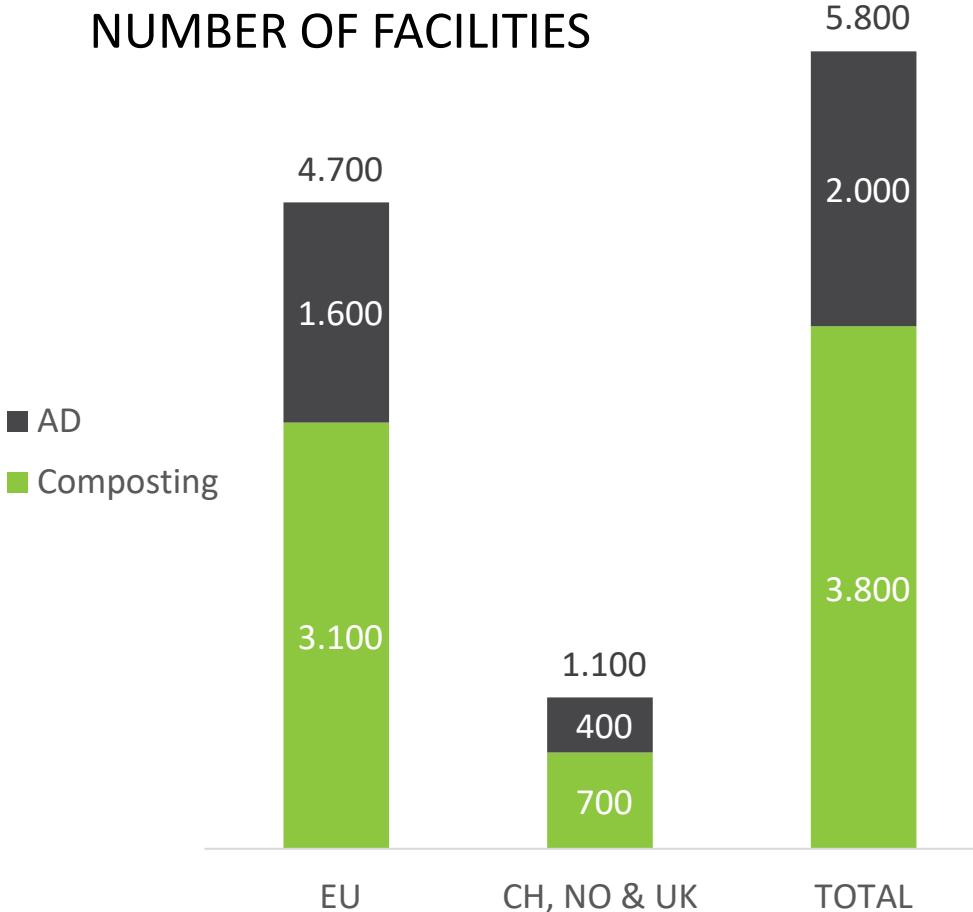
ECN DATA REPORT 2022

COMPOST AND DIGESTATE FOR A CIRCULAR BIOECONOMY

Overview of Bio-Waste Collection,
Treatment & Markets Across Europe



Biowaste Treatment – FOR PEOPLE – JOB CREATION



	FTEs PER FACILITY	TONNES PER FTE
	COMPOSTING	4.7
ANAEROBIC DIGESTION	4.9	5,300



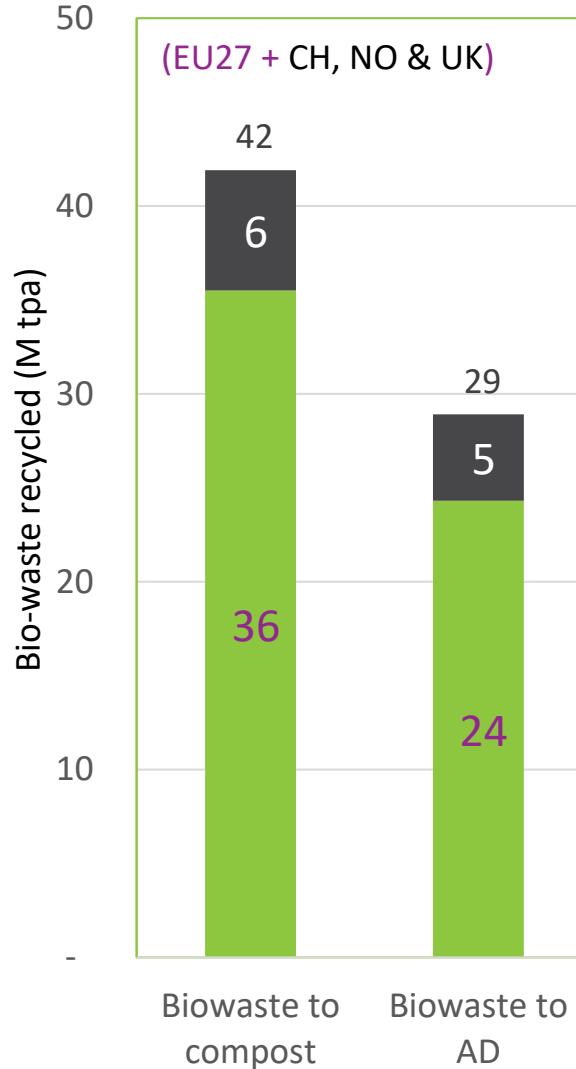
11,000 - 18,000 FTEs
COMPOSTING



2,000 - 5,500 FTEs
ANAEROBIC DIGESTION

FTE – Full Time Equivalent Employees

Biowaste Collection – Compost & Digestate Production

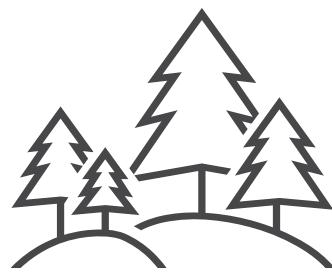


71 M tpa
BIO-WASTE RECYCLED

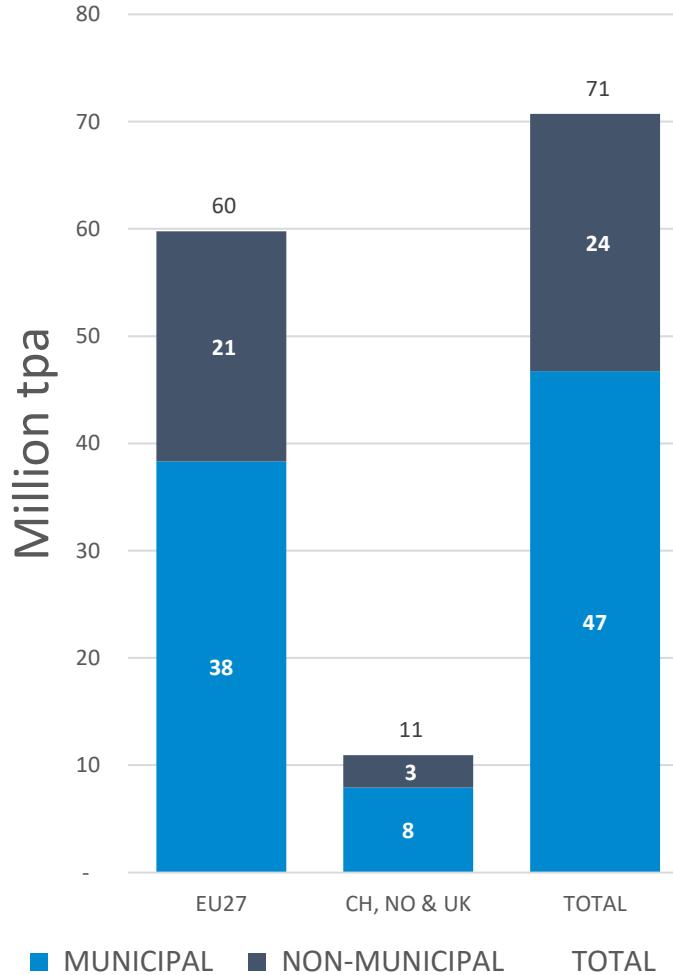
21 M tpa
COMPOST PRODUCED

Surface area (million ha)	Fraction of Arable Land	Fraction of Mod./ Severely Eroded Land
2.1	2%	16%

1.2 million tonnes CO₂-eq
sequestered on agricultural
soils every year

=  19.1 million urban tree seedlings grown for 10 years

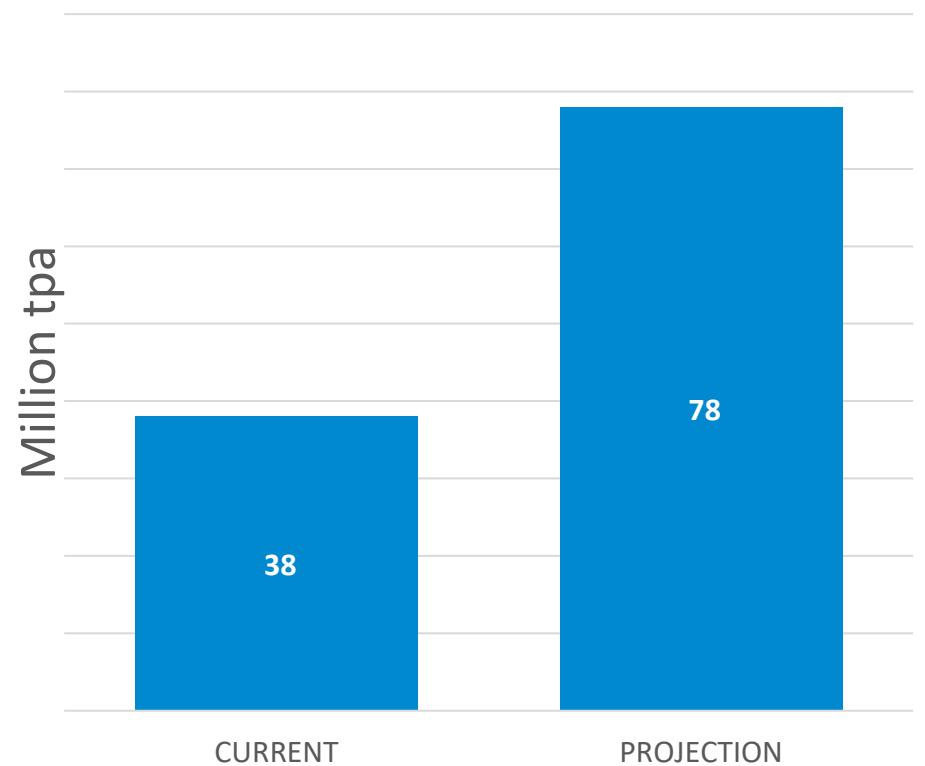
Municipal Biowaste – RECYCLING POTENTIAL



**EU TARGET TO
RECYCLE 65% MSW
BY 2035**

**17% to 35%
needed through
bio-waste**

**Extra 40 M tpa
MUNICIPAL
BIOWASTE has to
be separately
collected!**



ECN Data report 2022 - Sponsors

Thanks to all sponsors of the ECN Data report 2022!

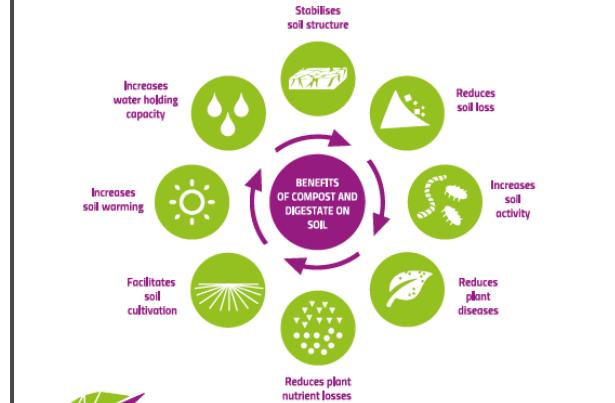


Quanturi

ECN DATA REPORT 2022

COMPOST AND DIGESTATE FOR A CIRCULAR BIOECONOMY

Overview of Bio-Waste Collection, Treatment & Markets Across Europe



ECN
Compost and Digestate
for a Circular Bioeconomy

Networking

European membership co-operation

- Since 2017 ECN is official Affiliate Member of the European Environmental Bureau (EEB; participation in EEB's Waste WG and Agri WG)
- Since Q4/2017 ECN is a Liaison Organisation of CEN TC 223 'Soil improvers and Growing media'
- Networking with ACR+, EBA, EUBP, EUROCITIES, FEAD, GME, MWE, ZWE



International membership co-operation

- ISWA, Participation in Working Group Biological Waste Treatment
- ECN is Partner in the 4per1000 initiative
- International Compost Alliance (ICA)



International Compost Alliance Networking



Initiative & Campaign



Promotion of ECN & CIC initiative 'Save Organics in Soil'

- Awareness raising on the **importance of soil organic matter** and its role in **sustainable and productive agriculture**
- **Recycling of carbon from bio-waste** by applying high-quality compost and digestate plays a key role in improving soils and **for keeping soils healthy and productive.**

International Compost Awareness Week (ICAW 2023)

- 30 April – 06 May 2023
- Theme: Healthy Soil for Healthy Life
- Poster contest organized by Compost Research & Education foundation



ECN Position Papers and Guidance

Position Paper

Compost for the prevention of soil health and fertility



10/2021

ECN Position Paper

Compost for the preservation of soil health and fertility

The development of separate collection schemes for bio-waste and high-quality recycling has made available a large quantity of mature, safe and healthy compost, estimated to be in the region of **12 million tonnes** every year across Europe. Compost is an effective soil improver, however, farmers struggle to use it properly for technical and economic reasons.

European agricultural soils have become degraded following many decades of use, resulting in both reduced quality and productivity. The unsustainable use of chemical inputs has also led to water and air pollution. The EU should guide and support the improvement of soil through a coordinated and harmonized approach in all Member States.



Info Paper

Survey on carbon farming schemes including compost



16/06/2021

ECN Info Paper

Survey on national/local plans allocating resources for soil management practices that include the utilisation of compost

In order to point out the key aspects of national or local policies put in place so far to stimulate the adoption of good land management practices aimed at preserving soil health and fertility, that include the reintroduction of organic matter by means of compost, we have collected and analysed some of the most significant incentivising schemes adopted in some Member States, here shortly summarised.

The following case studies were considered:

- Local humus build-up CarboCert (Germany, GE1)
- RETERRA - CarboSoil (Germany, GE2)
- Healthy Soils for Healthy Food (Austria, AU1)
- Humusprojekt (Ökoregen Kaindorf, Austria, AU2)
- Utilisation of organic fertilisers in place of mineral fertilisation (Italy, Region Piedmont, IT)
- French Carbon Standard CARBON AGRI (France, FR)

Organic Farming Schemes

The schemes are equally divided into public and private funded initiatives, mostly still active (or about to end), and all of them address farmers as the beneficiaries (in the GE2 case, organic soil improvers issuers are possible beneficiaries as well).

Despite all these schemes are focussed on the return of organic matter to soils and can thus be considered as "carbon farming" initiatives, some differences emerge: while some of them (GE2, FR, AU2) are specifically aimed at offsetting CO₂ emissions to the atmosphere through the storage of organic carbon in soils, other ones put the emphasis on other aspects, such as the replacement of mineral fertilisers (IT) or the improvement of soil health through the commitment of farmers in adopting good agronomical practices (AU).

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Position Paper

The role of recycled organic waste products within the Carbon farming Initiative



ECN Position Paper

Date: 23/06/2022

ECN Position Paper on the Role of Organic Waste derived Soil Improvers and Organic Fertilizers within Carbon Farming Initiative

The EC Communication on Sustainable Carbon Cycles published on 15th December 2021¹ focuses also on carbon farming as a business model incentivising practices on ecosystems in order to increase carbon sequestration. The EU Commission announced in its 2022 Work Program a proposal for the certification of carbon removals with the view of scaling up the development of sustainable carbon removals and creating a new business model for land managers and companies, in line with the European Green Deal and European Climate Law objectives. The carbon farming initiative² (CFI) refers to the carbon pools and GHG streams management at farm level, aiming to mitigate climate change. This can involve the management of land, livestock, all the carbon pools in soils (materials and vegetation), besides the streams of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (NO₂). In this frame, the EU recently published a *technical guidance handbook*³ which is intended to support the development of result-based payment schemes for CFI's in the EU.

The handbook gathers the possible carbon farming schemes under few main topics, amongst which the one called "Maintaining and enhancing SOC in mineral soils", to be achieved by the adoption of management practices that benefit the Soil Organic Carbon (SOC), including cover cropping, improved crop rotations, agroforestry, preventing conversion to arable land and conversion to grassland.

When reading the eligibility criteria of CFI's, with the motivation (see "annexes - case-studies") that the "Application of organic fertilizers result in translocation of carbon from one part of the system to another", the family of OFs include the organic waste derived organic soil improvers such as compost and solid digestate, possible nutrients and carbon sources for crops and agricultural soils. ECN wishes to clarify the role OFs can play within a carbon farming initiative, wishing that the organic fertilization of soil and plants

¹ COM(2021) 800 final - Communication from the Commission to the European Parliament and the Council - Sustainable Carbon Cycles

² https://ec.europa.eu/clima/eu-action/forests-and-agriculture/sustainable-carbon-cycles/carbon-farming_en

³ COWI Ecologic Institute and IEEP (2021) Technical Guidance Handbook - setting up and implementing result-based carbon farming mechanisms in the EU Report to the European Commission, DG Climate Action, under Contract No: CLIMA/C.3/ETU/2018/007. COWI, Kongens Lyngby

Guidance Document

Guidance on separate collection of bio-waste for high-quality recycling



Guidance on Separate Collection

Guidance on Separate Collection

The untapped potential and steps forward for separate collection of household food waste for high-quality recycling



Further information

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'Save Organics in Soil':

www.saveorganicsinsoil.org



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