



## Online event: Compost and Digestate in the Circular Bioeconomy: Healthy Soil for Healthy Life



Tuesday 30 June 2022, 15:00-17.00 CEST  
Online Event

### Hosted by MEP Sarah Wiener

Vice-Chair of the European Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development'

#### Speakers:

- **MEP Sarah Wiener**, Vice-Chair of the European Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development'
- **Kristel Vandenbroek**, Chair of ECN
- **Dr. Jane Gilbert**, ISWA WG Chair 'Biological treatment of Waste' and former ECN Chair
- **Silvija Aile**, Deputy Head of B3 Unit "From Waste To Resources", DG ENV, European Commission
- **Enzo Favoino**, Scientific Co-ordinator, Zero Waste Europe
- **Alberto Confalonieri**, Task Group Chair on 'Soil & Organic Matter', ECN
- **Henk Vooijs**, Market Development Consultant, Novamont
- **Sabine Houot**, Researcher, INRAE
- **Arnaud Schwartz**, Rapporteur of NAT Opinion on the EU Soil Strategy for 2030, European Economic and Social Committee
- **MEP Elsi Katainen**
- **MEP Manuela Ripa**
- **MEP Maria Noichl**

## Opening Remarks

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**MEP Sarah Wiener, Vice-Chair of the European Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development'**

**“While soil sealing represent the basis of agriculture and food production, the importance of soil complexity has not been fully understood at the political level”.**

**MEP Ms. Wiener** mentioned that **soil sealing is one of the most important environmental challenges the world is facing**. Moving on, she stated that *“while they represent the basis of agriculture and food production, the importance of soil complexity has not been fully understood at the political level”*. She highlighted that **fertile soil is a finite and non-renewable resource, which is why their conservation must be a priority**. In this sense, she considered that the EU Soil Protection Strategy presented by the Commission is an important step closer to establishing the EU framework for the protection and sustainable use of soil. Moving on, she emphasised that **it is important to promote agriculture practices beneficial to soils and contribute to humus build-up**. To conclude, governments should develop programs aimed at stopping the land degradation process and bringing degraded land back into production.

## Introductory remarks on “From bio-waste to high quality recycled organic products”

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**Kristel Vandebroek, Chair of ECN**

**“The EU has the legal framework to support biological cycles”**

**Ms. Vandebroek** emphasised that *“the EU has the legal framework to support biological cycles”*. However, she mentioned that there is still a long way to go. In fact, to reach the overall recycling rate of 65% of municipal solid waste by 2035, more bio-waste has to be collected. Moving on, she mentioned that due to high energy prices, **more interest in compost and digestate from industries is growing**. In this regard, to build a sustainable market, **it is**

**necessary to make sure that the quality of the compost and digestate has a high standard.** Accordingly, Ms. Vandebroek stated that the ECN quality assurance scheme can be used as a benchmark to achieve the sustainable market in the EU.

## Presentation on ‘Compost and Digestate in the Circular Bioeconomy: Sustainable Carbon Cycles and Healthy Soils’

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*Dr. Jane Gilbert, ISWA WG Chair ‘Biological Treatment of Waste’ and former ECN Chair*

**“Bio-waste recycling can connect with the sustainable and circular bioeconomy for Europe”**

**Dr. Gilbert** demonstrated that *“bio-waste recycling can connect with the sustainable and circular bioeconomy for Europe”*. She stated that the **bioeconomy interfaces with people, the planet and prosperity and cuts across a number of different EU thematics and strategies**. Starting with the interaction with compost and digestate for the people, she stated that within the EU 27, Switzerland, Norway and the UK, there are 5,800 permitted composting and anaerobic digestion (AD) facilities which creates over 20,000 full time equivalent (FTE) employees across Europe. Moving to the compost and digestate for the planet, there are 60 million tonnes of bio-waste composted and anaerobically digested within the EU 27 and 71 million tonnes of tons per annum of bio-waste recycled across Europe. Furthermore, if 10 tonnes of fresh compost per hectare are applied into agricultural land it can be put on about 2% of the arable land in Europe. Hence, **by directing that compost, the EU has potential to apply compost onto 60% of moderately or severely eroded soils**. Regarding the interaction between compost and digestate with prosperity, she highlighted that in terms of employment and looking at the contribution to the GDP per employee, it is argued that between 1 and 2 billion euros of GDP contribution comes from employment from this FTEs working across the sector. Similarly, the potential of sequestration of carbon dioxide into soils represents about 92 million euros a year. Moving on, she mentioned that the **soil can be improved through regular application of quality compost but it is a technique that modern agriculture has largely forgotten** and therefore, needs to be addressed. As a takeaway message regarding compost and digestate, she mentioned that at the moment, the EU is producing about 21 billion tonnes per annum of compost which is enough to put onto all of the arable land of

Belgium every year. However, if the EU doubled that, there would be enough compost for two Belgiums.

## Panel Discussion

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*Silvija Aile, Deputy Head of B3 Unit “From Waste to Resources”, DG ENV, European Commission*

**“There is a need to implement the separate collection obligations that have been established in the EU legislation”.**

**Ms Aile** welcomed the numerous efforts made by Member States and stakeholders in implementing new regulations of the revision of the 2018 Waste Framework Directive and Landfill Directive as well as the implementation of the fertilising regulation which recognised the value of bio-waste in the fertilising products and harmonising the market for those products. She emphasised that **the Commission’s first priority is preventional waste**, particularly the prevention of food waste. As a result, **the Commission is currently carrying out an impact assessment to assess the feasibility of setting food waste reduction targets** with the objective of proposing legally binding measures for next year. The second priority of the Commission **is to ensure that waste that is generated is managed in a sustainable way**. Ms. Aile stated that *“there is a need to implement in an ambitious way the separate collection obligations that have been established in the EU legislation”*. **The priority is to make sure that bio-waste does not end up in landfill or MBT plants, is directed toward a proper recycling process and result in good material as fertilisers**. In this regard, she mentioned that the Commission is looking for new measures to assess what is the need for a separate collection system and for its financing. An additional instrument pushing for separate collection system is the rule that prevent Member States from reporting waste as recycled if not separately collected in practice. Moving on, she stated that *“what is also extremely important is the need to engage with the stakeholders that would be the recipients of this second raw material”*. Indeed, there are different market situations which means that particular attention should be put on competent authorities to ensure the engagement with stakeholders in using the materials. Moving on to funding, she states that the Commission is making funds available,

mostly in terms of building capacities on recycling and separate collection and research and development. To conclude, she underlined that **the key issue is to have proper stakeholder engagement when setting up this system and awareness raising with the citizens** regarding the rules and benefits for the society and environment.

**Moderator Mr. Ilias Grampas** addressed the following question: *“what are your thoughts on the main challenges and opportunities in bringing emphasis on the issues such as soil health law, CAP, initiative on sustainable carbon cycle?”* **Ms. Aile** stressed that **the EU soil strategy is a key pillar of the EU Green Deal**. It has one of the key deliverables and legislative measures to try to define healthy soils. She mentioned that *“the objective is to provide a very clear direction to the Member States on where action is needed with the idea to reach healthy soils across the EU by 2030”*. Moving on, she stated that the Commission is currently carrying out an impact assessment, stakeholders and open public consultations to seek their views on specific measures and problem drivers. To conclude, Ms. Aile highlighted that clear actions must be taken within the EU Soil Strategy on degraded land.

### ***Enzo Favoino, Scientific Co-ordinator, Zero Waste Europe***

**“Legally binding targets or key performance indicators in the EU Soil Directive are missing”.**

**Mr. Favoino** stressed that the obligation to separate organic wastes paves the common roadmap for every actor in the EU. However, **he considered that “legally binding target or key performance indicators in the EU Soil Directive are missing”**. In this regard, he discussed this lack from the quantity angle and the quality angle of bio-waste. From the quantity angle, once data and obligations for separate collection are set, it is easy for Member States to comply by solely placing a bin in the municipality and encouraging people to deliver their bio-waste. However, it only results in the collection of 32% of bio-waste but only 16% of food waste. Hence, as quoted, ***“the real big challenge will be to maximise the total capture of food waste”***. Moving on, Mr. Favoino mentioned the need for a circular economy to collect bio-waste separately in a bid to send it for composting and AD. Considering the quality aspect, **he underlined the absence of key performance on quality**. In this sense, he mentioned that while composting sites and AD are well designed to get rid of impurities, the dragging factors reject

part of the bio-waste and end product. Consequently, there is still much more to do in order to maximise performances when it comes to both quantity and quality.

***Alberto Confalonieri, Task Group Chair on 'Soil & Organic Matter', ECN***

**“Compost is legal, now let’s make it desirable”.**

**Mr. Confalonieri** stated that several countries have implemented for many years regulations on recycling and composting digestate quality. He welcomed the fundamental quality assurance systems put in place by ECN. Moving on, he emphasised as quoted, **“the EU has to create a genuine commitment and necessary measures to win the defiance from farmers and citizens for using compost derived from waste”**. In addition, the EU has to put in place instruments that make farmers willing to use compost to overcome the loss of culture in organic matter value. To conclude, he stated **“compost is legal, now let’s make it desirable”**.

***Henk Vooijs, Market Development Consultant, Novamont***

**“The aim is to increase the collection of food waste”**

**Mr. Vooijs** stated that the **aim is to increase the collection of food waste**. He emphasised that despite the communication and efforts to take impurities out of the waste, glass and plastics are still present in compost. Hence, best practices have to be put forward. In this regard, Mr. Vooijs stated **three categories of consumer products that needs to be improved to enhance best practices**. The first category is products that consumers can directly use to collect food waste at home. The second category is to tackle the issue of products contaminated with food waste on the packaging which makes the separated collection impossible. The third category of products is the products known to contaminate compost. In addition, he mentioned another category of non-consumer products in agriculture that needs to be biodegradable, such as sanitary products or lubricants, because of the difficulty to recycle them.

***Sabine Houot, Researcher, INRAE***

**“There is a need to control the quality of the product used and recycled on soil”**

**Ms. Houot** underlined that **the key issue is the impact of compost application on soil organic matter content** as it is the driver of soil fertility health and can help the mitigation of climate change in relation with carbon storage in soil. Moving on, she compared the compost and digestate process. Digestate contains much more water and less organic matter so there will need more application to reach the same amount of increased carbon in soil than with compost. Another interesting effect is that digestate will be able to substitute the nitrogen fertiliser. With the compost, organic matter will increase and substitute phosphorus and potassium. Moreover, Ms. Houot mentioned that ***“there is a need to control the quality of the product used and recycled on soil”***. Moving on to contaminants and microplastic, there is a huge concern about the input of plastic in either compost or digestate. To conclude, she stated that discussions are taking place on the effect of digestate on biological activities.

***Arnaud Schwartz, Rapporteur of NAT Opinion on the EU Soil Strategy for 2030, European Economic and Social Committee***

**“If the EU wants to achieve healthy soils by 2050, the principle of subsidiarity must be respected”.**

**Mr. Schwartz**, on behalf of the European Economic and Social Committee, stated that if the EU is to achieve healthy soils by 2050, **there is a first need for human power and money**. Second, **a clear definition of healthy soil is needed**. Third, **a clear target for 2030 must be defined**. Moving on, Mr. Schwartz stated that *“if the EU wants to achieve healthy soils by 2050, the principle of subsidiarity must be respected”*. Indeed, **the conditions of soils and variety of uses are different between Member States**. In this sense, while having the same goal, there is a need for adaptation at the parcel level. Moving on, Mr. Schwartz emphasised **the need to prioritise measures on education, knowledge transfer and incentives for soil protection to all stakeholders**. Regarding artificialisation of the soil and land-use, a target for 2050 is very important as well as a target for zero pollution.

## Reactions from MEPs

***MEP Elsi Katainen***

**“Carbon farming and soil health are the key solutions in the future of agriculture”.**

**Ms. Katainen** stated that *“carbon farming and soil health are the key solutions in the future of agriculture”*. That is why **it is extremely important that food products remains at the high of both goal: farming and soil policies**. When it comes to healthy soils, the EU has to make sure that the legislation considers the differences between Member States and ensures a policy coherence. Moving on, she suggested that other means to achieve healthy soils shall be considered, such as trainings and advice in agriculture. Moving on to the issue of carbon farming, she stated that *“carbon sequestration should be made globally compatible and viable for farmers and forest owners”*. To do so, incentives from public and private sources should be put in place.

### **MEP Manuela Ripa**

**“The current legal framework is the best and most efficient approach to regulate the use of valuable resources in all Member States in a sustainable matter”.**

**Ms. Ripa** recalled that soil is a limited and finite resource and that 70% of the soils in EU are in a poor conditions. Nonetheless, until now, no binding EU regulations were in place to protect them. She stated that the EU needs a strong protection for soil as soon as possible. Indeed, she argued that **“the current legal framework is the best and most efficient approach to regulate the use of valuable resources in all Member States in a sustainable matter”**. Moving on, **Ms. Ripa expressed her support to the approach of binding measurable targets for soil protection** which must go hand in hand with an ambition timetable and compulsory measures to preserve soil functions, avoid soil damages and restore degraded soils. Regarding land degradation, Ms. Ripa affirmed that the EU has to end land degradation by 2030 and net land take by 2050 at the latest. In order to achieve this goal, there is a need for a wide EU legally binding framework and a uniform system to monitor soil quality, to mark fellow land and identify risk areas. In this regard, **bioeconomy has an important role to play in accelerating the progress toward a circular and low carbon economy** but also to modernise and strengthen the EU industrial based, to create more new value chain and greener cost effective industrial processes while protecting the biodiversity and the environment.



## Q&A Session

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On behalf of the EP Intergroup, **moderator Mr. Ilias Grampas** addressed the following question to **Ms. Favoino**: *“what would be your take on how a circular bioeconomy can contribute to healthy soils?”* **Mr. Favoino** recalled that the legislation has to be consistent in managing organic waste but also the effects of organics. **If properly fulfilled, the obligation of separate collection of organics can contribute to healthy soils but also to the storage of carbon.** He stressed that it is possible to *“store more carbon in the soil in the form of organic matter to produce fertility, which would represent a win-win situation”*.

**Moderator Mr. Ilias Grampas** addressed the next question to **Mr. Confalonieri**: *“are specific incentives for farmers needed to adopt carbon farming practices in their soil management approach?”* **Mr. Confalonieri** stressed that incentives are needed as **farmers have lost the culture of conserving and enriching organic methods in soils.** To do so, there is a need to tackle and raise awareness not only about the legal side but also about the quality of compost. Moreover, Member States should agree on monitoring, reporting, and verifying the application of the rules and procedures that would allow soil certificates to be issued to farmers. To conclude, he expressed his concern about carbon storage’s side effects and the financing rules for the carbon farming initiative where compost is seen as a simple translocation of an organic matter from one place to another.

Moving on during the Q&A, the following question was asked by **moderator Mr. Ilias Grampas to Ms. Vooijs**: *“in what ways do you think that consumers can help in the process of creating quality compost, and is there any best practices to share?”* **Ms. Vooijs** stated that consumers can be helped by the development of systems with fewer bins and biodegradable compostable products in the legislation. Moving on, he recalled **the need for the EU soil strategy and the bioeconomy strategy to go hand in hand.**

The next question by **moderator Mr. Ilias Grampas** was addressed to **Ms. Houot**: *“are there other farming practices efficient to increase carbon stocks?”* **Ms. Houot** contended that **compost application is very efficient to increase soil organic carbon but only concerns 2% of the arable soil in the EU.** Hence, she suggested the combination of different strategies to increase soil organic matter and soil health. Finally, **moderator Mr. Ilias Grampas** asked to

**Mr. Schwartz:** *“which role can agricultural-related carbon farming practices would play with regards to soil health?”* **Mr. Schwartz** stated that carbon farming can help farmers to improve their practices. However, there can be threats to developing carbon farming in financing it and regarding biodiversity concerns.

Moving on, a question was addressed to all the panelists: *“what are the measures to minimise the risk of contamination considering the barrier to widespread recycling of bio-waste to agricultural land?”* **Mr. Confalonieri** stated the need to improve the quality of separate collections and to perform a chain from bio-waste to soil. **Mr. Vooijs** mentioned that all the strategies available must be used but particularly **emphasised the need for communication between the Member States, stakeholders, and citizens.** The last question was addressed to all panelists: *“how can the EU prevent food manufacture from putting compostable on consumer packaging if it is not allowed in certain States to throw it away with organic waste?”* **Mr. Vooijs** stated that there is a need to design packaging in the same way as for organic products.

## Closing Remarks

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### **MEP Maria Noichl (video-message)**

**“Bio-waste will have to play a crucial role in the circular economy to produce high quality compost and digestate based products used in sustainable agricultural management systems”**

**MEP Ms. Noichl** stressed that **the lack of comprehensive and coherent policy framework torpedoes soil protection objectives.** She called for a legal framework and incentives to increase soil organic matter by connecting the different EU strategies in order to better protect our soils. She stated that *“bio-waste will have to play a crucial role in the circular economy to produce high quality compost and digestate based products used in sustainable agricultural management systems”*. Moving on, she mentioned **the need for legally binding legislative initiatives as well as measures that enable farmers to improve their nutrient management.** To this end, Member States must be encouraged to propose new measures in their strategic plans. To conclude, she called for the need to put the task of a comprehensive EU soil strategy at the centre of our work in the future.