

ROOTS - circular policies for changing the biowaste system

POSITION PAPER

The circular economy has a huge potential to make our societies more sustainable and decarbonised, with a reduced impact on the planet's resources. The European Union (EU) has made a significant commitment to this model and several initiatives and projects have been launched since the approval of the first Circular Economy package (2018).

As up to 50% of municipal waste is organic, valorisation of biowaste is a key tenet of a circular economy. Indeed, the EU Bioeconomy Strategy (2018) sees cities becoming major circular bioeconomy hubs, where biowaste is a feedstock for safe and sustainable bio-based products. While new EU waste legislation is expected lead to more quality biowaste becoming available for use in biorefineries from 2024.

However, **numerous regulatory bottlenecks hinder the full deployment of revolutionary solutions in the field of urban biowaste valorisation and re-use.** The European Green Deal and associated legislative initiatives provide the opportunity to correct this.

The ROOTS Initiative

In this framework, four Horizon 2020 projects working on biowaste valorisation have teamed up to promote innovative solutions for the European circular bioeconomy and bring down the regulatory barriers blocking a more sustainable future. This joint initiative is named **ROOTS - circular policies for changing the biOwasTe System.**

The projects **HOOP**, **VALUEWASTE**, **SCALIBUR** and **WaysTUP** are piloting new solutions to transform urban biowaste and wastewater into valuable products like Feed, Fertilisers, Bioplastics, Biopesticides, Proteins and Bioethanol. They use different processes and technologies, but they all rely on higher level of recycling and propose valorisation solutions relevant for the uptake of a true Circular Economy.

The promoters have discussed their views and shared their concerns on policy barriers hindering new innovations leading to the Circular Economy for urban biowaste. **The discussion has resulted in the preparation of four focus topics, accompanied by proposed solutions.** Such topics will constitute our key messages and will be addressed more in detail in future public initiatives.



These projects have received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement Nos. 101000836, 817788, 818312 & 818308.

1. Recycling targets and treatment plants

Despite separate collection of bio-waste being mandatory from January 2024, there is no specific recycling target for bio-waste at EU level. There is no reward mechanism for the collection and recycling of materials that could be treated in bio-refineries and fully valorised.

Recommendation: Set recycling targets for bio-waste and efficient collection schemes. Develop new support mechanisms for the new biowaste treatment plants enabling the production of clean compost, bioenergy and new low impact biobased products.

2. Waste and by-products

There are overlaps and inconsistencies in the definitions of “by-products” and “waste” in the current legislation, specifically (Directive 2008/98/CE and Regulation 1069/2009).

Recommendation: Products coming from biowaste should have more specific regulation/standardisation allowing for multiple re-use, aligned with the principles of the Circular Economy. This should help to clarify and simplify the whole framework.

3. Biopesticides

Biopesticides are also defined as “low risk” plant protection products, according to Regulation 1107/2009 they are defined as: “not containing substances of concern, being sufficiently active, and not causing unnecessary pain and suffering to vertebrates to be controlled”. However, they face the same barriers as chemical pesticides. This implies that even products completely renewable, biodegradable, coming from low impact technologies cannot be used.

Recommendation: The EU should create a simplified regulatory framework allowing for an easier commercialisation of biopesticides, characterised by biodegradability and of 100% vegetable source.

4. Insects for Animal Feed

Insects are a great source of proteins and using biowaste to grow and feed insects could unlock several economic opportunities. The projects of **ROOTS** are developing value-chains based on insect-rearing for feed production. Until 2021, their use as feed ingredient was approved only for aquaculture. However, in the second half of 2021, the EU has made a major step forward by allowing the use of insect protein for pig and poultry feed. This is in line with objectives of the **Farm to Fork strategy**, aiming to make livestock farming more sustainable and seek alternative feed materials. Insect-protein could be the answer to this challenge, EU legislator should favour the uptake of insect-based animal feed by bringing down all the remaining regulatory impediments and further enlarge its use.



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Recommendation: In this regard, **ROOTS** pledges for the revision of Regulation 767/2009 and 1069/2009.

The road ahead

The European Green Deal must address crucial topics for the Circular Economy, like those mentioned above. We express the wish that forthcoming policies will be guided by two clear principles:

- Simplify the regulatory framework.
- Unlock new opportunities in adherence with safety and health standards.

The **ROOTS** group wants to play a role in achieving a more sustainable society. We want to show that Horizon 2020 projects and their partners can speak out loud and concretely contribute to transform and improve our society. For this reason, we must combine the **development of new solutions and the dialogue with policy makers on regulatory barriers**.

In the next months, **ROOTS** will:

- Promote our initiative and our messages
- Talk and engage with relevant stakeholders
- Organise an online event inviting relevant stakeholders
- Analyse more in detail our focus topics

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