

Biocircularcities in brief #1

May 2022

Six months after the launch of this new adventure, the Biocircularcities partners have completed the first stages of their exploratory journey. They gathered their travelling companions, stakeholders of the local biowaste chains of the pilot territories, who already started sharing constructive feedback during three exchange sessions, the Local Living Labs. Their input will be crucial at each step of the project as no circular bioeconomy can be implemented in the pilots without the active involvement of the local actors.

It is also important to know the surrounding environment, that is to have a general idea on the current biowaste streams in the three pilot areas as well as a good overview on legal aspects both at European and local level. For that, the Biocircularcities consortium is currently working on defining key biowaste value chains in the pilot areas and analysing the existing policy framework and good practices in circular bioeconomy at European and pilot territory level. This first work will be used in a second phase of the project to identify the current barriers and opportunities linked with local regulation or current awareness of the circular bioeconomy solutions, and to explore how biowaste management can be optimised.

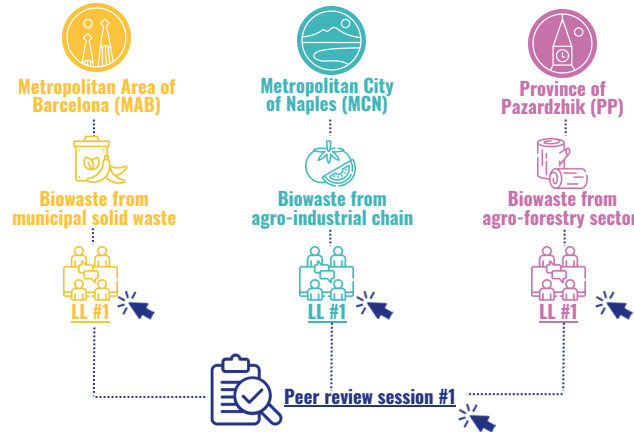
Loading the circular bioeconomy, where are we?



Analysing the situation

in pilot territories

Pilots selected the biowaste chain and the alternative scenario to reach a circular bioeconomy. Challenges encountered in the current biowaste management chain and potential solutions were discussed during the first meetings of the local Living Labs (LLs). 5 external experts gave feedback on the results of the LL and validated project's choices during a peer-review session.



Boosting circular bioeconomy

in pilot territories

- The review of the existing policy framework related to circular economy and biowaste management shows that in the pilots, as in Europe, regulations and plans have been increasingly developed in 2010-2020 to fulfil the objectives of the Waste Framework Directive 98/2008.
 - **MAB**: the first regulations on biowaste in 1993, the following regulations and programmes led to the obligation to collect biowaste separately.
 - **MCN**: the main target includes a 5% reduction in the ratio of generation municipal solid waste.
 - **PP**: the policy focuses on the reduction of organic waste sent to landfills, and to promote other treatments route as well as modern landfills.
- **30 good practices** in biowaste management and circular bioeconomy have been identified to inspire pilots, such as shifting towards individualised collection to reach 80% separate collection in La Conca de Barberà (ES), building a new Mechanical Biological Treatment plant in Sofia (BG) to boost recycling, and implementing a door-to-door collection to increase waste separate collection and the quality of the collected material in Milano (IT).



Recommendations from the Peer Review session #1

5 external experts were invited to discuss and share insight on the results of the first Living Labs.



Metropolitan Area of Barcelona (MAB)

The experts validated the decision to address the issue of high impurities content in biowaste by moving towards the individualisation of the collection systems, from open containers to door to door or smart bins. On a subsequent stage, it could be possible to implement a pay-as-you-throw system. Sociological aspects in source separation should not be neglected since communication to citizens is key to a successful separation.



Metropolitan City of Naples (MCN)

To address the insufficient local treatment capacity, it is suggested to start a gradual reconversion of local mechanical biological plants into biological treatment exclusively for biowaste. Another solution, complementary to this centralised treatment, could be to implement decentralised biowaste treatments. Experts agreed on the need to retrieve the results from past research and projects, as starting point to expand the range of available circular solutions for the agro-industrial biowaste chains. Industrial symbiosis and local cooperation can also pave the way to circular bio-economy results



Province of Pazardzhik (PP)

An increase in separation rate could be incentivized by introducing a landfilling tax returned to municipalities according to their separate waste collection performance. A change in waste fees should be introduced to incentivise separate collection of different fractions, especially biowaste that is currently not source separated. Energy and lignocellulosic valorisations are possible to valorise forest residues, giving priority to the second option to incentivise good practices for utilization of agro-forestry wastes more in line with the waste hierarchy.



More on the Peer Review session #1

For more:

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Bio-based Industries Consortium



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