

The Biocircularities (BCC) project champions the transition of urban areas towards a circular bioeconomy, focusing on optimising biowaste management and promoting sustainable bio-based products. By analysing three distinct pilot territories - the Metropolitan Area of Barcelona, the Metropolitan City of Naples, and the Province of Pazardzhik - BCC offers invaluable insights on the benefits and drivers to improve circularity of specific biomass value chains. The project's outcomes, informed by Life Cycle Costing (LCC) and Life Cycle Assessment (LCA) methodologies, address barriers and provide evidence-based policy recommendations to foster sustainable waste management and circular bioeconomy principles. As the project ended, this factsheet proposes ideas on how to exploit these key project results, aiming to further extend their impact and reach in the realm of sustainable urban development.

This **Exploitation Factsheet** is designed to:

- **Guide exploitation** by offering routes to harness key results from the BCC project.
- **Facilitate knowledge transfer** by serving as a tool for easy access to BCC's exploitable findings, promoting collaboration and exchange.
- **Promote uptake** by encouraging different stakeholders to adopt and further exploit the insights derived from the BCC project.



Exploiting the LCC&LCA Results

The BCC project employed LCA and LCC methodologies to evaluate the environmental and economic sustainability of biowaste management systems across three bio-based value chains on:

- (1) forestry residues in the Province of Pazardzhik,
- (2) agro-industrial biowaste (coffee chain) in the Metropolitan City of Naples, and
- (3) municipal biowaste in the Metropolitan Area of Barcelona.

The learnings of these pilots can be used as:

- **Benchmarking** or a reference point to other bioeconomy initiatives
- **Guidelines** for biowaste management companies and organisations
- **Decision-making tool** for local governments for more informed better policy decisions
- **Insights** about biowaste-derived materials for sustainable product development
- **Educational background materials** to inspire further research and testing

Summary of LCA & LCC results are accessible on [the BCC project website](#), presented in a dedicated [webinar recording](#), and published as a peer-reviewed article in the Sustainability Journal.



94 Policy Recommendations ready to use

The BCC project has crafted 94 [policy recommendations](#), thereof 30 are general policy recommendations for all three pilot areas which encompass broader principles and strategies that can be adapted and applied in other regions and value chains, including the topics **data management, organic waste treatment and sustainable biorefineries, market incentives for bio-based products, public awareness and support, and stakeholder involvement**.

The policy recommendations can be utilized across:

- **Local Municipalities and Urban Planners:** Utilise the policy suggestions to refine urban biowaste management strategies. The guidelines serve as adaptable tools to address local challenges and foster sustainable biowaste practices
- **Waste Management Companies:** Leverage BCC's insights to optimize waste treatment and explore innovative waste valorisation strategies.
- **Research Institutions and Academia:** Use BCC's analysis as a foundation for further research, providing a robust dataset for studies on biowaste valorization.
- **Environmental NGOs:** Harness BCC's policy recommendations to advocate for sustainable waste management and drive community-level awareness.



Discover the Biocircularities Webtool

The BCC Webtool assists stakeholders in identifying appropriate bio-circular technologies for improving biowaste management based on their specific contexts.

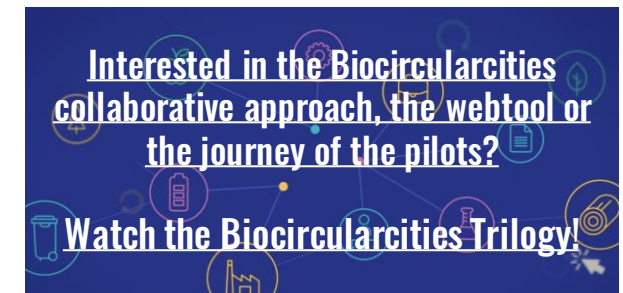
- **Empowering the Waste Management Business:** The Webtool can guide waste-to-energy facilities, composting facilities, and recycling facilities.
- **Technological Pathway Advisor for Local Governments:** The Webtool can guide local governments in evaluating different technological solutions.
- **Evidence-Based Policy Formulation:** Policymakers can use the Webtool to formulate evidence-based policies.
- **Advocacy for Sustainable Waste Management:** NGOs can use the Webtool to promote sustainable biowaste management practices.
- **Strategic Resource for EU Initiatives:** The Webtool can be used by other circular economy projects to enhance their impact.
- **BCC Webtool Expansion:** The consortium is open to further developing the Webtool with potential investors and collaborators.

Access to the Webtool

The BCC Webtool will remain accessible online after the project's conclusion, hosted by the Luxembourg Institute of Science and Technology (LIST).

Access the tool at: <https://bcc.list.lu/>.

[More about the Webtool, check Episode 2 of the BCC Trilogy](#)



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