

Policy and Regulatory Recommendations for Bio-waste Management in the EU

Nohales, G.¹ & Stinavage, M.¹

¹ENT Foundation. Coordinators of the LIFE BIOBEST Project. Vilanova I La Geltru, Catalonia, Spain.

Keywords: bio-waste management, regulatory barriers, European federalism, public policy.

Presenting author email: mstinavage@ent.cat

ABSTRACT

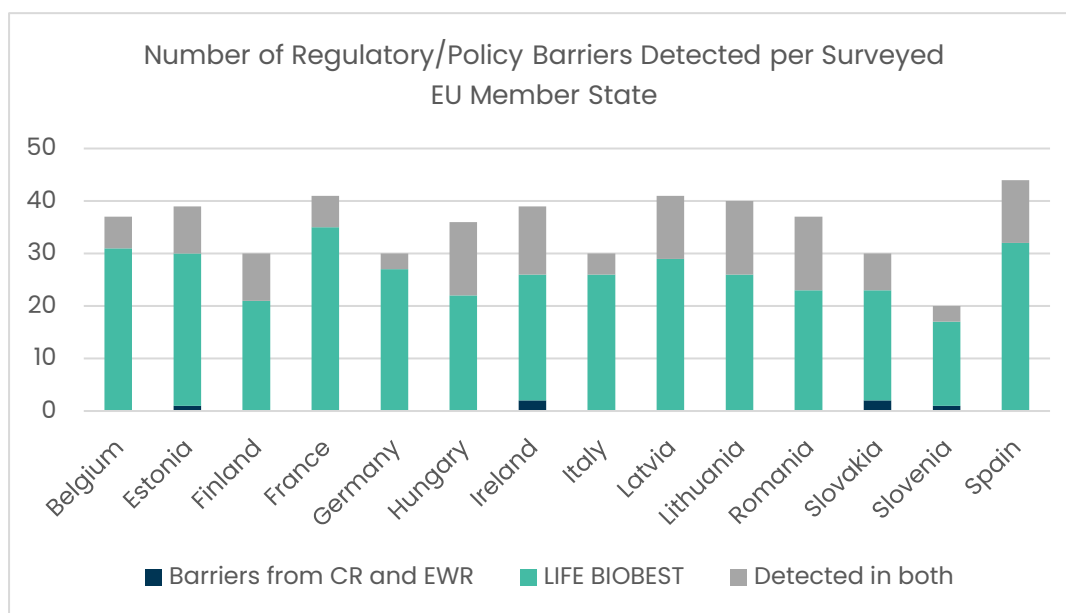
The Waste Framework Directive and the Landfill Directive directly target bio-waste management and exist within a multitude of cross-cutting policy legislation.

With the EU separate collection mandate effective as of January 2024, high quantities of bio-waste feedstock are expected. However, many bottlenecks and barriers prevent bio-waste management from reaching its full potential. Measures related to bio-waste recycling are not uniformly implemented within and across all Member States (MS). While collection systems may exist, the capture and the quality of separately collected material must be improved, especially for food waste. Only some EU regions and MS have taken action to implement bio-waste collection and treatment, guided by the requirements to meet the targets mentioned and incentivised by the landfill and incinerator taxes and complementary landfill bans.

In conjunction with the recent EU bio-waste separate collection mandate, the [LIFE BIOBEST](#) project identifies the gaps in the regulatory framework and systemic barriers obstructing efficient bio-waste management with high capture rates of high-quality material. This report, “Policy and Regulatory Recommendations for Bio-waste Management in the EU,” finds that a multitude of barriers plague the European institutions and stakeholders struggling to meet the EU mandate for separate collection of bio-waste and the landfill and recycling targets, thereby precluding the closure of the bio-waste cycle. Many barriers are interrelated and dispersed across EU MS, necessitating multiple transversal and vertical solutions to overcome them.

From April to October 2024 interviews were conducted and questionnaires dispersed. Using a multi-method approach, LIFE BIOBEST collected data through surveys, co-creation events, and interviews with experts from diverse geographic locations in the EU, reaching a total of 14 Member States. The 28 experts interviewed represent all geographical regions of the EU, and many are those with the largest populations, which is added to the know-how of the consortium. The study shows the frequency and distribution of barriers categorised by topic (legal/administrative, economic, organisational, technical), level of governance (EU, national, regional, municipal), and step in the bio-waste cycle (collection, treatment, use of outputs, quality).

Figure 1: Number of Regulatory/Policy Barriers Detected per Surveyed EU Member State



The research accomplishes the goal of evaluating and disaggregating the barriers to provide a wide and comprehensive view of the constraints and bottlenecks, which is a necessary step towards the design of corrective measures.

LIFE BIOBEST validated over 95% of barriers detected in the European Commission Country Reports (CR) and Early Warning Reports (EWR) and increased barriers detection by almost threefold. On average, 35 barriers were detected per MS.

To tackle these barriers and more, LIFE BIOBEST proposes the following core actions:

- Close the gaps in and advance the regulatory framework,
- Promote and align economic incentives and funding,
- Extend the network of expert stakeholders across all levels of governance,
- Improve technical know-how and validation of best practices,
- Increase communications, public education and awareness and
- Implement efficient and individualised models (that identify the user and allow controls of the collected material) and monitor performance.

Among initial priority actions are:

- Planning bio-waste management deployment and improvement at local and regional levels,
- Planning bio-waste treatment facilities and provide funding,
- Provide guidelines on the efficient models and recommendations for proper operations and
- Monitoring of bio-waste implementation and results.

Following this policy brief, the project produced four guidelines on bio-waste separate collection, governance & economic instruments, quality standards, and communication & engagement practices. The high-frequency barriers are accompanied by the creation of an assessment matrix and decision support trees for regional and local authorities. Recently, this policy analysis informed our [LIFE BIOBEST Comprehensive guidance](#), which aggregates policy recommendations for the European Commission.

LIFE BIOBEST is a preparatory project directed at EU policy assessment and recommendations. The LIFE BIOBEST consortium is led by [Fundació ENT](#) (ENT) in partnership with [Consorzio Italiano Compostatori](#) (CIC), [ACR+](#) (Association of Cities and Regions for sustainable Resource management), [European Compost Network](#) (ECN) and [Zero Waste Europe](#) (ZWE). For this study, the project systematically leveraged existing literature to expand regulatory barrier detection. The goal is to audit current actions and move forward high-quality standards.

REFERENCES

European Commission (2018) Report on the implementation of EU waste legislation, including the early warning report for Member States at risk of missing the 2020 preparation for re-use/recycling target on municipal waste.

European Commission (2022) Environmental Implementation Review 2022 Country Report - Estonia - Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Available at: <http://europa.eu>.

European Commission (2023) Report from the Commission identifying Member States at risk of not meeting the 2025 preparing for re-use and recycling target for municipal waste, the 2025 recycling target for packaging waste and the 2035 municipal waste landfilling reduction target. Available at: https://environment.ec.europa.eu/publications/waste-early-warning-report_en (Accessed: 15 June 2023).

Hogg, D. et al. (2018) Study to Identify Member States at Risk of Non-Compliance with the 2020 Target of the Waste Framework Directive and to Follow-up Phase 1 and 2 of the Compliance Promotion Exercise. Final Report. Bristol: Eunomia for the European Commission. Available at: www.eunomia.co.uk.

ACKNOWLEDGEMENTS

This research is part of LIFE BIOBEST (Funding: LIFE Programme).