Bin2Bean

SCAN ME!

Practice abstract 8

Waste Charging System Policy Guidelines
Living Labs in the waste management framework

*The **Bin2Bean project** is boosting the market deployment of safe, effective and sustainable **soil-improvement** solutions derived from bio-waste. **Policy guidelines** and **waste-charging roadmaps** are essential to support this transition.*

Turning Bio-waste to Soil Improvers: the Living Labs example

When collected and processed properly, bio-waste can be transformed into rich compost and soil improvers that nurture healthy gardens and farmlands, while also serving as a source of renewable energy through biogas. Diverting bio-waste from landfills is known to reduce greenhouse gas emissions and mitigate Europe's widespread **soil degradation**, an issue affecting roughly **46% of the continent's land area**. Since bio-waste accounts for about one-third of household waste in the EU, efficient recycling has the potential to significantly ease environmental pressures while decreasing dependence on landfilling and incineration.

In this context, the **Bin2Bean project**, funded by Horizon Europe, is actively supporting the transition of European cities toward healthy and regenerative soil systems by promoting innovations that valorise bio-waste into soil improvers through innovative and economically viable value chains. The project implements **three Living Labs** in **Amsterdam** (NL), **Hamburg** (DE) and **Egaleo** (EL) to develop, test, and validate locally adapted solutions that can be replicated in other urban regions. These Living Labs serve as real-world environments where partners map local waste flows, conduct field testing of soil improvers, and co-design evaluation frameworks assessing safety, environmental performance, and socio-economic impact. The project has already shown practical progress: in the first reporting period, the Living Labs engaged stakeholders and households through co-creation activities, awareness workshops, and strategy development on improving separate organic waste collection. For example, the Hamburg Living Lab focused on strategies to improve the quality of source-separated organic waste, a priority for enhancing compost and soil improver production. By generating experimental data and building tools like a scoring system to help cities select effective soil improver solutions adapted to different contexts, Bin2Bean contributes to meeting broader EU objectives, such as **reducing landfill waste to 10% of total municipal waste by 2035** and reinjecting significant amounts of nitrogen and phosphorus into soils in a sustainable way.

Project partners

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