The territorial anchoring of biowaste recovery : between constraints and opportunities. Lyon's metropolitan area a case study

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Abstract

Biomass management can be rooted in different forms of territorial anchoring, such as the use of local resources (Bahers, Durand and Béraud, 2017; Benoit, 2021) or organisational forms that allow the creation of local supply chains (Berdier and Maillefert, 2024). Territorial anchoring oscillates between the management of opportunities and constraints that may or may not allow the emergence of a transition model. By examining the specificities of territorial anchoring in the recovery of household bio-waste in the Lyon's urban area, we show that it has appeared as a constraint (1), but also as a facilitator in the construction of a recovery sector (2). However, it does not form part of a clear agri-food transition policy or a truly transformative coordination of actors (3). The assessment of territorial anchoring is based in particular on the methodology of the ELIPSE project, developed in collaboration with ADEME (Boyer et al., 2016). This methodology is used to assess the territorial sustainability of bio-waste management experiments, by comparing the industrial sector with local composting.
There are a number of reasons why household biowaste should be recycled locally: legal (local authorities are obliged to sort it at source), biochemical (putrescible materials need to be processed quickly) and economic (its weight and low value make it difficult to transport). In fact, the territorial anchorage of these processes is encouraged by the need for proximity. This constraint takes various forms. Firstly, in the development of long-established industries in the Lyon area for activities such as green waste management, in partnership with local authorities. Secondly, in the development of hyperlocal management methods for the management of household biowaste in a context of community management (Dumain and Rocher, 2017; Lehec, 2019).

Lyon's recycling systems are based on specific local features that can facilitate their implementation: the presence of actors with composting and vermicomposting skills (a), long-standing habits of sorting at source with community composting (b), and citizens' associations that organise events on environmental themes (biodiversity, food, composting, etc.) (c). The Lyon conurbation has relied on local resources and skills to meet the legal obligation of 1 January 2024. However, according to Zimmermann (2005, p. 35), "the search for one-off productive efficiencies" can run counter to the long-term nature of territorial anchoring. In this respect, our work raises questions about the sustainability of these sectors in the event of changes in supply or territorial forms of organisation. For example, the massification of flows could raise the question of outlets, their acceptability and their proximity.

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While the semi-industrial composting sector (supported by **Lyon's metropolitan area**) has a positive socio-economic impact by creating jobs that cannot be relocated and by creating local value (transition from bio-waste to compost) (Maillefert and Robert, 2020), we can question the development logic of this model: is it transformative and how? The creation of a recycling network can be an opportunity to change the economic model and move towards a territorial transition, provided that we question the value creation model and the forms of coordination, particularly from the point of view of the interdisciplinary nature of collective action (Maillefert and Robert, 2020). It seems that, in the case of Lyon, the region is currently still seen as a receptacle for activities that are not really linked to an agri-food transition policy or to broader forms of stakeholder coordination (e.g. farmers are excluded from the ecosystem - Berdier, Girault, Maillefert, 2024).

For example, the outlets for the compost produced by composters remain dependent on price constraints. If they are currently part of a territorial cycle through local agricultural use, this is due to the effect of geographical proximity: institutional proximity has yet to be built. Similarly, the actors do not propose a debate on how to ensure the long-term viability of the existing channels by maintaining a stable supply of bio-waste and green waste: for the moment, these supplies are very fragile and depend on an unregulated pricing policy. Finally, local composting facilities are threatened by the introduction of composting bins (a semi-industrial sector), which risks drying up their bio-waste supply. There is no guarantee that this fundamental territorial, social and educational contribution will be maintained.

These various constraints and opportunities will be analysed in order to identify the levers that can be used to anchor these bio-waste management activities, taking particular account of the concept of territorial service (Maillefert, 2024).

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