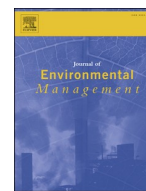




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## Research article

## The role of a local authority as a stakeholder encouraging the development of biogas: A study on territorial intermediation

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## ABSTRACT

In a context where anaerobic digestion is a controversial subject, it is not surprising to see that between 20% and 30% of anaerobic digestion projects are abandoned, mainly for reasons of local opposition, problems of coordination between stakeholders and the implementation of real territorial governance capable of facing the challenges encountered during the setting up of the project. We can consequently question the role that local territorial authorities could play to encourage the development of biogas in France. We used semi-structured interviews conducted with anaerobic digestion stakeholders to identify the main functions of territorial intermediation (and their specific elements) that local authorities could have to encourage the deployment and success of these projects. Local authorities play the role of intermediation by (i) ensuring spatial and cognitive proximities between actors, (ii) mobilizing territorial resources and favoring local anchorage (iii) installing trust among the local stakeholders and (iv) having a role of instigator by participating in the supply (inputs) of biogas plants and the purchase of the energy produced (outputs).

## 1. Introduction

National, European and international institutions now consider energy transition as unavoidable (UNO, 2018). The European Commission's latest report on economic, social and territorial cohesion (2017) insisted on the need to fight climate change and bring about an environmental transition notably through the development of renewable energies. With relation to this, the Europe 2020 Strategy sets specific goals: (i) reduce greenhouse gas emissions by 20% compared with the levels in 1990, (ii) increase the share of renewable energy to 20% and (iii) increase energy efficiency by 20% compared with the energy consumption forecast for 2020. In France, the Ministry of Ecological and Solidarity Transition (MTES) is pushing for an acceleration of energy transition, and is particularly insisting on more and more anaerobic digestion as a sustainable, local and circular solution (MTES, 2018).

This is in line with the idea developed by a growing number of researchers, according to which the strategy of liberation from fossil fuels is based on the intensification of the production of alternative, green energies, including anaerobic digestion (Mshandete et al., 2005; Ward et al., 2008; Lyytimäki et al., 2018; Alexander et al., 2019). Within the framework of the energy mix desired by France and faced with the will

of more territories to reach energy autonomy at local level, the valorization of organic waste<sup>1</sup> therefore seems to be the appropriate answer from an environmental and energetic perspective.

Anaerobic digestion, like the other sources of energy, is nevertheless subject to controversy, especially from a socioeconomic perspective with positive and negative consequences (Tilche and Galatola, 2008; Martinát et al., 2013). First of all, anaerobic digestion has several advantages for different stakeholders. It enables local authorities to recycle biomass waste and produce (i) electricity which can then be used for public lighting for example or (ii) heat to heat the water in a community swimming pool or to heat the city hall or a school. It therefore enables the operating costs of public administration to be reduced. This is an important argument in a context of strong tension with respect to local authorities' budgetary restrictions. The same is true for the industries where anaerobic digestion is helping firms to lower their energy bill and the cost of waste treatment. From this perspective, anaerobic digestion enables the local production and consumption of energy using the region's resources, and can thus be considered as a form of circular economy and decentralized production of sustainable energy (Song et al., 2014). Furthermore, as shown by Chodkowska-Miszczuk et al. (2019), as anaerobic digestion plants rely on local biomass resources,

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<sup>1</sup> Generated particularly by (i) breeding, (ii) crops and green waste produced and/or collected by local authorities, (iii) waste from agribusiness.

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