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Investment of a public waste treatment plant company in research projects for more innovative, cost-effective and sustainable process for heterogeneous bio-waste

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Introduction

Municipal waste and more specifically the separated collection of the organic fraction are perceived as a burden to our society while they are still products with an important, yet currently untapped, potential for the bio-industry. The efforts to valorise these heterogeneous waste streams are so far limited to relatively low level on the hierarchical ladder of Lansink meaning low value applications like energy production (anaerobic digestion or incineration) and nutrient recovery (digestate and composting).

IDELUX Environnement wants to create a networking model focusing on the carbon streams still available in waste by facilitating access to raw material for industry and research, but also, and most importantly, by promoting employment and the local circular economy. One of the largest municipal waste streams, bio-waste, plays a crucial role for the European circular economy. The stakes are high, transforming in a sustainable way heterogeneous organic waste initially contaminated by sorting errors.

Experimental

To do this, we propose a holistic approach to the industrial chain of treatment of municipal organic waste by integrating as optimally as possible transversal, multidisciplinary and innovative projects.

Results and Discussion

The Intermunicipal of waste treatment is setting up innovative projects to confirm the high potential for disruptive economic development that may exist in the organic waste sector in the particular case of the rural province of Luxembourg, in Belgium. It will then be easily reproduced in any other location part of Europe. Indeed, to achieve the necessary EU target to recycle 65% of municipal waste by 2035, especially bio-waste recycling is essential.



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Heterogeneous organic waste or biomasses often contaminated by plastics or other sorting mistakes



New sustainable raw materials for the industry



Figure 1. Municipal organic solid waste transformation at Idelux facilities through EU projects

Conclusions

The point of view of an industry investing in disruptive projects without compromising its effectiveness and its accomplishments.

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Biography

Marie-Aline Pierrard has completed PhD in Biology at Namur University partly performed at the College of Aquaculture and fisheries of the University of Can Tho, Vietnam. She has 6 years of experience as a project manager in municipal organic waste treatment. She has experience of the industry and has been involved in several research projects to represent IDELUX Environnement.