

Management of the Organic Fraction of Municipal Solid Waste in the Context of a Sustainable and Circular Model: Analysis of Trends in Latin America and the Caribbean

- Ulloa-Murillo, Leidy Marcela^a[Send mail to Ulloa-Murillo L.M.](#);
- Villegas, Lina María^b[Send mail to Villegas L.M.](#);
- Rodríguez-Ortiz, Alejandra Rocío^b[Send mail to Rodríguez-Ortiz A.R.](#);
- Duque-Acevedo, Mónica^c[Send mail to Duque-Acevedo M.](#);
- Cortés-García, Francisco Joaquín

Abstract

The main objective of this research is to analyze the most relevant aspects of the management of the organic fraction of municipal solid waste (OFMSW) and the Sustainable and Circular Production Models (SCPMs) in Latin America and the Caribbean (LAC). The bibliometric method was used for the analysis of 190 studies obtained from the Scopus and Latin America and The Caribbean on Health Sciences (LILACS) databases. The systematic review provided information on the main research approaches: identification and characterization; quantification; strategic and interdisciplinary management; and processes for treatment or valorization. Finally, an evaluation of public policies and strategies was performed. The results show that Brazil, Mexico, and Colombia have the highest number of publications on OFMSW. The findings also indicate that both research and policy strategies on SCPMs prioritize bioenergy and biofuels as the leading alternatives for the valorization of OFMSW. It also reflects the relevance of the Circular Economy (CE) and Bioeconomy (BE) as the main drivers of waste recovery and/or valorization in LAC. These aspects are of great interest to governments that are still in the process of implementing SCPMs. However, for those more advanced in this area, it provides valuable information on progress, policy effectiveness, and future actions for improvement. © 2022 by the authors. Licensee MDPI, Basel, Switzerland.

Author keywords

bioeconomy; biowaste; circular economy; food waste; waste management