

Circular Strategy Indicators to Reduce Food Waste: A Case Study in Sicily

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Abstract

This study quantifies the economic impact of surplus food donations from companies to the Banco Alimentare of Catania and examines how these donations reduce operational costs and promote the development of a circular economy model within the agribusiness sector. Food waste generates substantial financial losses for companies due to product depreciation, logistical inefficiencies, storage and disposal costs. Donating surplus food transforms a cost center into an economic opportunity through fiscal incentives that improve financial sustainability. The research aims to quantify circular economy indicators according to the UNI/TS 11820:2022 standard applying them to the case of the Banco Alimentare of Eastern Sicily. The analysis is based on a comparative examination of the organization's 2023 and 2024 Social Report to assess circularity and socio-economic impact. Supply chain analysis highlights improvements in logistics but also gaps in territorial coordination. The model is scalable and adaptable to heterogeneous urban contexts.

Keywords

Circularity indicators, food donation, food waste reduction, third sector organizations, UNI/TS 11820:2022.