



BRIT-EU

Case Study Profile

Catalonia,
Spain

With funding from the:



Federal Ministry
of Research, Technology
and Space

DATipilot 

TUHH
Technische
Universität
Hamburg



BRIT-EU

Introduction

Reference year:	2024
Population (-):	8,034,743
Population density (inhabitants per km ²):	250
Number of distinct collection areas (-):	947
Number of distinct collection organisers (-):	313
Amount of separately collected organics streams (t per year) ¹ :	574,045
Thereof biowaste stream (t per year) ¹ :	457,222
Thereof green waste stream: (t per year) ¹ :	116,823
Amount of collected residual waste (t per year) ¹ :	2,044,066
Total organics streams separation rate (%) ² :	22
Biowaste stream separation rate (%) ² :	18
Net biowaste separation rate (%) ³ :	47
Biowaste recycling rate (%) ¹ :	-
Total recycling rate (%) ⁴ :	49

Note: Key Performance Indicators and Influencing Factors are defined on the project website:

[Link](#)

¹[ARC \(2026\)](#)

²Defined in the documentation on the project website.

³Calculated based on weighted averages of 8% impurities in biobin ([ARC 2026](#)) and 29.6% of biowaste in residual bin ([ARC 2020](#)).

⁴[Idescat \(2026\)](#)

Waste collection organisation in Catalonia

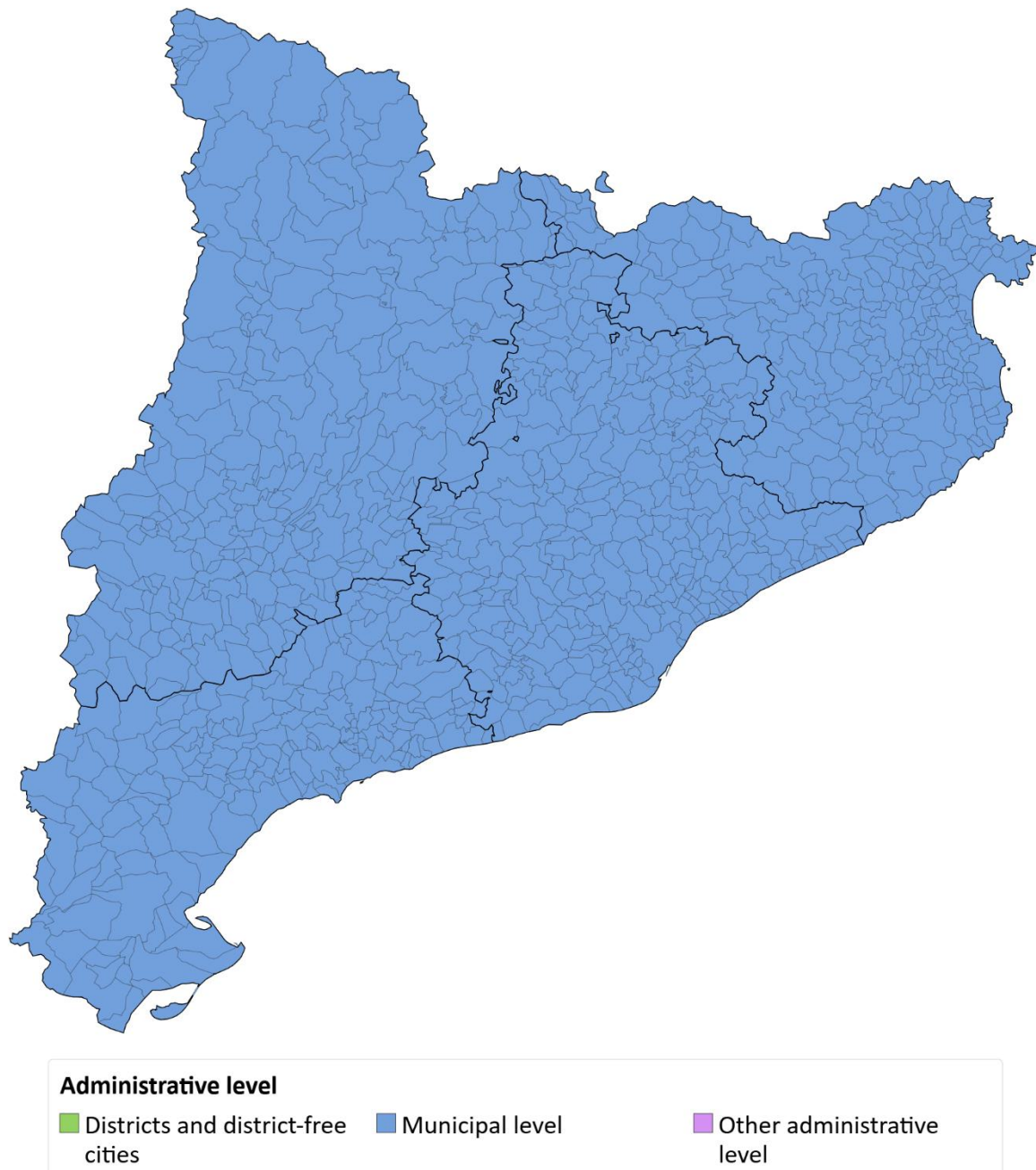
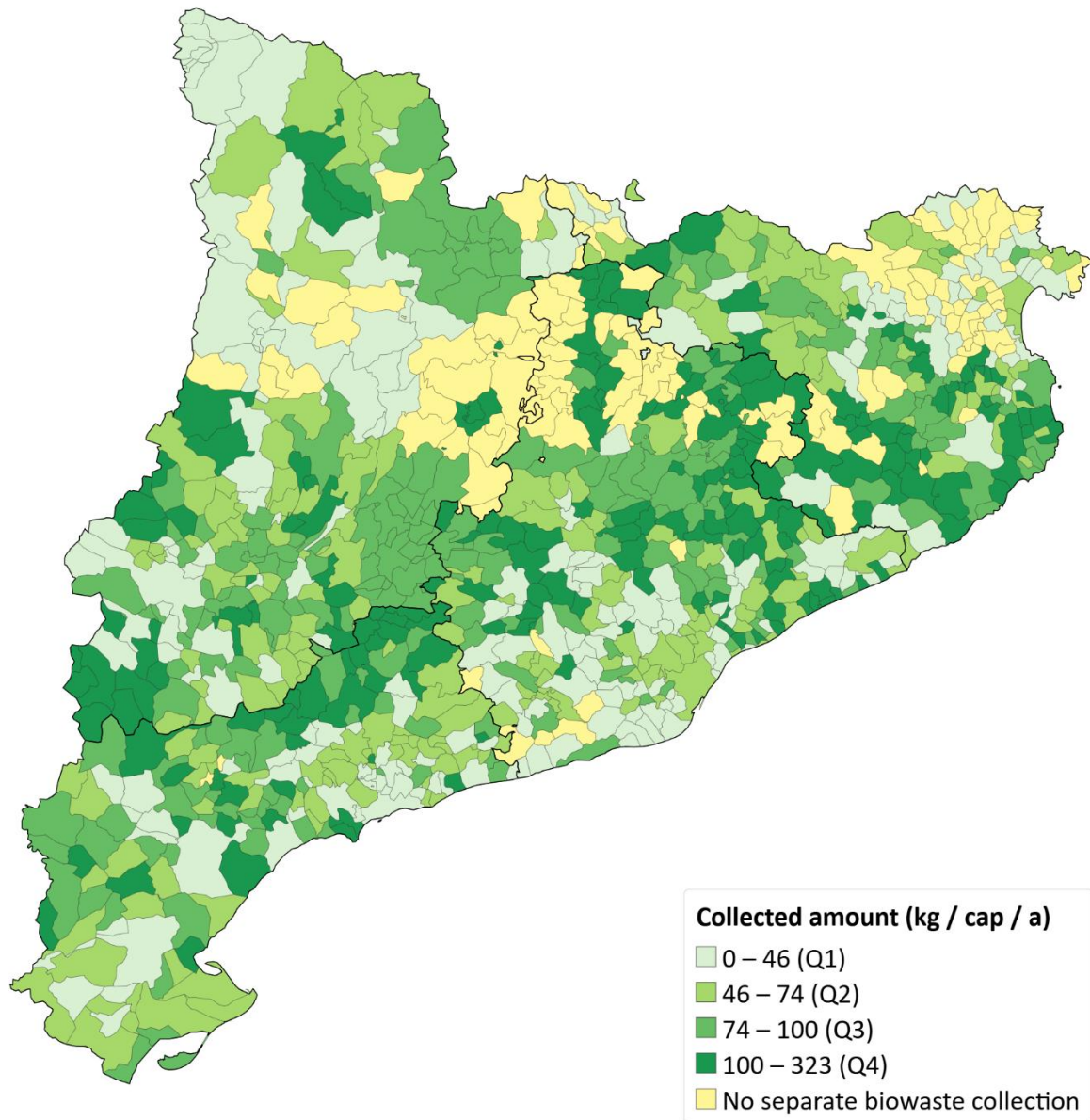


Figure 1: Organisational level of biowaste and residual waste collection in Sweden (2024)

Waste collection in Catalonia (CAT) is performed at municipal level (Figure 1). Catalonia comprises 947 municipalities. In practice collection is not always implemented by each municipality individually. Several municipalities cooperate through supra-municipal organisation (e.g. *Mancomunitat*) while collection services may also group municipalities into operational *collection circuits* (see Infobox 2).

Biowaste stream quantities



Q1-Q4: Quartile-based value classes

Figure 2: Collected gross biowaste quantities in Catalonia, Spain (2024)

The mean quantity of separately collected biowaste was 76 ± 42 kg per inhabitant and year (median = 73), with a minimum of 0, and a maximum of 323 (Figure 2).

Infobox 1: Separate collection of biowaste in Catalonia

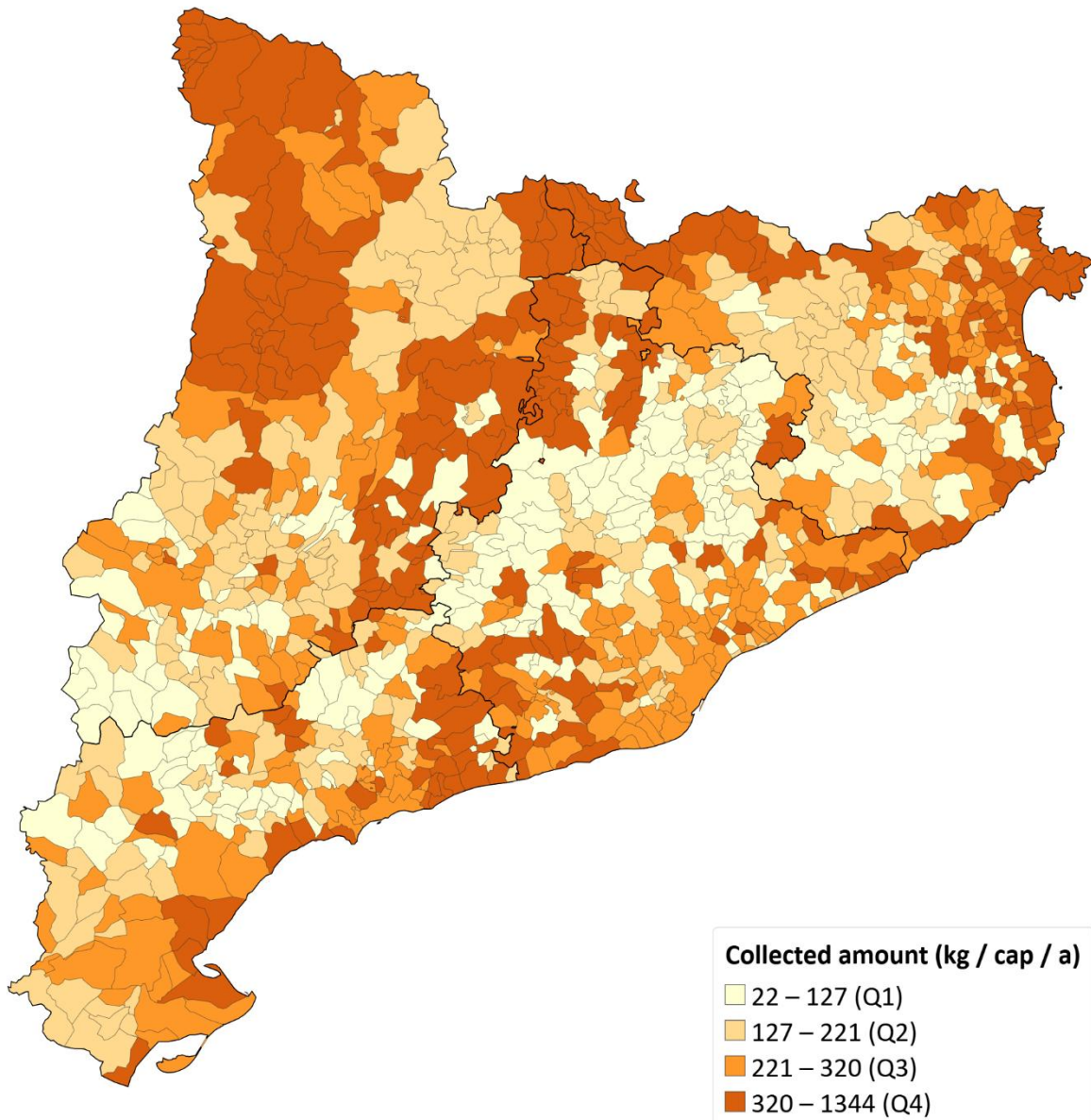
Separate collection of biowaste, referred to as *FORM* (*Fracció Orgànica dels Residus Municipals*), started in 1996. The focus is laid on a single-stream food waste collection. The system is coordinated by the Catalan Waste Agency ([Agència de Residus de Catalunya](#), ARC), which is responsible for waste generated and managed within Catalonia and provides regional monitoring, statistics, planning and guidance ([ARC 2026](#)).

All municipalities are required to organise separate collection or alternative management of biowaste, including home or community composting, particularly in rural or dispersed areas. Municipalities and supra-municipal entities may choose different collection models, such as door-to-door collection or street containers.

A key feature of the Catalan system is the landfill and incineration tax, combined with a refund mechanism for local authorities. This system penalises disposal of residual waste while returning funds to municipalities for separate collection and treatment ([ARC 2024](#)).

The quality of FORM is monitored through regular waste characterisations of all collection circuits (up to 4 times per year). The characterisations determine the share and type of impurities and are used to calculate net FORM quantities and quality coefficients for the refund system ([ARC 2015](#)).

Residual waste stream quantities

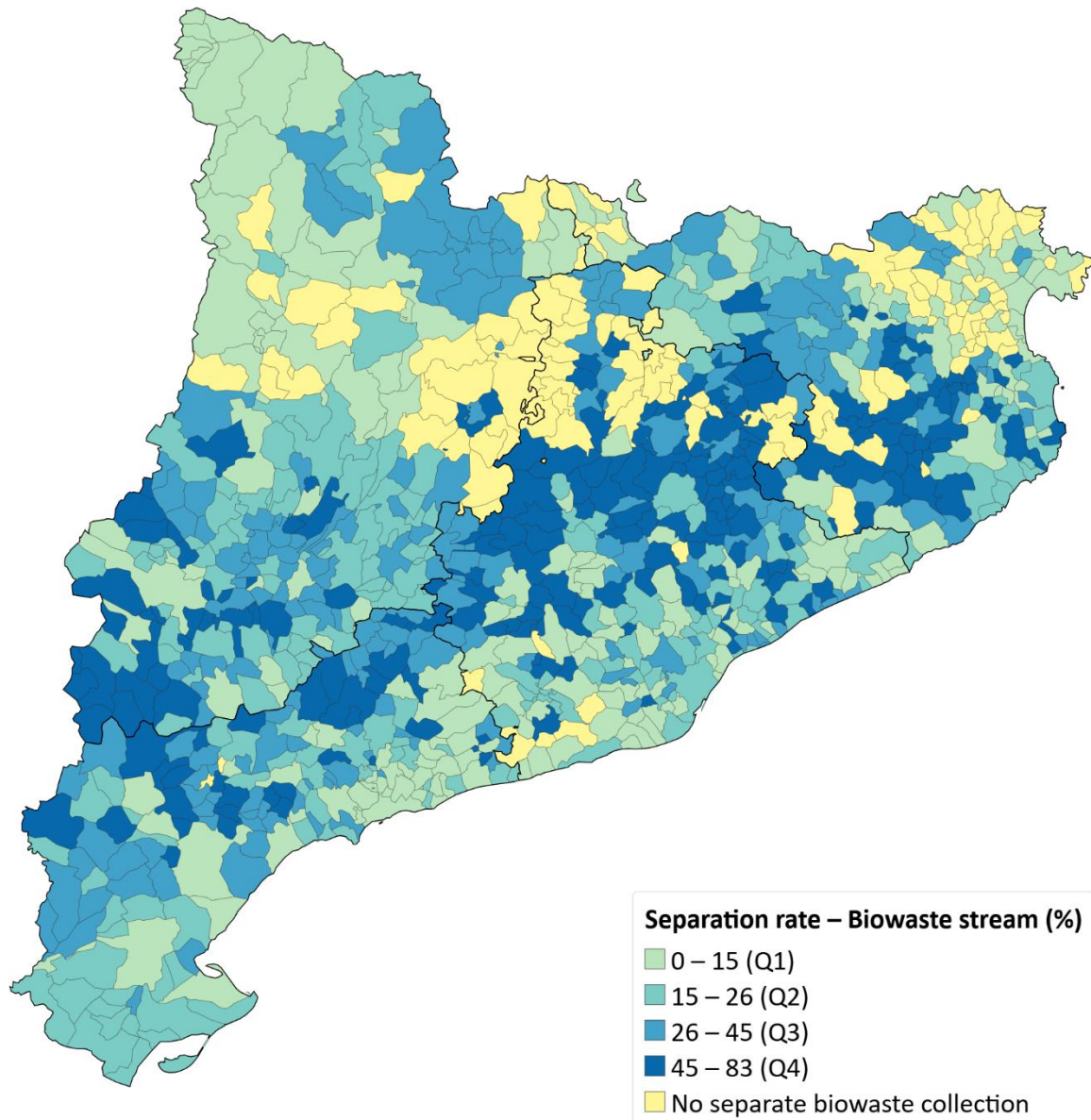


Q1-Q4: Quartile-based value classes

Figure 3: Collected residual waste quantities in Catalonia, Spain (2024)

The mean quantity of collected residual waste was 246 ± 161 kg per inhabitant and year (median = 221), with a minimum of 22, and a maximum of 1344 (Figure 3).

Biowaste stream separation rate

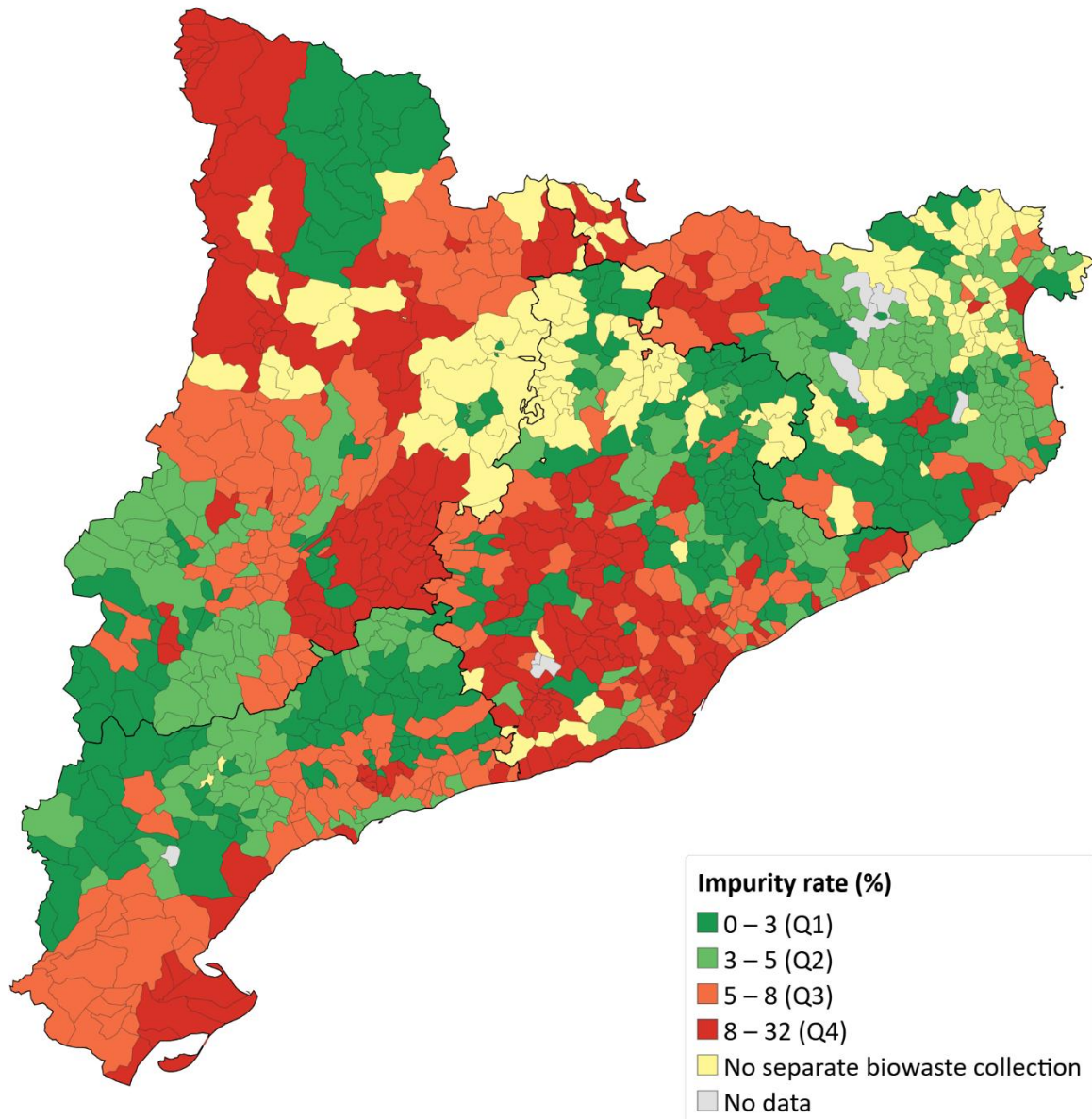


Q1-Q4: Quartile-based value classes

Figure 4: Biowaste stream separation rate in Catalonia, Spain (2024)

The biowaste stream separation rate ($SR_{BW, gross}$) indicates for most collection areas a residual bin dominant collection Figure 4. However, a strip of municipalities (179 = 7.5% of the population), stretching from north-east to south-west, largely collect a larger share of waste via the biowaste bin compared to the residual waste bin ($SR \geq 50\%$). The mean $SR_{BW, gross}$ was $31 \pm 20\%$ (median = 25%), with a minimum of 0%, and a maximum of 83%.

Impurities in the biobin



Q1-Q4: Quartile-based value classes

Figure 5: Impurities in biowaste stream in Catalonia, Spain (2024)

The mean share of impurities in biowaste was 5.9 ± 4.8 % (median = 4.6), with a minimum of 0.1, and a maximum of 32.4 (Figure 5).

Infobox 2: Waste characterisation of FORM in Catalonia

The quality of separately collected biowaste (*FORM*) in Catalonia is assessed through regular waste characterisations, following a standardised method provided by the Catalan Waste Agency⁵. These analyses determine the share and composition of impurities in the collected FORM and therefore provide an important basis for monitoring collection quality, calculating net FORM quantities and informing financial incentives linked to the refund mechanism.

The characterisations are not necessarily carried out separately for each municipality. Instead, they may be assigned to operational collection circuits, which can include several municipalities that are collected and treated together. As a result, the same impurity value can apply to more than one municipality within the same circuit. This is visible, for example, in spatial clusters of neighbouring municipalities with identical values in Figure 5.

The dataset was provided by the Separate Collection Department of the Catalan Waste Agency⁶, including collection-circuit-specific information and quantities. The data was then further processed and aligned with the municipal collection structure in Catalonia.

Learn More

Explore our website to access further project information, additional factsheets, and in-depth case study profiles: <https://www.compostnetwork.info/brit-eu/>

Citation

Walk, S. Lüssenhop, P., Martin, I., Siebert, S., Körner, I. (2026). BRIT-EU Project - Integrated information and management tool for the potential analysis of biowaste in the EU. European Compost Network ECN e.V. & Hamburg University of Technology. <https://www.compostnetwork.info/brit-eu/>

⁵ ARC (2026) - Qualitat de la FORM. Caracteritzacions

⁶ ARC (2026)