

LIFE BIOBEST

GUIDING THE MAINSTREAMING OF BEST BIO-WASTE RECYCLING
PRACTICES IN EUROPE

D3.4: Country Factsheets on the analysis of communication and engagement practices

WP3: Set of Guidelines

T3.4: Analysis of communication and engagement practices

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Public Report



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N°8: Factsheet on Exemplary Communication and Engagement Strategies for bio-waste collection | Ireland: National Pilot Scheme in Sligo for Brown Bins

Between July 2014 and March 2015, Sligo County Council coordinated a pilot scheme for the Brown Bin Programme in Sligo city. The aim of the trial was to assess the impact that a range of educational and collection tools, such as the use of brown bin waste management advisors and the provision of kitchen caddies to households, can have on the performance of the bio-waste separate collection system, in terms of participation rate, quantity and quality. The Sligo pilot project verified tangible benefits in correctly utilising the food waste bin and pinpointed practical steps that could be valuable for adoption in other towns.

SLIGO CITY		
Population	Density (inhab./km ²)	Type
20,608 (2022)	2,000	Urban, coastal seaport
Background elements		
<p>The Irish “European Union (Household Food Waste and Bio-waste) Regulations Act 2015”, introduced in April 2013, aims to encourage the separation and recovery of household kitchen waste in Ireland, requiring households to separate their kitchen waste. Despite their introduction, national statistics and research done by the Composting and Anaerobic Digestion Association of Ireland (Cré) have not seen the desired increase in the amount of kitchen-waste collected. Additionally, a growing trend of growing contamination in brown bins, especially with plastics, was observed. To address these issues and meet regulatory requirements, Sligo County Council implemented The Sligo County Council Waste Management Byelaws 2013, regulating household and commercial waste storage and collection. In Sligo, 18 areas were designated as “third-bin Areas,” providing an additional brown bin specifically for kitchen waste alongside regular waste and recycling bins.</p> <p>Following the implementation of the byelaws, Sligo County Council adopted and coordinated a Brown Bin pilot in Sligo City between July 2014 and March 2015 – which aimed to assess which educational and collection tools had the greatest effect on improving the capture and quality of separately collected kitchen waste in the brown bin. The project was funded by the County Council, the Department of Communications, Climate Action and the Environment, Cré and Novamont.</p>		

The pilot project focused on around 8,000 households in the town of Sligo. These households were divided into three distinct zones (A, B and C), delineated according to waste collection routes (see figure 1)



Image 1. Map of Sligo with areas division

- Within Area A, a total of 2,300 households were equipped with solid side kitchen (refer to Figure 2) caddies, roll of compostable bags, teaser leaflet and an informational leaflet. 70% received an awareness talk.
- Within Area B, 33% of the occupied households received an awareness talk (due to time constraints). 100% receive a teaser leaflet.
- Within Area C, 3,480 households were provided with vented kitchen caddies (refer to Figure 3), roll of compostable bags, teaser leaflet and an Information leaflet. 70% received an awareness talk.



Image 2. Solid sided caddy.



Image 3. Vented caddy.



The awareness-raising work carried out included the following components:

- **A waste characterisation study:** data collection regarding the quantity of kitchen waste in the residual waste bin, recycling bin, and brown bin, along with assessing contamination levels within it. This analysis took place before and after the awareness campaign to assess the pilot's impact.
- **A bin presentation survey** with collection of data on the number and type of waste bins presented by households, including their respective weights, on designated Dt-D collection days for each waste collector and waste stream in each area. This analysis took place before and after the awareness campaign to assess the pilot's impact.
- **A teaser leaflet on how to use the Brown bin** was delivered a few weeks before the awareness campaign started.
- **An information leaflet**, created by the national programme www.brownbins.ie, distributed to every household in Sligo City, customised with specific local contact details for Sligo residents.
- **A launch event** was conducted at the Institute of Technology Sligo's car park on a Saturday when the farmers market was taking place, including free compost give-away to the public.
- **Provision of collection tools:**
 - A 7-litre kitchen caddy (vented- or solid sided) with a sticker on it explaining what types of food waste can go into the caddy.
 - A roll of compostable bags.
- **The hiring of three interns as Waste Management Advisors**, who undertook the operational roles in the project, including:
 - Developing communication tools;
 - Providing D-t-D advice to 6,000 households in Sligo City;
 - Conduction of household surveys;
 - Bin presentation survey;
- **Media coverage:** Publications in local newspapers and radio interviews.



Key results	
Brown bin presentation	<p>Before the awareness work, only 37% of the households which were signed up to a brown bin service, were using it. After the awareness initiative, the recorded presentation increased to 70% with the greatest increase being recorded in Area A.</p> <p>The number of households presenting their brown bins on collection days increased significantly in all areas:</p> <ul style="list-style-type: none"> ● In Area A it increased from 359 households to 1,235. ● In Area B it increased from 267 to 353 households. ● In Area C it increased from 884 to 1,293.
Change in participation	<ul style="list-style-type: none"> ● 25% in all areas ● +51% in Area A ● +8% in Area B ● +16% in Area C <p>On average, participation doubled in Areas A and C, which received awareness information and collection tools, compared with those which did not.</p>
Bio-waste collection	<ul style="list-style-type: none"> ● 2.55 kg/household/wk in Area A = +1.93 kg/household/wk ● 1.06 kg/household/wk in Area B = +0.49 kg/household/wk ● 2.24 kg/household/wk in Area C = +1.05 kg/household/wk <p>The rate of kitchen waste capture doubled on average in Areas A and C - where residents received awareness-raising information and collection tools (Areas A and C) compared with those who did not (Area B).</p>

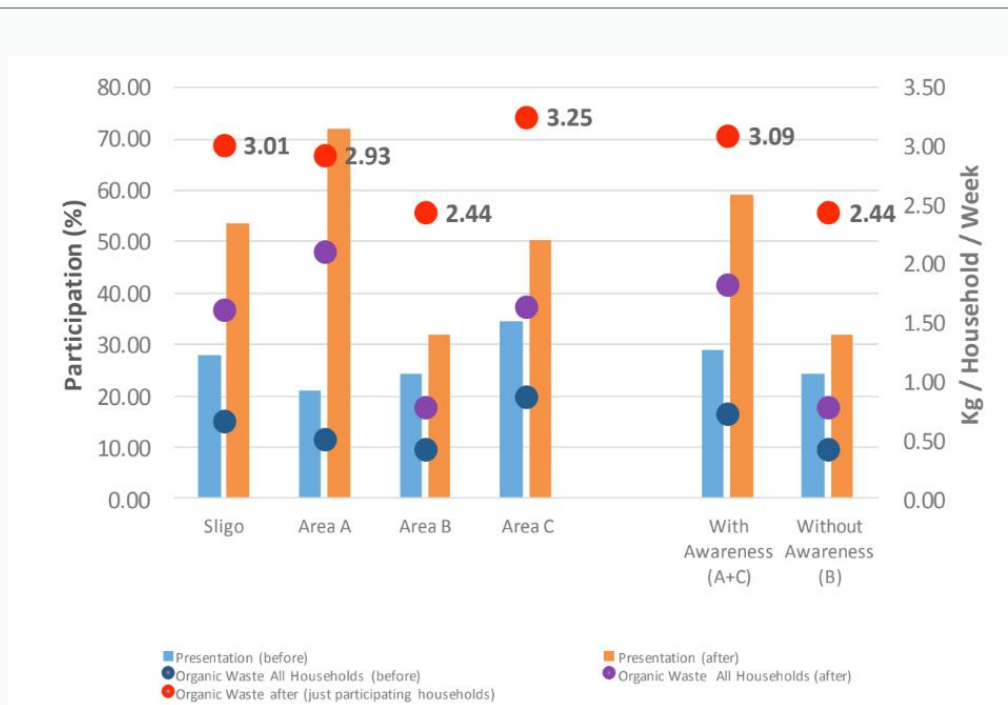


Figure 1. Overall impact of awareness in Sligo, by Area and awareness type.

Impurities in bio-waste (% of weight)

- On average per week, prior to the awareness programme, every brown bin presented in Sligo contained 0.49 kg of contamination (17% of contamination)
- The level of impurities in the brown bins dropped to an average of 2.5% in all areas after the trial (-86%)
- Decreased from 23% to 1% in Area A (-96%)
- Decreased from 20% to 6% in Area B (-70%)
- Decreased from 14% to 3% in Area C (-79%)

It's worth noting that at the start of the project, Area A had the highest level of contamination. Areas that received awareness-raising information and collection tools (Areas A and C) presented the lowest amount of contamination in comparison with those who did not (Area B).

A year later after the project was finished; Area A was investigated, and it was determined that the contamination level was still at a low level of 3%.



	Area A		Area B		Area C	
Brown Bin	Before	After	Before	After	Before	After
Plastics contamination	8	1	7	4	8	2
Total contamination	23	1	20	6	14	3
Dry-recycling Bin						
Organic waste	4	4	3	7	5	5
Total contamination	17	24	28	32	28	20
Residual Bin						
Organic waste	41	35	39	28	36	26

Table 1. Levels of contamination and organic waste in the three bins in each Area.

Bio-waste in residual waste (% of weight)

- Reduction in the quantity of kitchen waste in residual waste from 39% to 29%.
- -6% in Area A after the trial
- -11% in Area B after the trial
- -10% in Area C after the trial

Lessons-learned

The face-to-face awareness-raising discussions conducted by trainees in all areas before the pilot implementation highlighted several key findings:

- Many households were found to be unaware of what items should be placed in the brown bin, indicating a need for clearer guidelines and education.
- 25-litre bins were perceived as too heavy for the elderly when filled. Additionally, some individuals considered them too small.

Despite these initial concerns, the post-pilot survey in Sligo town indicated that, on average, 78% of households found the kitchen caddy distributed very useful. Such results suggest that providing households with a 7-litre kitchen caddy, along with a roll of compostable bags and information leaflets, could lead to a significant increase in both the quantity and quality of separately collected food waste. These insights from the pre-pilot discussions and post-pilot survey emphasise the importance of addressing community concerns and tailoring the waste collection approach to meet the specific needs and preferences of residents. In comparison, awareness-raising talks provided in people's homes by council technicians appeared to be the option with the least impact on food-waste separate collection.



Which of the following most encouraged you to recycle food waste using the brown bin?

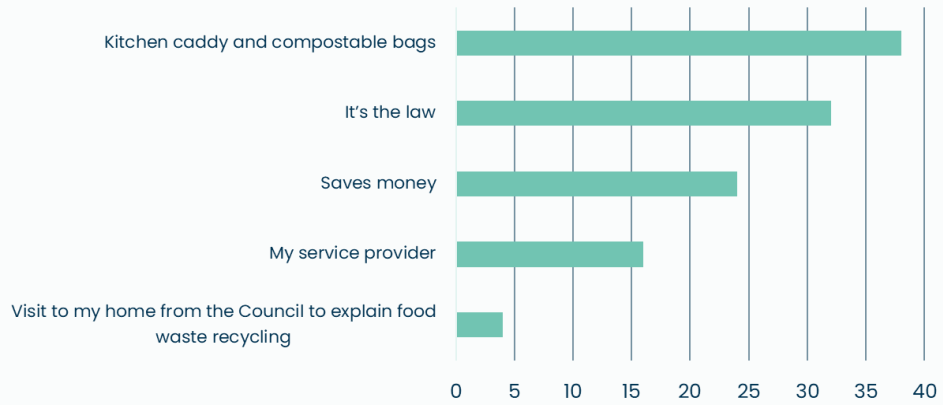


Figure 2. Results from an online survey emailed by a waste collector to their customers in Sligo City.



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