Case Studies: Local Performance Targets for Household Waste - Final report

Zero Waste Scotland

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ZERO WASTE SCOTLAND

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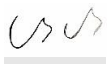
Signed	

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Limitations

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Executive Summary

Introduction

The Scottish Government previously established a national target to recycle, compost and reuse 60% of household waste in Scotland by 2020. Despite significant progress from 2004-14, the household recycling rate between 2015 and 2019 plateaued at approximately 45%. One action proposed by the Scottish Government within its consultation "Delivering Scotland's circular economy: A Route Map to 2025 and beyond"[1] is the introduction of statutory recycling and reuse local performance targets for household recycling.

Project Aim

The aim of this project was to learn about the development and implementation of targets designed to improve household recycling performance in other locations.

Approach

Three steps were taken to achieve the aim of this project:

1. **A horizon scan of countries and regions outside of the UK that have implemented statutory household recycling waste targets was conducted.** There were no cases found of national government setting household waste targets for local governments which would serve the aim of this research study. Therefore, a decision was made to include examples of broader statutory household waste targets.
   A total of five cases were identified that had statutory household waste targets and a further two cases were either consulting on or had committed to setting targets.
2. **A shortlist of cases was selected to research in further detail based on shortlisting criteria. Out of the original five cases identified, only two met the criteria for further research.** Flanders and Western Australia were taken forward for in-depth research as both had implemented different waste targets for different municipalities, which was a required part of the shortlisting criteria Due to where they were in the target development cycle, they would provide learnings on the target design, development, and implementation process. It is important to note that in both cases, the municipal targets were made statutory as they were part of the statutory instruments to deliver a waste strategy. In both cases there were no examples of the statutory powers being used to issue fines to penalise local municipalities that did not meet the targets. Instead, they implemented policies to support them to achieve the targets. However, in both cases the interviewee's said it was

[1] Scottish Government (2022) Delivering Scotland's circular economy: A Route Map to 2025 and beyond. https://consult.gov.scot/environment-forestry/scotlands-circular-economy-routemap/

important that they were statutory and had the potential of penalties to focus attention on waste as a priority area for the municipality.

3. **Semi-structured interviews were conducted** with representatives from regional government and local government associations in each of these regions due to the different perspectives they could provide.

Flanders

In Flanders, the interviews were conducted with one representative from the Public Waste Agency (OVAM) and one representative from the Association of Flemish Cities and Municipalities (VVSG). One-hour interviews were held with each correspondent via video conferencing and further information from the organisation was provided by e-mail.

Flanders is located in the north of Belgium, with a population of approximately 6.7 million. In Flanders, OVAM creates and monitors waste management legislation and policies for 300 Flemish municipalities[2]. The majority of municipalities are grouped into 27 inter-municipal waste management associations (IMWMA) to provide services[3]. The IMWMA's are collectively represented by Interafval, created in 1996 as a partnership between all IMWMAs and VVSG. Interafval ensures that local authorities voices are heard so they can have their say in Flemish Waste Policy[4]. Similarly, VVSG exists to provide services and promote the views of its members, which include not only municipalities but also public centres for social welfare and the police, for example[5]. OVAM has set waste targets in Flanders for the past 20 years in response to rising levels of consumption and production of waste. The 2016-22 Waste Management Plan set out targets for household waste generation (kg per inhabitant per year) for each municipality based on 16 groupings as the result of socio-economic factors (Table 1).[6] This was the first time that municipalities were set different targets. As of 2020 (the most recent data available) approximately 44% of municipalities had met the 2022 target[7] and the interviewee from OVAM said that many others were close to meeting their target.

[2] European Committee of the Regions (undated). Belgium.
https://portal.cor.europa.eu/divisionpowers/Pages/Belgium-Introduction.aspx
[3] Recupel (undated) The intermunicipal companies that manage waste in Belgium
https://www.recupel.be/en/blog/the-intermunicipal-companies-that-manage-waste-in-belgium/
[4] Municipal Waste Europe (Undated). Interafval
https://www.municipalwasteeurope.eu/member/interafval
[5] European Social Network (Undated). Association of Flemish Cities and Municipalities.
https://www.esn-eu.org/members/association-flemish-cities-and-municipalities#:~:text=The%20Association's%20core%20task%20is,inter%2Dlocal%20companies%20and%20partnerships.
[6] Zero Waste Europe (2020). Flanders' Implementation Plan for Household Waste and Comparable Industrial Waste 2016-2022.
https://zerowasteeurope.eu/wp-content/uploads/2020/11/zwe_11_2020_factsheet_flanders_waste-prevention_en.pdf
[7] Interview with OVAM, July 2022

Table 1: Targets per cluster in Flanders 2016-2022 Waste Management Plan

Cluster	Target
1. Suburbs	116kg/inhabitant
2. Rural or urbanised rural municipalities with strong economic growth	122kg/inhabitant
3. Urbanised rural municipality with industry activity and demographic growth	125kg/inhabitant
4. Less urbanised municipalities with demographic decline	129kg/inhabitant
5. Small agricultural municipalities	
6. Rural areas	139kg/inhabitant
7. Rural and agricultural municipalities with industrial activity	
8. Medium sized cities	
9. Significantly rural municipalities with high aging in the population	144kg/inhabitant
10. Highly urbanised municipalities with low income	147kg/inhabitant
11. Cities and metropolitan municipalities with industrial activity	
12. Metropolitan municipalities with tertiary activity	
13. Residential suburbia with high income	158kg/inhabitant
14. Regional cities	151kg/inhabitant
15. Large and regional cities	197kg/inhabitant
16. Coastal municipalities	258kg/inhabitant

In 2021, the Flemish Agency for Energy and Climate set a residual waste generation target of 100kg per year of residual waste per inhabitant per year in Flanders.[8] This target was used as the basis of Flanders' next Waste Management Plan (2023-30) which was consulted on in early 2022[9]. In this consultation, it was proposed that the groupings of municipalities were to be simplified, as the

[8] Flanders Agency for Energy and Climate (undated). Flemish Energy and Climate Plan 2021-2030 https://energiesparen.be/vlaams-energie-en-klimaatplan-2021-2030

[9] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

result of an analysis of the previous classification system found that socio-economic differences within municipalities were not always the drivers of residual waste generation[10].

For both the 2016-22 and 2023-30 Waste Management Plans, there was a three-month consultation period, which is required by law. The consultations brought together the views from key stakeholders such as municipalities, producers, waste collectors and waste processors. The representative from VVSG interviewed for the research presented in this report, said that the majority of municipalities were not in favour of the 2023-30 targets as they thought they were unachievable, and they would have liked to see a more evidence-based and tailored approach. This differed from the view held by the representative interviewed from OVAM who said that only some of the municipalities protested these targets and that these municipalities were the lowest performing ones.

The representatives from OVAM and VVSG both commented in interviews on the importance of responsibility and collaborative working to achieve these targets. Both interviewees said that responsibility for waste prevention does not just lie with local government and that there was responsibility by regional and national government to introduce policies to improve waste infrastructure and tackle waste further up the supply chain. Some of the policy measures in place at a regional level which are seen to play a role in household residual waste include[11]:

- landfill and incineration tax
- landfill bans
- pay as you throw (implemented by municipalities)
- extended producer responsibility
- deposit return schemes
- mandatory food waste collection (implemented by municipalities)

The 2023-30 Waste Management Plan consultation outlines the "Flemish Share" of the target. This is the impact that regional policy measures will have on the generation of household residual waste (kg per inhabitant).

In Flanders, municipalities are not financially penalised if they do not meet their targets. OVAM sees municipalities as partners in waste management and believe introducing financial penalties hinders collaborative working. If a municipality is not meeting their target, officials from OVAM, will conduct visits to the intermunicipal waste management authority (a grouping of municipalities which manage waste together), conduct a review of their waste plan and make recommendations of improvements. If these improvements are not made, then municipalities will lose access to

[10] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[11] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

subsidies that have been put in place by OVAM to support waste management. OVAM collects annual qualitative and quantitative data on household waste in Flanders from municipalities, IMWMAs and management bodies via their Online Waste Survey and their new Materials Information system[11]. This is a mandatory process.

Western Australia

In Western Australia, waste is primarily managed by local councils. Western Australia's inaugural waste plan was published in 2012, which did not result in any sustained improvement in the household material recovery rate (the materials extracted from processing waste, excluding incineration).[12] When asked about barriers to improving performance, representatives from Western Australia Waste Authority (WAWA) and the Western Australia Local Government Association (WALGA) in part attributed this lack of progress to an inconsistent approach to waste management across councils and a focus on energy from waste.

In 2019, the Western Australia's Waste Avoidance and Resource Recovery Strategy for 2030 set out household material recovery targets for councils.[13] This strategy puts greater focus on waste avoidance and has moved to targets for material recovery[14] of household waste (solid waste generated from domestic residential premises and local government activities) to address the challenges highlighted above. Separate targets were given for councils in the Perth and Peel region, where 80% of the population reside. Targets were also set for six major regional centres that are similar to Perth and Peel regarding population density. These targets are outlined in table 2 below.

[12] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

[13] Government of Western Australia (2019). Waste Avoidance and Resource Recovery Strategy 2019-2030 https://www.wasteauthority.wa.gov.au/images/resources/files/2019/10/Strategic_Direction_-_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

[14] The materials extracted from processing household waste (does not include recovered energy).

Table 2: Western Australia's Material Recovery Targets included in the 2019-2030 Waste Avoidance and Resource Recovery Strategy

Year	Area	Target (Material Recovery)
2020	Perth and Peel	65%
	Major regional centres	50%
2025	Perth and Peel	67%
	Major regional centres	55%
2030	Perth and Peel	70%
	Major regional centres	60%

There was a three-month consultation for the Waste Avoidance and Resource Recovery Strategy which was required by law. The consultation was advertised, copies were made available online and WAWA held in person workshops to engage local council on the targets and their intended benefits. According to the representative from WALGA, the consultation was sufficient, but it would have been helpful if council's capacity to engage with, talk through and process the targets was taken into consideration. They also said that the introduction of mandatory food and organic collection (FOGO), which was published in the final strategy, was not consulted on. This meant that councils were not prepared for this change and roll out has been slower than it may have been if there had been earlier engagement.

There are no direct financial penalties in Western Australia if councils do not meet their target. The interviewee from WALGA said that councils would not respond favourably to such penalties if they were implemented. Although there are no direct financial penalties, measures have been put into place that make it more expensive for councils that do not take steps to improve their recovery rates. For example, all councils are required to have a waste plan which outlines the actions they are going to take to manage waste.[15] If they do not have a waste plan in place or their waste plan is found to be inadequate, WAWA will charge the council to write one.[16]

[15] Government of Western Australia (2019) Guidance document, Local government waste plans. https://www.der.wa.gov.au/images/documents/your-environment/waste/Waste%20Plans%20Guidance.pdf
[16] Interview with WAWA, July 2022.

The interviewees from Western Australia also emphasised the importance of other measures to support meeting these targets. This included:

- Introducing a landfill levy to make it more expensive for councils to dispose of residual waste
- Mandatory FOGO collections
- Consistent approach to collections
- Incineration ban
- Waste export ban
- Deposit return scheme

It is too early to see the impact of these targets on material recovery rates in Western Australia. In the first year of the strategy, the material recovery rate decreased from 30% in 2019-20 to 29% in 2020-21. It should be noted that these statistics cover the first year of the coronavirus pandemic which caused an increase in single-use items and delay in improvements in the recycling provision (i.e. Food waste and organics).

Lessons Learnt – drawing insight from both case studies

In the interviews, representatives from OVAM, WAWA and the local government associations were asked to reflect on the challenges and success of the target development and implementation process. These lessons can be summarised as:

- **An evidence-based approach is needed** to get buy in from local government and ensure that targets are achievable.
- **A collaborative approach is needed** to meet targets. This includes early communication between regional and local governments. Whilst local governments in these cases had responsibility for waste management, measures and support needed to be implemented at a regional level.
- **Targets are not enough alone,** in both cases supportive measures such as EPR, regional communication campaigns and a new bin systems were introduced.
- **Targets were necessary,** to set strategic direction of the municipalities giving waste a priority and a defined ambition.
- **Penalties were not considered necessary,** but both case studies had measures in place to make it expensive to not take steps towards meeting targets.
- **Financial support is needed to implement measures.** In both case studies financial support was used to help improve infrastructure and waste collections.
- **FOGO comprises of approximately half of the waste stream** and separate collections are essential to improving material recovery rates.

Contents

Tables

Figures

List of Abbreviations

FOGO- Food Organic and Garden Organic

IMWMA- Inter-Municipal Waste Management Associations

OVAM- The Flanders Public Waste Agency

PAYT – Pay as you throw

VVSG- The Association of Flemish Cities and Municipalities

WALGA- Western Australia Local Government Association

WARRS- Waste Avoidance and Resource Recovery Strategy

WAWA- Western Australia Waste Authority

Glossary

Household residual waste (Flanders)[17]	Household and bulky waste not collected for recycling, ground litter, bin litter and unsorted fly-tipping are included in regional household residual waste figures. Ground litter and bin litter are not included in Municipal household residual figures.
Household Material Recovery Rate (Western Australia)[18]	The materials extracted from processing household waste (does not include recovered energy). Also commonly referred to as recycling and includes material such as FOGO, paper, card, aluminium, plastic and glass. The rate is the percentage of material recovery divided by waste generation.
Household Waste (Western Australia) [19]	Solid waste generated from domestic (residential premises and local government activities) activities
Pay as you throw	A scheme in which waste fee's paid by users are modulated according to the amount of residual waste they produce.
Energy from Waste[20]	The process of converting waste products into a form of energy such as heat, steam, or synthetic gas, which can then be used directly or further converted into products such as electricity or synthetic fuels. Energy recovery options are normally referred to as 'waste to energy' (or energy from waste) and can include both options of incineration and gasification.
Recovery rate (Western Australia) [21]	The process of extracting materials or energy from a waste stream through reprocessing, recycling, or recovering energy from waste. This is the percentage of the weight of waste sent for recovery divided by the total weight of waste generated.

[17] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[18] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

[19] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

[20] Government of Western Australia (2019). Waste to Energy. https://www.wasteauthority.wa.gov.au/publications/view/miscellaneous/waste-to-energy

[21] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

1. Introduction

The Scottish Government previously established a national target to recycle, compost and reuse 60% of household waste in Scotland by 2020. Despite significant progress from 2004-2014, the household recycling rate plateaued at approximately 45% between 2015 and 2019[22]. As a result, Scotland failed to meet this target. The Scottish Government have consulted on a strategic plan (i.e. Delivering Scotland's circular economy: A Route Map to 2025 and beyond)[22] to achieve Scotland's circular economy and net zero ambitions to 2025 and beyond. A key package within the consultation is improving household recycling, with one of the actions proposed being the introduction of statutory recycling and reuse local performance targets for household recycling.

The main aim of this project was to learn about the development of statutory targets designed to improve household recycling performance. This was accomplished by conducting an in-depth analysis of example cases of statutory waste target setting from outside of the UK. By conducting an in-depth analysis of example cases, this project aims to provide good understanding of contextual factors that led to the introduction of the targets, identify different target options, and identify the range of supporting policies and practices that have been used alongside the targets for Zero Waste Scotland to discuss these options with key future stakeholders.

2. Methodology

2.1. Identification and shortlisting of case studies

A horizon scan was conducted using desk-based research to create an initial longlist of countries and regions outside of the UK that have implemented statutory household recycling targets for local authorities. The longlist identified the following key information for each of the cases identified to inform the short list of case studies to bring forward to interview:

- the name of Local Government Association
- the current and historical recycling rate
- targets at the national, regional, and local level and who set those targets
- key legislation
- landfill and incineration rates
- details on other waste targets that have been implemented
- measures and financial incentives in place to support the delivery of the targets
- enforcement of the targets

The horizon scan identified few cases of statutory household recycling targets for local authorities, so a decision was made to include examples of other statutory household waste targets (for example household waste generation targets) in the longlist. Initially, the project aimed to only

[22] Scottish Government (2022) *Delivering Scotland's circular economy: A Route Map to 2025 and beyond.* https://consult.gov.scot/environment-forestry/scotlands-circular-economy-routemap/

include countries and regions with a minimum recycling rate of 60% in the longlist but as there were only a few examples of local target setting, this consideration was relaxed. A summary of the decision process for including cases in the longlist can be seen in Figure 1: Flow chart showing the decision-making process on whether cases should be included in the longlist

In total, five cases where regional governments have set household waste targets for local authorities were identified:

- Flanders, Belgium
- Western Australia
- Veneto, Italy
- Lombardy, Italy
- Emilia-Romagna, Italy

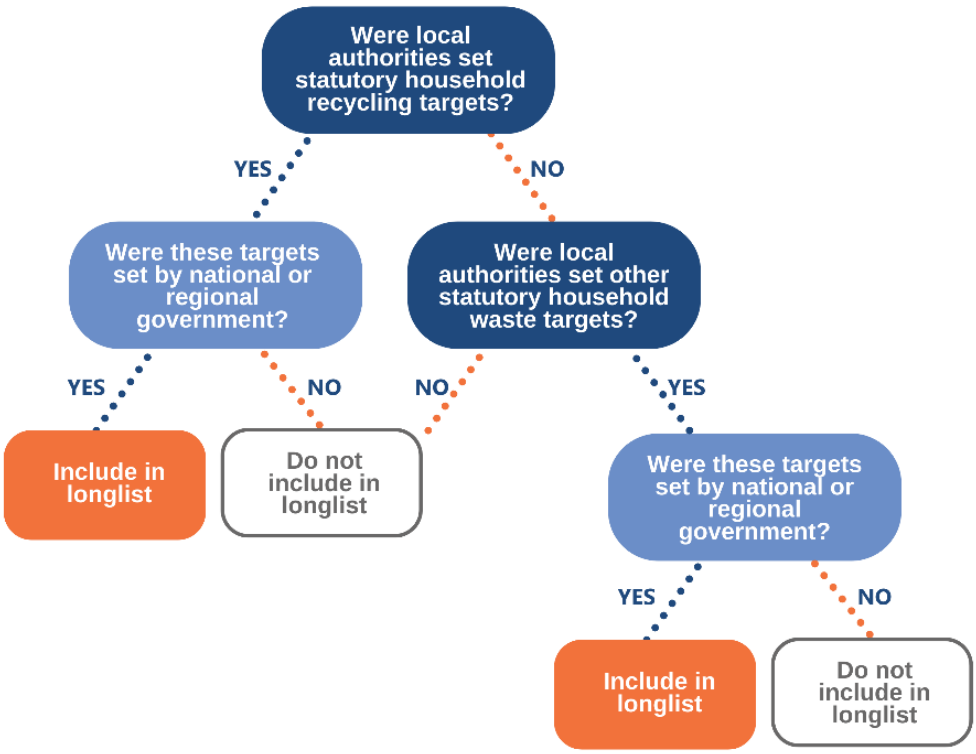

Figure 1: Flow chart showing the decision-making process on whether cases should be included in the longlist

There were no cases found of national government setting household waste targets for local governments which would serve the aim of this research study. For example, Finland has committed to setting household recycling targets for local authorities but has not yet defined the level or scope of this target.[23] Between March and May 2022, New Zealand consulted on

[23] Finnish Government (2022) Kierrä ksestä kiertotalouteen https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163978/YM_2022_13.pdf?sequence=1&isAllowed=y

introducing local government targets, however, a response to the consultation had not been published at the time of writing this report.[24]

The scope and the focus of these targets differs between the five cases identified, and they have taken different approaches regarding target design (Table 3). There are therefore lessons to be learned from comparing these cases regarding target development, implementation, and the working relationship between different levels of government and local authorities. The three cases shortlisted to research in further detail were Flanders (Belgium), Western Australia, and Veneto (Italy). Justification for inclusion of these cases in the shortlist can be seen in Table 3.

Only Flanders and Western Australia were suitable for in-depth research and interviews. When contact was made with Contarina, the company responsible for the management of waste from municipalities in Veneto, it was found that targets are not based on actual recycling but rather on waste collection and delivery to the Material Recovery Facility. Attempts were then made to secure interviews with key stakeholders from Lombardy and Emilia-Romagna, however, they were also unsuccessful.

[24] New Zealand Government (2022) Consultation document: Transforming recycling https://environment.govt.nz/assets/publications/Transforming-recycling-consultation-document.pdf

Table 3: Targets for the selected cases and the justification for their inclusion on the shortlist

Case study	Target(s)	Justification
Flanders, Belgium	**National:** 55% household waste prepared for reuse and recycling by 2025, 60% by 2030, and 65% by 2035. Set by the EU[25]. **Local:** Household waste generation (kg per inhabitant) based on the municipality cluster type Targets set for 2020 in the 2016 Waste Management Plan and for 2030 in the 2023 Waste Management Plan. Set by Flanders Public Waste Agency (OVAM)[26].	▪ Targets have been developed and implemented; ▪ Targets differ for municipalities; ▪ Different approach from other areas on setting waste generation targets; and ▪ Can provide learnings from full target cycle.
Western Australia	**National:** 80% resource recovery rate from all waste streams by 2030. Set by the Australian Government[27]. **Regional:** 70% material recovery rate by 2025 and 75% by 2030. Set by Western Australia Waste Authority (WAWA)[28] **Local:** 65% household material recovery rate by 2020, 67% by 2025 and 70% by 2030. In other major regional centres, increase household material recovery rate to 50% by 2020, 55% in 2025 and 60% in 2030. Set by Western Australia Waste Authority (WAWA)[29]	▪ Recovery targets differ according to level of urbanisation; ▪ Implemented in 2019 and target set for 2030, so they are earlier in their journey;

[25] European Environment Agency (2022). Reaching 2030's residual municipal waste target- why recycling is not enough https://www.eea.europa.eu/publications/reaching-2030s-residual-municipal-waste#:~:text=The%202020%20EU%20circular%20economy,their%20municipal%20waste%20by%202030.
[26] Zero Waste Europe (2020). Flanders' Implementation Plan for Household Waste and Comparable Industrial Waste 2016-2022. https://zerowasteeurope.eu/wp-content/uploads/2020/11/zwe_11_2020_factsheet_flanders_waste-prevention_en.pdf
[27] Australian Government (2019). National Waste Policy Action Plan https://www.dcceew.gov.au/environment/protection/waste/publications/national-waste-policy-action-plan
[28] Government of Western Australia (2019). Waste Avoidance and Resource Recovery Strategy 2019-2030 https://www.wasteauthority.wa.gov.au/images/resources/files/2019/10/Strategic_Direction_-_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf
[29] Ibid.

Table 4 (Continued): Targets for the selected cases and the justification for their inclusion on the shortlist

Case study	Target(s)	Justification
Veneto, Italy	**National:** 55% household waste prepared for reuse and recycling by 2025, 60% by 2030, and 65% by 2035. Set by the EU[30]. **Local:** 76% separate household waste collection by 2020. Set by the Veneto region [31].	▪ Can provide learnings from full target setting cycle; ▪ A collaborative approach was taken between municipalities and thus could provide good practice and learnings from this approach; and ▪ Emphasis on transparency in waste strategy, which could reduce risk of not getting information from interview.
Lombardy, Italy	**National:** 55% household waste prepared for reuse and recycling by 2025, 60% by 2030, and 65% by 2035. Set by the EU[32]. Local: 70% household recycling rate by 2020. **Set by the Lombardy region [33].**	▪ The regional government has developed local recycling targets; and ▪ The target setting process is not well documented- more risk.
Emilia-Romagna, Italy	**National:** 55% household waste prepared for reuse and recycling by 2025, 60% by 2030, and 65% by 2035. Set by the EU[34]. Local: **70% household recycling rate by 2020.** Set by the Emilia-Romagna region[35].	▪ The regional government has developed local recycling targets and they are in the process of developing new targets; ▪ Can provide learnings from the full target cycle; and ▪ Less likely to secure an interview (no leads on contact).

[30] European Environment Agency (2022). Reaching 2030's residual municipal waste target- why recycling is not enough https://www.eea.europa.eu/publications/reaching-2030s-residual-municipal-waste#:~:text=The%202020%20EU%20circular%20economy,their%20municipal%20waste%20by%202030.
[31] Regione del Veneto (2022). Piano Regionale di Gestione dei Rifiuti Urbani e Speciali. https://www.regione.veneto.it/web/ambiente-e-territorio/piano-gestione-rifiuti
[32] European Environment Agency (2022). Reaching 2030's residual municipal waste target- why recycling is not enough https://www.eea.europa.eu/publications/reaching-2030s-residual-municipal-waste#:~:text=The%202020%20EU%20circular%20economy,their%20municipal%20waste%20by%202030.
[33] Regione del Lombardia. (2016). Sostenibilita Ambientale: La Gestione Dei Rifiuti in Lombardia. https://www.regione.lombardia.it/wps/wcm/connect/e97b6ccf-a3ef-4ba2-a54f-d051315cb474/quaderno_rifiuti_142x210_hires.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-e97b6ccf-a3ef-4ba2-a54f-d051315cb474-lastT9Q
[34] European Environment Agency (2022). Reaching 2030's residual municipal waste target- why recycling is not enough https://www.eea.europa.eu/publications/reaching-2030s-residual-municipal-waste#:~:text=The%202020%20EU%20circular%20economy,their%20municipal%20waste%20by%202030.
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2.2. Semi-structured interviews

As described in Section 2.1, Flanders and Western Australia were taken forwards for in-depth research and interviews. The interviews were structured around:

- Target development: the context, recent performance trends, development timeframe and resources required;
- Target design considerations: timeframes and performance levels, materials, and activities in scope, how they were chosen and how they were agreed;
- Consultation process;
- Wider policies and practices used to support the target(s): e.g., incentives and penalties, financial support, guidance, and services; and
- Key learnings: what went well, what could be done differently, what the challenges were and how they were addressed.

Interviews were first carried out with one key individual from the regional policy teams for each case study. Desk-based research was conducted to identify what individuals may have been involved in the design of the target and/or its implementation. The individuals from the regional policy team (Table 4) in each case were involved in at least one part of the target process i.e., target setting, developing supporting measures or target implementation. Interviews were then conducted with one key individual from the local government association (Table 4) for each case study to provide the perspective of responding to policy, including engagement in policy setting and challenges in implementation. The local government association was interviewed instead of individual local authorities, to provide more of an overview of local issues[36].

Table 5: Interviewee organisations for each shortlisted case

Case	Interviewee organisations
Flanders	The Flanders Public Waste Agency (OVAM)
	Association of Flemish Cities and Municipalities (VVSG)
Western Australia	Western Australia Waste Authority (WAWA)
	Western Australia Local Government Association (WALGA)

[36] Information available in the public domain on the development and implementation of these targets was limited. The regional government policy officials and local government association representatives were interviewed to gain the widest range of views on this process as possible. Desk-based research and interviews provided a wealth of information sufficient to understand the case studies and lessons learnt. Further research could provide additional insight and broader perspectives from other stakeholders, however the level of detail gained in this report is sufficient to fulfil the project aims.

3. Findings

3.1. Flanders

3.1.1 Target development and context

In Belgium, each region is responsible for establishing policies for different environmental issues. In Flanders, the Public Waste Agency (OVAM) creates and monitors the waste management legislation and policies for the 300 Flemish municipalities[37]. The majority of municipalities are grouped into 27 inter-municipal waste management associations[38] (IMWMA) to provide services. Only a few municipalities are not part of an IMWMA. The IMWMA's are collectively represented by Interafval, created in 1996 as a partnership between all IMWMAs and the Association of Flemish Cities and Municipalities (VVSG). Interafval ensures that local authorities voices are heard so they can have their say in Flemish Waste Policy[39].

OVAM have set waste targets in Flanders for the past 20 years in response to rising levels of consumption and production of waste[40]. Regional waste management policies in Flanders began with the creation of the first Waste Decree in 1981, regulating the development of regional waste management plans. Since then, new waste management plans (five since 1997) have been developed outlining targets and waste policies for municipalities alongside the implementation of supporting legislation (Figure 2)[41]. Over time as targets were met and exceeded, more ambitious goals were set and waste management policies transitioned from a focus on waste disposal, source segregation and recycling to waste prevention[42].

[37] European Committee of the Regions (undated). Belgium.
https://portal.cor.europa.eu/divisionpowers/Pages/Belgium-Introduction.aspx
[38] Recupel (undated) The intermunicipal companies that manage waste in Belgium
https://www.recupel.be/en/blog/the-intermunicipal-companies-that-manage-waste-in-belgium/
[39] Municipal Waste Europe (Undated). Interafval
https://www.municipalwasteeurope.eu/member/interafval
[40] Interview with OVAM, July 2022
[41] Arcadis & Eunomia (2008). Optimising Markets for Recycling.
https://ec.europa.eu/environment/enveco/circular_economy/pdf/studies/optimising_markets_report.pdf
[42] Ibid.

Figure 2: Timeline of key legislation and waste plans in Flanders

Flanders is often coined as one of the best regions in Europe regarding waste management [43]. Waste generated per inhabitant per year has decreased from 544.78kg in 2005 to 467.36kg in 2020[44]. This is lower than the 2020 European average of 505kg per inhabitant[45] .

Upon conducting recent waste composition studies, OVAM found high levels of recyclable and compostable waste in their residual waste streams, and this was an issue they decide to act on. As a result, OVAM developed a range of more ambitious targets within their 2016-2022 Waste Management Plan to meet their waste reduction ambitions, including increased reuse targets, waste reduction targets for industrial waste and tailored residual waste targets for municipalities[46].

The 2016-2022 and 2023-2030 Waste Management Plan and their associated drafting and approval procedures have their legal basis in Article 18 of the Material Decree[47] [48]. This means that the plans are legally binding for all administrative authorities in the Flemish Region, the provinces, the municipalities, and the public authority bodies governed by private law entrusted with public utility

[43] Innio4sd (2019). Prevention and Management of Household Waste in Flanders, Belgium https://www.inno4sd.net/prevention-and-management-of-household-waste-in-flanders-belgium-504

[44] OVAM (2020). Household Waste and Similar Industrial Waste Report 2020. *https://ovam.vlaanderen.be/documents/177281/0/Rapport+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2020.pdf/462b749e-5ba6-3a0b-fb42-42cf69057812?version=2.0&t=1658840787357&download=true*

[45] Eurostat (2019). 487kg of Municipal Waste Generated Per Person *https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20190123-1#:~:text=487%20kg%20of%20municipal%20waste,person%20%2D%20Products%20Eurostat%20News%20%2D%20Eurostat*

[46] Zero Waste Europe (2020). Flanders' Implementation Plan for Household Waste and Comparable Industrial Waste 2016-2022. https://zerowasteeurope.eu/wp-content/uploads/2020/11/zwe_11_2020_factsheet_flanders_waste-prevention_en.pdf

[47] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[48] OVAM (2011). Materials Decree https://navigator.emis.vito.be/mijn-navigator?wold=41707

tasks related to environmental policy[49]. They provided tailor made targets based on the socio-economic factors in each of the assigned clusters (as seen in Appendix 1).

OVAM determines the waste streams that municipalities must collect, how they are collected and how often they are collected (see Appendix 2 for examples of mandatory waste streams)[50]. With the implementation of the 2016-2022 Waste Management Plan, Flanders no longer enforces the mandatory door-to-door collection of residual waste, paper and cardboard, organic waste and metal packaging and drinks cartons. Instead, municipalities can choose between a door-to-door collection service, a short distance delivery system or a combination of both[51]. The short distance delivery systems must be within walking distance of no more than 200m and can be either underground or above ground. Other materials can be presented for collection at recycling centres[52].

3.1.2 Target design considerations

The previous 2016-2022 Waste Management Plan put forward the ambition to reduce household residual waste per inhabitant to 141kg by 2022 from 157kg in 2014 - an 11% decrease approximately[53]. As 2021-22 waste data is not yet available, OVAM still do not know if this target will be achieved, especially as an increase in residual waste generated per inhabitant was found in 2020 during the COVID-19 pandemic (Figure 3).

The targets for household waste generation developed for the 2023-2030 Waste Management Plan were influenced by the 100kg residual household waste per inhabitant by 2030 target included in the Flemish Energy and Climate Plan 2021-2030[54]. According to the representative from OVAM, to have consistency between environmental strategies, they decided to keep the 100kg target for 2030. The target is, however, complemented by tailored and specific targets for different municipalities according to various socio-economic and demographic factors. This is to reflect the fact that 100kg per household by 2030 is not feasible for every municipality.

[49] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[50] OVAM (2020). Implementation Plan for Household Waste and Similar Industrial Waste. https://ovam.vlaanderen.be/uitvoeringsplan-huishoudelijk-gelijkaardig-bedrijfsafval

[51] OVAM (2017). Implementation Plan for Household Waste and Comparable Industrial Waste- Summary. https://ovam-english.vlaanderen.be/implementation-plan-for-household-waste-and-comparable-industrial-waste

[52] Ibid.

[53] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[54] Flanders Agency for Energy and Climate (undated). Flemish Energy and Climate Plan 2021-2030 https://energiesparen.be/vlaams-energie-en-klimaatplan-2021-2030

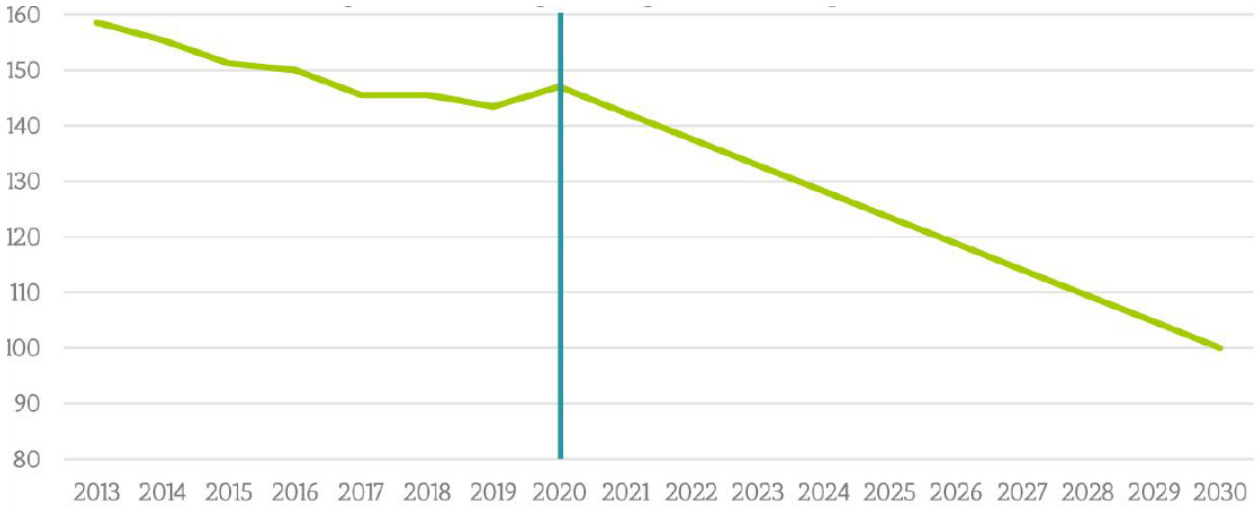

Figure 3: Route towards 100kg household residual household waste target for 2030

To achieve the 100kg target for Flanders outlined in the Flemish Energy and Climate Plan[55], residual waste must have decreased every year from 2020 by an average of 4.7kg per inhabitant (a decrease of approximately 40%) (Figure 3). This may be a challenge as between 2013 and 2020, household residual waste per inhabitant decreased by approximately 7.5%[56]. OVAM notes in the 2023-2030 Waste Management Implementation Plan that 'the level of ambition of this target cannot be underestimated'[57]. The target, then, exists to motivate and encourage municipalities to take further action now rather than later.

Before the development of the 2016-22 Waste Management Plan, there was one residual waste target, which was the same for all municipalities[58]. According to the interview with OVAM, this brought about much discussion regarding fairness and made benchmarking between municipalities challenging. For example, they stated that municipalities felt that it was not fair that cities and coastal areas had the same target as municipalities in less urbanised and tourist areas. As a result, targets for household waste generation (kg per inhabitant) were developed based on municipality cluster type. The cluster types, developed by the Belfius bank, are based on a range of socio-economic and demographic factors. It divided Flemish municipalities into 16 clusters[59] (see Appendix 1 for a map of municipalities, their cluster type, and their tailored target).

[55] Flanders Agency for Energy and Climate (undated). Flemish Energy and Climate Plan 2021-2030 https://energiesparen.be/vlaams-energie-en-klimaatplan-2021-2030

[56] OVAM (Undated). Household Waste. https://www.vlaanderen.be/en/statistics-flanders/environment-and-nature/household-waste#sources

[57] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[58] Ibid.

[59] Ibid.

In 2020, the Flemish Government carried out an extensive analysis of this classification system as part of the evaluation of the 2016-22 Waste Management Plan. It was determined that the cluster system was too complex and that the socio-economic differences within the municipalities were not always the drivers of residual waste generation. This analysis showed that three clusters (16: coastal municipalities, 15: large and regional cities and 9: municipalities on the outskirts of cities with high economic activity and an increasing number of older people) have statistically significant differences in the amount of household residual waste generated**Error! Bookmark not defined.** Therefore, it has been proposed in the 2023-30 waste management plan, that municipalities are grouped into four clusters: 9, 15, 16 and a main cluster that includes all other municipalities[60].

The target for each cluster is a reduction in residual waste for households by 10-20% by 2030, based on the average residual waste produced over the preceding three years (Table 5). Large cities and municipalities in coastal areas, for example, have different targets as they have less space for bins and in coastal areas there are high levels of second-home ownership[61].

Details on the targets for 2030 for each cluster type can be found in Table 5. It is important to note that the targets do not apply to the 34 well performing municipalities i.e., the municipalities that are already meeting their target. They must only reduce their residual waste by 2030 by a minimum of 13kg per inhabitant, known as the 'Flemish share'[62]. It is assumed that the well performing municipalities still must not generate more household waste per inhabitant than is set out for their cluster. However, this is not specified within OVAM's policy documents.

Table 6: Flemish clusters and the targets per inhabitant for 2030

[60] Ibid.

[61] Ibid.

[62] Ibid.

Cluster	Description	Target per inhabitant for 2030
Main cluster	All municipalities outside 9, 15 and 16	83kg
Cluster 9	Significantly rural municipalities with an increasing number of older people	130kg
Cluster 15A	Large cities	171kg
Cluster 15B	Regional cities	98kg
Cluster 16	Coastal municipalities	197kg

Municipalities that participate in IMWMA's can choose to replace their targets with targets created at the intermunicipal level[60]. This gives more flexibility in how each municipality meets their target, according to the representative from VVSG. This is only possible, though, if the municipality submits a policy plan that aligns with the vision and direction of their IMWMA and includes policy instruments that will help the municipality achieve their targets[60].

OVAM collects annual qualitative and quantitative data on household waste in Flanders from municipalities, IMWMAs and management bodies via their Online Waste Survey[63] and their new Materials Information system[64]. In Flanders, household residual waste is defined as the "fraction of household waste that is not selectively collected"[65]. It includes household and bulky waste not collected for recycling, ground litter, bin litter and fly-tipping. Using this system means that data on fly-tipping will not be included in the residual waste figures if it is sorted and recycled[66]. Under the 2016-22 Waste Management Plan, ground and bin litter counted towards the residual waste targets, however it was proposed in the 2023-30 Waste Management Plan that household residual waste figures for municipalities will no longer include this[67]. Ground and bin litter will still be

[63] OVAM (2020). Household Waste and Similar Industrial Waste Report 2020. https://ovam.vlaanderen.be/documents/177281/0/Rapport+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2020.pdf/462b749e-5ba6-3a0b-fb42-42cf69057812?version=2.0&t=1658840787357&download=true

[64] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[65] OVAM (2020). Household Waste and Similar Industrial Waste Report 2020. https://ovam.vlaanderen.be/documents/177281/0/Rapport+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2020.pdf/462b749e-5ba6-3a0b-fb42-42cf69057812?version=2.0&t=1658840787357&download=true

[66] Ibid.

[67] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030

included in the regional household residual waste figures for Flanders. Municipalities must also register annually the amount of litter that is cleaned up to ensure these quantities are not included in the residual waste figures[68].

3.1.3 Consultation process

For both the 2016-22 and the 2023-30 Waste Management Plans, there was a three-month consultation period which is required by law[69]. The consultations brought together the views and suggestions from key stakeholders such as the municipalities, the IMWMAs, waste management companies, and the federations of producers, waste collectors and processors. In addition to the online consultation, OVAM visited five provinces in Flanders and carried out presentations on the waste strategy for stakeholders so they could have a better understanding of the plan and ask questions. The representative from OVAM stated however that, in both consultations, there was not much direct discussion with the municipalities regarding the targets but rather with the Inter-municipal Waste Management Associations (IMWMAs).

From the interviews with OVAM and VVSG, they demonstrated a difference of opinion regarding the popularity of the targets. The representative from VVSG noted that the majority of stakeholders, in particular the municipalities and the IMWMAs, are not in favour of the targets. The municipalities argue that the targets are not fair, especially for cities and coastal areas, and the 100kg target by 2030 is unrealistic. Municipalities have complained about OVAM's lack of flexibility regarding the targets and the fact that municipalities could not make a case for being in a different cluster or having different targets set for them[70]. Municipalities and IMWMA would have liked to see a more tailored approach by OVAM, which would have included more research into the drivers of residual waste generation and consideration of the historical action and progress of each municipality when developing targets[71].

The representative from OVAM, on the other hand, explained that only some municipalities (who were not meeting the targets) ''protested and others expressed their disagreement". This may mean that the level of opposition to the target ranged amongst the municipalities. Blocking the target or withdrawing participation was not mentioned during the interview with the OVAM representative. As a result, according to the interviewee, OVAM had to clearly explain the rationale behind the targets set and facilitate positive discussion. They explained to the municipalities that they wouldn't be penalised for not reaching targets, but that they would like municipalities to show that they are taking action to meet the targets and comply with legislation. According to the representative from VVSG, the attitudes towards the targets from municipalities are also based on

https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[68] Ibid.

[69] Interviews with OVAM and VVSG, July 2022

[70] Interview with VVSG, July 2022.

[71] Ibid.

how the IMWMAs present the targets to municipalities. The presentation of the targets is perceived to be based on the IMWMAs' general attitudes to recycling and how well they are performing.

3.1.4 Implementation of the target – key components

Penalties

Municipalities were not directly penalised if they did not meet the waste generation targets set for them in the 2016-22 Waste Management Plan. During the interview with OVAM, they confirmed that there is no intention to introduce penalties under the next plan either. OVAM sees municipalities as partners in waste management and believe that collaboration and support is essential to effectively preventing waste.

When asked if they thought penalties would hinder or help progress, OVAM acknowledged that this approach could be too soft, but that introducing penalties would significantly damage the relationship between regional and local government. This sentiment was reflected in the interview with VVSG who said that the lack of financial penalties encouraged buy in from municipalities who felt the targets were too ambitious as they wouldn't be penalised if they didn't meet the targets but still took steps to improve levels of household residual waste. They were encouraged to do what they could to meet the targets.

Support

If a municipality is not meeting their target, officials from OVAM will visit the IMWMA and conduct a review of their waste plan and make recommendations on changes to waste management practices to reduce waste. The IMWMA will then have six months to make an action plan to outline how they will implement these recommendations. Another meeting will be held between OVAM and the IMWMA will at this point to check the action plan[72].

OVAM highlighted that this is a resource intensive process- they usually visit 30-50 municipalities per year. In 2020, two years before the end of the previous waste management plan, they conducted visits to 65 municipalities that were at least 20kg away from hitting their target. On reflection, the representative from OVAM said that this support resulted in municipalities improving their waste plan and is something that they will continue to provide under the next targets. VVSG said that these visits were welcomed by most municipalities and that if more time and money was available, they would like to see more of these visits conducted. However, VVSG also acknowledged that some municipalities reportedly did not find these visits helpful, and feedback had been that OVAM often takes a one size fits all approach. However, there was an overall sentiment that the OVAM was providing sufficient waste plan support.

[72] Interview with VVSG, July 2022.

Subsidies

OVAM provides subsidies, which are distributed among municipalities to support implementation of practices to reduce residual waste. These subsidies are usually in the region of 3 million euros per year for the region of Flanders. However, they have been reduced to approximately 600,000 euros as the result of spending during the pandemic[73]. VVSG said that there is concern among municipalities that they will not be able to implement new services because of this and will struggle to meet the new targets proposed in the consultation. An example they gave to support this statement referred to the fact that around one third of municipalities still need to implement organic waste collection and many will not be able to do this without subsidies.

Regional policy measures

Shared responsibility and collaborative working were strong themes in both the interviews with OVAM and VVSG. It was recognised that responsibility for waste prevention did not just lie with local government. It was discussed during both interviews that there was responsibility by regional and national government to introduce policies to improve waste infrastructure and tackle waste further up the supply chain. The polluter pays principle is at the heart of OVAM's approach.

A number of measures were in place under the 2016-22 waste plan to prevent household residual waste. This included: landfill bans, landfill, and incineration tax, pay as you throw schemes, extended producer responsibility schemes (including reporting of measures to reduce waste by producers), establishment of a network of reuse and repair centres, a forum for sustainable product innovation and communications campaigns.[74]

According to the representative from OVAM, general campaigns are run at the regional level, but the municipalities are responsible for communicating with the public and providing information about waste prevention and waste sorting, for instance.

It has been mandatory for all municipalities to implement PAYT policies since 2012.[75] OVAM sets minimum and maximum tariffs, however, municipalities can choose their own rates within these boundaries. However, in 2016 it was found that not all municipalities were implementing this minimum and maximum tariffs of the rates, so OVAM decided that non-compliant municipalities would no longer have access to subsidies.

The consultation for the 2023-30 Waste Management Plan quantifies the "Flemish Share" of the target, which is the impact that certain measures implemented by the regional government are

[73] Interview with OVAM, July 2022

[74] European Environment Agency (2016) Overview of the national waste prevention programmes in Europe: Belgium – Flanders. https://www.eea.europa.eu/themes/waste/waste-prevention/countries/2016-waste-prevention-country-fact-sheets/belgium-flanders-region-fact-sheet

[75] Zero Waste Europe (2021) Waste Incineration under the EU ETS https://zerowasteeurope.eu/wp-content/uploads/2021/10/ZWE_Delft_Oct21_Waste_Incineration_EUETS_Study.pdf

expected to have on residual waste levels and thus the ability of municipalities to meet their targets[76]:

- Take-back obligations on disposable nappies and selective collection from household is expected to reduce residual waste by 5.6 kg per inhabitant.
- Introduction of EPR schemes on products, particularly textiles is expected to reduce residual waste by 3 kg per inhabitant.
- Other food waste initiatives are expected to reduce residual waste by 2.37 kg per inhabitant.

Therefore, if the Flemish Government does not implement these measures, then municipalities are expected to fall 10.97 kg short of their target.

3.1.5 Impact of the target

A small decrease in municipal household residual waste per inhabitant has been seen over the period for which targets were set.[77] In the period of 2016-20, household residual waste per inhabitant decreased from 150kg to 147kg. Household residual waste per inhabitant did decrease even further to 143kg in 2019 but it increased again by 4kg in 2020 due to the impact of Covid-19[78]. Based on the data from OVAM's most recent Household Waste and Similar Industrial Waste report (2021), in 2019, 131 municipalities had achieved their household residual waste targets[79]. However, due to the impact of COVID-19, this figure decreased to 74 municipalities for 2020. 92 municipalities, though, were close to their target (1-10kg per inhabitant). As of 2020, 6 out of the 27 IMWMA's had met their target for 2022[80].

The representative from OVAM said that they expect more municipalities will have met their waste targets by 2022, as the most recent data showed that many were only a few kilograms above their target. However, the 2020 data showed that approximately 59 municipalities were at least 20kg away from meeting their target[81].

[76] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

[77] Statistics Flanders (Undated) Household waste. https://www.vlaanderen.be/en/statistics-flanders/environment-and-nature/household-waste#sources

[78] OVAM (undated). Figures for household waste and similar commercial waste https://ovam.vlaanderen.be/cijfers-huishoudelijk-afval-en-gelijkaardig-bedrijfsafval

[79] OVAM (2020). Household Waste and Similar Industrial Waste Report 2020. https://ovam.vlaanderen.be/documents/177281/0/Rapport+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2020.pdf/462b749e-5ba6-3a0b-fb42-42cf69057812?version=2.0&t=1658840787357&download=true

[80] OVAM (2020). Household Waste and Similar Industrial Waste Report 2020. https://ovam.vlaanderen.be/documents/177281/0/Rapport+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2020.pdf/462b749e-5ba6-3a0b-fb42-42cf69057812?version=2.0&t=1658840787357&download=true

[81] Ibid.

3.1.6 Overall learnings

In the interviews, representatives from OVAM and VVSG were asked to reflect on the challenges and successes of the 2016-22 targets and what they would like to have seen done differently. The consultation for 2023-30 Waste Management Plan, had already incorporated some of the learnings from the previous cycle.

The representative from OVAM said that overall, they found the targets to be successful in reducing the amount of waste generated in weight per household (kg), which led to the development the 2023-30 Waste Management Plan. They also said that the targets will be stricter and more ambitious under the new plan, but not unachievable, in their opinion. This was mentioned several times in the interview with OVAM as they feel setting ambitious targets is important in achieving significant change. They said that the target setting process for the 2016-22 plan taught them what needs to be done to achieve these targets. For example, collection of food waste was seen as crucial in meeting household residual waste targets. The representative from VVSG said that they thought that there had not been enough support by OVAM in implementing food waste collections and that more would need to be done. While the representative from VVSG did not specify what support municipalities need, the collection of food waste often necessitates improvements in infrastructure.

According to the representative from OVAM, they decided to improve enforcement, implement stricter measures and simplify how the targets are calculated. These changes were the result of learning from the 2016-22 Waste Management Plan. The consultation for the 2023-30 Waste Management Plan outlines that they do not intend to fine municipalities that miss their target, but they will hold municipalities responsible if they do not comply with more concrete obligations, such as offering separate collections or applying correct rates for bulky waste. OVAM supports municipalities with subsidies and if they are found to be non-compliant these will be removed[82].

The representative from OVAM outlined what stricter measures could look like. This included implementing an incineration ban and creating higher tariffs on residual waste. This is something that they would only pursue if some municipalities continued to miss their targets. They recognise that this will not be politically popular, but it may be necessary to achieve these more ambitious targets.

This was not mentioned in the interview, but the consultation document outlined the intention to change the scope of the 2023-30 targets. Litter and fly tipped materials will no longer count towards the residual waste targets as this was penalising municipalities that were clearing their streets.

[82] OVAM (2022). Lokaal Materialenplan. Uitvoeringsplan huishoudelijk afval en gelijkaardig bedrijfsafval 2023-2030 https://ovam.vlaanderen.be/documents/177281/3472420/Lokaal+Materialenplan.+Uitvoeringsplan+huishoudelijk+afval+en+gelijkaardig+bedrijfsafval+2023-2030.pdf/2ae54015-6527-5b0c-d2db-838be87aeae0?version=1.2&t=1653395002667&download=true

In their reflections, the representative from VVSG said that municipalities could use more support from OVAM in reaching these targets. The lower subsidies as a result of coronavirus pandemic were seen as insufficient to take the appropriate steps. Beyond financial support, the representative from VVSG said that municipalities would also welcome the regional government developing consistent messaging that they could use to communicate with householders.

The representative from OVAM said that cooperation with municipalities is important and is something that it will continue to do. Whilst the representative from VVSG was sometimes critical of how this was approached, there was an overall understanding of the importance of working together to meet environmental ambitions.

3.2. Western Australia

3.2.1 Target development and context

In Western Australia, waste is primarily managed by local councils. They provide household waste collection and recycling services, operate, and manage landfill sites, and deliver awareness and education programmes. Local councils also provide infrastructure, incentives and information that are designed to encourage behaviour change[83]. The Waste Avoidance and Resource Recovery Act 2007, developed and enforced by Western Australian Waste Authority (WAWA), requires regional government and local councils to develop long-term waste strategies to drive improvements in waste services, waste recovery and waste avoidance; and set targets for waste recovery, reduction, and waste diversion from landfill[84]. The Waste Avoidance and Resource Recovery Act 2007 states that regional waste strategies should be benchmarked against global best practice and take a ten year and beyond view. The regional waste strategy must also be reviewed at least every five years[85].

The 2020, 2025 and 2030 targets for material recovery are set out in Western Australia's Waste Avoidance and Resource Recovery Strategy (WARRS) for 2030 published in 2019[86]. This strategy replaces and builds upon Western Australia's inaugural waste strategy, *Creating the Right Environment,* published in 2012, introducing goals and measures aimed at Western Australia becoming a circular economy as well as moving to targets for material recovery. A timeline of key legislation and waste plans can be found in Figure 4.

[83] Government of Western Australia (2019). Waste Avoidance Resource Recovery Strategy 2030. https://www.wasteauthority.wa.gov.au/images/resources/files/Strategic_Direction_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

[84] Government of Western Australia (2007) Waste avoidance and resource recovery act 2007. https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_2758_homepage.html

[85] Ibid.

[86] Government of Western Australia (2019). Waste Avoidance Resource Recovery Strategy 2030. https://www.wasteauthority.wa.gov.au/images/resources/files/Strategic_Direction_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

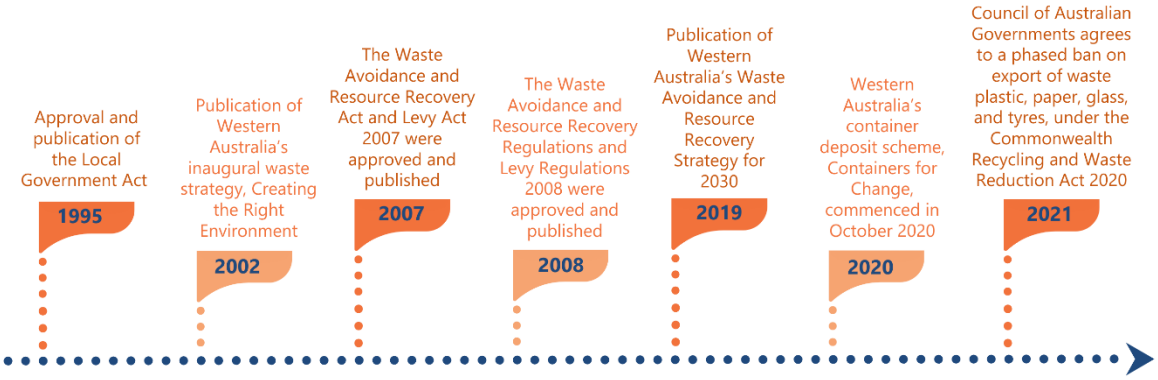

Figure 4: Timeline of key legislation and waste plans in Western Australia

Under the first waste strategy published in 2012, there has been no sustained improvement in the household material recovery rate[87]. When asked about the barriers to improving performance, representatives from WAWA and WALGA in part attributed this lack of progress to an inconsistent approach to waste management across councils with a focus on energy from waste. With many councils not implementing waste services to increase material recovery.

There is a lack of a unified approach to waste collection among councils in Western Australia; waste collection and processing arrangements vary considerably across the state[88]. Consequently, according to the representative from WAWA, they had to create policy mechanisms (including targets) to help streamline systems and encourage local councils to work towards a common goal. Council's either operate a:

- Two-bin system with general waste and comingled recycling;
- A three-bin system with general waste, comingled recycling and garden waste or;
- A three-bin system with general waste, comingled recycling, and FOGO.[89]

The bin system in place has been found to impact material recovery rates, with the two-bin system as the lowest performing system, with an average recovery rate of only 16%. Conversely, the three bin is the best performing system for material recovery, with an average recovery rate of 57%[90].

The interviewee from WAWA said that in their opinion, there have also been challenges in ensuring that all councils adhere to the waste hierarchy. They said that in the past, previous governments in Australia promoted waste to energy as an easy and cheap way of managing waste and as a result

[87] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf
[88] Interview with WAWA, July 2022
[89] Recycle Right (Undated) Which bin https://recycleright.wa.gov.au/which-bin-main/
[90] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

of this, some councils entered long (15-20 years) contracts with energy to waste facilities. The interviewee at WAWA also said that this was often done without engaging communities, who were not in favour of incinerating waste. In recent years, the interviewee said there has been a shift in state and national governments regarding incineration and the focus is now on the value of materials that can be recycled through recovery. The representative from WAWA said that whilst most councils within Western Australia have also shifted their focus to the prevention, reuse, and recycling of materials, there are still some councils that are still prioritising energy from waste. According to the interviewees from WALGA and WAWA, these long contracts pose a challenge in regards to shifting the views of these councils, however, these contracts do not prohibit them from increasing their material recovery rate.

According to the representative from WAWA, FOGO comprises of approximately half of the waste stream and separate collections are essential to improving material recovery rates. However, there has been difficulty implementing FOGO collection systems. The implementation of FOGO collection systems, according to the representative from WALGA, is challenging as not all councils had the capacity to do this.

The WARRS for 2030 aimed at transforming Western Australia to become a circular economy by putting greater focus on avoidance[91]. This strategy moved to targets for material recovery and aimed to address the challenges highlighted by those interviewed by setting direction for all Western Australians and guide their decisions with regards to waste.

3.2.2 Target design considerations

The specific targets developed for Western Australia were based on the reporting methodologies used by WAWA and by benchmarking against national best practice cases, such as Victoria. An example of a best practice case noted in the interview with WAWA was in Victoria[92] where they set targets for the recovery of municipal household waste. By setting a target, Victoria saw the recovery (including recycling and incineration) rate reach 67%[93] by 2017 and the target was largely welcomed by local communities[94]. Another example noted was the implementation of FOGO by a group of councils in the south Peel area (Western Australia)- they reached a 68% material recovery rate for food and organic waste, and the councils were from neither a well performing nor poor performing area regarding waste and recycling[94], in the opinion of the interviewee.

[91] Government of Western Australia (2019). Waste Avoidance Resource Recovery Strategy 2030. https://www.wasteauthority.wa.gov.au/images/resources/files/Strategic_Direction_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

[92] Victoria was not chosen as a case study in this research as targets had not been set for individual municipalities or groups of municipalities.

[93] VAGO (2019). Recovery and Reprocessing Resources from Waste. https://www.audit.vic.gov.au/report/recovering-and-reprocessing-resources-waste?section=#:~:text=Sustainability%20Victoria%20(SV)%20estimates%20that,of%20the%20state's%20waste%20system.

[94] Interview with WAWA, July 2022

Household material recovery targets have been set across Western Australia, but there are specific targets for Perth and the Peel region, where 80% of the population reside, and six 'major regional centres' that are similar to Perth and Peel regarding population density (Table 6)[9591]. The targets for the Perth and Peel region are more ambitious than the targets for the regional centres to reflect the increased urbanisation and infrastructure already in place in these areas.

Table 7: MSW Material Recovery target per area per year

Year	Area	Target (Household Material Recovery)
2020	Perth and Peel	65%
	Major regional centres	50%
2025	Perth and Peel	67%
	Major regional centres	55%
2030	Perth and Peel	70%
	Major regional centres	60%

Between the period of 2014-2015 and 2020-2021, the material recovery rate in the **Perth and Peel region** decreased by seven percentage points from 39% to 32%[95] [96]. A smaller decrease in material recovery rate was found in the **major regional centres** during that period- the rate dropped by three percentage points from 30% in 2014-2015 to 27% in 2020-2021[97]. Based on this data, the targets for 2025 and 2030 for Perth and Peel and the major regional centres could be considered

[95]Government of Western Australia (2022) *Waste and recycling in Western Australia 2020-21* https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

[96] Government of Western Australia (2021). Annual Report https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/4110786aeca5584c5774d55e4825878a00278647/$file/tp+786+(2021)+2020-21+waste+authority+annual+report.pdf

[97] Government of Western Australia (2022) *Waste and recycling in Western Australia 2020-21* https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

very ambitious. In **Perth and Peel**, the material recovery rate would need to increase by 38 percentage point by 2030[98] (Figure 5[99]).

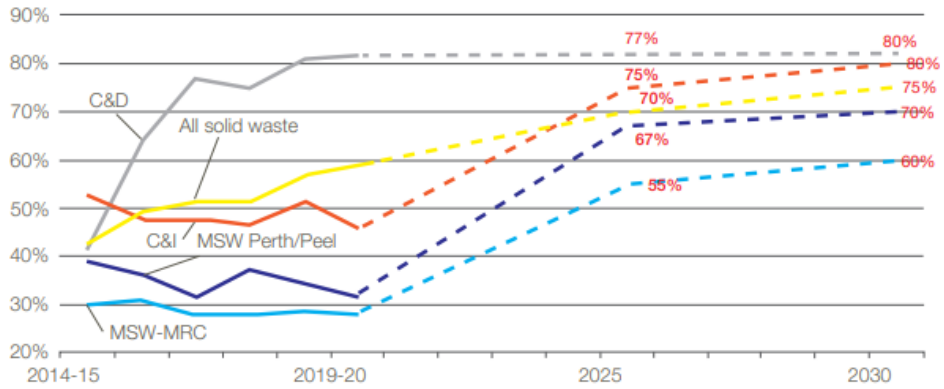

Figure 5: Material recovery rates against the waste strategy targets

The representative from WAWA said that the 2030 target timeline were largely based on the lessons learned from Victoria (as mentioned), as well as the time it would take to implement FOGO, which was seen as a vital policy measure to improve material recovery rates. They also said that in Victoria, it took approximately 10 years to see improvements in recovery rates. The representative from WAWA said there had been further discussion on whether the 2025 target could be brought forward to 2023, but this was seen as too challenging, as FOGO had not been widely implemented in councils with metropolitan areas. They stated during the interview that, to meet the target for 2025, councils in the Perth and Peel area would have needed to implement changes as far back as 2015.

Currently, the targets are concerned only with tonnage rather than focusing on different waste streams and their value[100]. However, there is the expectation to consider the importance of certain priority materials such as food and garden organics that have an impact on tonnage and carbon emissions, as evidenced through the interviews with WAWA. Waste and recycling data in Western Australia is currently collected, reported, analysed, and used by a large variety of stakeholders such as local government, regional councils, state government agencies and community groups[101]. Until 2019, there was no single point of guidance for what type of waste data should be collected, reported, stored, and used. There was a lack of coordination and limited data sharing between

[98] Government of Western Australia (2021). Annual Report https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/4110786aeca5584c5774d55e4825878a00278647/$file/tp+786+(2021)+2020-21+waste+authority+annual+report.pdf

[99] Government of Western Australia (2022) *Waste and recycling in Western Australia 2020-21* https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

[100] Interview with WAWA, July 2022

[101] Government of Western Australia (2019). Waste Data Strategy. https://www.wasteauthority.wa.gov.au/images/resources/files/2019/12/Waste_Data_Strategy.pdf

those responsible for data collection, and there was no shared plan for addressing inefficiencies and data gaps. This was highlighted in an audit of the effectiveness of the 2012 waste strategy in October 2016[102][101]. Amendments to the Waste Avoidance and Resource Recovery Regulations 2008 made in 2019 require annual reporting of data by:

- all local councils that provide waste services:
- entities that treat, process or sort at least 1,000 tonnes of reprocessed, recycled or recovered material in a financial year: and
- landfills that receive at least 20,000 tonnes of solid waste in a financial year or the relevant premises and are located outside of the metropolitan area[101].

It is hoped that improvements in data collection will ensure that progress can be monitored correctly and that any changes in the approaches taken to waste management are based on sound data**Error! Bookmark not defined.**.

3.2.3 Consultation process

There was a three-month consultation period for WARRS 2030 which was required by law and, according to the representative from WAWA, the targets were central in the consultation process. All citizens, businesses, government, and organisations were invited to participate, especially local councils, industry associations and the public. The consultation was advertised, and copies of the strategy were made publicly available online. In addition, the WAWA held in person workshops in the Perth and Peel area and online workshops in the other major regional centres in order to inform local councils and other stakeholders why the targets should be adopted. Overall, approximately 400 people participated in the workshops and another 300-400 people participated via email, according to WAWA.

When asked about the consultation process or communication more broadly, the representative from WALGA noted that the standard communication structure was sufficient, but it would have been helpful if WAWA took into consideration stakeholders' capacity to engage with, talk through and process the targets. WAWA could also have been more forthcoming about the introduction of FOGO. It was not mentioned in the first draft of WARRS 2030 or during the consultation period, according to WALGA.

[102] Government of Western Australia (2019). Waste Data Strategy. https://www.wasteauthority.wa.gov.au/images/resources/files/2019/12/Waste_Data_Strategy.pdf

3.2.4 Implementation of the target- Key components

Penalties

There are no direct financial penalties in Western Australia if councils do not meet their target. The interviewee from WALGA said that councils would not respond favourably to such penalties if they were implemented. Although there are no direct financial penalties, measures have been put in place that make it more expensive for councils that do not take steps to improve their recovery rates. All councils are required to have a waste plan which outlines the actions they are going to take to manage waste.[103] If they do not have a waste plan in place or their waste plan is found to be inadequate, WAWA will charge the council to write one.[104]

Supporting measures

It has also been made more expensive for councils to dispose of residual waste, incentivising action to increase recovery rates. This has largely been through an increase on the landfill levy, which increased from $8 AUFD approx. inert rate/tonne (approximately £4.70) in 2014 to $70 AUD approx. inert rate/tonne (approximately £41) from 2018 onwards. The putrescible rate/tonne also increased from 2014 to 2018 with a rate of $28 AUD putrescible rate/tonne (approximately £16.50) in 2014 to $70 AUD putrescible rate/tonne (approximately £41) from 2018 onwards[105]. This has made it cheaper for councils to recycle waste in comparison to landfill, and provides the incentive to sort it. Both interviews reflected that this is one of the biggest drivers to increasing recovery rates.

The implementation of FOGO collection systems was a priority for the WARRS 2030. The strategy states that all local councils in the Perth and Peel area must introduce a three-bin system one each for residual waste, recycling, and FOGO by 2025. So far five councils in Perth and Peel have implemented FOGO, with 16 committed to FOGO by 2025 and 12 remaining uncommitted (Figure 6)[106]. The importance of this measure was highlighted in both interviews and was seen as an essential step in achieving the recovery targets. Despite its importance, councils have faced a number of challenges in regards to implementing FOGO collection systems. This measure was not consulted on, therefore councils were unprepared when the final strategy was published.

[103] Government of Western Australia (2019) Guidance document, Local government waste plans. https://www.der.wa.gov.au/images/documents/your-environment/waste/Waste%20Plans%20Guidance.pdf
[104] Interview with WAWA, July 2022.
[105] Government of Western Australia (2020). Review of the Waste Levy: Consultation Paper. https://consult.dwer.wa.gov.au/waste-policy/review-of-the-waste-levy/user_uploads/review-of-the-waste-levy---consultation-paper-.pdf
[106] Government of Western Australia (2022) Waste and recycling in Western Australia 2020-21 https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_in_Western_Australia_2020-21.pdf

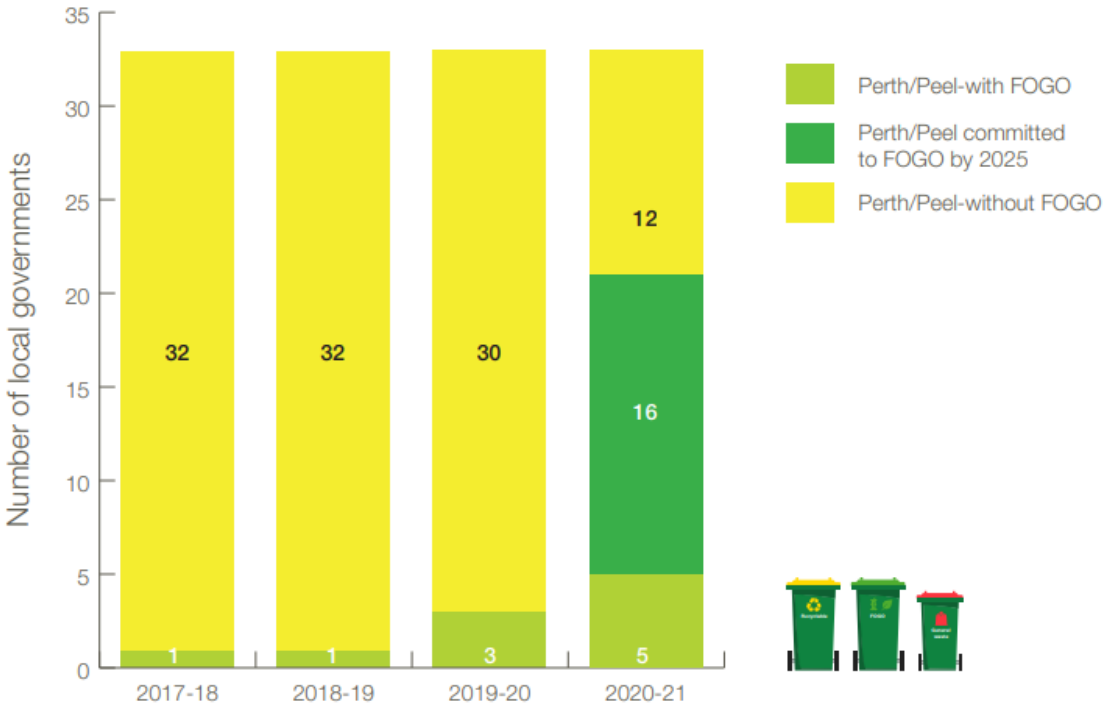

Figure 6: Implementation of FOGO in the Perth and Peel regions

As of August 2020, over 25 councils in Western Australia, including in Perth and Peel, provide, or have committed to providing, a three-bin FOGO service[107]. Support has been made available for councils through the Better Bins Plus: Go FOGO programme. The programme supports councils to help provide effective education and engagement with their residents and providing funding for the delivery of kerbside FOGO services that are consistent with Western Australia's guidelines[108][107]. However, it doesn't cover the full cost of implementation. Through the National Waste Policy Action Plan published in 2019, the Australian Government has also agreed with states and territories to introduce FOGO collection services for all households and businesses in the country by 2023[109]. Based on the most recent data from August 2020, it is not known whether this goal will be achieved in Western Australia.

A FOGO reference group was established by WAWA to bring together policy officials and local government to discuss and collectively agree on the implementation of FOGO. This provided a forum for consistent communication, which has been a tool previously used within the region to foster collaborative relationships.[110] This approach was first taken in 2018 when an export ban on waste came into effect and a consistent approach to the increase in waste was required[110]. The

[107] Government of Western Australia (2022) Better Bins Plus: Go FOGO. https://www.wasteauthority.wa.gov.au/programs/view/better-bins
[108] Ibid.
[109] Government of Australia (2019). National Waste Policy Action Plan. https://www.dcceew.gov.au/sites/default/files/documents/national-waste-policy-action-plan-2019.pdf
[110] Interview with WALGA, July 2022

interviewee from WALGA said that councils found this forum beneficial but would have liked to see more support through best practice guidance from the beginning.

Moving to a three-bin system in all councils is important in achieving consistency in waste collection services across Western Australia beyond achieving the targets set. WAWA hired a marketing company to create consistent messaging across all councils[110]. A communications toolkit called WasteSorted was developed to help local councils and regional councils communicate effectively with their residents.[111] The toolkit is available in a variety of different languages and uses pictures to ensure they are accessible to all residents. This was welcomed by councils as it's broadly understood and the evidence suggests that consistent messaging is essential for behaviour change[112][110]. The interviewee at WALGA reflected that there were some missed opportunities to implement complimentary messaging in other areas. For instance, a food waste avoidance campaign should have been run when FOGO was being implemented. WAWA are also responsible for developing education and engagement resources to communicate the benefits of resource recovery and using recycled products. Examples of engagement materials can be found in Appendix 3.

Achieving these targets has been supported by measures put in place at a national level by the Australian Government. As mentioned, in 2020, the Australian Government agreed to a phased ban on the export of waste plastic, paper, glass, and tyres since 2021, the export of most of these has been regulated[113] As a result, the states have had to increase infrastructure to be able to handle the increase in waste, which of course comes with a financial cost but ultimately is an important step to achieving local recovery targets by ensuring there is capacity to recycle waste and no longer allowing the responsibility of processing waste to be passed onto other nations[114].

Under the WARRS 2030, a ban on the incineration of recyclable materials was put into place for 2020 to prevent recyclable materials from being incinerated and increase recovery rates[115]. Since the implementation of WARRS, energy recovered from waste is reported separately from material recovery.

Western Australia has implemented a deposit return scheme for beverage containers in October 2020 known as Containers for Change. The return rate for containers between January and March 2021 was 58%, higher than the rates published for similar schemes that have been implemented in

[111] WasteSorted (Undated) Be a GREAT sort and do better than the bin. https://www.wastesorted.wa.gov.au/

[112] Interview with WALGA, July 2022

[113] Government of Western Australia (2021). Review of the Waste Avoidance and Resource Recovery Act 2007 https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/4110745afebdb68e730d246f4825877b001650f8/%24file/tp+745+(2021)+dwer+review+of+the+waste+avoidance+and+resource+recovery+act+2007.pdf

[114] Interview with WAWA and WALGA, July 2022

[115] Government of Western Australia (2019). Waste Avoidance Resource Recovery Strategy 2030. https://www.wasteauthority.wa.gov.au/images/resources/files/Strategic_Direction_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

Queensland, New South Wales, and the Australian Capital Territory.[116] This is significant as, before the scheme, beverage containers made up 44% of all litter in the state, according to the 2017-2018 National Litter Index.

3.2.5 Impact of the target

The material recovery rate in 2020-21 was 29%[117], which shows a decrease from 30%[118] in 2019-20. A decrease in recovery for food organics, paper and cardboard, glass and metals were seen between 2019-20 and 2020-21. However, there was an increase in recovery of plastic and garden organics. The recovery of plastics increased from 4% in 2019-2020 to 7% in 2021 and garden organics increased from 50% in 2019-2020 to 53% in 2020-2021[119] [120]. As the targets were implemented in 2019, it is still too early to see the impact that the targets have had on recovery rates.

It should also be noted that the most recent statistics cover the first year of COVID when restrictions were in place in Australia.[121] The coronavirus pandemic may have impacted recovery rates due to increase in single-use items and delay in waste collection as the result of staff absences. In August 2022, WAWA reaffirmed commitment to waste avoidance and resource recovery as it adapts to the impact of COVID-19.[122]

3.2.6 Overall learnings

When asked to reflect on the target development and implementation process to date, representatives from WAWA and WALGA highlighted the importance of communication between the public, councils, and state government. There are elements that went well, such as marketing materials and FOGO reference group. However, the interviews highlighted how better communication could have mitigated some of the challenges that have occurred during this process. The councils which were incinerating their waste and have been locked into long energy from waste contracts are not reflecting their communities' interests, which are to see more reuse

[116] Economic Regulation Authority Western Australia (2021) Report on the effects of the container deposit scheme on beverage prices in Western Australia.
https://www.erawa.com.au/cproot/22078/2/-2019.CDS.Inq-CDS-Price-Monitoring---Draft-Report---to-publish.PDF
[117] Western Australia Waste Authority (2021) Waste and recycling snapshot: Western Australia 2020-21
https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_snapshot_2020-21.pdf
[118] Western Australia Waste Authority (2020) Waste and recycling snapshot: Western Australia 2019-20
https://www.wasteauthority.wa.gov.au/images/resources/files/2021/09/Waste_and_recycling_snapshot_2019-20.pdf
[119] Western Australia Waste Authority (2021) Waste and recycling snapshot: Western Australia 2020-21
https://www.wasteauthority.wa.gov.au/images/resources/files/2022/08/Waste_and_recycling_snapshot_2020-21.pdf
[120] Western Australia Waste Authority (2020) Waste and recycling snapshot: Western Australia 2019-20
https://www.wasteauthority.wa.gov.au/images/resources/files/2021/09/Waste_and_recycling_snapshot_2019-20.pdf
[121] Parliament of Australia (2021) COVID-19: a chronology of Australian Government announcements (up until 30 June 2020)
https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19AustralianGovernmentAnnouncements
[122] Government of Western Australia (2022) Waste Authority re-sets to tackle waste challenges
https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/08/Waste-Authority-re-sets-to-tackle-waste-challenges.aspx

and recycling. Had there been better engagement from councils with their residents, then this could have helped to increase buy in from these councils. The representative from WALGA said that the better performing councils i.e., councils with higher material recovery rates are the ones which work closely with their residents. They said that they think there is a lot to learn from the success of high performing councils and they would recommend that Scotland look at what their high performing councils do differently if they decide to implement targets.

The representative from WALGA said that better communication between councils and WAWA could have resulted in increased buy in from councils and mitigated some of the challenges that they have faced as part of this process. They said that councils felt that WAWA did not communicate all steps of the process and they would have liked to see the journey mapped out from target development to implementation to meeting targets. The representative from WALGA highlighted that more could have been done by WAWA to understand the challenges that councils face in their day-to-day operations as they are the ones that are blamed by the public when things go wrong.

Benchmarking against best practice i.e., taking an evidence-based approach was also seen as an important element of the strategy in regards to engagement with local councils[123]. Having the examples of Victoria and of the implementation of FOGO in several councils in the Perth and Peel region made it more difficult for the targets, the timelines, and the measures needed to meet those targets to be criticised and argued against.

Interviews also highlighted that more time could have been taken to prepare for the implementation of the targets. The representative from WALGA said that there was a missed opportunity in terms of education programmes for the public. These should have been developed and ready to go as soon as the targets were implemented. They said sequencing of the complimentary measures should have been considered more closely and this could have been mitigated by a well-communicated plan.

The need to consider infrastructure was also important. There are only three MRFs in Western Australia, two large and one small. They were already struggling to cope with increased recycling as the result of the export ban in 2019 when a MRF burned down. They had no contingency in place, and it is not known how this could have impacted the recovery targets.

[123] Interview with WAWA, July 2022

3.3. Conclusion

Both regions saw setting household targets for local government as necessary in taking positive action to reduce household residual waste. Although the targets between these two case studies were very different, some commonalities can be seen in their approach and provide lessons on the successes and challenges of their journey in developing and implementing household waste targets (Figure 7).

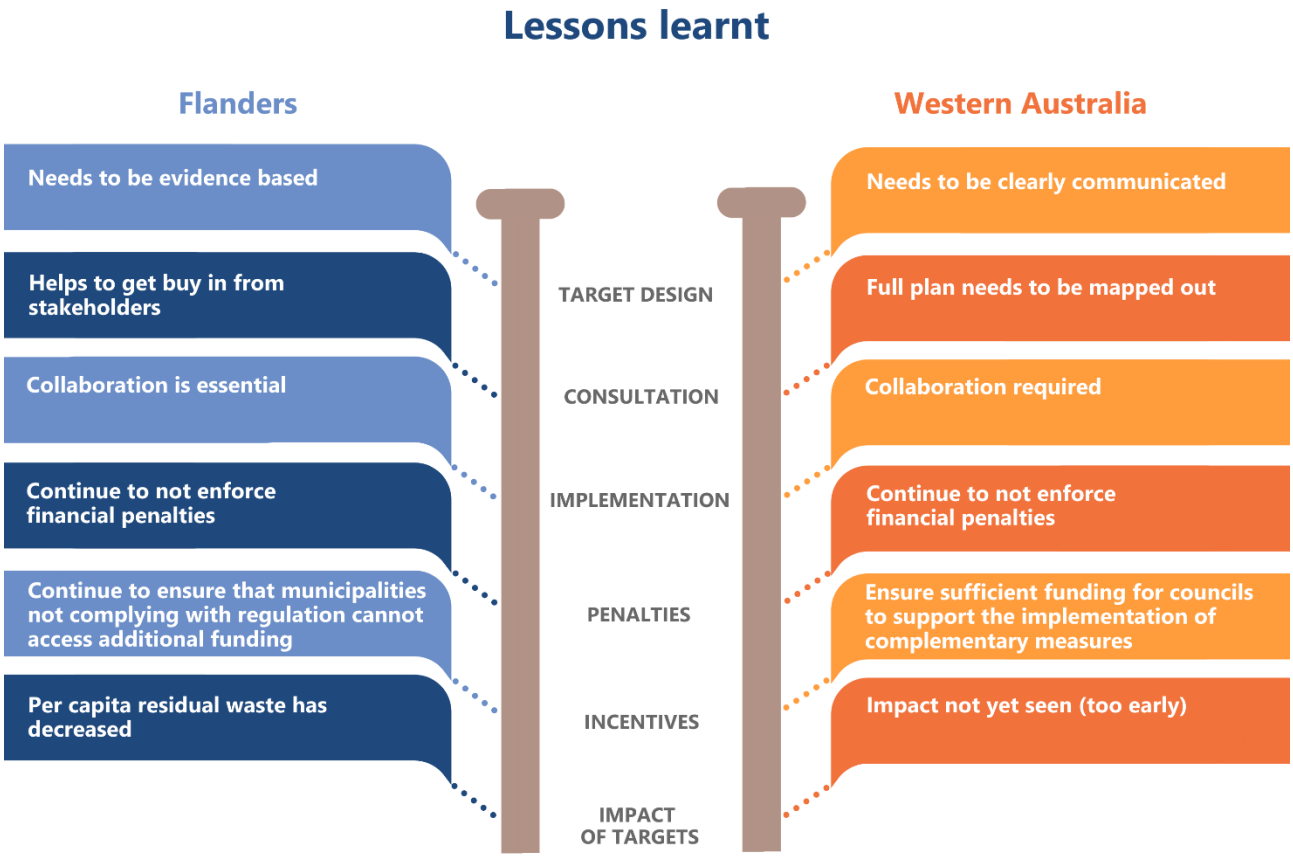

Figure 7: Summary of lessons learned from the target setting process as reflected by interviewees

The contextual factors leading to the development of these targets was different. Western Australia had seen little improvement in material recovery performance and targets were developed to bring performance across councils in line with each other. Different targets were given to the Perth and Peel Region based on urbanisation and resulting infrastructure to improve material recovery rates. Flanders, on the other hand, developed targets in response to rising consumption and waste generation. Initially, they calculated targets based on several socio-economic factors but have recently consulted on a simplified method having found that socio-economic factors were not necessarily the drivers for residual waste generation.

The importance of developing evidence-based targets was highlighted in interviews for both regions. In Western Australia, learnings were taken from another state, in particularly on target length. The representative from WAWA said that these learnings prevented claims that these targets were not achievable. The interview with VVSG, highlighted the importance of this evidence base in getting buy in from municipalities.

The importance of collaboration and communication between regional and local governments was highlighted in all the interviews. The interviews made it clear that the earlier collaboration and communication activities start, the better. The local government representatives in Western Australia and Flanders said that better communication at the target development phase could have increased buy in from the councils who were more reluctant. In Flanders, there was concern among some municipalities that there was not a strong enough evidence base for the targets, and they were therefore not achievable. In the case of Western Australia, the ramifications of not having consulted on FOGO implementation was made apparent, as councils were not ready to implement this when the WARRS was published.

All interviewees did not see the targets as sufficient to meet regional objectives. In both cases, complimentary measures were seen as necessary to meeting targets. Whilst different approaches were taken by national, regional, and local government, the polluter pay principle and adhering to the waste hierarchy were at the heart of these policies. In particular, separate food waste collections were seen as vital in meeting targets and emphasis was put on ensuring these could be implemented.

Financial penalties were explored with all of the interviewees in both case study regions. There was a consensus amongst the interviewees that implementing financial penalties for missing targets would do more harm than good as it would damage these relationships. It was also seen by interviewees as unfair to punish local government when responsibility for reaching targets needs to be shared between national, regional, and local governments and the public. This came out more strongly in the interview with both OVAM and VVSG in Flanders, however, the interviews with both representatives in Western Australia officials did discuss the importance of polluter pay principles such as extended producer responsibility.

Whilst there are not any direct financial penalties for missing targets, Flanders, and Western Australia, penalise non-compliance of other waste responsibilities. In Flanders, this is through restricting access to subsidies and in Western Australia, WAWA charges councils to write a waste plan if they do not have one in place or it is found to be inadequate. A different approach is taken in Flanders where support is given to municipalities to produce their own waste plan. This is seen as a supportive and collaborative measure with positive results.

Flanders has seen a reduction in per capita residual waste; however, the impact of these targets cannot be uncoupled from the other policy measures that have been put into place e.g., EPR on products such as textiles and, take back obligations for nappies. It is clear from interviews that policy officials see a holistic approach as necessary and that no one single approach will work.

It is too early to see the impacts of the targets in Western Australia. Steps that have been taken since the publication of WARRS, such as increase in the implementation of FOGO and a three-bin system, could be attributed to the targets and complimentary measures in the strategy.

Appendix 1- Flanders 16 clusters

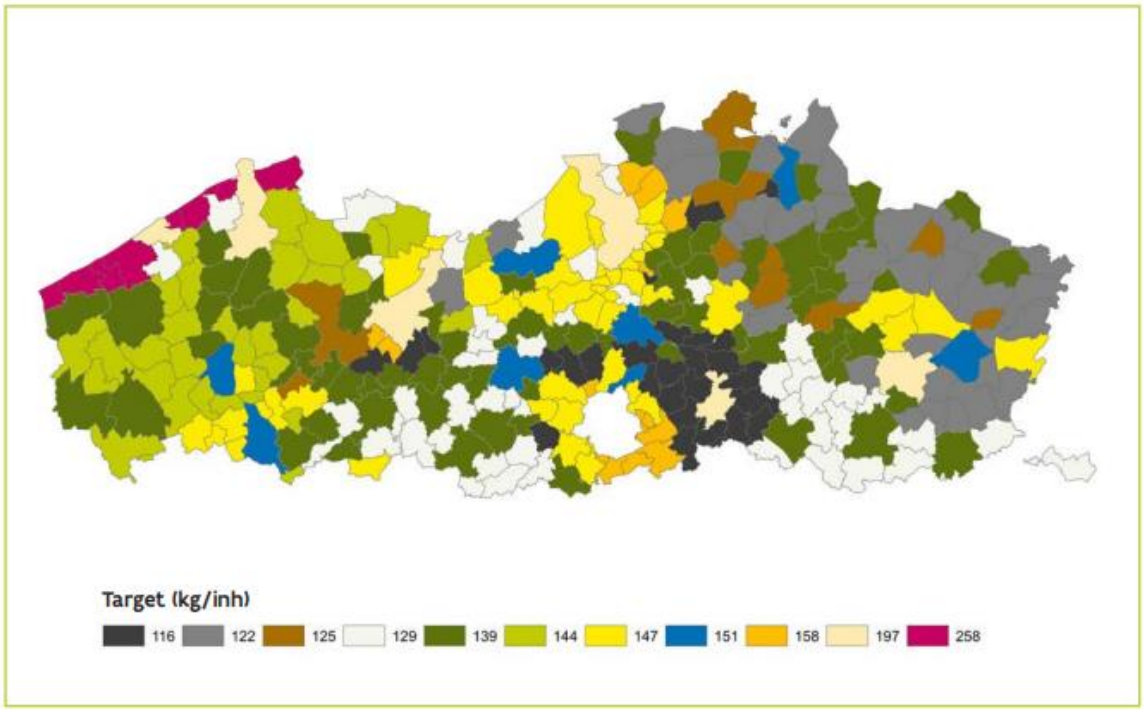

Figure 8: Map with the original 16 clusters the targets in kg per inhabitant

Denomination	Target
In the suburbs	116kg/inh
Rural or urbanized rural municipalities with strong economic growth	122 kg/inh
Urbanized rural municipalities with industrial activity and demographic growth	125 kg/inh
Less urbanized municipalities with demographic decline Small agricultural municipalities	129 kg/inh
In rural areas Rural and agricultural municipalities with industrial activity Medium sized cities	139 kg/inh
Significantly rural municipalities with high ageing in the population	144 kg/inh
Highly urbanized municipalities with low incomes Cities and metropolitan municipalities with industrial activity Metropolitan municipalities with tertiary activity	147 kg/inh
Residential suburbia with high income	158 kg/inh
Regional cities	151 kg/inh
Large and regional cities	197 kg/inh
Coastal municipalities	258 kg/inh

Figure 9: 16 clusters and their targets

Appendix 2- Examples of waste collection with frequency and method of collection

Table 5 below shows the waste streams that municipalities in Flanders must collect, how they are collected and how often they are collected, as determined by OVAM[124].

Table 8: Examples of mandatory waste streams, and their collection method and frequency

Waste stream / material	Door to door and/or short distance delivery system	Large recycling parks
Municipal household waste	Every two weeks and/or short distance	
Paper and cardboard	Monthly and/or short distance	Yes
Metal packaging and drink cartons	Every three weeks and/or short distance	
Glass	Monthly and/or short distance (at least one per 1000 inhabitants)	
Organic kitchen waste	Every two weeks and/or short distance, in organic waste regions	
Bulky waste	On demand, at least twice a year	Yes
Textiles	Four times a year, or containers (at least one per 1000 inhabitants)	Yes
Garden waste	On demand, at least four times a year, in organic waste regions	Yes

[124] OVAM (2020). Implementation Plan for Household Waste and Similar Industrial Waste. https://ovam.vlaanderen.be/uitvoeringsplan-huishoudelijk-gelijkaardig-bedrijfsafval

Appendix 3- Western Australia's 'Be a GREAT sort' Campaign

The WasteSorted behaviour change campaign 'Be a GREAT sort' (Figure 5) was developed by Western Australia's Department of Water and Environmental Regulation as part of a strategic approach to support consistent messaging around resource recovery, waste avoidance and appropriate waste disposal behaviours[125]. The campaign was developed using an evidence-based approach, including input from research and stakeholder consultation. The Campaign aims to reframe waste as an issue that can be solved, promote 'high-level waste sorting behaviours' and normalise the move away from landfill.

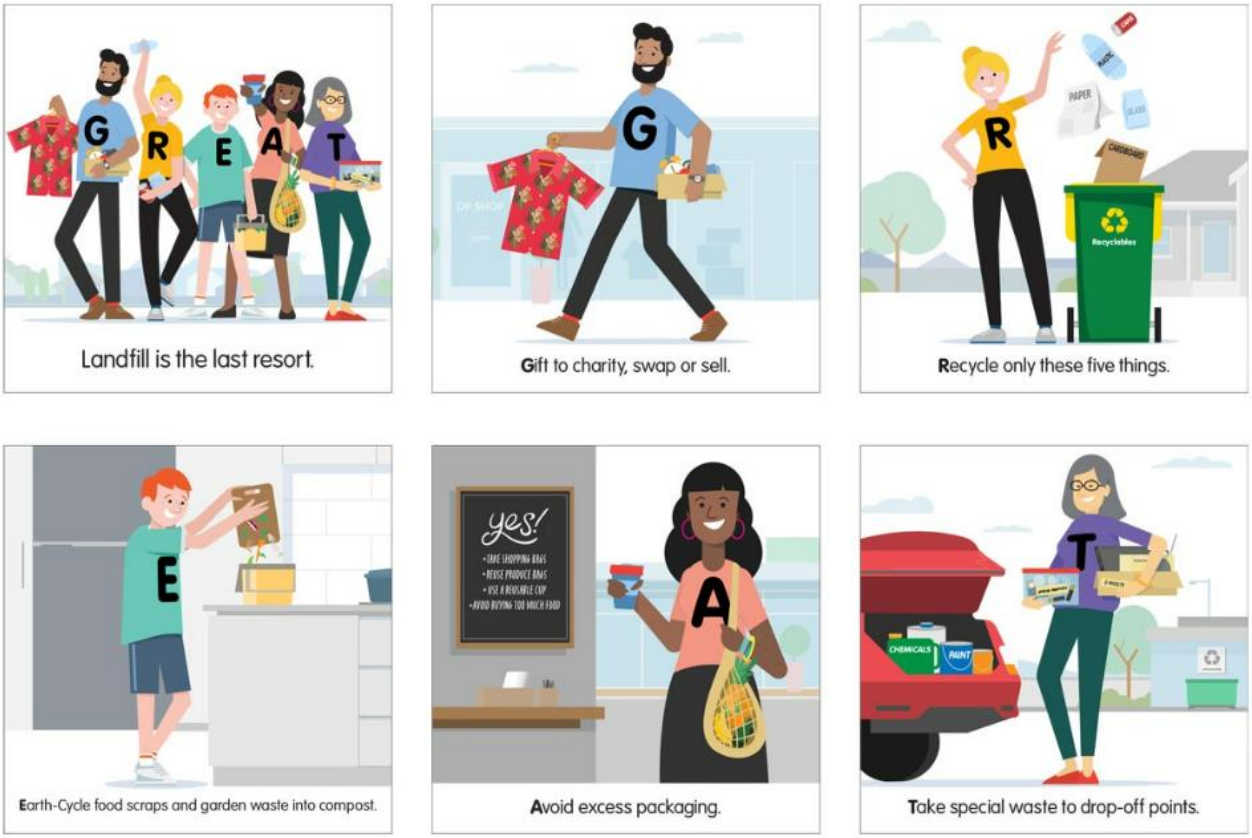

Figure 10: Socials for the 'Be a GREAT sort' Campaign

[125] Western Australian Department of Water and Environmental Regulation (2020). GREAT Sort toolkit. https://lga.wastesorted.wa.gov.au/greatsort