



NATIONAL WASTE STATISTICS

SUMMARY REPORT FOR 2019

2019

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

THE WORK OF THE EPA CAN BE DIVIDED INTO THREE MAIN AREAS:

Regulation: We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.

Knowledge: We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.

Advocacy: We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.

OUR RESPONSIBILITIES

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- > waste facilities (e.g. landfills, incinerators, waste transfer stations);
- > large scale industrial activities (e.g. pharmaceutical, cement manufacturing, power plants);
- > intensive agriculture (e.g. pigs, poultry);
- > the contained use and controlled release of Genetically Modified Organisms (GMOs);
- > sources of ionising radiation (e.g. x-ray and radiotherapy equipment, industrial sources);
- > large petrol storage facilities;
- > waste water discharges;
- > dumping at sea activities.

NATIONAL ENVIRONMENTAL ENFORCEMENT

- > Conducting an annual programme of audits and inspections of EPA licensed facilities.
- > Overseeing local authorities' environmental protection responsibilities.
- > Supervising the supply of drinking water by public water suppliers.
- > Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- > Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- > Prosecuting those who flout environmental law and damage the environment.

WATER MANAGEMENT

- > Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- > National coordination and oversight of the Water Framework Directive.
- > Monitoring and reporting on Bathing Water Quality.

MONITORING, ANALYSING AND REPORTING ON THE ENVIRONMENT

- > Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- > Independent reporting to inform decision making by national and local government (e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports).

REGULATING IRELAND'S GREENHOUSE GAS EMISSIONS

- > Preparing Ireland's greenhouse gas inventories and projections.
- > Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland. Environmental Research and Development.

STRATEGIC ENVIRONMENTAL ASSESSMENT

- > Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

ENVIRONMENTAL RESEARCH AND DEVELOPMENT

- > Assessing the impact of proposed plans and programmes on the Irish environment (e.g. major development plans). Radiological Protection.

RADIOLOGICAL PROTECTION

- > Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- > Assisting in developing national plans for emergencies arising from nuclear accidents.
- > Monitoring developments abroad relating to nuclear installations and radiological safety.
- > Providing, or overseeing the provision of, specialist radiation protection services.

GUIDANCE, ACCESSIBLE INFORMATION AND EDUCATION

- > Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- > Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (e.g. My Local Environment, Radon Maps).
- > Advising Government on matters relating to radiological safety and emergency response.
- > Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

AWARENESS RAISING AND BEHAVIOURAL CHANGE

- > Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- > Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

MANAGEMENT AND STRUCTURE OF THE EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- > Office of Environmental Sustainability
- > Office of Environmental Enforcement
- > Office of Evidence and Assessment
- > Office of Radiation Protection and Environmental Monitoring
- > Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

NATIONAL WASTE STATISTICS SUMMARY REPORT FOR 2019

Published by:

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil
PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland

Telephone: +353 53 9160600

E-mail: info@epa.ie

Fax: +353 53 916 0699

Website: www.epa.ie

LoCall: 1890 33 55 99

© Environmental Protection Agency 2021

Although every effort has been made to ensure the accuracy of the material contained in this publication, complete accuracy cannot be guaranteed. Neither the Environmental Protection Agency nor the authors accept any responsibility whatsoever for loss or damage occasioned or claimed to have been occasioned, in part or in full, as a consequence of any person acting, or refraining from acting, as a result of a matter contained in this publication.

All or part of this publication may be reproduced without further permission, provided the source is acknowledged.

ISBN: 978-1-80009-006-4

December 2021

CONTENTS

Key Findings for 2019	3
1 Introduction	6
2 Waste Management in Ireland	8
3 Progress to EU Targets.....	13
4 Municipal Waste	15
5 Household Waste	20
6 Food Waste.....	24
7 Composting & Anaerobic Digestion	27
8 Packaging Waste.....	32
9 Hazardous Waste.....	37
10 Waste Electrical & Electronic Equipment (WEEE)	41
11 End-of-Life Vehicles (ELVs).....	45
12 Waste Tyres	47
13 Construction & Demolition Waste.....	50
14 Outlook	55
15 Further Information	61
Appendix 1 – Progress to EU Waste Targets.....	63

LIST OF FIGURES

Figure 1:	The waste hierarchy, showing the order of preference for actions to reduce and manage waste (Source: EPA)	9
Figure 2:	Waste Collection & Treatment in 2019, compared with 2009. (Source: EPA)	11
Figure 3:	Municipal waste generated per person in various European countries in 2019. Source: Eurostat and EPA	16
Figure 4:	Management of municipal waste in 2019. Source: EPA.....	17
Figure 5:	Changes in municipal waste management from 2001 to 2019. Source: EPA	17
Figure 6:	Changes in the share of municipal waste landfilled compared with changes in the landfill levy. The 2035 landfill target is also shown. Source: EPA	18
Figure 7:	Trend in the generation and recycling of municipal and future EU targets for 2020 to 2035. Source: EPA	19
Figure 8:	Trend in household waste from 2010 to 2019 compared with CSO data on personal consumption of goods and services. Source: EPA and CSO.....	21
Figure 9:	Collection of household waste in Ireland in 2019	22
Figure 10:	Regional variations in the quantity of household waste collected per person, by bin type, in 2019	23
Figure 11:	Estimated food waste generated in Ireland in 2019. Source: EPA.....	25
Figure 12:	Types of wastes treated by composting / anaerobic digestion in 2019. Source: EPA	28
Figure 13:	Types of wastes treated by composting / anaerobic digestion in 2019. Source: EPA	29
Figure 14:	Quantity of Biodegradable Municipal Waste disposed to landfill, compared with Landfill Directive limits. Source: EPA	30
Figure 15:	Municipal biowaste treated by composting/anaerobic digestion, 2005 to 2019. Source: EPA	31

Figure 16:	Trend in packaging waste generation in Ireland compared with GNI. Source: EPA and CSO.....	33
Figure 17:	Breakdown of packaging waste generated in 2019. Source: EPA	34
Figure 18:	Trend in recovery and recycling of packaging waste, 2009 to 2019. Source: EPA	34
Figure 19:	Recycling of packaging waste in 2019, relative to current and future recycling targets. Source: EPA.....	35
Figure 20:	Recycling of packaging waste in Ireland and abroad, 2019. Source: EPA.....	36
Figure 21:	Types of hazardous waste generated in Ireland in 2019. Source: EPA	39
Figure 22:	Generation and location of treatment of hazardous waste in Ireland, 2010 to 2019. Source: EPA.....	39
Figure 23:	Breakdown of WEEE collected in 2019. Source: EPA	43
Figure 24:	WEEE collection, recovery and recycling in Ireland from 2009 to 2019, and EU collection targets. Source: EPA.....	44
Figure 25:	ELV reuse, recycling and recovery 2009-2019. Source: EPA.....	46
Figure 26:	Final treatment of waste tyres collected in Ireland in 2019. Source: EPA	48
Figure 27:	Overview of the collection and treatment of Ireland's waste tyres in 2019. Source: EPA.....	49
Figure 28:	Quantity of construction waste managed in Ireland, compared with CSO construction index. Source: EPA, NWCPO and CSO	51
Figure 29:	Composition of C&D waste collected in Ireland in 2019. Source: EPA	52
Figure 30:	Treatment of C&D waste in Ireland in 2019. Source: EPA.....	52
Figure 31:	Final treatment operation by C&D waste stream in 2019. Source: EPA.....	53

KEY FINDINGS FOR 2019

WASTE GENERATION

MUNICIPAL WASTE increased by



Waste from **HOUSEHOLDS** accounted for

1.6m TONNES



CONSTRUCTION AND DEMOLITION WASTE



correlating with **increased construction activity nationally.**



PACKAGING WASTE increased by



HAZARDOUS WASTE increased by



WASTE GENERATION IN IRELAND continues to be closely **LINKED WITH ECONOMIC ACTIVITY** indicating limited progress towards a circular economy



WASTE TREATMENT

The **drop off** in Ireland's **RECYCLING RATES** for some waste streams continued:



MUNICIPAL WASTE RECYCLING dropped by 1% to **37%**

PACKAGING RECYCLING RATE dropped by 2% to **62%**

The trend towards **INCINERATION** continued



almost half of **MUNICIPAL WASTE** incinerated **46%**

a large majority of **PLASTIC PACKAGING WASTE** incinerated **69%**

15% of **MUNICIPAL WASTE** was disposed to **LANDFILL**

48% of **HOUSEHOLDS** had a **BROWN BIN**, up from 43% in 2018



Municipal biowaste treated by **COMPOSTING** or **ANAEROBIC DIGESTION** increased by



Ireland **RELIED ON EXPORT** for treating a number of key waste streams:



40% of **MUNICIPAL WASTE** and **65%** of **HAZARDOUS WASTE** was exported for final treatment

only **16%** of packaging waste was **RECYCLED** in Ireland (mainly glass and wood)

20% of waste treated by composting / anaerobic digestion took place at facilities in **NORTHERN IRELAND**



COMPLIANCE WITH EU TARGETS

Ireland **CONTINUED TO MEET ALL CURRENT RECYCLING AND RECOVERY TARGETS** for packaging waste and



is **ON TRACK** to meet the **2020 recycling target for municipal waste**.



However **SIGNIFICANT IMPROVEMENTS** in recycling will be needed to meet the **2025** and **2030** targets.



Ireland **MET ALL RECYCLING AND RECOVERY TARGETS** FOR WEEE



however Ireland **FAILED TO MEET THE NEW WEEE COLLECTION TARGET** of achieving a separate collection rate of **61%**



Ireland **CONTINUED TO MEET ALL REUSE AND RECYCLING RATE TARGETS**



for end-of-life vehicles but by a narrow margin.



RECYCLING RATES REMAIN WORRYINGLY LOW for plastic packaging at **28%** with a continuing trend towards **ENERGY RECOVERY 69%**



FUTURE PLASTIC RECYCLING targets of



50% by **2025**

55% by **2030**

will be **VERY CHALLENGING** for Ireland to meet

Ireland is **ON TRACK TO MEET THE 2020 RECOVERY TARGET** of

70%

for **C&D waste**, achieving a material recovery rate of **84%** in 2019



OUTLOOK

The latest EPA data highlight that **URGENT ACTION IS NEEDED**

- to reverse the rise in waste generation
- significantly improve recycling rates
- and increase Ireland's self-sufficiency in treating our waste

Ireland needs to transform current **BUSINESS MODELS** into



CIRCULAR ones that promote **WASTE REDUCTION, REUSE & RECYCLING**.

CIRCULARITY ROADMAPS are needed for key economic sectors, supported by clear policy, legislation and targets.



1



INTRODUCTION

The EPA compiles national statistics on the generation and management of waste in the Republic of Ireland. National waste statistics are produced to fulfil a number of statutory and non-statutory European and international reporting obligations including:

- > the EU Waste Framework Directive (2008/98/EC as recast by 2018/851/EC);
- > the EU Waste Statistics Regulation (2150/2002/EC as amended);
- > EU producer responsibility initiative directives: the Packaging Directive, WEEE Directive and ELV Directive;
- > the Basel Convention on hazardous waste movements, incorporated into EU law via the Waste Shipment Regulation (1013/2006);
- > the OECD/Eurostat Sustainable Development Indicator SDI on Municipal Waste.

The EPA's waste statistics also fulfil a number of other important roles, including informing Ireland's waste management and prevention policy, tackling waste crime and keeping the public informed about trends in waste generation and treatment.

The chief outlet for national waste data is the EPA's National Waste Statistics web resource, a dedicated area of the EPA's website where new data on individual waste streams is published as it becomes available. See www.epa.ie/nationalwastestatistics

This summary report collates the key findings from the 2019 data published on the National Waste Statistics website. For detailed tables on individual waste streams and the latest available data for Ireland, always check the EPA website.

2



WASTE MANAGEMENT IN IRELAND

WASTE LEGISLATION & POLICY

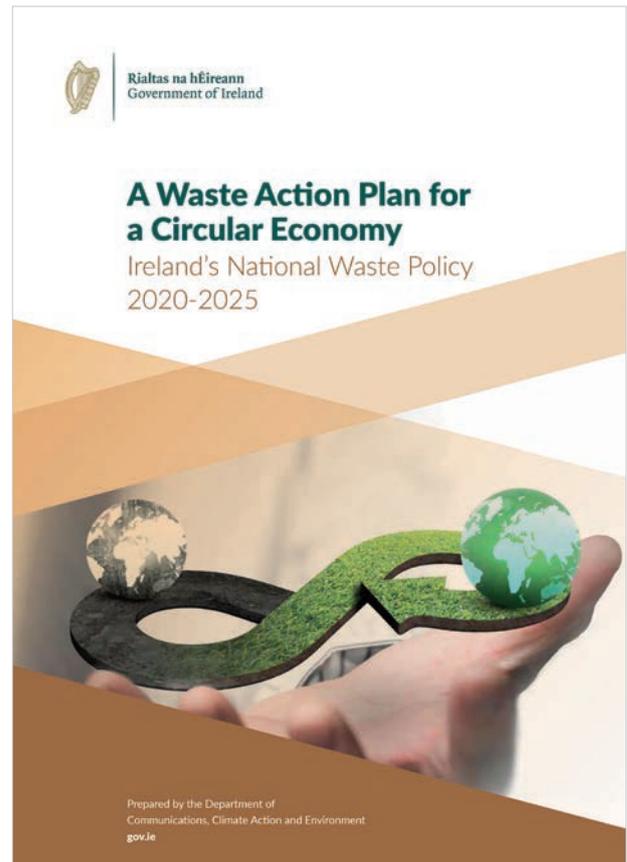
Ireland's waste management practices, infrastructure and regulation have matured significantly over the last two decades. This change has been driven by EU legislation which in turn has shaped national policy and economic instruments. European waste policy has long been centred on the concept of the waste hierarchy (*Figure 1*), with EU directives setting targets for the recovery and recycling of waste and its diversion from landfill with the aim of moving waste management policies and practices further up the waste hierarchy.



Figure 1: The waste hierarchy, showing the order of preference for actions to reduce and manage waste (Source: EPA).

The EU's first Circular Economy Action Plan, adopted in 2015, emphasises the need to move towards a life cycle-driven 'circular' economy, reusing resources as much as possible and bringing residual waste close to zero. The Circular Economy Action Plan updated pre-existing European waste legislation, tightened existing targets and introduced a range of new targets. The new targets and requirements in the revised EU Waste, Packaging and Landfill Directives were transposed into Irish law in 2020. The EU's second Circular Economy Action Plan, adopted in 2020, focuses on accelerating the transition of Europe's economy towards a more circular model.

Domestically, Ireland's national waste policy was reviewed in 2020 to strengthen the focus on the circular economy. A *Waste Action Plan for a Circular Economy* was published in September 2020. It contains over 200 measures across various areas including the circular economy, municipal waste, consumer protection and citizen engagement, plastics and packaging waste, construction and demolition waste, textiles, green public procurement and waste enforcement. The upcoming whole of government Circular Economy Strategy, due to be published by end-2021, will provide a national policy framework for Ireland's transition to a circular economy. The Circular Economy Bill 2021 will place Circular Economy Strategy, and Ireland's commitment to a circular economy, on a clear statutory footing and provide the necessary underpinning for relevant measures.



WASTE MANAGEMENT PLANNING

The making of a waste management plan is an obligation of EU Member States as required by the Waste Framework Directive. To date in Ireland, the three Regional Waste Management Planning Offices have produced six-year Regional Waste Management Plans setting objectives and targets for the prevention and management of waste within each region. In line with the *Waste Action Plan for a Circular Economy*, in 2021 the three Regional Waste Management Planning Offices are currently preparing a combined National Waste Management Plan for a Circular Economy due to be adopted in 2022. The Plan will contain targets for reuse, repair, resource consumption and reducing contamination levels.

The EPA is responsible for preparing the National Hazardous Waste Management Plan every six years. In 2021, the EPA published a revised Draft National Hazardous Waste Management Plan 2021-2027 for public consultation. The new Plan sets out a set of recommendations to be actioned within the lifetime of the plan to strengthen protection of the environment and human health through best-practice management of hazardous wastes. It includes recommendations relating to policy and regulation, prevention, collection and treatment, and implementation. Each recommendation is accompanied by an 'owner' and specific actions to be implemented in the first half of the plan period. The final Plan is expected to be published by EPA in December 2021.

WASTE REGULATION

The waste industry in Ireland is largely privatised. Four regulatory bodies are involved in regulating the collection, transport, storage, treatment and export of waste: the EPA, the National TransFrontier Shipments Office (NTFSO), the National Waste Collection Permit Office (NWCPO) and the local authorities.

The number of authorised waste collectors in Ireland has fallen from over 3,250 in 2009 to 2,050 in 2019 (Figure 2), reflecting a continued consolidation in Ireland’s waste collection market. The most significant change in recent years has been the shift away from disposing of residual waste to landfill to its use in energy recovery. The number of active landfills accepting municipal waste in Ireland has fallen markedly from 28 in 2009 to just four in 2019. Ireland has two incinerators treating municipal waste for energy recovery (total licensed capacity to treat 835,000 tonnes of non-hazardous municipal waste per year), while in addition three cement kilns

are authorised to accept solid recovered fuel (SRF) for co-incineration as an alternative to fossil fuels.

Across all sectors licensed by EPA, non-hazardous waste transfer stations ranked second highest for the number of non-compliances in 2019 (after the Food & Drink sector), the same as in 2018 and 2017. Of the 11 sites on the EPA’s National priority list in 2019, 3 were in the waste sector (two landfills and one non-hazardous waste transfer station). Local authorities carried out over 120,000 waste-related inspections in 2019, which included 27,000 routine inspections to permitted and authorised waste sites, over 3,000 inspections to assess compliance with producer responsibility obligations and over 28,000 non-routine including unauthorised waste inspections (which was 50% higher than in 2018). In addition, local authorities handled over 38,000 waste-related complaints (plus a further 34,000 litter complaints), undertook over 10,000 enforcement actions and initiated over 480 prosecution actions relating to waste (EPA, 2021¹).

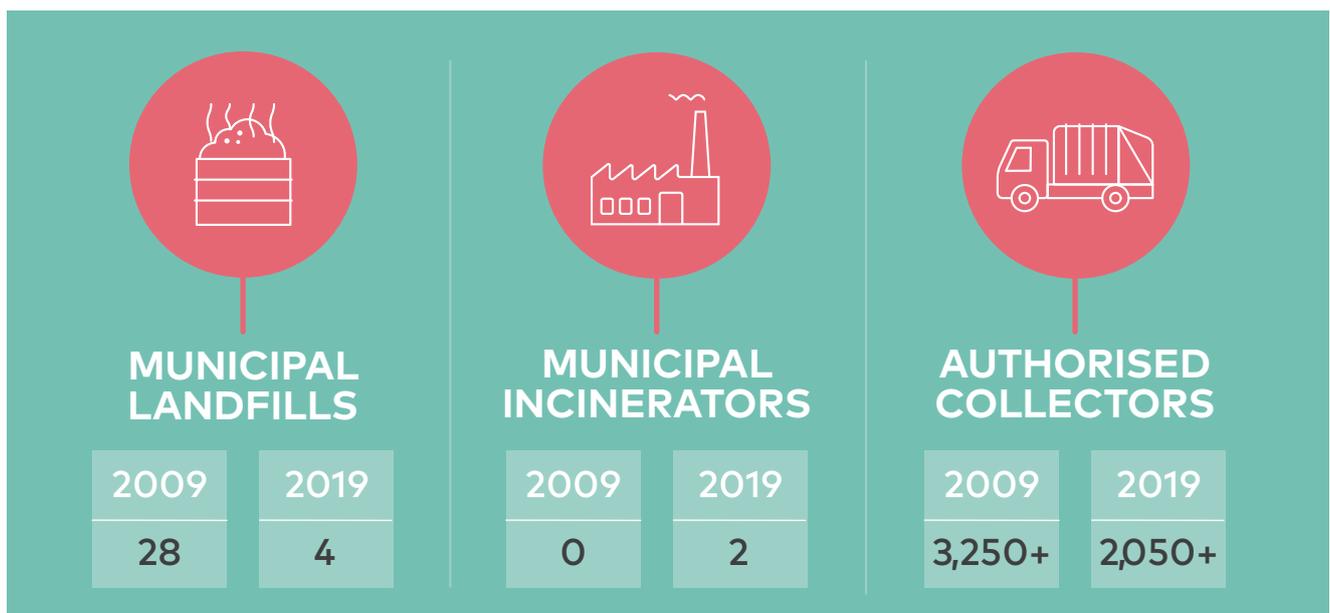


Figure 2: Waste Collection & Treatment in 2019, compared with 2009. (Source: EPA).

¹ EPA, 2021. Focus on Local Authority Environmental Enforcement – 2019 Activity Report. www.epa.ie/publications/compliance--enforcement/public-authorities/EPA_LAEnforcementReport2019.pdf

EXTENDED PRODUCER RESPONSIBILITY

Centred on the producer pays principle, Extended Producer Responsibility (EPR) requirements are in place for a number of waste streams in Ireland: packaging, electrical and electronic equipment, batteries, end-of-life vehicles, farm plastics and tyres. The EU's Circular Economy legislative package strengthens the producer responsibility concept in European legislation and extends the requirements for producer responsibility schemes. In line with this, the *Waste Action Plan for a Circular Economy* includes commitments to:

- > adopt new rules for EPR schemes to incentivise good practice in waste recycling and drive better product design;
- > extend the tyres EPR to include all categories of tyres provided for in the Eighth Schedule of the Tyre Regulations;
- > remove individual producer self-compliance as an option across all EPRs;
- > ensure EPR schemes modulate, where possible, the financial contributions paid by producers by 2023;
- > introduce new EPRs for the waste streams listed in the Single Use Plastics Directive: tobacco products, balloons, wet wipes (those not subject to an outright ban) and fishing gear.

WASTE PREVENTION & THE CIRCULAR ECONOMY

Ireland's National Waste Prevention Programme has been running since 2004 and is recognised by the European Commission as an example of best practice in the EU. Led by the EPA, the Programme aims to support waste prevention and resource efficiency in collaboration with households, businesses and other sectors. Some examples of NWPP initiatives include Stop Food Waste, the Local Authority Prevention Network and Smart Farming. The programme has been reviewed a number of times, most recently in 2020-2021 in response to the commitment in the *Waste Action Plan for a Circular Economy* to reconfigure the existing National Waste Prevention Programme to make it Ireland's Circular Economy Programme. In March 2021, the EPA published the draft of the new National Circular Economy Programme incorporating the National Waste Prevention Programme 2021-2027 for public consultation. The Programme, to be published before end-2021, aims to provide leadership in Ireland's circular economy and support Ireland's pathway to net-zero carbon emissions by 2050.



3



**PROGRESS
TO EU TARGETS**

Ireland must meet a range of EU targets for recycling and recovery of different waste streams, including municipal waste, construction and demolition waste, packaging waste, waste electrical and electronic equipment (WEEE), waste batteries and end-of-life vehicles (ELVs). *Appendix 1* summarises Ireland's performance in relation to its current targets. It shows that Ireland met all current targets in 2019, with the exception of the new WEEE collection target that came into effect in 2019 (see Chapter 10). Various targets are set to become far more challenging over the coming following recent updates to EU Regulations and Directives.

KEY NEW EU TARGETS



Municipal Waste Recycling

Under the revised Waste Framework Directive, the recycling target for municipal waste will increase to 55% in 2025, 60% in 2030 and 65% in 2035. The calculation method for 2025 and beyond is significantly more stringent, comparable to the OECD/Eurostat Municipal Waste Indicator which puts Ireland's municipal waste recycling rate at 37% in 2019, making achievement of the higher targets considerably more challenging.



Landfilling

The revised Landfill Directive requires member states to reduce the share of municipal waste landfilled to 10% or less by 2035. While Ireland has made significant progress in reducing disposal to landfill, with 15% of municipal waste disposed to landfill in 2019, meeting the 10% target still poses a challenge, particularly as it includes waste landfilled at each step along the municipal waste treatment process both in Ireland and abroad.



Plastic Packaging

The revised Packaging Directive sets ambitious recycling targets for plastic packaging of 50% by 2025 and 55% by 2030. With Ireland's recycling rate for plastic packaging declining to 28% in 2019, significant increases in plastic packaging recycling will be needed over the coming years to meet the new targets.



Waste Electrical & Electronic Equipment (WEEE)

Ireland failed to achieve the new WEEE Directive collection target of 65% in 2019, achieving a WEEE collection rate of 61%.



Other New Targets & Obligations

As well as tightening existing targets, the 2018 EU Circular Economy Package introduces a range of other targets and reporting obligations, including for food waste, single use plastics and re-use of materials such as furniture, textiles, electronic goods and construction materials.

4



MUNICIPAL WASTE

3.1m

tonnes generated in Ireland in 2019

37%

was recycled, 46% was incinerated and 15% was landfilled

40%

was exported for final treatment

Municipal waste consists of household waste and commercial and other waste that is similar in nature to household waste. It is one of the largest waste streams and a key area of policy focus. The data presented are provisional data for 2019 and still subject to Eurostat validation - always check the EPA Waste Statistics webpages for the latest data (www.epa.ie/nationalwastestatistics).

GENERATION

Almost 3.1 million tonnes of municipal waste was generated in Ireland in 2019, up from 2.9 million tonnes in 2018. Of this 52% came from households and 48% from commercial sources. This amounted to 628 kg of municipal waste per person in Ireland in 2019, an increase from 600 kg per person in 2018 and 577 kg per person in 2017. The largest increase was seen in the generation of bulky waste, which increased by almost 134,000 tonnes. Ireland's generation of municipal waste ranks well above the EU average (*Figure 3*). Average municipal waste generation in the EU increased from 496 kg per person in 2018 to 502 kg per person in 2019. The large differences between countries in reported municipal waste generation reflect variations in economic wealth and consumption patterns but also differences in how countries collect, manage and report municipal waste. Harmonised methodologies have been introduced at EU level to address these differences and improve comparability.

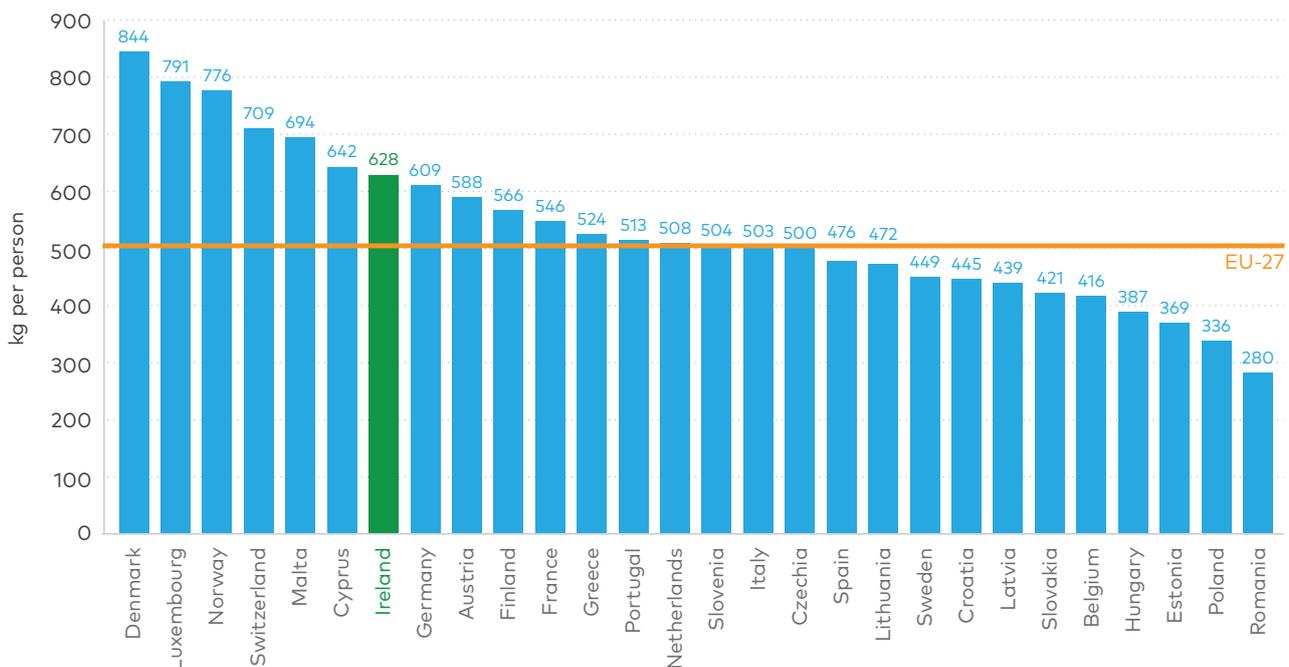


Figure 3: Municipal waste generated per person in various European countries in 2019.

Source: Eurostat and EPA.

TREATMENT

Of the 3.1 million tonnes of municipal waste generated in Ireland in 2019, 37% was recycled (down slightly from 38% in 2018), 46% was used in energy recovery (up from 43% in 2018) and 15% was landfilled (up slightly from 14% in 2018) (Figure 4).

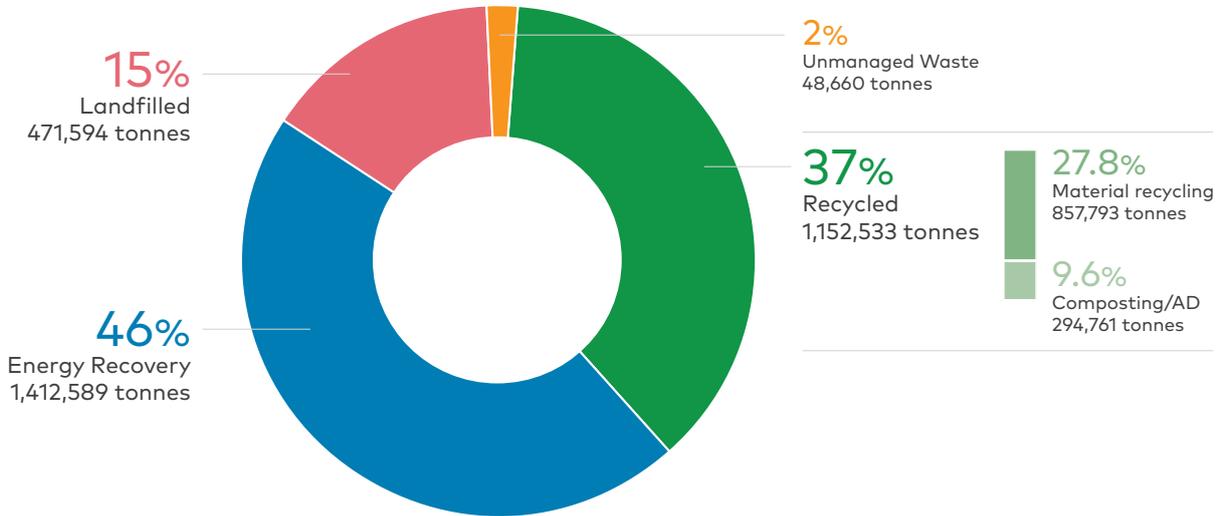


Figure 4: Management of municipal waste in 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

Figure 5 illustrates the very significant changes that have occurred in the management of municipal waste in Ireland since 2001. There has been a dramatic fall-off in landfilling of municipal waste over the past two decades in Ireland. The shift away from landfill was accompanied by increased levels of recycling in the early 2000s and more recently significant increases in the share of municipal waste sent for energy recovery. These trends are discussed in more detail below.

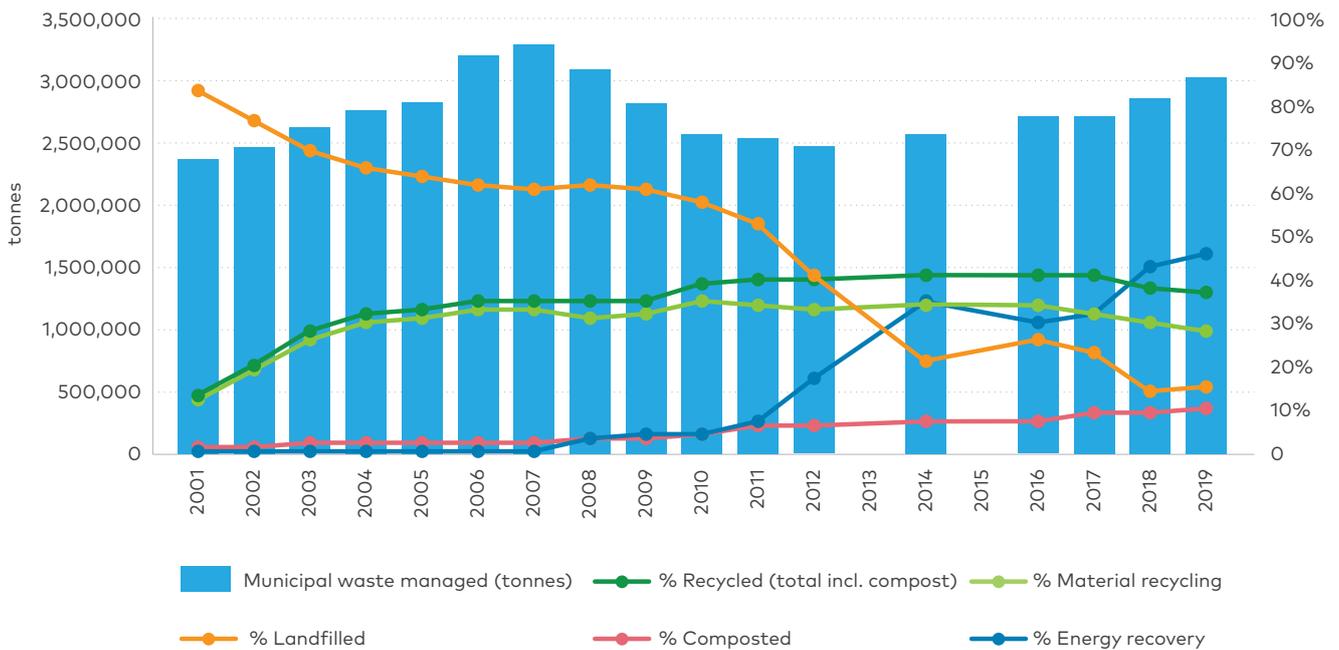


Figure 5: Changes in municipal waste management from 2001 to 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

Disposal to landfill has fallen sharply in Ireland over the past decade; a welcome development since this is the least desirable option in the waste management hierarchy. Some 15% of municipal waste was landfilled in 2019, down from 58% in 2010 and over 80% in 2001. The increase in the landfill levy has been a key policy driver in bringing about this dramatic shift (*Figure 6*). The marginal increase in the landfill rate from 14% in 2018 to 15% in 2019 is attributable to a change in the European Commission calculation rules². Before 2019, biostabilised fines used for landfill cover were classified as a waste recovery process (backfill) while from 2019 on this practice is classified as disposal. Applying the same calculation rules to the 2018 landfill figures to allow for a direct year-on-year comparison gives a landfill rate of 18% for 2018, indicating a net decrease of 3% in municipal waste landfilled in Ireland between 2018 and 2019 when the effects of the method change are excluded.

Further diversion of municipal waste from landfill will be needed for Ireland to achieve the revised Landfill Directive limit of 10% or less disposal of municipal waste to landfill by 2035 (*Figure 6*).



Figure 6: Changes in the share of municipal waste landfilled compared with changes in the landfill levy. The 2035 landfill target is also shown. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

Of the municipal waste diverted from landfill in recent years, it is clear from *Figure 5* that the majority went to energy recovery. The share of municipal waste sent for energy recovery increased from 0% in 2007 to 46% in 2019. Ireland's first municipal waste incinerator came into operation in 2011 and the second during 2017. In addition, three cement kilns are now licensed to co-fire municipal waste as an alternative to fossil fuels.

Figure 5 shows that recycling, by contrast, had largely plateaued since 2010 and rates have now in fact started to slip, following strong improvements in the early 2000s. Ireland's recycling rate for municipal waste was 37% in 2019, down from 38% in 2018 and 40% in 2017, using the OECD-Eurostat sustainable development indicator on municipal waste. This puts Ireland's recycling rate below the European average of 48% in 2019 and significantly behind the leading EU country, Germany, where 67% of municipal waste was recycled in 2019³.

² As prescribed by **Commission Implementing Decision (EU) 2019/1004**

³ ec.europa.eu/eurostat/databrowser/view/cei_wm011/default/table?lang=en

The decrease in recycling from 2018 to 2019 is attributable to a change in the European Commission calculation rules for the reporting of municipal waste, whereby waste that is co-incinerated at cement kilns and incorporated into cement product is no longer counted as recycling and is now reported as recovered⁴. Notwithstanding this method change, there has been a downward trend in Ireland's recycling performance from 41% in 2016 to 40% in 2018 to 38% in 2019 (*Figure 7*).

For the purpose of reporting on compliance with the Waste Framework Directive's 2020 recycling target for municipal waste, a separate calculation method is used (based on household derived paper, metal, plastic and glass), as provided for under the Directive, which put Ireland's municipal recycling rate at 53% in 2019, in compliance with the Directive's 2020 recycling target of 50%. However, future Waste Framework Directive targets for 2025 onwards, shown in *Figure 7*, will use a calculation methodology more comparable with the OECD-Eurostat Indicator, which put Ireland's municipal recycling rate at 37% in 2019. The more stringent calculation methodology makes achievement of the new recycling targets even more challenging.

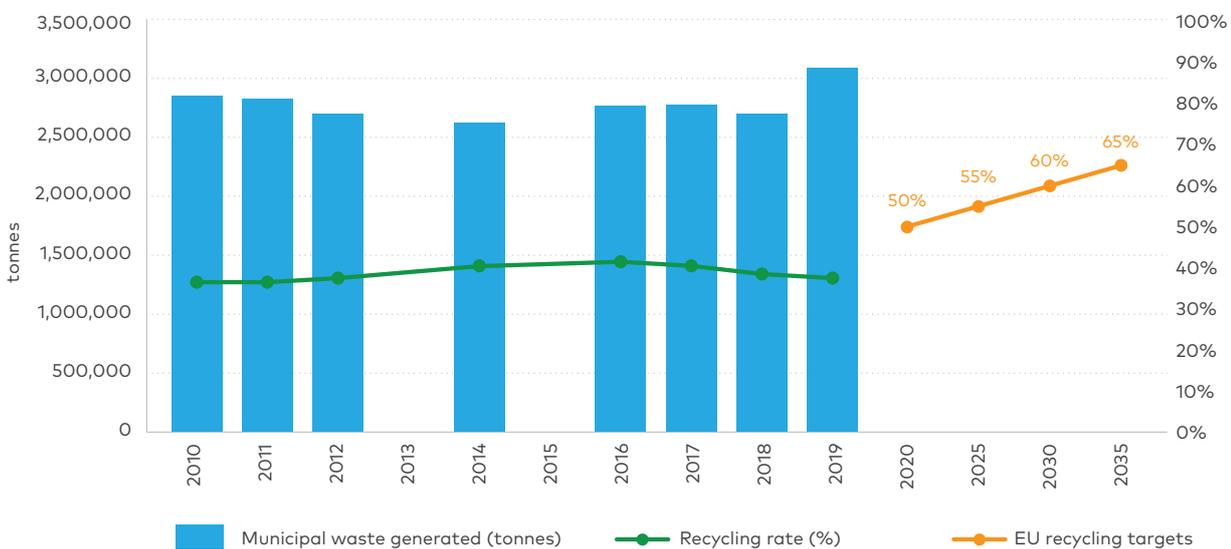


Figure 7: Trend in the generation and recycling of municipal and future EU targets for 2020 to 2035. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data

Ireland is heavily reliant on export markets for final treatment of municipal waste. In 2019, some 1.2 million tonnes representing 40% of Ireland's municipal waste was exported, up from 35% in 2018. Of the municipal waste exported in 2019, 701,000 tonnes went for recycling, 447,000 tonnes went for energy recovery and 90,000 for composting.

The 2019 municipal waste data for Ireland highlight the need for urgent implementation of policy measures to significantly improve Ireland's recycling rates in the years ahead, to position Ireland on course to meet the ambitious EU recycling targets for 2025-2035 and capitalise on the opportunities of a circular economy. This is discussed further in Chapter 14 Outlook.



⁴ As prescribed by **Commission Implementing Decision (EU) 2019/1004**

5



**HOUSEHOLD
WASTE**

1.6m	tonnes of household waste generated in 2019
66%	of household waste was collected at kerbside
48%	of households had a brown bin

GENERATION

A total of 1.57 million tonnes of household waste was managed in Ireland in 2019, an increase of 3% on 2018 (*Figure 8*). Overall, there were small increases in the quantities of most waste types generated by households. The largest increases were seen in household waste brought to Civic Amenity Sites and bulky skip waste collections. The quantity of household waste generated in Ireland in 2019 equates to 330 kilogrammes per person, up from 325 kg/person in 2018 and 321 kg/person in 2017. The general trend in household waste correlates closely with CSO data on personal consumption of goods and services, both of which have shown a predominantly upward trend since 2012 (*Figure 8*). These data indicate that waste generation in Ireland continues to be closely linked with consumption patterns.

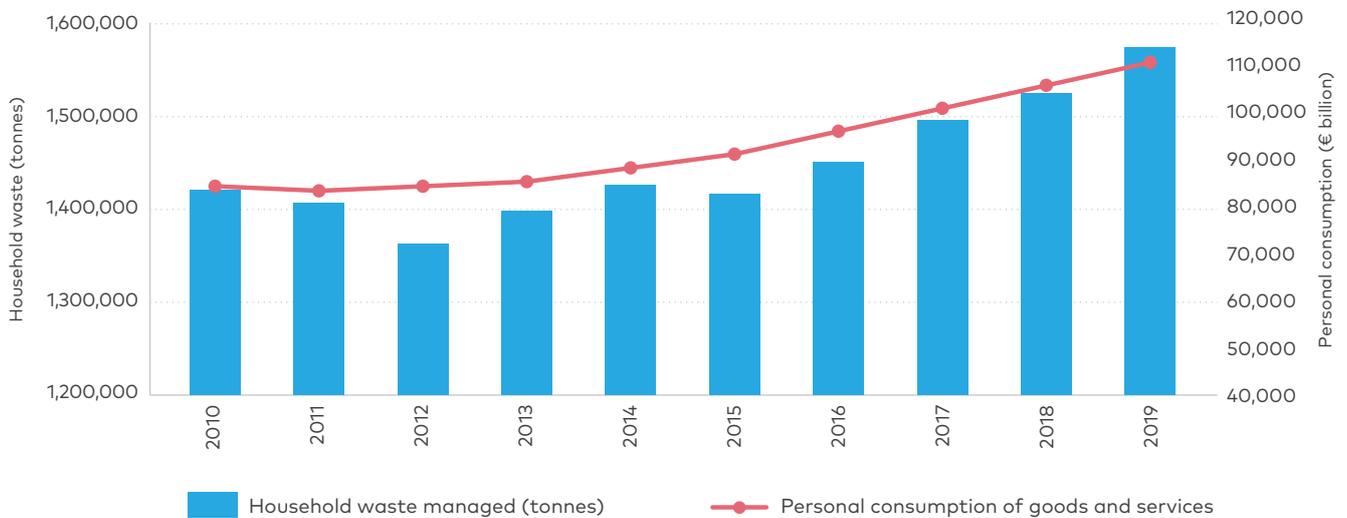


Figure 8: Trend in household waste from 2010 to 2019 compared with CSO data on personal consumption of goods and services. Source: EPA and CSO.



Check www.epa.ie/nationalwastestatistics for latest data.

An estimated further 48,660 t of household waste was unmanaged in Ireland in 2019. 'Unmanaged waste' is waste that is not collected by kerbside collections or brought to waste collection centres and is therefore likely to cause pollution in the environment because it may be fly tipped or disposed of through backyard burning.

COLLECTION

As shown in *Figure 9*, the majority (66%) of household waste managed in Ireland in 2019 was collected at kerbside (1,044,973 tonnes), down from 70% (1,069,068 tonnes) in 2018. Increases were seen in the share of household waste collected at civic amenity sites (up from 11% in 2018 to 13% in 2019) and via skips (up from 9% in 2018 to 11% in 2019).

Some (40%) of all household waste managed in 2019 was collected in the residual waste (black) bin, amounting to 635,000 tonnes. This represents a decline from the 675,764 tonnes of residual waste collected in 2018. Residual waste in Ireland is generally incinerated for energy recovery or landfilled. The EPA estimates that the amount of residual waste could be reduced by approximately 50% with proper segregation of recyclable and organic waste.

Almost 244,000 tonnes or 16% of household waste was collected in the recycling bin in

2019 (down slightly on the 249,227 tonnes collected in 2018). The EPA's most recent waste characterisation⁵ study found that almost a third of the waste placed in household recycling bins is not recyclable and belongs in the residual waste or organic bin.

Organic waste (food and garden waste) collected in the brown bin accounted for 10% of all household waste managed in 2019 (159,000 tonnes), up from 9% in 2018 (137,032 tonnes). When properly segregated, this waste gets composted or digested to make biogas. Despite improved brown bin services and use, still only 48% of Irish households had a brown bin in 2019, up from 43% in 2018 and 41% in 2017. Most household organic waste (over 60% in 2019) continues to be placed in the residual (black) or recycling bins and therefore not recycled (either because residents don't have a brown bin or they are not using it correctly).

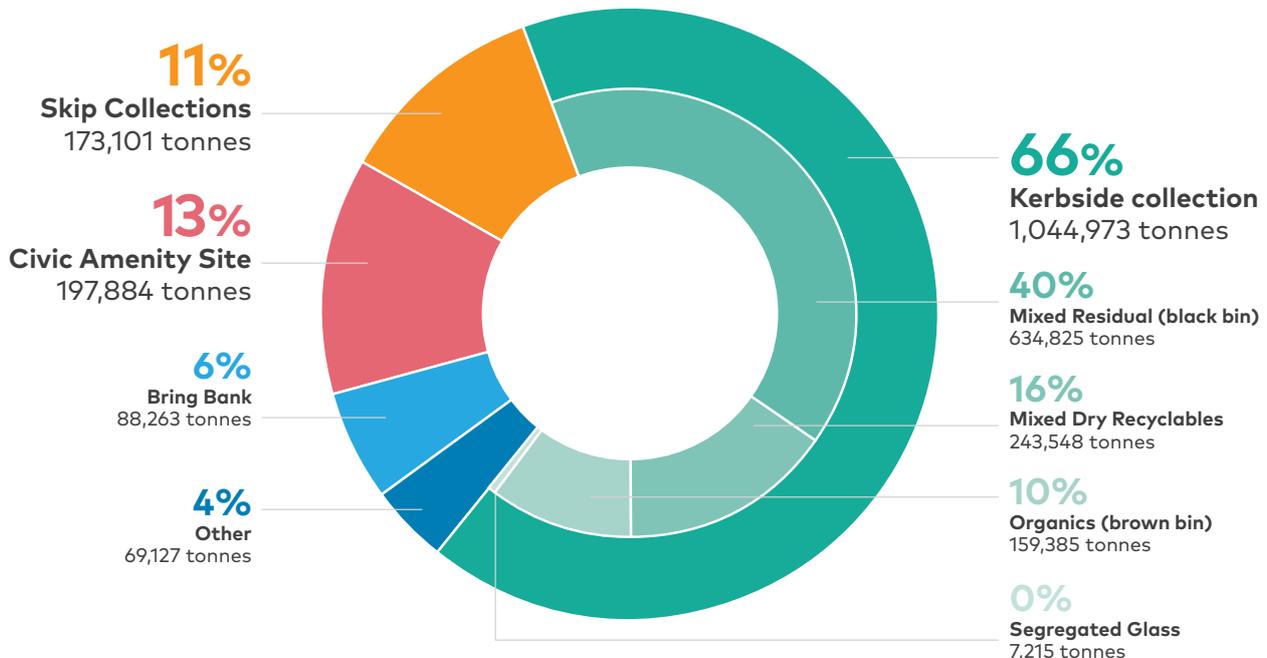


Figure 9: Collection of household waste in Ireland in 2019.

Check www.epa.ie/nationalwastestatistics for latest data.

⁵ Waste characterisation reports are available at: www.epa.ie/pubs/reports/waste/wastecharacterisation/

Figure 10 illustrates clear regional differences in the quantity of household waste collected per person by bin type. These variations can be attributed to differences in the types of waste collection services and infrastructure provided (for example, prevalence of 2-bin or 3-bin systems in rural vs. urban areas), large variations between counties in the share of the population using authorised waste collectors, and behavioural factors such as bin sharing.

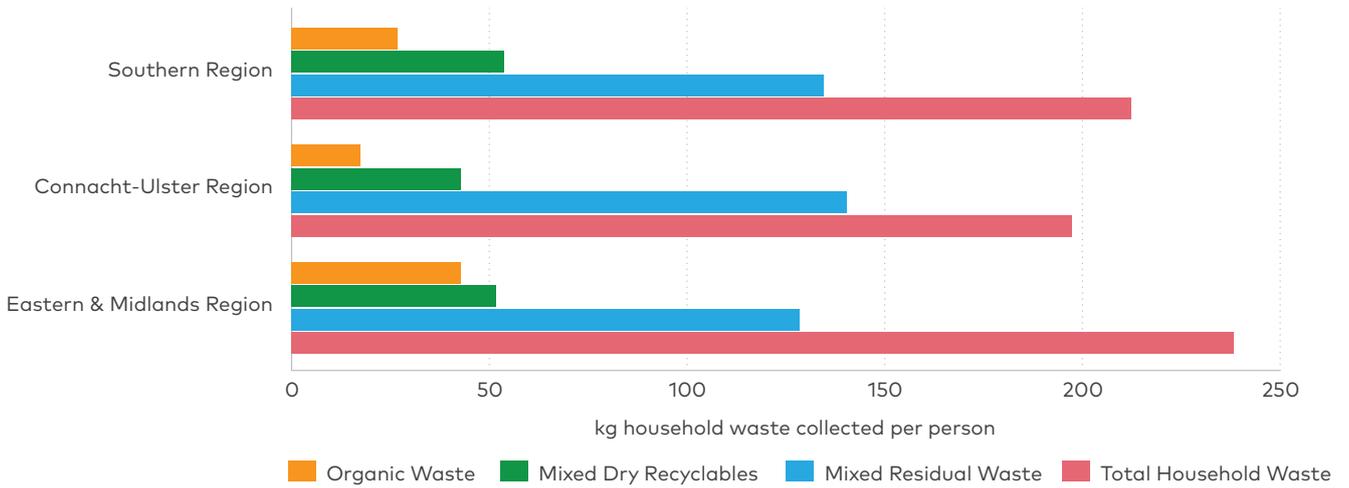


Figure 10: Regional variations in the quantity of household waste collected per person, by bin type, in 2019.

Check www.epa.ie/nationalwastestatistics for latest data.

6



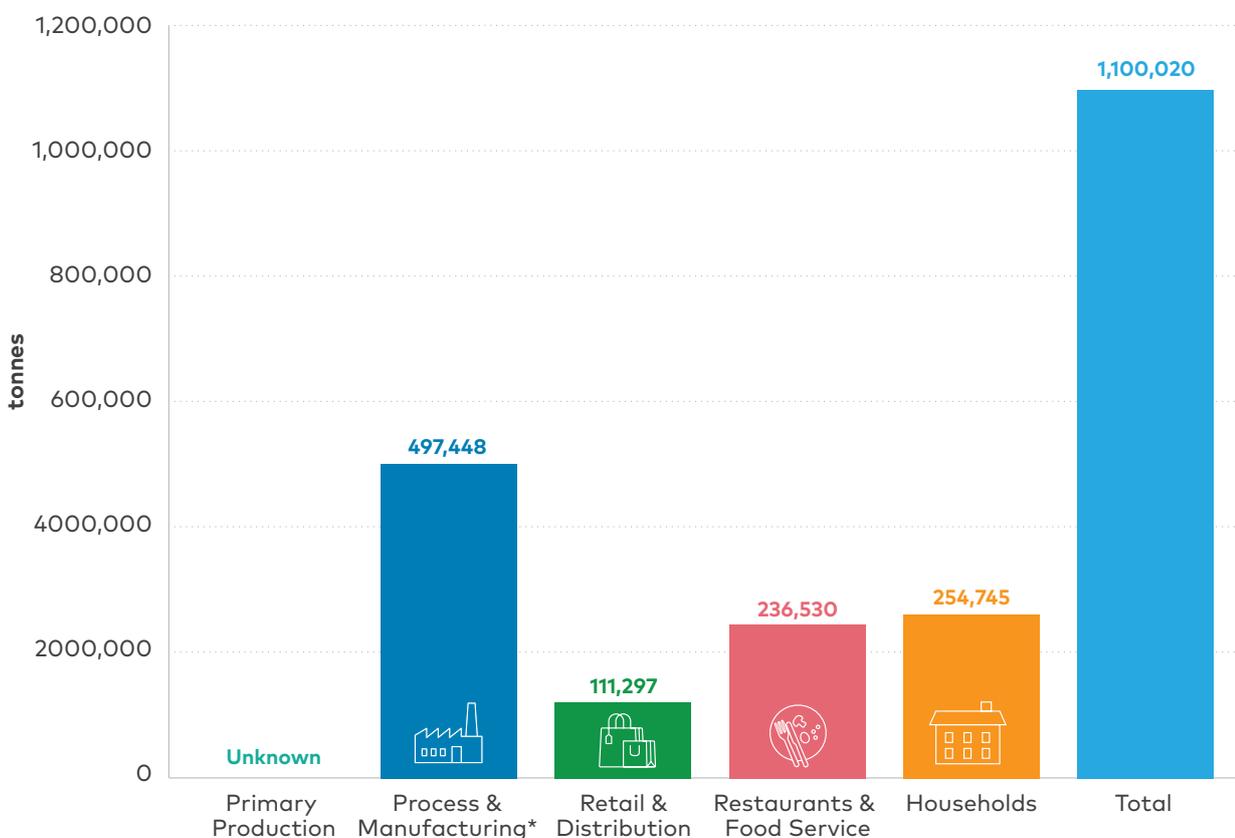
FOOD WASTE

Food waste is a global problem that has environmental, social and economic consequences. More than one quarter of food produced is wasted globally. Growing, processing, transporting food all use significant amounts of resources. Food waste is estimated to account for 8-10% of total anthropogenic greenhouse gas emissions. The urgency and challenge of addressing food waste is highlighted at international level and EU level through the UN Sustainable Development Goals and the Circular Economy Package. The EU aims to reduce food waste by 50% by 2030 and Ireland will be required to report to the EU on food waste generated at each stage of the food supply chain from 2020. Ireland's Climate Action Plan also includes food waste as a priority waste stream and articulates a 50% reduction. The reframed National Waste Prevention Programme

aims to raise awareness of food waste and target behavioural change through its Stop Food Waste programme and Food Waste Charter.

GENERATION

The EPA estimate that Ireland generated approximately 1.1 million tonnes of food waste in 2019 (*Figure 11*), up from 1.05 million tonnes generated in 2018. About half (45%) of Ireland's food waste is estimated to come from the processing and manufacturing sector, with the remainder arising from households (23%) and the commercial sector including restaurants/ food service and retail/distribution (32%). These figures exclude food waste arising at the primary production stage, for which data are not currently available.



*2018 data

Figure 11: Estimated food waste generated in Ireland in 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.



Current household food waste amounts to approximately a quarter of a million tonnes per annum (excluding home composting). The average Irish household throws out 150kg of food waste each year, at a cost of approximately €700. There is considerable uncertainty over food waste amounts in the processing and manufacturing sector, as well as at the primary production stage, and the EPA will undertake further analysis of these sectors during 2022.

TREATMENT

A significant amount of food waste in Ireland is not currently being segregated for separate collection and ends up in residual and recycling bins. Under the revised Waste Framework Directive, separate collection of biowaste will be mandatory from the end of 2023. Food waste management has improved with an increase in brown bin collections over the last decade but from a low base. Brown bin use by householders has increased from 19,000 tonnes in 2008 to 159,385 tonnes in 2019. This has resulted in a decrease of food waste in the household residual waste bin; but in 2019 an estimated 63% of food waste in the residual waste and mixed dry recyclables household

bins should have been diverted either to the brown bin or to home composting. As discussed in Chapter 5, less than half of Irish households (48%) had a brown bin in 2019. A 2019 survey on brown bin use in the commercial sector⁶ found that over 30% of businesses did not use a food waste bin despite a decade of legislation requiring it. These findings align with the EPA's most recent waste characterisation study⁷ which found that over one-third of the waste in commercial residual waste bins consists of food waste.

Collectively these findings illustrate the scale of the challenges that Ireland faces to reduce food waste and improve biowaste management in the years ahead.



⁶ www.cre.ie/web/wp-content/uploads/2019/10/RED-C-Commercial-Food-Waste-Survey-Sept-2019.pdf

⁷ Waste characterisation reports are available at: www.epa.ie/publications/monitoring--assessment/waste/national-waste-statistics

7



COMPOSTING & ANAEROBIC DIGESTION

528k

tonnes of waste went for composting / AD in 2019

56%

consisted of municipal biowaste such as kitchen food waste and garden & park green waste

20%

was transferred to facilities in Northern Ireland for treatment

QUANTITY

The quantity of waste treated by composting and anaerobic digestion rose to 528,000 tonnes in 2019, a 19% increase on the previous year. The majority of waste treated by composting/AD consisted of municipal biowaste (56%) such as kitchen/canteen food waste and garden/park green waste (*Figure 12*). The largest increases in 2019 were seen in:

- > municipal biowaste, up 15% from 257,000 in 2018 to 295,000 tonnes in 2019;
- > wastes from the dairy products industry which more than doubled, from 20,618 tonnes in 2018 to 44,730 tonnes in 2019; and
- > wastes from waste water treatment plants, up 18% from 54,779 tonnes in 2018 to 64,622 tonnes in 2019.

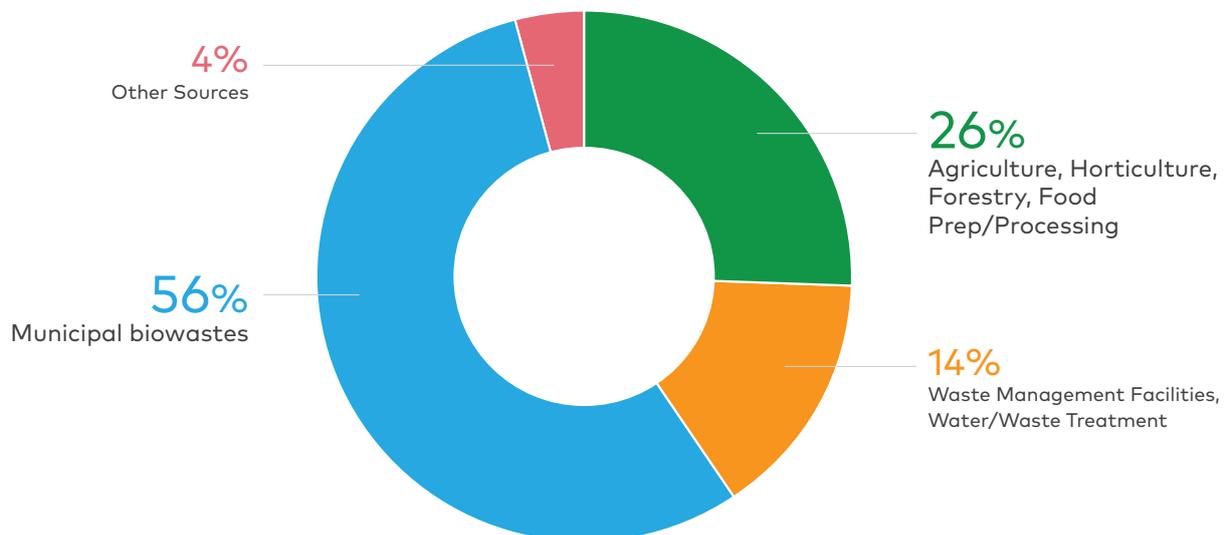


Figure 12: Types of wastes treated by composting / anaerobic digestion in 2019. Source: EPA. Check www.epa.ie/nationalwastestatistics for latest data.

These figures exclude (i) home composting estimates, (ii) facilities which only treated their own waste, (iii) waste imported to Ireland for treatment, and (iv) organic fines accepted for biostabilisation, which are reported separately (below).

TREATMENT

Of the 528,000 tonnes of waste treated by composting or anaerobic digestion in 2019, 55% underwent composting while 45% was treated by anaerobic digestion. There has been a marked increase in the quantity of waste treated by anaerobic digestion in recent years, from 120,400 tonnes in 2017 to 237,600 tonnes in 2019 (Figure 13).

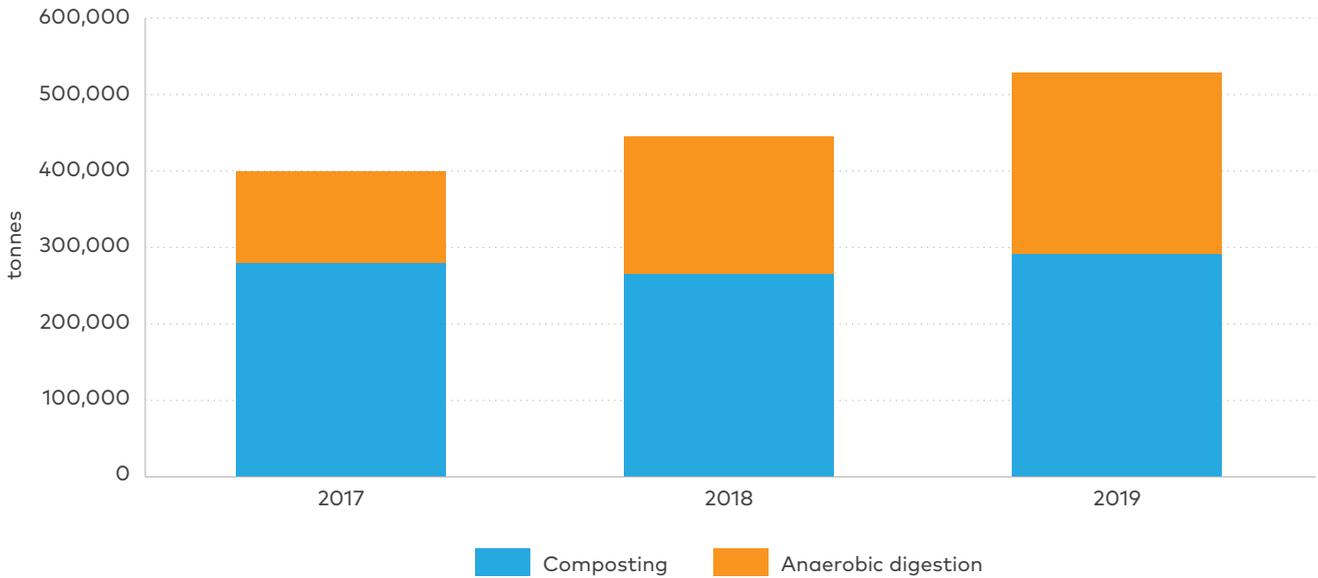


Figure 13: Types of wastes treated by composting / anaerobic digestion in 2019. Source: EPA. Check www.epa.ie/nationalwastestatistics for latest data.

In 2019, some 80% of the waste treated by composting or anaerobic digestion was treated at facilities in Ireland (down from 83% in 2018), while 20% was transferred to facilities in Northern Ireland (up from 17% in 2018). More favourable gate fees in Northern Ireland are attributed as the main driver for this trend.

Products of the composting and anaerobic digestion processes are used in horticulture, landscaping and agriculture.

MUNICIPAL BIOWASTE

The bulk of biodegradable municipal waste consists of food waste and garden/park waste. Two key pieces of EU legislation deal with biodegradable municipal waste:

- > the Landfill Directive, which requires the diversion of biodegradable municipal waste from landfill, and
- > the Waste Framework Directive, which requires measures to encourage the separate collection and recovery of food waste and garden and park waste (biowaste).

The Landfill Directive sets a limit on the quantity of biodegradable municipal waste going to landfill; by 2020, it must be reduced to 35% of the total quantity (by weight) of biodegradable municipal waste produced in 1995. Ireland has been in compliance with this target for some time (*Figure 14*).

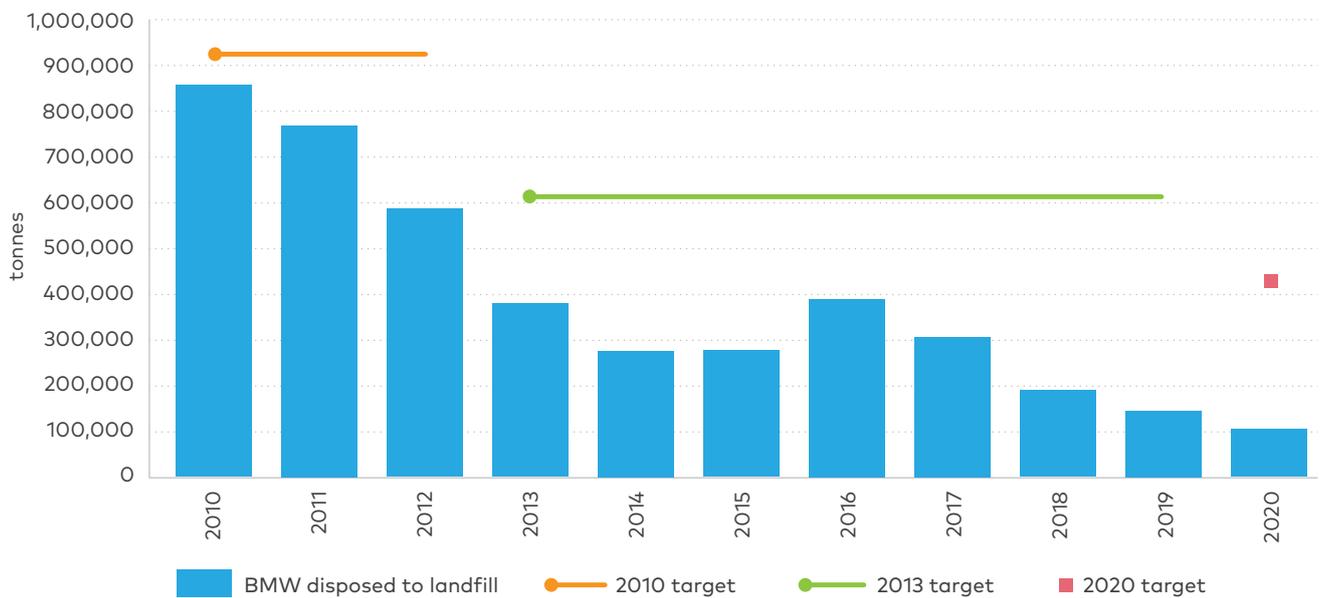


Figure 14: Quantity of Biodegradable Municipal Waste disposed to landfill, compared with Landfill Directive limits. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

In Ireland, separate collection of food waste was introduced for commercial premises in 2010 and for households in 2013; this currently applies to those living in population centres with of 500 or more residents. As outlined in Chapter 5, 48% of all Irish households had a brown bin in 2019, up from 43% in 2018 and 41% in 2017. New EU waste legislation means that the separate collection of biowaste will be mandatory from end- 2023.

Figure 15 shows that the Food Waste Regulations and the associated brown bin roll out have led to large increases in the quantity of municipal biowaste composted/anaerobic digested, from less than 50,000 tonnes in 2005 to 295,000 tonnes in 2019. The fact that a greater share of organic waste is now being separately collected and treated in Ireland is also evidenced in the EPA's 2018 waste characterisation study, which found that the fraction of food

and garden waste in household residual bins has fallen from 24% in 2008 to 16% in 2018. Despite these improvements, as outlined in Chapter 5 Household Waste 60% of household organic waste continued to be placed in the residual (black) or recycling bins in 2019 and was therefore not separately collected for composting or anaerobic digestion (either because residents don't have a brown bin or they are not using it correctly).

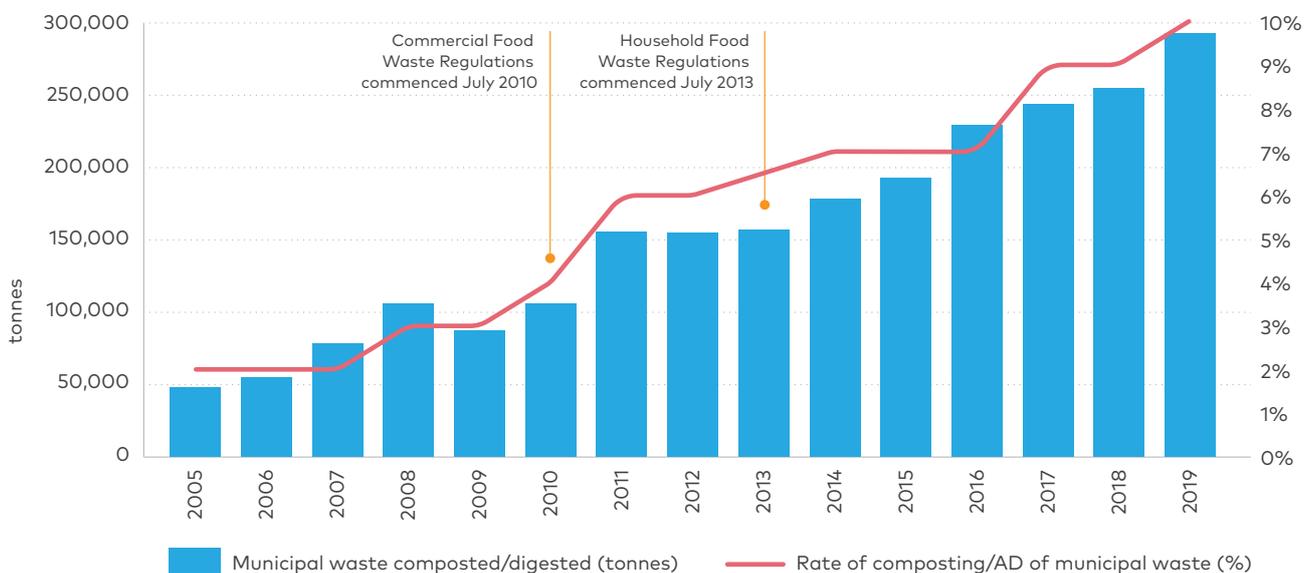


Figure 15: Municipal biowaste treated by composting/anaerobic digestion, 2005 to 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

ORGANIC FINES

Organic fines arise from the mechanical treatment of residual waste. There has been a notable rise in the treatment of organic fines at composting plants in Ireland up from around 50,000 tonnes in 2013 to 152,000 tonnes in 2019. This increase reflects the fact that most residual waste in Ireland is now pre-treated mechanically at

waste facilities, for example by trommelling, before it is sent for recovery or disposal. The organic fines arising from this pre-treatment process undergo composting to reduce their biological activity to an EPA-approved standard. The biostabilised fines can then be used as landfill cover or disposed of at landfill without giving rise to odour and greenhouse gas emissions.

8



PACKAGING WASTE

1.1m	tonnes of packaging waste generated in 2019
62%	of all packaging waste was recycled
69%	of plastic packaging waste was incinerated, 28% was recycled

GENERATION

Ireland generated 1,124,917 tonnes of packaging waste in 2019, an increase of 11% on 2018 and the third year in a row when the quantity of packaging waste exceeded 1 million tonnes. The generally upward trend in packaging waste generation in Ireland, evident in *Figure 16*, shows Ireland is failing to decouple economic activity from packaging waste generation and the consumption of finite resources.

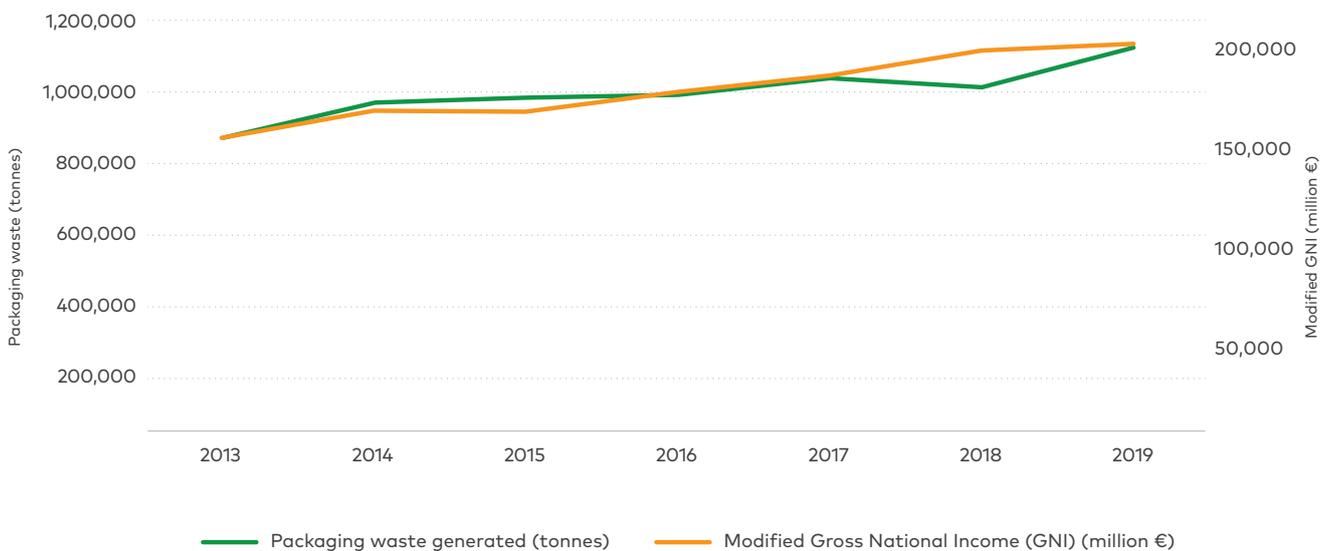


Figure 16: Trend in packaging waste generation in Ireland compared with GNI.

Source: EPA and CSO.



Check www.epa.ie/nationalwastestatistics for latest data.

The majority of packaging waste in 2019 consisted of paper and cardboard (42%) and plastic (28%), with smaller amounts of glass, wood and metal and textiles (*Figure 17*). The EPA's 2018 waste characterisation study⁸ found that packaging accounted for one-third (33%) of all household waste collected at kerbside⁹. Comparing with the previous waste characterisation study a decade earlier, the share of packaging waste has increased between in both the recycling bin (from 41% to 55%) and in the residual waste bin (from 23% to 29%)¹⁰.

⁸Waste characterisation reports are available at: www.epa.ie/nationalwastestatistics

⁹Percentage before contamination factors are applied. Contamination factors take account of the amount of residual waste left on target materials, for example residual food left in a food container.

¹⁰Percentages before contamination factors are applied. Contamination factors take account of the amount of residual waste left on target materials, for example residual food left in a food container.

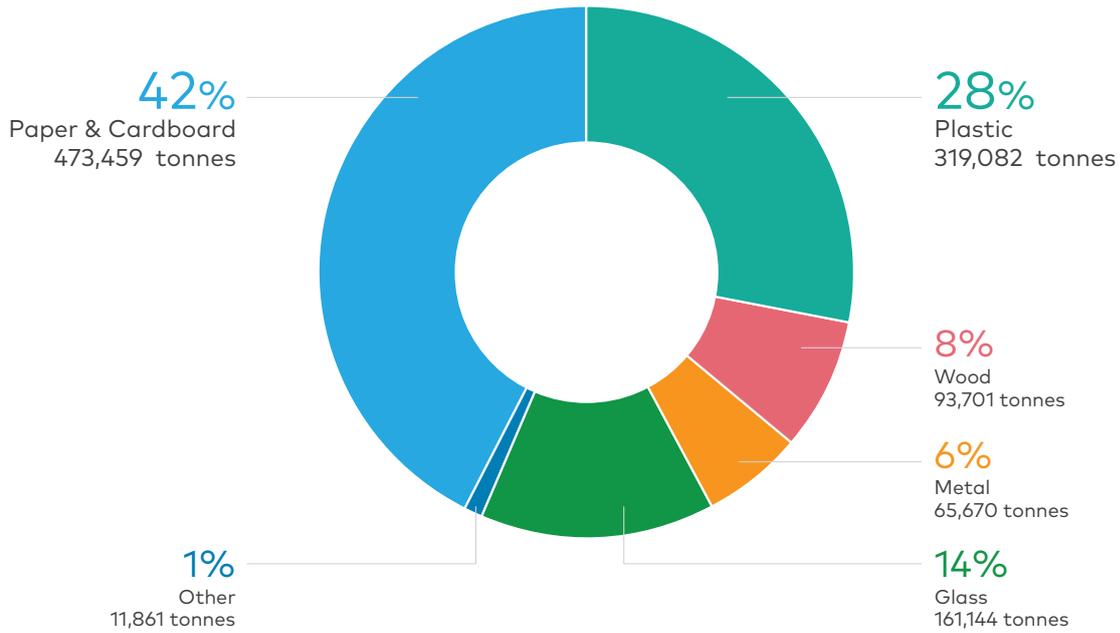


Figure 17: Breakdown of packaging waste generated in 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

TREATMENT

In 2019, Ireland recycled 61% of all packaging waste generated (some 0.69 million tonnes). Ireland has been in compliance with packaging recycling and recovery targets since their introduction in 2011, as shown in *Figure 18*. However, it is evident that packaging recycling rates have been declining since 2012.

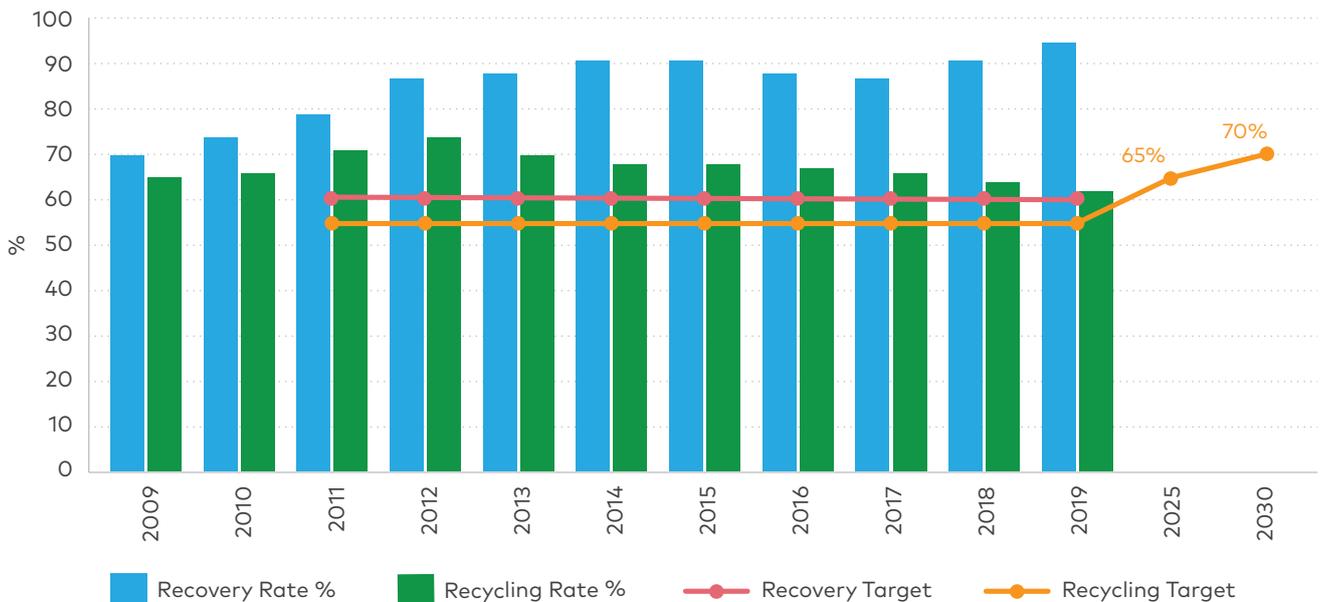


Figure 18: Trend in recovery and recycling of packaging waste, 2009 to 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

Under the revised Packaging Directive, the recycling target for packaging waste increases to 65% by 2025 and to 70% by 2030 (Figure 18) and there are also ambitious new targets for individual packaging streams, as shown in Figure 19. In particular, the new recycling targets for plastic packaging (50% by 2025 and 55% by 2030) will present a significant challenge for Ireland, considering only 28% of plastic packaging was recycled in Ireland in 2019 (down from 31% in 2018 and 34% in 2017).

In addition to the 0.69 million tonne of packaging waste that was recycled in 2019, 0.37 million tonne of packaging waste was sent for energy recovery at either municipal

waste incinerators or cement kilns that co-incinerate packaging material to generate energy. The share of plastic packaging waste sent for incineration with energy recovery increased from 64% in 2018 to 69% in 2019. In 2019, two-and-a-half times more plastic packaging waste was sent for incineration/energy recovery than was recycled (221,000 tonnes versus 89,000 tonnes). The recent broadening of the scope of what can be recycled by Irish homes and businesses to include soft plastics will be an important part of the suite of measures needed to reverse the decline in Ireland's packaging recycling rates and close the gap to new EU targets, discussed further in Chapter 14 Outlook.

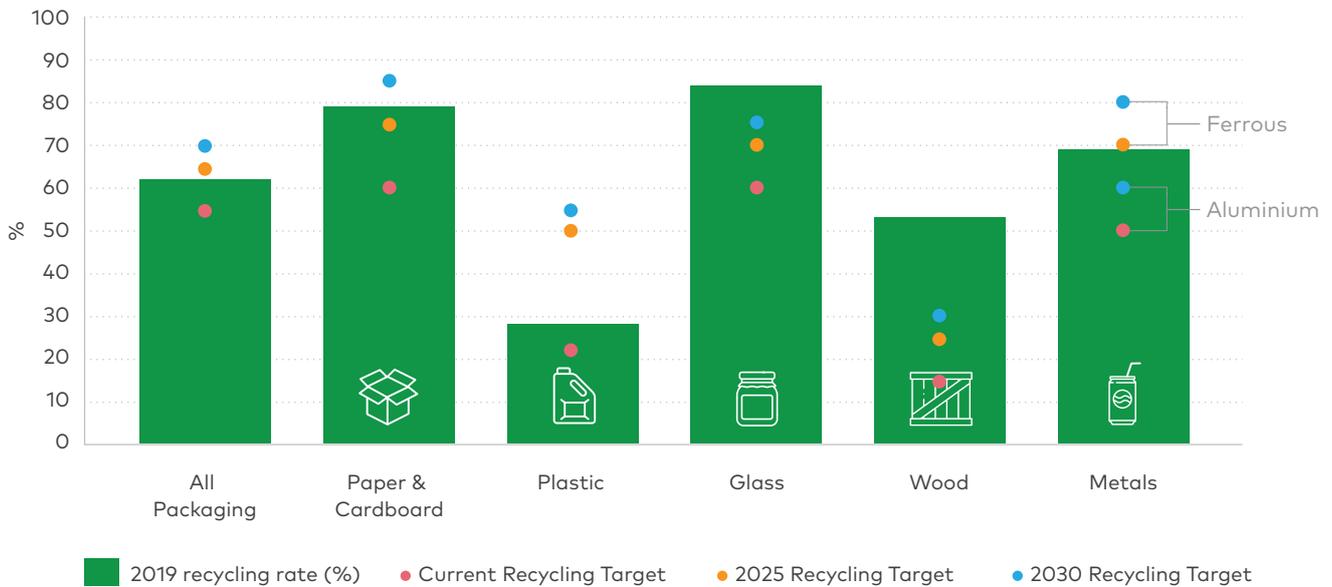


Figure 19: Recycling of packaging waste in 2019, relative to current and future recycling targets. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

EPA assessment of the 2019 packaging data indicates the potential impact of greater diversion of recyclable material from energy recovery to recycling on Ireland's recycling rates:

- > About 16,000 tonnes of PET plastic (the type of plastic most commonly used in drinks bottles) went for energy recovery in 2019; if that material was diverted to recycling, Ireland's plastic packaging recycling rate would increase from 28% to 33%.
- > If all the readily recyclable plastics (PET, PE and PP) that went for energy recovery in 2019 (amounting to almost 39,000 tonnes) was recycled instead, Ireland's recycling rate would increase from 28% to 40%.

- > If alongside the above measures, plastic bags and film typically used to transport products (over 54,000 tonnes) was removed by finding reusable alternatives, then Ireland's plastic packaging recycling rate would increase from 28% to 48%, still slightly below the 2025 target of 50%.
- > When it comes to metals, some 13,000 tonnes of aluminium was sent for energy recovery in 2019; if that material was recycled then Ireland's metal packaging recycling rate would increase from 69% to 89%.
- > Some 35,000 tonnes of flat and corrugated cardboard, typical of secondary packaging, was sent for energy recovery in 2019. If this was replaced with a reusable alternative then Ireland's paper and cardboard recycling rate would increase from 79% to 85%.
- > Implementing all of the above measures would increase Ireland's overall packaging recycling rate by 10 percentage points to 72%, just above the 2030 EU target of 70%.

Of the 1.1 million tonnes of packaging waste generated in Ireland in 2019, just 16% was recycled in Ireland (*Figure 20*). Glass and wood packaging accounted for most of the packaging waste that was recycled in Ireland while almost all of Ireland's paper/cardboard and plastic packaging that was recycled in 2019 was exported abroad. This increases the emissions associated with the recycling of Ireland's packaging waste and misses an opportunity to capture the resource potential of materials in Ireland and the associated economic opportunities.

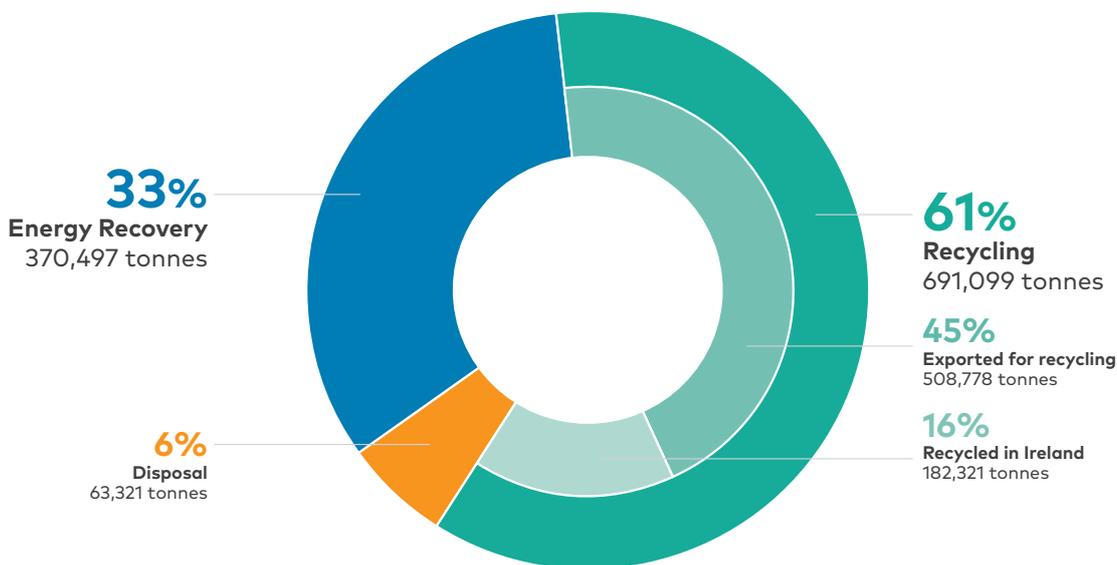


Figure 20: Recycling of packaging waste in Ireland and abroad, 2019.

Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

View the EPA's Infographic on Packaging Waste in Ireland in 2019: www.epa.ie/our-services/monitoring--assessment/waste/national-waste-statistics/packaging/



9



HAZARDOUS WASTE

0.6m

tonnes of hazardous waste generated in 2019

84%

rise in hazardous waste since 2012

65%

of hazardous waste was exported for treatment in 2019

GENERATION

A total of 580,977 tonnes of hazardous waste was generated in Ireland in 2019, an increase of over 54,580 tonnes (10%) since 2018 (*Figure 21*). The quantity of hazardous waste generated in Ireland has been increasing since 2012, and particularly since 2016. The increase in 2019 was driven by an increase in contaminated soil from development and dredging.

Hazardous waste is produced from a wide variety of sources and covers many waste types. Of the hazardous waste generated in Ireland in 2019, approximately 80% came from industry, 18% from the construction sector and two percent from municipal sources, such as households, small

businesses, educational facilities etc. *Figure 21* illustrates the main types of hazardous waste generated in Ireland in 2019. The top four categories that made up 61% of hazardous waste generated in 2019 were:

- > wastes from waste treatment such as incinerator bottom ash, fly ash, boiler ash and residues from flue gas and air pollution control at waste-to-energy facilities (152,635 tonnes)
- > contaminated soils from the development of old industrial facilities and brownfield sites, (90,595 tonnes)
- > chemical reaction residues (65,509 tonnes)
- > solvents (46,813 tonnes).



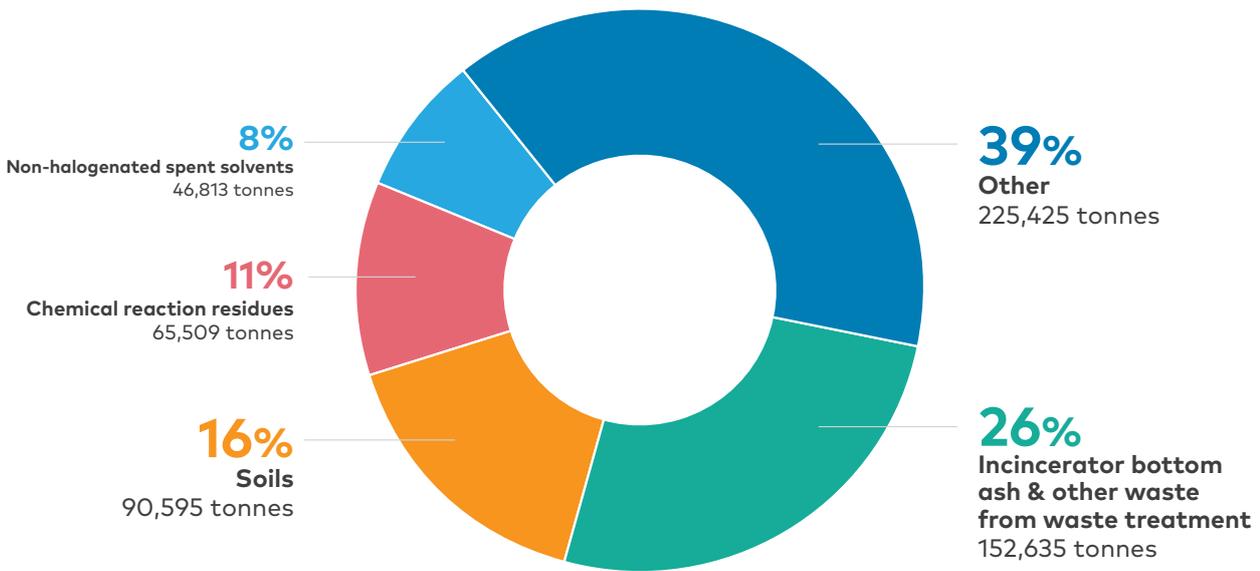


Figure 21: Types of hazardous waste generated in Ireland in 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

TREATMENT

The vast majority (65%) of Ireland’s hazardous waste was exported for treatment in 2019 (Figure 22), mainly to the Netherlands, Norway, the UK, Denmark, and Germany. This reflects the fact that Ireland does not have the range of facilities to deal with all of the hazardous waste generated. Striving for more self-sufficiency nationally in the management of Ireland’s hazardous waste is a key action of the National Hazardous Waste Management Plan. The continuing growth in exports of hazardous waste highlights the need for an end-to-end approach to waste management practices in Ireland and a reduced reliance on waste exports.



Figure 22: Generation and location of treatment of hazardous waste in Ireland, 2010 to 2019.

Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

The third *National Hazardous Waste Management Plan for 2014-2020* identified three strategic needs to be addressed if additional hazardous waste is to be treated in Ireland:

1. expansion of physico-chemical treatment,
2. addressing the deficit in thermal treatment capacity, and
3. securing long-term disposal arrangements for hazardous waste streams not suitable for thermal treatment or recovery.

The EPA carried out a progress review of the National Hazardous Waste Management Plan in 2018¹¹, which found that considerable progress had been made in progressing or completing 23 of the 27 recommended actions in the plan. The review noted that Ireland continues to face challenges in the achievement of complete self-sufficiency in terms of hazardous waste treatment because of the range of specialist treatments required. Therefore, export for treatment often continues to be the more favourable cost option.

The EPA has prepared a draft of the fourth *National Hazardous Waste Management Plan* for the years 2021-2027 which will be published before the end of 2021.

Under the National Waste Prevention Programme, the EPA promotes the use of cleaner technologies and the prevention of waste, including hazardous waste. In the area of waste collection, producer responsibility initiatives have led to increased collections of WEEE and batteries and one-off collections. In addition, household and farm waste have resulted in controlled management of specific hazardous waste streams. In the regulatory area, EPA led market surveillance campaigns have increased compliance with the RoHS, POPs and REACH directives and regulations.

¹¹ Ireland's National Hazardous Waste Management Plan. 2014-2020. Environmental Protection Agency. 2014

10



WASTE ELECTRICAL & ELECTRONIC EQUIPMENT (WEEE)

61%

Ireland's WEEE collection rate in 2019, which failed to meet the new EU target of 65%

63k

tonnes of WEEE collected for treatment in 2019

59%

consisted of 'large equipment' such as cookers, washing machines etc.

Electronic waste is the fastest growing waste stream globally. The Waste Electrical and Electronic Equipment (WEEE) Directive (2012/19/EC) aims to ensure that WEEE is collected and managed in an environmentally friendly way. It sets an overall collection target for e-waste and individual targets for the reuse, recovery and recycling of six separate categories of equipment including large and small household appliances, IT and telecommunications equipment, and medical devices. Ireland's extended producer responsibility system for WEEE consists of two approved bodies (ERP Ireland and WEEE Ireland) covering private household WEEE (referred to as Business-to-Consumer/B2C WEEE). Industry is directly responsible for management of non-private

household WEEE (referred to as Business-to-Business/B2B WEEE).

In 2019 the collection target for WEEE increased significantly from 45% to 65%. The rate is calculated based on quantity of WEEE collected relative to the average weight of EEE put on the market in the three preceding years. The increase in the collection target from 45% to 65% represents a significant step-up in ambition for Member States; in 2018, the average collection rate achieved by EU Member States was 47%, with nine countries failing to meet the 45% collection target.



COLLECTION

More than 62,600 tonnes of WEEE was collected for treatment in 2019, an almost identical quantity to 2018 (62,700 tonnes). Large Equipment accounted for 59% (by weight) of all WEEE collected in Ireland in 2019. This category includes cookers, washing machines etc. (Figure 23).

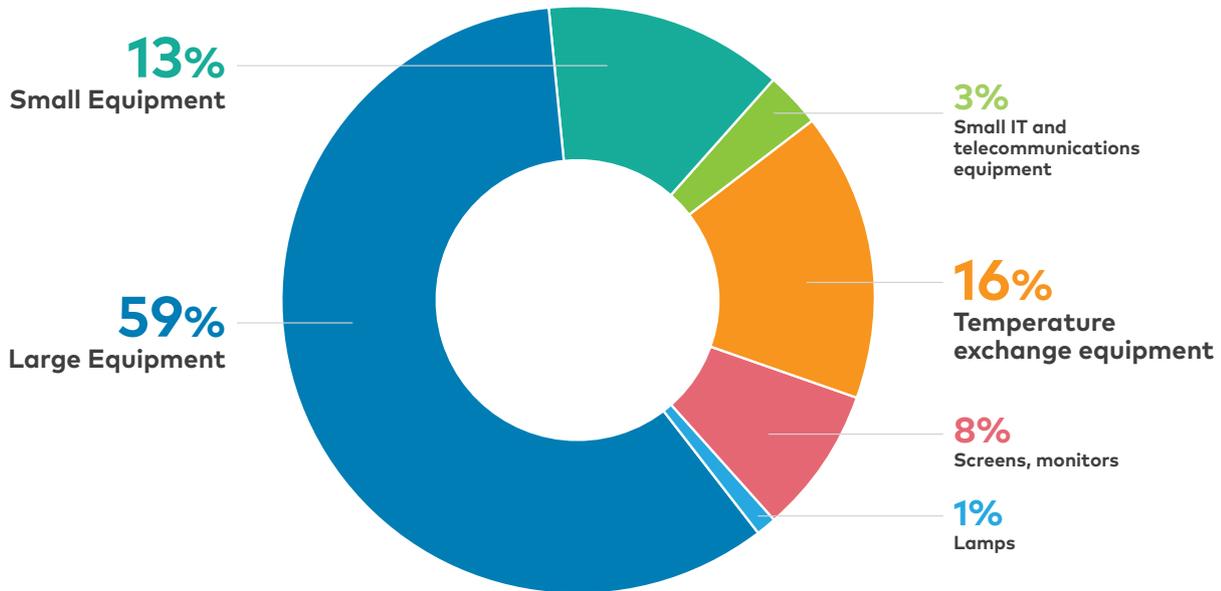


Figure 23: Breakdown of WEEE collected in 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

TREATMENT

Some 57,897 tonnes of WEEE were recovered and 53,162 tonnes were prepared for reuse or recycling in 2019 (increases of 4% and 2%, respectively, on the 2018 quantities). Some 79% of the WEEE collected in 2019 was treated in Ireland (although not necessarily final treatment).

The data for 2019 show that Ireland surpassed the WEEE Directive recovery and recycling/reuse targets for all six categories of WEEE but failed to meet the new separate collection target. Ireland achieved a collection rate of 61% in 2019, identical to 2018 and four percentage points below the new 65% target (Figure 24 and Appendix 1).

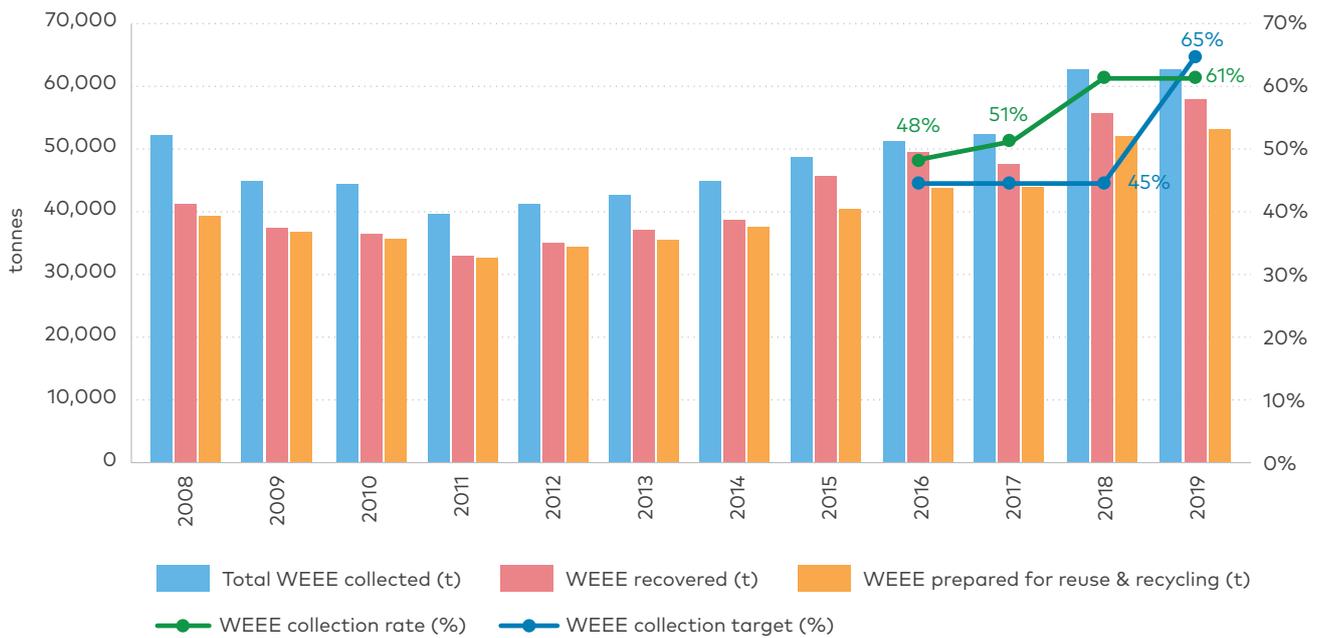


Figure 24: WEEE collection, recovery and recycling in Ireland from 2009 to 2019, and EU collection targets. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

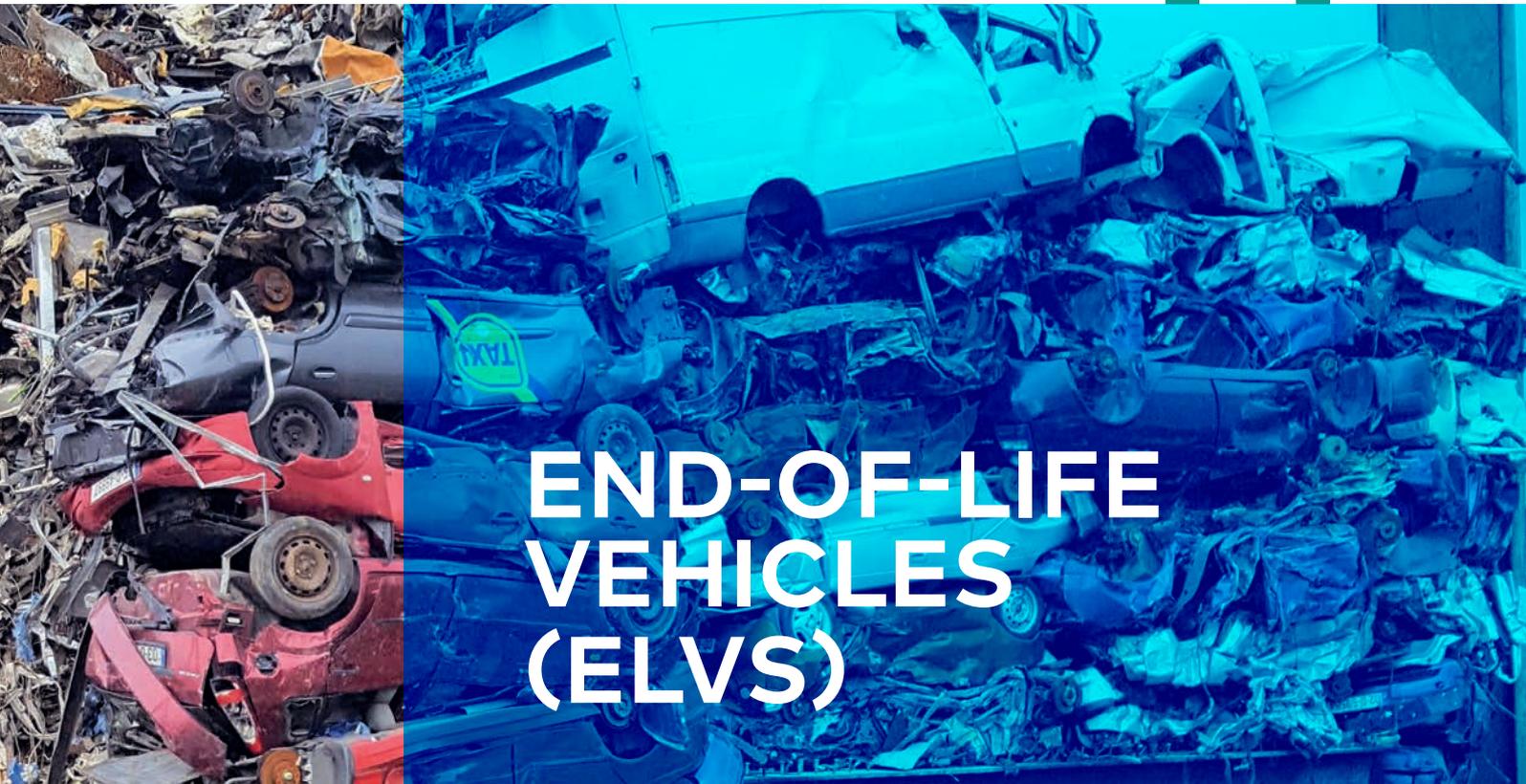
Achieving the new EU WEEE collection target will require stakeholder engagement and targeted efforts to improve the collection of both household and professional WEEE. A new multi-stakeholder WEEE Collection Working Group has been formed by the EPA to focus on achieving the collection target. One area identified for improvement is the B2B sector where the EPA's Office of Environmental Enforcement is actively engaging in a programme of audits of B2B companies.

There is also evidence from the EPA waste compositional analysis that substantial amounts of WEEE are still present in household bins, accounting for 0.9% of waste in the residual bin and 0.7% of waste in the recycling bin in 2017-2018. Ensuring that more of this WEEE is separately collected through the available channels will

help to improve Ireland's WEEE collection rate and allow for the maximum value to be extracted from the valuable and scarce materials in the WEEE.

The link between economic wealth and consumption of electronic goods is evident from the trends in Figure 24 which show that there was a notable decline in the quantities of WEEE collected in Ireland during the economic recession years, when householders and businesses did not replace electronic equipment as frequently. Ireland's economic growth since 2012 has coincided with a rise in WEEE collected.

11



**END-OF-LIFE
VEHICLES
(ELVS)**

151k

ELVs treated in Ireland in 2019

87%

rate of ELV reuse and recycling, compared with target of 85%

End-of-Life Vehicles (ELVs) refer to cars or light commercial vehicles weighing less than 3.5 tonnes that are no longer suitable for use and are discarded as waste. The ELV Directive (2000/53/EC) sets binding targets for the reuse, recovery and recycling of ELVs. The current targets, effective from 1st January 2015, require a minimum 85% reuse and recycling and a minimum of 95% reuse and recovery.

TREATMENT

The latest data indicates that an estimated 150,800 ELVs were treated in Ireland in 2019, a decrease of 7% on the previous year when 162,500 were treated. This is the second year that Ireland narrowly achieved full compliance with the ELV Directive targets which were fully met for the first time in 2018. Ireland achieved a reuse and recycling rate of 87.4% and a reuse and recovery rate of 95.2% (Figure 25).

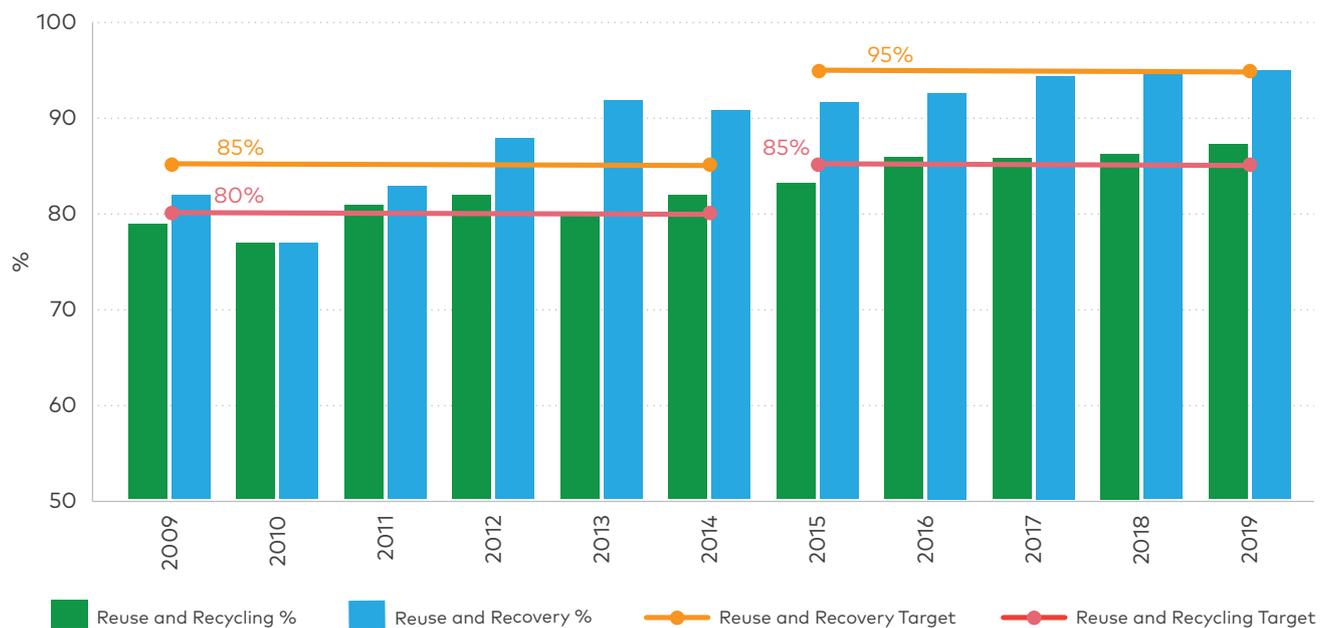


Figure 25: ELV reuse, recycling and recovery 2009-2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

While Ireland's rates of reuse, recycling and recovery of ELVs have shown gradual year-on-year improvement since 2010, the rate of improvement has slowed in recent years (Figure 23). Ireland must continue to improve the reuse, recycling and recovery of valuable material from end-of-life vehicles as part of our transition to a circular economy. Ireland's ELV producer compliance scheme, ELV Environmental Services (ELVES), was established in 2017 and works behalf of vehicle manufacturers, distributors and importers to improve the ELV processing in Ireland and enable its member to meet their regulatory responsibilities.

12



WASTE TYRES

46k	tonnes of waste tyres managed in Ireland in 2019
88%	were recycled
73%	were exported for final treatment

Tyres contain chemicals and heavy metals that pose a threat to soil, water, plants, animals and the atmosphere if waste tyres are not managed properly. Discarded waste tyres also have a significant negative visual impact on the landscape.

When waste tyres are collected by authorised waste collectors and transferred to authorised waste treatment facilities, very high recycling percentages can be achieved. Well-managed tyre waste therefore supports the circular economy. A producer compliance scheme for tyres and waste tyres, Repak ELT, was introduced in October 2017. There are no statutory recycling or recovery targets for waste tyres.

TREATMENT

A total of 46,424 tonnes of waste tyres were managed in Ireland in 2019. This represents little change on the 46,501 tonnes managed in 2018. The vast majority (88% or 40,748 tonnes) of waste tyres that entered the waste management network in Ireland in 2019 were recycled, while 10% were used for energy recovery and only 1% each were prepared for reuse and used as ballast (*Figure 26*). Recycled tyres are typically used in equestrian arenas, sports pitches, rubber mat products, flower beds and various other products based on demand.

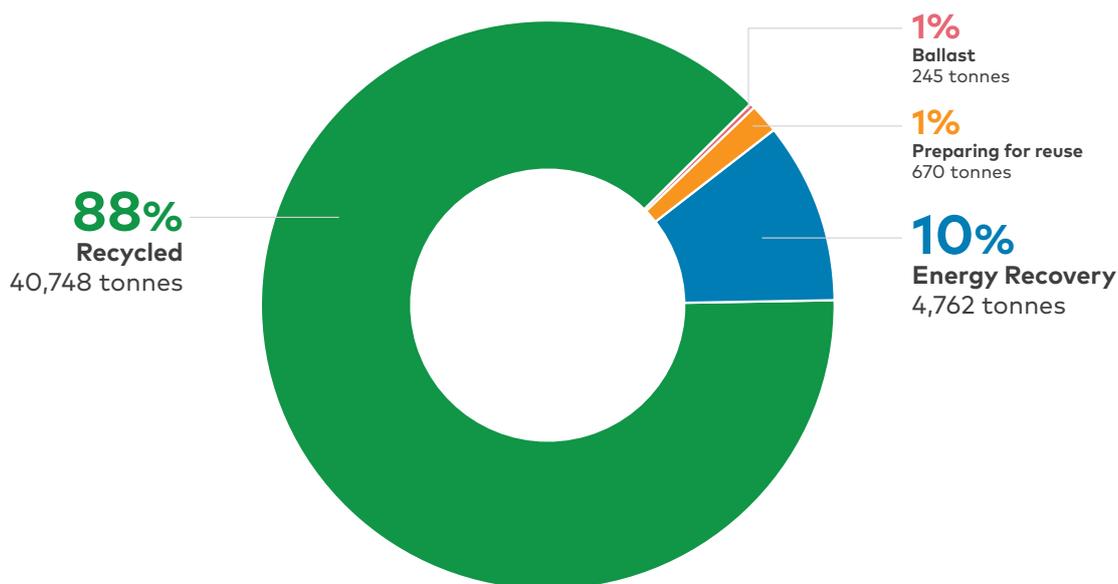


Figure 26: Final treatment of waste tyres collected in Ireland in 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

Figure 27 illustrates how waste tyres moved through Ireland's waste treatment network in 2019. Some 14,596 tonnes of waste tyres were crumbed for recycling in Ireland, up from 9,307 tonnes in 2018. However, the vast majority of Ireland's waste tyres (73%) were still exported for final treatment abroad (mainly to Asian countries). Of the 33,880 tonnes of waste tyres exported from Ireland in 2019, the vast majority were recycled (93%), 6% went for energy recovery and less than 1% were prepared for reuse.

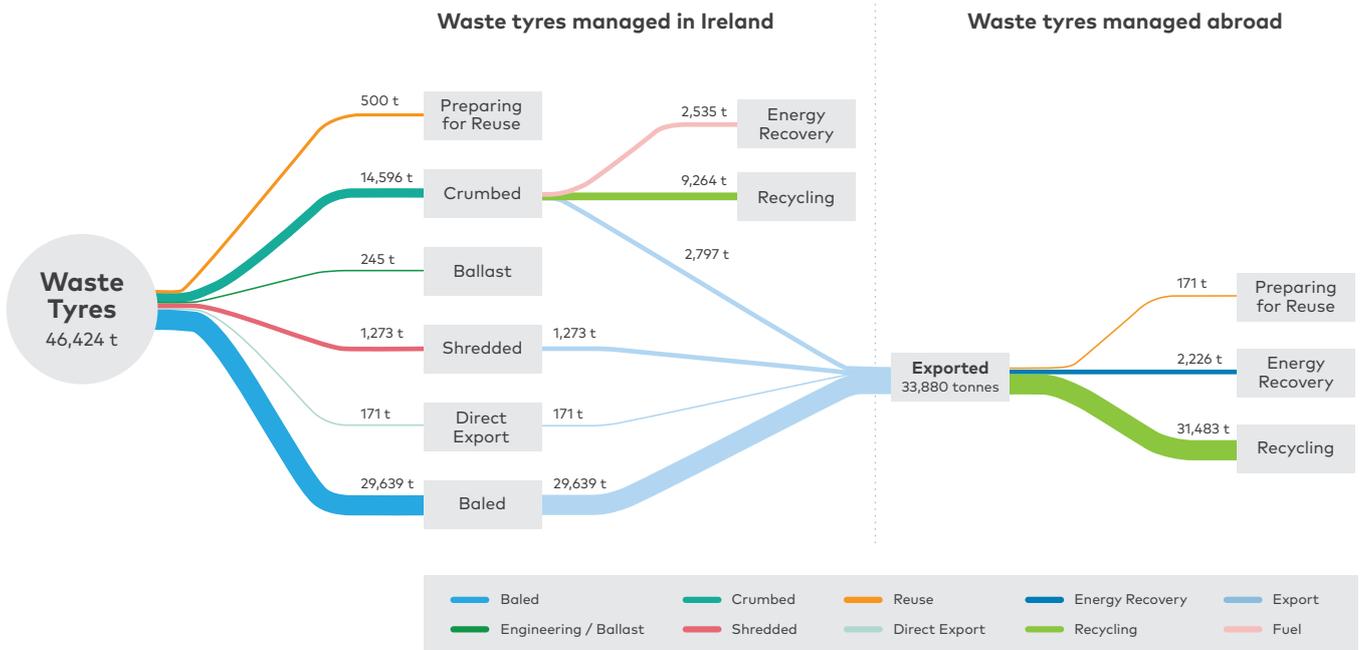


Figure 27: Overview of the collection and treatment of Ireland's waste tyres in 2019.

Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

13



CONSTRUCTION & DEMOLITION WASTE

8.8m	tonnes of C&D waste collected & managed in 2019, up from 6.2 m in 2018
84%	material recovery rate for C&D waste in 2019, up from 77% in 2018

GENERATION

Construction and demolition (C&D) waste represents a substantial waste stream in Ireland in terms of both volume and weight. Approximately 8.8 million tonnes of C&D waste was collected by authorised waste collectors for treatment in 2019, up significantly from 6.2 million tonnes in 2018 and 4.7 million tonnes in 2017. This increase in C&D waste corresponded with an increase in construction activity nationally (*Figure 28*).

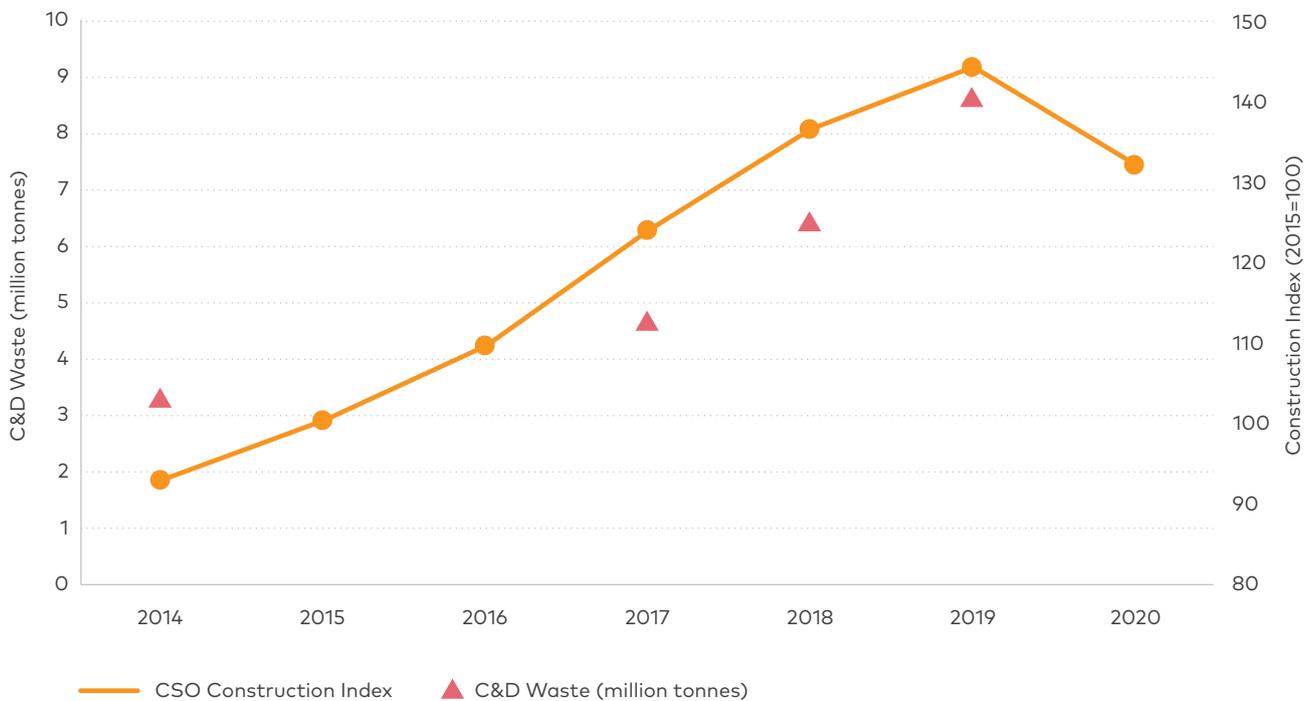


Figure 28: Quantity of construction waste managed in Ireland, compared with CSO construction index. Source: EPA, NWCPO and CSO.

The vast majority of C&D waste managed in Ireland in 2019 consisted of soil and stones (85%), followed by concrete, brick, tile and gypsum waste (7%) and mixed C&D waste (5%). Only 2.5% of C&D waste was collected separately as single material streams (wood, glass, plastic or metal) (*Figure 29*).

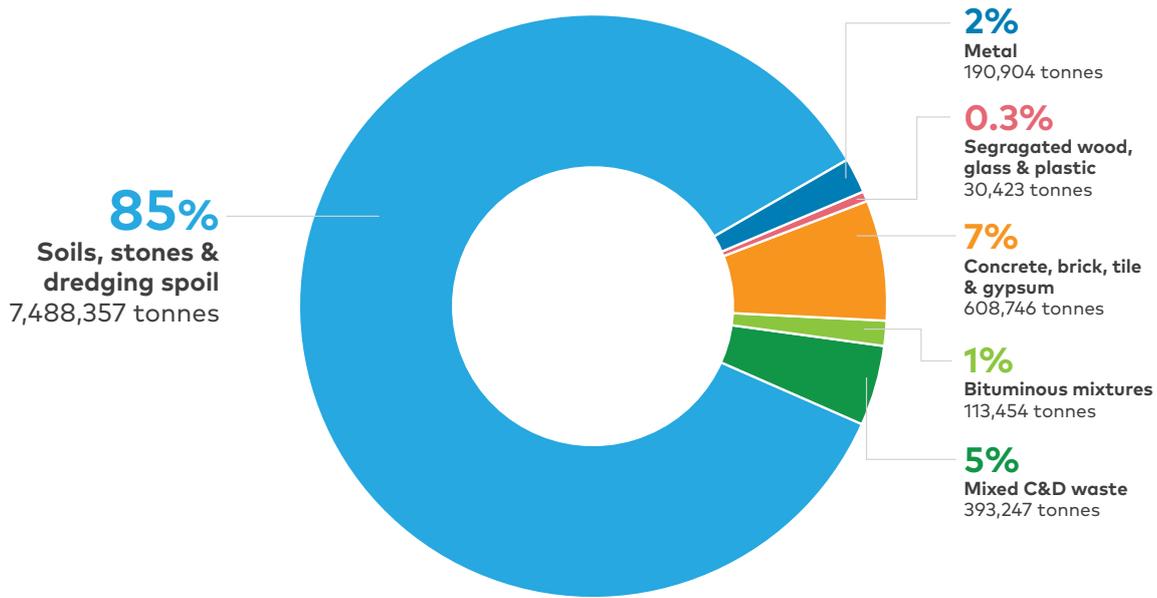


Figure 29: Composition of C&D waste collected in Ireland in 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

TREATMENT

Most of the C&D waste was backfilled (82%) in 2019, while 10% went for disposal and only 7% was recycled (Figure 30).

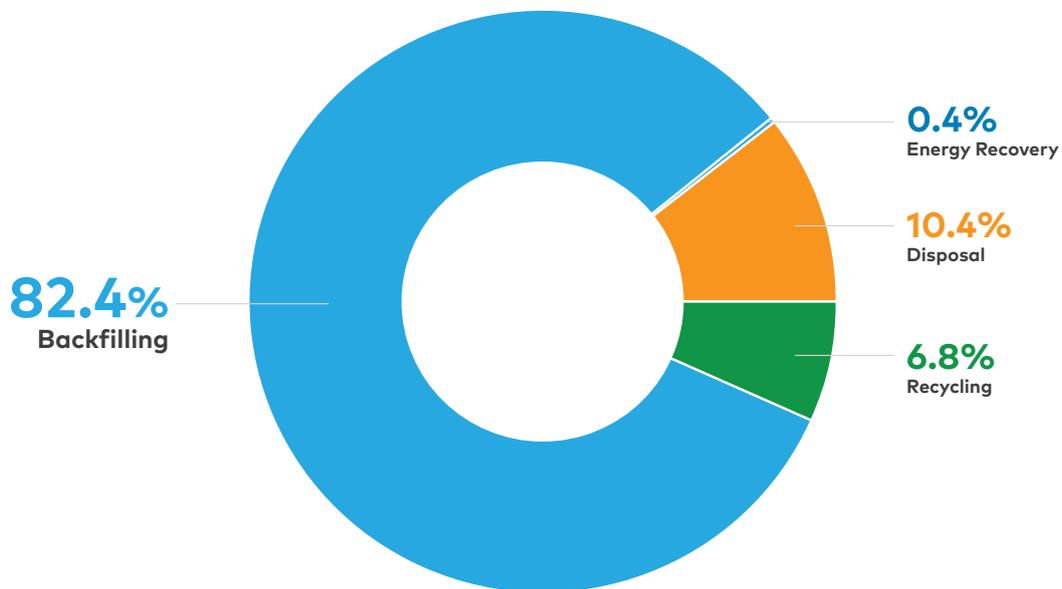


Figure 30: Treatment of C&D waste in Ireland in 2019. Source: EPA.

Check www.epa.ie/nationalwastestatistics for latest data.

The dominance of backfilling as a treatment operation reflects the large proportion of soil and stones in C&D waste. Backfilling refers to a recovery operation, carried out at authorised facilities, where suitable waste is used for reclamation purposes in excavated areas or for engineering purposes in landscaping and where the waste is a substitute for non-waste materials. It includes worked out quarries that are in the process of being restored or sites where soil and stone is imported to the site to raise natural ground levels.

Disposal was the main treatment operation for C&D waste treatment residues and a smaller share of mixed C&D waste and soils and stones (*Figure 31*). Recycling was the main treatment operation for metals (100%) and waste bituminous mixtures (64%). It is notable that only 39% of segregated wood, glass and plastic waste arising in this sector was recycled in 2019 while 54% went for energy recovery.

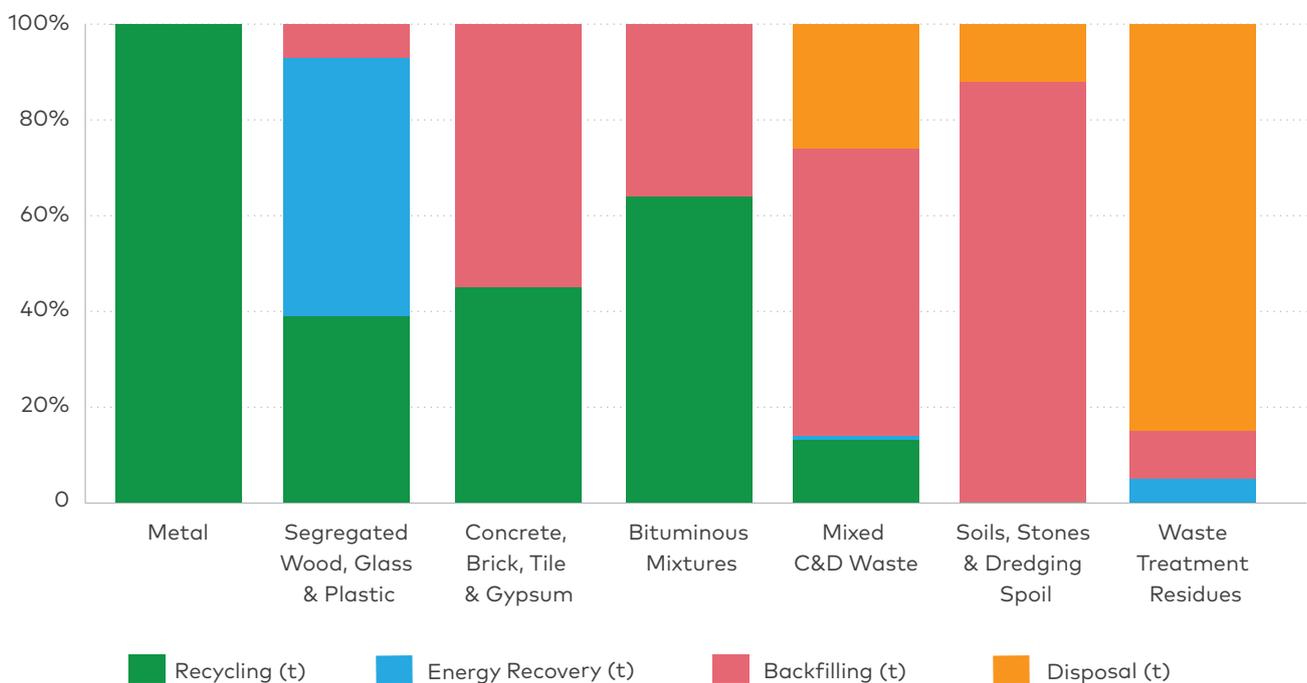


Figure 31: Final treatment operation by C&D waste stream in 2019. Source: EPA.



Check www.epa.ie/nationalwastestatistics for latest data.

Improved recycling and prevention of C&D waste could be achieved by employing best practice circular construction activities, such as designing out waste, enhanced segregation of C&D materials into individual material stream and maximising the use of resources, in line with the EPA's revised Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects due to be published before the end of 2021. Successful activation of the circular economy in the construction sector could see millions of tonnes of resources being re-used in construction projects every year, reducing demand for virgin raw materials and lowering the carbon footprint of the sector.

TARGET COMPLIANCE

The Waste Framework Directive requires Member States to achieve 70% material recovery of C&D waste by 2020 – this target excludes hazardous waste and the soil and stone portion of C&D waste. In 2019, Ireland achieved 84% material recovery of non-hazardous, non-soil-and-stone C&D waste, surpassing the 2020 EU target. This represents an improvement on the C&D material rate of 77% achieved by Ireland in 2018.

BY-PRODUCT NOTIFICATIONS

The Waste Framework Directive provides for uncontaminated excavated soil and other naturally occurring materials (used on sites other than the one from which they were excavated) to be considered as by-products rather than waste under certain circumstances. Decisions on by-product status are made by economic operators who must then notify their decision to the EPA. The EPA may determine to agree with the economic operator's decision, as notified; alternatively, after consultation with the economic operator and the relevant local authority, the EPA may determine that the notified material is waste.

In 2019, the EPA received by-product notifications for 5,983,137 tonnes of soil and stone material. Notifications for 1,048,180 tonnes were withdrawn. The EPA

determined that 2,773,930 tonnes of the soil and stone notified were by-product, as notified, and that 49,020 were waste. The estimated quantity of soil and stone material notified in 2019 for which no determination was made to date amounted to 2,112,007 tonnes. It is important to note that by-product notifications do not necessarily mean that any or all of the material was generated or indeed moved. By-product notifications do not necessarily mean that the activities proceeded; however, if they did, material classed as a by-product would not have entered the waste management network or be included in the EPA's 2019 waste statistics data. Only material notified as by-product, determined to be waste and generated and moved as waste in 2019 is covered by the EPA's 2019 C&D waste statistics.



14



Recent policy developments aligned to the European Green Deal aim to put Ireland on a pathway to a circular economy. The *Waste Action Plan for a Circular Economy*, published in September 2020 strengthens the focus of waste policy on the circular economy, and the National Waste Management Plan for a Circular Economy due to be adopted in 2022 will set out objectives and recommendations to be pursued over the next six years. The upcoming whole of government Circular Economy Strategy, due to be published by end-2021, will provide a national policy framework for Ireland's transition to a circular economy. The 2019 waste data presented in this report show that Ireland faces significant challenges to deliver this national policy objective.

WASTE GENERATION

Ireland's generation of municipal waste, packaging waste, C&D waste and hazardous waste continued to rise in 2019. The quantity of household waste generated per person in Ireland has increased from 321 kilogrammes (kg) in 2017 to 325 kg in 2018 to 330 kg in 2019, while municipal waste generation per person has increased from 577 kg to 628 kg over the same period. Packaging waste increased by 11% in a year to 1.1 million tonnes, the third year in a row that packaging waste in Ireland exceeded a million tonnes. Hazardous waste generation increased by 10% in a year to 0.6 million tonnes. Construction and demolition waste rose to 8.8 million tonnes, up significantly from 6.2 million tonnes in 2018 and 4.7 million tonnes in 2017. These increases in waste generation correlated with upward trends in economic indicators such as GNI, personal consumption and construction activity, showing a continuing link between economic activity and waste generation/resource consumption in Ireland.

It is evident from these trends that systemic change is needed to reverse the rise in waste generation and embed the circular economy approach across

Ireland's economy and society. The circular economy is based on designing out waste and keeping materials in use for longer. It is characterised by the use of renewable energy and fully recyclable input material, extending product lifespans and increased shared use of products, and reuse or recycling of products or materials after their initial productive life.

Swift implementation and operationalisation of circular economy policy is critical to reversing the trends identified in this report. This will involve the use of a broad range of levers beyond waste management. It requires the development of circularity roadmaps for key economic sectors, such as construction, manufacturing, food and drink, supported by clear policy signals, legislation, and national targets. Transforming existing linear business models into circular ones will require a suite of actions and supports including the development of standards for secondary materials, economic levies to reduce the use of virgin material, restrictions on placing on the market of certain single-use items and non-recyclable packaging, improved product labelling, new Extended Producer Responsibility schemes, and targeted interventions to overcome barriers to the take-up of pre-owned and refurbished goods and product repair services.

TARGET COMPLIANCE

The 2019 data in this report highlight the urgent need for implementation of measures to improve Ireland's recycling rates and support the achievement of ambitious new EU recycling targets.

In 2019 Ireland achieved compliance with all existing EU waste targets, with the exception of the new separate collection target for WEEE (*Table 1*). Ireland achieved a separate collection rate for WEEE of 61% compared with the target of 65% (*Appendix 1*), highlighting the need for targeted measures to improve the separate

collection of household and business WEEE

Recent declines in Ireland’s recycling rates for municipal waste and packaging waste continued in 2019. Efforts to improve recycling were outstripped by larger increases in the quantity of waste generated and a greater share of waste sent for energy recovery. Less than a third (28%) of Ireland’s plastic packaging waste was recycled in 2019, while 69% was incinerated.

Sustained efforts are needed for other waste streams to ensure that Ireland’s compliance with existing EU waste targets is maintained and further improved: Ireland

narrowly achieved compliance with the recycling and recovery targets for ELVs, a number of categories of batteries and one category of WEEE (*Appendix 1*).

The upcoming 2025 and 2030 recycling targets for municipal waste and plastic packaging waste will pose significant challenges for Ireland. With Ireland’s recycling rates for municipal waste and plastic packaging waste declining rather than improving as increased shares of these wastes are incinerated, the gap to EU targets is widening for Ireland rather than narrowing. More stringent EU reporting rules will make compliance with the new targets even more challenging for Ireland.

Table 1: Ireland’s current and outlook for future compliance with EU targets

EU Directive	Target	Current target compliance (2019)	Outlook for future target compliance	Comments
Waste Framework Directive	Municipal Waste Recycling			On track to meet 2020 target for household municipal waste recycling and C&D recovery, but much more stringent municipal waste recycling targets for 2025 and 2030 will pose a significant challenge.
	C&D Waste Recovery			
Packaging Directive	Total Packaging Recycling			Meeting current targets but recycling rates for some packaging streams are stagnating or declining. Significant challenge to meet future 2025 and 2030 targets for individual packaging streams, in particular plastic.
	Glass Recycling			
	Paper & Cardboard Recycling			
	Metal Recycling			
	Plastic Recycling			
	Wood Recycling			
End of Life Vehicles Directive	ELV Reuse, Recycling and Recovery			Meeting all current targets but by a narrow margin.
Batteries Directive	Batteries recycling			Meeting all current targets but by a narrow margin for some categories of batteries.

EU Directive	Target	Current target compliance (2019)	Outlook for future target compliance	Comments
Landfill Directive	Diversion of biodegradable municipal waste from landfill			Already compliant with 2020 BWM target by a large margin. Further reductions in municipal waste disposal to landfill needed to meet 2035 target.
	Disposal of municipal waste to landfill	—		
WEEE Directive	Separate collection of WEEE			Meeting all current WEEE recovery targets but failed to meet the new WEEE separate collection target.
	Recovery, reuse and recycling of WEEE			

CURRENT TARGET COMPLIANCE:



Ireland already **in compliance** or on track to achieve compliance with target in 2019



Ireland **not in compliance** with target in 2019

OUTLOOK FOR FUTURE TARGET COMPLIANCE:



Largely on track: measures in place provide prospect of achieving target compliance.



Partially on track: outlook for achieving target compliance is dependent on current and planned measures being implemented and effective.



Largely not on track: considering distance to target in 2019, significant improvements and additional measures likely to be needed to achieve target compliance.

PACKAGING WASTE

Negative trends in waste streams such as packaging, in particular plastic packaging, require urgent action. The data indicate that efforts to increase the quantity of plastic packaging being recycled are being offset by an even greater increase in the amounts of plastic packaging waste being generated and incinerated and, as a result, Ireland's recycling rates have shown a generally declining trend since 2013.

It is clear from the EPA data that measures to improve packaging recycling need to be combined with measures at policy and industry level to halt the rise in packaging

waste and ensure businesses place less packaging on the market. Addressing this challenge holistically requires rethinking how we make, transport and use products right along the supply chain, moving to a system where unnecessary packaging is avoided and any remaining packaging placed on the market is designed either for re-use or recycling.

Progress is underway in some areas to support this shift, as part of the implementation of the *Waste Action Plan for a Circular Economy*. The acceptance of soft plastics in kerbside recycling bins from September 2021 is a positive step towards increasing the amount of plastic



waste being presented for recycling. The introduction of a deposit return scheme for plastic drinks bottles and aluminium cans from 2022 will help ensure more of these items are separately collected for recycling. From July 2021 a range of single-use plastic items have been banned in Ireland including cotton bud sticks, cutlery, plates, stirrers, chopsticks, straws, polystyrene containers and oxo-degradable plastic products. The impact of these measures on Ireland's waste generation and recycling rates will become evident as waste data for 2021 and 2022 is collected and analysed.

Notwithstanding this progress, reversing Ireland's declining recycling rates and closing the gap to EU targets will require more far-reaching changes. Key measures that need to be implemented without delay for packaging waste include the introduction of mandatory Extended Producer Responsibility for all packaging producers, the modulation of producers' fees (whereby recyclable packaging will have lower fees and non-recyclable packaging and over-packaging will be heavily penalised) and a requirement for all packaging to be reusable or recyclable by 2030.

ENERGY RECOVERY

The data in this report highlight the growing share of municipal and packaging

waste being sent for energy recovery, in tandem with falling recycling rates. While the energy recovery process is designed to treat residual waste that cannot be recycled, EPA waste characterisation studies identify significant quantities of recyclable materials in refuse derived fuel incinerated in Ireland. The government's pledge to introduce a levy on waste recovery (of €5 per tonne) will be an important lever to ensure that waste operators are incentivised to extract the maximum amount of recyclable material from residual waste, and its introduction should be prioritised.

WASTE SEGREGATION

Significant improvement in national recycling rates can also be achieved through improved waste segregation by households and in particular businesses. The EPA's 2018 national municipal waste characterisation study found that over 20% of material in the household recycling bin should not be there and that packaging material in the recycling bin is now less clean now than it was ten years earlier. In the commercial sector, almost 70% of the content of the residual waste bins could potentially be diverted either to recycling or to brown bins. As outlined in this report, EPA analysis of the 2019 packaging data shows that diverting a range of readily recyclable packaging waste types from

energy recovery to recycling, through improved segregation, has the potential to significantly improve Ireland's packaging recycling rates.

While there has been a significant reduction in organic waste in the household residual bin in response to the introduction of the brown bin, still only 48% of Irish households had a brown bin in 2019 and most household organic waste (over 60% in 2019) continues to be placed in the residual (black) or recycling bins and therefore not recycled. Expanding the roll-out of brown bins to Irish households to increase the separate collection of organic waste for composting and anaerobic digestion will assist in increasing Ireland's recycling rate for municipal waste.

Delivering improvements in how households and businesses segregate their waste will require enhanced education and awareness campaigns around the importance of recycling and the types of material that should be placed in the different bins. The recent expansion of the recycling list to include soft plastics and the move to standardised bin colours across the State on a phased basis will assist this process. Waste collectors also have an important role to play in supporting their customers to separate waste correctly for recycling. The government's commitment to incorporating recycling targets as conditions of waste collection permits is welcome and should be implemented without delay as part of the suite of measures to improve the separate collection of waste for recycling.

WASTE EXPORTS

Ireland remained heavily reliant on export for a number of key waste streams in 2019, pointing to some significant waste infrastructure deficits and missed opportunities to foster a circular economy. The vast majority of Ireland's segregated municipal waste and packaging waste

continued to be exported for recycling in 2019, while 65% of the nation's hazardous waste was sent to other European countries for disposal or recovery.

The share of organic waste exported to Northern Ireland for composting and anaerobic digestion has increased, accounting for 20% in 2019, up from 17% in 2018, with more favourable gate fees in Northern Ireland attributed as the main driver for this trend.

These trends point to the need for expansion of Ireland's waste treatment and recycling capacity in order to extract the maximum value from waste materials in Ireland and reduce the emissions associated with transporting waste over long distances.

GREEN RECOVERY

As Ireland emerges from the global pandemic, the implementation of ambitious policies and measures that support circular business models presents an opportunity for a 'green recovery' that supports waste prevention and reduction, generates new jobs and responds to climate change.



15



**FURTHER
INFORMATION**

Further information and the latest national waste data are available on the EPA's National Waste Statistics web resource: www.epa.ie/nationalwastestatistics. The National Waste Statistics web resource will continue to be updated and the range of early indicators expanded as new data become available.



[Environment & You](#)
[Environmental Topics](#)
[Our Services](#)
[Publications](#)
[Who we are](#)

View our latest waste statistics

<div style="text-align: center;"></div> <p style="text-align: center;">Packaging</p> <p>Most of the products we buy are contained in packaging to protect them during transport and make them look attractive on shop shelves. When the goods are unpacked, the packaging becomes waste. Ireland generated over 1.1 million tonnes of packaging waste in 2019.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">62%</p> <p style="text-align: center;"><small>Ireland's overall packaging recycling rate in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Construction & Demolition</p> <p>C&D waste is made up of many different materials such as soil and stones, concrete, bricks, tiles and gypsum waste. The treatment route for most C&D waste is backfilling.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">8.8 million tonnes</p> <p style="text-align: center;"><small>of C&D waste was generated in Ireland in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Household</p> <p>Household waste includes waste collected directly from households in the residual, recycling and organic bins and waste brought by householders to waste collection centres such as bring banks, civic amenity sites, pay-to-use compactors and landfills.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">1.6 million tonnes</p> <p style="text-align: center;"><small>of waste was generated by Irish households in 2019</small></p>
<div style="text-align: center;"></div> <p style="text-align: center;">WEEE</p> <p>Waste electrical and electronic equipment (WEEE) is one of the fastest growing waste streams worldwide. In 2019, Ireland surpassed all EU targets for recycling and recovery of WEEE.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">62,600 tonnes</p> <p style="text-align: center;"><small>of WEEE was collected in Ireland for treatment in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">End-of-Life Vehicles (ELV)</p> <p>ELVs are cars or light commercial vehicles that are no longer suitable for use and are discarded as waste. Some 150,800 ELVs (scrap vehicles) were treated in Ireland in 2019.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">87.43%</p> <p style="text-align: center;"><small>Ireland's ELV reuse and recycling rate in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Hazardous</p> <p>Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes are generated by all sectors of Irish society from large industry and healthcare to small businesses, households and farms.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">580,977 tonnes</p> <p style="text-align: center;"><small>of hazardous waste was managed in Ireland in 2019</small></p>
<div style="text-align: center;"></div> <p style="text-align: center;">Biodegradable Municipal Waste</p> <p>BMW comprises those elements of municipal waste that will not or degrade biologically, including food waste, garden & park waste, and waste paper & cardboard.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">104,255 tonnes</p> <p style="text-align: center;"><small>of BMW was disposed to landfill in Ireland in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Municipal</p> <p>Municipal waste is made up of household waste and commercial waste of a similar nature. The EPA reports on how much municipal waste Ireland generates and how this waste is treated.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">2,912,353 tonnes</p> <p style="text-align: center;"><small>of municipal waste was generated in Ireland in 2018</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Composting & Anaerobic Digestion</p> <p>Composting is a natural process that uses bacteria and fungi to recycle organic material, such as kitchen and garden waste, into compost. Anaerobic digestion uses bacteria to break down organic matter in the absence of oxygen to treat animal manures, wastewater biosolids and food wastes.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">436,000 tonnes</p> <p style="text-align: center;"><small>quantity of waste accepted for treatment at composting & anaerobic digestion facilities in 2018</small></p>
<div style="text-align: center;"></div> <p style="text-align: center;">Tyres</p> <p>Tyres become waste when worn-out tyres on vehicles are replaced. If not managed properly, waste tyres pose a threat to the atmosphere, to land, soil, water plants and animals.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">46,424 tonnes</p> <p style="text-align: center;"><small>of waste tyres were managed in Ireland in 2019</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">'First Look' Data</p> <p>In this section we present trend data that are available in a more timely fashion than our complete, validated datasets.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">335,000 tonnes</p> <p style="text-align: center;"><small>of Ireland's municipal waste was incinerated or co-incinerated in the first quarter of 2021</small></p>	<div style="text-align: center;"></div> <p style="text-align: center;">Infrastructure</p> <p>Learn more about Ireland's waste infrastructure here.</p> <p style="text-align: center;">Interesting fact</p> <p style="text-align: center;">3 landfills</p> <p style="text-align: center;"><small>In Ireland are accepting municipal waste in 2021, compared with 21 a decade earlier</small></p>

APPENDIX 1: PROGRESS TO EU WASTE TARGETS

EU Directive	Current EU Target date	Current EU Target	Ireland's rate in 2019	Ireland's Compliance Status in 2019	Future EU Targets	Outlook for Ireland's Future Compliance
Waste Framework Directive (2008/98/EC as amended)	12/12/2020	≥ 50% preparing for reuse and recycling of household derived paper, metal, plastic & glass (calculation method 1)	53% Based on method 1 37% Based on OECD/Eurostat municipal indicator		Preparing for re-use and recycling of municipal waste: ≥ 55% by 2025 ≥ 60% by 2030 ≥ 65% by 2035	
	12/12/2020	≥ 70% preparing for reuse, recycling and other material recovery of C&D non-hazardous waste, excluding natural soils & stone	84%		None	
Packaging Directive (94/62/EC as amended)	31/12/2011	≥ 60% recovery of packaging waste	95%		None	
		≥ 55% recycling of packaging waste	61%		≥ 65% by 2025 ≥ 70% by 2030	
		≥ 60% recycling of glass packaging	84%		≥ 70% by 2025 ≥ 75% by 2030	
		≥ 60% recycling of paper & cardboard	79%		≥ 75% by 2025 ≥ 85% by 2030	
		≥ 50% recycling of metals	69%		Ferrous metals: ≥ 70% by 2025 ≥ 80% by 2030 Aluminium: ≥ 50% by 2025 ≥ 60% by 2030	
		≥ 22.5% recycling of plastics (counting exclusively material that is recycled back into plastics)	28%		≥ 50% by 2025 ≥ 55% by 2030 (overall recycling, not just recycling back into plastics)	
		≥ 15% recycling of wood	53%		≥ 25% by 2025 ≥ 30% by 2030	

EU Directive	Current EU Target date	Current EU Target	Ireland's rate in 2019	Ireland's Compliance Status in 2019	Future EU Targets	Outlook for Ireland's Future Compliance
End of Life Vehicles Directive (2000/53/EC)	01/01/2015	≥ 95% reuse and recovery	95%		None	
		≥ 85% reuse and recycling	87%		None	
Batteries Directive (2006/66/EC)	26/09/2016	≥ 45% collection rate for batteries & accumulators	47%		None	
	26/09/2011	≥ 65% recycling of lead-acid batteries and accumulators	87%		None	
		≥ 75% recycling of nickel-cadmium batteries and accumulators	78%		None	
		≥ 50% recycling of other waste batteries and accumulators	83%		None	
Landfill Directive (1999/31/EC)	16/12/2020	<610,000 tonnes of biodegradable municipal waste BMW to landfill	145,000 t		None	
	—	—	—	—	≤ 10% of municipal waste disposed to landfill by 2035	
WEEE Directive (2012/19/EC)	As of 2019	≥ 65% separate collection of WEEE	61%		None	
	15/8/2015	Temperature exchange equipment: ≥ 85% recovery ≥ 80% reuse and recycling.	97% 86%		None	
	15/8/2015	Screens & monitors: ≥ 80% recovery ≥ 70% reuse and recycling	94% 84%		None	

EU Directive	Current EU Target date	Current EU Target	Ireland's rate in 2019	Ireland's Compliance Status in 2019	Future EU Targets	Outlook for Ireland's Future Compliance
WEEE Directive (2012/19/EC)	15/8/2015	Lamps: No recovery target ≥ 80% reuse and recycling.	88% 82%		None	
	15/8/2015	Large equipment (>50 cm external dimension): ≥ 85% recovery ≥ 80% reuse and recycling	93% 87%		None	
	15/8/2015	Small equipment (<50 cm external dimension): ≥ 75% recovery ≥ 55% reuse and recycling	84% 74%		None	
	15/8/2015	Small IT and telecommunications equipment (<50 cm external dimension): ≥ 75% recovery ≥ 55% reuse and recycling	88% 81%		None	

CURRENT TARGET COMPLIANCE:

- Ireland already **in compliance** or on track to achieve compliance with target in 2019
- Ireland **not in compliance** with target in 2019

OUTLOOK FOR FUTURE TARGET COMPLIANCE:

- Largely on track:** measures in place provide prospect of achieving target compliance.
- Partially on track:** outlook for achieving target compliance is dependent on current and planned measures being implemented and effective.
- Largely not on track:** considering distance to target in 2019, significant improvements and additional measures likely to be needed to achieve target compliance.

AN GHNÍOMHAIREACTH UM CHAOMHNÚ COMHSHAOIL

Tá an Gníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaoil a chaomhnú agus a fheabhsú mar shócmhainn luachmair do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaoil a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

IS FÉIDIR OBAIR NA GNÍOMHAIREACTHA A ROINNT INA TRÍ PHRÍOMHRÉIMSE:

Rialú: Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gclóíonn leis na córais sin.

Eolas: Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithé agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.

Tacaíocht: Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaoil atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaoil inbhuanaithe.

ÁR BHFREAGRACHTAÍ

Ceadúnú

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaoil:

- > saoráidí dramhaíola (m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- > gníomhaíochtaí tionsclaíoch ar scála mór (m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- > an díantalmhaíocht (m.sh. muca, éanlaith);
- > úsáid ghlanscartha agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (OGanna);
- > foinsí radaíochta ianúcháin (m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíoch);
- > áiseanna móra stórála peitрил;
- > sceitheadh fuíolluisce;
- > gníomhaíochtaí dumpála ar farraige.

FORFHEIDHMIÚ NÁISIÚNTA I LEITH CÚRSAÍ COMHSHAOIL

- > Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- > Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- > Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- > Obair le húdaráis áitiúla agus gníomhaireachtaí eile chun dul i ngleic le coireacht chomhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, díriú ar chiontóirí, agus maoirsiú a dhéanamh ar fheabhsúcháin.
- > Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (WEEE), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a idíonn an ciseal ózón.
- > An dlí a chur orthu siúd a bhriseann dlí an cho

BAINISTÍOCHT UISCE

- > Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchreasa agus cósta na hÉireann, agus screamhuiscí; leibhéal uisce agus sruthanna aibhneacha a thomhas.
- > Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- > Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

MONATÓIREACTH, ANAILÍS AGUS TUAIRISCIÚ AR AN GCOMHSHAOIL

- > Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoráip (CAFÉ) a chur chun feidhme.
- > Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus áitiúil (m.sh. tuairisciú tréimhsiúil ar Staid Chomhshaoil na hÉireann agus Tuarascálacha ar Tháscairí).

RIALÚ ASTAÍOCHTAÍ NA NGÁS CEAPTHA TEASA IN ÉIRINN

- > Fardail agus réamh-mheastacháin na hÉireann maidir le gás ceaptha teasa a ullmhú.
- > An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

TAIGHDE AGUS FORBAIRT COMHSHAOIL

- > Taighde comhshaoil a chistiú chun brúnna a shainiú, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

MEASÚNÚ STRAITÉISEACH COMHSHAOIL

- > Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaoil in Éirinn (m.sh. mórfheananna forbartha).

COSAINN RAIDEOLAÍOCH

- > Monatóireacht a dhéanamh ar leibhéal radaíochta, agus measúnacht a dhéanamh ar a oiread is atá muintir na hÉireann gan chosaint ar an radaíocht ianúcháin.
- > Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as tairm náisiúnta.
- > Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- > Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

TREOIR, FAISNÉIS INROCHTANA AGUS OIDEACHAS

- > Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- > Faisnéis thráthúil ar an gcomhshaoil ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaoil (m.sh. Timpeall an Tí, Mapaí Radóin).
- > Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- > Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

MÚSCAILT FEASACHTA AGUS ATHRÚ IOMPRAÍOCHTA

- > GeFeasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- > Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

BAINISTÍOCHT AGUS STRUCHTÚR AN GCC

Tá an ghníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- > An Oifig um Inbhuanaitheacht Comhshaoil
- > An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- > An Oifig um Fhianaise agus Measúnú
- > An Oifig um Chosaint Radaíochta agus Monatóireacht Comhshaoil
- > An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.



E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

Headquarters

PO Box 3000,
Johnstown Castle Estate
County Wexford,
Ireland

T: +353 53 916 0600
F: +353 53 916 0699

Regional Inspectorate

McCumiskey House,
Richview,
Clonskeagh Road,
Dublin 14, Ireland

T: +353 1 268 0100
F: +353 1 268 0199

Regional Inspectorate

Inniscarra,
County Cork,
Ireland

T: +353 21 487 5540
F: +353 21 487 5545

Regional Inspectorate

Seville Lodge,
Callan Road,
Kilkenny, Ireland

T: +353 56 779 6700
F: +353 56 779 6798

Regional Inspectorate

John Moore Road,
Castlebar
County Mayo,
Ireland

T: +353 94 904 8400
F: +353 94 902 1934

Regional Inspectorate

The Glen,
Monaghan,
Ireland

T: +353 47 77600
F: +353 47 84987

Regional Offices

The Civic Centre
Church St.,
Athlone
Co. Westmeath, Ireland

T: +353 906 475722

Room 3, Raheen Conference
Centre, Pearse House,
Pearse Road, Raheen
Business Park,
Limerick, Ireland

T: +353 61 224764