Overview of national waste prevention programmes in Europe

Ireland

2021

European Environment Agency

General information

1.	Name of the country/region	Ireland
2.	Coverage of the waste prevention programme (national/regional)	National
3.	Type of programme (stand alone or integrated into waste management plan)	Stand-alone programme
4.	Title of programme and link to programme	Towards a Resource Efficient Ireland — A National Strategy to 2020 https://www.epa.ie/publications/circular-economy/resources/towards-a-resource-efficient-ireland.php
5.	Duration of programme	Programme came into force in 2004 and has been revised biennially since then
6.	Language	English
7.	Development process of the programme/revision	Ireland's national waste prevention programme (NWPP) was established in 2004. The programme has been reviewed periodically over the years and most recently in 2018. The current programme moves the focus from predominantly demonstration and local scale to national-level strategic programmes preventing waste. The latest revision took into account broad policy developments such as the circular economy and climate agendas. The programme aims to provide tools and information to businesses, individuals and the public sector to influence behavioural change, support sustainable choices and inform policy
8.	Budget envisaged for implementation of the project	The annual report 2019 includes a detailed overview on budgets available for the implementation of the programme. The funding is provided by the Environment Fund and is disbursed through contracting arrangements and grant agreements. In 2019, the total expenditure was EUR 1.53 million. Its breakdown (shown in Figure 1) highlights food waste prevention and local waste prevention activities as the most important building blocks

Figure 1: Breakdown of expenditure on waste prevention in 2019
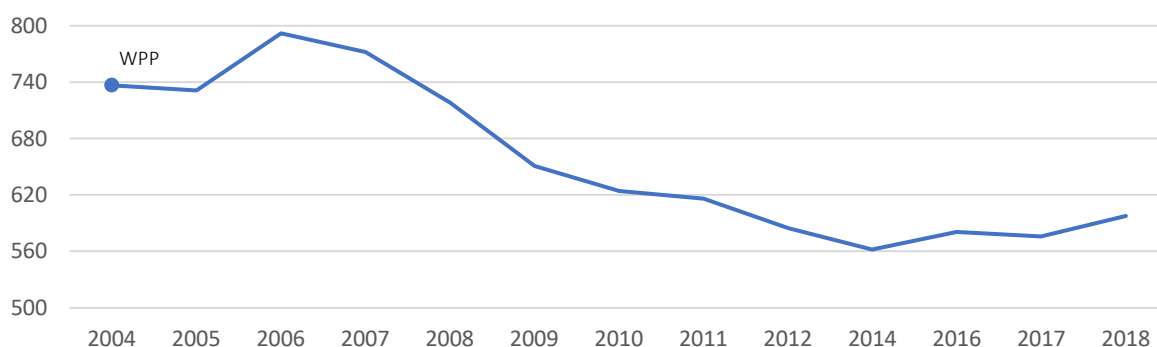

Source: EPA (2020).

Waste generation

The following figures illustrate the progress towards waste prevention and decoupling of waste generation from economic growth in Ireland.

Municipal solid waste
- The generation of municipal solid waste (MSW) per capita has decreased significantly over the course of the implementation of the waste prevention programme, from 737 kg per capita in 2004 to 598 kg per capita in 2018 (see Figure 2).
- Although MSW generation is influenced by many factors (population, household expenditure), the stringent implementation and repeated updating of the NWPP might explain the positive trend in waste generation, particularly from 2007 to 2014.

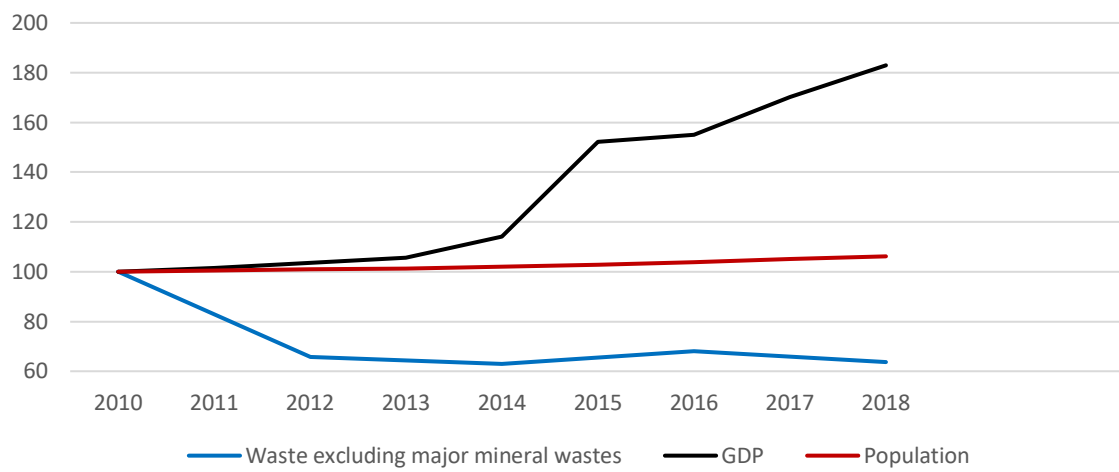Figure 2: Municipal waste generation in Ireland per capita, 2004-2018

Source: Eurostat Circular Economy Monitoring Framework.

Total waste
- The economic crisis of 2008-2010 had a profound impact on Ireland's economic growth.
- Hence, Ireland's total waste generation continued to decrease throughout the years, and particularly quickly between 2010 and 2012 (see Figure 3).
- Until 2013, Ireland's GDP remained quite steady and then started to increase significantly.
- This increase in GDP, however, had little impact on Ireland´s waste generation, indicating a decoupling trend between its economic growth and the generation of waste.
- A link between waste generation and population growth, which increased slowly but steadily within this period, cannot be observed.
- Similar to MSW, the measures in Ireland's NWPP might partially explain the overall positive trend in total waste generation.

Figure 3: Growth rate of waste (excluding major mineral wastes), GDP and population in Ireland, 2010-2018 (2010 = 100)

Waste prevention programme

Objectives and priorities

1.	Waste prevention objectives of the programme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts)	The NWPP is Ireland's primary initiative with regard to developing the circular economy. This emerging economic model looks to minimise the consumption of resources and energy by keeping products and materials in use for longer than at present. It is founded on the waste hierarchy, which identifies waste prevention as the primary approach, followed by reuse, repair and recycling More specifically, the NWPP aims to: • reduce wasteful consumption of material, water and energy resources by changing behaviours in businesses, households and the public sector • enhance competitiveness and reduce business costs by delivering programmes that stimulate resource efficiency and the circular economy • support sustainable growth and employment in the green economy, including reuse enterprises • minimise generation of hazardous wastes through efficient practices and use of safer alternatives • manage hazardous substances in products through efficient regulation • inform and influence evidence-based decision-making by compiling and publishing high-quality data on waste
2.	Sectors covered	• Agriculture • Construction and infrastructure • Healthcare • Manufacturing and industry • Retail • Transport • Households • Service activities • Hospitality • Public services (including procurement)
3.	Priority waste types	• Food/organic • Construction and demolition waste • Hazardous waste • Household/municipal waste • Packaging • Waste electrical and electronic equipment/batteries • Manufacturing waste • Bulky waste • Water wastage • Other miscellaneous wastes
4.	Target groups	The Irish NWPP explicitly involves working with various stakeholders. Through innovation and partnership working, it supports initiatives that develop and showcase best practice in an Irish context. Specific interactions are tailored to engage with the general public, commercial enterprises or

public bodies, with an emphasis on evidence-driven messaging

In 2019, the work built upon existing successful partnerships with the Irish Farmers' Association, the Rediscovery Centre and Community Resources Network Ireland, and created new collaborations, including with Irish Manufacturing Research and the Irish Universities Association. Within the public sector, the NWPP worked closely with the Department of the Environment, Climate and Communications, the regional waste management offices, and with local authorities through the Local Authority Prevention Network (LAPN)

Targets, indicators and monitoring

1.	Indicators proposed	Waste prevention in Ireland is measured at a project level with indicators set out in the NWPP. Available data are verified as appropriate and aggregated by sector or by other means to indicate: • the volume of resources conserved (tonnes of materials, cubic metres of water, kilowatt-hours of energy), with measurements made before and after the intervention (e.g. production of residual waste per person) • the quantity of waste prevented (tonnes of waste generated), with measurements made before and after the intervention • money saved (the difference in euros in waste, water and/or energy costs after the intervention or change) All specific prevention projects undertaken under the NWPP have built-in metrics. Indicators are quantitative where possible and qualitative where appropriate. Examples of such indicators also include the number of businesses or communities contacted by the different waste prevention projects
2.	Quantitative targets	For the purposes of waste management planning, Ireland is divided into three regions (Southern, Eastern-Midlands and Connacht-Ulster). The regional waste management plan 2015-2021 envisages a 1 % reduction per capita per year in the quantity of household waste generated within this period of time The NWPP collaborates and provides funding and support for waste prevention activities by local authorities in these regions through the LAPN
3.	Monitoring of programme	The Irish Environmental Protection Agency (EPA) publishes annual progress reports that provide detailed information on successfully implemented waste prevention measures and strategic considerations on future waste prevention priorities (https://www.epa.ie/pubs/reports/waste/prevention/reports/). A National Waste Prevention Committee (NWPC) was convened in 2004 to monitor the development of the NWPP and to provide strategic directions for the EPA in implementing it The EPA provides the chairperson and secretariat for the committee; further members are drawn from governmental, non-governmental, business and sectoral interest groups.
4.	Evaluation of the programme	The annual progress reports include assessments of specific projects and waste prevention measures. In addition, technical oversights are provided by the NWPC

Prevention measures

Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive	The annual waste prevention report 2019 highlights successfully implemented prevention measures in the following areas: 1. innovation and demonstration 2. delivering through partnerships 3. advocacy and communications Detailed information on specific measures can be found in the following overview (see Table 1)

Table 1: Specific waste prevention measures structured in accordance with Article 9 of the Waste Framework Directive

Promote and support sustainable consumption models	**Circular Campus**: Together with the Irish Universities Association, the potential of waste prevention and behavioural change on Irish university campuses will be explored (NWPP, p. 13) The **Roscommon Women's Network** helps visualise the potential of the local circular economy by offering training to upcycle textiles (p. 11). In collaboration with RTÉ, a podcast on the circular economy in Ireland has been produced (p. 26)
Encourage the design, manufacture and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolescence), repairable, reusable and upgradeable	Operating within the envelope of the NWPP, the Controlled Substances and Producer Responsibility unit supports producer responsibility initiatives under the waste electrical and electronic equipment (WEEE) and batteries regulations that places significant emphasis on prevention in the design phase
Target products containing critical raw materials to prevent those materials becoming waste	Not specifically addressed in the NWPP
Encourage the reuse of products and the setting up of systems promoting repair and reuse activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products	Community Resources Network Ireland is a network for reuse and repair organisations in Ireland, representing them in the national and EU policy developments. The members of this network have reused over 24 000 tonnes of materials (p. 19)
Encourage, as appropriate and without prejudice to intellectual property rights, the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and reuse of products without compromising their quality and safety	A specific tool funded by the NWPP is repairmystuff.ie. It creates connections between repair business and consumers in Ireland to promote repairing for reuse within the circular economy approach (p. 13)
Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques	The 'Green Enterprise: Innovation for the circular economy' is a competitive funding programme/flagship initiative of the NWPP that created opportunities for innovations in the priority areas of plastic waste, construction and demolition waste, food waste, and resources and materials in 2019. The programme promoted case studies that

	explored circular economy opportunities and scenarios for Irish businesses and organisations, as well as demonstration projects to apply research ideas (p. 10f.) Resource efficiency tools: online tools such as TREE help companies watch their internal processes and household actions to make efficient use of water, energy and materials (p. 13) Irish manufacturing research: this 3-year partnership (2020-2022) is intended for CIRCULÉIRE, the national platform for circularity manufacturing to develop circular economy models and offer innovation funding. The goal is to measure performance on greenhouse gas emissions and waste generation (p. 17)
Reduce the generation of food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services, as well as in households as a contribution to the UN Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030	Smart farming: this programme includes a partnership between the Irish Farmers' Association and the NWPP. It makes assessments of on-farm resource efficiency and identifies potential savings and efficiencies (p. 17)
Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products	As a national campaign, 'Stopfoodwaste.ie' raises awareness to households on food waste issues. Via the Food Waste Charter, businesses are encouraged to act to prevent and report food waste in Ireland. With its social media initiatives, the campaign gained a 57 % increase in social media followers, enabling it to reach a wider audience on food waste among consumers. In addition, a media campaign on food waste ran for 2 weeks on both radio and social media reaching over 1.6 million listeners (p. 24)
Promote the reduction of the content of hazardous substances in materials and products, without prejudice to harmonised legal requirements concerning those materials and products laid down at EU level, and ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council provides the information pursuant to Article 33(1) of that regulation to the European Chemicals Agency as from 5 January 2021	Not specifically addressed in the NWPP
Reduce the generation of waste, in particular waste that is not suitable for preparing for reuse or recycling	Partnership with the Rediscovery Centre, the National Centre for the Circular Economy, supports the Irish transition towards a circular economy The project 'Rezero' by ZeroWaste.ie demonstrates a deposit-return system for food retailers (p. 11)

Identify products that are the main sources of littering, notably in natural and marine environments, and take appropriate measures to prevent and reduce litter from such products, where Member States decide to implement this obligation through market restrictions, they shall ensure that such restrictions are proportionate and non-discriminatory	The initiative 'Small Business Innovation Research' offers solutions to the plastics challenge. It encourages cooperation between small and medium-sized enterprises and the public sector to promote innovation to tackle the unsustainable amounts of plastic packaging used in Ireland (p. 13)
Aim to halt the generation of marine litter as a contribution towards the UN Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds	Not specifically addressed in the NWPP
Develop and support information campaigns to raise awareness about waste prevention and littering	The LAPN advances the priority efforts of the NWPP to prevent local waste and to advance local prevention measures in communities (p. 17) Within the DCCAE-led Green Government initiative, the NWPP provides a guidance document on resource efficiency action plans. This can help governments to save water, energy and materials, prevent food waste and raise recycling rates in their work environment. This activity is supported by the TREE online resource efficiency tool (p. 25)

Additional implemented prevention measures, not covered by Article 9 of the Waste Framework Directive	A single-use plastics project by Polymer Alloy Technology demonstrates the capacity of plastics to be remoulded into pallets in a circular economy (p. 11) A Hexafly project demonstrates the conversion of waste to proteins that can be used for animal and aquaculture feed (p. 11) An Irish Manufacturing Research project called SymbioBeer reduces food waste by using waste bread as a secondary raw material to produce beer, while beer waste is used for the production of bread (p. 11)

Food waste prevention

Food waste generation
Ireland does not yet have a specific waste prevention programme for food waste but emphasises this waste stream as one of the key priorities in its NWPP.

Ireland generates about 1 million tonnes of food waste per year (not including wasted food from agriculture). This represents around 34 % of the generated MSW, which — taking into account the food's life cycle — amounts to a carbon footprint of 3.6 Mt CO_2e. Around 40 % is derived from food processing operations and 60 % from the household and commercial sector. Household and commercial food waste is of concern due to its high volume of embedded carbon and other natural resources and its various waste collection mechanisms. Separate collection from food processing operations is, for example, much easier than from households ([1]).

For future analyses, official data provided by Eurostat that monitors the generation of food waste and its development over time can be used.

Measures to prevent food waste
The EPA's 'Stop Food Waste' is the national food waste prevention campaign, providing guidance and resources to help consumers reduce food waste. Through a combination of education, training, local champions and national media and social media promotions, the programme aims to raise consumer awareness and empower citizens to change their behaviour and reduce food waste.

Through the 'Food Waste Charter', the EPA is leading a collaborative programme that supports businesses throughout the food supply chain to reduce food waste. The EPA also hosts the 'Forum on Food Waste', bringing together key actors across the food chain to discuss the issues and challenges in relation to food loss and waste in Ireland.

For a more comprehensive mapping of country efforts towards food waste prevention, please visit the European Commission's Food Loss and Waste Prevention Hub.

Reuse of products

Data
Reuse and life-time extension of products are considered key strategies in waste prevention. The revised Waste Framework Directive (WFD) puts a specific emphasis on measures related to this topic. Article 9 of the revised WFD requires Member States to monitor reuse based on methodology to be developed by the Commission. So far, no comparable data exist to assess progress towards reuse.

With regard to the Commission Implementing Decision (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.010.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A010%3ATOC), this section will be updated by the EEA accordingly.

Measures to support reuse
The LAPN provides various good practice examples, as well as tools and guidelines to support the reuse and repair of products.

Monaghan County Council has been working with county councils from Galway, Kilkenny, Limerick, Meath, South Dublin and Wicklow to develop an online repair directory. This follows on from the success of the Kilkenny Repair Directory, developed in 2015, which has been replicated on paper in other counties. The directory is available on the website: http://www.repairmystuff.ie/

([1]) https://www.epa.ie/our-services/monitoring--assessment/circular-economy/food-waste/

Galway County Council and Galway City Council co-hosted the Galway Reuse and Repair Initiative. This event was designed to showcase best practice examples of reuse, repair and upcycling currently being undertaken by businesses, organisations, voluntary groups and others in Galway and beyond. The event boosted waste prevention and resource efficiency within the region, created awareness of these issues and increased the profile of existing good practice examples in the community.

Building on the success of Kilkenny's Repair Directory, Monaghan County Council has undertaken a feasibility study on the development of a repair app for android phones. This app is supposed to provide comprehensive repair and reuse options and information on facilities for households in the region. The feasibility study has looked at the costs of building the app, the costs of maintaining the app and the database, market research into the need for such an app, and any similar international projects for comparison purposes.

Best practice examples

The Green Enterprise programme provided EUR 55 000 funding for the University of Limerick to demonstrate 'Greening IT' — a circular economy approach to campus IT services. The project, which was completed in 2019, was the first national campus plan to improve the resource and energy efficiency of IT equipment across each stage of the product life cycle. The outcomes of the project included:

- demonstrating reduced energy use of campus IT equipment which included optimising cooling and investigating opportunities for reducing up to 90 % of campus carbon emissions by moving on-site services to the cloud;
- including green public procurement criteria in tender documents;
- encouraging and promoting campus reuse through existing informal reuse exchange systems;
- engaging suppliers through extended producer responsibility (EPR) schemes and promoting recycling through student end-of-semester WEEE collection events;
- upskilling the project team with local training on repairing phones and engaging the campus community on life cycle impacts and opportunities for extending the use phase of electronic equipment through repair events;
- hosting a pop-up shop for refurbished IT equipment: over a 2-month period, 150 items were sold to staff and students.

A key learning point from this study was the importance of gaining support from senior management at the outset to establish cross-departmental motivation and support to undertake the project. The benefits of the project have continued past completion, such as hosting further repair education events and annual end-of-semester WEEE recycling events, continuing close engagement with suppliers to enact EPR schemes, increasing the activity and use of existing on-site exchange and reuse systems, and using opportunities to reduce campus IT carbon emissions by moving on-site services to the cloud.

Links to the circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces not only the input of natural resources into the economy but also the efforts required to collect and recycle waste.

Approaches to improving circularity are often linked to successful waste prevention. The following table shows which circular strategies are explicitly integrated into the Irish waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	Focusing on the durability of electronic products
Repair, refurbishment and remanufacture	Yes	Several initiatives that focus on extending the use phase of products
Recycling	Yes	For example, cooperation with recovery programmes
Economic incentives and finance	Yes	Detailed and transparent budget for waste prevention efforts
Circular business models	Yes	Support for local networks on sharing and leasing
Eco-innovation	Yes	Stimulating innovations for efficiency as one of the key pillars
Governance, skills and knowledge	Yes	Focus on enabling local actors, e.g. the LAPN