Environmental Protection Agency

National Waste Prevention Programme

Annual Report 2014

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

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

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

Strategic Environmental Assessment

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

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 Climate, Licensing and Resource Use
- Office of Environmental Enforcement
- Office of Environmental Assessment
- Office of Radiological Protection
- 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 Prevention Programme

Annual Report for 2014

epa
BeGreen
PREVENTING WASTE & SAVING MONEY

Acknowledgements

The EPA acknowledges the following for their support in the ongoing development and implementation of the National Waste Prevention Programme:

- Alan Kelly, TD, Minister for the Environment, Community & Local Government for providing finance from the Environment Fund and for ongoing support. Also the advice and guidance of his Department staff;
- The National Waste Prevention Committee who have generously provided their time and collective knowledge to the programme (See Appendix A);
- The Board and staff of the EPA;
- The many local authority staff who have contributed significantly to the development of the programme;
- The consultants engaged and managed by the EPA to progress many of the projects, in particular the Clean Technology Centre at Cork Institute of Technology.

Cover photo, courtesy of Community Re-use Network Ireland:
Upcycled items on sale at the Revival by CRNI pop-up shop, Dublin.

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FOREWORD

We have seen many important developments this year in the area of waste prevention and resource efficiency both in Ireland and in Europe. The launch mid-year of our own new national waste prevention programme "Towards a Resource Efficient Ireland" was a milestone and sets out our approach in this area through to 2020. It continues the evolution of our work in this area from our beginnings in 2004 when few others in Europe had thought about waste prevention. Innovations in the plan include developing new approaches to behaviour change; and a stronger focus on re-use activities.

In Europe, despite some interesting policy developments and the adoption of waste prevention plans in every member state, the year ended on a somewhat flat note following the withdrawal of the Circular Economy Package. This framework is critical to provide leadership on transforming Europe into a more competitive resource-efficient economy. This vision is particularly important now, given low oil and commodity prices which reduce the impetus for efficiency. Current indications are that the European Commission will present a new circular economy package in 2015 with a broader 'materials' focus.

This year also saw the release of a report from research commissioned by EPA which provides an analysis of the benefits association with increasing material efficiency and reduced wastage. The report identifies that annual savings to the Irish economy of €928m would be delivered by achieving efficiencies in consumption of 2%. The report proposes a set of actions that would set Ireland on the right course to realise this objective and we look forward to moving this research into an action phase.

Within this context, we have delivered a further successful year of this programme - which is funded by the Department of Environment, Community & Local Government. The programme acts both as a leader and a partner for resource efficiency in Ireland. We work by supporting a wide portfolio projects and actions with householders, businesses and government bodies that promote resource efficient practices. These activities are detailed in this report which we hope you find informative and engaging.

Dr Jonathan Derham
Chair, National Waste Prevention Committee

Dr Shane Colgan
Manager, Resource Efficiency Unit

TABLE OF CONTENTS

NWPP HIGHLIGHTS 2014

BUSINESS

Green Business

€1.4m of savings in 2014, identified in 38 businesses.

6 Resource Efficiency seminars held.

180 companies engaged since 2011. Average identified savings €37k = ***Savings to date: €6.7m.***

Green Hospitality

270 members in 2014.

Member hotels…

waste ↓ 84%

water-use ↓ 38%

energy-use ↓ 32%

SMILE Resource Exchange

- ***1,145 active members***
- ***357 tonnes of materials exchanged - value: €398,000***
- ***National Launch by An Taoiseach***

Smart Farming

600 farmers shared the learnings from 30 on-farm resource efficiency assessments and generated average cost savings of €6,600/farm.

41 Green Enterprise Projects funded since 2012, valued at c.€1.9m

HOME / COMMUNITY

Stop Food Waste

- *450,000 website hits.*
- *350 households took part in the Stop Food Waste Challenge, reporting food waste reductions between 30-50%.*
- *Forum on Food Waste event.*

Community Re-use Network Ireland:

Revival Pop-up Shop in Dublin (12 weeks)

★ *100 visitors/day*

★ *€18,000 in sales*

28 CRNI members in 2014 - many are social enterprises working with long-term unemployed.

FreeTrade Ireland:

✓ 18,000 items exchanged

✓ 600,000 website hits

✓ ***€680,000 savings achieved*** *by reusing household items.*

Green Home…

…helped households reduce electricity usage and generate ***annual savings over €250/home****.*

OTHER NWPP AREAS

360 tonnes of hazardous farm waste brought by **3,000 farmers** to **16 collection centres.**

(including… 32t of pesticides; 16t of veterinary medicines; 164t of waste oil; 18t of paints; and 100t of WEEE & batteries)

(2013 & 2014 data)

PUBLIC SECTOR

Local Authority Prevention Network…

26 local authorities and 2 Regional Waste Management Offices received grant aid of ***€192,000 for 16 waste prevention projects.***

Green Healthcare:

✓ **Case-studies** & **How-to guides** distributed to **every hospital**

✓ **Cork University Hospital saving €114,000/year**

17 local authorities ran the Stop Food Waste Challenge with community groups in their areas, involving 350 households

37% decrease in household waste disposed to landfill in 2013

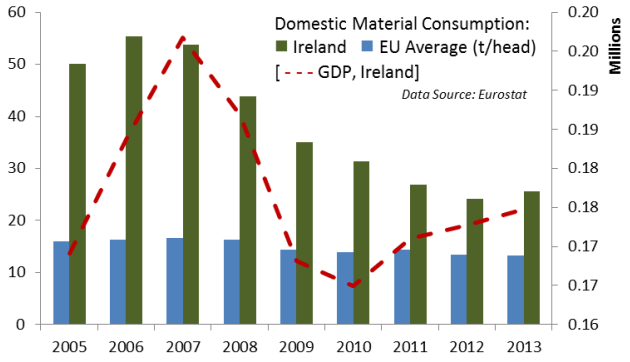
Ireland's new **National Waste Prevention Plan** launched

INTRODUCTION

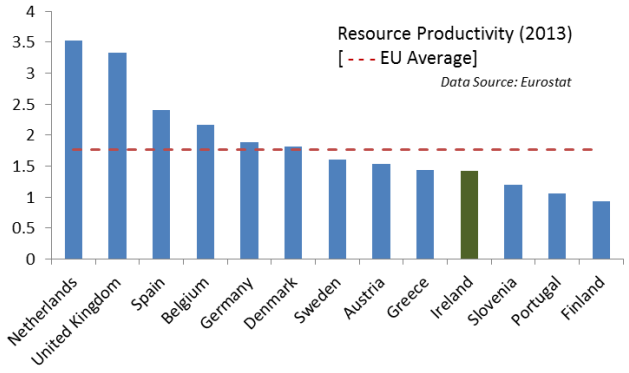
Waste Prevention & Resource Efficiency

Waste Prevention is a critical part of resource efficiency and addresses not just 'waste' but wastage of resources in the broadest terms. Reducing inefficient or inappropriate use of raw materials and resources clearly offers a more sustainable path to prosperity and reduces environmental impact. Prevention of waste is at the pinnacle of the waste hierarchy and may be achieved through reducing the overall demand for goods and services and/or by imposing production efficiency through using less (or at least less harmful) materials throughout the life-cycle of a product or service.

At a European level, leadership on this topic is provided through the *Resource Efficient Europe* strategy adopted in 2011. This strategy, and the complementary *Resource Efficiency Roadmap*, provides a framework for the design and implementation of future actions. It promotes a more sustainable use of natural resources, and a shift towards low-carbon growth in Europe. *Resource Efficient Europe* is one of seven flagship initiatives that form the overall *Europe 2020* strategy to become smart, sustainable and inclusive economy.



This drive for efficiency is particularly critical for Ireland given an ongoing very high level of consumption in our economy as shown in the diagram. While consumption levels have dropped significantly since 2007, they remain higher than European averages and have begun to rise again in step with the recovering economy.

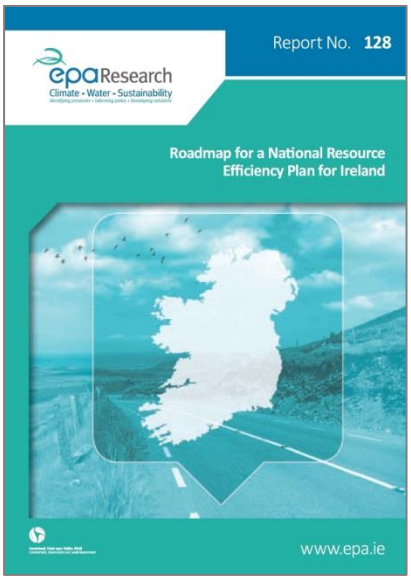


Recent research commissioned by the EPA showed Ireland spends approximately €46 billion on raw materials per annum. These are used in factories, offices, shops and homes across the country and provide the basis of our lifestyle. When consumption data is related to economic output, a measure of the productivity of our resource use is seen.

Ireland has a high ratio of consumption to wealth generated; indicating that maximum productivity is not being drawn from our use of raw materials. Just like there are campaigns to encourage householders and business to be energy efficient; carefully avoiding wastage means we can become 'resource efficient' - spending less while maintaining our standard of living.

Roadmap for a National Resource Efficiency Plan for Ireland

During 2014, an EPA-funded research team concluded that a target of just a two per cent reduction in material consumption spending per annum - achieved through resource efficient practices - would yield **savings of about €928 million for the Irish economy in the first year**. Over an eight to ten year period, this could lead to a 25% improvement yielding a total saving of €7 billion.



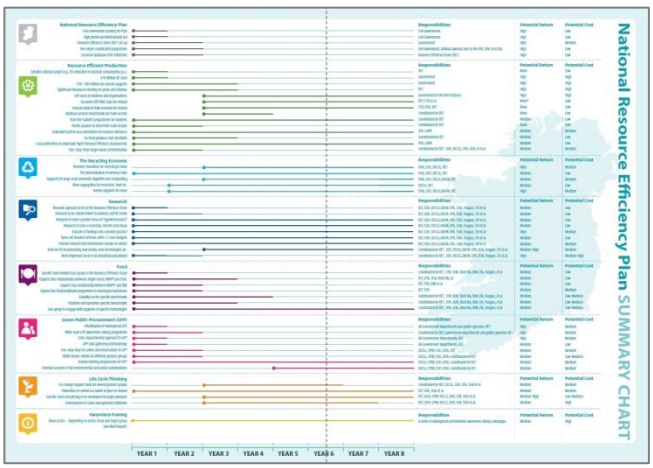
The main conclusion is that, while Ireland is very active and progressive in many areas of resource efficiency, there are deficiencies in relation to some of the more strategic issues, such as life-cycle thinking, eco-design, chain management, green public procurement etc. While Ireland has a good range of resource efficiency supports in place, the magnitude of the spending in this area is less than in many other countries.

The authors found that initiatives to support resource efficiency in Ireland are wide-ranging in focus and support large number of target groups in society. When compared with other countries, especially those of a similar scale and socio-economic status, Ireland was found to be implementing worthwhile and effective resource efficiency programmes. However, greater integration of the programmes in place, and greater intensification of their scope & scale was recommended.

A range of resource efficiency related activities are already taking place in Ireland, in a wide variety of sectors, by public sector and private groups. In many cases, these are driven by government policies and programmes, as outlined in this report, and include the EPA's National Waste Prevention Programme; SEAI's supports for energy efficiency and Origin Green, which promotes resource efficiency in the food sector etc . In many cases, for relatively modest investments, they are achieving significant cost savings in parallel with environmental benefits. However, Ireland can and should be doing more.

The main finding of this independent research is that Ireland currently needs a fully integrated and comprehensive National Resource Efficiency Plan. This would involve:

- ✓ Full cross-Government commitment;
- ✓ Ministerial leadership;
- ✓ A dedicated Resource Efficiency Team;
- ✓ Sufficient resources to meet recommended targets;
- ✓ Full implementation of the detailed activities advocated in the study.



The authors estimated that Ireland is spending annually between 6 and 8 times as much on materials as it is on energy. However, the funding for energy efficiency seems to be far in excess of that currently spent on resource efficiency. Of relevance is the fact that Ireland has a specific energy efficiency target of 20% improvement in energy efficiency across the whole economy by 2020. However, Ireland (like most EU countries) does not yet have resource efficiency targets and the report recommends that this should be rectified.

Improving resource efficiency and resource productivity is good for the environment and good for business. The report shows that resource efficiency can be achieved - with potential for economic benefits and job creation - through the implementation of the roadmap, which is in line with current Government policy to promote a 'Green Economy'.

The Circular Economy

More recently, many of the principles and ambitions in Resource Efficiency have been used to build a concept known as the circular economy. Essentially this economic model puts great emphasis on preserving products, components and materials in use for as long as possible. It looks at an integrated economic perspective across the whole life cycle of production activities and consumption behaviours. The benefit arises by requiring less extraction (and refining) of virgin raw materials and by making the fullest possible use of the labour and capital costs embedded in every product. In this model, landfill and incineration are viewed as leakage of resources from the economy and are to be prevented. It is entirely aligned with the waste hierarchy and offers an effective response to concerns regarding future security of supply for critical raw materials including rare earth metals.

In a fuller sense, the Circular Economy is not only about maximising resource productivity but it also addresses and supports concepts such as

- ✓ Equity of access to resources
- ✓ Valuing ecosystem services
- ✓ Wellbeing - of human health & the environment
- ✓ Fair social & employment structures

Source: European Commission

The objectives of the NWPP are fully coherent with the principles of the circular economy and will form a critical part of Ireland's efforts in this area as the concept develops at EU and national levels.

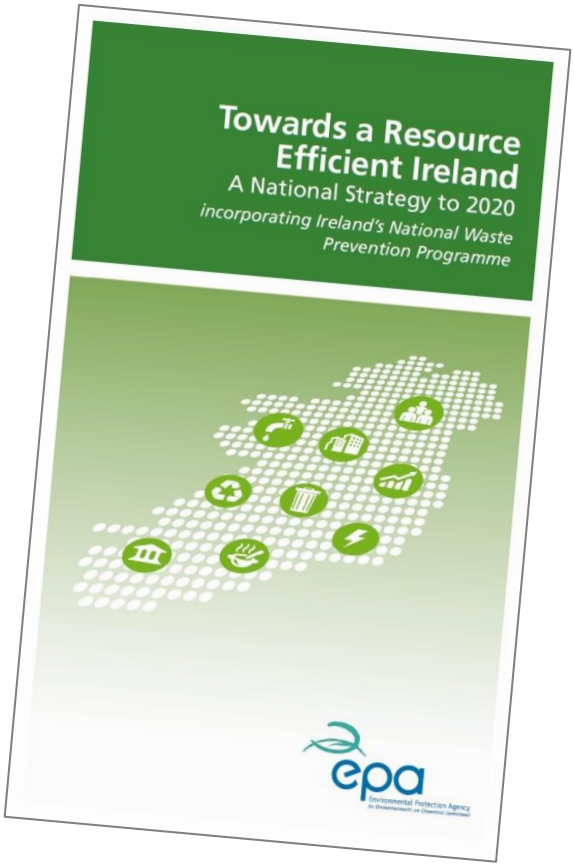
WASTE & RESOURCE POLICY DEVELOPMENTS

Over the course of 2014, there were a number of significant policy and strategy documents issued of relevance to the NWPP and the general area of resource efficiency. These are discussed below and include national publications plus some significant outputs from both the European Commission and the European Environment Agency (EEA).

National Waste Prevention Programmes

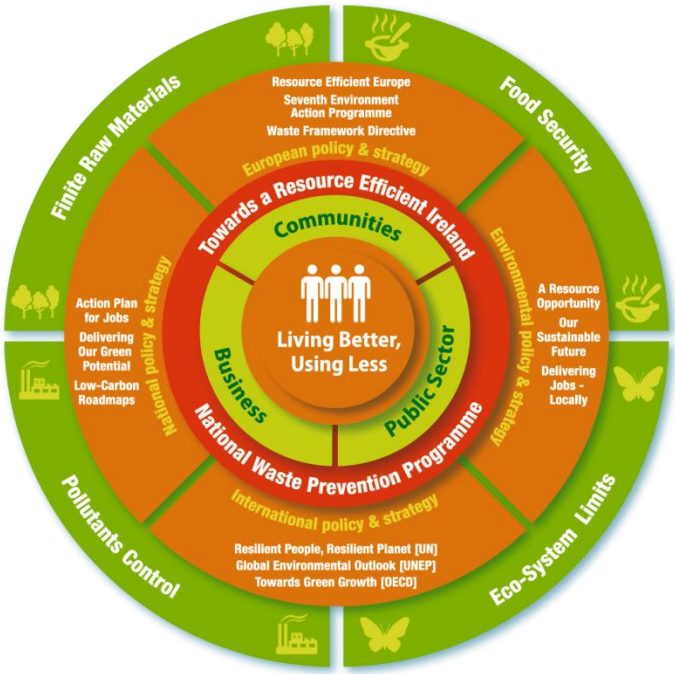
The key policy development for waste prevention in Ireland in 2014 was the publication of "**Towards a Resource Efficient Ireland**", which sets out the National Waste Prevention Programme (NWPP) for Ireland over the period 2014-2020. The central message of the Towards a Resource Efficient Ireland strategy is around sustainability and in particular the concept that in order for Ireland to be competitive and sustainable we need to live better while using less. The new programme aims to ensure that water, energy and raw materials are used in a better way - through efficient production processes and less wasteful consumption. The programme sets out the priorities and actions for Ireland to move away from a 'take-make-use-dispose' economic model to an economy and society where:

- we consume less and more efficiently;
- our natural resources and raw materials are sustainably managed;
- products are kept in use for longer;
- end-of-life goods are up-cycled & re-used and
- wastes are recovered for use as raw materials.



Specific actions to break the link between economic growth and environmental impact include:

- Reduce wasteful consumption of material, water and energy resources by changing behaviours in businesses, households and the public sector;
- Enhance competiveness and reduce costs by stimulating resource efficiency;
- Support employment in the green economy - including re-use enterprises;
- Minimise generation of hazardous wastes by moving to safer alternatives;
- Minimise exposure to hazardous substances in products through efficient regulation;
- Publish data on consumption and waste generation to track the sustainability of our society.
- Work effectively with other State bodies such as Enterprise Ireland, IDA, SEAI, Bord Bia, HSE, to deliver on national resource efficiency targets.



Towards a Resource Efficient Ireland was submitted to the European Commission during the year as the latest in a series of waste prevention programme. An analysis was submitted in parallel to confirm alignment of activities under Ireland's NWPP with the measures provided in Annex IV of the Waste Framework Directive (2008/987/EU).

The other NWPPs in place across Europe have been collected by the European Environment Agency Eionet partnership and are available on-line: http://scp.eionet.europa.eu/facts/WPP.

The year also saw Northern Ireland publish a waste prevention strategy: The Road to Zero Waste. Building on a 2013 waste management strategy, the programme aims to support "green jobs", environmental protection, and conservation of resources. It is available to view at http://www.doeni.gov.uk/ and describes thirteen focus areas, which include:

- Extended Carrier Bag Levy
- Voluntary Agreements with Business (including the Construction Sector)
- Reuse and Repair Network
- Eco-Home & Eco-Schools Programmes

The programme targets at-source waste production to reduce the amount and toxicity of waste (before recycling, composting, energy recovery and landfilling become options) and also considers the adverse impacts of the generated waste on the environment and human health.

National Hazardous Waste Management Plan

The EPA has also released the National Hazardous Waste Management Plan for the years 2014-2020. The plan sets out the priorities to be pursued over the next six years to improve the management of Ireland's hazardous waste based around twenty-seven recommendations. Key issues identified include:

- Hazardous waste collection facilities need to be provided by local authorities for householders and small businesses.
- Local authorities need to be resourced to provide these services.
- Given their potential for environmental pollution, a take-back scheme for expired household medicine is needed.
- Farm hazardous waste should be collected using take-back schemes.
- Improved collection of hazardous waste is required for a number of smaller priority sources including vehicle servicing garages, ports and harbours, and healthcare risk waste from individuals.
- Sites where hazardous waste was disposed of in the past should be identified, assessed and, where necessary, remediated.

Green Procurement Guidance for the Public Sector

This guidance was prepared by the EPA in collaboration with a number of State Agencies and Government Departments. It is a practical resource tool designed to assist procurers to build green criteria into public tenders and a deliverable under the Government's National Action Plan for Jobs. Procurement across all Government Departments and Agencies accounts for 10-12 per cent of Ireland's GDP (approx. €14 billion in 2011). Including sustainable and green practices in public procurement can drive significant behavioural change as well as the expansion of markets for green products and services. Green procurement allows public bodies to influence the marketplace in a positive way, driving demand for secondary resources and incentivising job creation in the green economy.

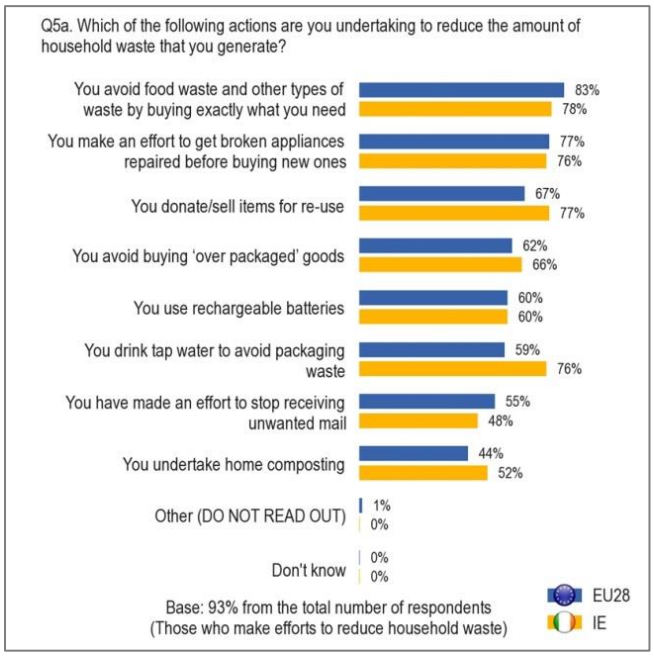
The purpose of the Guidance is to provide a practical overview of the issues at stake, best practice examples and detailed criteria for insertion in tenders. It covers eight sectors:

- Road transport vehicles and services
- Energy
- Construction
- Food and Catering services
- Cleaning products and Services
- Textiles and Uniforms
- Office IT Equipment
- Paper

The Guidance complements government policy in green public procurement as outlined in the document Green Tenders: An Action Plan on Green Public Procurement which is available here: http://www.environ.ie/en/Environment/SustainableDevelopment/GreenPublicProcurement/.

European Commission: Attitudes towards Waste Management & Resource Efficiency

In mid-year, the European Commission published a Flash Eurobarometer report on the topic of 'Attitudes of Europeans towards Waste Management and Resource Efficiency'. The stated aim of the survey was "to understand citizens' perceptions, attitudes and practices related to generation and management of waste, efficient use of resources, as well as elements of the so-called "circular economy" (including second-hand products and alternatives to buying new products)".



The results were based on a survey of 26,595 respondents across Europe – including a sample in Ireland of 1,000. Overall the survey indicated a strong level of public support for resource efficiency with 96% of all respondents saying say it is important for them that Europe uses its resources more efficiently (The 'Ireland' score was even higher at 98%).

In addition, Ireland (along with Greece & Cyprus) had the highest proportions of people who think that more efficient resource use would have a positive impact on both economic growth and employment opportunities in their country. With regard to the impact on quality of life, this proportion was again highest in Ireland (along with Austria, Luxembourg & Sweden).

Other notable Irish results include:

- Agreement about making efforts to reduce the amount of household waste they generate is highest among respondents in Ireland (97%).
- Trend analysis shows that the number of people in Ireland who waste 15% or less of the food they buy has increased significantly in Ireland, and more quickly than in most European countries.

European Commission: Circular Economy Package

In July, the Commission adopted proposals to turn Europe into a more circular economy and boost recycling in the Member States. The plan contained targets for Europeans to recycle 70 % of municipal waste and 80 % of packaging waste by 2030, and to ban burying recyclable waste in landfill as of 2025. At time of publication, it was announced that achieving the new waste targets would create 580,000 new jobs, while making Europe more competitive and reducing demand for costly scarce resources.

Late in 2014, and following some months of uncertainty, it was confirmed that the European Commission would withdraw the Circular Economy package in its original form. This action arose from a 'screening' of pending pieces of legislation initiated under new Commission President Jean-Claude Juncker and a stated aspiration to better align the package with the wider priorities of the new Commission.

The Commission has since indicated that it will introduce a new circular economy package in late 2015 which is being presented as a more ambitious approach addressing a range of economic sectors in

addition to waste. Specifically, the Commission has indicated that the new package will have a two-fold approach:

1. New legislative proposal on waste targets, which will maintain EU wide goals on recycling levels.
2. Roadmap for further action on the circular economy, looking at two aspects:
   - *upstream*: in the production and use phase, before products become waste; and
   - *downstream*: after products are no longer waste, looking at what can be done to encourage and develop a market for the recycled products.

The overall aim is broadly as before: to transform Europe into a more competitive resource-efficient economy by getting maximum value from resources at all stages of the life cycle of products. In terms of benefits, it is estimated that waste prevention, eco-design, reuse and similar measures could bring net savings of € 600 billion, or 8 % of annual turnover, for businesses in the EU, while reducing total annual greenhouse gas emissions by 2-4 %.

European Commission: Green Action Plan for SMEs

In July, the European Commission announced its Green Action Plan for SMEs, which presents a series of SME-oriented actions proposed at European level to help exploit the business opportunities that the transition to a green economy offers, by improving resource efficiency of European SMEs, supporting green entrepreneurship, exploiting the opportunities of greener value chains, and facilitating market access for green SMEs. The plan sets out a series of objectives and corresponding actions which can be grouped in four key sections:

1. Improving resource efficiency in SMEs for the reduction of production costs and for productivity gains.
2. Green entrepreneurship supports to foster a favourable business environment in which green ideas can be easily developed, financed and brought to the market.
3. Promoting opportunities for SMEs in a greener value chain, including re-manufacturing, repair, maintenance, recycling and eco-design to driver economic growth while also making a significant contribution to addressing environmental challenges.
4. Supportive framework and more international cooperation are required in order to help European SMEs with green expertise successfully integrate into global value chains. Access to the markets for green SMEs.

European Commission: Resource efficiency opportunities in the building sector

Also in July, the Commission adopted the Communication "Resource Efficiency Opportunities in the Building Sector" which aims to promote a more efficient use of resources consumed by new/renovated buildings, and to reduce their overall environmental impacts throughout the full life-cycle. Key objectives of the initiative include:

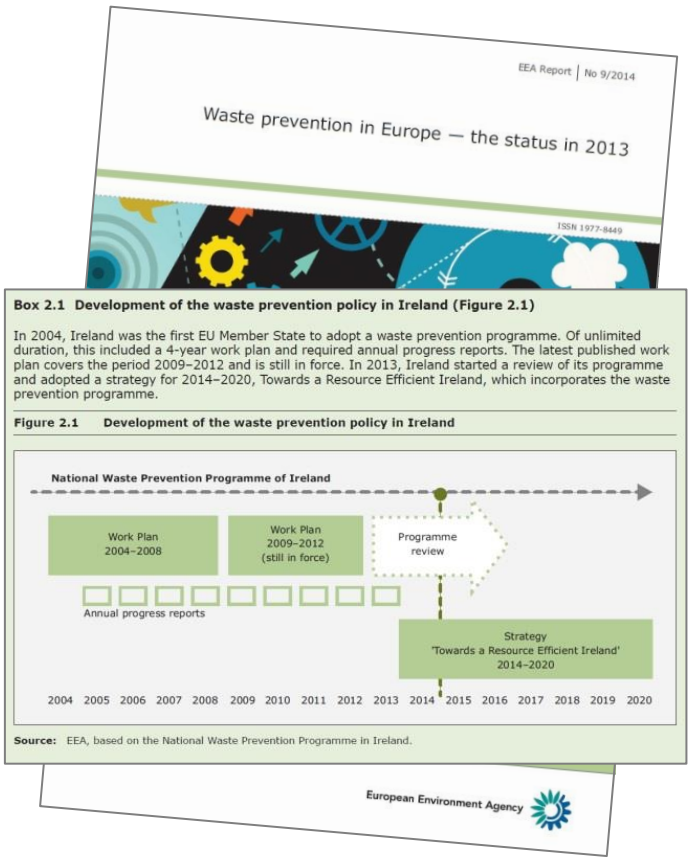
- Raising awareness of and demand for better environmental performing buildings;
- Improving knowledge and information regarding resource use and environmental impacts in the sector;

- Removing barriers created by different requirements concerning the environmental performance of buildings;
- Improving material efficiency, including the prevention and management of construction and demolition waste;
- Supporting more intensive use of buildings in order to reduce the need for further built environment.

EEA: Waste Prevention in Europe

This EEA report 'shows that by the end of 2013, 18 of 31 countries had adopted waste prevention programmes as required by the EU Waste Framework Directive. The EEA has indicated that it will regularly assess waste prevention programmes under this legislation.

Overall, the report found that the various programmes show considerable differences in detail, coverage, objectives and time horizon. Most waste prevention programmes mention the aim of 'decoupling' waste generation from economic growth, but quantitative targets and corresponding monitoring schemes are often lacking. The majority (60%) are concerned with information and awareness-raising, while regulatory or economic policy instruments are mentioned less frequently (17%).


EEA Report | No 9/2014

Waste prevention in Europe — the status in 2013

ISSN 1977-8449

Box 2.1 Development of the waste prevention policy in Ireland (Figure 2.1)

In 2004, Ireland was the first EU Member State to adopt a waste prevention programme. Of unlimited duration, this included a 4-year work plan and required annual progress reports. The latest published work plan covers the period 2009–2012 and is still in force. In 2013, Ireland started a review of its programme and adopted a strategy for 2014–2020, Towards a Resource Efficient Ireland, which incorporates the waste prevention programme.

Figure 2.1 Development of the waste prevention policy in Ireland

Source: EEA, based on the National Waste Prevention Programme in Ireland.

European Environment Agency

The EEA concluded that the variety of national initiatives leaves substantial room for improvement and that additional efforts would be beneficial with regard to target setting, monitoring and the funding of upstream prevention measures.

EEA: Resource-Efficient Green Economy and EU policies

This report examined how Europe can create jobs and encourage innovation by using resources much more efficiently. It considers how European economies can drive more efficient material resource use as part of the transition towards a 'green economy' (a stated aim of the EU). The EEA states that while many environmental trends are gradually improving, the EU needs a more fundamental, systemic re-orientation of its economy if it is to meet some of its long-term environmental objectives.

The report finds that an effective lever for improving resource efficiency would be to reduce labour taxes such as income tax, instead of taxing inefficient resource use and environmental pollution. Such environmental taxes could encourage job creation but are under-used in the EU, equivalent to only 2.4 % of GDP in 2012. There may be multiple benefits - countries with the highest environmental taxes also seem to rank very highly for eco-innovations and competitiveness.

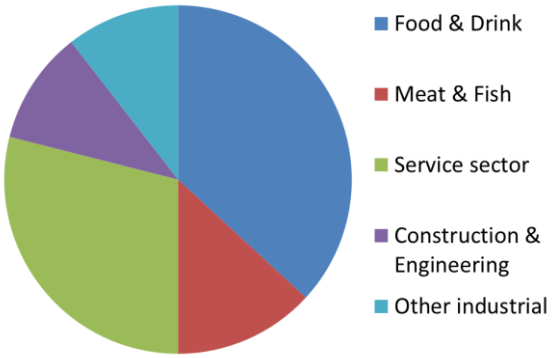
In addition, the authors argue that strong environmental regulation can give the EU a competitive advantage as an early adopter. Other regions which want to import products into the EU are gradually adopting European norms such as vehicle emissions standards or chemical controls.

Finally, the EEA notes that there is an opportunity to boost environmentally-beneficial innovation in areas such as renewable energy - through EU aims to increase the share of manufacturing to 20 % of GDP by 2020 (from 15.1 % in 2013). However, the report warns that such growth must be consistent with EU environmental priorities; otherwise it could have negative consequences including increasing greenhouse gas emissions and wasting valuable resources.

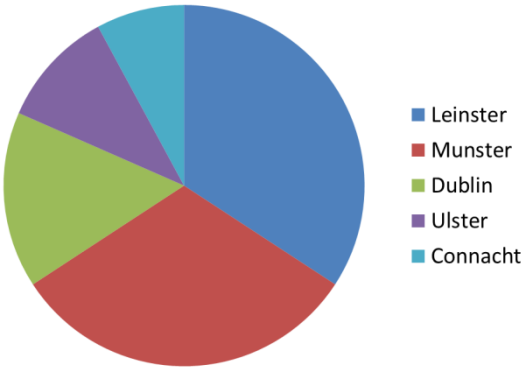
RESOURCE EFFICIENCY ACTIVITIES

Green Business

The Green Business Programme is now seven years in existence and one of the flagship activities of the NWPP. The programme has been managed by the Clean Technology Centre, Cork since June 2011 and during this time Green Business has visited 180 companies and identified more than €6.7 million potential cost savings for businesses.



There were 38 resource efficiency assessments undertaken in 2014 across a wide range of sectors in Irish business as shown, *left*. Regionally there was a good distribution of assessments across the country, *below*. With average savings over €36,000 per company identified, **€1.4 million worth of savings were identified to Irish businesses through Green Business in 2014.**



A number of companies which have been visited, have already acted upon Green Business advice and have achieved significant cost savings and reduced their environmental impacts.

BALLON MEATS – CO. CARLOW
Ballon Meats worked with Green Business to look at improving efficiency in water and energy use. The REA identified hot water as the major part of their thermal load, so the project examined harnessing waste heat from their refrigeration compressors to offset some of the required energy input. By installing a tubular heat exchanger the boiler feed water is now pre-heated to 45°C, reducing oil costs for water heating by approximately 40%.

Guidance

A key function of Green Business is the provision of guidance and advice for the business sector. In 2014 Green Business developed a ***"Resources"*** feature on the **www.greenbusiness.ie** website. This feature allows businesses and the public to search for and download a wide range of

guidance documents in the area of resource efficiency and environmental management. The **www.greenbusiness.ie** website also features a section on "***Case studies/ Presentations".*** Green Business Seminar ***Presentations*** are available from some of Irelands leading companies in the area of resource efficiency.

In 2014, Green Business published two good practice guides on resource efficiency: Resource Efficiency for the Retail Sector and Resource Efficiency for the Print & Packaging Sector. Both of these guides were developed in collaboration with industry and business sector organisations.

A summary of Green Business activity since June 2011 is illustrated in the infographic below.

Collaboration

In recent years, Green Business has developed a good working relationship with a number of organisations, who provide advice and assistance on the area of resource efficiency. This collaboration optimises synergies which can be achieved. Organisations which Green Business has collaborated with include the Regional Waste Management Offices; Be Green programmes such as LAPN, SMILE & Green Hospitality; and the organisations shown below.

Seminars and Promotion

The Green Business team work closely with the NWPP-supported Ibec Green Business executive to promote resource efficiency to the Ibec membership and other stakeholders.

In the last three years, Green Business has hosted 29 Resource Efficiency Seminars. These seminars are aimed at promoting the message that 'Green Business' is 'Smart Business' and that resource efficiency has a crucial part in sustaining business. Attendees are primarily from the industrial/ commercial sector but also include those from the government, consultancy, education and media sectors. In 2014, Green Business organised six regional seminars, with three held in May and three in November. The seminars were open to all sizes of business from micro-enterprises, to SMEs, to larger organisations. There was a total audience of 218 attendees.

Green Business, and the Ibec Green Business executive, continued its sponsorship and promotion of the Green Awards in 2014. This promotion by the Ibec Green Business Executive assisted in the Green Awards achieving over 150 award category entrants of exceptional quality. Green Business sponsored two award categories, the Green Small Organisation Award which was won by Clearstream Solutions and the Green Public Sector award which was won by ESB.

Green Business promotional activities in 2014 included participation in events such as the SEAI Energy Show; Future in Food Conference; Bord Bia Origin Green workshops; Taking Care of Business regional events; and SMILE events.

Repak Prevent & Save

Repak's Packaging Waste Prevention Programme aims to assist Irish businesses with positive and practical ways to reduce packaging and to promote those achievements to a wider audience.

In 2014, Repak & PMCA Economic Consulting updated a previous study to report the monetary savings resulting from the packaging prevention activities of Repak member firms. Activities have been supported by Repak through the employment of two packaging technologists dedicated to working to optimise the volume of packaging placed in Ireland. The main findings of the study are as follows:

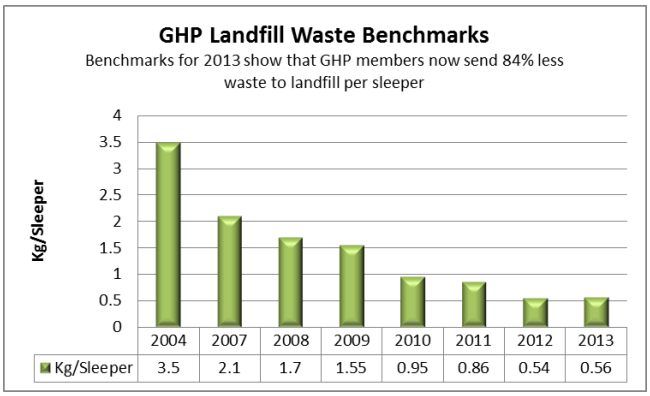
- Cumulatively during 2005-2013, almost 520,000 tonnes of packaging have been prevented – including an estimated 88,000 tonnes of packaging prevented in 2013 alone;
- The estimated procurement savings made by Repak members have risen from €9.4m in 2006 to €36m in 2013 or amount to a cumulative total of almost €213m over this time;
- The estimated supply chain savings from the packaging prevention activities of Repak members have grown from €4.8m in 2006 to nearly €15m in 2013 or by €93m cumulatively during the period;

In 2013, the €51m in procurement and supply chain savings associated with the packaging prevention activities of Repak members equate to an average of approximately €24,200 in packaging savings per member.

REPAK
Business *funding* recycling

Green Hospitality Programme

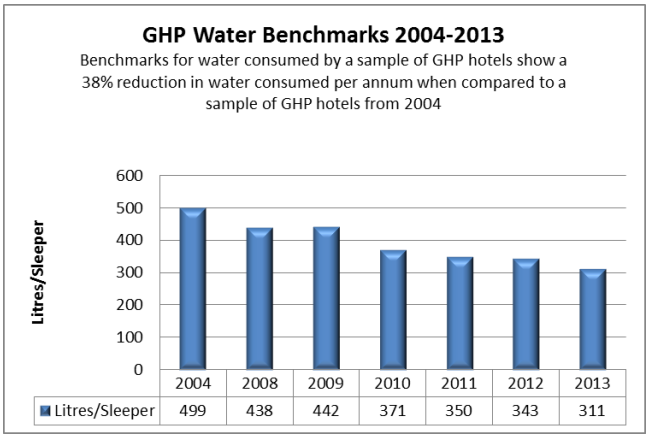
The Green Hospitality Programme (GHP) provides a step-by-step approach to environmental management within the hospitality and catering sectors with awards given at Eco-label, Silver, Gold and Platinum levels. The Programme has become the standard for environmental management within the hospitality sector in Ireland. It is the only Irish developed national programme recognised internationally, and has all major stakeholders supporting the project within Ireland, including Tourism Ireland, Fáilte Ireland, Irish Hospitality Institute, Irish Hotels Federation and the Restaurants Association of Ireland.



Environmental improvements made by GHP hotels are measured annually using environmental benchmark figures provided by the members. Certified members are obliged to provide their environmental benchmark on an annual basis. Since GHP first commenced benchmarking in 2004, GHP hotels have made significant improvements.

Estimated environmental benefits for GHP members in 2014

- 8,500 tonnes of waste prevented
- 45,000,000 KWh of energy saved
- 500,000 m3 of water saved
- 10,000 tonnes of CO2 saved
- An estimated €8.7 million saved for the hotel sector

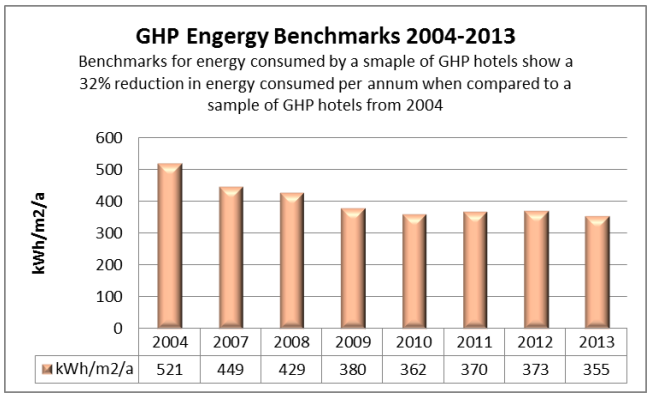


The average GHP hotel energy cost per sleeper was €4.7 in 2013. Water and waste costs averaged at €0.72 per sleeper. In 2013, GHP hotels had circa 5 million sleeper nights, with an estimated utility cost of €27.1 million. If these hotels were consuming as they did in 2004, utility costs would be at least an additional 32% more than they are today which is equivalent to €8.7million per annum for the current 130 hotels participating in the programme. Therefore the average additional savings for GHP hotels is €70,000 per hotel per annum.

Key achievements of the programme in 2014 include:

- Maintained membership at 270 members and grew certification to 61% of members.
- GHP ran 38 regional workshops to assist hospitality businesses to move towards certification reduce their utility costs and utilize green marketing to its full extent.
- GHP delivered regional workshops in Monaghan, Clare, Kerry, Mayo, Dublin and Cork.

- GHP held the first "Tourism and Travel Conference and Awards" on 16th October, 2014 which was attended by the Minister for Tourism, Mr Pascal Donohoe
- Carried out 20 environmental reviews
- Programme Development – GHP continuously updates GHP Criteria, Verification Requirements, Guides & Templates
- The GHP environmental benchmark workbook has been improved to incorporate the International "Hotel Carbon Measurement Initiative"
- Greener Festivals. In 2014 GHP supported the Rose of Tralee International Festival and Fleadh Cheoil Sligo.



The Green Hospitality Programme takes credit for much of these saving but not all, as there would appear to be a number of important factors at play, which has resulted in these dramatic improvements in resource efficiency by GHP hotels over the last 10 years. Other factors which have resulted in resource efficiency improvements include:

- Environmental legislation such as the packaging regulations and food waste regulations.
- An increased awareness of costs associated with utility costs and the realisation of the benefits to the bottom line of being prudent with resources.
- The downturn on the economy and the necessity to reduce overheads.
- An huge increase in available resource technology products and suppliers, such as lighting, water saving devices, energy monitoring and control services, renewable energy products, etc.

Green Healthcare Programme

The Green Healthcare programme (GHCP) aims to improve resource efficiency and help prevent and reduce waste and emissions from healthcare facilities in Ireland. To date, the programme has worked with 41 healthcare facilities, including acute hospitals, children's hospitals and primary community continuing care (PCCC) facilities. The acute hospitals worked with represent 50% of the acute beds in Ireland. The HSE has been involved in the Green Healthcare Programme since its inception and in 2014, the HSE's National Health Sustainability Office (NHSO) provided co-funding to the GHCP.

In 2014 a 'Whole of Campus' approach was used, whereby an acute facility would be selected as an exemplar of a Sustainable Hospital. The GHCP would primarily focus on waste prevention work, and water reduction work; and SEAI would focus on energy reduction and awareness work.

Connolly Hospital Blanchardstown

Food-waste prevention was the major focus for 2014 at Connolly Hospital and the catering department implemented a number of changes to the ordering and provision of food, as recommended by the programme. Combined with awareness training for all catering staff and increased supervision of ward activities, the food waste generated has reduced significantly in the past months.

The most recent waste contractor information indicates a 27% reduction in the quantity of food waste generated. The reduction in food waste has resulted in a corresponding reduction in food purchasing and initial estimates indicate reduced purchasing costs in the region of approximately €30,000 per annum.

Cherry Orchard Hospital

During 2014, Cherry Orchard Hospital was selected as the second exemplar Sustainable Hospital, and initial work focused on attainment of relevant data and statistics including a detailed waste & recycling survey, and a food provision & wastage survey. These surveys identified potential waste prevention and improvement options for the facility.

The timing of the selection of the hospital in Q3 2014, and the time required to undertake the waste surveys and generate reports, did not allow significant time for the facility to implement the recommendations made.

Roscommon Green Healthcare Project

The Roscommon Green Healthcare Project was initiated to improve the sustainability of healthcare facilities across County Roscommon. The project involves reviewing the waste generation and management practices in both public and private facilities. A detailed waste survey and a food provision & wastage survey were undertaken in two public facilities. The work with private facilities followed a more remote type of support, and did not incorporate detailed waste surveys.

New Participants

While the main aim of the 2014 programme was to work specifically with existing facilities, the GHCP also engages with facilities that initiate contact. Examples of work commenced with new facilities.

- Acute hospital, Munster – provided with advice on implementing food waste segregation and recycling system. Facility is now meeting food waste legislation.
- Intellectual disability services provider, Dublin – the facility has commenced a project to identify food waste prevention measures, while implementing systems that can be implemented by the facility's clients

Work with existing facilities

Assistance continued for other participants in implementing waste prevention improvement options during 2014. Significant assistance was provided to Cork University Hospital in 2014. Since 2013, the hospital has had an active sustainability team, which has implemented or seriously considered many of

the GHCP's recommendations. Measures implemented at Cork University Hospital are saving €115,000 per year in costs; and the hospital was awarded a Green Flag during 2014.

Other examples of assistance given to existing facilities include:

- Acute hospital, Munster – revisited to encourage the rollout of recycling and waste prevention measures onsite. A Plan of Action, outlining the next steps to be taken, was provided to the hospital.
- PCCC facility, West Munster – re-survey of food provision and waste services to identify improvements made from implementing original recommendations. The re-survey observed that food waste segregation had greatly improved, with recycling also increasing.
- Acute hospital, Dublin – revised menu ordering system. This measure has greatly reduced the paper consumption and freed up printing facilities. A number of other recommendations are yet to be implemented, with great potential for further waste prevention.
- Acute hospital, Connacht – facility was visited to encourage the implementation of a renewed waste prevention programme. A new plan of action and guidance on specific issues was drawn up and provided to the hospital for consideration.

Website and resources development

Promotion of the GHCP's resources is essential in order to encourage facilities to implement waste prevention measures. All guidance documents are available on the Green Healthcare Programme's website.

In 2014 the individual guides were combined into two booklets; one on food waste and one on other wastes; and packaged in a presentation pack. The NHSO facilitated the distribution of packs to each acute hospital in the country. In addition, packs were distributed at the NHSO's National Seminar on Sustainable Health Systems in Connolly Hospital, and the 'Enabling Delivery of Sustainable Healthcare' seminar at CUH.

The Green Healthcare Programme's private information-sharing network is in operation. The network is facilitated by CTC on their Basecamp Project Management online tool. As has been observed with other networks, the network is gradually being used by HSE staff to ask questions and seek guidance, and raise awareness of upcoming events.

Water reduction study

A water reduction and cost savings study was undertaken in an acute hospital in the Midlands, to identify the potential for the reuse of Reverse Osmosis reject water. The study estimated that approximately €2,400 worth of reject water is discharged to drain per annum. This water, which was tested and observed to be potable, could potentially be used for lower use purposes e.g. toilet flushing. Some storage and plumbing costs would be required, with an estimated payback of less than one year.

Community Reuse Network Ireland

Community Reuse Network Ireland (CRNI) is an all-Ireland umbrella body that represents community-based organisations involved in reuse. CRNI is funded by the EPA and is the national body for reuse with a broad stakeholder base including grassroots reuse organisations, the wider environmental and social enterprise sectors, policy makers, government officials and the general public. CRNI sits on a number of bodies including the National Waste Prevention Committee (NWPC), the Social Enterprise Task Force (SEEFT), Eco-tourism Ireland and the European-wide reuse network (RREUSE).

The majority of CRNI's members are social enterprises and the network members provide substantial benefits in both environmental and socio-economic terms.

Environmental benefits	Socio-economic benefits
✓ *Waste prevention*	✓ *Job creation for disadvantaged areas and marginalised people*
✓ *Diversion of valuable materials from landfill*	✓ *Employment training and skills training*
✓ *Resource efficiency*	✓ *The provision of quality essentials at affordable prices*
✓ *Educational value of promoting reuse to a wider public*	✓ *Boosting local economies*

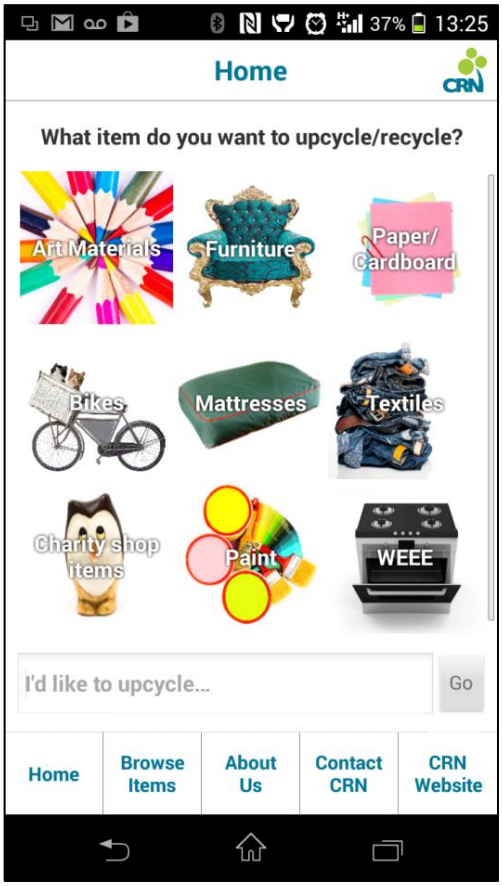
The aims of the network are set out its current five-year strategy as:

- Promotion of reuse
- Support for members
- Communication – internal and external
- Membership drive
- Policy input
- Research (including market research)
- Networking and Links (including European links)

2014 has been an important year for CRNI when much of the hard work put into the group since its inception in 2010 paid off and the network was rewarded with a more prominent profile and cemented its role as a key stakeholder in the Irish environmental sector. CRNI completed two exciting Green Business projects funded under the EPA Strive Programme in 2014; the *Reuse It! smartphone app* and the *Revival by CRNI pop-up shop* and educational space.

The **Revival by CRNI pop-up shop** showcased and marketed re-used products made by CRNI members in a stylish, city centre retail space

with the intention of bringing re-use to mainstream shoppers. The shop stocked a wide range of upcycled products including furniture; fashion; bikes; laptops; and art materials. Footfall was in the order of 100 customers per day, and total sales over its 12-week duration were over €18,000. The products in the shop were quirky, but were also well designed & expertly crafted – demonstrating the high level of finish that can be achieved for re-use items. An integral part of this project was a series of workshops to teach upcycling skills & techniques, and to inspire participants to think in new ways about reusing, rather than junking discarded items.



The **Reuse It! smartphone app** allows users to find the appropriate service to reuse particular items (furniture, WEEE and so on) in their own geographical areas. It also contains short instructional videos of simple reuse, or make-mend-and-do, skills.

2014 also saw CRNI organise a reuse conference which was well attended and well received by a broad sector of participants from public, private and civil sectors. The conference featured speakers from Ireland, the UK and Europe and looked at both practical and policy aspects of reuse and was held at Farmleigh house in the Phoenix Park. A video of the conference was produced as a promotional video for CRNI, to extend the impact and value of the conference. Discussions on the day proved to be robust and insightful and the event resulted in a lot of interest from all over the country.

There is a wealth of collective expertise and experience in reuse within the network and so CRNI takes its role as a key stakeholder in policy discussion around waste prevention and circular economy very seriously. This year CRNI was delighted to take part in the National Waste Prevention Committee and consultations on the new Regional Waste Management Plans (RWMPs). Submissions made by CRNI to the RWMP process were the product of much consultation within the network transferring the knowledge of those working on the ground in reuse as well as drawing from reuse discourses happening in Europe.

Networking and creating links is an essential part of the work of CRNI and the network was represented at many events during 2014, by both the network coordinator and individual members. Some of the more high profile events at which CRNI members participated included Irish Social Enterprise Conference; CIWM Resource Efficiency Event; European Commission Green Week; and Irish Wastes Management Conference. CRNI also attended two meetings of the European reuse network, RREUSE, in mainland Europe. Presentations on reuse and the work of the network were also given to the Conference of Irish Geographers, the Local Authority Prevention Network and textile students in the National College of Art and Design.

SMILE Resource Exchange

The SMILE Resource Exchange programme has continued to develop in 2014, growing to 1,145 registered members on the website **www.smileexchange.i**e and directly supporting 323 synergies between businesses. These synergies continue to help businesses to become more sustainable, to save money on purchasing and waste disposal costs while also acting as a platform to identify business opportunities from turning a waste into a resource. Coupled with the economic benefits the programme brings about environmental benefits, preventing waste occurring, increasing the life of resources through reuse, increasing recycling levels and reducing the amount of waste going to landfill.

The core work of SMILE is to develop synergies between businesses, and in 2014 SMILE directly supported 323 interactions, of which 112 were identified through the SMILE website; 107 by SMILE; and 104 were identified prior to 2014 but continued to be supported during the year. A total of 60 successful synergies were recorded in 2014 equating to 357 tonnes of material actually diverted from landfill with an estimated value of €398,000.

In November, An Taoiseach, Enda Kenny, T.D., officially announced the national launch of the SMILE programme, making the service available to all businesses across the Republic of Ireland. Speaking at an event in Dublin, the Taoiseach urged businesses to engage in the service and commended the innovative thinking behind the initiative as well as SMILE's international links with other industry networks through the European Industrial Symbiosis Association (EUR-ISA).

A signature SMILE event took place in Tallaght Stadium, Dublin in April with 62 people in attendance and 148 potential synergies identified. In total, approximately 23,516 tonnes of resource materials were offered on an annual basis at the event which could equate to a monetary cost saving of between €1.79m and €2.38m if all this material was diverted from landfill.

In November, the SMILE website was revamped with a fresh design and a number of additional features added to the website for members.

Industrial Symbiosis in Europe

Through membership of the EUR-ISA network SMILE has developed relationships with 10 similar projects to SMILE across Europe over the course of 2014, including Denmark, Finland, the UK and Turkey. Through such interactions SMILE has learned how such programmes operate in these countries and this year completed a report, "Toward a Roadmap for Industrial Symbiosis in Ireland" which looks at the Irish model of an industrial symbiosis programme, i.e. SMILE, in contrast to the European programme models. In order to progress successfully industrial symbiosis in Ireland, the report recommends:

1. A national expert group bringing together academia, government and business to oversee the implementation of industrial symbiosis; and
2. An increase in levels of technical support given to companies.

Technical Support Assistance

Following the analysis of similar industrial symbiosis programmes across Europe it was identified that specialist technical assistance was required for the SMILE project in order to achieve more significant

tonnages and diversion away from landfill. A three month trial was piloted from October to December 2014 which saw Flannery Nagel Environmental Consultants appointed to provide technical assistance to the project. To date they have identified and supported 47 potential synergies and have given support to progress synergies already identified by the SMILE team.

BOOMERANG RECYCLING

July 2014 saw the official launch of Boomerang Recycling, a social enterprise p recycling mattresses, initiated by SMILE. Through its members, SMILE identified a significant volume of mattresses in the Cork region and a lack of recycling facilities. Funding was secured through the EPA Green Enterprise Programme (in collaboration with Cork County & City Councils, Cork Environmental Forum, Cork City Partnership and the local community), and the facility is now up and running. Today they recycle approximately 150 mattresses per week with 1 paid full time manager employed and 8 TUS workers who all live close to the facility. The facility plans to increase the volumes to 300 mattresses per week by year end and to move to do shifts employing 16 TUS workers. Since April 2014, 1774 mattresses have been diverted from landfill equating to 247 tonnes of material.

Collaboration

SMILE continues to collaborate with projects and organisations that have shared goals in relation to resource efficiency. In 2014, SMILE collaborators included WEEE Ireland; Bord Bia (Origin Green 2 Degrees Platform); and Local Enterprise Offices.

In 2014 SMILE submitted a proposal to the European CHEST Project (Collective enHanced Environment for Social Tasks) to help develop a GIS mapping system called SourceIT, to help social enterprises and new businesses to map, locate and quantify resources. Such a system would help Boomerang Recycling in Cork and Eco Mattresses in Dublin to locate mattresses around Ireland in a more co-ordinated and efficient way. The proposal was successful and is due to begin in the first quarter of 2015.

Green Enterprise

The Green Enterprise Programme is designed to grant aid projects to develop sustainable products, services or to raise awareness. As in 2013, applications from the Food and Drink sector were particularly welcomed, although a range of companies, state bodies, charities and consultants were amongst the applicants. A total of 36 applications were received, resulting in 12 projects being funded. The successful projects are listed below:

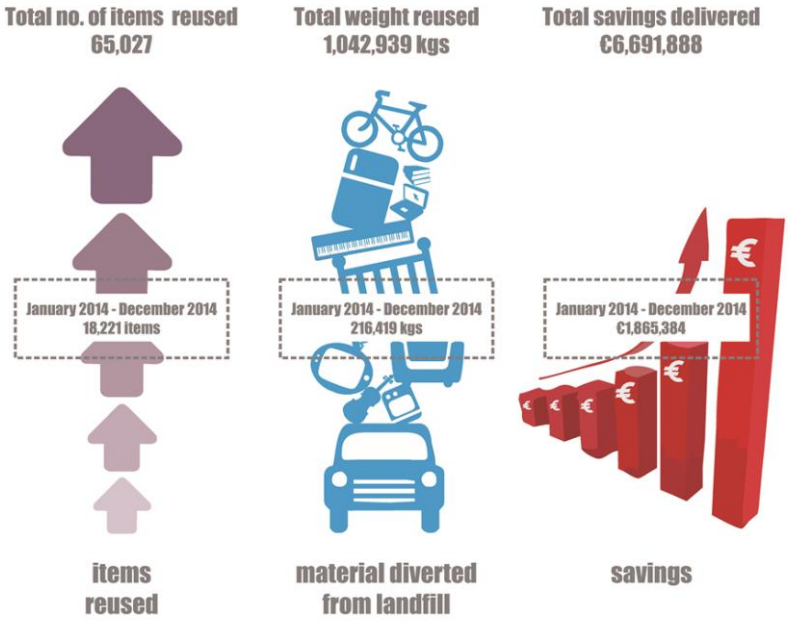
Applicant	Project Name
Community Re-use Network	"Resource Revival Roadshow", Re-use pop-up shop outreach roadshow
Bia Food Initiative	Operation of Irelands first large-scale food bank.
The Upcycle Movement	Textile Ted – An educational / re-use programme for discarded textiles
Business in the Community / Econcertive / Dun Laoghaire Rathdown County Council	Encouraging CSR in the Supply Chain
Flannery Nagel Environmental Ltd	Contaminated plastics from primary meat processing sector, Technical, economic and environmental appraisal of waste options
CyberColloids Ltd	Vegetable Waste a Rich Resource
Ecotourism Ireland Ltd	Inisbofin a different type of Tourism embracing Green Practise Procurement and Customers
Re-Create	Creative ReUse in the Community – Workshops and Creative Toolkits
Macroom-E	Digital Technology, SME's and Change
Wexford County Enterprise Board / Econcertive	GreenSave Wexford
Hospitality Solutions Consulting Ltd	To Develop a Good Practice Guide to Resource Efficiency within Leisure Centres with Swimming Pools

With 14 Green Enterprise projects being completed in 2014, there are currently 26 projects underway. In 2015, a redesign and launch of a new Green Enterprise website is planned.

FreeTrade Ireland

Free Trade Ireland continues to contribute to direct reuse and resource efficiency to householders, in keeping with the strategy for smart, sustainable and inclusive growth. In 2014, FreeTrade Ireland diverted 18,220 items, amounting to more than 216 tonnes of materials away from landfill to users of the service. This means materials are being used for longer and the resource value is being maximised. The use of the service resulted in CO_2 savings of approximately 1,944 tonnes. Using conservative estimates for item values, it is calculated **FreeTrade users saved €679,000** in terms of avoided purchases.

In 2015, the significant milestone of the reuse of 100,000 items through the FreeTrade service will be reached and this will have resulted in carbon savings in excess of 10,000 tonnes. The service continues to prove an excellent value-for-money waste prevention initiative with a €17 return on every €1 invested by the NWPP in 2014.



The membership base continued to grow in 2014 with 3,321 new members signing up to use the service. The overall number of members now using the service stands at 51,200. The website maintains a high level of activity, with over 630,000 visits to the website in 2014 from over 26,000 unique visitors.

FreeTrade Ireland has also developed a partner reuse exchange service that is solely for the use of public sector organisations in order to maximise resource efficiency in the public sector. The Public Resource Exchange Platform (PREP) will go live in 2015 and continue to demonstrate the value of the FreeTrade Ireland concept and how it can be used to increase reuse and waste prevention across a range of sectors.

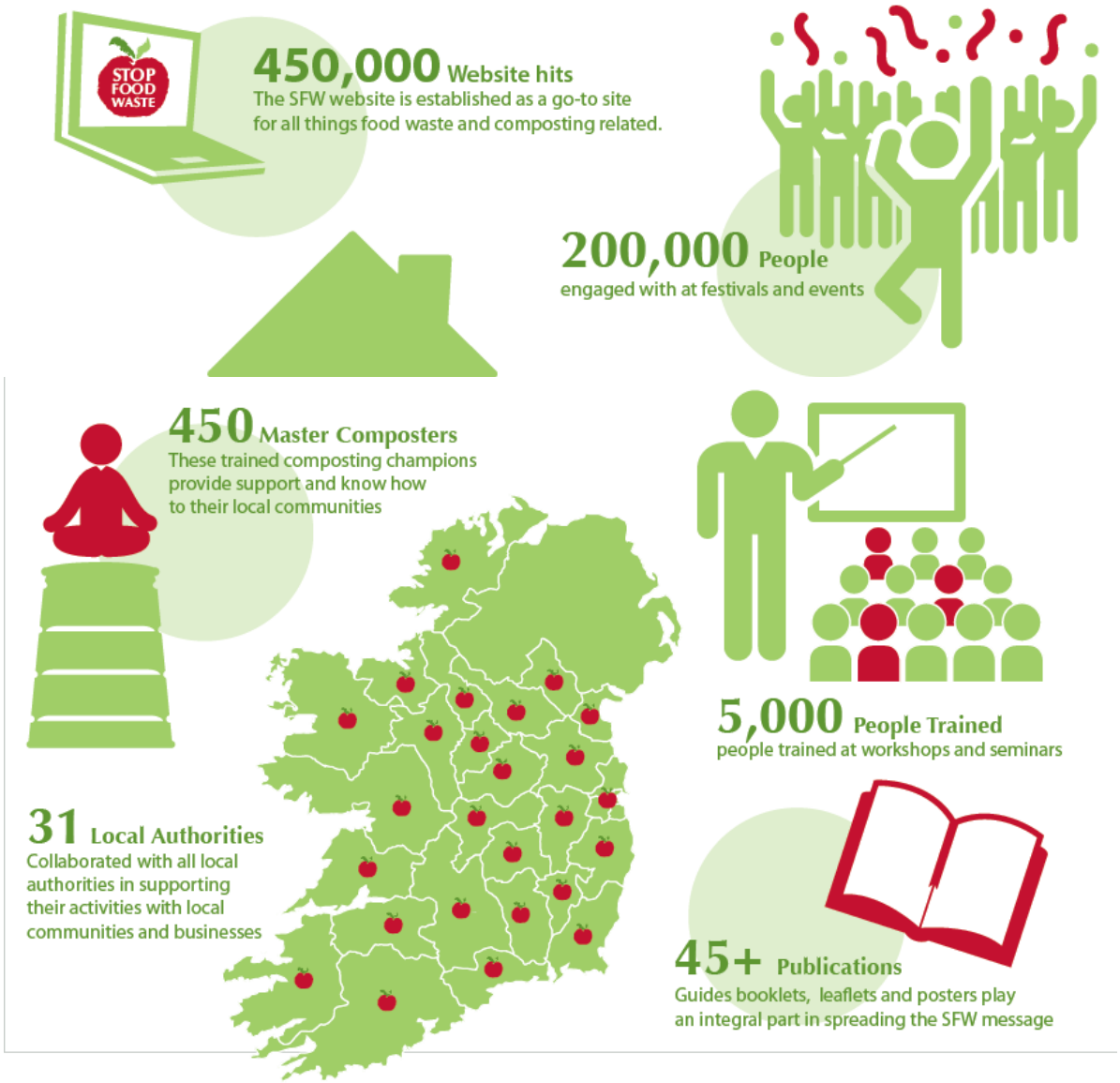
FreeTrade Ireland was nominated for the Green Technology award at the 2014 Green Awards as a service that has made a positive contribution to the environment and its achievements in waste prevention and resource efficiency. The service was also a semi-finalist in the 2014 Web Awards.

Stop Food Waste

During 2014 the Stop Food Waste programme continued to inform and engage with consumers and businesses on food waste, and to promote composting unavoidable food waste at home. Since its inception, the programme has been promoting behaviour changes that lead to food waste prevention, through a combination of easy to use information, education, training, local champions and peer example.

Using a recognised national brand and consistent messages, Stop Food Waste works in partnership with local authorities, community groups, local champions and other organisations to promote food waste prevention and enable behaviour change at a local level and around the country.

In 2014 Stop Food Waste had information stands at numerous events around the country including Electric Picnic, the Ploughing Championships, Savour Kilkenny and other food festivals. Presence at these events was facilitated by local authorities and sharing stand space with other organisations, and by involving Master Composter volunteers.



Stop Food Waste Challenge:

Stop Food Waste and the Local Authority Prevention Network work very closely with each other to encourage and promote food waste prevention to Irish householders and businesses. In 2014, 17 local authorities ran the Stop Food Waste challenge with community groups in their areas, involving over 350 households.

The Stop Food Waste Challenge is an easy to follow stepwise programme that guides people through the food cycle to identify areas where changes in behaviour can lead to reducing food waste. The challenge involves a series of workshops covering a range of issues including awareness of what is being wasted, meal planning, smart shopping, proper food storage, and composting methods. While each of these areas is important, the most important one will be different for everyone and the programme helps people find the best solutions to their specific food waste issues.

Working together, participants were able to share their experiences to reduce the quantities of food that their households wasted each week. As well as improving their shopping habits and saving money, participants reported food waste reductions between 30-50%.

Forum on Food Waste

In 2014, Stop Food Waste developed and organised an event to bring together key actors across the food chain to discuss the issues and challenges in relation to food loss and waste in Ireland. The **Forum on Food Waste** took place in December and was attended by over 80 people from a wide cross-section of organisations and representatives from the food growers, distribution and retail sector; local authorities; the catering and food services sector; academics and the charity sector, including Bord Bia, BIM, IBEC, Tesco, FoodCloud. The Forum was also featured in an article in the Irish Times.

Bloom in the Phoenix Park

In 2014, the Bloom garden show featured the 'Food for Thought' garden, highlighting the issue of food waste and how to prevent it. Designed by Elma Fenton, the garden was developed through collaboration between Stop Food Waste, Dublin City Council, LAPN and Bord Bia. The garden won a Silver medal and provided an opportunity to discuss food waste prevention with some of the 106,000+ visitors who attended over the June Bank Holiday weekend.

Four key messages relating to food waste prevention were included as Stop Food Waste banner ads in the Bord Bia 'Quality Kitchen Cookbook' and over 30,000 of these recipe booklets were distributed at the Bloom event.

Local Authority Prevention Network

Co-ordinated by the EPA, the Local Authority Prevention Network (LAPN) draws together most local authority personnel undertaking activities on waste prevention and resource efficiency in their local areas. In 2014, 16 projects, representing 26 local authorities and 2 Regional Waste Management Offices received a total grant aid of €192,000, and the remaining local authorities also participated in the Network at some level. In 2014, members of the LAPN continued to engage and collaborate with individuals, communities, businesses and other organisations around the country:

Monaghan County Council ran an "ECOtourism" initiative working with local hotels to reduce resource use, waste prevention packs for business, and also carried out work with youth groups, Tidy Towns, & the Taste of Monaghan.

Clare County Council gave training to Burren Eco-tourism Network businesses and Clean Technology Centre gave feedback on the business environmental plans.

Galway County Council worked on the Stop Food Waste challenge and also on the Household Hazardous Waste Initiative, as well general resource efficiency work with businesses and the community.

Sligo County Council greened the Fleadh Cheoil for its first year in the town, working with the festival committee and local businesses.

The **Eastern Midlands Waste Management Region** is running a series of repair cafes within the region in conjunction with the local authorities during 2014 and 2015.

Carlow County Council worked closely with local groups on a range of projects to promote waste prevention, including with the Taste of Carlow festival and with local publicans. Also ran the Household Hazardous Waste Initiative, a swap shop, and a food waste demonstration evening. Did water conservation work with Tidy Towns groups.

Kilkenny County Council joined up with Savour Kilkenny Food Festival to promote food waste prevention. Over the 2 day festival, 9 cookery demonstrations were given on how to use leftovers creatively and maximise use of ingredients.

Wexford County Council ran the Household Hazardous Waste Initiative as well as the 'Use Less at the seaside' project in conjunction with Clare and Kerry.

The **Southern Waste Management Region** developed a regional awareness campaign on waste prevention aimed at behaviour change, organised a series of "Repair Cafes" and built a catalogue of repair and reuse centres across the region.

Dublin City Council worked on greening the Bloom Festival in the Phoenix Park and sponsored a garden highlighting food waste and promoting food waste prevention. Clean Technology Centre also sponsored this garden.

Mayo County Council worked with the local Connaught Creative Resource Centre which facilitates reuse of materials from industry in the region in creative applications in schools and other activities.

Roscommon County Council worked to green some local festivals and were also involved in work with local hospitals and care homes in conjunction with the Green Healthcare programme.

Waterford City and County Council worked with the local festival and stallholders, as well as businesses and local schools on waste prevention initiatives.

Dun Laoghaire Rathdown County Council is running an ongoing Greensave mentoring programme for SMEs, public bodies and the voluntary sector to help save costs through reducing resource use.

Kerry County Council worked with the Dingle Food Festival & the Listowel Food Fair, with workshops on preventing food waste with a local chef, talks on stop food waste, & provided biodegradable plates/forks & segregated bins for the Dingle food trail. A Reuse Café was hosted in Tralee with garden furniture, jewellery, watches, bicycles, tools & electrical items being repaired.

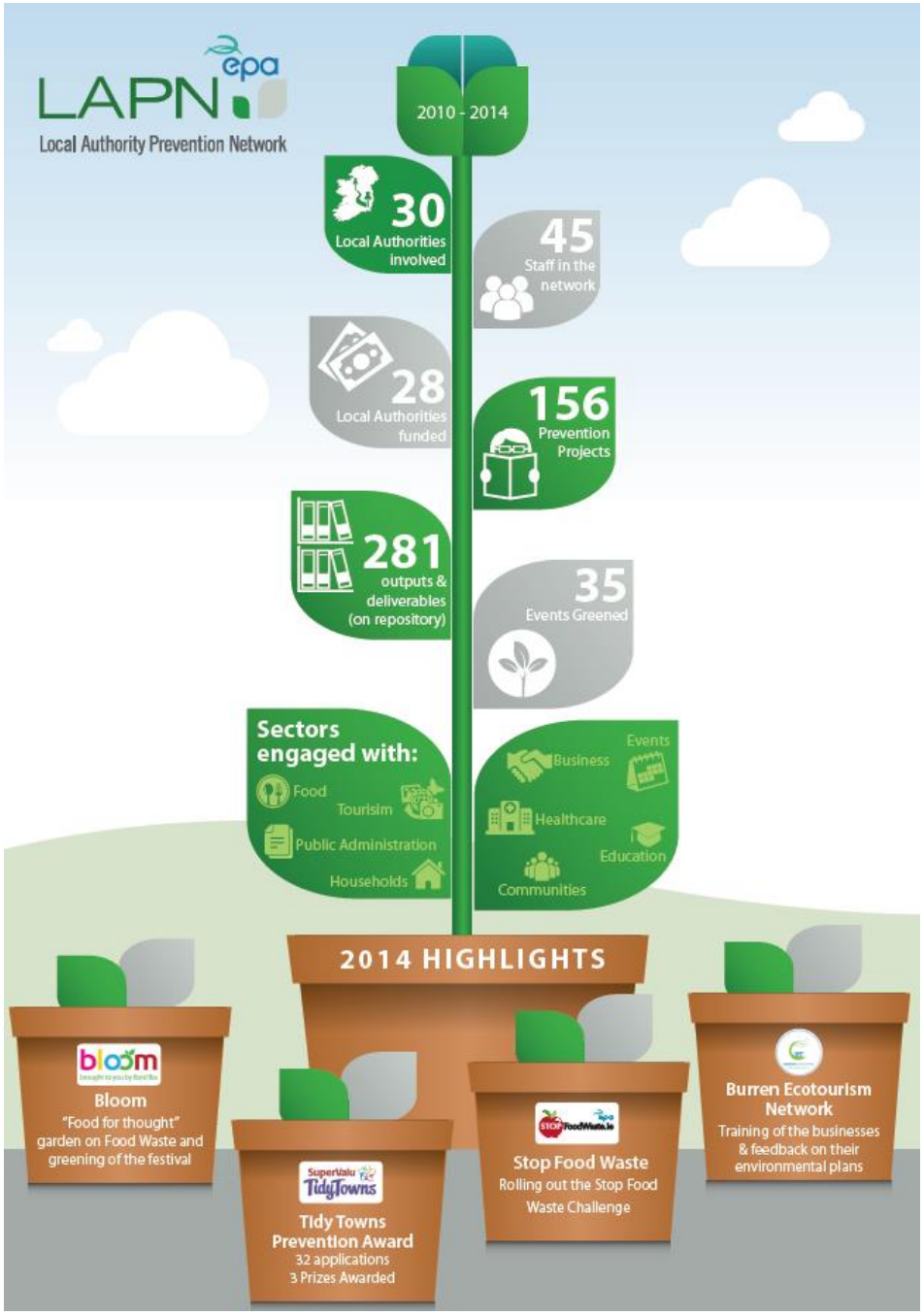
Cork County Council was active in the support of the Stop Food Waste campaign with events held at libraries & supermarkets through the County. Also participated in greening communities and festivals throughout the summer period. Continuation of waste prevention awareness-raising on piers & marinas.

Clare, Kerry and Wexford County Councils worked together on "*Using Less at the Seaside*", a programme examining waste and practices from holiday campsites.

Limerick City and County Council developed an inter-agency food waste prevention web working with nominated representatives from Moyross community.

The following local authorities worked through LAPN and the Stop Food Waste programme to run food waste challenges during 2014 with community groups in their areas:

- *Clare*
- *Cork City*
- *Cork County*
- *Donegal*
- *Fingal*
- *Galway County*
- *Laois*
- *Limerick*
- *Louth*
- *Mayo*
- *Meath*
- *Roscommon*
- *South County Dublin*
- *Waterford*
- *Westmeath*
- *Wexford*
- *Wicklow*



Tidy Towns Waste Prevention Award

A total of 32 entries were received for the inaugural EPA Special Award for Waste Prevention. The aim of the award is to recognise communities that have undertaken activities to prevent waste and use resources efficiently.

A dedicated Tidy Towns section of the LAPN website (www.localprevention.ie) was developed to collate examples of waste prevention activities for community groups to use as inspiration for the award and also for the Sustainable Waste & Resource Management category in the main Tidy Towns competition.

SuperValu TidyTowns

WASTE PREVENTION AWARD

SPONSORED BY ENVIRONMENTAL PROTECTION AGENCY

NATIONAL AWARD WINNER OF €1,000

Ballon Improvement Group, Carlow

HIGHLY COMMENDED AWARD OF €500 EACH

Blackrock Tidy Towns, Louth
Milltown Tidy Towns, Galway

Smart Farming

Smart Farming is a voluntary on-farm resource efficiency initiative that focuses on ways to improve farm returns through better resource management. This initiative is led by the Irish Farmers' Association (IFA) in conjunction with the EPA. It brings together the knowledge and expertise of Teagasc, UCD, SEAI, Farm Tractor and Machinery Trade Association, Fertiliser Association of Ireland, Grassland Association of Ireland, and the National Federation of Group Water Schemes and demonstrates the benefits of better resource management on farms.

This initiative commenced in late 2012 as part of the EPA's Green Business programme. In 2013, a Smart Farming guide and website (www.smartfarming.ie) were developed to disseminate best practice in resource management. On-farm resource efficiency assessments (or costs saving studies (CSS)) were carried out on five case study farms, which were representative of the main farming enterprises. The findings were shared with farmers at a national workshop. An average saving of €5,000 was identified on each of the five farms.

> ***"Smart Farming delivers real returns while protecting the environment"***
>
> Eddie Downey,
> IFA President

Smart Farming also benefits the environment. This has become known as "delivering the double dividend" of economic and environmental improvement. Measures adopted by the farmers will result in reduced risk of run-off of nutrients to water courses through better targeted use of fertilisers and slurry applications, reduced energy and inputs use, and reduced greenhouse gas emissions.

During 2014, the initiative moved into national implementation. Farmers volunteered to participate in the programme, following a call from IFA in the farming media. The only criterion specified was that a farmer was a member of a farm discussion group and willing to discuss the findings of the CSS with their

group. In 2014, more than 600 farmers across the country participated, through 30 CSSs shared among discussion groups of 20 farmers. **The average cost saving identified was €6,600/per farm**. These savings were delivered by focussing on eight key areas on the farm:

- *Feed*
- *Water*
- *Time management*
- *Machinery maintenance*
- *Grassland*
- *Inputs*
- *Soil fertility*
- *Energy use*

Pictured below at the launch of the Smart Farming cost-saving studies on the farm of Andrew McHugh in Longford are: agriculture consultants, Laura Johnston, Tom Dawson, & Mark McConnell; host farmer Andrew McHugh; Harold Kingston, IFA; Eileen O'Leary, CTC; Daniel McHugh; and Thomas Ryan, IFA.

The Smart Farming programme will continue in 2015. On-farm resource efficiency assessments will be carried out around the country across all farm types. Costs savings and environmental benefits will be recorded. The focus will remain on increasing the efficiency per unit of production on farms. This is sustainable intensification in action, saving farmers money and maximising output while protecting the environment.

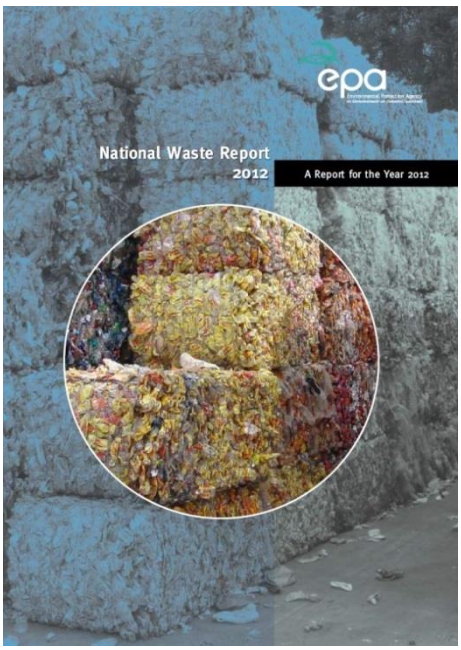
WASTE REPORTING & STATISTICS

The EPA supports the successful implementation of the National Waste Prevention Programme through the publication of national waste statistics.

National Waste Reporting

The EPA's National Waste Report and bulletins provide trends and information on the generation and management of particular waste streams in the State, such as municipal waste, hazardous waste, and Producer Responsibility Initiatives such as waste packaging, waste electrical and electronic equipment, end of life vehicles and waste batteries. The reports and bulletins also highlight relevant indicators on waste; inform progress towards legislative targets; aid policy development; and support the development of new business opportunities. See www.wastereport.ie.

The 2012 National Waste Report was published in August 2014 and provides in-depth information on trends in waste generation and management. The report shows the impact of an evolving waste policy landscape in Ireland, and of changing household behaviours in relation to waste generation. Key findings from the report include:



- 2012 was the first year that the percentage tonnage of municipal waste recovered (59%) exceeded the percentage tonnage disposed (41%).
- This reflects a combination of measures including an increase in the use of municipal waste as a fuel and increases in the landfill levy for disposal of waste to landfill.
- All EU waste reduction targets are on-track, albeit with risks around achievement of future targets such as 2015 End-of-Life-Vehicle recycling and recovery targets and 2016 targets for collection of portable batteries.

A new approach for waste reporting was introduced by EPA in 2014, whereby short bulletins will be published within 12-months of the year-end providing initial data on waste trends. The headlines from the three published bulletins which presented initial data on 2013 waste statistics were:

- The quantity of waste exported for use as a fuel increased by 197% between 2012 and 2013.
- Although slightly more household waste was collected in 2013, the quantity of household waste managed per person has remained relatively stable since 2011.
- Composting and anaerobic digestion of municipal waste has increased. Further improvements are expected with effective enforcement of 2013 legislation aimed at promoting the separate collection of household food waste.

National legislation introduced in 2013, governing the separate collection of household food waste, is expected to have a positive impact on the quantity of municipal waste undergoing composting and anaerobic digestion. Such waste has not shown any significant increase since 2011.

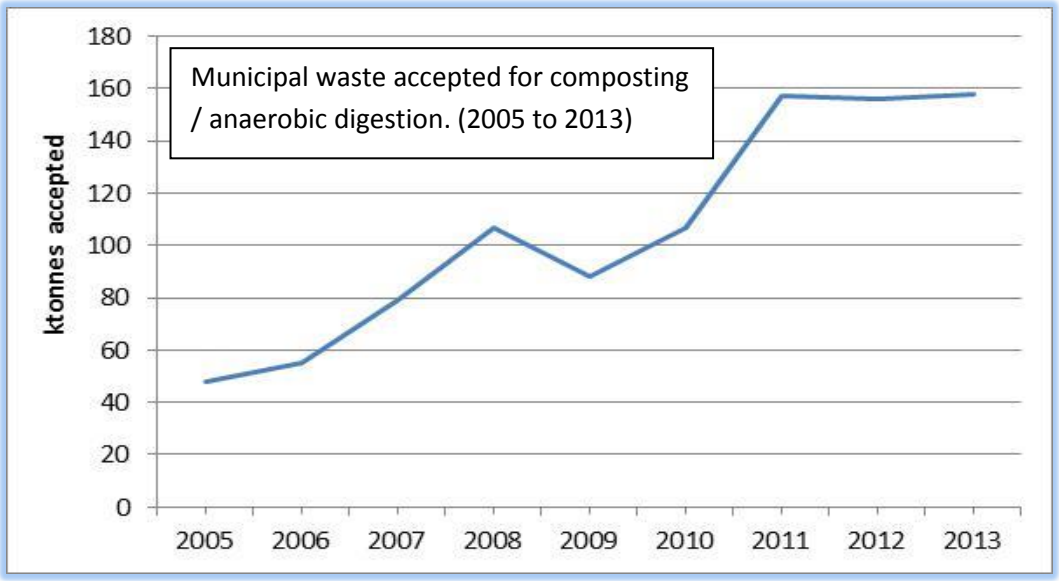
EU Waste Targets

Ireland achieved all its EU obligations across a broad range of waste legislation in 2012. Ireland achieved compliance with end-of life vehicle (ELV) recovery and recycling targets as required under the 2006 ELV Directive for the first time. The National Waste Report for 2012 warned of the risk of failing to meet future, more onerous, targets for the ELV Directive, Batteries Directive and Landfill Directive. A full summary table presenting Ireland's progress towards meeting EU waste targets is available at www.wastereport.ie and in Appendix C.

Municipal Waste Recovery

The year 2012 was a landmark year for municipal waste as it was the first year where more municipal waste was recovered than disposed to landfill. Waste which previously would have been disposed to landfill is now increasingly being sent to waste to energy plants for recovery.

The shift from disposal to recovery has been driven by the increasing landfill levy, and also the 2009 and 2013 food waste regulations which require segregation and separate collection of food waste. There has been a significant increase in the amount of bio-degradable municipal waste recovered at anaerobic digestion and compost facilities between 2005 and 2013 (see Figure).



Residual Waste Treatment

The closure of landfills is a continuing trend in Ireland with the number of landfills accepting municipal waste decreasing from twenty-nine in 2006 to eleven in 2013. Much of Ireland's residual waste is exported for energy recovery with a 197% increase between 2012 and 2013. While much of this waste previously went to cement kilns in Europe, there is an increasing trend on residual waste going to waste to energy facilities in Europe with 48% exported to Germany and 26% exported to the Netherlands. Any waste exported abroad for energy recovery is a lost energy resource and opportunity for the State. While moving up the waste hierarchy from disposal at landfill to energy recovery is a welcome trend, an over reliance on export poses a risk should these export markets close.

HAZARDOUS WASTE ACTIVITIES UNDER NWPP

Hazardous Waste Prevention and Management

The revised National Hazardous Waste Management Plan (NHWMP), third version, was published June 2014. The plan was developed in accordance with Section 26 of the Waste Management Acts 1996 as amended. The first NHWMP was published in 2001 and replaced by a second plan, published in 2008. This third NHWMP is a revision of the second plan and covers a period of six years from date of publication.

The NHWMP is a strategic level document designed to provide overall direction to decision and policy makers involved in the prevention and management of hazardous waste. The main components of the National Hazardous Waste Management Plan 2008-2012 remain intact in the revised plan. These include promotion of:

- Prevention of hazardous waste generation
- Collection and correct treatment of hazardous waste
- Indigenous treatment of hazardous waste
- Dealing with legacy issues (e.g. closed historic landfills).

The revised Plan includes more recent waste data (e.g. from National Waste Report for 2011), updates on recent legislation and waste related activities (e.g. recent implementation measures such as prevention initiatives (guidance and awareness)), brief information on emerging issues over the plan period (e.g. expected legislative changes), and updates to the set of recommendations to ensure that they remain valid for the plan's intended lifetime.

The revised Waste Framework Directive reinforces waste prevention at the top of the waste hierarchy and the revised plan continues to prioritise a number of hazardous waste prevention activities and recommendations. The National Hazardous Waste Management Plan 2014 – 2020 can be downloaded from the EPA website.

Farm Hazardous Waste Collections 2013-2014

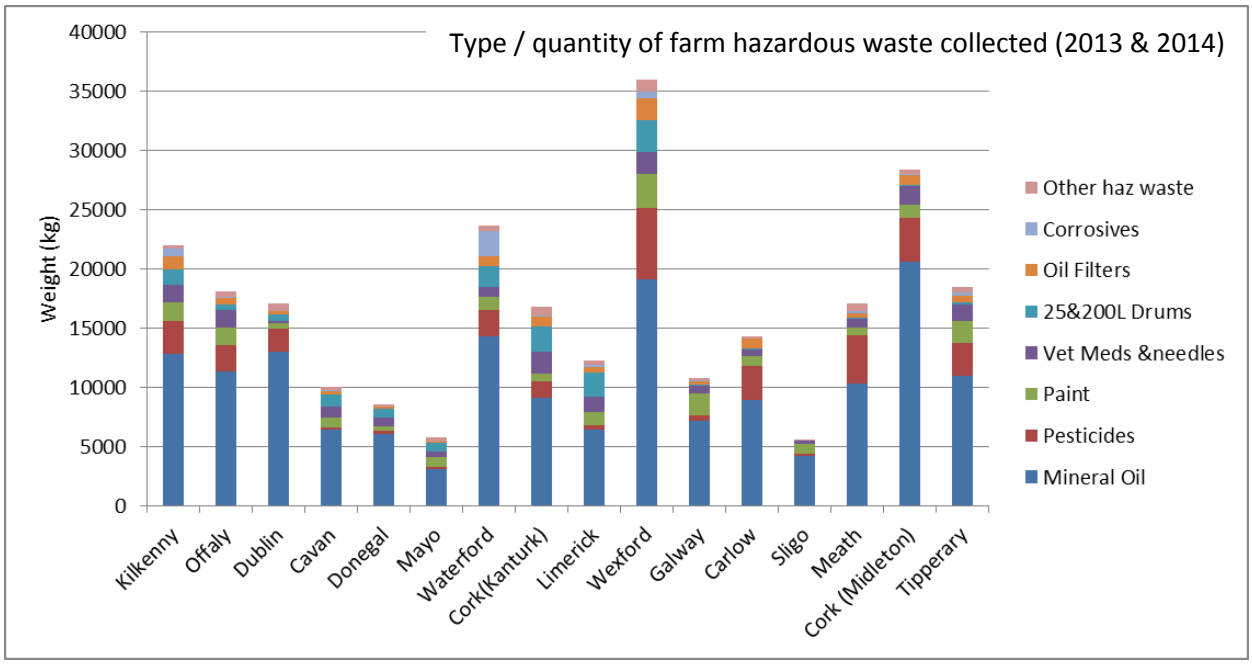
The Environmental Protection Agency (EPA) teamed up with Teagasc, the Department of Agriculture, Food and the Marine, local authorities in Galway, Carlow, Sligo, Meath, Cork and Tipperary (2013) and Kilkenny, Offaly, Dublin, Cavan, Donegal, Mayo, Waterford, Cork, Limerick and Wexford (2014), WEEE Ireland, European Recycling Platform (ERP) and RILTA Environmental Ltd. to facilitate the collection, recovery and disposal of hazardous waste from farms. The farm hazardous campaign was also promoted and supported by Bord Bia, IFA, ICMSA, IFFPG, livestock mart owners and some agricultural co-operatives and merchants.

During 2013–2014, over 3,000 farmers used the 16 hazardous waste collection centres and the average weight collected per farmer was 92 kg. Farmers paid €2/kg for the disposal of hazardous waste. The busiest centre was Enniscorthy with 331 farmers, while Ballymote in Sligo was used by 79 farmers. This very successful campaign was a joint collaboration between the EPA, Teagasc, DAFM, 15 local authorities, WEEE Ireland, ERP and RILTA Environmental. It was also strongly promoted by IFA, Bord Bia, ICMSA and some agri-businesses and mart owners.

Waste collected & removed from the Irish environment (2013 & 2014)	
31 tonnes of pesticides which included over 670 kg of highly toxic historical pesticides called persistent organic pollutants (POPs) such as DDT, deldrin, lindane and endosulfan. Pesticides with mercury, arsenic and cyanide were also collected	***1.6 tonnes biocides*** (creosote, rat poison, detergents etc.) and 5 tonnes of a mix of other chemicals such as aerosols, adhesives, antifreeze, creosote, brake fluids etc..
16 tonnes of veterinary medicine wastes including vaccines, needles, antibiotics, syringes, insecticides, sheep dip etc	***71 tonnes of waste electrical and electronic equipment*** (WEEE) such as TVs, computers, freezers, fridges, washing machines and power tools
5 tonnes of corrosives which included acids such as sulphuric and propionic and caustic soda	***29 tonnes of batteries*** (tractor, car, fence and portable)
18 tonnes of waste paints which included lead, solvent and water based paints	***164 tonnes of waste engine and hydraulic oil*** and 10 tonnes waste oil filters

The farm hazardous waste campaign in 2013 and 2014 facilitated the removal of hazardous wastes from farms; assisted in identifying the type and quantity of hazardous wastes being generated and stockpiled on farms and provided a collaborative platform for multi-agency co-operation in assisting farmers in

removing these wastes off-farms. The campaign received overwhelming support from farmers who demonstrated their willingness to contribute financially to the environmentally sound management of their waste when presented with a practical and accessible opportunity to do so. It shows that there is a clear demand and need for a long-term sustainable and affordable national collection scheme for farm hazardous waste.



The campaign has also confirmed that there are substantial quantities of farm hazardous waste present on farms (both legacy and current) which poses a potential risk to farmers, their livestock and the environment. However it also clearly demonstrates that farmers want to manage these wastes in an appropriate manner as evident in their participation in the collections and contributing financially to the safe recovery and disposal of these wastes. Over 360 tonnes of farm hazardous wastes has been removed out of the Irish environment during a nine week period in 2013 and 2014. The combined farm hazardous waste collections of 2013 and 2014 probably represents the largest ever voluntary bulk removal of highly toxic pollutants out of the Irish environment in such a concentrated period of time. The campaign also clearly demonstrates the benefits and added value of inter-agency collaboration and co-operation and active and voluntary farmer participation.

The farm hazardous waste campaign has clearly identified the need for a suitable and affordable national scheme for the management of farm hazardous waste. The relevant government departments and their agencies, the farming industry and organisation are currently working together to help ensure that such a national scheme is established in 2016. In the meantime EPA, Teagasc, DAFM and local authorities will operate between eight and ten centres across the country in 2015 to ensure the continuation of this important initiative.

COMMUNICATING THE OUTPUTS

Communication is the critical ingredient for ensuring that the NWPP is successful in meeting its aims. The NWPP takes a broad and active approach to getting the messages and learnings from the programmes to other potential users.

Some of the most effective communications from the NWPP are achieved through peer-to-peer avenues when businesses and householders share their personal experiences and successes with others who are starting out on the resource efficiency journey. The NWPP facilitates and encourages this type of sharing by publishing reports and case studies; through active on-line forums and via organised events and seminars.

Begreen.ie

The NWPP web presence comprises a large number of individual sites, each focussed on a particular target audience. In order to bring these sites together under one umbrella, the BeGreen.ie website was developed. The site was entirely revamped in 2014 to provide a more contemporary and attractive portal into the extensive materials produced by the NWPP in recent years.

A key part of our outreach is the ongoing sponsorship of the Eco-Eye series on RTE television. In 2014, the series included an episode “Rethinking Waste” (*left*) which was produced in association with the NWPP. In this programme, presenter Duncan Stewart urged viewers to stop seeing waste as something to be disposed of and forgotten; and to move away from the ‘consume-and-dispose’ attitude of modern society.

Award Sponsorship

In addition the NWPP looks to celebrate success and to spread the message of resource efficiency by sponsoring appropriate awards. Some of the awards supported through the NWPP include:

Green Awards

- ★ Green Public Sector Award: *Electricity Supply Board*
- ★ Green Small Organisation Award: *Clearstream Solutions*

Corporate Social Responsibility Awards

- ★ Excellence in Environment - Multinational Company: *Abbott Ireland* and *AbbVie Ireland*
- ★ Excellence in Environment - Large Indigenous Company: *ESB, Ardnacrusha*

Irish Hospitality Institute Awards

★ Environmental Manager of the Year: *Gerry Eustace, Croke Park Hotel, Dublin*.

Media coverage

Many of the NWPP activities attract strong media interest, through articles in national and regional papers and also in TV/radio coverage. Some examples of these articles are shown below:

Tackling food waste benefits businesses and consumers

Eoin Burke-Kennedy

Some firms have found novel ways to cut down on food waste including creating new

1m
The amount of waste in tonnes the EPA estimates is generated each year

500kg
The amount of fish mince that can be recovered from a tonne of what was once waste

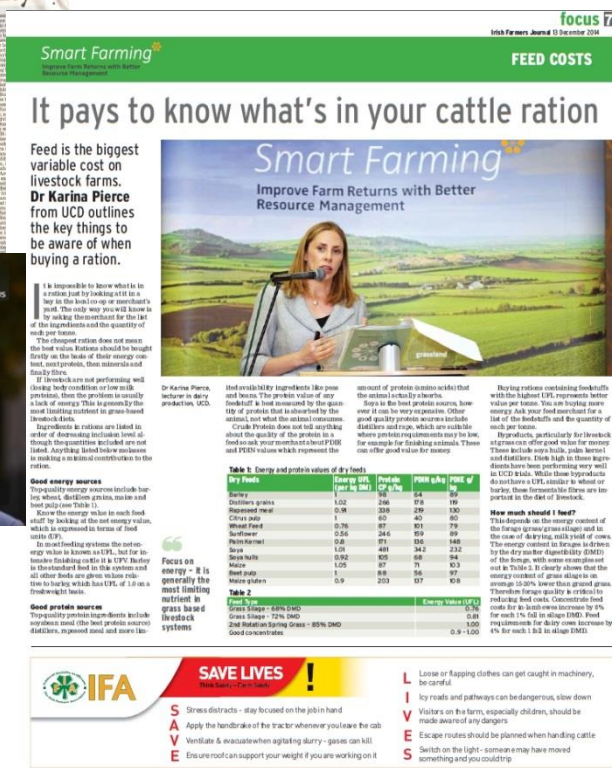
192
The amount of food in tonnes redistributed from Tesco using the FoodCloud app

24 Money & Jobs

on the GRAPEVINE with JOE DERMODY

joe.dermody@examiner.ie

Companies can save €37,000 a year by improving their sustainability



focus

Irish Farmers Journal 13 December 2014

Smart Farming

FEED COSTS

It pays to know what's in your cattle ration

Feed is the biggest variable cost on livestock farms. Dr Karina Pierce from UCD outlines the key things to be aware of when buying a ration.

Smart Farming

Improve Farm Returns with Better Resource Management

Table 1: Energy and protein values of dry feeds

Table 2

euronews

Dr Shane Colgan

Environmental Protection Agency, Ireland

UPGRADE TO THE CIRCULAR ECONOMY

IFA

SAVE LIVES !

SAVE

Stress distracts - stay focused on the job in hand

Apply the handbrake of the tractor whenever you leave the cab

Ventilate & evacuate when agitating slurry - gases can kill

Ensure roof can support your weight if you are working on it

LIVES

Loose or flapping clothes can get caught in machinery, be careful

Icy roads and pathways can be dangerous, slow down

Visitors on the farm, especially children, should be made aware of any dangers

Escape routes should be planned when handling cattle

Switch on the light - someone may have moved something and you could trip

CONCLUSION AND OUTLOOK

This report is intended to provide an engaging overview of the wide ranging activities carried out through the NWPP over the course of 2014. Most of the resources, reports and data presented in this report are available in further detail through the NWPP website at www.begreen.ie. While many parts of the NWPP do not lend themselves to simple value for money calculations, those that do demonstrate that the programmes continue to deliver value as illustrated in the figures below:

Programme	NWPP funding	Savings[a]	Return on Investment
Green Business	€320,000	€1.38m	4 : 1
FreeTrade Ireland	€40,000	€679,000	17 : 1
SMILE Resource Exchange	€140,000	€398,000	3 : 1
Smart Farming	€90,000	€3.96m	44 : 1

[a] *Savings achieved & identified*

Looking ahead, the big challenge in this area is to shift behaviours and lifestyles away from the consumption and disposal of goods to other lifestyles that deliver an equivalent standard of living with a lesser impact on our planet. Concepts such as the 'circular economy' are a way to attempt to recast this environmental message in terms with more resonance to policymakers and the public.

From a national perspective, resource efficiency is well aligned with Ireland's ambitions for economic and social renewal. The projects and initiatives underway in the NWPP are all focussed on achieving this goal and the programme is constantly pursuing links with other organisations to activate this thinking across other sectors. In the immediate term, major challenges include drawing new groups and sectors into the ethos of resource efficiency; and also in ensuring that the excellent carried out by programme participants is maintained to make resource efficiency the natural choice in their organisations and their homes.

The publication during the year of a review of waste prevention programmes across Europe provided an endorsement of the programme's achievements to date and 2014 represents another successful year for the programme. In particular, the year saw the launch of the next cycle of the NWPP which will direct waste prevention and resource efficiency activities through to 2020. The NWPP will continue to be innovative and adaptable in its approaches as the programme develops further, and will continue to report on activities over this period.

Appendix A: National Waste Prevention Committee (2014)

Representative	Organisation
Jonathan Derham (Chair)	Environmental Protection Agency
Shane Colgan (ex officio)	Environmental Protection Agency
Philip Nugent	Department of Environment, Community & Local Government
Eoin Deegan	Department of Environment, Community & Local Government
Jean Clarke	Department of Environment, Community & Local Government
Marian Byrne	Department of Agriculture, Food & the Marine
Orla O'Brien	Department of Jobs, Enterprise & Innovation
Brendan Keane	Irish Waste Management Association
Enda Kiernan	Chartered Institution of Wastes Management
Des Cummins	Small Firms Association
Andrew Cartwright	Irish Small & Medium Enterprises
Michael Gillen	Pharmachemical Ireland (Ibec)
Anne Murphy	Ibec
Thomas Ryan	Irish Farmers Association
Robert Geraghty	Enterprise Ireland
Ray Bowe	IDA Ireland
Tadhg Coakley	Clean Technology Centre
Dermot Cunningham	Clean Technology Centre
Frank Corcoran	Environmental NGOs
Mark O'Mahoney	Chambers of Commerce of Ireland
Joanne Rourke	Community Re-Use Network Ireland
Helen Maher	Health Service Executive
Brendan McDonagh	Industrial Development Authority
Olivier Gaillot	Engineers Ireland
Phillippa King	Southern Waste Region
Evelyn Wright	Eastern & Midlands Waste Region

Appendix B: National Waste Prevention Committee Terms of Reference

- Monitor the development and implementation of the National Waste Prevention Programme;
- Monitor the implementation, by relevant public authorities, of National Hazardous Waste Management Plan recommendations;
- Advise and provide strategic direction to the Core Prevention Team in developing and driving the National Waste Prevention Programme;
- Provide input to the Environmental Protection Agency for the purpose of section 26(6) of the 1996 Waste Management Act;
- Identify priorities for action and make recommendations to relevant public authorities and private bodies;
- Consider and make recommendations to the Minister for the Environment, Community and Local Government regarding appropriate policy and legislative initiatives;
- Have regard to national, European Union and international policy and legislation and best practice in relation to waste prevention and hazardous waste management;
- Facilitate, support and promote co-ordination and liaison between relevant bodies, public and private, on the National Waste Prevention Programme and the National Hazardous Waste Management Plan;
- Consider and make recommendations to relevant bodies regarding public awareness requirements in relation to hazardous waste and the prevention of waste;
- Monitor and evaluate new research and data on waste prevention, trends in hazardous and non-hazardous waste production and waste management practices;
- Consider and make recommendations to the Environmental Protection Agency and the Department of the Environment, Community and Local Government on research priorities;
- Monitor progress in sectoral producer responsibility initiatives;
- Disseminate information on best practice in waste prevention and hazardous waste management;
- Consider and make recommendations to relevant bodies regarding the provision of funding to support implementation of the National Waste Prevention Programme and the National Hazardous Waste Management Plan; and
- Prepare and submit to the Minister for the Environment, Community and Local Government an annual report outlining progress on the implementation of the National Waste Prevention Programme and the National Hazardous Waste Management Plan.

Appendix C: Progress towards EU waste recycling, recovery & diversion targets (November 2014)

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
94/62/EC as amended	**Packaging Directive**[1]	6(1)	31-12-2011	60% as a minimum by weight of packaging waste will be recovered or incinerated at waste incineration plants with energy recovery.	87%	Achieved
				55% as a minimum by weight of packaging waste will be recycled.	74%	Achieved
				No later than 31st December 2011 the following minimum recycling targets for materials contained in packaging waste will be attained:		
				(i) 60% by weight for glass;	85%	Achieved
				(ii) 60% by weight for paper and board;	83%	Achieved
				(iii) 50% by weight for metals;	76%	Achieved
				(iv) 22.5% by weight for plastics, counting exclusively material that is recycled back into plastics;	40%	Achieved
				(v) 15% by weight for wood.	82%	Achieved
2002/96/EC	**WEEE Directive**[2]	5(5)	(31-12-2006) 31-12-2008[3]	Separate collection of > 4kg of WEEE from private households per person per year.	7.5 kg	Achieved
		7(2)		For large household appliances:- – recovery shall be increased to a minimum of 80% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 75% by an average weight per appliance.	84% 82%	Achieved
				For automatic dispensers:- – recovery shall be increased to a minimum of 80% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 75% by an average weight per appliance.	90% 88%	Achieved

[1] 2012 data, most recent reported to European Commission.

[2] 2012 data, most recent reported to European Commission.

[3] Ireland secured a two-year derogation.

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
				For IT and telecommunications equipment:- – the rate of recovery shall be increased to a minimum of 75% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 65% by an average weight per appliance.	88%	Achieved
				For consumer equipment:- – the rate of recovery shall be increased to a minimum of 75% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 65% by an average weight per appliance.	94%	Achieved
2002/96/EC	**WEEE Directive**[2]		(31-12-2006) 31-12-2008[3]	For small household appliances, electrical & electronic tools, toys, leisure and sports equipment:- – the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.	89%	Achieved
				For medical devices:- – the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.	91%	Achieved
				For monitoring and control instruments:- – the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.	90%	Achieved
				For lighting equipment:- – the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and – component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.	90%	Achieved
				For gas discharge lamps, the rate of component, material and substance reuse and recycling shall reach a minimum of 80% by weight of the lamps.	88%	Achieved

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
2000/53/EC	End of Life Vehicles Directive[4]	7(2)(a)	1-1-2006	Reuse and recovery to a minimum of 85% by average weight of vehicle and year.	88%	Achieved
				Reuse and recycling to a minimum of 80% by average weight of vehicle and year.	82%	Achieved
		7(2)(b)	1-1-2015	Reuse and recovery to a minimum of 95% by average weight of vehicle and year.	(88%)	Risk Due January 2015
				Reuse and recycling to a minimum of 85% by average weight of vehicle and year.	(82%)	Risk Due January 2015
2006/66/EC	Batteries Directive	10(2)	31-12-11	Minimum 25% collection rate for batteries & accumulators.	28%[5]	Achieved
			26-9-2016	Minimum 45% collection rate for batteries & accumulators.	(28%)[6]	Risk Due September 2016
		12(4)	26-9-2011	Recycling processes shall achieve the following minimum recycling efficiencies:		
				(a) recycling of 65 % by average weight of lead-acid batteries and accumulators, including recycling of the lead content to the highest degree that is technically feasible while avoiding excessive costs;	79%[7]	Achieved
				(b) recycling of 75 % by average weight of nickel-cadmium batteries and accumulators, including recycling of the cadmium content to the highest degree that is technically feasible while avoiding excessive costs; and	75%[7]	Achieved

[4] 2012 data, most recent reported to European Commission.

[5] Collection rate for 2011 (target year).

[6] Collection rate for 2012, most recent reported to the European Commission.

[7] 2012 data, most recent reported to the European Commission.

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
				(c) recycling of 50 % by average weight of other waste batteries and accumulators.	57%[7]	Achieved
1999/31/EC	**Landfill Directive**	5(2)	(16-7-2006) 16-7-2010[8]	Biodegradable municipal waste going to landfills must be reduced to 75% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (< 916,000 t)	860,000 t[9]	Achieved
			(16-7-2009) 16-7-2013	Biodegradable municipal waste going to landfills must be reduced to 50% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (< 610,000 t)	589,000 t[10]	On track Due July 2013
			16-7-2016	Biodegradable municipal waste going to landfills must be reduced to 35% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (427,000 t)	380,810 t[11]	On track Due July 2016
2008/98/EC	**Waste Framework Directive**	11(2)(a)	12-12-2020	Preparing for reuse and recycling of 50% by weight of household derived paper, metal, plastic & glass *(includes metal and plastic estimates from household WEEE).*	45%[12]	On track Due December 2020
		11(2)(b)	12-12-2020	Preparing for reuse, recycling and other material recovery (incl. beneficial backfilling operations using waste as a substitute) of 70% by weight of C&D waste (excluding natural soils & stone)	97%[13]	Achieved
		29	12-12-2013	Establishment of a National Waste Prevention Programme (NWPP)	NWPP established in 2004	Achieved

[8] Ireland secured a four-year derogation on first and second targets.

[9] 2010 BMW tonnage disposed to landfill.

[10] 2012 BMW tonnage disposed to landfill.

[11] 2013 BMW tonnage disposed to landfill. This is a preliminary figure and is liable to change.

[12] 2012 data, most recent reported to the European Commission.

[13] 2011 data, most recent reported to the European Commission.

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta 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 gcloíonn leis na córais sin.*

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

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

Ár bhFreagrachtaí

Ceadúnú

- Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:
- saoráidí dramhaíola (m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- gníomhaíochtaí tionsclaíocha ar scála mór (m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- an diantalmhaíocht (m.sh. muca, éanlaith);
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (OGM);
- foinsí radaíochta ianúcháin (m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha);
- áiseanna móra stórála peitril;
- scardadh dramhuisce;
- 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 le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíriú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuiscí; leibhéil 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.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol

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

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis cheaptha 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 shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúnacht Straitéiseach Timpeallachta

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn (m.sh. mórphleananna forbartha).

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- 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 gcomhshaol ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaol (m.sh. Timpeall an Tí, léarscáileanna 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

- Feasacht 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 na Gníomhaireachta um Chaomhnú Comhshaoil

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 Aeráide, Ceadúnaithe agus Úsáide Acmhainní
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Measúnú Comhshaoil
- An Oifig um Cosaint Raideolaíoch
- 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.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Headquarters, PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland

Ceanncheathrú, Bosca Poist 3000
Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire

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

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

Cigireacht Réigiúnach, Teach Mhic Chumascaigh
Dea-Radharc, Bóthar Cluain Sceach
Baile Átha Cliath 14, Éire

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

Regional Inspectorate
Inniscarra, County Cork, Ireland

Cigireacht Réigiúnach, Inis Cara
Contae Chorcaí, Éire

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

Regional Inspectorate
John Moore Road, Castlebar
County Mayo, Ireland

Cigireacht Réigiúnach, Bóthar Sheán de Mórdha
Caisleán an Bharraigh, Contae Mhaigh Eo, Éire

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

Regional Inspectorate
Seville Lodge, Callan Road,
Kilkenny, Ireland

Cigireacht Réigiúnach, Lóiste Sevilla,
Bóthar Challainn, Cill Chainnigh, Éire

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

Regional Inspectorate
The Glen, Monaghan, Ireland

Cigireacht Réigiúnach, An Gleann
Muineachán, Éire

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

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

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