Environmental Protection Agency

National Waste Prevention Programme

Annual Report 2013

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Environmental Protection Agency

The Environmental Protection Agency (EPA) is a statutory body responsible for protecting the environment in Ireland. We regulate and police activities that might otherwise cause pollution. We ensure there is solid information on environmental trends so that necessary actions are taken. Our priorities are protecting the Irish environment and ensuring that development is sustainable. The EPA is an independent public body established in July 1993 under the Environmental Protection Agency Act, 1992. Its sponsor in Government is the Department of the Environment, Community and Local Government.

OUR RESPONSIBILITIES

LICENSING

We license the following to ensure that their emissions 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 manufacturing, cement manufacturing, power plants);
- intensive agriculture;
- the contained use and controlled release of Genetically Modified Organisms (GMOs);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea.

NATIONAL ENVIRONMENTAL ENFORCEMENT

- Conducting over 1200 audits and inspections of EPA licensed facilities every year.
- Overseeing local authorities' environmental protection responsibilities in the areas of - air, noise, waste, waste-water and water quality.
- Working with local authorities and the Gardá to stamp out illegal waste activity by co-ordinating a national enforcement network, targeting offenders, conducting investigations and overseeing remediation.
- Prosecuting those who flout environmental law and damage the environment as a result of their actions.

MONITORING, ANALYSING AND REPORTING ON THE ENVIRONMENT

- Monitoring air quality and the quality of rivers, lakes, tidal waters and ground waters; measuring water levels and river flows.
- Independent reporting to inform decision making by national and local government.

REGULATING IRELAND'S GREENHOUSE GAS EMISSIONS

- Quantifying Ireland's emissions of greenhouse gases in the context of our Kyoto commitments.
- Implementing the Emissions Trading Directive, involving over 100 companies who are major generators of carbon dioxide in Ireland.

ENVIRONMENTAL RESEARCH AND DEVELOPMENT

- Co-ordinating research on environmental issues (including air and water quality, climate change, biodiversity, environmental technologies).

STRATEGIC ENVIRONMENTAL ASSESSMENT

- Assessing the impact of plans and programmes on the Irish environment (such as waste management and development plans).

ENVIRONMENTAL PLANNING, EDUCATION AND GUIDANCE

- Providing guidance to the public and to industry on various environmental topics (including licence applications, waste prevention and environmental regulations).
- Generating greater environmental awareness (through environmental television programmes and primary and secondary schools' resource packs).

PROACTIVE WASTE MANAGEMENT

- Promoting waste prevention and minimisation projects through the co-ordination of the National Waste Prevention Programme, including input into the implementation of Producer Responsibility Initiatives.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

MANAGEMENT AND STRUCTURE OF THE EPA

The organisation is managed by a full time Board, consisting of a Director General and four Directors. The work of the EPA is carried out across four offices:

- Office of Climate, Licensing and Resource Use
- Office of Environmental Enforcement
- Office of Environmental Assessment
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet several times a year to discuss issues of concern and offer advice to the Board.

National Waste Prevention Programme

Annual Report for 2013

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:

- Mr. Phil Hogan, T.D., Minister for the Environment, Community & Local Government for providing finance from the Environment Fund and for his 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 Appendices A & B);
- 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 EPA to progress many of the projects, in particular the Clean Technology Centre at Cork Institute of Technology.

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Foreword

The earth's natural resources (water, soils, metals, minerals, fuels & biodiversity) provide our food and energy plus the shelter and goods we use to survive and develop. In the recent *Resilient People, Resilient Planet* report, the UN noted that our planet is under unprecedented stress; driven by strong population growth and rapidly rising numbers of middle-class consumers. In less than 20 years, it estimates that the world will need 50% more food and 45% more energy. In the face of this increasing demand, our resources remain finite and are being consumed at an ever quicker rate. The outcome from this current behaviour will undoubtedly lead to overloading of the planet's carrying capacity with consequent shortages of raw materials and foodstuffs.

Resource efficiency offers a clear win-win scenario; improved performance in reducing wastage also delivers real savings. It is a critical component of the 'circular economy' whereby we reduce our dependency on raw materials without compromising economic development. Transforming an economy onto a resource-efficient path brings increased competitiveness and new sources of growth, through cost savings from improved efficiency; commercialisation of innovations; and better management of resources.

Since 2004, Ireland's National Waste Prevention Programme has successfully coordinated and led a package of activities to promote resource efficient practices at work and in the home. This report provides an overview of the activities that were underway in 2013 and highlights some key achievements.

Dr Jonathan Derham
Chair, National Waste Prevention Committee

Dr Shane Colgan
Manager, Resource Efficiency Unit

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NWPP Highlights 2013

- ✓ The Smart Farming website (www.smartfarming.ie) is now live and includes the *Smart Farming – A Guide to help improve farm returns with better resource management.* The voluntary on-farm resource efficiency initiative will move from pilot phase to national implementation phase in 2014 and aims to deliver the double dividend for farmers of saving money whilst protecting the environment in eight key areas around the farm.
- ✓ The Local Authority Prevention Network continues to be a dynamic network of local authority personnel implementing effective waste prevention and resource efficiency programmes locally. During 2013, there were 20 'active' members of the Network and a further 12 local authorities participated in the Network at some level.
- ✓ Members of the LAPN collaborated to run workshops for householders on greener cleaning and reducing household hazardous waste. To support the workshops, good practice guides for householders on Greener Cleaning and Greener Gardening were developed. In 2013, workshops were organised in Limerick, Monaghan and Cork with further roll-out planned in 2014.
- ✓ The RTE TV documentary 'Waste Watchers' aired in December presenting the work of the Stop Food Waste campaign with the residents of Killorglin, Co. Kerry. Independently verified figures indicate that an average of 359,000 viewed the programme.
- ✓ The new look Stop Food Waste website went live in December. The website now has a cleaner and fresher look, with materials curated under themes relating to the 5 steps of the Stop Food Waste challenge.
- ✓ BIM, in association with GreenBusiness, launched the Green Seafood Programme, which is a sectoral based project looking at the processing, as well as some of the packaging, and fishing related issues with the seafood industry.
- ✓ SMILE Resource Exchange passed the mark of 1,000 members and in January won the "Best Eco-innovation" Category in the LAMA (Local Authority Members Association).
- ✓ FreeTrade Ireland officially launched its Smartphone App with An Taoiseach Enda Kenny.
- ✓ EPA participated in the "Taking Care of Business" event at Dublin Castle, where over 20 state bodies engaged 800 attendees through a "one stop shop" to advise on supports and regulations for new and start-up enterprises.
- ✓ RTÉ launched its Green Broadcaster sustainability report in conjunction with the "Fuel Your School" project, where 4 schools won a years' free energy.
- ✓ The EPA sponsored a re-use event, *The Big Upcycle* where over 20 traders showcased their wares to more than 1,200 visitors, who enjoyed demonstrations of creative upcycling.
- ✓ Municipal solid waste generation in Ireland has decreased by 17% since it peaked in 2007

Selected National Waste Prevention Programme Metrics for 2013
57 *Green Business* Resource Efficiency Assessments at Irish SMEs representing **>5,000** employees in total. **€40,000** average annual savings identified for participating SMEs (maximum €400,000).
30% of Irish hotels representing **>50%** of hotel beds participating in the *Green Hospitality Programme*. **85%** less waste per sleeper in 2013 than there was in 2004. Average hotel produces **51tonnes** of food waste per annum which represents a cost of **>€150,000**.
14 SMEs and enterprises benefited from implementation of the EPA-funded *Green Enterprise* clean technology grant aid.
The initial phase of EPA-supported *Smart Farming* programme has yielded prevention savings of **€5,000** per participant farm.
32 of the **34** Local Authorities participate in the *Local Authority Prevention Network*.
33% of Acute Hospitals representing **>50%** of all national acute beds are participating in the EPA *Green Healthcare* programme. **40%** reduction in food waste achieved at one small acute hospital. In 2013 the Green Healthcare programme produced **5** Best Practice Guides; **6** 'how to' instructional guides; **4** prevention fact sheets; **5** Case Studies; and **4** calculation & cost saving identification tools.
600,000 people watched the EPA funded *Waste Watchers* programme on food waste.
There are now **500** community-based master composter ambassadors trained.
The *Stop Food Waste* website achieved an average **750** unique hits a day in 2013.
By the end of 2013 there were **77,000** household items reused through the EPA-supported *Free Trade Ireland* web-based exchange facility. The facility has **44,000** members and the website has **17,000** weekly visitors.
There are **26,000** participating households in the EPA-funded *Green Home* programme.
Members of the EPA-supported Community Reuse Network in 2012 and 2013 have been directly involved in the re-use of **9,000** items of furniture; **15,000** litres of paint; **>2 million** items of clothing; **40,000** items of electrical and electronic equipment; and over **1,000** bicycles.
The *Farm Hazardous Waste* pilot bring-centre scheme saw **850** farmers bring **94,000** kg of farm hazardous waste, **16,000** kg of WEEE, and **6,000** kg of batteries for collection.
By the end of 2013 the national inventory of *PCBs* has been reduced from a high of **250,000** litres in 2010, to now contain less than **25,000** litres.
121 unannounced inspections of *WEEE* producers and retailers were undertaken in 2013.
The industrial symbiosis project *SMILE* saw **2,746** tonnes of industrial by-products offered for exchange during three events in Munster.

1. Introduction

Over the course of 2013, the National Waste Prevention Programme (NWPP) continued to build on the success of ongoing and previous initiatives to promote resource efficiency and the sustainable use of natural resources. The national significance of this activity is emphasised in the most recent government policy document on waste management, '*A Resource Opportunity*' which stresses the environmental and economic benefits of better waste management - particularly waste prevention.

This report provides an overview of the progress made by the NWPP in 2013 on a wide variety of integrated projects focussing on waste prevention during the ninth year of the programme.

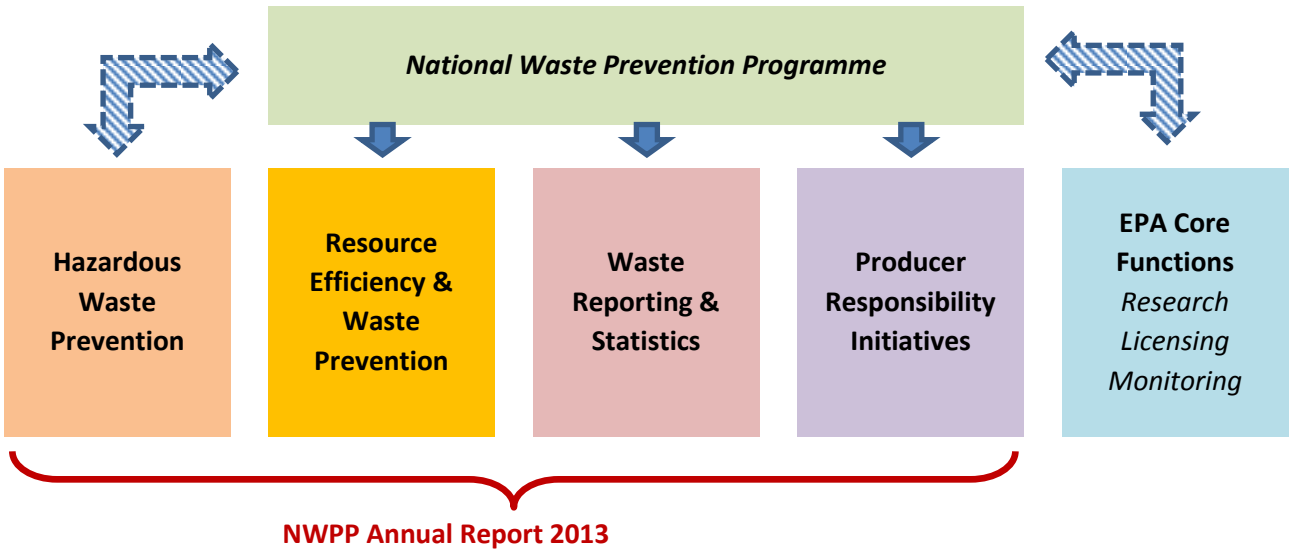
Overall objective and structures

The overall objective of the NWPP is to establish an ambitious programme that delivers substantive results on waste prevention and minimisation across both hazardous and non-hazardous waste arisings. The Programme has three main strands:

- Supporting **Resource Efficiency & Waste Prevention** by providing expertise and financial backing for projects/initiatives;
- Measuring progress through **Waste Reporting & Statistics**; and
- Implementing statutory obligations on **Controlled Substances & Producer Responsibility** initiatives

In addition, **Hazardous Waste Prevention** represents a key aim of the National Hazardous Waste Management Plan which is led by the EPA and is regarded as an integral part of national waste prevention activity.

The diagram below illustrates the various strands of the NWPP and also notes the role of other EPA functions in waste prevention.



Rationale

Following recession, Ireland is now pursuing economic renewal at a time when growing global demand and competition for resources makes costs and competitiveness more critical than ever. Future growth is also set against a backdrop of increasing global populations which are also seeking to prosper into the future. Effective and far-reaching action is urgently needed to promote responsible production and consumption and so facilitate sustainable human development. Common to these concerns is the concept of **Resource Efficiency** which is understood as Water Conservation, Waste Prevention, Energy Efficiency, and Clean Technology (incorporating Eco-Design). In essence, Resource Efficiency is about living better while using less - for Ireland, this aim has never been more relevant.

To achieve a resource-efficient and green economy, there is a need to make a transition across all sectors of the economy and, in particular, the energy, agricultural and transport systems, as well as changing behaviours of producers and consumers.

Working with Others

The EPA works closely with a range of groups to ensure that the NWPP is applicable and relevant to the needs of its target audiences. Extensive contacts are maintained with all relevant stakeholder organisations in order to share learning/experiences and to involve them directly in the development & implementation of practical waste prevention/resource efficiency projects

Partners include representatives from government and other stakeholder groups including Bord Bia, Sustainable Energy Authority of Ireland, Enterprise Ireland and IDA Ireland and environmental NGOs.

2. Waste Prevention Policy Developments

Two policy documents were released in late 2013 that have significant impact on the national resource efficiency agenda and the work of the NWPP. These are Ireland's *Progress Report on Growth and Employment in the Green Economy* and the European Commission's *Seventh Environment Action Programme.*

In addition there were a number of other developments that are pertinent to the work and focus of the NWPP. Not only do these policies shape the future landscape over which the Programme will be delivered, but they also emphasise the central role of resource efficiency and the NWPP in the delivery of a sustainable future.

Progress Report on Growth and Employment in the Green Economy

Published in December 2013 by the Department of Jobs, Enterprise & Innovation under the Action Plan for Jobs initiative, this document provides an outline of some recent development in the green economy in Ireland under a number of key sectors as shown below:

- Tourism
- Agriculture, Marine & Forestry
- Water & Wastewater Management
- Renewable Energy
- Energy Efficiency
- Waste Management
- (Green) Financial Services
- Green Products & Services
- Resource Efficiency
- Research, Development & Innovation

The report provides case studies to illustrate activities across a range of sectors and include a number of specific references to NWPP projects including SMILE, Green Hospitality and Green Enterprise. The report also signals an intention to produce a study on employment in Ireland's green economy and also calls for active implementation of Green Public Procurement – an issue being pursued also by the NWPP.

Seventh Environment Action Programme

A significant policy development for environmental protection generally and more particularly, resource efficiency is the Seventh Environmental Action Programme (EAP). The programme identifies three priority areas where more action is needed: protect nature and strengthen ecological resilience; boost resource-efficient, low-carbon growth; and reduce threats to human health and wellbeing.

Living well, within the limits of our planet

The focus on transforming the EU into a resource-efficient, low-carbon economy is particularly relevant for NWPP and highlights the need for significant improvements to the environmental performance of products over their life cycle and for reductions in the environmental impact of consumption, including cutting food waste.

The programme notes that Europe's competitiveness and future growth will depend on improving resource efficiency and calls for indicators and targets for resource efficiency to be established, to guide

public and private decision-makers. There is a strong focus on turning waste into a resource and the EAP calls for more prevention, re-use and recycling. The need for further action towards more efficient use of water is also highlighted. Overall, the EAP underlines the importance of several key priorities within Ireland's NWPP and provides a strong driver for further developing NWPP work.

New Waste Management Planning Regions

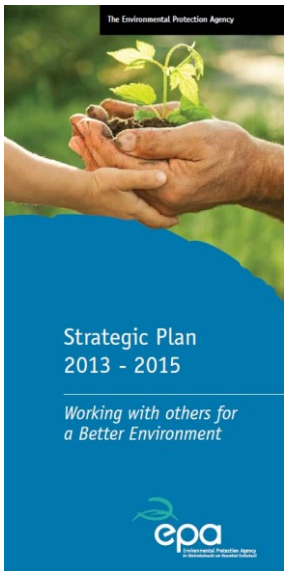
The DECLG policy document on waste management "*A Resource Opportunity*" includes provision for a reduction in the number of waste management planning regions from ten to three. During 2013, the composition of the three new waste management planning regions and the Lead Authorities were confirmed, as follows:

Region	Constituent Authorities..	Lead Authority
Connacht-Ulster	Cavan, Donegal, Galway City, Galway County, Leitrim, Mayo, Monaghan, Roscommon, Sligo	Mayo County Council
Eastern-Midland	Dublin City, Dun Laoghaire-Rathdown, Fingal, Kildare, Laois, Longford, Louth, Meath, Offaly, South Dublin, Wicklow, Westmeath	Dublin City Council
Southern	Carlow, Clare, Cork City, Cork County, Kerry, Kilkenny, Limerick, Tipperary, Waterford, Wexford	Tipperary-Limerick Consortium

The NWPP will engage with these theree bodies with a view to progressing waste prevention and resource efficienct activities at regional level.

EPA Strategic Plan 2013 – 2015

In its fourth formal strategy, the EPA states its over-riding priority for the next three years is to keep the environment centre-stage and support sustainable economic recovery. Challenges identified in the document with direct relevance to the NWPP include:



- Building a resource-efficient low-carbon economy and society by protecting Ireland's green image while also supporting sustainable development in key sectors such as agriculture, food and tourism.
- Mobilising all citizens to engage in a more environmentally responsible way in areas such as waste reduction, water usage and energy consumption.

The strategy specifically recognises the important role of the NWPP by calling for greater engagement by householders, communities and businesses in resource efficient behaviours through participation in EPA BeGreen initiatives including Green Homes, Greening Communities, Green Business, Green Hospitality, Stop Food Waste and Smart Farming.

National Hazardous Waste Management Plan

Hazardous waste is generated by all sectors of Irish society: from large industry, to small businesses, households, schools and farms. Prevention is a key objective of hazardous waste management and is an integral part of national actions in this area. During 2013, the EPA prepared a draft revision of the National Hazardous Waste Management Plan (NHWMP) and opened a public consultation to collect views from all stakeholders. The new plan promotes the reduction in the generation of hazardous waste in the sectors identified as a priority for continued action. These sectors are shown below:

Sector	Typical wastes
Households	Paint, pesticides, pharmaceuticals, batteries, fluorescent tubes
Pharmachem	Solvents, other industrial hazardous waste
Agriculture	Waste oils, oil filters, paints, pesticides, animal healthcare wastes, batteries, corrosives, biocides
Healthcare	Healthcare hazardous waste (dressings, contaminated medical products etc..)
Publishing & Printing	Ink and varnish waste
Transport	Waste oils, oily sludge, lead acid batteries

Revision of National Waste Prevention Plan

In 2013, the NWPP embarked on the process of producing a revised waste prevention plan to act as a fourth cycle of the programme. Drawing from initial input from the NWPC and other key stakeholders, followed by a public consultation, the plan will be published mid-2014. The new plan reflects the evolution of the NWPP from strict waste prevention to a wider 'resource efficiency' approach. The plan will also maintain clear linkages to the stated requirements for a national waste prevention programme as per the Waste Framework Directive. The overall vision is "**Living Better, Using Less**".

Although still in preparation at time of writing this report, the overarching objective of the plan is implementing EU and national policy on resource efficiency so as to break the link between economic growth and environmental impact. More specifically, the draft objectives are to:

- Reduce wasteful consumption of material, water and energy resources by changing behaviours in businesses, households and the public sector;
- Enhance competiveness and reduce business costs by delivering programmes that stimulate resource efficiency and the circular economy;
- Support sustainable growth and employment in the green economy - including re-use enterprises;
- Minimise generation of hazardous wastes through efficient practices and use of safer alternates;
- Manage hazardous substances in products through efficient regulation; and
- Inform and influence evidence-based decision-making by compiling and publishing high quality data on waste.

3. Resource Efficiency / Waste Prevention Activities

A core part of the NWPP is a suite of projects led by EPA to address waste prevention across a broad range of topic areas. These projects have been developed over the course of the NWPP to respond to policy priorities and environmental imperatives. Projects are conducted in close co-operation with stakeholders and operators in each area and in some cases, projects are implemented through a contractor. The relationship between NWPP projects and key pillars of economy / society is presented below and then an overview of activities is then provided for each project.

Sectoral focus of NWPP resource efficiency / waste prevention activities:

	Business	Public Sector	Communities
Green Business	✓✓		
Green Hospitality	✓✓		
Green Healthcare	✓	✓✓	
Green Enterprise	✓✓	✓	✓
SMILE	✓✓		
Smart Farming	✓✓		✓
LAPN	✓	✓✓	✓✓
Stop Food Waste	✓✓	✓	✓✓
Freetrade Ireland			✓✓
Community Re-use Network	✓	✓	✓✓
Green Home			✓✓
Greening Communities			✓✓

GreenBusiness.ie

GreenBusiness.ie is now six years old and one of the flagship programmes of the NWPP. Green Business is a free and confidential resource efficiency service for SMEs in Ireland that aims to achieve substantive resource efficiency improvements and cost savings, through waste prevention and reductions in water and energy consumption. The programme is based on free on-site resource efficiency assessments which provide recommendations on resource efficiency and cost-savings.

Resource Efficiency Assessments (REAs)

In 2013, Green Business conducted 57 on-site REAs - with 60% of these visits to operators in the food processing sector, many of which are involved in the Bord Bia “Origin Green” programme. Green Business works with a range of company sizes, ranging from companies with 5 to 1,000 employees and in 2013, REAs were delivered to companies with a combined total of 5,442 employees.

Green Business identified **average savings of €40,000** per company visited, in areas including water, waste and energy management. Potential savings identified in companies ranged from €650/annum to €421,000/annum. The majority of potential savings identified in 2013 were energy savings (80%). Firms that avail of Green Business assistance are encouraged to share their good news stories. Some recent examples include:

Bewleys Tea and Coffee Processing facility have progressively implemented energy efficiency improvements, with the result that the plant now uses 40% less energy for every bag of coffee produced at their site in Dublin.

CG Power Systems Ireland Ltd. Co. Cavan has reduced its gas bill by €200,000 per year by installing a heat recovery system on their paint line oven.

H.J Heinz Manufacturing Ireland Limited in Dundalk, has minimised their packaging requirements. On one product line, cardboard packaging has been designed to be used 31 times, when previously this packaging was single use.

Resource Efficiency Seminars

In 2013, Green Business hosted six regional resource efficiency seminars in association with other organisations including Enterprise Ireland; SEAI; Ibec; SMILE Resource Exchange; and REPAK.

These workshops provided participants with an introduction on resource management through preventing waste, reducing energy and water consumption and thereby reducing costs and improving competiveness. Case studies from industry speakers were also presented which outlined the benefits of resource efficiency for business. Speakers included representatives from Anglo Beef Processors (ABP), CG Power Systems Ireland Ltd, H.J Heinz Manufacturing Ireland Limited, C&D Foods, and Johnson & Johnson. These seminars received positive feedback from industry.

Sectoral Links

In 2013, Green Business continued to develop relationships with stakeholders and projects which complement the Green Business programme including:

- **Bord Bia, Origin Green Programme:** Green Business offers resource efficiency support to members of the Origin Green sustainability programme. The “Origin Green” programme assist companies to identify efficiency projects which will reduce their environmental impacts reduce their costs and improve their competitive advantage in the international market place.
- **Bord Iascaigh Mhara:** Green Business worked with BIM for the Winter Seminars and intend on partnering for future work in the fish sector. Green Business is working closely with BIM to develop the “Green Seafood Programme”.
- **Print and Pack Forum:** Green Business has worked with the Print and Pack Forum to identify resource efficiency options for the printing sector. Case studies and a best practice guide have been developed for this sector. This guide launches in 2014.
- **Retail sector:** Green Business has produced the Resource Efficiency, Best Practice Guide for the Retail Sector. This easy to use guide launches in 2014.
- **Irish Dairy Industries Association:** Green Business is currently working with the Irish dairy

industry to identify opportunities for water efficiency in the sector.

- **Ibec:** Green Business works in close co-operation with Ibec, and their Green Business Executive.
- **Repak "Prevent and Save":** Green Business works in close co-operation with the REPAK Prevent and Save programme.

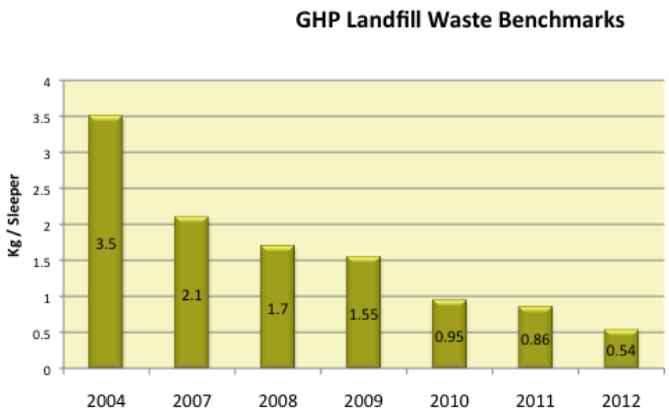
Green Hospitality

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 is very successful and has swiftly become the standard for environmental management within the hospitality sector in Ireland.

Over the 6 years of the programme, the GHP has engaged more than 30% of Irish Hotels and approximately 50% of Irish Hotel Rooms.

GHP also works across the hospitality sector and has 140 non hotel members at present from various industry sub-sectors – contract catering, bed & breakfasts, activity centres, restaurants and leisure centres.

Environmental improvements made by GHP hotels are measured annually using environmental benchmark figures provided by the members. Since GHP first commenced benchmarking in 2004, GHP hotels have made significant improvements and are now placed as near "best in class" in Europe. Data for 2012 show that GHP members now send 85% less waste to landfill per sleeper when compared to 2004.



Benchmarks for energy show a 28% reduction in energy consumed per m^2 per annum and there has been a 31% reduction in water consumed per sleeper. The average GHP hotel energy cost per sleeper was €4.9 in 2012. Water and waste cost €0.6 per sleeper. In 2012, GHP hotels had circa 5 million sleeper nights, with an estimated utility cost of €27.5 million. A reduction of 10% in these costs would save these hotels €2.7 million.

The average GHP hotel produces 51 tonnes of food waste per annum. The value of this food waste is equivalent to €153,000 per annum per hotel. Food waste is an area where there is potential to make significant cost savings through 'no cost' and 'low cost' measures. A very achievable 20% reduction in food waste, by GHP hotels would yield savings of over €3.6 million per annum.

Key achievements in 2013 include:

- Membership grew to 270 members. The focus for 2014 will be to encourage these new members to achieve certification and embed the savings within their businesses.

- 180 properties certified (a 20% increase on 2012) This includes 98 Eco-label, 57 Silver, 18 Gold and 7 Platinum members.

- The number of Platinum Awards has grown to seven adding the Armada Hotel Spanish Point, and the Doolin Hotel, Co Clare. This standard indicates world class environmental performance. Other platinum Award holders are: the Radisson Blu Hotel (Dublin Airport), Westin Hotel (Dublin), Dromoland Castle, (Clare). Garryvoe Hotel (Cork) and The Moorings Bar and Restaurant, (Kerry)

- 38 regional workshops were held to assist hospitality businesses to move towards certification, reduce their utility costs and utilize green marketing to its full extent.

- Delivered a series of regional Green Marketing workshops, presented by Xavier Font from the International Centre for Responsible Tourism (ICRT)

- GHP have developed sub-programmes including Green Restaurants, Greener Festivals, etc. and are in the process of finalising an Eco-tourism label, in consultation with Fáilte Ireland.

- The GHP environmental benchmark workbook has been improved to incorporate the International "Hotel Carbon Measurement Initiative"

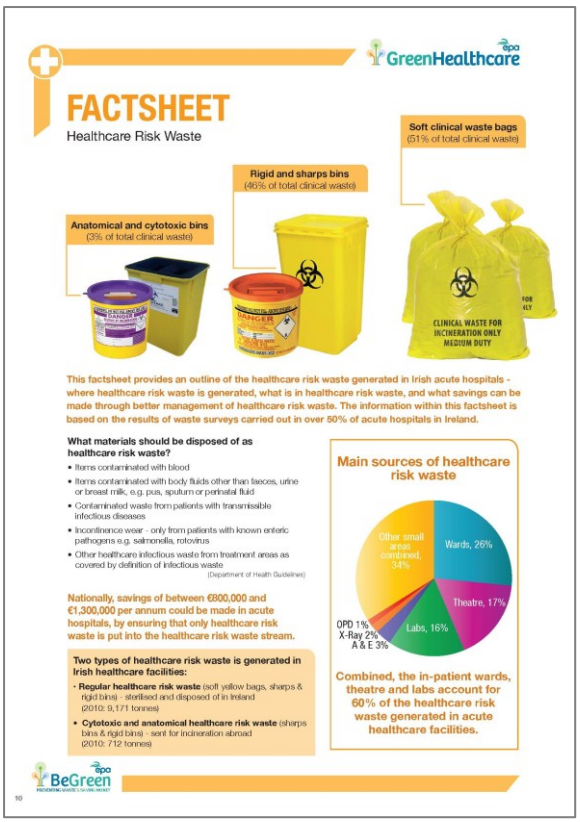
- Greener Festivals. In 2013 GHP supported the Rose of Tralee International Festival. Ongoing development of information and guidance for festivals is being undertaken and in 2014.

- GreenTravel.ie was launched in 2013. This website www.greentravel.ie is a site for domestic and international tourists – leisure and business – and provides these visitors with access to greener hospitality businesses around Ireland.

Green Healthcare

The Green Healthcare programme 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 33 healthcare facilities, including acute hospitals, children's hospitals and primary community continuing care (PCCC) facilities. The acute hospitals engaged represent 50% of the acute beds in Ireland. In 2013, the programme also provided assistance and guidance on developing waste prevention initiatives to hospitals in Qatar and Singapore.

Key achievements in 2013 include:


GreenHealthcare

FACTSHEET

Healthcare Risk Waste

Soft clinical waste bags (51% of total clinical waste)

Rigid and sharps bins (46% of total clinical waste)

Anatomical and cytotoxic bins (3% of total clinical waste)

CLINICAL WASTE FOR INCINERATION ONLY MEDIUM DUTY

This factsheet provides an outline of the healthcare risk waste generated in Irish acute hospitals - where healthcare risk waste is generated, what is in healthcare risk waste, and what savings can be made through better management of healthcare risk waste. The information within this factsheet is based on the results of waste surveys carried out in over 50% of acute hospitals in Ireland.

What materials should be disposed of as healthcare risk waste?

- Items contaminated with blood
- Items contaminated with body fluids other than faeces, urine or breast milk, e.g. pus, sputum or perinatal fluid
- Contaminated waste from patients with transmissible infectious diseases
- Incontinence wear - only from patients with known enteric pathogens e.g. salmonella, rotovirus
- Other healthcare infectious waste from treatment areas as covered by definition of infectious waste

(Department of Health Guidelines)

Nationally, savings of between €800,000 and €1,300,000 per annum could be made in acute hospitals, by ensuring that only healthcare risk waste is put into the healthcare risk waste stream.

Two types of healthcare risk waste is generated in Irish healthcare facilities:

- **Regular healthcare risk waste** (soft yellow bags, sharps & rigid bins) - sterilised and disposed of in Ireland (2010: 9,171 tonnes)
- **Cytotoxic and anatomical healthcare risk waste** (sharps bins & rigid bins) - sent for incineration abroad (2010: 712 tonnes)

Main sources of healthcare risk waste

Wards, 26%
Theatre, 17%
Labs, 16%
A & E 3%
X-Ray 2%
OPD 1%
Other small areas combined, 34%

Combined, the in-patient wards, theatre and labs account for 60% of the healthcare risk waste generated in acute healthcare facilities.

BeGreen

- A small acute hospital reviewed the quantity and type of food provided to its wards, along with the timing of meals. As a result the quantity of un-served food waste generated was reduced by 40%, as measured by the re-survey. The hospital also reduced the quantity of milk automatically provided to patients, thereby reducing the quantity of un-served milk disposed of to drain by 40%. In total this represented savings in the region of €8,000 per annum
- A large acute hospital has implemented a number of food waste reduction measures. The hospital is currently implementing further recommendations but using waste contractor data from early in the programme, minimum savings of €10,000 per annum have been achieved.
- A large acute hospital reviewed its provision of healthcare risk waste (HCRW) bins, increased training of staff regarding the classification of healthcare risk waste, and implemented reusable HCRW bins. As a result the hospital reduced its HCRW generation by 27 tonnes, resulting in savings of around €20,000 per annum. Additional benefits in terms of worker safety were also identified.

The main focus in 2013 was to work with existing participating facilities to assist them in implementing waste prevention improvement options. As part of this work the programme undertook a number of re-surveys to identify recommendations implemented to date. This information was used to generate case studies for the website and as a means of further encouraging improvement in the facilities concerned.

In April 2013 the revamped Green Healthcare website www.greenhealthcare.ie was launched. The main aim of the website is to provide guidance and support information to any healthcare facility wishing to implement waste prevention and increased segregation measures. As of the end of 2013, the website contained the following number of guidance documents and tools:

- 5 best practice guides
- 6 'how to' instructional guides
- 4 factsheets
- 5 case studies
- 4 calculation and cost saving identification tools

Through the sharing of knowledge and experiences, hospitals save time and resources by avoiding problems already encountered by others. The network is gradually being used by HSE staff to get guidance on waste management issues from staff in other facilities.

The awareness of and use of the Green Healthcare resources can be seen by the fact that a number of staff from healthcare facilities that had not previously been engaged with under the programme have since asked to join the network.

Interaction with other national agencies:
The Green Healthcare Programme presented an outline of its work and findings to the HSE Board in April 2013, which was favourably received. The programme has actively engaged with the HSE's new National Health & Sustainability Office (NHSO) and hopes to assist in the development of the office, through the sharing of knowledge, guidance documents and already developed networks. Green Healthcare representatives met with and provided information to the Department of Agriculture, Food and the Marine as part of their research work on the development of future markets for elderly nutritional products.

Green Enterprise

The Green Enterprise call in 2013 represented the first year of the scheme in its new format. It was previously known as the Cleaner Greener Production Programme (CGPP). Green Enterprise challenges organisations and companies to produce goods and provide services in more environmentally friendly ways and to minimise emissions through cleaner production methods. The objective is to achieve a balance between economic activity and environmental protection.

The programme aimed to support prevention, and re-use, projects in line with key EU and Irish strategic policies such as "A Resource Opportunity - Waste Management Policy in Ireland" and "Delivering Our Green Potential", both published in 2012. Key sectors included agri-food, tourism and Green Products and Services.

A total of 44 applications were received, with a total of 14 projects receiving funding up to a maximum of €60,000. These represented a number of sectors and types of organisations, including manufacturing, agri-food, community groups, public sector organisations and charities. Often projects involved multiple partners, for example a consultancy, manufacturing company and third-level educational establishment working together on a proposal.

Organisation	Project
Community Recycling Network	Resource Revival
Central Solutions Ltd	Water Management at Industrial Facilities in Ireland
The Rediscovery Centre	Developing a sustainability framework for the reuse sector
Limerick County Council	Encouraging Corporate Social Responsibility among Small to Medium Enterprises
Polymer Recovery Limited	Valuable products from Mixed Plastics Waste otherwise
Midlands Simon Community	Refashion clothes within the Charity sector
Cork Environmental Forum	Boomerang, Bring Back & Re-Use
Tallaght Plastics	Optimisation of cleaning process to manufacture high quality polyethylene recyclate
Macroom E	Influencing and Evaluating Behavioural Change
EOS Future Design	Agrichar : Reduction of pollutants and nutrient loss in slurry and silage in cattle farming
Glanbia Ingredients Ireland Limited	More effective use of nitric acid in process
FDT Consulting Engineers & Project Managers Ltd	Improved Treatment of Distillery Wastes
Wexford County Enterprise Board	GreenSave Wexford
Cynar Recycling Limited	Farm Waste Plastics

In addition, a number of projects funded in previous calls reached an end. These included a life cycle analysis of insulation for timber frames buildings, and novel disinfection equipment for use in hospitals. Details of outputs can be seen at www.cleanerproduction.ie.

The long-term aim of Green Enterprise is to ensure that cleaner greener production and eco-efficiency become the established norm in Ireland. The EPA intends that other businesses will learn from and build on past success stories. Over the six phases of this programme which have run to date, the EPA has committed €6.6 million to 106 projects that have received part-funding for demonstration projects.

SMILE Resource Exchange

In 2013, SMILE Resource Exchange has continued to expand and develop in the key regions of Cork, Limerick, Clare, Kerry and Dublin. SMILE Resource Exchange is a free service for industry that encourages the exchanging of resources between its members in order to save them money, reduce waste going to landfill and to develop new business opportunities. Potential exchanges are identified through networking events and via an online exchange facility (www.smileexchange.ie), with a support team to assist throughout. At the exchange events and through the website businesses can identify resources they would like to exchange such as reusable items, by-products and surplus products. Key achievements in 2013 include:

- Membership increased to 1,005 businesses (165 new members since April 2013).
- 3 events were held in this period April 2013 to December 2013, one in Leinster and two in Munster with a total of 104 businesses participating and 180 in attendance overall (11 events held to date with an attendance of 490 businesses combined).
- 353 potential synergies were identified at the three events and 89 enquiries were made on resources posted on the website with a further 88 synergies identified through other avenues.
- 2,746 tonnes of material were presented at the three events in Munster and Leinster with a potential cost saving of between €208,696 and €277,346 on an annual basis. (In total 28,467 tonnes have been presented at SMILE events to date with a combined identified cost saving of between €2,163,492 and €2,875,167). This cost saving is based on events alone and does not reflect the potential emerging through the website.
- SMILE became a founding member of the newly found European Industrial Symbiosis Association. EUR-ISA brings together the organisations responsible for up to 10 established industrial symbiosis programmes
- Through interaction with a multinational company in Cork, a mentoring system is being developed which should see the environmental best practise from within the multinational company being shared with groups of SMEs.
- SMILE continues to work with Rehab Recycling in the promotion of the Eco Village and in particular of the SMILE "Re-use Cabin" within the facility. SMILE members can use the cabin as a drop off and collection facility for the exchange of resources.
- SMILE was a finalist in the Green Awards "*Waste to Business Resource*" category.
- SMILE came 14th (of 268 entrants) in the European Commission "*World You Like*" Competition receiving over 7,000 votes.

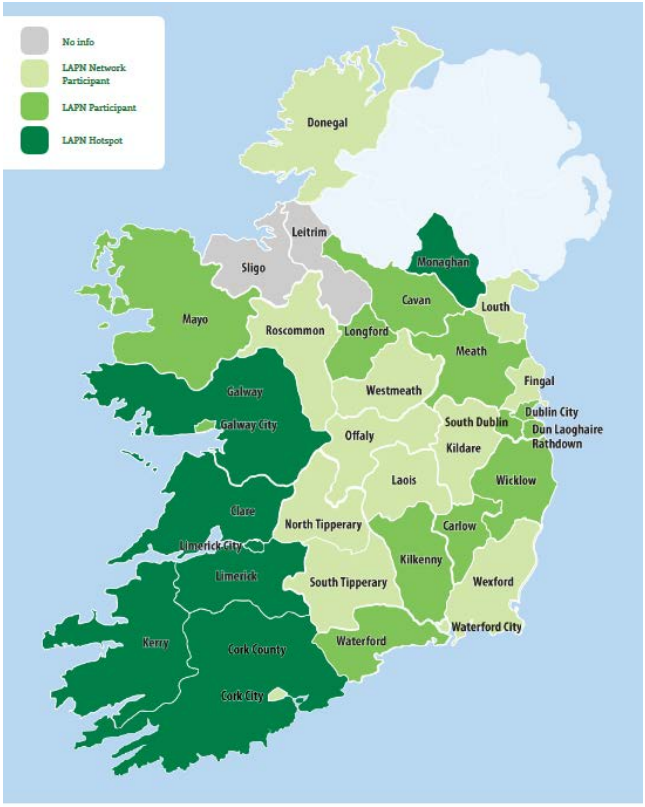
Smart Farming

Smart Farming is a collaborative initiative aimed at expanding the green business initiative into the farming sector. Smart Farming highlights ways that farmers can reduce their farm bills and maximise outputs through better resource management. This is a national voluntary farmer focused initiative that looks at resource use and efficiency on all farms across all sectors and highlight "top tips" in relation to feed, soil fertility, grassland, energy, machinery, water, inputs and waste, and time management. A Smart Farming Guide has been prepared through collaboration between the EPA, Irish Farmers Association (IFA), Teagasc, Sustainable Energy Authority of Ireland (SEAI), University College Dublin, Irish Grassland Association, Fertiliser Association of Ireland, National Federation of Group Water Schemes (NFGWS) and Farm Tractor and Machinery Trade Association (FTMTA). This is now available at www.smartfarming.ie or www.ifarm.ie. The IFA is the implementing partner for this initiative.

The Smart Farming Guide is a summary of top-tips to save farmers money on feed, fertilisers, energy and water bills and shows ways to reduce waste. In 2013, a number of on-farm pilot studies were undertaking where potential savings of up to €5000 per farm were identified from adopting resource efficiency measures. During 2014, the Smart farming initiative will move from the pilot phase to national implementation. A nationwide call was made to farmers who are members of existing discussion groups to register an expression of interest in having a Resource Efficiency Assessment (REA) carried out on a member's farm. A minimum of 25 REAs will be carried out on dairy, beef, sheep, tillage and mixed farms in clusters across the country. The only eligibility criteria used for selection is that the farmers selected will be prepared to discuss the findings of the REAs with their discussion group on their farms.

A web-based support network has been developed to support the guide; this will provide a platform for the farmers participating in the pilot studies to tell their stories and to provide links to other relevant national schemes. Resource efficient farming saves money, is good for the economy, and benefits the environment and society. It will enable farmers to help demonstrate that their farming practices are smart, green and sustainable.

Local Authority Prevention Network



Co-ordinated by the EPA, the Local Authority Prevention Network draws together most local authority personnel undertaking activities on waste prevention and resource efficiency.

There is now a network of LA personnel engaged in the practical application of resource efficiency with communities, businesses and other organisations across the country.

The extent to which local authorities engage with the Network varies. During 2013, there were 20 'active' members. Including less active local authorities, 32 out of the 34 local authorities in Ireland (before ongoing mergers) participated in the Network.

The major activities for the past year include:

- Six regional training events on Food Waste Surveys and Food Waste Prevention were held. The events were attended by 47 participants from 27 local authorities; attendees were drawn from Environmental Awareness Officers and LA staff responsible for enforcing the Food Waste Regulations. In turn, participants are undertaking a number of such assessments and identifying savings for businesses in their functional areas.
- Water-use reduction training for local authority personnel was carried out, with 3 sessions around the country, conducted by CTC and Low Flo Ltd. Selected LAPN personnel also participated in the delivery of this training.
- Work was undertaken in Killorglin with local businesses and the community for the Waste Watchers TV programme. LAPN (Kerry County Council and LCK Regional Waste Management Office) and CTC personnel were heavily involved.
- A revamp of the LAPN website was performed and development of the LAPN Project Catalogue and Toolkit continued. A map is being developed to showcase the projects done in each area. The greenyourfestival.ie website was further populated during the year as local authorities continue to 'green' local events.
- Good practice guides were designed for householders on Greener Cleaning and Greener Gardening. Workshops for householders on greener cleaning were organised by local authority LAPN teams in Limerick, Monaghan and Cork, with further training planned in Galway County.
- A number of food and waste surveys in PCCC hospitals were carried out by CTC in conjunction with LAPN personnel. The results of these are included in the Green Healthcare programme. This illustrates a strength of the LAPN whereby

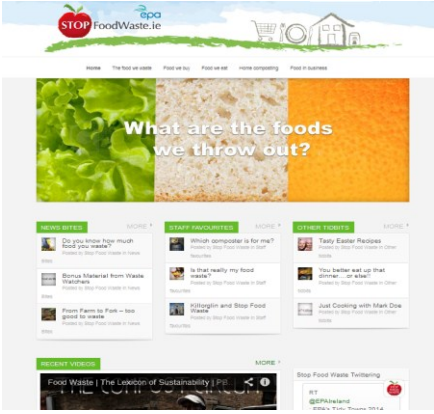
local authority persons trained in waste prevention can assist with other NWPP activities.

- Some of the local authorities participating in the Prevention Network have developed a short video on food waste aimed at householders: (http://www.youtube.com/watch?v=A9_re5_ss98). It is also available for any local authority to use as an advertisement in local cinemas.
- A programme for greening the Bloom Festival was developed with Dublin City Council.

Stop Food Waste

During 2013 the Stop Food Waste programme, continued to be the prominent national platform to inform, and engage with consumers, communities and businesses on how to avoid food waste and compost unavoidable food waste at home. Through collaboration with these target groups, Stop Food Waste creates awareness, educates and develops practical tools to enable behaviour changes that lead to reducing food waste.

Communications & promotion



One of the main points of contact for the programme is the www.stopfoodwaste.ie website. In 2013, the website underwent a significant redevelopment and the new look Stop Food Waste website went live in December. The website now has a cleaner and fresher look, and the layout also makes it more suitable for viewing on smartphones and other mobile devices, given that 32% of people in Ireland now access the internet using these devices rather than on a traditional PC.

Materials and resources are curated under 5 thematic areas where changes in behaviour to reduce the amount of food wasted in the home have been identified: being aware of what food is wasted and why; planning meals and shopping; storing food to prolong its shelf life; cooking and serving.

The Food in Business section on the website has been greatly expanded, to help businesses self-assess their food waste and initiate a food waste prevention programme using an easy, step-by-step, do-it-yourself methodology and guide. Also included are case studies, videos and useful links to other sectoral NWPP programmes.

Monitoring website activity has been a consistent metric that the programme has used to measure the extent of progress and awareness raising. Since 2010 the daily activity on the site has increased steadily with an average of over 750 unique daily hits on the website in 2013.

The website acts as a repository and library for information and a variety of communications channels are used to draw people in to relevant sections on the website and engage with them in a more focused way. Over the last year or so the Stop Food Waste community has been steadily growing through the use of social media to connect, inspire and collaborate with others.

Stop Food Waste continues to field regular media request for statistics and current thinking on the issue of food waste. In 2013, 18 interviews for newspapers and radio were conducted. The SFW team is also regularly invited to write articles or speak at events. In 2013, the team attended 5 events to speak about the programme and its activities.

Stop Food Waste contributed significantly to an episode on food waste for the **Eco-eye** TV series that aired on RTE One on 12 February 2013. According to the series producers, viewership figures estimate that almost 500,000 people watched the full programme and another 100,000 watched the repeat the following Monday night. The episode had the highest ratings of the series and 32% of people watching TV in Ireland that night were watching Eco Eye.

Local authorities and Master Composters continue to use the Stop Food Waste brand to promote food waste prevention and home composting at major events and venues around the country, such as Bloom, Electric Picnic, Fota Wildlife Park, Dublin Zoo, the Ploughing Championships, Tullamore Show, North West Garden Show. Having the Master Composters and the local authority networks act as ambassadors is an efficient way for the programme to have a presence at these events and promotes the message to a large audience.

Stop Food Waste Challenge

Stop Food Waste has been successfully promoting the main messages in relation to food waste prevention widely and regularly, and using a wide spread of tools and applications, including online and social media as well as the more traditional media types. To date, the programme is regularly contacted for information, comment, interviews and quotes about issues relating to food waste and saving money, and the team maintains these contacts and seeks to create synergistic opportunities where possible. It is important to communicate a clear and consistent message, promoting the food waste management hierarchy as an integrated solution rather than promoting a single option over another.

However, it is widely acknowledged that while creating awareness and providing information is necessary for change, it is not sufficient. To enable real behaviour change there is a need to engage and collaborate with individuals, communities, businesses and other organisations and bring about a desire in people to change their behaviour. Once people feel that changing their behaviour will make a difference, they also need to feel empowered to make a change.

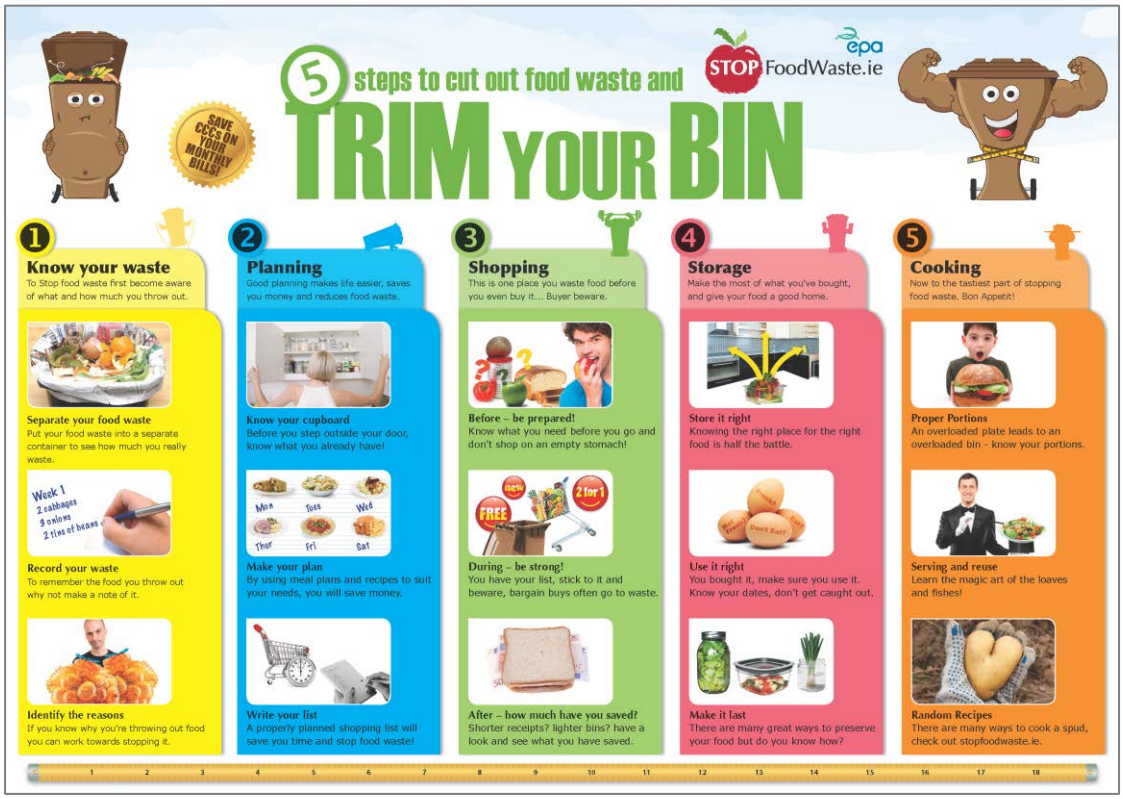
Stop Food Waste has been addressing this by focussing on clear actionable steps, developing practical tools and providing support to implement them. The Stop Food Waste Challenge is an easy to follow stepwise toolkit which guides people through the full food cycle to identify what they are wasting and take action to reduce it, and save money in the process. Within each of the 5 stages of the food cycle

Waste Watchers

A TV documentary 'Waste Watchers' aired on RTE One on 8 December. Presented by Philip Boucher-Hayes, the documentary featured the work with the residents of Killorglin, Co. Kerry referred to below. The programme looked at food wasted in homes and businesses and the small changes that can lead to reducing food waste and saving money. Independently verified figures indicate that an average of 359,000 people viewed the whole programme, and there was a peak of 409,000 viewers during the programme. There were also 4,300 RTE player views in the following three weeks.

In addition to the TV documentary a number of additional videos filmed during the Killorglin initiative are available on the SFW website. SFW ran an intensive communication campaign using the SFW social media platforms in the run up to, during and after the airing of the programme. As the documentary aired, #wastewatchers was trending on Twitter, and @Stop_Food_Waste Twitter followers rose to 1,413 following transmission of TV documentary.

there are 3 key areas where changes in behaviour can lead to reducing food waste. While each of these areas is important, the most important one will be different for everyone and the toolkit helps people find the best solutions to their specific food waste issues.



Working with local authorities

Stop Food Waste has developed close working links with local authorities, who promote the programme in their own areas. Many of the local authorities engaged with Stop Food Waste are also members of the Local Authority Prevention Network. As these are in daily contact with the public and local communities, they are in the perfect position to promote food waste behaviour and enable behaviour change at a local level, through one-on-one interaction and group-level activities. While using a recognised national brand and consistent messages, these can better penetrate into local communities through the work of the waste prevention co-ordinators, environmental awareness officers and their community group networks, with whom they engage on a daily basis.

Working with others

To get the message effectively and efficiently to as many people as possible and to avoid duplication of effort, Stop Food Waste actively pursues opportunities for collaboration with existing community-based networks and other organisations.

By the end of 2013, almost 500 Master Composter/Stop Food Waste Ambassadors volunteers have been trained in food waste prevention and home composting techniques. The volunteers give advice and guidance on food waste prevention and composting in their localities: in schools, in tidy towns, in community gardens, in parks, in neighbourhoods and at many national, regional and local events, fairs and festivals.

There is now a network of 12 main composting demonstration sites around the country and a further 60 satellite demonstration sites supported locally by active Master Composter volunteers (see map on stopfoodwaste.ie).

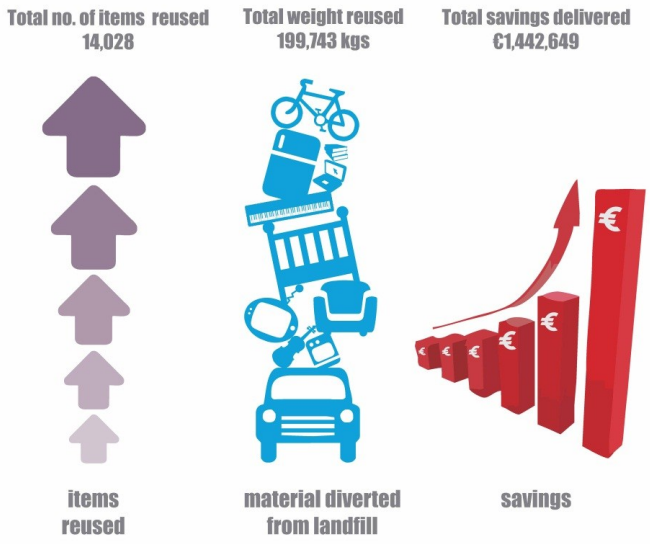
Stop Food Waste also works with individuals and organisations promoting similar messages, targeting similar audiences or having mutually beneficial goals, such as chefs/food bloggers; home economics teachers; NGOs (An Taisce, Voice); social enterprises (FoodCloud, Bia Food Initiative); Tidy Towns; HSE Community Dieticians and other organisations promoting healthy eating and kitchen economics (Healthy Food for All, Crosscare); parent groups (e.g. My Kids' Time), etc.

It is also important to share knowledge and contribute experiences to work being done on preventing food waste in other countries. Stop Food Waste is a member of the EU FUSIONS research project on using social innovations to reduce food waste (http://www.eu-fusions.org/) and Think.Eat.Save, a global UNEP/FAO initiative call for action and website portal to showcase ideas and provide a one-stop shop for news and resources on food waste prevention.

FreeTrade Ireland

In July 2013, FreeTrade Ireland became a member of the National Waste Prevention Programme. FreeTrade Ireland also continues to be an active member of Community Re-use Network Ireland and aims to continue to support the development of waste prevention and re-use in Ireland. FreeTrade Ireland continued to facilitate re-use for households and businesses across Ireland. Over 14,000 items were re-used through the service during 2013. Over 77,000 items have been re-used since the service began. It is estimated the service diverted approximately 200,000 kgs of quality materials away from landfill and saved members of the service over €1.4 million during 2013.

Furniture remains the most popular item re-used through the service with almost 60% of items posted on the website fitting in to the furniture and office furniture category. Other commonly posted items on the website include electronics and appliances, childcare items and general interest items such as gardening tools and sports equipment.



The membership base continued to grow in 2013 with 3,900 new members signing up to use the service. The overall number of members now using the service stands at 47,000. The website remains a hub of activity with 17,000 visitors to the website on a weekly basis with approximately 8,000 unique visitors indicating that there are a high number of first time users.

The activity on the FreeTrade Ireland service contributes to the national re-use economy. In 2013 the re-use of items delivered an estimated savings of €1.4 million to users of the service. Since the service was launched nationally the total financial savings amounts to almost €5 million. The return on investment remained high in 2013 with a €26 return for every €1 invested by the EPA and Local Authorities. The service generates revenue from online advertising and in the last 12 months this amounted to just over €3,500.

During 2013 technical developments remained a priority for the project with the aim to make the service more user friendly and convenient to use. Technical developments to further improve the quality of the data recorded by the management system were also made. The major development completed in 2013 was an upgrade of the FreeTrade Ireland smartphone apps. Using the new free apps our users on both iPhone and Android platforms have the full functionality of the service available to them whilst on the move.

Other developments in 2013 included:

- Promotional video educating new visitors about the service and how to use the service
- Restructuring of the FreeTrade Ireland home page to utilise space more efficiently
- Developments to the backend management system to allow for recording of app data

FreeTrade Ireland Promotional Activities

Promotion of the service remains vital to the development of the service and in 2013 the team raised awareness of the site through activities including re-use day events, social media, online marketing, blogs, exhibiting at conferences and events. The team co-ordinated the national launch for the new smartphone app and hosted two competitions promoting the new app and the FreeTrade Ireland service to raise awareness of the app amongst our users.

In 2013 the FreeTrade Ireland Team completed 3 re-use day events at Kinsale Road Landfill & Civic Amenity, Cork, Derryclure Landfill & Civic Amenity, Offaly and Ballyogan Recycling Park, Dun-Laoghaire Rathdown. Fact-sheets detailing each re-use day event and outcomes from events are developed by the team after each event.

At the Cork and Offaly events members of the FreeTrade Ireland Team were on-site to inform members of the public visiting the site about the service. Information packs were distributed to visitors. The service was also explained to site staff as part of efforts to raise awareness of the service at the centre. Signs promoting the service were erected at each of the sites and left in place after the visit. Each event was advertised on local media which helped to increase footfall on the days.

The re-use event hosted at Ballyogan Recycling Park took place during the European Week of Waste Reduction 2013 in conjunction with Dun Laoghaire Rathdown County Council. At the event the FreeTrade Ireland team rescued several high quality items before they became a waste material. Items saved included a new baby travel cot, a surf board cover, brewing bottles, an antique serving platter and a Turkish backgammon board.

The re-use day events are very successful promotional activities for FreeTrade Ireland and more are planned for 2014.

Community Re-use Network Ireland

As Ireland continues to improve in terms of managing waste and resources, solutions at the upper end of the waste hierarchy are gaining traction at both policy level and in practice. Reflecting the commitment to waste minimisation and re-use within the Waste Framework Directive (2008/98/EC), the NWPP has been examining and supporting re-use activities in Ireland for a number of years.

According to the Directive, "re-use" means any operation by which products or components that are not waste are used again for the same purpose for which they are conceived. "Preparing for re-use" means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they will be re-used without any other pre-processing.

CRNI Members	
Bryson Recycling	ReCreate
Busy Bees	Rediscovery Centre
Camara	Rehab Recycling
Clondalkin Community Recycling Initiative	Revamp 3R
EcoMattress	Rothar
Free Trade Ireland	SMILE Resource Exchange
Irish Charity Shops Association	Sunflower Recycling
Irish Cancer Society	Voluntary Services

A significant part of the NWPP's work in this area is its role in the establishment and continuing support of the Community Re-use Network Ireland (CRNI). CRNI is an all-island umbrella for community-based social enterprises specialising in both direct re-use and preparing for re-use activities while providing training and employment for excluded people. CRNI members are committed to providing environmental, economic and social benefits – the "triple bottom line".

In the last 2 years, CRNI members have been directly involved in the re-use of over 9,000 items of furniture, 15,000 litres of paint, over 2 million items of clothing and other textiles as well as 40,000 items of electrical and electronic equipment and over 1,000 bikes.

CRNI is currently executing two exciting projects under the EPA Strive Programme (Green Enterprise) a smartphone application to provide information about re-use service providers and a pop-up re-use education and retail space. The smartphone application, Re-use It!, will allow users to find the nearest and most appropriate re-use enterprise or venue to which they can bring their pre-loved items. The

EcoMattress, Dublin

EcoMattress is an innovative project and the first of its kind in Ireland. It breaks down used mattresses, recycling 100% of the components, with zero landfilling. In its first six months, EcoMattress recycled 80 tonnes of mattresses that would have otherwise ended up in landfill. The company reached a capacity of 250 mattresses per week, working half-time and with a planned expansion to working full-time in 2014, that weekly total is set to rise to 500 mattresses. 2014 also sees the Cork Environmental Forum, in conjunction with CRN member SMILE Resource Exchange, initiate a similar mattress project, Boomerang Mattresses Bring Back and Re-use, in Cork.

pop-up space, in Dublin during summer 2014, will be a city centre location where high quality re-used products will be show cased. This space will also be used to run interactive educational workshops on a range of practical skills for repairing and revamping used items. The aim of the pop-up space project is to promote re-use as an innovative, creative and desirable option.

Going forward, CRNI has set out an ambitious but realistic five year strategy which seeks to position the network as a significant actor in the drive towards resource efficiency. Core targets within this strategy include raising the public and media profile of re-use as a waste solution and to contribute valuable insight and advice to government in policy-making and policy implementation processes.

Green Home

The Green Home Programme has been operating since 2006 as a partnership between the EPA and An Tasice's Environmental Education Unit. In 2013, approximately 26,000 households were participating in the programme - an increase of 4,000 households sine the previous year. In addition, there were a further 6,809 online members of the Green-Home website (www.greenhome.ie). Average savings of €350 per annum are realised for households that fully implement the programme. The overall economic savings achieved for all Green-Home participants in 2013 is estimated at between €910,000 (if 10% of the households engaged achieved the average €350 saving) and €2,275,000 (if 25% of the households engaged achieved the average €350 saving).

Schools participating in An Taisce's Green-Schools programme represent a fundamental hub to the Green Home Programme. Since 2006, 121 schools from the Green-Schools Programme with a catchment of over 26,000 households have worked on the Green-Home programme, while 96 schools have been awarded the Green Home Flag -. St Mary's National School Trim – received their Green Home flag in 2013 and the award of Green School/College 2013 at the National Green Awards.

178 Tidy Towns Groups are currently registered as participants through the Green Home website. This element of the Green-Home programme has grown very rapidly over the last 2 years. Induction presentations to Tidy Towns Groups that explain the implementation of the Green Home programme have been delivered in several counties throughout Ireland. The programme continued to grow in 2013 with considerable growth in County Kerry due to the focussed intervention in that area. It is envisaged that a further 30-35 Tidy Towns Groups will engage with the programme in 2014.

The Green Home Programme has been "exported" to and adopted by Northern Ireland. This is a great endorsement of the programme, which is branded as "Eco-Home" in Northern Ireland and operated by Tidy Northern Ireland. The programme is supported by Belfast City Council and the Department of the Environment's "Rethink Waste Campaign". Eco Home Northern Ireland was launched in Belfast City Council in March 2013 and is completely based on the Green-Home programme - and is accredited as such to EPA and An Taisce. This development has allowed for a number of opportunities for developing an all-island profile of the programme. The programme continues to grow in Northern Ireland and has now been included as Action 3 in the Draft Northern Ireland Waste Prevention Programme.

Greening Communities

Greening Communities is a national programme that seeks to shine a light on communities that are working for themselves to make their community a better place to live and work. The Programme is a joint initiative of the EPA and An Taisce. Greening Communities is designed to take an overarching look at the abundant active programmes and initiatives (e.g. Tidy Towns groups, Green-Schools, National Spring Clean, Transition Towns and the Smarter Travel programme) and celebrates the work being undertaken at community level throughout the country. As part of the programme, there is focus on particular communities, recording best practice (for positive environmental behaviour); identifying the needs of a community; and providing support to facility the growth of these Greening Communities.

A key objective of the programme is to establish a robust accreditation / award system, with built-in flexibility and local application, for a Greening Community. The methodology used for this accreditation, is piloted with five communities (Wexford Town; Westport, Co Mayo; Killorglin, Co Kerry; Aughrim, Co. Wicklow; Coolagown, Co. Cork) and this process commenced in 2013. Each community is issued a "Greening Communities Challenge" after a gap analysis of current activities (programmes and initiatives). These communities are then 'measured' and 'reviewed' with regard to their level of sustainability.

Activities in 2013 that were supported by the Greening Communities Programme included:

- County Meath was divided into six Tidy Town Networks to host workshops on Sustainable Waste and Resource Management, the newly expanded category of the Tidy Town Competition. The host community invited neighbouring communities to the workshop, to explore how everyday behavioural changes can contribute to creating a more sustainable community;
- Wexford Tidy Towns highlighted the 2013 National Spring Clean with a large scale clean-up at the local sports grounds, involving Tidy Towns and the local sports groups. This clean-up was used as a opportunity to publicise the work of Wexford Tidy Towns and the new Biodiversity subcommittee.
- The Frenchpark Greening Community identified an opportunity for a biodiversity workshop. Using the newly established Sensory Garden as a focal point, outside expertise was used to guide the local community to explore biodiversity in the area; and
- The flagship event for the Docklands Business Forum (DBF) is the Annual Docklands Clean-up, which provides a positive "giving it back" medium for business to the local community and a networking opportunity for the volunteers. This year was the third time the event has taken place and was the biggest ever DBF Spring Clean with more than 60 volunteers representing 20 businesses across the docklands area.

4. Waste Reporting & Statistics

The EPA's National Waste Report for 2011, published in March 2013[1], supports the successful implementation of the National Waste Prevention Programme. The report provides trends and information on waste generation and management and also gives context on the quantities and types of waste arising in the State. It informs the effective management and prevention of waste on a national and regional basis and enables the prioritisation of efforts to target the prevention, recycling and management of waste streams. As well as providing data on municipal waste generation and management, the National Waste Report also gives information on waste streams subject to Producer Responsibility Initiatives such as packaging, waste electrical and electronic equipment, end of life vehicles and batteries. The report highlights relevant indicators on waste as an aid to policy development and to support the development of new business opportunities.

Considerable progress has been made in the way that waste is managed in Ireland. Some of the main findings for 2011 are:

- Municipal solid waste generation in Ireland has decreased by 17% since it peaked in 2007.
- There was an increase in municipal waste recovery since 2010 to 47%.
- The recycling rate for municipal waste is now equivalent to the EU norms at 40%.
- The bulk of municipal waste recovered (73%) is exported for recovery.
- The majority of municipal waste (53%) is disposed of to landfill - though this continues to decrease year on year.
- The tonnage of refuse derived fuel (RDF) used as a fuel at cement kilns and incinerators in Ireland and abroad increased by 68%.
- Ireland has surpassed the 2011 EU packaging recovery target of 60%, with a 79% recovery rate in 2011.
- Household WEEE collection amounted to 7.6 kg per person, almost double the 4 kg per person EU target.
- There was an 83% decrease in construction and demolition waste collected since 2007.
- There was a 21% increase in household organic waste collected since 2010.

Ireland is well advanced towards achievement of its EU obligations across a broad range of waste legislation, in particular in relation to recovery and recycling[2]. A recent European Environment Agency[3] report showed that Ireland was one of the countries in Europe with the fastest growing recycling rates. However, the State continues to show a substantial reliance on recovery of municipal waste abroad.

There is a risk that some future targets will not be met. Ireland's continued reliance on landfill means that we are at risk of not reaching strict biodegradable waste diversion targets by 2016. Efforts in waste prevention, diversion to recovery, the development of necessary supporting infrastructure and the

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[1] www.wastereport.ie

[2] http://www.epa.ie/pubs/reports/waste/stats/Ireland_progress_towards_EU_waste_targets_7Mar14.pdf

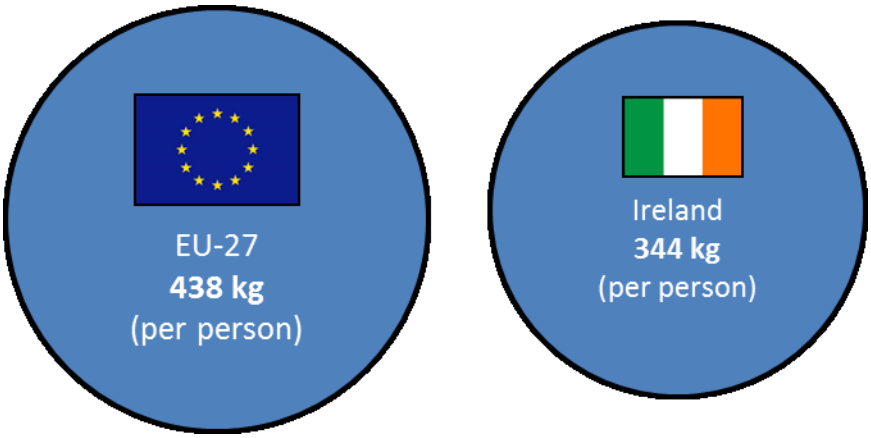
[3] Managing municipal solid waste – a review of achievements in 32 European countries. (2013). European Environment Agency.

enforcement of the 2009 and 2013 Food Waste Regulations will underpin the achievement of future targets.

As of end 2013, Ireland is failing to meet the re-use and recovery targets under the End of Life Vehicle (ELV) Directive targets which have been effective since 2006. With higher ELV targets coming into effect from January 2015, urgent action is needed to increase re-use, recovery and recycling of ELV materials.

Household waste generation per person

The average weight of household waste produced per person in Ireland in 2012 was less than the EU average - see figure below[4]. This indicator suggests that Irish households are less wasteful as a society compared with the average across the EU.

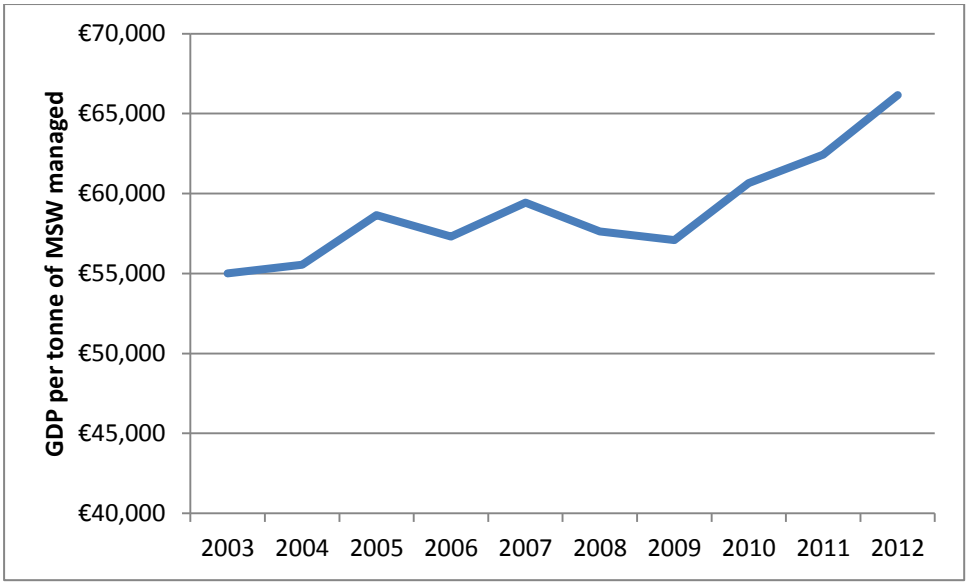


The household waste per person in Ireland has been decreasing over the period 2006 to 2012 from 470 kg/person in 2006 to 344 kg/person in 2012. This indicates success in national campaigns and awareness as regards waste minimisation – though effects of reduced consumption are also likely to have contributed. In addition, it suggests an economy and society that are improving the efficiency of consumption patterns with respect to waste generation.

Societal wealth generation and waste

The majority of society's municipal waste is generated from communities and, in particular, retail, restaurants, commercial and municipal services and households. The graph overleaf shows that Ireland generated more wealth per tonne of municipal waste over the period 2006-2012. In other words, we are becoming more efficient in how we live within the economy that we support.

[4] Source: Eurostat and EPA



These trends evident in indicators suggest that as an economy and society, Ireland is generating less waste per unit of wealth generated, and accordingly becoming more resource efficient. Recent National Waste Reports available on the EPA website at www.epa.ie/pubs/reports/waste/stats/.

5. Hazardous Waste Prevention and Management

The proposed revised National Hazardous Waste Management Plan (NHWMP), third version, was released for publication consultation in late 2013. The proposed revised plan is developed in accordance with Section 26 of the Waste Management Acts 1996 as amended. The first such Plan was published in 2001 and was replaced by a second Plan, published in 2008. This third proposed Plan is a revision of the second Plan and will cover 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 proposed revised plan. These include promotion of:

- Prevention of hazardous waste generation
- Collection and correct treatment of hazardous waste
- Indigenous treatment of hazardous waste while reducing export volumes (where feasible)
- 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 next plan period (e.g. expected legislative changes), and updates to the set of recommendations to ensure that they remain valid for the next plan period.

The revised Waste Framework Directive reinforces waste prevention at the top of the waste hierarchy and the proposed revised plan continues to prioritise a number of hazardous waste prevention activities and recommendations. The revised National Hazardous Waste Management Plan is also due for publication in 2014.

The programme to prevent and reduce the generation of hazardous waste continues to be integrated into the wide range of projects within the National Waste Prevention Programme.

The draft code of practice/guidance document on the minimum operational and environmental standards for accepting hazardous waste at civic amenity sites was circulated by EPA to other stakeholders in 2013 and is due for publication in 2014.

There are a range of regulations in place that control the content of hazardous materials in use. These include regulations on:

- Restriction of Hazardous Substances (in electrical & electronic equipment),
- Persistent Organic Pollutants (POPs),
- Packaging (Essential Requirements),
- Batteries & Accumulators and Decorative Paints.

Other legislation controlling the impact of products that may become hazardous (or environmentally harmful) wastes after use include regulations on

- End-of-Life Vehicles (ELVs),
- Polychlorinated Biphenyls (PCBs),
- Ozone Depleting Substances (ODS),
- Fluorinated Greenhouse Gas (F-gas),
- Organic Solvents (transposing the relevant sections of the Industrial Emissions Directive).

Enforcement and compliance with these regulations will reduce the health and environmental impacts of these potentially hazardous and harmful substances. The EU REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation should also reduce hazardous materials and products over time.

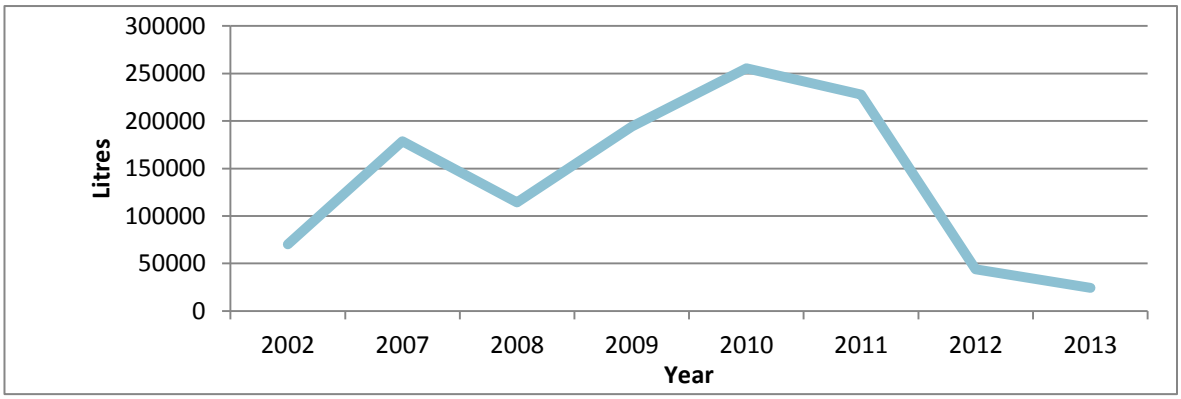
Farm Hazardous Waste Bring-Centres

Six farm hazardous waste bring-centres were undertaken in November 2013. This operated as a collaboration between the EPA, Teagasc, Department of Agriculture, Food & the Marine, six Local Authorities and mart owners. RILTA Environmental Limited was contracted as the hazardous waste operator to collect, recover and dispose of the farm hazardous waste. WEEE Ireland and European Recycling Platform also participated in the collection of WEEE and batteries. The events were publicised in local and regional papers, on radio and through Teagasc advisory services. The bring-centres were located in Ballinasloe, Tullow, Ballymote, Trim, Middleton and Thurles and were very successful with over 850 farmers depositing 94 tonnes of farm hazardous waste, 16 tonnes of WEEE and 6 tonnes of batteries. The average weight collected from each farmer was 110 kg. Wastes collected included waste oils, pesticides, veterinary medicines, paints, oil filters, corrosives and aerosols. The feedback from the farmers was very positive and identified the need for a national scheme to be established for the collection of farm hazardous waste. Farmers paid €2/kg for disposal and were issued with certificates of disposal by RILTA Environmental Ltd. Media coverage of the scheme was extensive with interviews on RTE TV and Radio, regional and national papers and also in the Farmers Journal. A report on the pilot will become available at www.epa.ie. The project partners have agreed to undertake ten additional pilot bring centres in 2014 and provide support for the establishment of a national scheme including a producer responsibility initiative.

Polychlorinated Bi-phenyls (PCBs) Regulation

Polychlorinated Bi-phenyls (PCBs) are a class of synthetic organic chemicals and are Persistent Organic Pollutants (POPs). They were typically used in old electrical equipment such as transformers, capacitors and fluorescent lighting ballasts. Production and use of PCBs are controlled by POPs legislation and their disposal by the EU PCBs Directive (enacted into Irish law by S.I. No. 163 of 1998). Holders of equipment containing more than 5 litres of materials confirmed or suspected to be PCB-contaminated must notify the EPA of its use annually before 1st September and the equipment is recorded on a register – the National PCB Inventory. Holders of PCBs or PCB-contaminated equipment were obligated to dispose of or decontaminate equipment where it contains more than 5 litres of PCB-contaminated material with total PCB concentrations greater than 0.05% by weight by the 31st December 2010.

The graph below illustrates the trend in the volume of confirmed and suspected PCB holdings on the national PCB inventory since 2002. At the end of 2013 a total of 24,328 litres of equipment which is confirmed or suspected to be PCB-contaminated remained on the National PCB Inventory. Efforts, in conjunction with local authority and other stakeholders, to identify and register notifiable PCB-contaminated equipment within the State will continue in 2014.



The EPA works continually with Local Authorities and many large state and semi-state organisations as well as private industry to identify potential holders of PCB-contaminated equipment and to promote compliance. This work involves a combination of inspections, meetings and correspondence with the stakeholders and to date has achieved a considerable reduction in the amount of PCB-contaminated or potentially PCB-contaminated equipment within the State.

During 2013 the EPA conducted a series of regional workshops to train Local Authority staff in the identification of potentially PCB-contaminated equipment with a view to Local Authorities carrying out relevant site inspections.

The risk of PCBs leaking into the environment is highest where there are non-operational sites or where equipment is targeted by metal thieves or vandals. In 2013 The EPA continued to work with regulatory authorities and holders of PCB-contaminated equipment to reduce these risks.

The PCB Management Plan, EPA information and guidance are posted at www.pcbs.ie.

6. Producer Responsibility Initiatives

WEEE and Batteries Producer Responsibility

The EPA is responsible for enforcing many aspects of the WEEE and Battery Regulations in Ireland, with other enforcement responsibilities assigned to the local authorities. Since the producer responsibility regime implemented for WEEE and batteries is fully integrated and many producers are obligated under both regulations, enforcement activity is undertaken in an integrated manner also. The objective of producer responsibility relating to WEEE and batteries is to ensure the environmentally sound management of WEEE and waste batteries.

The European WEEE Directive[5] came into effect in August 2005 and was transposed in Ireland from then. The recast[6] of the WEEE Directive was published in July 2012 and has been transposed in Ireland by new WEEE regulations published in March 2014[7].

During 2013, the EPA participated in extensive stakeholder consultations relating to the transposition, undertaken within the WEEE Monitoring Group, chaired by the DECLG. The European Battery Directive[8] came into effect in September 2008 and was transposed in Ireland from then.

The EPA carries out announced and unannounced inspections of producers and retailers of electrical and electronic equipment and batteries. The EPA also engages external resources to assist with enforcement and carry out campaigns of inspections from time to time. A programme of audits is also undertaken to verify the data submitted to the EPA by producers operating on a business to business (B2B) basis. The number and type of inspections carried out in 2013 is summarised in the table below.

Inspection type	Inspections completed	EPA *or* External resources
Producers Inspections	23	EPA
B2B Producer Audits	53	External resources
Distance Seller Inspections	45	EPA

The EPA continues to engage with all stakeholders involved in the management of WEEE and batteries, including the Department of Environment, Community and Local Government, WEEE Register Society and the two compliance schemes, WEEE Ireland and ERP Ireland. The continuing high value of metal has created an additional challenge for the proper management of WEEE with metal theft becoming more prevalent. This issue forms part of a larger national issue with metal theft and in 2013 the EPA jointly prepared an information/awareness leaflet with the Gardaí on this matter.

[5] European Parliament and Council Directive 2002/96/EC on waste electrical and electronic equipment as amended.

[6] European Parliament and Council Directive 2012/19/EU on waste electrical and electronic equipment.

[7] S.I. No 149 of 2014, European Union (Waste Electrical and Electronic Equipment) Regulations 2014.

[8] European Parliament and Council Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators.

EPA guidance and information on WEEE and batteries is posted at www.weee-enforcement.ie and www.batteries-enforcement.ie.

WEEE producers operating on a business to business (B2B) basis must submit a 3-yearly Waste Management Plan and an annual Waste Management Report to the EPA. An online tool for submission of plans and reports was developed by the EPA to facilitate the B2B producers and was rolled out in early 2012. Just under 600 B2B producers are now engaged with the system and it has provided for increased efficiency for both producers and EPA inspectors. Improvement and further development of the system will be addressed and implemented as needs are identified.

End-of-Life Vehicle Recycling Producer Responsibility

Under the End-of-Life Vehicle Regulations, vehicle producers are obliged to contract a network of authorised treatment facilities (AFTs) that carry out free depollution of vehicles at the end of their useful life. ATFs are subject to a number of conditions and must hold a valid waste permit or, where deemed appropriate, a waste licence. Minimum technical requirements with regards to storage and appropriate treatment of ELVs must be met by each facility. An ATF is also required to keep detailed records of ELVs accepted on site and ELVs, or ELV parts, sent off site for re-use, recovery, disposal or further treatment. Local authorities are responsible for enforcing the regulations.

The EPA collects ELV data by carrying out an annual survey of ATFs and ELV shredder operators throughout Ireland. ELV waste data are then compiled to produce a dataset which is used to calculate rates of re-use, recovery and recycling of ELVs arising in Ireland. These rates are used to track Ireland's progress in meeting national and EU recycling and recovery targets.

From the figures reported in the EPA National Waste Report for 2010, ELV re-use and recovery was 77% and re-use and recycling also 77%. Preliminary figures for 2011[9] indicate that re-use and recycling and re-use and recovery rates were 77% and 79% respectively. Re-use and recovery rates decreased in 2010 and 2011 in comparison to 2009 because all auto shredder residue went for disposal to landfill in 2010 whereas previously some of it had been used as landfill cover (and therefore recorded as recovery). These percentages indicate that Ireland is failing to meet the EU targets of 85% re-use and recovery and 80% re-use and recycling which have been in force since January 2006. It is expected that a number of actions will be required if the targets are to be met, including (i) increased dismantling of non-metallic ELV components prior to shredding, (ii) the application of post-shredder technologies to extract recyclable materials (such as metals, plastics) from the shredder residue and/or (iii) energy recovery of shredder residue (perhaps combined with metal recovery from combustion residues).

Obligated producers and ATFs will need to ensure that this is achieved as more stringent targets are to be met in 2015.

[9] The EPA hopes that the preliminary recycling and recovery rates reported for 2011 are an underestimate as they do not take account of non-metal recycling and recovery from Irish ELVs exported to non-Irish shredders.

Other Producer Responsibility Initiatives

The Farm Plastics scheme has been in place in Ireland for a number of years. Regulations on waste tyres were published in 2007 in order to promote the environmentally sound management of this waste stream. The local authorities are the enforcement authorities for both of these regulations.

The Irish Farm Film Producers Group (IFFPG), which was established in 1997 with the support of the Irish Farmers Association (IFA), is the sole approved body for the recovery of waste farm plastics (bale wrap and sheeting). IFFPG collects both at the farmyard and at over 200 bring centres that are organised annually across the country. Over 23,000 tonnes of waste farm plastic (bale wrap and sheeting) and 300 tonnes of fertiliser and feed bags, netting and pesticide containers are collected and recycled annually.

In 2010, Farm Plastics Recycling Ltd, was established as a not-for-profit self-funding company by the agri-supply and farming sector to offer farmers the opportunity to recycle other farm plastics such as fertiliser and feed bags, netting, twine and empty pesticide containers. It has been estimated that approximately 350 tonnes of these container are placed on the market annually in Ireland. In 2012, the EPA and the Department of Agriculture, Food and the Marine developed guidance for farmers on best practice in relation to empty pesticide containers. The *7 Steps: Good Practice Guide for Empty Pesticide Containers* provides simple guidance for the safe and environmentally friendly recovery of empty pesticide by triple rinsing. Only triple rinsed pesticide containers managed in accordance with this Good Practice Guide can be classified as non-hazardous waste. This Guide and the supporting technical background paper are available at http://www.epa.ie/pubs/advice/waste/farm/.

Challenges in relation to Producer Responsibility Initiatives

Producer Responsibility Initiative (PRI) schemes are multi-stakeholder systems with complimentary roles for registration bodies, compliance schemes, waste collectors, waste processors, brokers and regulatory authorities. They have operated most effectively where all parties are clear about their roles and responsibilities and more importantly work collectively to achieve the objective of the PRI. The EPA consider that stakeholder monitoring groups akin to the existing one in place in the Waste Electrical and Electronic Equipment (WEEE) regime would be appropriate for all PRIs to provide a mechanism for stakeholder engagement and discussion on any issues arising.

The EPA recognises that existing PRIs have achieved significant benefit for waste management in Ireland especially with respect to packaging waste, farm plastics, waste electrical and electronic equipment and batteries. This has taken place in the context of a limited number of schemes and this success should not be lost by the creation of a mechanism which unduly increases the number of schemes without a logical reason to do so. The EPA does not see a need for a large number of competing compliance schemes as being warranted in the geographical context of a small island nation. The EPA does however see that limited competition within a PRI can drive efficiency and effectiveness in scheme operations.

The EPA considers that there is merit in having compliance schemes that can provide services to Producers across a variety of PRI obligations, not least in reducing the administrative costs of scheme

membership and providing efficiencies in logistical aspects of their operations. Irrespective of the scope of any scheme, where additional PRIs are put in place a robust mechanism to require innovative cooperative actions to prevent additional cost from competition for PRI waste within the market is needed.

The EPA notes the success of the not-for-profit WEEE Register Society as a registration body for producers under the WEEE and batteries PRI schemes. The scope and function of such a body could be expanded to provide the same registration function to other producers obligated under other PRI mechanisms thereby reducing the potential for increasing administrative costs. This would be sensible in the case of Producers with multiple obligations under a variety of PRI regulations having a single register body with whom they are required to interact. The WEEE register society provides the initial point of contact for producers and as such has a significant role in ensuring that all obligated parties are aware of their legal obligations. This has provided significant benefit for the WEEE and batteries systems and could be replicated for the packaging, tyres and other schemes already in existence. It also has the added benefit to producers of providing a confidential reporting system with respect to the placement of product on the Irish Market.

The Plastic Bag levy has been a remarkably successful form of Producer Responsibility initiative, through taking a different approach involving taxation. This structure could be used successfully for other materials to improve recovery. Deposit return levies on household batteries would without doubt yield considerably higher return rates. The commercial food waste regulations and the planned household food waste regulations are another form of producer responsibility that yields environmental gains. In this context, the EPA considers that a complex PRI structure scheme is not necessarily the only way to achieve producer responsibility. Different approaches through taxation, levies, and limits have been taken and can further still be taken for specific streams or activities that yield more sustainable waste management behaviours. The EPA urges consideration of this wider pallet of options and opportunities when developing any new or revising existing PRIs.

Data from compliance schemes is an important input to these reports. The EPA believe that a general requirement on all compliance schemes, and waste management operations contracted to them, should be an obligation to provide to the regulatory authorities all relevant information in relation to the collection and management of PRI wastes in a timely fashion. This obligation should include explicitly an obligation to provide to the EPA information on collection and management of PRI waste for the National Waste Report and reports required under EU legislation.

The pinnacle of the waste hierarchy is prevention and future development of PRIs should place significant emphasis on promotion of prevention in the design and operation of all schemes. Compliance schemes should incentivise their members to place products on the market that are easy to recycle and that do not need to be recycled for a long time (i.e long life products). Schemes should consider the eco-design of products in developing their charging scheme for members with benefits for those placing very energy efficient or long-life products on the market. Compliance schemes should also promote systems where companies have contracts for items to be returned to them for end of life where then effective recycling takes place. These actions would encourage better product designs. The Packaging Waste Prevention programme operated by REPAK is an excellent example of what can be achieved.

Appendix A: National Waste Prevention Committee (2013)

Representative	Organisation
Jonathan Derham (Chair)	Environmental Protection Agency
Shane Colgan (ex officio)	Environmental Protection Agency
Ronan Mulhall / Jean Clarke	Department of Environment, Community & Local Government
Marian Byrne	Department of Agriculture, Food & the Marine
Orla O'Brien	Department of Jobs, Enterprise and Innovation
Brendan Keane	Irish Waste Management Association
Enda Kiernan	Chartered Institution of Wastes Management
Catherine Joyce O'Caollai	Irish Industrial Products Association
Des Cummins	Small Firms Association
Andrew Cartwright	Irish Small & Medium Enterprises
Michael Gillen	Pharmachemical Ireland
Thomas Ryan	Irish Farmers Association
Robert Geraghty	Enterprise Ireland
Tadhg Coakley / Dermot Cunningham	Clean Technology Centre
Frank Corcoran	Environmental NGOs
Sean Murphy	Chambers of Commerce of Ireland
Mary Twomey	Forfás
Helen Maher	Health Service Executive
Brendan McDonagh	Industrial Development Authority
Olivier Gaillot	rx3; Engineers Ireland

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.l

Appendix C: Progress towards EU waste recycling, recovery and diversion targets. (March 2014)

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
94/62/EC as amended	Packaging Directive[10]	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.	79%	Achieved
				55% as a minimum by weight of packaging waste will be recycled.	71%	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;	81%	Achieved
				(ii) 60% by weight for paper and board;	92%	Achieved
				(iii) 50% by weight for metals;	67%	Achieved
				(iv) 22.5% by weight for plastics, counting exclusively material that is recycled back into plastics;	48%	Achieved
				(v) 15% by weight for wood.	93%	Achieved
2002/96/EC	WEEE Directive	5(5)	(31-12-2006) 31-12-2008[11]	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
				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% 86%	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% 93%	Achieved

[10] 2011 data, most recent reported to European Commission. The deadline for reporting 2012 data to the European Commission is 30 June 2014.
[11] Ireland secured a two-year derogation.

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
				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% 85%	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% 88%	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% 86%	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% 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.	91%	Achieved
2000/53/EC	**End of Life Vehicles Directive**	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**[12]	10(2)	31-12-11	Minimum 25% collection rate for batteries & accumulators.	29%[13]	Achieved
			26-9-2016	Minimum 45% collection rate for batteries & accumulators.	(28%)[14]	Risk Due September 2016

[12] **Data presented as per DoECLG report to European Commission June 2013, with information for reference period 2009-2012.**

[13] **Collection rate for 2011 (target year).**

[14] **Collection rate for 2012.**

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
		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;	83%[12]	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	76%[12]	Achieved
				(c) recycling of 50 % by average weight of other waste batteries and accumulators.	65%[12]	Achieved
1999/31/EC	**Landfill Directive**	5(2)	(16-7-2006) 16-7-2010[15]	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[16]	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)	588,848 t[17]	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)	(588,848 t)[17]	Risk Due July 2016
2008/98/EC	**Waste Framework Directive**[18]	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%	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%	Achieved
		29	12-12-2013	Establishment of a National Waste Prevention Programme (NWPP)	NWPP established in 2004	Achieved

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

[16] **2010 BMW tonnage disposed to landfill.**

[17] **2012 BMW tonnage disposed to landfill. Indicator status is 'on track' for 2013 target but 'at risk' for 2016 target based on tonnage BMW disposed to landfill in 2012.**

[18] **2011 data, most recent reported to the European Commission. The deadline for reporting 2012 data to the European Commission is 30 September 2014.**

An Ghníomhaireacht um Chaomhnú Comhshaoil

Is í an Gníomhaireacht um Chaomhnú Comhshaoil (EPA) comhlachta reachtúil a chosnaíonn an comhshaol do mhuintir na tíre go léir. Rialaímid agus déanaimid maoirsiú ar ghníomhaíochtaí a d'fhéadfadh truailliú a chruthú murach sin. Cinntímid go bhfuil eolas cruinn ann ar threochtaí comhshaoil ionas go nglactar aon chéim is gá. Is iad na príomh-nithe a bhfuilimid gníomhach leo ná comhshaol na hÉireann a chosaint agus cinntiú go bhfuil forbairt inbhuanaithe. Is comhlacht poiblí neamhspleách í an Ghníomhaireacht um Chaomhnú Comhshaoil (EPA) a bunaíodh i mí Iúil 1993 faoin Acht fán nGníomhaireacht um Chaomhnú Comhshaoil 1992. Ó thaobh an Rialtais, is í an Roinn Comhshaoil, Pobal agus Rialtais Áitiúil.

ÁR bhFREAGRACHTAÍ

CEADÚNÚ

Bíonn ceadúnais á n-eisiúint againn i gcomhair na nithe seo a leanas chun a chinntiú nach mbíonn astuithe uathu ag cur sláinte an phobail ná an comhshaol i mbaol:

- áiseanna dramhaíola (m.sh., líonadh talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- gníomhaíochtaí tionsclaíocha ar scála mór (m.sh., déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- diantalmhaíocht;
- úsáid faoi shrian agus scaoileadh smachtaithe Orgánach Géinathraithe (GMO);
- mór-áiseanna stórais peitreail;
- scardadh dramhuisce;
- dumpáil mara.

FEIDHMIÚ COMHSHAOIL NÁISIÚNTA

- Stiúradh os cionn 2,000 iniúchadh agus cigireacht de áiseanna a fuair ceadúnas ón nGníomhaireacht gach bliain.
- Maoirsiú freagrachtaí cosanta comhshaoil údarás áitiúla thar sé earnáil aer, fuaim, dramhaíl, dramhuisce agus caighdeán uisce.
- Obair le húdaráis áitiúla agus leis na Gardaí chun stop a chur le gníomhaíocht mhídhleathach dramhaíola trí comhordú a dhéanamh ar líonra forfheidhmithe náisiúnta, díriú isteach ar chiontóirí, stiúradh fiosrúcháin agus maoirsiú leigheas na bhfadhbanna.
- An dlí a chur orthu siúd a bhriseann dlí comhshaoil agus a dhéanann dochar don chomhshaol mar thoradh ar a ngníomhaíochtaí.

MONATÓIREACHT, ANAILÍS AGUS TUAIRISCIÚ AR AN GCOMHSHAOL

- Monatóireacht ar chaighdeán aeir agus caighdeáin aibhneacha, locha, uiscí taoide agus uiscí talaimh; leibhéil agus sruth aibhneacha a thomhas.
- Tuairisciú neamhspleách chun cabhrú le rialtais náisiúnta agus áitiúla cinntí a dhéanamh.

RIALÚ ASTUITHE GÁIS CEAPTHA TEASA NA HÉIREANN

- Cainníochtú astuithe gáis ceaptha teasa na hÉireann i gcomhthéacs ár dtiomantas Kyoto.
- Cur i bhfeidhm na Treorach um Thrádáil Astuithe, a bhfuil baint aige le hos cionn 100 cuideachta atá ina mór-ghineadóirí dé-ocsaíd charbóin in Éirinn.

TAIGHDE AGUS FORBAIRT COMHSHAOIL

- Taighde ar shaincheisteanna comhshaoil a chomhordú (cosúil le caighdéan aeir agus uisce, athrú aeráide, bithéagsúlacht, teicneolaíochtaí comhshaoil).

MEASÚNÚ STRAITÉISEACH COMHSHAOIL

- Ag déanamh measúnú ar thionchar phleananna agus chláracha ar chomhshaol na hÉireann (cosúil le pleananna bainistíochta dramhaíola agus forbartha).

PLEANÁIL, OIDEACHAS AGUS TREOIR CHOMHSHAOIL

- Treoir a thabhairt don phobal agus do thionscal ar cheisteanna comhshaoil éagsúla (m.sh., iarratais ar cheadúnais, seachaint dramhaíola agus rialacháin chomhshaoil).
- Eolas níos fearr ar an gcomhshaol a scaipeadh (trí cláracha teilifíse comhshaoil agus pacáistí acmhainne do bhunscoileanna agus do mheánscoileanna).

BAINISTÍOCHT DRAMHAÍOLA FHORGHNÍOMHACH

- Cur chun cinn seachaint agus laghdú dramhaíola trí chomhordú An Chláir Náisiúnta um Chosc Dramhaíola, lena n-áirítear cur i bhfeidhm na dTionscnamh Freagrachta Táirgeoirí.
- Cur i bhfeidhm Rialachán ar nós na treoracha maidir le Trealamh Leictreach agus Leictreonach Caite agus le Srianadh Substaintí Guaiseacha agus substaintí a dhéanann ídiú ar an gcrios ózóin.
- Plean Náisiúnta Bainistíochta um Dramhaíl Ghuaiseach a fhorbairt chun dramhaíl ghuaiseach a sheachaint agus a bhainistiú.

STRUCHTÚR NA GNÍOMHAIREACHTA

Bunaíodh an Ghníomhaireacht i 1993 chun comhshaol na hÉireann a chosaint. Tá an eagraíocht á bhainistiú ag Bord lánaimseartha, ar a bhfuil Príomhstiúrthóir agus ceithre Stiúrthóir. Tá obair na Gníomhaireachta ar siúl trí ceithre Oifig:

- An Oifig Aeráide, Ceadúnaithe agus Úsáide Acmhainní
- An Oifig um Fhorfheidhmiúchán Comhshaoil
- An Oifig um Measúnacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáide

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag ball air agus tagann siad le chéile cúpla uair in aghaidh na bliana le plé a dhéanamh ar cheisteanna ar ábhar imní iad agus le comhairle a thabhairt don Bhord.

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