

# Sustainability Report 2013



## Sustainable Packaging from a Sustainable Company

## About this Report

Sustainability is a journey rather than a destination. This is a journey that Ardagh Group has been following for some time. All the elements for monitoring, managing and reporting on our sustainability performance have been in place for many years, but we feel the time is now right to take the next step in our journey and bring these elements together in one place, our first ever sustainability report.

In doing so, we feel it is important to apply the reporting principles established in the Global Reporting Initiative (GRI) guidelines. The GRI guidelines provide a trusted and credible framework, ensuring consistency, transparency and materiality in sustainability reporting. The principles enshrined in the GRI guidelines enjoy widespread credibility with a range of stakeholder groups. As a result, globally these are the most widely recognised and applied guidelines for sustainability reporting. Ardagh Group self-declares that the disclosure process and the report presented here is compliant with Application Level C of the GRI G3 reporting guidelines.

Using the GRI guidelines, Ardagh Group has established an appropriate set of reporting boundaries and has identified a series of relevant key performance indicators, which will allow our stakeholders to understand how our sustainability performance evolves year-on-year. The performance data presented in this report covers the calendar years 2011 & 2012.

2011 was a year of structural change within Ardagh Group, with the integration of the Metal and Glass divisions after the acquisition during 2010 of Impress. The data presented within this report covers both these divisions. Furthermore, the additional acquisition of FiPAR took place during 2011. Although this acquisition took place mid-year, the data for the Metals division includes data for FiPAR for the full calendar year.

Although the KPI data presented in this report refers to calendar year 2011, any significant events occurring during 2012 (up to the date of publication of this report) which may influence future sustainability performance (e.g. the establishment of environmental targets for the Metal Division) are introduced and will be covered in detail in future reporting.

The reporting boundaries encompass all the organisation's significant activities and operations, in particular those associated with the manufacture and supply of Ardagh Group's glass and metal packaging products. Excluded from the reporting boundaries are the environmental, economic, and social impacts associated with the Group's separate engineering and R&D businesses, Heye International, UniMould, and Ardagh Crosmiéres. In total, these 3 businesses comprise of 9 engineering units, compared to 91 glass and metal manufacturing sites. By necessity, the engineering businesses operate independently of Ardagh Group's container manufacturing businesses, and account for less than 1.3% of Group turnover and employment. The nature of the operations at these engineering sites means that they will not make a significant contribution to the overall Ardagh environmental footprint.

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Sustainability - a Journey rather than a destination

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## Company



three pillars one vision

## A Message from the CEO

It is my pleasure to contribute to the first published sustainability report for Ardagh Group, which provides a further open exchange with our stakeholders.

It is our intention to update this report once every two years to provide an update on the progress that we are making in this important area. We recognise the importance of shared responsibility in addressing Sustainability and are committed to working in partnership with our employees, bondholders, customers, suppliers and all of our stakeholders.

Both packaging materials, Metal and Glass, are complementary from a market perspective and are trusted and respected by brand owners and consumers globally. In addition, both materials possess superior properties in relation to environmental sustainability and therefore make an important contribution by providing packaging solutions that reflect the needs of society today and in the future.



Niall Wall, CEO

- Metal and Glass are inherently recyclable, without loss of quality.
- Metal and Glass are not scarce resources on earth. They are not "consumed" but only used and then made available for future use, since both materials are truly and infinitely recycled without loss of quality. The recent implementation of the material category "Permanent Material" is fully applicable for Metal and Glass.
- Recycling systems for Metal and Glass are widely established and have a proven record of efficiency and effectiveness.
- Glass and Metal do not contain embedded carbon emissions (delayed carbon emissions). Hence there is no associated carbon release in current or future life cycles.
- Metal and Glass provide long shelf-life and retained nutritional value for the packaged products.
- Both metal and glass contribute to an efficient and sustainable supply chain. No refrigeration is required and food waste is prevented during transport, storage and use.

These are only some of the numerous positive properties relating to our packaging materials. In addition, we see the continuous improvement of our internal processes and activities as a key responsibility.

Ardagh Group has shown significant growth over the past decade. We began container glass manufacturing in the Republic of Ireland and later expanded into Europe. In 2010 the acquisition of Impress represented an important strategic step by expanding our geographic scale to global level and adding metal to our packaging portfolio. Also in 2012 we have been able to realise significant growth by further acquisitions of the Boxal Group, Leone Industries and Anchor Glass. Thus growth has always been and will continue to be a key element of our corporate strategy.

Realising this growth strategy, it becomes more and more crucial for us to accept the existence of some critical global sustainability problems. Some of the main challenges we face are:

- Growing population, leading to growing demands
- Limited resources, causing supply problems, price increases, etc
- Pollution is damaging the earth's habitats and resources
- The waste of the earth's finite resources
- Economic issues causing poverty and social imbalance

These problems will not diminish but rather increase in the future. Thus a proactive and consistent sustainable development of Ardagh Group and its value chain is critical for both on-going successful growth and our responsibility towards our stakeholders.

To ensure the continued sustainable development across Ardagh Group we have implemented sustainability targets as part of our long term strategic planning. With our sustainability strategy and the structures that we have built, we are confident we will achieve our targets of reducing our negative environmental impact whilst remaining economically sustainable and socially responsible."

As previously stated, sustainability is a shared responsibility that involves the entire value chain. Therefore I would like to encourage our suppliers and customers to include sustainability in their business planning and to encourage our customers to consider sustainability aspects holistically in their packaging strategies and decision making.



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To ensure the required sustainable development across Ardagh Group we have implemented sustainability targets as part of our long-term strategic planning

## **Core Values**

Our business environment is constantly changing. We can count on changes in our products, our employees, our customers and our suppliers. What remains unchanged is our commitment to our core values which form the foundation of our business. They are building blocks that demonstrate our commitment our customers and our business as well as our respect for each other. These values define who we are as a company - to each other, to our customers, to our suppliers and to our shareholders.



## Trust

Trust is earned by displaying personal attributes that show you are respectful, reliable, consistent and honest in your approach to others. It is built on mutual respect, personal integrity and transparency.

## Teamwork

The need for individuals to interact with others, in a mutually beneficial way, is important for building a strong business. Individual teams need to recognise the impact of their decisions on various sub-teams and ultimately the business. Teamwork is built on collaboration, shared responsibility and open communication.

## Excellence

Excellence is constantly striving to improve yourself and the business. It focuses on continuous improvement, innovation and sustainability.

## What Sustainability means to Us

For Ardagh Group, sustainability means not only delivering a reduced environmental impact but also achieving sound economic performance and making a positive social contribution. Underpinning our approach is a well-managed financial policy. This is essential, as profit enables Ardagh Group to make the necessary investments to implement projects and practices that reduce our environmental footprint, protect the health and safety of our employees and make a positive contribution to the wider society in which we operate.

These activities are not pursued just so the organisation can feel and look good. A proactive approach to sustainability is imperative – it ensures that we identify and minimise any economic, environmental and social risks that may affect the business.



## Sustainability Strategy

Sustainability deals with global and regional issues concerning the environment, the economy and social responsibility. The implementation of our Group sustainability strategy allows us to continue to operate and enjoy success as a company while taking a responsible stance towards the environment. Our focus and commitment is to be the leading supplier of inherently sustainable packaging and build a sustainable future based on these **three pillars of sustainability**:





#### Environmental

Our manufacturing processes have an impact on the environment. Ardagh identifies, controls, measures and reduces this impact. We achieve this by reducing energy consumption and emissions, maximising our recycling rate and use of recycled product, optimising our use of secondary packaging materials, managing our waste appropriately by avoiding use of landfills and limiting water usage. Environmental management systems across our regions help to manage our impact so we achieve our ambitious long-term targets.

- Environmental Index Indicator (GoGreen Index)
- Targets for metal and glass including energy, CO<sub>2</sub>, emissions, waste and water reductions



#### Social

Our Corporate Social Responsibility policy is in the process of being implemented and aims to provide a guideline on social and ethical best practices as well as support decision-making in complex situations. Our CSR policy applies to all employees, encouraging everyone to support our goals. The policy builds on the Group's Code of Conduct and redefines corporate standards. As part of implementation of this policy is the introduction of the Community Involvement Project Guideline, which provides a systematic approach for finding the most appropriate community involvement projects for Ardagh to be involved in. This fosters our long-term target of having at least one community project per plant by 2017, adding value to our plants and their respective communities. Other Social Activities include:

- Implementation of BSafe! Programme Group wide
- Social and Ethical Performance Systems, Group wide implementation involving the supply chain
- Corporate Mission Statement/Business Ethics
- Frequent sustainability bulletins and report
- Labour/Health and Safety Policy
- Sedex Participation/ 'Save Food' participation
- External audits where appropriate



#### Economic

Our economic stability has impact on our employees, local communities, the environment and other stakeholders. Ardagh continually invests in systems and processes to improve the efficiency of all our operations, thereby reducing costs as well as environmental impact. We focus on customer and supplier partnership programs to strengthen our relationships within the supply chain. This enhances our competitiveness and contributes to the Group's financial sustainability.

- Reduction of raw material usage and increase of recycled product
- Investing in energy-efficient technologies
- Minimising transportation costs with pack optimisations and back loading



### **Programmes & Activities**

#### Corporate Social Responsibility

- Implementing BSafe! Programme Group-wide
- Community Treatment Projects
- Social & Ethical Performance Systems
- Sedex Participation
- External Audits where appropriate
- 'Save Food' Participation
- Plant Community Involvement Projects

#### Environmental

- Environmental Index Indicator (GoGreen Index)
- Targets for Glass & Metal: Energy, CO<sub>2</sub>, Emissions Waste, Water
- Environmental Management Systems
- Plant LCA Projects

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- Cradle to Cradle Strategy

#### Economic

- Shared Value for all Stakeholders
- Enhanced competitiveness
- Creating Synergies Along the Value Chain to Achieve Joint Goals
- Long-Term Mutually Beneficial Relationships

#### General

- Corporate Mission Statement
- Sustainability and CSR Advisory Panel
- Performance Reviews
- External GRI Sustainability Report
- Frequent Bulletin
- Supply Chain Involvement
- Driving Industrial Regulatory Agenda

### Our Sustainability Mission:

To implement our Group sustainability strategy across our business and work together to achieve our long-term targets

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#### CASE STUDIES

#### Glass - Europe Frozen Cullet (Germany)

The Frozen Cullet project was internally developed (and awarded with an R&D grant from the German Agency for the Environment, UBA) due to the fact that, under severe weather conditions, furnace preheaters were easily blocked by feeding in too much moisture, ice and snow. This causes additional energy consumption including costs and emissions as well as production losses.

To prevent this from happening, the hot air above the furnace is now captured, heated with a heat exchanger resulting in maximum temperatures of 120°C. The heated air is then blown into the cullet bin (bottom-up) and thus heats up the cullet, which leaves the bin dry and unfrozen. The air with an average temperature of 40°C leaves the cullet bin on the upper side and flows out into the batch house, heating it up once more.

"The frozen cullet project demonstrates the great potential for innovation in our plants, which we need to achieve our ambitious sustainability targets."

Johan Gorter, CEO Glass Europe





Source: Project Documentation, W. Cieleback



## Metal - Europe Installation of Energy Saving Tools (Pulsar Unit) (Reus, Spain)



Moreover, a smart automatic control regulates the lighting over the weekend to ensure minimum lighting but avoid waste of energy when all lights are turned on. The lighting was also newly structured to cover a broad area with fewer lights.

Overall, such tools are comparatively easy to install while the amount of energy and  $CO_2$  saved is huge.





## Group Overview





Sustainable Packaging for the World's biggest brands

## Understanding our Business

#### Overview of Activities

With over 18,000 employees and a turnover of €4.2 billion, Ardagh Group is a leading supplier of rigid packaging solutions to the food and beverage and consumer products industries, currently supplying a broad range of glass and metal packaging to a variety of end markets on a global basis.

Holding a number one or number two market position in most of the markets served, Ardagh Group produces value added products to over 2,000 customers globally, including some of the world's best known brands. The customer base includes a diverse mix of leading international blue-chip companies and large national and regional companies, as well as small local businesses. Ardagh Group has long-standing relationships with many of the key customers, working closely with some of these clients for over one hundred years.

The Glass Packaging division designs, manufactures and sells glass containers to food & beverage end markets in Europe and North America. The division manufactures both proprietary and non-proprietary glass containers. Proprietary products are customised to the exact specification of our customers and play an important role in their branding strategies. The non-proprietary products deliver consistent performance and product differentiation through value added decoration, including embossing, coating, printing and pressure sensitive labelling.

The Metal Packaging division supplies a comprehensive line of metal packaging for food, consumer products, pet food aerosols and other household and industrial end markets. Products include tinplate and aluminium standard and customer metal packaging, including two and three-piece cans, easy-open ends and peelable lids. State-of-the-art manufacturing techniques deliver value-added solutions including customised shapes and sizes, innovative designs, and high-quality graphics in order to drive product differentiation, and deliver end-user convenience and consumer safety.

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A leading supplier of rigid packaging solutions to the food, beverage and consumer products industries

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	Glass Division	Metal Division
Activities	Designs, manufactures and sells glass containers	Designs, manufactures and sells metal packaging solutions
Products	Proprietary and non-proprietary glass containers	Standard and custom packaging, including two and three-piece cans, easy-open ends and peelable lids
Markets	Food and beverages (including beer, wine & spirits and non-alcoholic beverages), pharmaceuticals, toiletries and healthcare	Food, consumer products, pet food, aerosols, other household and industrial applications
Geography	Northern Europe (US since 2012)	Global
Market Share	<ul> <li>Market leader in Northern Europe with approximately one third market share of glass container production by volume</li> <li>#1 or #2 glass container supplier in six out of the seven counties in which we operate</li> </ul>	<ul> <li>#1 or #2 supplier in selected value added sectors including food (Europe and Australia), seafood (global and North American), aerosols (Europe and Australia), paints and coatings and other speciality end uses such as infant and nutritional powders and beer kegs for at-home use</li> <li>#1 supplier of food and speciality cans in Europe</li> </ul>
Operations	33 glass plants operating 53 furnaces in 9 countries	68 production facilities in 24 countries
Production	12 billion containers, 3.1 million tonnes of glass	13 billion containers, 26 billion pieces
Employees	10,035	7,965

## Over 100 locations Worldwide in 25 Countries

- Glass Facilities
- Metal Facilities
- Innovation Facilities
- Offices

\* For 2011 we estimate that glass packaging was the market leader in Northern Europe with an approximate one-third market share of glass container production by volume and an approximate 16% market share of total European glass container production by volume.

Please refer to the list of countries at the end of the report.



In 2011 and 2012 we experienced Ardagh Group as a responsible business partner, who is pro-actively implementing its sustainability strategy. We have been using Ardagh's expertise in developing a lightweight bottle. This procedure will be used by Heineken Worldwide. We also worked together in the pilot phase of Heineken's Environmental Scorecard for packing suppliers.

## Corporate Governance at Ardagh Group

The international GRI standard for corporate sustainability reporting requires to disclose about the corporate governance structures. Thus to ensure GRI compliance the general governance arrangements can be summarised as follows. A more detailed insight is given in the Ardagh Group Bond Report, which has been published on our corporate web site.

The Board of Directors is the decision making body of Ardagh Group S.A., the holding company of Ardagh Group. It has nine members, including the Chairman, CEO, CFO and three non-executive directors.

The Board of Directors is responsible for the management of the business of Ardagh Group. It has delegated some of its power to, and is supported in its decision making by, the Executive Committee and the Audit Committee.

The Executive Committee oversees the management of the business and affairs of the subsidiaries of Ardagh Group S.A.. The Audit Committee reviews the accounting principles, policies and practices adopted in the preparation of interim and annual financial statements, discusses with auditors the results and scope of the audit and reviews the scope and performance of internal control functions.





## **Global Leadership Team**

The Ardagh Global Leadership Team team is highly experienced with strong backgrounds in the glass and metal packaging industry. Over the past decade the members of our senior team have demonstrated their ability to manage improvements in all areas of sustainability, costs, adapting to changing market conditions and acquiring and successfully integrating new businesses.



#### Ardagh Group organisational structure

The organisational structure follows the principles of Group - Divisions - Regions - Territories and Plants. The operational responsibility lies within the divisional reporting line for Metal and Glass. The divisional management teams are headed by the divisional Chief Executives for Metal and Glass.

There are Regional and Territorial Operations Directors, who are responsible for the implementation of Group strategies and practices (amongst others also for the sustainable development of Ardagh Group) across all plants.

## Our Sustainability Performance during 2011

Understanding our stakeholder's needs – who are they and what do they want to know

Ardagh Group has used the stakeholder chapter from ISO26000 as a basis to guide an internally facilitated stakeholder identification process.



Stakeholder	Dialogue Mechanism	Frequency	Core Interest
Employees	Formal communication processes (personal reviews, team meetings, local proposal systems, works councils on local advisory boards), informal communication.	Constantly	Long-term employment. Good working conditions. Personal development.
Neighbours	Informal communication, inquiries, complaints	Occasionally	Employment Low level of environmental impacts and nuisances
Customer	Contract specifications, contract review meetings, customer audits, quality control process at delivery projects	Constantly and project related	Compliance with product specifications. Low selling prices. Business insight.
Supplier	Supply contract specifications, contract review meetings, supplier audits, quality control process at delivery, projects	Constantly and project related	Continued supply. High selling prices. Business insight.
Regulators and authorities	Planned review meetings, licensing procedures, after incidents	Occasionally	Compliance with legal and other requirement.
Trade associations	Membership, Board members, Participation in committee meetings and working groups	Constantly and project related	Business insight Identifying our industry's demands. Representing the industry's interest. Ensuring industry's preparedness for the future
Non- Governmental Organisations	No direct dialogue, but via trade associations	Occasionally	Transparency and minimisation of our operations' and products' environmental, social, ethical and economic impacts on people and the environment

### CASE STUDY

#### Glass - Europe Collaborative Working (Dongen - Netherlands)

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Our Ardagh Glass facility in Dongen, The Netherlands, together with Coca Cola Enterprises recently launched a new heat exchange pilot programme. Residual heat from Ardagh's glass furnaces is being captured and used to supply heat-driven processes at Coca-Cola's neighbouring factory.

The initiative is expected to provide a sizeable proportion of the energy required for Coca-Cola's processes and thus reduces overall carbon emissions. This pilot project is currently on-going and is due to conclude in January 2014. On completion, the results will be analysed to give an accurate measure of the amount of energy and associated carbon emissions that can be saved on an annual basis.

Source: Coca-Cola Enterprises Press Release

Reference: Coca-Cola Enterprises (http://www.cokecce.com/system/file\_resources/71/Our\_Stakeholders\_Factsheet.pdf#page=1)

## Glass - Europe Education on Recycling Campaign (Poland)





During 2012, Ardagh employees in Poland started a campaign to promote recycling in schools. Furnace specialists, environmental managers and health & safety managers gave lectures discussing the overall topic of recycling, the benefits of glass packaging, environmental responsibilities of plants and the technological production process of glass. The tour was hosted by primary and high schools as well as universities and adult schools in Ujście, Gostyń and Wyszków.

In Ujście and Gostyń all schools in place were visited throughout the campaign, which in total educated 4,500 people of different ages.

To engage with the community in future as well, Eco or Earth Days have been introduced by the respective communities and are actively supported by Ardagh.



# Environmental



**Permanent Materials** 

## Glass & Metal

## Permanent Materials



On the 24th May 2012 the European Parliament endorsed the European Commission's Resource Efficiency Roadmap, specifically calling for 'Permanent Materials' to be made a new resource category. This category now works alongside the existing categories of 'renewable' and 'non renewable' resources. This recognises the properties which infinitely recyclable permanent materials, such as metals or glass, have.

The definition of 'permanent materials' is given by British Standards (Source BS 9805:2011) as "materials for which efforts are made to retain for use in society the energy and raw materials invested in their production at the end of the product life, either through reuse or recycling, with no loss of quality no matter how many times the material is recycled."





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Both Glass and Metal are intrinsically sustainable as they qualify for the classification 'Permanent Material'

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## Ardagh's Environmental Sustainability Focus



## Ardagh's Social & Ethical Sustainability Focus

As depicted in the figure below, our social and ethical agenda is based on the displayed 5 key principles on page 33.



This demonstrates inherently sustainable properties for Metal and Glass. This can be summarised as follows:

#### Sustainable Materials

Permanent materials - made from naturally occurring materials

Widely recycled - Widely existing recycling systems across the globe mean glass and metals have the highest recycling rates in the world.

Examples of high recycling rates:

- Glass in Europe: up to >90% with an average of 70%<sup>1</sup>
- Steel in Europe: up to >90% with an average of 72%<sup>2</sup>
- <sup>12</sup> footnote references at the end of these statements.

Lightweighting achievements + further potentials

Ardagh's metal and glass packaging contribute to a closed material loop which does not lead to down-cycling or require heat recovery (as an end of pipe solution).

## Glass and Metal: Sustainability Credentials



www.apeal.org

## Environment Profiles: Glass Container Operations

Key environmental impacts of container glass manufacturing

Glass production is an energy intensive process. We use natural gas, electricity and to a very low extent, oil, to fuel our furnaces. As a result, the main emissions from glass manufacturing are carbon dioxide and nitrogen dioxide, and particulates. Sulphur oxide is not a significant emission for Ardagh Group as we have substituted heavy fuel oil for natural gas in our furnaces.

The primary raw materials used in the production of glass containers are cullet (crushed recycled glass), sand, soda ash and limestone. We use as much post-consumer glass as possible as this enables the other raw materials to melt at lower temperatures, thereby lowering our energy costs and carbon emissions and prolonging furnace life.

Ardagh Group does not own its own distribution fleet for distributing glass containers. We use various freight and haulage contractors to make deliveries to customer sites or warehousing facilities. In some cases, customers make their own delivery arrangements and therefore may purchase from us on an ex-works basis. Warehousing facilities are situated at our manufacturing facilities; however, in some regions, we use networks of externally rented warehouses at strategic third party locations, close to major customers' filling operations.



### Metal Packaging Operations

Our metal packaging division converts steel and aluminium coils made from recycled and non - recycled metal, into steel and aluminium containers and closures. This process principally requires energy (in the form of purchased electricity or heat generated from onsite fuels) plus some additional material inputs such as paints, coatings and liner compounds. As a result, the main environmental impacts in metal packaging manufacturing are volatile organic compounds, carbon dioxide, nitrogen oxide and particulate emissions as well as the generation of waste and handling of hazardous materials.



### Metal - North America Water Savings Project (American Samoa)

Our Samoa plant has a shared water supply with our customer StarKist. As a result of a water savings project the water consumption has been significantly reduced by more than 1300m<sup>3</sup> per month. The project started with a detailed analysis of the water demand system and identified the water coded vacuum system as the main contributor. A water circulation system was designed and installed in order to reduce the initial consumption level. In the control phase of the project, success was documented with regards to stable process conditions and significant water savings.







Ardagh has adopted a series of stretching environmental targets which reflect the main environmental interventions of glass and metal manufacturing:

## Environment -Glass Europe

Reduce our absolute Environment Impact by 2017

Energy Consumption	16%	$\bigtriangledown$
CO <sub>2</sub> Emissions	20%	$\bigtriangledown$
NO <sub>x</sub> Emissions	41%	$\bigtriangledown$
Particulate Emissions	55%	$\bigtriangledown$
Use of Recycled Content	15%	$\triangle$
Process Water Consumption	16%	$\bigtriangledown$





In general, accuracy depends on various factors such as variation in operational factors (energy consumption, material qualities, maintenance and repair activities, product related specifications, etc.), the relevant environmental indicators and the individual monitoring systems on plant level. With regards to identifying trends and serving for the controlling process, the accuracy has shown to be sufficient and allows for a capable environmental management process.

All Metal territories have started to implement environmental management systems wherever no formal management system was in operation. The achievement of the environmental performance targets is embedded in the required management systems.

Base Year: 2007

## Environment -Metal

Reduce our absolute Environment Impact by 2017

Management Systems	ISO 14001 Ardagh E	EMS
Energy Consumption	14%	$\bigtriangledown$
CO <sub>2</sub> Emissions	20%	$\bigtriangledown$
NO <sub>x</sub> Emissions	41%	$\bigtriangledown$
VOC Emissions	10%	$\bigtriangledown$
Water Consumption	Each Plant to have Reduc	ction Plan
Waste Management	Separate Collection on e	ach Plant
Daga V(a.m. 0010		

Base Year: 2010

All of our Glass Europe Manufacturing sites are ISO 14001 certified. 25% of metal packaging plants are ISO 14001 certified plants. It is our objective to have environmental management systems in place at all plants, with formal ISO 14001 certification at all glass plants and metal plants with coating lines. Ardagh has implemented a Group practice for "Assessment of sustainability performance of our packaging" with indicators. Such indicators are being evaluated for new projects in the product development process. The assessment is based on an evaluation of criteria such as recyclability, toxicity or durability.

## The Regulatory Environment in major operating regions

#### **Regions Emissions CO2 Waste Others**

#### **Europe Union**

- Industrial Emissions Directive (2010/75/EU)
- EU Emissions trading directive (2003/87/EC, Decision No 406/2009/ EC)
- Packaging and packaging waste directive (94/62/ec)
- Waste framework directive (2008/98/EC)
- Reach (1907/2006)
- Essential requirement for packaging (94/62/EC)
- Water framework directive (2000/60/EC)
- Priority substances directive (2008/105/EC)
- Water protection directive (2000/60/EC)

#### North America

- Clean Air Act
- Cross State Air Pollution Rule (CSAPR)
- Clean Air Interstate Rule (CAIR)
- Rule on: National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters ("Boiler MACT")
- Clean Air Act
- Resource Conservation and Recovery Act
- Clean Water Act

#### Australia

- National Environment Protection Measure for Ambient Air Quality (Air NEPM)
- National Waste Policy
- Hazardous Waste (Regulation of Exports and Imports) Act
- Environment Protection and Biodiversity Conservation Act
- National Water Commission Act Water Act

#### Russia

- Federal law on atmospheric air protection of May 4,1999, N 98-FZ
- Law of 24 June 1998, no. 89 FZ Law on handling of wastes
- Federal law on environmental protection of January 10, 2002, N7-FZ Federal Law on industrial safety in hazardous production facilties of July 21, 1997, N 116-FZ

We believe that we are in substantial compliance with our permits and with all material environmental laws and regulations

## CASE STUDIES

## Glass - Europe Enhanced post-consumer Glass Recycling



## The European glass region has started a project with the aim to significantly improve the quality of the recycled post-consumer cullet (recycled glass).

A major objective was to reduce the amount of Pb-contaminations (from lead crystal or industrial glass) by enhancing the treatment and sorting process at the cullet treatment plant. The project team consisted of managers and technical experts from procurement, quality management, our operations and (most importantly) our suppliers. After a long assessment and analytical phase an agreement was found on the specification and process requirements. Within less than two years the suppliers invested into new leading edge detection and sorting technology. Now all our strategic suppliers are able ensure a certain level of Pb contamination in the cullet and we have achieved a significant step in process and product control.

#### **Example:**

Our supplier Glasrecycling-Leeseringen GmbH has been very proactive in the project. GRL is now equipped with the best available technique for lead sorting and enabled to market highest qualities of cullet. As a consequence we have been able to reduce the concentration of Pb contaminations while keeping the very high recycled content levels stable.





## Glass - Europe Integrated Management System (Germany)

Europe Central Glass has been successfully running an Integrated Management System (IMS) for many years in case of new standards, e.g. the ISO 50001 Energy Management, they take 1 or 2 plants as a pilot and roll out the following year to all the other plants.

In 2011 Nienburg and Obernkirchen plants had their energy management system certified to ISO 16001 standard. The objective for 2012 was to achieve ISO 50001 certification for the entire territory, as pictured. This is great work and contributes to lowering environmental impacts, cost savings, and proves the advantages of running an integrated management system in a matrix organisation.



#### CASE STUDY

## Metal Cradle-to-Cradle® Certification

Ardagh Group has started collaboration with EPEA for the assessment of two metal cans according to Cradle-to-Cradle standards.

Cradle to Cradle<sup>®</sup> is a phrase coined by Prof. Dr. Michael Braungart in the 1980's. His institute is called the Environmental Protection Encouragement Agency (EPEA). The philosophy behind C2C is that products should be designed in such a way that they are 100% recyclable or 100% biodegradable. Also products should not contain toxic substances and be produced with renewable energy. The idea is that in this scenario there is no more waste and depletion, nor a 'negative footprint'

The first and most important benefit of a C2C assessment is gaining knowledge on what is inside a product. This is the one and only realistic base for improvement. EPEA has a team of qualified scientists and therefore a great know-how of chemical substances. Every chemical is assessed and evaluated. This evaluation is the feedback for improvement. The next benefit is the knowledge to what extent your product fits in a closed loop circle. This is because with Cradle to Cradle<sup>®</sup> there should be no more waste and depletion.

Another benefit is knowing your position in terms of water and energy usage during the production process. The aims are to use 100% renewable energy and use water in such a way that it leaves the production facility cleaner than when it entered in the first place.

The project for Ardagh Group started in early 2011. We collected data at chemical level from all the components of the cans, such as tinplate, coatings, inks etc. This information had to be given by suppliers and was sent directly to EPEA. In addition, information about the production process was sent to EPEA for analysis. This included data on water and energy usage as well as information on social policies.

Cradle to Cradle<sup>®</sup> and this project are changing the current focus on sustainability. In the old paradigm of 'cradle to grave', there was a focus on minimizing footprint. A consequence is that things are getting downsized, but that is not a final solution to the problem. A permanent solution is to choose materials that are inherently good.

Becoming C2C-certified requires having a very sustainable product. Given that Ardagh Group is a glass and metal packaging supplier serving a substantial industry, there is a positive impact.

#### The certificate acknowledges truly sustainable credentials



CERTIFIED

cradletocradle

SILVER

СМ

PRODUCTS

Ø

PRODUCTS

e

Ardagh Group

400 g Infant Formula Can

## Metal Packaging

It all starts with choosing the right materials. Because iron (which is the main constituent of a steel can) is a chemical element, it can be recycled without any loss of quality. This makes it an ideal packaging material. The certification started with a period of nine months of collecting data of all the chemical components of the two cans. This data was independently analysed at the deepest chemical level (until 100ppm).

The certification report confirms that our packaging is in compliance with the Cradle to Cradle® requirements. This covers a comprehensive assessment with the criteria of the material, material reutilization, energy consumption, water impact and social responsibility.

In close and grateful collaboration with its suppliers, Ardagh Group managed to fully disclose this data collection process, which resulted in the certification of the two cans.

This confirms that metal packaging is genuine sustainable packaging!

We are an enthusiastic supporter of recycling programmes, particularly because increased success in glass recycling normally increases the supply of cullet in the marketplace.



"

Certification report confirms that our packaging is in compliance with the Cradle-to-Cradle® requirements

"

#### CASE STUDIES

## Metal Matters Programme

#### (Group Initiative)

Ardagh has a strong focus within the metal packaging industry to promote the use of metal as a sustainable packaging medium and support the industry to increase recycling rates.

Ardagh is a funding partner for the MetalMatters programme. The programme works in partnerships with local authorities and their waste collection partners to promote metal packaging recycling, and improve capture rates at kerbside.

MetalMatters, has followed up its initial promise since its pilot scheme in 2010 and delivered unprecedented success. The programme has reached 1.9 million households across 31 local authorities and significantly increased the metal capture rate in each campaign.

The MetalMatters programme is supported by WRAP and is managed on behalf of the funding partners by Alupro the Aluminium Packaging Recycling Organisation. Other funding partners include the MPMA (Metal Packaging Manufacturers Association) and BAMA (British Aerosol Manufactures Association) both of which Ardagh are active members.

As well as the funding partners MetalMatters has also attracted stakeholders such as the Department of Environment in Northern Ireland and Zero Waste Scotland. The programme has also been highlighted by senior politicians, receiving a vote of confidence from Minister of Resources, Lord de Mauley, who has cited the programme as a model of best practice.

Rick Hindley, Executive Director of Alupro who manages the programme, said: "MetalMatters' achievements to date are impressive and testament to the commitment of all involved, from the people on the ground who delivered the campaigns day-to-day, to our industry funding partners who have committed significant investment in the programme. Our plans for MetalMatters were shaped by the 2010 pilot scheme, which produced hard evidence to show that the industry's approach resulted in demonstrable successes. After a year of refining the programme to suit a range of local collection systems and circumstances, and building on our experiences, I am delighted that MetalMatters continues to deliver a strong return on investment. It makes a difference within local communities and drives up local recycling rates."

## Metal - Zero Landfill Strategy

#### (Conklin Plant, USA)

Disposal with Richard D'Attilio, (left)

**Executive Director Broome County** 

Industrial Development Agency."

"Steven Walker (center) Ardagh, Conklin Plant Engineer and Mike Shelhamer (right) Plant Manager receive the "Zero Landfill" certificate from Chris Kline of Bert Adams

friendly and energy efficient technologies. This includes efforts towards maximising recycling and implementing effective waste management schemes. A zero landfill strategy is adhered to, meaning no waste generated at the facility is disposed into landfills. Instead, the plant engineer arranges for local disposal contractors to collect the waste.

The Greenfield Plant in Conklin is proactive in promoting environmentally-

As a result of this strategy and other energy and environmental efforts, the plant was awarded the Leadership in Energy and Environmental Design (LEED) certificate by the U.S. Green Building Council.

James Willich, CEO Metal US says: "Achieving zero landfill status in Conklin demonstrates Ardagh's continuing commitment to sustainability as we rise to overcome the ecological challenges that impact our environment and society."

This initiative serves as a good example to other US based plants and offices, teaming up with local businesses and national youth organisations such as the Boy Scouts of America and the Girl Scouts of the USA.







# Social



## Sustainable Packaging



The majority of our employees are members of labour unions. We generally negotiate national contracts with our unions, with variations agreed at the local plant level. Most such labour contracts have a duration of one to two years. Our management believes that, overall, our current relations with our employees are good. Our subsidiaries located in the European Union have special negotiating committees which have established a European Works Council ("EWC") in compliance with EU directives. The EWC acts as a communications conduit and consultative body between our EU subsidiaries and our employees. The EWC meets at least twice a year, and senior management attends these general meetings. The EWC also has the right to be notified of any special circumstances that would have a major impact on the interests of employees. EWC delegates are elected for four-year terms on the basis of legal principles or practices in the relevant countries, while the allocation of EWC delegates between countries is governed by EU directives.

#### **Employment Practices**

Ensuring equal opportunities for employees is important for Ardagh Group. Given the wide diversity of countries and laws operated across, the approach has been to decentralise the development of policies, procedures and training. All countries within the Group ensure that they have the appropriate policies in place which include issues such as equal access to training and development, promotion and no discrimination on the grounds of gender, religion or sexual orientation. All policies and procedures comply with the local legal requirements and form part of the introduction of new employees to the business and the training of managers.



#### Talent Management

Ardagh is focused on ensuring that we have the right people with the right skills at the right time. As such a programme of opportunities has been developed to support our approach to people development. From a clear and robust introduction process which identifies the needs of all new employees and seeks to meet these through focused training and mentoring support, to clearly publicised skills matrices for different roles and levels, everything possible is done to ensure that all employees have access to information on how to develop their careers within Ardagh Group.

Particular focus is placed on Leadership skills and training is provided through a partnership with the Leadership Trust (a UK based organisation with a portfolio of international clients). Special attention is paid to safety and all employees receive practical training focused on their behaviour towards safety as well as processes and procedures. In addition strong management training is made available at all levels to ensure sustainable development of skills to provide a platform for growth to the business.

In 2012 an International Traineeship was launched and was designed to identify and develop leaders of the future. This programme combines practical delivery of projects around the world with supportive development of leadership and management skills. Project work is part of our approach to improve the business and Lean Six Sigma is the chosen approach to process improvement – designed to ensure we continually challenge and change.

We are dedicated to developing our people to their full potential ensuring a sustainable workforce that is engaged and committed to the future of our business.



## Health & Safety Performance

We strive to maintain a safe working environment for all of our employees, with safety in the workplace being a key objective, measured through individual accident reports, detailed follow up programmes and key performance indicator reporting. We believe that our safety record sits among the best in the industry.

"Safety first" has become a core part of our culture. It is our vision to achieve zero accidents and so naturally safety is the first item on any operational or general management meeting agenda and it is the first thought before starting work. Over the past few years we have implemented conventional occupational H&S management systems in our plants which are aimed at continuously improving the H&S Performance.



In 2011 we implemented a behavioural safety programme called "BSafe!" as a complementary means for effective incident prevention. The core of this system is people based. We are all responsible for H&S ourselves, colleagues and visitors and have a responsibility to care for each other on the job. "BSafe!" and its programme elements has been developed internally involving the territorial H&S managers in workshops and project teams. The result is a behavioural safety standard for implementation across Ardagh Group.

As a consequence of the mentioned occupational H&S management, the accident prevention has improved significantly over the past number of years.

## CASE STUDY

## **B**Safe!



We are all responsible;

how we model safety and respect others and the safe way of working. This year, we are focused on achieving these objectives:

- > To eliminate repeat accidents
- > To strengthen and integrate our existing programmes under Ardagh's 'one brand one vision' mission statement.

### Ardagh Group BSafe!

Behavioural Safety Programme Standard



#### CASE STUDY





## Initiative

The SAVE FOOD initiative is a joint campaign instituted by the Food and Agriculture Organisation of the United Nations and Messe Düsseldorf GmbH to fight global food loss.

## SAVE FOOD...

...aims at networking stakeholders in industry, politics and research, encouraging dialogue and helping to develop solutions along the food value chain. One of its aims is to enlist the support of the industry in initiating and sponsoring its own SAVE FOOD projects.

## SAVE FOOD...

...premiered in May 2011 with an international congress at Interpack, the world's most important trade fair for the packaging Industry.





# Economic



## Sustainable Company

## **Economic Performance**

As a privately owned company, Ardagh Group does not publish detailed financial information. However, it is important to demonstrate to our stakeholders that Ardagh Group is a financially sound business and is well placed for future growth. The Economic KPIs presented in the sustainability report have been selected with this objective in mind.

Ardagh Group has reached its current scale and market position through a well-balanced combination of organic growth and strategic acquisitions. A series of acquisitions over the past decade have been successfully integrated into the business, resulting in expansion into new markets and generating cost savings.



#### Ardagh Group: European Industry Consolidator

#### Integration of Acquired Businesses

Growth through acquisitions is a key element of Ardagh's growth strategy. It is important that acquired businesses are quickly aligned with Ardagh's sustainability vision.

## • €4.2 billion revenue

As a privately owned company Ardagh Group is well placed to make decisions and investments that improve our mid and long-term sustainability, whilst appropriately balancing the need for short-term return on investment. Subsequently, whilst pursuing a strategy of growth through acquisition, Ardagh Group has been able to maintain Capex levels superior to the industry average.

	PERFORMANCE		
Economic KPI's	2011	2012	
Revenue	€3.2 billion	€4.2 billion	
Investment over preceeding 5 year period - Glass Division	9% of Sales	7.2% of Sales	
Investment over preceeding 5 year period - Metal Division	5% of Sales	3.5% of Sales	

## Integration of Acquired Businesses

Growth through acquisitions is a key element of Ardagh's strategy. It is important that acquired businesses are quickly aligned with Ardagh's sustainability vision.

Ardagh Group follows a structured integration programme with the acquired businesses. From day one, functional teams are aligned with the objective to create a single business according to our corporate strategy of "one brand one vision".

Working collaboratively there is a transition phase to standardise systems and processes. Activities are prioritised and tracked through the implementation phase. This ensures that we maintain consistency and adopt best practices across the Group.

#### For example the integration in the area of Sustainability:

Ardagh Group has policies, Group procedures, systems and structures in the area of sustainability. There is a team of territorial environmental coordinators and environmental managers in Metal and Glass. This Group meets twice a year and holds monthly teleconferences in order to ensure a standardised development across the Group and an efficient team approach. Content of such exchanges are our internal systems and procedure, upcoming and actual legislation, as well as customer requirements.

The functional integration is being managed by a team consisting of our Group Head of Sustainability and the sustainability functions of the new business. They ensure integration of the new businesses by reporting social & ethical policies as well as Group procedures.

#### Metal - Europe Energy Reduction Project (Seesen Plant, Germany)



As part of a major plant energy reduction programme, the plant management team is monitoring energy consumption on a monthly basis. The project has identified major energy consuming equipment and defined low cost measures for energy conservation. Restructuring of the plant workshops and operational buildings has reduced the amount of heated m<sup>2</sup> significantly. Various electrical power conservation programmes (e.g. upgrading compressed air systems) have led to electrical power reductions of 12% (2010 vs. 2011).

At the same time production was increased by 5%



## Workshop Restructuring Team

## CASE STUDY

### Metal - North America L.E.E.D Certified Facility (Conklin, USA)



The construction of the greenfield plant in Conklin, USA, used methods that promote "environment-friendly" and "energyefficient" technologies. Features of our "green" building include:

Architecture designed to optimize energy efficiency

Construction materials manufactured locally with up to 70% recycled materials

A recycling program during the construction of the site and building

Energy efficient lights & motion detectors facility wide

High efficiency HVAC units, roof, wall insulation, glass and room designs

Water-free and low-flush lavatory devices

Elimination of paper towel consumption by using highly efficient hand driers

Refrigerants engineered to reduce the impact of ozone depletion.

Paints and sealants with "zero" or low Volatile Organic Compound (VOC) emitting fumes

The building and site have been recognized by the U.S. Green Building Council and earned the Leadership in Energy and Environmental Design (L.E.E.D.) certificate for both a manufacturing site and facility.

#### Zero Landfill:

Our Conklin facility is one of only several LEED certified manufacturing facilities in North America that recycles ALL generated waste. The plant generates no waste to landfill.

**Cleaning Supplies:** 

We maintain our plant with non-hazardous, biodegradable cleaning products.



### Next Steps...

It is our intention to present data on the KPIs every second year. There may be ad hoc, intermediate updates in between, which will be published on www.ardaghgroup.com/sustainability

Ardagh Group will continue to monitor performance against the 2017 environmental targets and take appropriate actions to ensure these are achieved. To improve the quality and accuracy of the figures presented in the future reports, all manufacturing sites with significant impacts will be required to provide primary against the environmental KPIs.

Along with the implementation of the CSR policy the next step is the involvement of our key suppliers into social and ethical performance assessment. Moreover, we will formalise our activities in regard to community involvement and other relevant CSR aspects.



# GRI Principles and this Report



Sustainable Materials

#### **GRI** Reporting **Corresponding Sections** Content from this Report **Strategy and Analysis** 1.0 1.1 Statement from the most senior decision maker A Message from the CEO 2.0 Organisation Profile 2.1 Name of the Organisation Coporate Governance at Ardagh Group 2.2 Primary Brands Not Applicable \_ 2.3 Operational Structure **Global Leadership Team** 2.4 Location of Headquarters Coporate Governance at Ardagh Group -2.5 Countries where the Understanding our business -Organisation operates 2.6 Nature of Ownership and Legal Form Coporate Governance at Ardagh Group 2.7 Markets served Understanding our business, Our Customers 2.8 Scale of the Reporting Understanding our business Organisation 2.9 Significant changes during the Reporting period Not Applicable 3.0 Report Parameters 3.1 Reporting Period About this Report 3.2 Date of most recent previous Report About this Report -3.3 Reporting Cycle Next Steps 3.4 Contact point for questions Sustainability enquiry form available at weblink on the back cover of this report 3.5 Process for defining content Process for defining content -3.6 Boundary for the Report About this Report 3.7 Any specific limitations on scope or boundary About this Report 3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations and other entities Not Applicable 3.10 Re-Statements of information from previous periods Not Applicable 3.11 Significant changes from previous Reporting periods Not Applicable **GRI** Principles and this Report

3.12 GRI Content Index

#### GRI Reporting Content

## Corresponding Sections from this Report

4.0	Governance, Commitments and Engagement	
	4.1 Governance Structure	<ul> <li>Corporate Governance at Ardagh Group</li> </ul>
	4.2 Chair of Highest Governance Body	<ul> <li>Corporate Governance at Ardagh Group</li> </ul>
	4.3 Independent and/or Non-exclusives	<ul> <li>Corporate Governance at Ardagh Group</li> </ul>
	4.4 Mechanisms for Shareholders and Employees to provide recommendations	<ul> <li>Understanding our Stakeholders needs - Who are they and What do they want to know?</li> </ul>
	4.14 Stakeholders groups	<ul> <li>Understanding our Stakeholders needs - Who are they and What do they want to know?</li> </ul>
	4.15 Identification and selection of Stakeholders	<ul> <li>Understanding our Stakeholders needs - Who are they and What do they want to know?</li> </ul>
5.0	Data on Performance - GRI Performance Indicators	
	1.1 Statement from the most senior decision maker	<ul> <li>Environmental performance KPIs</li> <li>Social &amp; Ethical Performance"</li> <li>Health &amp; Safety Performance</li> <li>Economic Performance</li> <li>Comparison of KPIs</li> </ul>

GRI Performance Indicator	Corresponding Ardagh Group disclosures
EC1 Direct economic value generated and distributed	Pages 17 - 18, 44 - 45: Narrative on strategy, management performance and operational data provided for company turnover. Additional operational data provided for investment rate as a percentage of sales for each of the Divisions. No data provided for economic value distributed. Indicators: - Net sales - Investment rate - Glass - Investment rate - Metals
EC2 Financial implications and other risks and opportunities for the organisation's activities due to climate change	Page 44 - 45: Narrative on issues and management performance provided, no operational performance data provided.
EN2 Percentage of materials used that are recycled input materials	Pages 24 - 29, 31, 35: Narrative on issues provided. Operational data provided for tonnes of cullet (recycled post-consumer glass) used. Indicators: - Use of recycled post-consumer glass (cullet) - Consumption - proportion of wood pulp certified FSC / PEFC - Ownership and legal status
EN3 Direct energy consumption by primary energy source EN4 Indirect energy consumption by primary energy source	Pages 28 - 29, 31 - 32, 46: Narrative on issues and management performance provided, operational data provided as a single combined energy consumption value for each of the Divisions: - Energy consumption - Glass Division - Energy consumption - Metal Division
EN8 Total water withdrawal by source	Pages 26, 28, 29, 30, 31 - 32: Narrative on issues, management performance and operational data on total process water consumption for each of the Divisions: - Total process water consumption - Glass Division - Total process water consumption - Metal Division
EN16 Total direct and indirect greenhouse gas emissions by weight	Pages 28 - 29, 31 -32: Narrative on issues, management performance and operational data on Scope 1 and Scope 2 GHG emissions provided for each of the Divisions. Indicators: - Total Scope 1 GHG emissions - Glass Division - Total Scope 1 GHG emissions - Metal Division - Total Scope 2 GHG emissions - Glass Division - Total Scope 2 GHG emissions - Metal Division

GRI Performance Indicator	Corresponding Ardagh Group disclosures
EN20 NOx, SOx and other significant air emissions by type and weight	<ul> <li>Pages 28 - 29, 31 - 32:</li> <li>Narrative on issues, management performance and operational data on total NO<sub>x</sub> emissions and particulate emissions provided for each of the Divisions; operational data on total VOC emissions provided for Metal</li> <li>Division Indicators: <ul> <li>Total NO<sub>x</sub> emissions - Glass Division</li> <li>Total NO<sub>x</sub> emissions - Metal Division</li> <li>Total Particulate emissions - Glass Division</li> <li>Total Particulate emissions - Metal Division</li> <li>Total VOCs emissions - Metal Division</li> </ul> </li> </ul>
EN22 Total weight of waste by type and disposal method	<ul> <li>Pages 28 - 29, 31 - 32, 36, 46:</li> <li>Narrative on issues, management performance and operational data on total mass of waste sent for disposal and total mass of waste sent for recycling for each of the Divisions</li> <li>Indicators: <ul> <li>Total waste disposed - Glass Division</li> <li>Total waste disposed - Metal Division</li> <li>Total waste recycled - Glass Division</li> <li>Total waste recycled - Glass Division</li> </ul> </li> </ul>
EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Page 31: Narrative on issues and management performance provided, no operational performance data provided
EN27 Percentage of products sold and their packaging materials that are reclaimed by category	Page 31: Narrative on issues and management performance provided, no operational performance data provided
LA1 Total workforce by employment type, employment contract and region	Page 38 - 39: Narrative on issues, management performance and operational data on total workforce for each of the Divisions provided. Data also broken down by employment contract type but not disaggregated by region Indicators: - Total workforce - Glass Division - Total workforce - Metal Division - Total workforce - Group Level - Employment contract type by %
LA4 Percentage of employees covered by collective bargaining agreements	Page 38 - 39: Narrative on issues and management performance provided, no operational performance data provided

GRI Performance Indicator	Corresponding Ardagh Group disclosures
LA7 Rates of injury, occupational disease, lost days, and absenteeism, and total number of work-related fatalities by region	Pages 40 - 41: Narrative on issues, management performance and operational data on lost time accident for each of the Divisions provided and operational data on total fatalities for overall Group provided. Indicators: - Total lost time accidents - Glass Division - Total lost time accidents - Metal Division - Total fatalities
PR1 Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and service categories subject to such procedures	Page 40 - 41: Narrative on issues and management performance provided, no operational performance
Process for defining content	The content in this report has been defined through close reference to the various GRI guidance documents. Content has been developed by a team consisting of members from the sustainability and communications teams with external consultancy support providing expertise in GRI reporting requirements. The environmental content and KPIs have been chosen to reflect the key environmental interventions of the business, as represented in this report by the Environmental Profiles diagrams for Glass Container Operations and Metal Packaging Operations. These environmental interventions are well documented and have been determined as material, as both glass and metal packaging operations are covered by a range of environmental regulations which reflect these interventions. The social content has been defined with reference to the stakeholder chapter from ISO26000. This was used as a basis for an internally facilitated stakeholder identification and materiality assessment.

## Explanations of KPI's

## 

Environmental KPI's	Glass	Metal		Total
Energy Consumption (MWh)	10,572,133	1,060,040	-	11,632,172
Scope 1 CO <sub>2</sub> Emissions (Tonnes)	2,013,450	136,984	-	2,150,433
Scope 2 CO <sub>2</sub> Emissions (Tonnes)	1,309,680	135,845	-	1,445,525
NO <sub>x</sub> Emissions (Tonnes)	11,273	186	-	11,459
Particulate Emissions (Tonnes)	648	N/A	-	648
VOCs Emissions (Tonnes)	N/A	N/A	-	-
Use recycled post-consumer Glass (Cullet) (Tonnes)	3,005,045	N/A	-	3,005,045
Process water consumption (m <sup>3</sup> )	4,202,374	294,055	-	4,496,429
Waste disposed (Tonnes)	3,471	16,929	-	20,400
Waste recycled (Tonnes)	14,597	16,311	-	30,908
% Waste recycled	81	49		60

Social KPI's	Glass	Metal	Group	Total
Employees	6,967	7,694	241	14,902
Lost Time Accidents	75	65	N/A	140
Fatalities	1	0	0	1

Economic KPI's	Glass	Metal	
Revenue	€3,29	0.3 bn	
Investment over preceeding 5 years (as % of Sales)	9%	5%	

# 

Environmental KPI's	Glass	Metal		Total
Energy Consumption (MWh)	10,488,391	972,412	-	11,460,803
Scope 1 CO <sub>2</sub> Emissions (Tonnes)	1,950,181	126,189	-	2,076,370
Scope 2 CO <sub>2</sub> Emissions (Tonnes)	1,300,710	123,208	-	1,423,918
NO <sub>x</sub> Emissions (Tonnes)	10,402	169	-	10,571
Particulate Emissions (Tonnes)	685	N/A	-	685
VOCs Emissions (Tonnes)	N/A	N/A	-	N/A
Use recycled post-consumer Glass (Cullet) (Tonnes)	3,162,016	N/A	-	3,162,016
Process water consumption (m <sup>3</sup> )	4,024,826	315,759	-	4,340,585
Waste disposed (Tonnes)	3,405	16,373	-	19,778
Waste recycled (Tonnes)	18,249	17,234	-	35,483
% Waste recycled	84	51		64

Social KPI's	Glass	Metal	Group	Total
Employees	10,035	7,698	267	18,000
Lost Time Accidents	77	69	N/A	146
Fatalities	0	0	0	0

Economic KPI's	Glass	Metal	Total
Revenue	€2.1 bn	€2.1 bn	€4.2 bn
Investment over preceeding 5 years (as % of Sales)	7.50%	3.50%	

## Explanations of KPI's

#### Comment on VOC Emissions:

"

"

Where coating and printing technology is operative, our Metal plants release Volatile Organic Compound (VOC) Emissions. Based on the permit requirements there are abatement technologies applied (incinerators or water based lacquers). As part of implementation of our environmental management system, there have been reductions in emissions. As the operational conditions and the character of the VOC emissions do not allow for a straight-forward way of monitoring, the actual emission levels are not displayed in this report in order to ensure minimum levels of accuracy. It is our aim to implement a standard for the quantification and reporting of VOC emissions in order to populate primary data with sufficient accuracy in the future.

#### Comment on the Environmental KPI in general:

Since 2011 Ardagh grew significantly through acquisitions (FiPar, Boxal, Leone Glass, Anchor Glass). The monitoring and reporting standards of the newly acquired businesses differ from the Ardagh ones. Where primary data could not be populated from local data systems, secondary data were derived based on estimates to the best of our knowledge. We are confident that the displayed data reflect the performance levels in an acceptable way.

"

## List of Operating Countries

#### Luxembourg

Luxembourg

#### American Samoa

Pago Pago

#### Australia

Hawthorn Kyabram Milperra Taree

#### Canada

Blacks Harbour

#### China

Hong Kong

#### Czech Republic Skřivany

Teplice Znojmo

#### Denmark

Esbjerg Hjørring Holmegaard

#### France

Beaurepaire Crosmières (R&D) La Flêche Labatut Ludres Moëlan-Sur-mer Paris Roye Schweighouse-sur-Moder Veauche Villeneuve sur Lot

Germany
Bad Münder
Bergheim
Cuxhaven
Dägeling
Drebkau
Erftstadt
Germersheim
Lünen
Neuenhagen
Nienburg
Obernkirchen
Seesen
Wahlstedt
Wedel
Weißenthurm

#### Greece

Methoni

#### **Hungary** Szenna Vaja

Ireland Dublin

#### **Italy** Aprilla

Campegine Cassolnovo Castel San Giorgio Cava de'Tirreni Fiorenzuola d'Arda Incisa Scapaccino Montecchio Emilia Montorio al Vomano

#### Japan

Nagahama Tokyo

#### Latvia

Salacgrīva

#### Morocco Casablanca

#### Netherlands

#### Deventer Dongen Hoogeveen Leeuwarden Moerdijk Veenendaal Zaandijk

#### New Zealand Hamilton Hastings Poland Gdańsk Gostyń Katy Pieńsk Poznań Ujście Wyszków

Romania Buftea

#### Russia

Moscow Ust Labinsk Vyazma

#### Seychelles Victoria

South Korea

#### Haman-myeon

Seoul

#### Spain

Meis Reus

#### Sweden

Limmared

#### Thailand

Bangkok (Samutsakorn)

#### Ukraine

Bila Tserkva

#### **United Kingdom**

Barnsley
Doncaster
Irvine
Knottingley
Merthyr Tydfil
Norwich
Sutton-in-Ashfield

#### **United States of America**

Bloomsburg Bridgeton Carnegie Conklin Elmira Henryetta Jacksonville Lake Zurich Lawrenceburg Salem Shakopee Streator Tampa Terminal Island Warner Robins Weirton Winchester Zanesville



## Sustainability at the heart of everything we do

Further information:

www.ardaghgroup.com/sustainability

www.ardaghgroup.com