



RESOURCE EFFICIENCY FACTSHEET

# The Accommodation and Food Service Sector



## The sector

This NACE Section (I), Accommodation and Food Service Activities, contains two distinct divisions, NACE 55 Accommodation, and NACE 56 Food and Beverage Service Activities. Key indicators in the sector in Ireland are 17,800 enterprises, employing over 160,000 employees with a turnover of €9.75 billion<sup>1</sup>. Many of the businesses operating in the accommodation division also provide food and beverages. Tourism plays a very important role in the sector. 8.74 million people visited Ireland in 2016 (46% of them on holiday), spending an estimated €4.6bn<sup>2</sup> (32% of the total tourism spend was on accommodation and 34% on food and beverages). Accommodation and food service businesses have a great influence on the impact visitors make in terms of resource consumption and waste generation. Resource efficiency practices are considered as essential to the sector to increase profit, reduce waste generation and to enhance competitiveness

## Policy

Because of the importance of tourism to the accommodation and food services sector many of the policies directed at making tourism more sustainable will have a broader impact across the entire sector. The European Commission is committed to promoting the sustainable development of tourism in Europe, as tourist destinations are increasingly being called upon to tackle social, cultural, economic, and environmental challenges. Many initiatives are in place to facilitate sound environmental, social, cultural and economic management for both individual business enterprises and destinations.

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The EU Ecolabel is a voluntary scheme, established in 1992 to encourage businesses to produce and market products and services that are kinder to the environment. Products and services awarded the EU Ecolabel display its logo, allowing consumers to easily identify them. The EU Ecolabel covers a wide range of products and services including guest accommodation (hotels and campsites). There are eight ecolabel hotels and campsites in Ireland<sup>3</sup>, located in counties Leitrim, Sligo, Donegal and Cavan.

TOUERM, was developed by the European Environment Agency, and is based on the use of indicators. These indicators are policy relevant, feasible and regularly updated in order to be able to reflect both environmental impacts (baseline and threshold) and sustainability trends at a European scale. Some of the indicators may also address specific geographical contexts, such as coastal zones, rural areas and urban areas.

In Ireland the EPA funded the Green Hospitality Programme in 2008-2015, which provided a step-by-step approach to environmental management within the hospitality and catering sectors with recognition at Eco-label, Silver, Gold and Platinum award levels. The programme provided direct assistance to hospitality sector with resource management and environmental benchmarking while at the same time offered a recognition mark. The hospitality sector is also supported by the EPA's Green Business Programme which offers advice and guidance to the sector on Resource Efficiency. Several hotels, cafes and restaurants have participated in the programme.

Globally, several world-leading organisations have put sustainable tourism on their agenda, such as the United Nations World Tourism Organisation (UNWTO) and the Global Sustainable Tourism Council (GSTC).

The UNWTO has been promoting the use of sustainable tourism indicators since the early 1990s. Its guidebook on indicators of sustainable development for tourism destinations is designed to help identify the key factors that make a destination sustainable, viable and attractive.

The Global Sustainable Tourism Council (GSTC) manages the global standards for sustainable travel and tourism, and acts as the international accreditation body for sustainable tourism certification. To date, two sets of GSTC criteria have been developed for hotels, tour operators and destinations.



## Indicators

Indicators are used in independently verified certified systems, such as the EU Eco-label, Eco-tourism Ireland's certification scheme<sup>4</sup>, The Green Hospitality Programme<sup>5</sup> and the global Green Key<sup>6</sup> certification scheme for hotels. Indicators are available for individual enterprises or for destinations (cities, geographical areas etc.).

To assist tourist destinations in measuring their performance in relation to sustainability, the European Commission has developed a 'European Tourism Indicators System' (ETIS)<sup>7</sup>. ETIS is a system of indicators suitable for all tourist destinations, encouraging them to adopt a more intelligent approach to tourism planning. It is:

- a management tool, supporting destinations who want to take a sustainable approach to destination management
- a monitoring system, easy to use for collecting data and detailed information and to let destinations monitor their performance from one year to another
- an information tool (not a certification scheme), useful for policy makers, tourism enterprises and other stakeholders.

## Waste

Based on 2017 national waste characterisation data for the restaurants, food waste still remains the most significant waste stream accounting for 45% of total waste arising from the restaurant sector. Other significant waste streams include: glass (18%), Cardboard (15%), Paper (12%) and Plastic (10%).

Prevention of waste is the most effective means of waste minimisation with the lowest environmental impact. Preventing waste has been estimated to save up to ten times the actual disposal cost, due to the hidden costs of waste such as lost labour time, energy costs, lost materials etc. Examples are:

- Replace disposable food service items with standard ware or use compostable alternatives.
- Eliminate individually wrapped food items by providing bulk dispensers for sauces, shakers for sugars and salts and ramekins of jam and butter.
- Replace disposable coffee/tea cups with, reusable cups or use compostable options.

Environmental benchmarking allows business to compare their own environmental performance against the national average, and allow for hospitality businesses to measure potential waste reductions and associated cost savings associated with these reductions. It has been estimated that each tonne of food waste can cost approximately €2,000 – €5,000<sup>8</sup>.

The EPA funded the Green Hospitality Programme (GHP) in 2008-2015 which was instrumental in developing number of environmental benchmarks for the hospitality sector which included Kg of landfill/ sleeper and Kg of food waste per cover. See Table 1 below.

**Table 1: GHP Environmental Benchmarks 2014**

	Irish Average
Kg Landfill Waste/ Sleeper	0.74
Kg Food Waste/ Cover	0.30
kWh/m2/ annum	343
Litres Water /Sleeper	301

## CASE STUDY: Radisson Blu Royal Hotel- Dublin Reduces Waste Costs by €59,000

Radisson Blu Royal Hotel-Dublin is a city centre hotel with 150 rooms and suites. It has a restaurant a bar and 15 highly well-equipped meeting facilities. It undertook a multitude of different simple but highly effective methods to prevent waste.

These included:

- Used clear waste bags to make waste separation and monitoring more visible.
- Introduced close monitoring of waste streams and identified ways to reduce and improve management of each stream separately.
- Minimised waste packaging through better planning of food purchasing and delivering.
- Wooden pallets were used and collected for free by agreement with several suppliers.
- Product ordering and the food preparation process were revised, this resulted in a reduction in food demand and waste.
- Locked the waste room at all times so that waste collections were monitored more easily.
- Invested in a €4,500 water bottling system which minimised in glass waste.

This all resulted in a savings of €59,000 per annum.

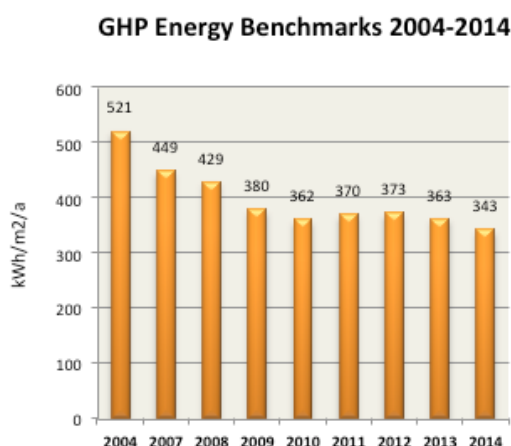
Benchmarking carried out by GHP identified that the Irish hotels are producing 50 tonnes of food waste per annum, on average. This is a cost of up to €250,000 per hotel. Food waste is generated at every step of the process of food service. Food waste is generated at (1) Purchase and delivery (2) Storage (3) Food Preparation and cooking (4) Serving and (5) Storage post cooking. There are many opportunities to reduce food waste and these outlined in detail in "Less Food Waste, More Profit, A Guide to Minimising Food Waste in the Catering Sector"<sup>9</sup>

## Energy

Improving energy efficiency makes perfect business sense; it saves money, enhances a business's reputation and helps in the fight against climate change. Energy consumption represents a significant share in hospitality sector spending. The average GHP hotel energy cost per sleeper was €4.7 in 2013. This compares to water and waste costs averaged at €0.72 per sleeper.

Benchmarks for energy consumed by a sample of GHP hotels between 2004 and 2014 show a 32% reduction in energy consumed per annum as shown in Figure 1. The hotel and other sectors in Ireland have achieved these reductions by adopting an Energy Management Hierarchy.

**Figure 1: Benchmarks for energy use in Irish hotels 2004-2014**



Elimination or reduction of energy use can be achieved in a number of ways including:

- turning lights off in areas supplied with adequate daylight
- switching off kitchen extraction when not cooking
- using energy efficient equipment and lighting
- Purchase or generate energy from renewables.

**CASE STUDY: Radisson Blu Hotel & Spa, Little Island, Co Cork, saves €12,300/annum by installing timers.**

Radisson Blu Hotel & Spa, located in Little Island, Co Cork is a four-star property with 129 luxury rooms and suites. Facilities include spa and fitness centre, restaurant, bar and nine meeting rooms and a ballroom.

As part of the hotel's environmental management programme, water features in the leisure centre pool area were identified as a significant electricity user. The swimming pool has 16 different water features, all of which were wired to turn on when the leisure centre was open. This resulted in all water features having a running time of 5,000 hours per annum. The water features have a combined electrical rating of 41kW. The estimated annual use of electricity for these features was 205,000kWhr, which at an average cost of 12c per kWhr, was costing the hotel €24,600 per year in electricity costs.

Management estimates that the running time of the water features has been halved. The installation of the push buttons timers cost €8,500 and has delivered an estimated savings of over €12,300/ annum on reduced electricity costs. The payback period for this project was 8 months.

**Water**

Water management and better use of water resources is considered to improve competitiveness, increase financial benefits and meet the sustainability regulations in any hospitality business. In addition to water saving, the business will save energy costs that associated with heating water. Cold water normally costs around €2.5 per 1000 litres. The cost of hot water can cost as much as €10 per 1,000 litres.

To minimise the water consumption in any hospitality business the water usage patterns should be benchmarked against industry standards. In 2014 the average benchmark for water consumption in the hotel sector was 301 litres/ sleeper. This compares to an industry average of 499litres/sleeper in 2004 (GHP), so water management has improved dramatically in recent years showing a reduction in consumption of 31%.

A significant contributor to water consumption can be leaks or faults in the water distribution systems. Sub-metering and on-line monitoring units which continuously monitor water usage can be used to detect leaks. Businesses can also read their water meter on a weekly basis to monitor consumption. Good Water Management Practices, Accommodation and Food Service Sector

**Leak Detection:** Establish an active process in place to identify water leaks.

**Flow Measurement:** Measure water flows from Showers, Toilets, Urinals, Wash Basins

**Urinals:** Control flow from urinals with motion sensors or push buttons.

**Toilet Cisterns:** Use dual flush toilet cisterns and or reduce flush rates.

**Washing:** Use the most water efficient dishwashers, glass washers and laundrettes.

**Rainwater:** When feasible harvest rainwater to flush toilets, clean floors and yards.

**Staff awareness:** Staff should be made aware of how they can minimise water consumption

**CASE STUDY: Carlton Atlantic Coast Hotel reduces Water Consumption by 28%**

Radisson Blu Hotel & Spa, located in Little Island, Co Cork is a four-star property with 129 luxury rooms and suites. Facilities include spa and fitness centre, restaurant, bar and nine meeting rooms and a ballroom.

As part of the hotel's environmental management programme, water features in the leisure centre pool area were identified as a significant electricity user. The swimming pool has 16 different water features, all of which were wired to turn on when the leisure centre was open. This resulted in all water features having a running time of 5,000 hours per annum. The water features have a combined electrical rating of 41kW. The estimated annual use of electricity for these features was 205,000kWhr, which at an average cost of 12c per kWhr, was costing the hotel €24,600 per year in electricity costs.

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BeGreen brings together all of the activities and programmes that have been put in place by the EPA, local authorities and other partners to promote waste prevention, resource efficiency & behavioural change:

## Further Information

<http://www.epa.ie/begreen/>  
Less Food Waste, More Profit, A Guide to Minimising Food Waste in the Catering Sector, CTC, 2010.  
<http://greenbusiness.ie/resource/less-food-waste-more-profit/>

USEPA resources on Greening the Food Services Sector:  
[http://www.cleanairinfo.com/greeningfoodservice/03\\_resources.html](http://www.cleanairinfo.com/greeningfoodservice/03_resources.html)

Resource Efficiency in Priority Irish Business Sectors

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This factsheet is one of seven that accompanies the main report of the EPA research project: Efficiency in Priority Irish Business Sectors (2014-RE-DS-1). Other factsheets are available on the following sectors: Food & Beverage Manufacturing, Construction, Pharmaceutical and Chemical, Retail, Manufacture of Non-Metallic Mineral Products. There is also an overall factsheet. The main report is available at [www.epa.ie](http://www.epa.ie).

<sup>1</sup>[http://ec.europa.eu/eurostat/statistics-explained/index.php/Accommodation\\_and\\_food\\_service\\_statistics\\_-\\_NACE\\_Rev\\_2statistics\\_-\\_NACE\\_Rev\\_2](http://ec.europa.eu/eurostat/statistics-explained/index.php/Accommodation_and_food_service_statistics_-_NACE_Rev_2statistics_-_NACE_Rev_2)

<sup>2</sup><https://www.tourismireland.com/Research/Visitor-Facts-Figures>

<sup>3</sup><http://ec.europa.eu/ecat/hotels-campsites/en/ie/ireland>

<sup>4</sup><http://www.ecotourismireland.ie/>

<sup>5</sup><http://www.greenhospitality.ie/>

<sup>6</sup><http://www.greenkey.global/>

<sup>7</sup><http://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators/>

<sup>8</sup><http://stopfoodwaste.ie/resources/business/>

<sup>9</sup><http://greenbusiness.ie/resource/less-food-waste-more-profit/>

