

Regulating for people, the environment and growth

2015 evidence summary

September 2016

This report summarises Environment Agency statistics on the impact of our regulatory activities on people, the environment and economic growth for the 2015 calendar year. Where data is only available by financial year, it's based on the financial year April 2015 to March 2016.

Our role is to apply the regulatory framework set by government. We seek to do this in a way that minimises the administrative costs of regulation on businesses and makes it as easy as possible for them to do the right thing.

A clear regulatory framework with agreed standards and targets has helped to drive major environmental and public health improvements over the last few decades. Regulation has played an important part in reducing emissions to air and the quantities of waste and pollutants produced by businesses. It has helped to reduce the number of serious pollution incidents to air, land and water as well as improving the quality of inland and coastal waters.

We're working to improve our approach and ensure that we continue to be a fair and proportionate regulator. We work hard to protect people and the environment, supporting businesses and sustainable growth while targeting illegal operators and poor performers. Waste crime diverts up to £1 billion from legitimate businesses and Her Majesty's Treasury each year. We recognise that businesses trying to do the right thing require a different approach to those that are persistently or intentionally non-compliant and we act accordingly, fairly and consistently based on evidence.

In this summary, sites or activities that we regulate under the Environmental Permitting Regulations 2010 (EPR), are referred to as permitted sites or activities. The activities of some of the industries and businesses that we don't permit under EPR will be regulated under other legislation. For example, activities may be regulated under the Water Resources Act or monitored under the Water Environment (Water Framework Directive) Regulations 2003.

Data used in the production of this summary is extracted at set points in time to preserve inter-year comparability. The underlying databases are live and subject to change. Data retrieved in any future extract may be different.

Main facts

Emissions to air from the businesses we regulate continue to reduce. Since 2014, emissions of:

- greenhouse gases have reduced by 10%
- nitrogen oxides have reduced by 15%
- sulphur dioxide has reduced by 23%
- fine particles have reduced by 6%

Between 1990 and 2020 the water industry will have invested about £25 billion in environmental improvement work. Since 2000, there has been a:

- 50% reduction in the amount of phosphorus load discharged by sewage treatment works
- 23% decrease in the biological oxygen demand load from sewage treatment works discharges

Since 2008, we have returned over 27 million cubic metres of water per year to the environment by stopping businesses taking more than the local environment can sustain.

Waste recovery rates continue to rise, increasing from 56% in 2012 to 65% in 2015.

In 2015 there were 499 serious pollution incidents, 19% fewer than in 2014. Since 2014, the number of serious incidents caused by:

- activities with permits decreased by 32%
- non-permitted activities increased by 22%
- activities where we could not identify the source decreased by 65%

In 2015, 97% of the sites we regulated were rated satisfactorily; A, B or C for Opra permit compliance.

In 2015:

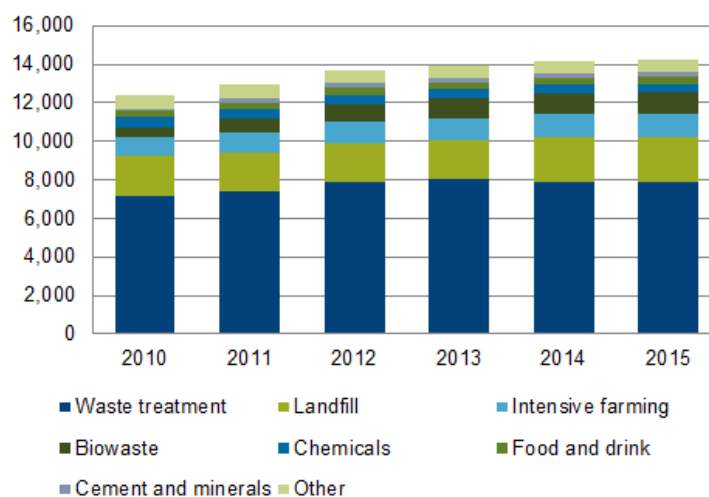
- we undertook 70 prosecutions against registered companies for environmental offences, compared to 81 in 2014
- companies were fined a total of £3.6 million, compared to £3.2 million in 2014
- the single biggest fine rose from £600,000 in 2014 to £750,000
- £0.9 million as proceeds of crime was confiscated from 7 defendants, compared to £1.4 million from 25 defendants in 2014
- we accepted 28 enforcement undertakings contributing almost £730,000 to environmental charities, organisations or projects, compared to 43 in 2014, contributing almost £600,000

The Environment Agency is responsible for regulating the industries in England with the highest potential environmental impacts. We regulate under the Environmental Permitting Regulations 2010 (EPR). Up to and including 2015, we issued environmental permits for activities that could pollute air, land or water. From April 2016, we will also issue EPR permits for activities that could increase flood risk or adversely impact land drainage.

We carry out regular monitoring to make sure businesses comply with conditions set out in the permits we issue. We take a risk-based approach and focus regulatory action on sectors and sites causing pollution incidents or where we see persistent non-compliance. We also continue to work and engage with compliant operators that have the highest potential for environmental harm if not properly controlled.

In 2015, we were responsible for regulating over 14,000 EPR permits, around 2,000 more than we regulated in 2010.

Number of permits held by industries in England, 2010 to 2015



The benefits of regulation

Regulation is a vital part of protecting our natural capital. Natural capital is a measure of the environmental assets, such as the stocks of forests, water, land, minerals and oceans that provide benefits or value to people. These benefits include, for example, providing food, clean air and water, wildlife, energy, wood, recreation and protection from hazards.¹ Protecting our natural capital is important because it adds to the country's gross domestic product (GDP), affects our economy's ability to grow and impacts human health and wellbeing. Expressed as an asset value of the next 25 years, the UK natural capital is estimated to be worth £1.6 trillion.²

Our activities have contributed to:

- an 87% reduction in sulphur dioxide since 2000 that has all but eliminated acid rain (formed when sulphur oxides dissolve in airborne water droplets), which causes harm to plants, wildlife, and water environments
- reductions in air pollutants (sulphur dioxide, nitrogen oxides and fine particles) that harm health and wellbeing
- 97% of bathing waters in England in 2015 meeting at least the minimum requirements of the new more stringent standards of the updated Bathing Waters Regulations - if the new standards were applied to the 2000 data for bathing waters, only 66% would have met the minimum requirements
- a 50% reduction in the amount of phosphorus discharged by sewage treatment works since 2000, reducing the adverse impacts of eutrophication resulting from excessive levels of nutrients

¹ See the Natural Capital Committee's second report on 'The State of Natural Capital: Restoring our Natural Assets' (www.gov.uk/government/publications/natural-capital-committees-second-state-of-natural-capital-report).

² See the ONS 'Natural capital accounting 2020 roadmap: interim review and forward look' (www.gov.uk/government/statistics/natural-capital-accounting-2020-roadmap-interim-review-and-forward-look).

- a reduction of 24% since 2000 in the emissions of greenhouse gases that contribute to climate change

Although there are direct costs to businesses associated with environmental regulation, the overall benefit-cost ratio of Defra's regulation is 3.0.³ This means that where £1 is spent on regulation (mainly by businesses and public authorities), there is a £3 return to society. These benefits include economic benefits to businesses and the public, and benefits to wider society from an improved environment and improved health. For example, when Walkers Crisps identified 2 factories operating in areas categorised by the Environment Agency as 'seriously water stressed', they addressed the problem by introducing more water-efficient manufacturing processes. This action also saved them £630,000 per year in water-related costs.⁴

Emissions to air

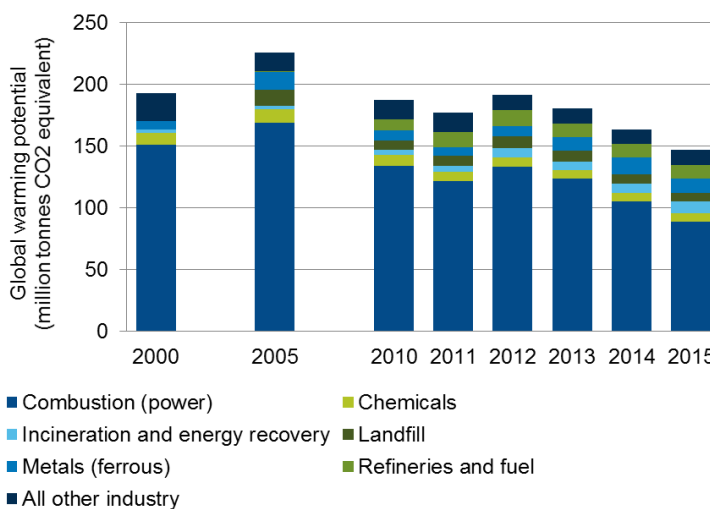
Pollutant emissions are known to have a detrimental impact on human health; in particular on the respiratory system, but they can also lead to other serious conditions such as heart disease or cancer.⁵ Operators conducting activities that could harm human health or the environment are required to apply for and maintain a permit under EPR. Permits contain conditions for operation to help reduce harmful emissions.

Under EPR, permitted sites are required to report their emissions to us each year, and are recorded in our Pollution Inventory database. The businesses we regulate contribute 43% of total greenhouse gas emissions in England, 31% of nitrogen oxides (NOx), 64% of sulphur dioxide (SOx) and 19% of fine particle (PM10) emissions.⁶

Since 2000:

- emissions of greenhouse gases have decreased by 24%, and by 10% since 2014
- emissions of NOx have decreased by 55%, and by 15% since 2014
- emissions of SOx have decreased by 87%, and by 23% since 2014
- emissions of PM10 have decreased by 36%, and by 6% since 2014

Greenhouse gas emissions (as global warming potential) to air from sites with permits in England, 2000 to 2015



⁶ 'All other industry' includes emissions from sectors that contribute less than 5% towards the total release of greenhouse gases in 2015.

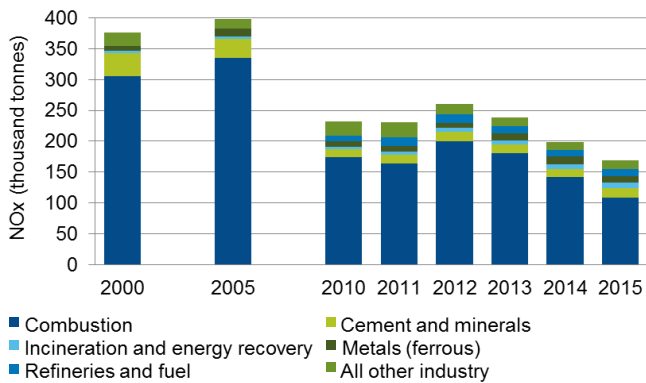
³ See Defra's 'Emerging findings from Defra's regulation assessment – first update covering 2012' (www.gov.uk/government/publications/the-costs-and-benefits-of-defra-s-regulations).

⁴ See the Natural Capital Committee's 'The state of natural capital: restoring our natural assets' (www.gov.uk/government/publications/natural-capital-committees-second-state-of-natural-capital-report).

⁵ See Defra's UK-AIR 'Effects on air pollution' (uk-air.defra.gov.uk/air-pollution/effects).

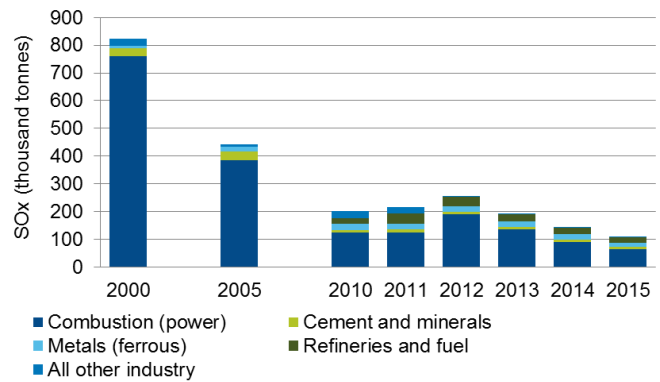
⁶ See the National Atmospheric Emissions Inventory 2012 (England) data for greenhouse gases and 2013 (England) data for NOx, SOx and PM10 (naei.defra.gov.uk/data/data-selector).

Nitrogen oxides (NOx) emissions to air from sites with permits in England, 2000 to 2015



'All other industry' includes emissions from sectors that contribute less than 5% towards the total release of nitrogen oxides in 2015.

Sulphur dioxide (SOx) emissions to air from sites with permits in England, 2000 to 2015



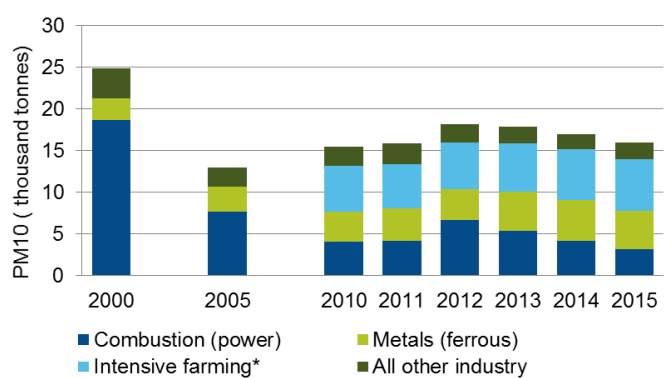
'All other industry' includes emissions from sectors that contribute less than 5% towards the total release of sulphur oxides in 2015.

Of the sites we regulate, the combustion (power) sector is a major contributor to emissions of greenhouse gases (61%), SOx (64%), NOx (58%) and PM10 (20%).

Flue-gas desulphurisation, a chemical reaction used after fuel combustion to convert SOx emissions to gypsum, is largely responsible for the substantial decrease in SOx observed since 2000. Smaller fluctuations in the overall trends of these pollutants tend to be a reflection of the amount and type of fuel used by the sector.

The increase in emissions in 2012 was partly due to a cold winter increasing demand and partly due to the availability of cheap coal from the USA triggering an increase in the proportion of coal burnt in power stations. The regulatory framework facilitates market flexibility allowing operators to purchase different fuel mixes while maintaining an overall reduction in emissions over time.

Particulate matter (PM10) emissions to air from sites with permits in England, 2000 to 2015



'All other industry' includes emissions from sectors that contribute less than 5% towards the total release of particulate matter in 2015.

* Emissions from the intensive farming sector were not collected prior to 2010

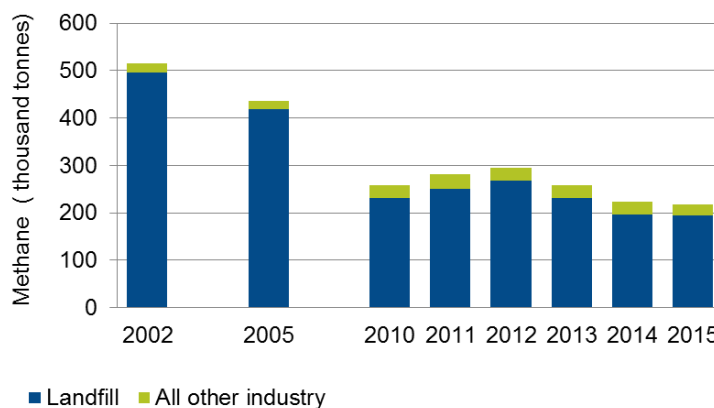
There are a number of reasons for the reduction in emissions since 2012. These include:

- coal and oil plants unable to meet the tighter emissions standards of the Large Combustion Plants Regulations 2002 continuing to close
- breakdowns and scheduled outages at 2 coal-fired plants in 2014
- increasing energy generating capacity from renewable sources, reducing the amount of energy produced from fossil fuels

In 2015, the landfill sites we permit released 194,000 tonnes of methane to the air (89% of all methane emissions reported from the sites we permit). This is about 14% of total methane emissions in England.⁷ The landfill sector's methane emissions decreased by 1% between 2014 and 2015, and by 61% since 2002.

Almost 783,000 tonnes of methane was collected and combusted in engines and flares at landfills in England in 2015, 4 times the amount released to air. Of this, 91% was combusted in engines to generate electricity. In 2015, 6% of electricity generated in the UK from renewable energy sources came from landfill gas, compared to 8% in 2014.⁸

Methane emissions to air from sites with permits in England, 2002 to 2015



⁸ 'All other industry' includes emissions from sectors that contribute less than 5% towards the total release of methane in 2015.

The decline in landfill gas production is largely due to the diversion of biodegradable waste away from landfill and a decrease in the number of operational sites. The global warming potential of methane is estimated to be around 25 times greater than carbon dioxide, based on a 100-year time horizon. As such, even small decreases in methane can have significant benefits in terms of its contribution to climate change.

Freshwaters

Freshwaters, as a natural capital asset, are worth at least £40 billion to the economy.⁹ Through our regulatory work under EPR, as well as other initiatives such as catchment sensitive farming, we seek to limit the impact industry and businesses can have on the water environment.

Regulation protects the quality and quantity of water for:

- the provision of drinking water
- water sports and angling
- wildlife and conservation interests
- livestock watering
- navigation

In England, businesses, the third sector and public sector jointly spend about £5 billion a year to protect the water environment (by preventing deterioration) and to protect public health and wellbeing.¹⁰ We also use licensing and regulation to protect legitimate uses of the water environment.¹¹

⁷ See the National Atmospheric Emissions Inventory 2014 (England) data (naei.defra.gov.uk/data/data-selector).

⁸ See the Department of Business, Energy & Industrial Strategy 'Renewable sources of energy: Chapter 6 Digest of United Kingdom Energy Statistics' (www.gov.uk/government/statistics/renewable-sources-of-energy-chapter-6-digest-of-united-kingdom-energy-statistics-dukes).

⁹ See the ONS 'Natural capital accounting 2020 roadmap: Interim review and forward look' (www.gov.uk/government/statistics/natural-capital-accounting-2020-roadmap-interim-review-and-forward-look).

¹⁰ See our Update to the river basin management plans: impact assessment (www.gov.uk/government/publications/update-to-the-river-basin-management-plans-impact-assessment).

¹¹ See our 'Managing water abstraction' (www.gov.uk/government/publications/managing-water-abstraction).

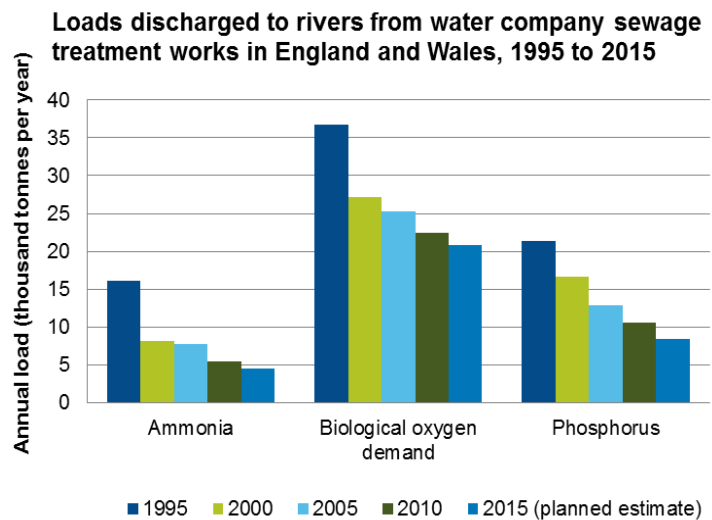
Discharges to water

Water company and industrial discharges and run-off from agricultural land can reduce water quality if it contains:

- nutrients such as phosphorus and nitrogen
- oxygen-depleting substances
- toxins such as metals, ammonia or other chemicals
- silt – which is a pollutant in itself, but may also bind and transport other contaminants

Between 1990 and 2020 the water industry will have invested about £25 billion in environmental improvement work. Our work to target water quality improvements and associated investment by water companies has helped to achieve a:

- 50% reduction in the amount of phosphorus load discharged by sewage treatment works since 2000, and by 61% since 1995
- 45% decrease in the amount of ammonia discharged since 2000, and by 72% since 1995
- 23% decrease in the biological oxygen demand load from sewage treatment works discharges since 2000, and by 43% since 1995



In addition, since 1995:

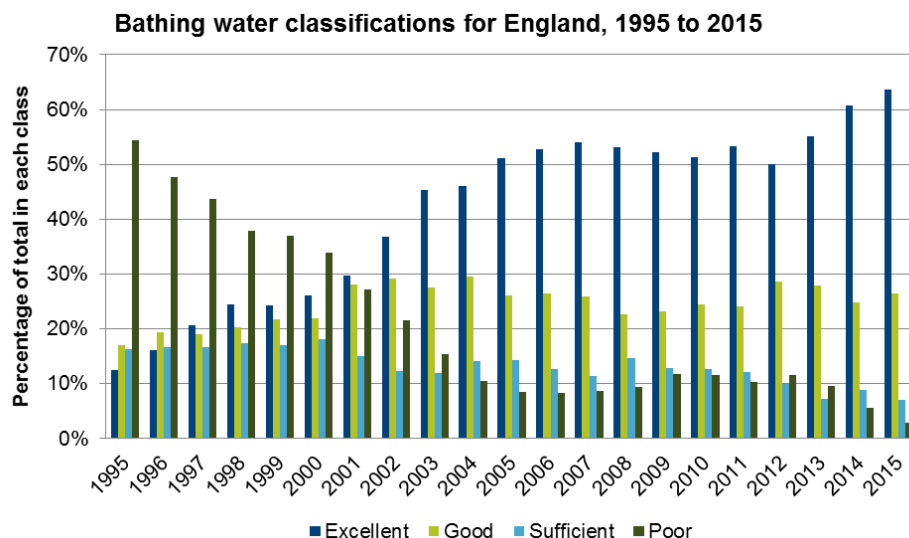
- approximately 7,000 storm overflows have been improved in England reducing the impact of pollution from overflow discharges
- about 15,000km of rivers have been protected or improved to benefit fisheries and nature conservation

Water containing too much phosphorus is one of our most significant water management issues. Water company discharges of sewage effluent are the largest source of phosphorus entering rivers nationally – accounting for 60 to 80% of the total load. Agriculture through run-off contaminated with fertilisers and manures is the second largest source, contributing about 25% of the total load. Reductions in fertiliser use and animal numbers, along with improved agricultural practices over the last 30 years has helped to control phosphorus loadings to water from agricultural sources.

In addition to the effect on water quality in rivers, discharges also affect our beaches and coasts. The standard of our bathing waters is determined by the amount of faecal indicator organisms (FIOs) they contain. FIOs are bacteria that indicate pollution by faecal matter and the likely presence of other micro-organisms that can cause illness. The most significant sources of FIOs are:

- sewage from sewage treatment works or combined storm sewer overflows
- agricultural pollution from faeces of grazing animals
- urban run-off containing dog and bird faeces

Bathing water quality has improved steadily over the last 2 decades, largely as a result of improvements to the sewerage system by water companies.¹² Over the past 25 years, water companies have invested more than £2 billion in projects to improve sewage treatment processes and reduce sewage overflow in order to achieve the standards of the Bathing Waters Regulations.



In 2015, under new, more stringent standards for the assessment of bathing waters, 97% of bathing waters met at least the minimum standard.¹³

Abstraction

In 2015, approximately 11% of surface water bodies had low flows that were not sufficient to support a healthy ecology. Around 30% of groundwater bodies in England are also not achieving a good quantitative status.¹⁴

The licences and permits we issue to water companies and other users such as agriculture, the power generation sector and other industries, control the effect taking water has on the environment.¹⁵

Many abstractions are environmentally sustainable, but this isn't always the case. Some licences were granted when there was a poorer understanding of the impact of over-abstraction on the environment, which can lead to:

- drying out of rivers
- sinking of water tables
- intrusion of saltwater from the sea in coastal areas, which degrades groundwater

Since 2008, we have returned over 27 million cubic metres of water per year to the environment by stopping businesses taking more than the local environment can sustain. We will continue to review current and new abstraction licences. As a result:

- water companies will need to manage their water supply assets to reduce the environmental impacts of their abstraction while securing a sustainable supply¹⁶
- other abstractors will need to review their current and future water needs and make sure they use water efficiently

¹² See Defra's 'Statistics on UK bathing waters for 2015' (www.gov.uk/government/statistics/bathing-water-quality-statistics).

¹³ See our report 'Bathing waters in England: 2015 compliance report' (www.gov.uk/government/publications/bathing-waters-in-england-2015-compliance-report).

¹⁴ See our 'Abstraction and flows pressure narrative 2015' (ea.sharefile.com/share?#/view/s13685d2d8754fe29).

¹⁵ See our 'Managing water abstraction' (www.gov.uk/government/publications/managing-water-abstraction).

¹⁶ See our 'Water company performance report 2015' (www.gov.uk/government/publications/water-and-sewerage-companies-in-england-environmental-performance-report).

We also work with sectors that influence water movement within catchments; farmers and land managers, whose practices affect water storage and water run-off rates.

Waste produced and recovered by businesses we permit

In 2015, the sites we permit produced 14 million tonnes of waste, of which 65% (9.1 million tonnes) was recovered. This compares to the 14.1 million tonnes produced in 2014, 64% (9 million tonnes) of which was recovered.

Reductions in the amount of waste produced can be achieved by redefining when waste can be used as a resource.

The Environment Agency issues quality protocols to promote the use of waste as a resource by explaining when waste-derived material can be regarded as a non-waste product. For example, under a quality protocol, waste steel slag can be processed and used in civil engineering and construction activities rather than being sent to landfill. The benefit to the groups affected by the steel slag quality protocol is expected to be £66 million over the next 10 years.¹⁷

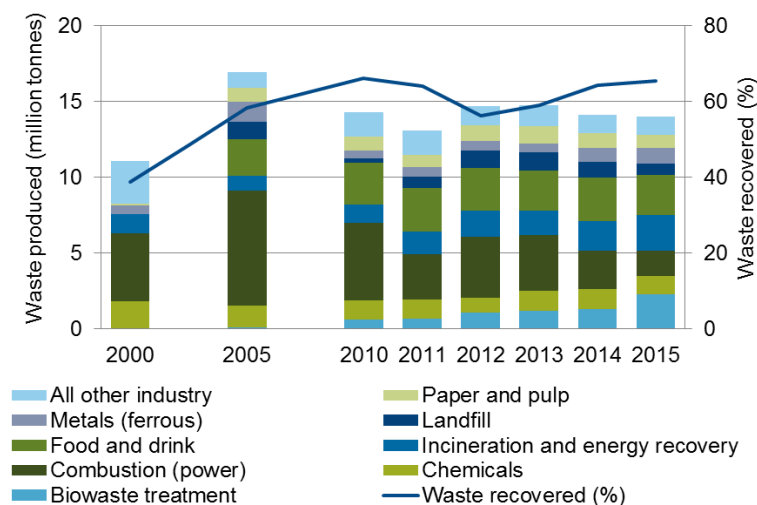
In 2015, the sectors producing the most waste were:

- food and drink (2.6 million tonnes, 19% of waste produced by all sectors with permits)
- incineration and energy recovery (2.4 million tonnes, 17%)
- biowaste treatment (2.3 million tonnes, 16%)

Waste produced by incinerators consists of incinerator bottom ash (ash left over from burning the waste) and air pollution control residue (from treating the exhaust gases). The amount of waste produced is proportional to the amount of waste burned. Between 2010 and 2014 (2015 figures are not currently available), the tonnage of waste incinerated increased by 43% (from 6 million to 8.6 million).

The increase in waste produced by the biowaste treatment sector is associated with updates to the EPR, which required more biowaste sites to report to our Pollution Inventory database.

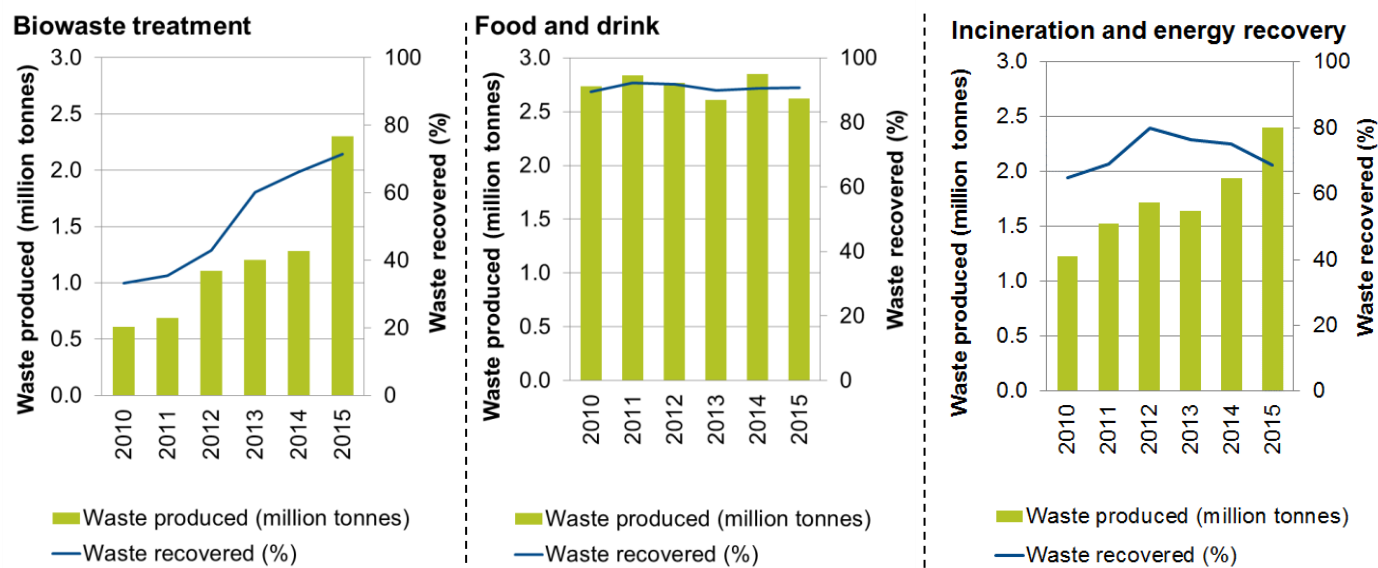
Waste produced by sites with permits



'All other industry' includes waste from sectors that contribute less than 5% towards the total waste produced in 2015.

¹⁷ See the Environment Agency 'Steel slag quality protocol: business engagement assessment' (www.gov.uk/government/publications/steel-slag-assessment-for-proposed-quality-protocol).

Waste produced and recovered by sites with permits: top 3 sectors in England, 2010 to 2015



In 2015, 65% of all waste produced was recovered. The sectors with the highest waste recovery rates were:

- food and drink, 91%; up from 89% in 2010
- incineration and energy recovery, 69%; up from 65% in 2010
- biowaste treatment, 71%; up from 33% in 2010

For further information about the changing picture of waste management, see our 'Regulating the waste industry: 2015 evidence summary' (www.gov.uk/government/publications/regulating-the-waste-industry-2015-evidence-summary).

Pollution incidents

We classify pollution incidents according to their impact on the environment and people, from category 1 (the most serious) to category 4 (little or no impact) and the level of response needed. This section is about the most serious pollution incidents, categories 1 and 2.

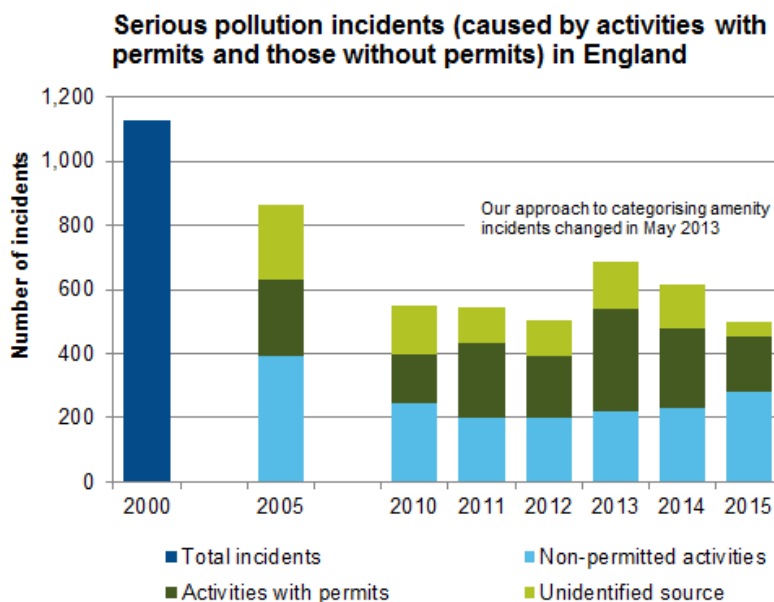
Serious pollution incidents can harm people and the environment as well as damage businesses and affect recreational activities such as angling. Our officers investigate the causes of serious pollution incidents to take appropriate action against those responsible. In the financial year 2015 to 2016, our costs for attending incidents were recorded as £2.1 million. Of this, £980,000 was set as being legally rechargeable – where incidents have an impact on water or where an impact to water was prevented through our action, and where the polluter has been identified. We recharged polluters for 97% of this (£950,000).

The information our officers collect also helps us determine the sectors or activities we should focus our efforts on, and identify areas for businesses to improve.

In 2015 there were 499 serious pollution incidents: 42% fewer than in 2005, and 56% fewer than in 2000.

Since 2014, there has been a:

- 19% decrease in the total number of pollution incidents (614 incidents in 2014)
- 32% decrease in incidents caused by activities with permits (from 249 incidents in 2014 to 170 in 2015)
- 22% increase in the number of incidents caused by non-permitted activities (from 232 to 283)
- 65% decrease in incidents where we could not identify the source (from 133 to 46)



In May 2013, we changed our approach to classifying ongoing amenity incidents. This made it easier to substantiate incidents, particularly odour-related incidents, and to deal with ongoing amenity incidents involving multiple reports as a single incident with a higher severity level. This raised the impact level of some incidents to category 2 when they would have previously been reported as a number of category 3 events, and led to a significant rise in the number of category 1 or 2 odour incidents recorded in 2013. Numbers of incidents in 2014 and 2015 have decreased despite this change in approach.

Tackling pollution incidents

We work to build a proactive preventative approach with each sector. For example:

- sector specific permit conditions which make key technical requirements mandatory
- an annual compliance audit programme - focussed on one aspect in the sector each year
- detailed sector specific technical regulatory guidance
- engaging with operators on reviewing incidents, learning lessons and sharing best practice

The greatest reduction in serious pollution incidents in 2015 was in the landfill sector. This sector caused 10 incidents, compared with 34 in 2014; a 71% decrease. The reduction was partly a result of our work with the sector.

Alongside our work with sectors, we also work with other organisations to help prevent and mitigate incidents when they happen. We work with:

- the Fire and Rescue Service, providing £200,000 of essential pollution incident response equipment, such as drain blockers and oil and chemical sorbent pads, to them every year so they can protect the environment as part of their incident response
- Highways England to influence the design of pollution control devices on roads to help reduce the effect run-off and spills caused by road-related incidents can have on nearby watercourses

- rivers trusts, wildlife trusts, community wardens, local campaigns and projects such as the Oil Care Campaign,¹⁸ Yellow Fish¹⁹ and Connectright²⁰ to help prevent water pollution incidents

These initiatives help to protect drinking water supplies, wildlife, bathing waters, fisheries and the wider amenity value of our rivers. They also allow businesses use of water without damaging our environment.

For further information about the impact of pollution incidents on the environment and the sectors responsible, see our 'Pollution incidents: 2015 evidence summary'

(www.gov.uk/government/publications/pollution-incidents-2015-evidence-summary).

Environmental compliance of the businesses we regulate

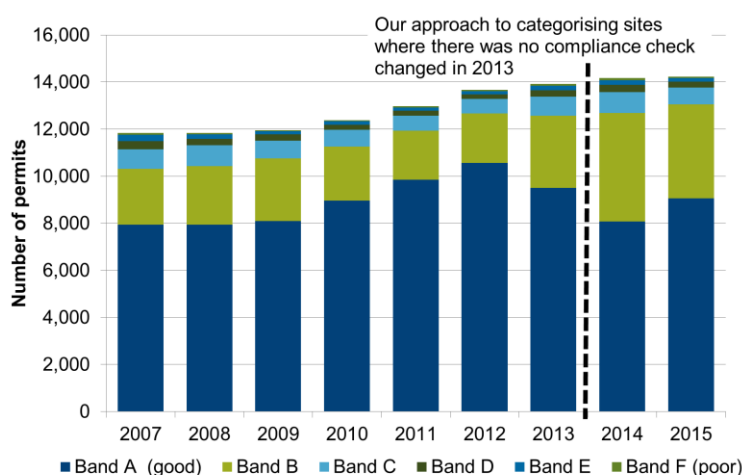
We rate compliance with permit conditions in bands A (good) to F (poor). Bands D, E and F represent poorer, unsatisfactory compliance with permit conditions.

In 2015, 97% of the sites we regulate were rated A, B or C for permit compliance. The number of sites in band A increased by 12% between 2014 and 2015 (8078 to 9051). Compared with 2014 there was a slight decrease (0.9%) in the percentage of those rated D, E or F.

We regard operators that have a D, E or F Opra permit compliance rating for 2 consecutive years as persistent poor performers, and we look at this on a rolling basis. The number of persistent poor performers for the 2 years 2013 and 2014 was 229. The number for the years 2014 and 2015 was 213, a 7% decrease.

In 2015, 41% (87) of the persistent poor performers were in the non-hazardous waste treatment sector and 28% (60) were in the landfill sector. We have established a programme designed to take action on persistent poor performers and operators that cause pollution incidents and negative impacts on communities.

Opra permit compliance ratings in England, 2007 to 2015

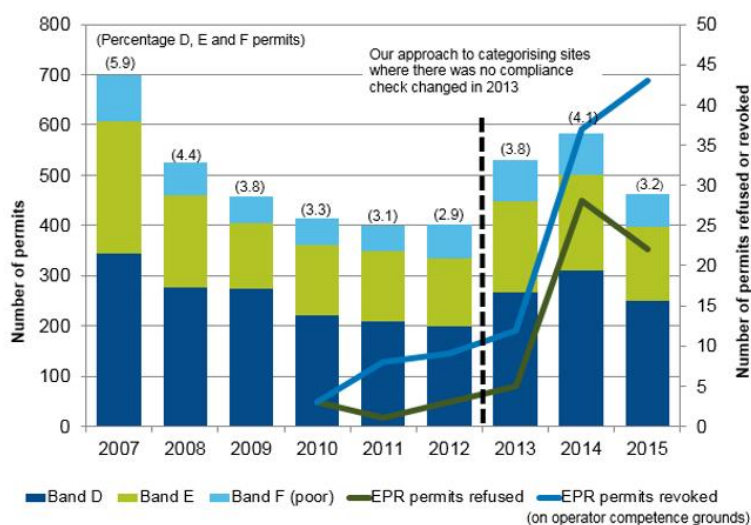


¹⁸ See the Oil Care Campaign (www.oilcare.org.uk).

¹⁹ See 'Avoiding pollution: Yellow Fish scheme' (www.gov.uk/government/publications/avoiding-pollution-yellow-fish-scheme).

²⁰ See the ConnectRight campaign (www.connectright.org.uk).

EPR permits rated for poor compliance (all sectors) in England, 2007 to 2015



Persistent poor performers Permits in compliance bands D, E or F in 2014 and 2015



If an operator demonstrates poor compliance by continually breaching their permit conditions, we'll revoke their permit. We'll also refuse permit applications where operators have convictions for environmental offences, a lack of technical competence or inadequate financial resources.

We may also suspend an environmental permit if we consider that operation of the facility poses a risk of serious pollution, or initiate a permit variation to improve standards.

Enforcement activities

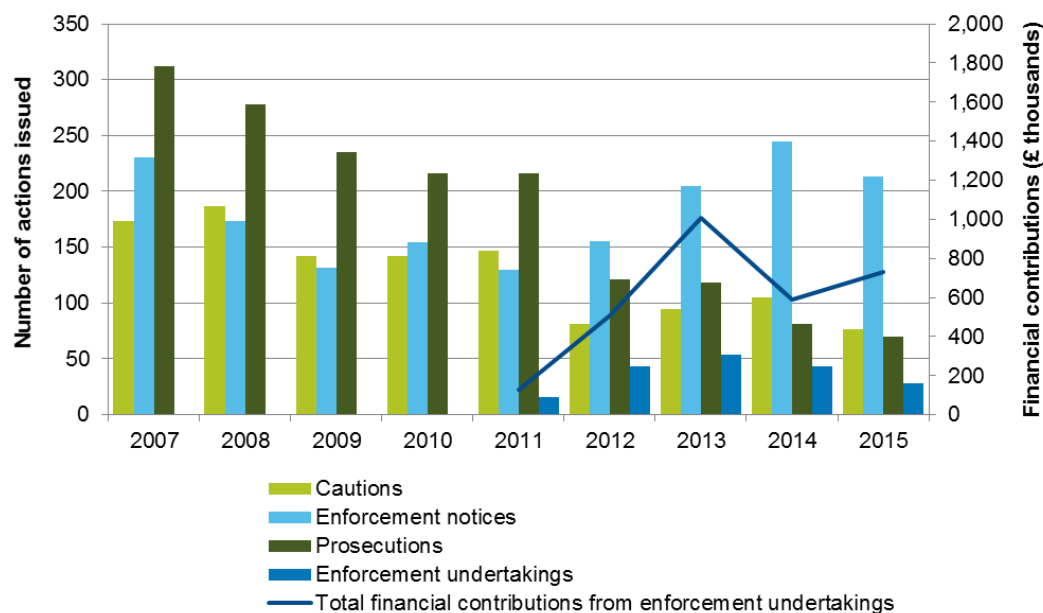
We make use of the range of enforcement responses available to us. These include:

- cautions; used to deter offenders, and suitable for cases where, although we could prosecute, there are other factors that we take into account
- enforcement notices; used to bring sites we permit back into compliance and put right any damage caused to the environment
- civil sanctions; most commonly enforcement undertakings, seeking to change offenders' behaviour by paying to clean up the damage caused and improve the environment, rather than paying fines

We prosecute operators who commit serious offences, but we use different approaches with businesses who are trying to do the right thing. In some situations, issuing an enforcement notice or warning letter at the right time is sufficient to bring an operator back into compliance, and put right any environmental damage, without the need for further sanctions.

Civil sanctions give us more flexibility to enforce regulations. They aim to change behaviour by requiring offenders to pay to clean up the damage they have caused, improving the environment and helping the local community, rather than paying fines. We have been able to use civil sanctions under a limited number of regulations in England since 6 April 2010.

Enforcement actions used for environmental offences by registered companies (all sectors) in England, 2007 to 2015



During 2015, we accepted 28 enforcement undertakings from businesses. Environmental charities, organisations or projects in England received almost £730,000 as a result of these enforcement undertakings.

Guidelines on how to approach the sentencing of environmental offences were issued to criminal courts in 2014 by the Sentencing Council. For the first time, a tariff has been provided to indicate the right level of penalties dependent upon the seriousness of the offence and the turnover and profit of the organisation involved. This has led to a significant increase in the size of fines imposed on larger organisations.

In 2015:

- we successfully undertook 70 prosecutions against registered companies for environmental offences, compared with 81 in 2014
- companies were fined a total of £3.6 million, compared to £3.2 million in 2014
 - of the £3.6 million fine in 2015, £3.2 million was for companies we regulate through permits
- the average fine per company was £55,000 compared to £48,000 in 2014
- the single biggest fine was £750,000 compared to £600,000 in 2014

In certain circumstances we also seek orders under the Proceeds of Crime Act 2002 (PoCA), which allows for the confiscation and payment to the State of benefits identified as proceeds of crime. The Environment Agency applies for confiscation orders post-conviction and has had considerable success in recovering unlawful profits from illegal operators and cases where lower costs due to poor practice undercut legitimate business. In this way £1.4 million was confiscated from 25 defendants in 2014, and almost £0.9 million from 7 defendants in 2015.

Promoting economic growth

Reducing the burden on businesses

Cost savings to businesses are calculated using Equivalent Annual Net Cost to Business (EANCB). This is the government's preferred methodology and is used in impact assessments for regulatory measures in accordance with Green Book guidance (www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government). EANCB takes the net present value of a project or initiative and works out what this is on a yearly basis.

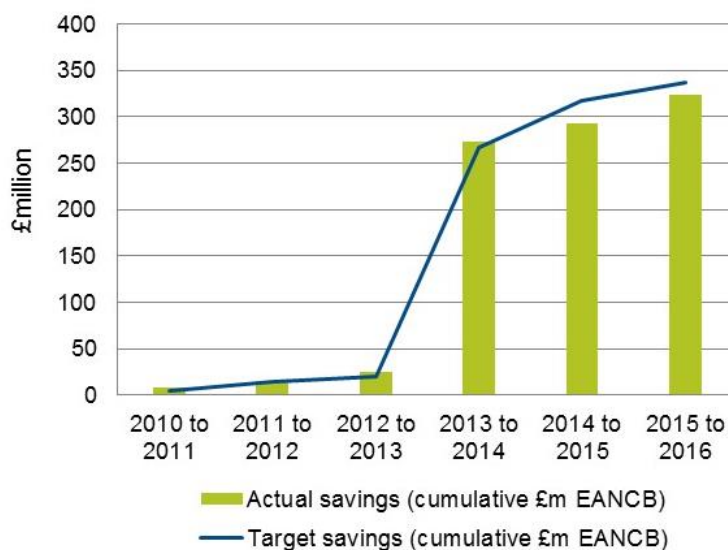
Since April 2010, we have helped businesses save about £324 million EANCB.

In the financial year 2015 to 2016, we helped businesses save about £32 million against a target of £20 million, EANCB. Initiatives included:

- our smarter guidance project
- the Emissions Trading Workflow Automation Programme

EANCB underpinned the Accountability for Regulator Impact (ARI) scheme. After the May 2015 General Election, the government replaced ARI with the Business Impact Target. This takes into account both positive and negative financial impacts from changes to the way we regulate business. We're working with government on implementing this new duty.

Reductions in costs for businesses we regulate in England, 2010 to 2016



EANCB: Equivalent Annual Net Cost to Business

Making it easier for businesses

Reducing the time taken to grant permits can help reduce costs to businesses. In 2015 we processed over 99.5% of permit applications within 13 weeks. Of almost 195,000 environmental permits, exemptions and registrations issued in 2015, 7 permits took longer than 13 weeks to determine and were not subject to exception criteria agreed with Defra.

Innovative approaches to support business

We continue to develop and seek out new ways that support the growth of businesses. We are developing an innovative, catchment-based approach to permitting water treatment works discharges. It's expected to deliver improved environmental outcomes at a lower cost and in a more sustainable way than is currently the convention. This approach will be piloted in the Bristol Avon catchment with an estimated £23 million saving for Wessex Water.

During 2015, we published about 200 datasets as 'open data'. Open data is data that anyone can access and use, free of charge. Our aim is to allow others to use our data to help them grow their businesses, contributing to the economy, society and improvements in the environment. Examples of the uses of our data include:

- managing forests
- flood forecasting

- deciding where to plant crops, such as grapevines

In April 2015, we launched a new voluntary digital service for Waste Carrier, Broker and Dealer registrations. This service was developed to the Government Digital Service standard and has had a 92% uptake. In December 2015, Producer Compliance Schemes used 'WEEE Online' for the first time to register their members (producers of electrical and electronic equipment) for the 2016 compliance year. Feedback from customers using these services has been positive and we're working to quantify the benefits.

LIT 10496