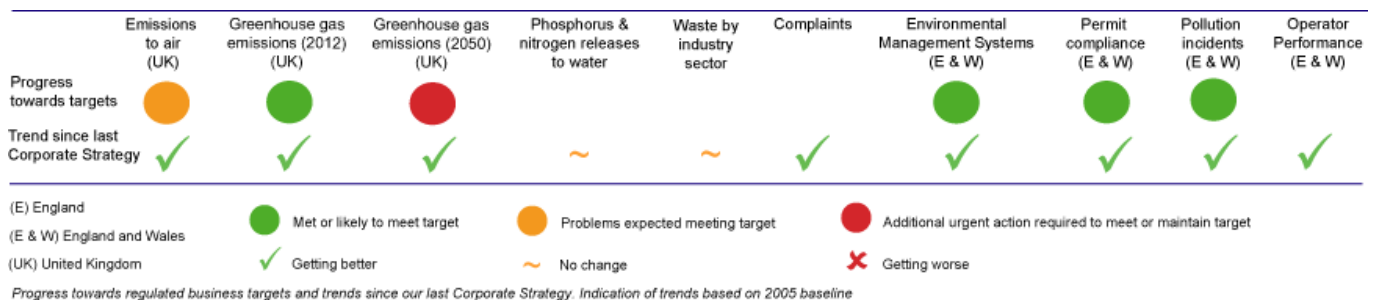


Our corporate strategy 2010 - 2015

Evidence: business

See also: air, water and the water environment, land and farming, waste, climate change

Where are we now?



Why do we need to act now?

Businesses that are regulated by us have already made some big improvements. More and more sites are reporting to us but still emissions to air and water have fallen, there are fewer pollution incidents and greenhouse gas emissions have remained constant. Fewer sites are breaching their permits and performing poorly.

But these improvements need to be maintained and some aspects – like greenhouse gas emissions, waste production and resource efficiency – need to be improved to offset the impacts of climate change, an increasing population and, potentially, increasing industrial productivity from economic recovery. We will continue to work with businesses and to target our regulation to efficiently achieve these environmental outcomes.

Benefits of action

- Better air quality due to regulation of industrial releases in the UK has improved people's health. Reductions in sulphur dioxide (SO₂) and particulates (PM₁₀) from industrial releases between 1990 and 2005 led to as many as 1850 fewer premature deaths and reduced hospital admissions by as many as 1800 in 2005.¹
- More energy efficient industry will help to reduce greenhouse gas emissions. It will be five times more expensive to deal with the impacts of climate change such as floods, droughts and heatwaves, than taking measures to avoid it.²
- Using and managing resources more efficiently could save the UK economy £6.4 billion every year – with most of these savings coming from energy efficiency and waste management.³

Successes

We regulate around 2,900 industrial activities in England and Wales ranging from nuclear sites to chemicals, food and drink manufacture to intensive pig and poultry farming. We also regulate about 7,300 waste management activities from landfills and incinerators to waste transfer stations, and 2,000 users of radioactive substances.

We permit 40,000 discharges to surface and groundwater, 31,000 water abstractions, and about 8,000 land drainage consents. Jointly with the Health and Safety Executive we regulate 850 major accident hazard sites. We register around 80,000 waste carriers and brokers and 340,000 low-risk waste activities.

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Other lower-risk sites and activities are regulated by Local Authorities. Many more activities are not actively regulated at all, although we provide advice, have powers to intervene in the event of environmental harm such as pollution incidents, and prosecute when we need to.

Air quality

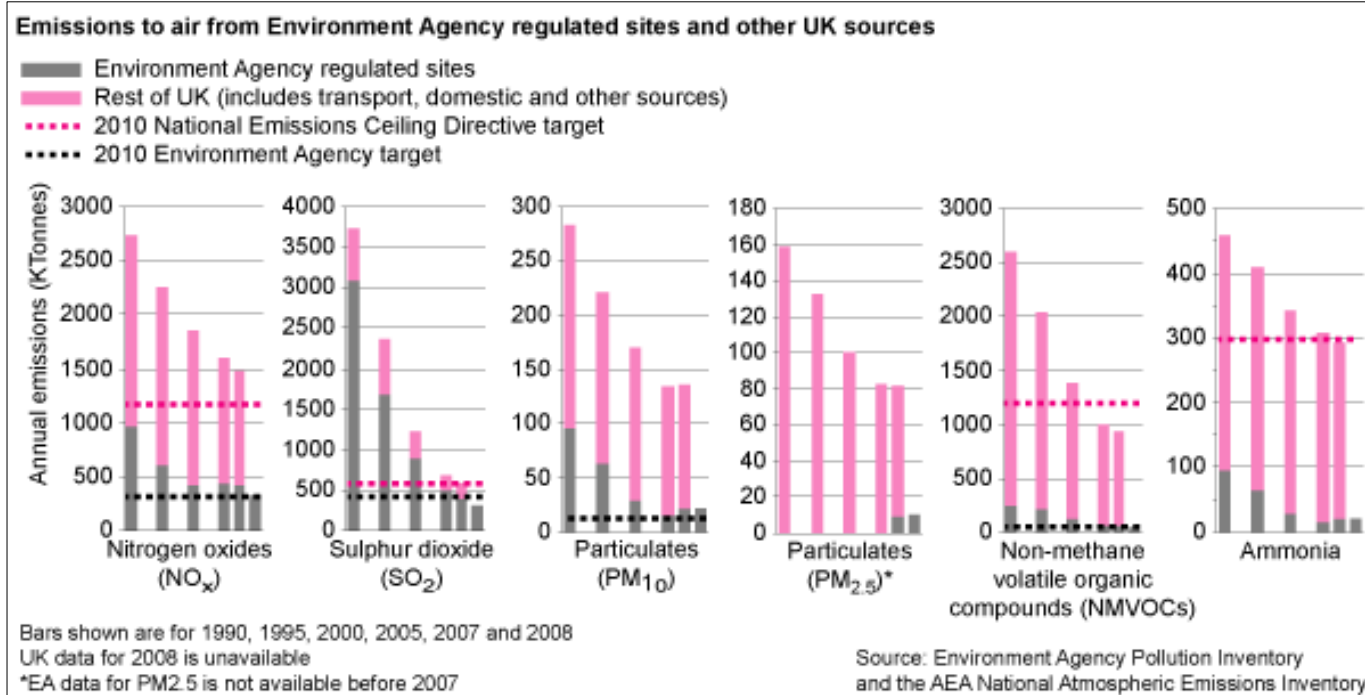
We regulate releases to air from major industry to protect human health and the environment. We work to national and international targets and ensure that the sites we regulate do not breach local air quality standards. We have prioritised SO₂, nitrogen oxides (NO_x) and PM₁₀ in the past because these pollutants have the greatest impact on human health and the natural environment.

Sites we regulate under the Environmental Permitting Regulations (EPR) emit 68 per cent of UK SO_x, 28 per cent of NO_x, 16 per cent of PM₁₀ and about 40 per cent of greenhouse gases.

Emissions from industry we regulate are likely to meet 2010 target levels. Emissions from the UK as a whole are expected to exceed air quality objectives for particulates (PM₁₀) and nitrogen dioxide (NO₂). The UK has applied to the European Commission for a time extension to meet air quality limits for PM₁₀ in eight areas of the UK. In 2007 the UK was Europe's biggest producer of NO_x, accounting for 14 per cent of the EU total.⁴ The main source is transport – 18 per cent of major urban roads are expected to exceed air quality standards for NO₂ in 2010.⁵ Nitrogen dioxide (NO₂) and nitric oxide (NO) are both oxides of nitrogen and together are referred to as NO_x.

Environmental Permitting Regulations (EPR)?

EPR aims to protect the environment while minimising administrative burden on businesses. It replaces the various regimes we used in the past to regulate industry, such as PPC (pollution prevention and control), IPC (industrial pollution control), WML (waste management licensing) and will include consents to discharge to water (most relevant to sewage treatment works). Consolidating these regimes makes regulation simpler and less expensive for businesses and for us.



It is likely that there will be a relative reduction in emissions to air because of a fall in production during the economic recession. Once the economy improves and production increases, there is a risk that emissions will increase unless efficiency improves.

Greenhouse gases

The industry we regulate under the Environmental Permitting Regulations (EPR) is responsible for about 40 per cent of UK greenhouse gas (GHG) releases.

Limits for carbon dioxide (CO₂) are set under the EU Emissions Trading Scheme (EU ETS) and Carbon Reduction Commitment (CRC) Energy Efficiency Scheme and not in our EPR permits. We run the EU ETS and will be

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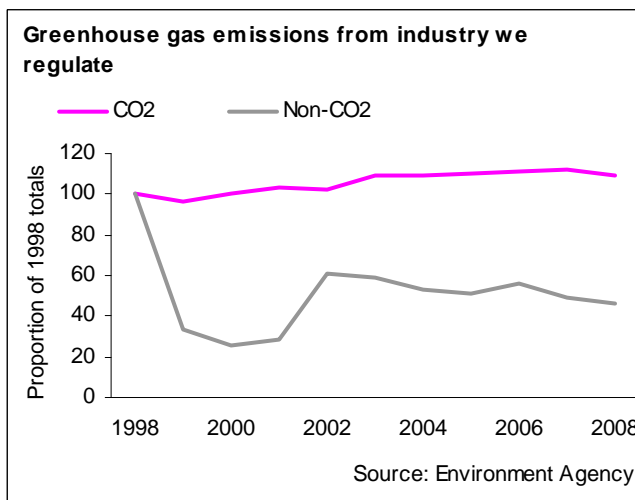
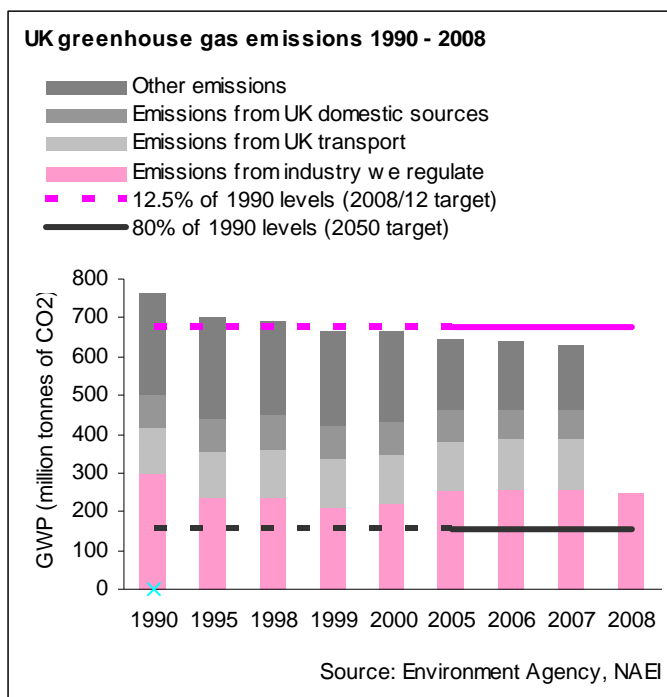
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responsible for CRC. We set limits for other greenhouse gases (GHG) under EPR if they're being released at a level which could cause other environmental impacts. Uptake of best available techniques at the sites we regulate has halved emissions of non-CO₂ greenhouse gases.



Best available techniques.
A selection of techniques to protect the environment that should achieve an appropriate balance between realising environmental benefits and costs occurred by operators (Part 1 Section 3 of the Pollution Prevention and Control (England and Wales) Regulations 2000).

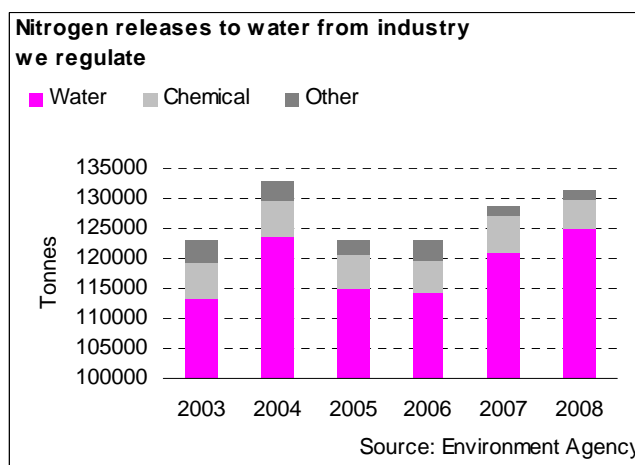
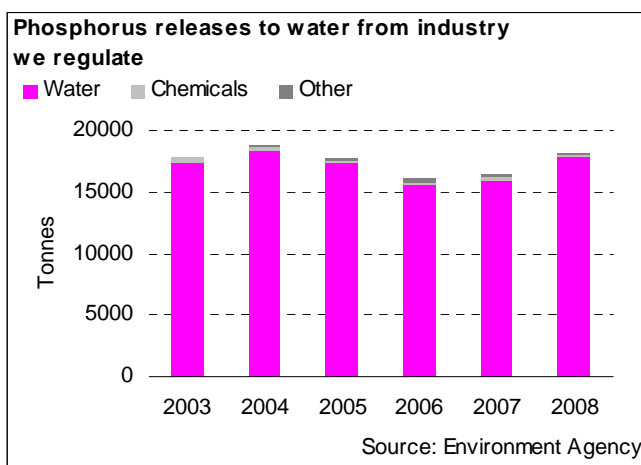
Water quality

Businesses are responsible for one-quarter of Water Framework Directive river failures (11 per cent from the water industry and 13 per cent from agriculture).

Nutrient (nitrogen and phosphate) pollution has been identified as one of the key threats to achieving good water quality under the Water Framework Directive. Diffuse pollution is a particular problem, but the contribution from point sources – like sewage treatment works – also needs to be managed.

An estimated 63 per cent of phosphate⁶ and 35 per cent of nitrate⁷ comes from sewage treatment works and other industry. Most of the remainder is from diffuse agricultural sources.

The quality of our bathing waters has improved. In 2008, 97 per cent of bathing waters in England and Wales met water quality standards compared to 78 per cent in 1990.⁸ This is primarily due to investment by the water industry and our work to help target investment to get the biggest benefits for the environment.



Land quality

In some places industry has left a legacy of contaminated land. We have brought more than 3700 hectares of contaminated land back into beneficial use so far and have a target of 4200 hectares by the end of 2009/10. This includes 35 designated 'special sites' that we have responsibility for.⁹

Waste

About 330 million tonnes of waste is produced in the UK every year. Industry we regulate produced about 15 million tonnes of waste in 2008, 14 per cent less than in 2005.

More than half of the waste produced by industry we regulate is recovered – 58 per cent in 2008.

Of the waste disposed, more than half goes to landfill. This was three and a half million tonnes in 2008, one third less than in 2005.¹⁰ More than 80 per cent of this is from the energy, metals and chemicals sectors and residues from waste incineration.

Pollution incidents

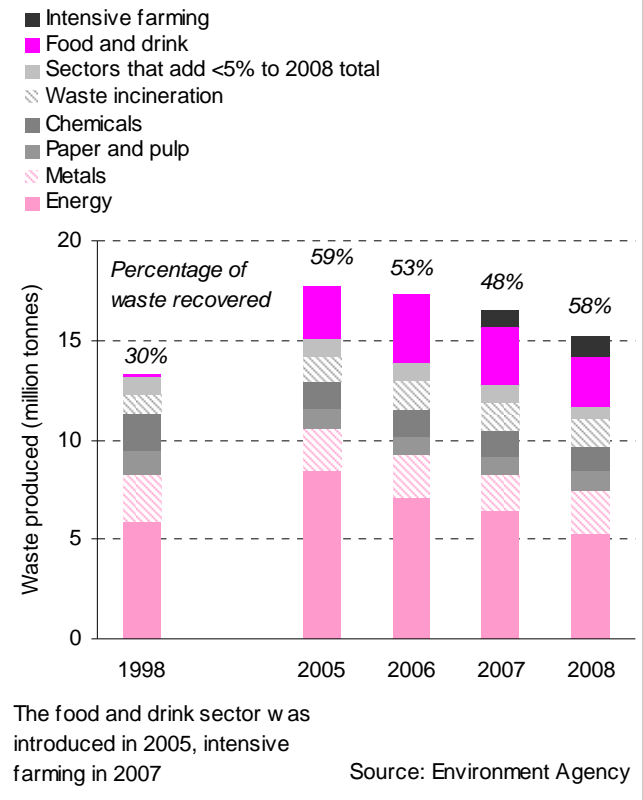
Industry caused 56 per cent of serious pollution incidents. But the number of incidents (from both industry and other sources) is going down, and is now the lowest on record. We're meeting our target to reduce serious pollution incidents by 10 per cent every year.

Environmental management

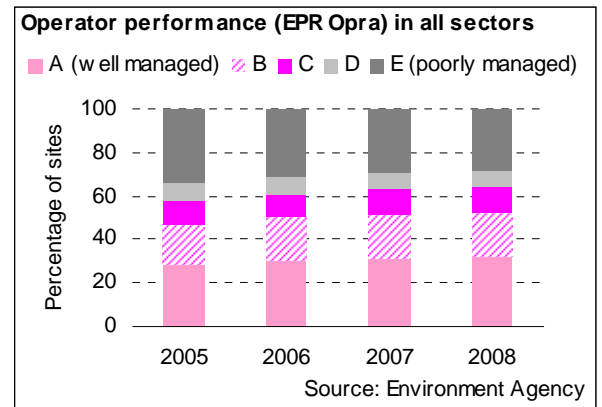
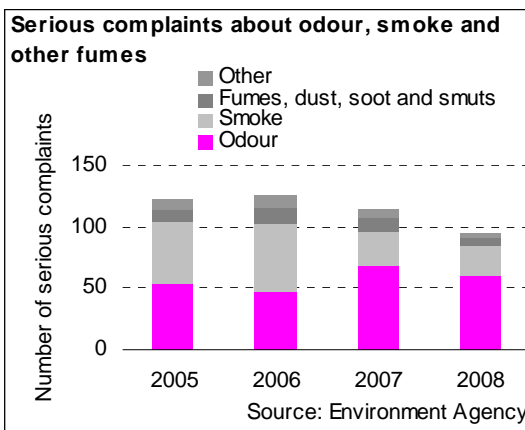
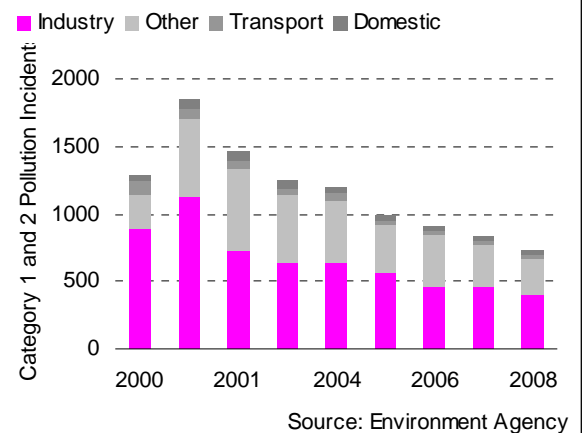
Sites we regulate under EPR are now better managed, environmentally:

- Fewer sites we regulate have poor environmental performance scores (D or E operator performance score under our Opra rating).
- More sites have an accredited Environmental Management System (EMS) in place – nearly 2200 in 2008. We are meeting our target to increase the number of sites with accredited EMS by five per cent each year.
- Sites are breaching their permits and licences less frequently. In 2008 there were 1462 serious Compliance Classification Scheme (CCS) breaches, well below our target limit of 2000.

Waste produced by industry we regulate



Serious pollution incidents to all media



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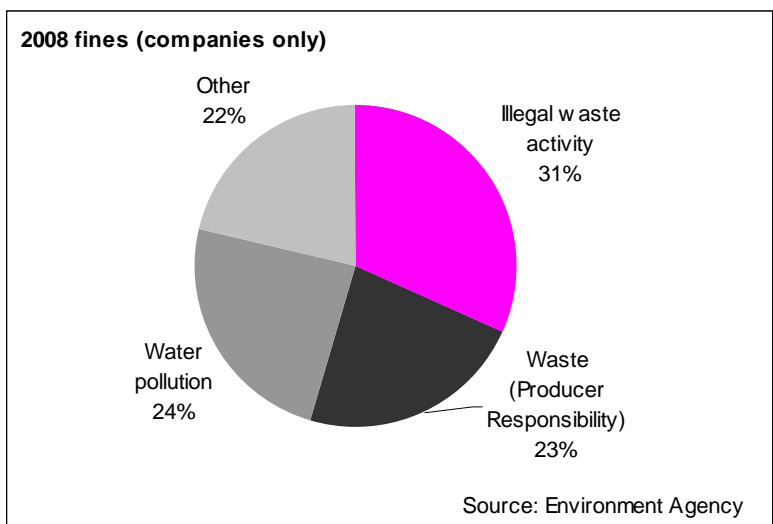
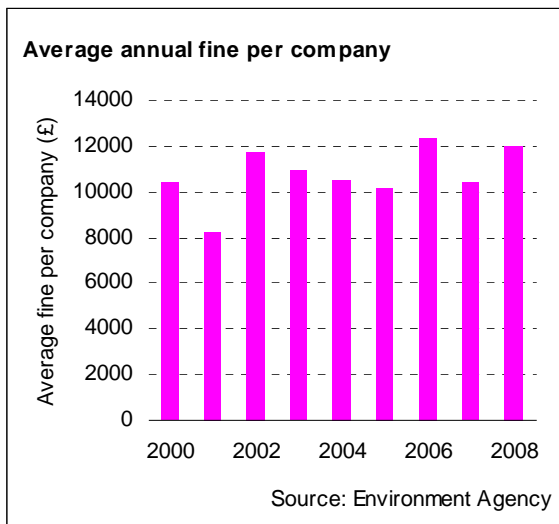
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- The sites we regulate need to be good neighbours as well as responsible operators. We received more than 90 serious complaints about nuisances like odour, dust and smoke in 2008 (20 fewer than in 2007, and 30 fewer than 2005 and 2006). 77 per cent of these were from sites we regulate. Two thirds were about odour, primarily from waste treatment and disposal sites.

We advise and assist businesses to comply with environmental legislation, but as a last resort we prosecute companies that harm the environment. In 2008 we took 250 companies to court. More than £3 million was awarded in total fines. Each year, companies have been fined between £10,000 and £12,000 on average.

The ten companies who were fined the most in 2008 (see table below) accounted for 30 per cent of the total annual fine in 2008.

Company	Sector	Fine (£)	Events	Reason for prosecution
Western Wines Ltd	Other (Wholesale)	225,000	6	Packaging (producer responsibility)
Anglian Water Services Ltd	Water	173,000	6	Water pollution, breach of consent
MID Developments Ltd	Other (Construction and demolition)	97,000	3	Illegal waste activity
Eurowaste Recycling Ltd	Waste	63,000	9	Illegal waste activity, breach of permit
R C Deacon Ltd	Other (Transport)	62,100	1	Illegal waste activity, breach of permit
Hills Waste Solutions Ltd	Waste	60,800	5	Illegal waste activity, breach of permit
John Craxford (Plant Hire) Ltd	Other (Construction and demolition)	60,000	8	Illegal waste activity, breach of permit
Blowplast Ltd	Other (Manufacturing)	56,000	14	Packaging (producer responsibility)
Merisant UK Ltd	Other (Wholesale)	54,000	12	Packaging (producer responsibility)
South West Water Ltd	Water	51,600	10	Water pollution, breach of consent



More than half of the total fines in 2008 were for illegal waste activity or producer responsibility (packaging) offences. About a quarter were for water pollution and the rest were for other offences such as breaching permit conditions.

In 2007, 98 per cent of FTSE-All share companies reported environmental performance in their annual reports. But less than half (42 per cent) gave quantitative figures.

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The source of the problem

The relative impacts of the businesses we directly regulate are:

		Chemicals	Energy	Farming Pig and poultry ¹¹	Food and drink	Metals	Minerals	Nuclear	Waste	Water	Other
Pollution incidents number and (% of all serious industrial incidents)		2 (<1%)	3 (<1%)	113 (28%) [14 (4%)]	28 (7%)	7 (2%)	7 (2%)		146 (36%)	61 (15%)	36 (9%)
Releases to air (% of releases from sites we regulate)	SO _x	1	77	0	<1	17	4		<1	<1	<1
	NO _x	3	81	0	<1	8	5		2	<1	<1
	PM ₁₀	<1	35	23	2	34	4		<1	<1	<1
Greenhouse gases (%)		5	73	<1	1	9	5		6	<1	<1
Waste production & management (total) (%)	waste production (total) (%)	8	35	6	16	14	3		9 ¹²	<1	7
	waste recovered (% of waste produced by that sector)	26	56	49	81	63	69	69 ¹³	37 ¹⁴	6	84
Operator Performance	% of sector in band A	51	68		40	58	67		27		38
	% of sector in band D & E	2	1		7	5	2		43		8
Serious permit breaches: number and (% of all serious breaches) ¹⁵		14 (1%)	2 (<1%)	16 (1%) [6 (<1%)]	32 (2%)	36 (3%)	29 (2%)		852 (59%)	78 (5%)	391 (27%)
% of 2008 fines		3	0	2 [<1]	5	<1	1		25	14	50

Our response: the future

Our Corporate Strategy describes how we will work with businesses to make sure that they take responsibility for reducing their impacts on air, land and water, and to use resources efficiently and minimise waste disposal. We will also involve and engage with local communities where sites are of significant public interest or concern.

¹ Environment Agency 2008, Air quality and deposition benefits from Environment Agency regulation. Science report SC060108

² Cabinet Office, 2008 Learning Lessons from the 2007 Floods, an independent review by Sir Michael Pitt

³ Defra, 2007. Quantification of the business benefits of resource efficiency. Available at randd.defra.gov.uk/Document.aspx?Document=EV02036_6754_FRP.pdf

⁴ European Environment Agency (2009) European Community emission inventory report 1990–2007 under the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP)

⁵ Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Volume 2.

⁶ White, PJ and Hammond, JP (2006) Updating estimates of the sources of phosphorus in UK Waters. Defra funded project WTO701 CSF

⁷ Hunt, D.T.E., Dee, A.S. & Oakes, D.B. 2004. Updating the estimates of the source apportionment of N to UK waters. Phase 2. Defra report by WRc plc. <http://www.fwr.org/defrawqd/wqd0002.htm>

⁸ Refers to the improvement against mandatory (basic) standards.

⁹ For more information see Environment Agency, 2009. Dealing with contaminated land in England and Wales.

Available from our publications catalogue at www.environment-agency.gov.uk/research/library/publications/default.aspx

¹⁰ this is based on data from the sites we regulate that produce waste, rather than waste management sites

¹¹ More than one thousand large pig and poultry units regulated under EPR. There are more than 160,000 farms in England and Wales, and we have some regulatory role for all of them.

¹² Incineration subsector only

¹³ Includes material reused and recycled on site.

¹⁴ Incineration subsector only

¹⁵ Includes breaches of any permit – includes EPR permits, consents to discharge and abstraction licences.

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