



A new direction for UK resource strategy after Brexit

Executive summary

“Following Brexit, Defra will, for the first time in decades, be solely responsible for setting the UK’s direction of travel on resource policy.”

For the past 45 years, environmental governance has been shared between the European Union and the UK. This arrangement has delivered significant improvements to UK resource use, as well as areas like water and air quality. But, following Brexit, the Department for Environment, Food and Rural Affairs (Defra) will, for the first time in decades, be solely responsible for setting the UK’s direction of travel on resource policy.

Over the next few years, Defra will need to reinvent the UK’s agricultural subsidy regime, draw up new arrangements on fisheries and advise on trade deals heavily focused on food products. These are extraordinary challenges in themselves, but they will happen in parallel with the more mundane, but highly complex, process of transposing more than 1,100 pieces of environmental legislation from the EU to the UK.

In the face of these considerable demands, there will not be much capacity for fulfilling the rest of Defra’s brief. This policy insight outlines two critical challenges it will have to manage effectively on resources policy over the next two years to achieve a good outcome post-Brexit:

1

Managing divergence from existing EU waste and resource governance

Differing environmental standards create ‘non-tariff barriers’ and competitive distortions that harm trading arrangements. It will be necessary to retain or recreate the governance institutions ensuring adherence to legislation, including laws on waste, recycling, chemicals and product standards, and to guarantee sufficient equivalence so the UK can continue trading freely with the EU.

2

The creation of new policy

Failing to update and improve legislation once it is transposed risks opening an unpopular and environmentally harmful domestic policy gap after March 2019. We argue that

the UK should focus its efforts on enhancing resource efficiency and productivity to suit the UK's particular circumstances.

To fulfil these tasks and avoid obstructions to future trade with other European nations, we recommend that the UK should:

Continue to co-operate on ecodesign standards and apply them domestically

Meeting ecodesign and other product standards will be necessary for UK businesses to sell into the EU market, even in a World Trade Organisation trading scenario. The UK should continue to co-operate with the EU on ecodesign and ensure product standards are applied domestically. Lower standards in the UK would allow imports of poor quality goods, undermining domestic businesses, saddling consumers with higher bills and inferior products, and increasing resource consumption and energy use.

Negotiate full access to the REACH regime

The EU's REACH (Registration, Evaluation, Authorisation and restriction of Chemicals) regulation is the most advanced system in the world for protecting people and the environment from thousands of harmful chemicals. Attempting to create a UK equivalent would be enormously expensive and time consuming. Some believe it will be impossible, as a single country cannot replicate its scope and expertise. Leaving REACH while maintaining its rules could make the UK vulnerable to legal challenges from businesses wanting to use potentially dangerous chemicals. Maintaining REACH and accepting the jurisdiction of the Court of Justice of the European Union (CJEU) in this area is necessary to keep the same levels of protection from chemicals in the UK.

Maintain waste policy principles and co-operate on evolving regulations

Waste rules, guided by underlying principles such as polluter pays and the precautionary principle, exist to prevent

“Failing to set further targets would undermine investment in recycling, and reduce economic and environmental gains.”

environmental hazards, including illegal waste burning, dumping in rivers and fly-tipping. The regulations and accompanying case law are highly complex and must continually evolve to incorporate technological progress, address new environmental risks and maintain trade equivalence. The UK should keep the guiding principles in law and apply existing EU case law on waste. It should continue to co-operate with other European countries on improvements, for example via innovative cross border forums like the North Sea Resources Roundabout.

Ensure an effective governance regime

The UK’s environmental governance regime includes monitoring, required by EU rules; enforcement, underpinned by the European Commission; and legal redress, currently provided by the CJEU. For effective monitoring in the future, the UK should co-operate with the European Environment Agency and retain equivalent monitoring standards. If the UK leaves the single market, it will need a new independent regulatory body with powers from all four UK administrations to ensure compatibility and political independence.

The role of the CJEU is more complicated: for UK businesses selling into the EU, ecodesign standards and chemical use will be governed by the CJEU even in a ‘no deal’ scenario, and these are too valuable for the UK to lose. We urge the UK to reconsider its hard line on the CJEU.

At the same time as preparing for Brexit, Defra is formulating a new resource and waste strategy for England. To avoid problematic gaps and to ensure this strategy is fit for the future outside the EU, we recommend it includes the following:

New targets, including for recycling, that increase resource efficiency and productivity

Polling shows that 94 per cent of people in the UK want to recycle. The UK’s current recycling targets only go up to 2020. Failing to set further targets would undermine investment in recycling, and reduce economic and environmental gains.

As the UK negotiates Brexit, it should adopt the same targets as the EU for 2030 and act on its own evaluation that existing targets could be improved. Goals should also be set for minimisation, commercial and industrial waste and resource productivity.

Mandatory food waste collections from households and businesses

The government's *Clean growth strategy* identifies waste policy as a major contributor to achieving UK carbon budgets, with food waste alone contributing more than four per cent of UK emissions. It has committed to send no food waste to landfill by 2030. To achieve this, the government should mandate separate food waste collections for treatment through anaerobic digestion. This would ensure that this carbon intensive waste stream is minimised and treated in a way that reduces emissions while producing energy and an alternative to chemical fertilisers.

Extended producer responsibility, accounting for the full lifecycle of products

Producers, who control product and packaging design, should be made responsible for the environmental costs associated with the whole lifecycle of their products through extended producer responsibility (EPR). Packaging producers, for instance, cover only ten per cent of the costs they impose on the waste and recycling system. The UK should institute a producer funded deposit return scheme for single use beverage containers, and reform other packaging and product rules to make polluters pay more.

UK resources policy at a crossroads

“The UK faces a stark choice: to embrace a progressive resource efficiency agenda or revert to simple waste management.”

How the resources sector performs is vital to both the economy and the environment. Although there has been little domestic policy support in England over the past decade, the waste sector alone employs 105,000 people in 5,329 businesses, with a combined turnover of £18 billion, contributing over £6.5 billion in gross value added (GVA) to the UK economy.¹ If repair, reuse and leasing activities are added, the contribution rises to £41 billion in GVA and 672,000 jobs.² These industries already reduce raw material use and leading manufacturers are improving their efficiency, but it is still estimated that we would need three planets if everyone used resources at the rate we do in the UK.

Today, half of our recycling is exported overseas, depriving the economy of valuable assets and jobs. Britain landfills at least £3.8 billion's worth of resources annually and sends plenty more to incineration. A lack of government support for remanufacturing means it contributes only £2.4 billion to the economy, less than half of its potential £5.6 billion.³

How we manage resources also has climate change implications. Moving to a more resource efficient economy could reduce CO₂ equivalent emissions by up to 27 million tonnes a year by 2030, equal to more than five per cent of UK emissions in 2015.⁴

As the government negotiates Brexit, planning for both a potential 'implementation phase' to avoid a cliff edge and a final settlement, it is a time of great risk but also significant opportunity. After decades of transcribing EU directives, Defra will become responsible for both the primary legislation and our overall approach. The UK faces a stark choice: to embrace a progressive resource efficiency agenda or revert to simple waste management, which would be to the detriment of the economy, human health and the environment.

A brief history of resource legislation

Before the 1970s, environmental regulation in the UK was largely reactive. For waste management, the first dedicated legislation was the Deposit of Poisonous Waste Act, passed in 1972 in response to outcry over cyanide dumping.

The same year, the UK joined what would become the EU and our approach became more forward looking and entwined with that of our European neighbours. The first European Environmental Programme in 1973 aimed to prevent differing environmental standards from creating trade barriers and market distortions. Co-ordination helped the UK to address environmental problems that were not necessarily confined within international borders but affected citizens' quality of life.

But we did not always enthusiastically adopt environmental policy. Until the 1980s, the UK was known as the 'dirty man of Europe'. This was partly down to a reliance on landfill, coupled with a 'dilute and disperse' approach, allowing polluted water to seep into surrounding soils, on the incorrect premise that toxicity would be naturally resolved.

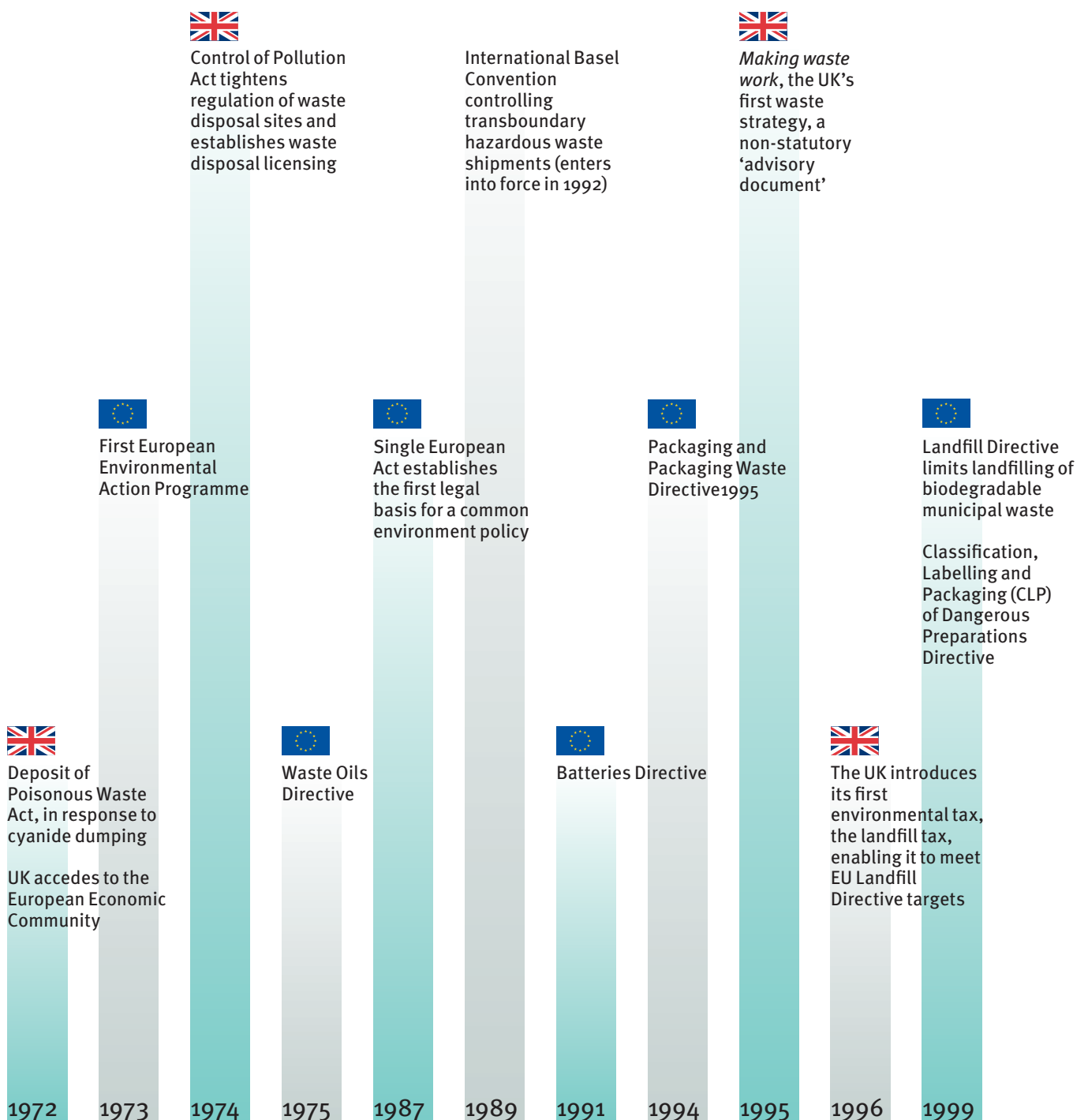
It was not until the early 2000s that the UK started becoming a recycling society, stimulated by the landfill tax and a recycling target of 25 per cent by 2005 for local authorities, which many thought impossible. The early and mid 2000s marked a high point for long term policy vision. The *Waste strategy for England 2007* increased recycling targets to 40 per cent by 2010 and 50 per cent by 2020 and introduced waste minimisation targets (now dropped).

In 2013, the coalition government announced it would "step back" from waste policy work, and, unlike the devolved nations, England only has the EU's 2020 50 per cent recycling goal, which is looking increasingly beyond reach.⁵

For its part, the EU is modernising again by negotiating a Circular Economy Package to move towards an economy where resources are kept in use, waste is designed out and negative impacts are minimised. With the package due to be agreed by the end of 2017, but not transcribed domestically by Brexit day, it is unclear whether the UK will adopt the package.

England, meanwhile, has recently announced plans for its own resource and waste strategy, which is a new opportunity to drive resource efficiency forward.

The history of UK resources legislation



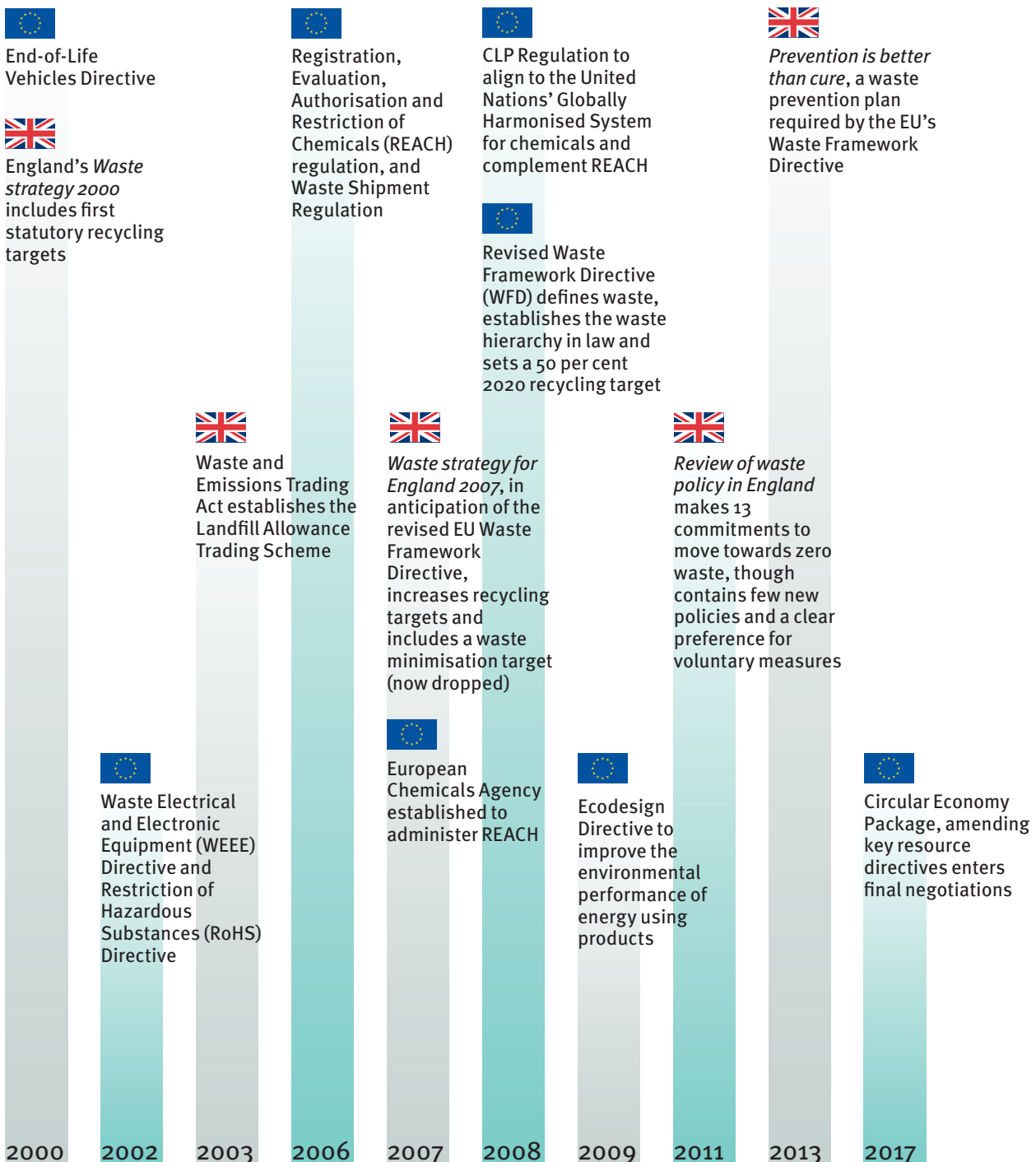


Domestic legislation



EU legislation

For more detail on the most significant current EU directives and regulations for the resources sector, see the annex on page 23.



“Even if Brexit results in a Swiss style bilateral deal, where EU legislation does not directly apply, we would be expected to meet environmental standards.”

The impact of Brexit

The UK’s decision to leave the EU could have significant ramifications for resource and waste management, and uncertainty is already hindering long term planning and business confidence.⁶ With exit negotiations underway, considerable doubt remains over what form Brexit will ultimately take and how far our environmental legislation will diverge from the EU’s during the potential ‘implementation phase’ and beyond.

Several scenarios could see the UK retain the environmental acquis (the accumulated legislation, acts, and decisions that comprise EU law) as well as maintaining parity with future changes. These include a European Economic Area (EEA) type arrangement like Norway’s or a free trade agreement that stipulates compliance with EU laws or standards. The European Parliament says any agreement would be conditional on the UK’s “continued adherence” to EU environmental and other legislation.⁷ The European Council’s negotiating guidelines demand safeguards against “environmental dumping”.⁸

All this suggests that, even if Brexit results in a Swiss style bilateral deal, where EU legislation does not directly apply, we would be expected to meet environmental standards, as is the case with Switzerland’s recycling rates. Divergence on resource policy – unless the UK goes further than its EU neighbours – would reduce our ability to trade with the EU. To avoid this, the government should guarantee that it will at least match Europe’s resource ambitions and targets.

What are the Brexit risks?

During this parliament, government attention and civil service time will be dominated by converting the EU's *acquis communautaire* into domestic legislation. Our analysis of EU legislation (see the annex on page 23), in conjunction with expert interviews and stakeholder workshops, has identified areas of particular risk to resource policy during this process.

Given the monumental undertaking of converting EU legislation into UK law, and the capacity shortage in government as it faces this task, we suggest the policy areas listed below should be the focus, first to bank the successes of the current resource policy framework and then to build momentum for the upcoming resource and waste strategy for England.

Summary of recommendations

	Policy area	Desired outcome
Retaining successes of past policy	Ecodesign	The UK continues to co-operate with Europe on product standards, applying them domestically as well, both to enable trade and prevent the country becoming a dumping ground for low quality goods. By focusing on designing for durability, repairability and reusability, the benefits to consumers and the environment will increase.
	Chemicals	The UK negotiates full access to the EU's world leading REACH regime. Creating a UK counterpart would be expensive and complicated, while following decisions without full access to the database could leave the UK open to legal challenges.
	Waste rules	To prevent environmental harm and maintain trade equivalence, the UK continues to apply existing EU rules and case law on waste, including its definition, and co-operates to improve it, as well as maintaining guiding principles, including polluter pays and the precautionary principle.
Building momentum for future strategy	Resource targets	The UK adopts the headline recycling targets from the forthcoming Circular Economy Package and enhances them by adding targets for minimisation, commercial and industrial waste and resource productivity.
	Food waste	The UK ensures that organic waste is minimised and captured for treatment through universal food waste collections for households and businesses. This will also ensure England meets the zero food waste to landfill target set in the UK's <i>Clean growth strategy</i> .
	Producer responsibility	Manufacturers, who control product and packaging design, become more responsible for the whole lifecycle of their products through the application of extended producer responsibility principles.

“Mandating the durability of products and modular design could save substantial amounts of money and resources.”

Continuing co-operation on ecodesign

Why does it matter?

Ecodesign rules have reduced energy consumption, saving UK households an average of £290 per year, and have begun to reduce waste. Manufacturers design products for large markets, which limits the ability of the UK to exceed EU standards alone. Conversely, if the UK does not apply ecodesign rules domestically, British consumers will be exposed to shoddy products banned by the EU.

What does a positive outcome for the UK look like?

Continued co-operation on, and domestic application of, EU ecodesign standards.

Rationale

Maintaining EU product standards and accepting CJEU rulings will be necessary for UK businesses to sell into the EU market. Applying them domestically would prevent low quality goods entering a less regulated UK market to the detriment of both consumers and UK manufacturers, who could be undercut in their home market. Although Brexit means the UK will lose its vote on EU ecodesign rules, the UK should maintain technical co-operation with the EU as it expands ecodesign to tackle durability and recyclability.

Our research has shown that mandating the durability of products and modular design could save substantial amounts of money and resources, which the UK would miss out on if it does not apply ecodesign standards. Up to a third of household appliances are not lasting as long as people think they will. For example, if washing machines lasted the 12 years European consumers expect, it would save £3.6 billion and cut 900,000 tonnes of e-waste annually.⁹

Challenge

The EU's Ecodesign Directive has been heavily targeted by deregulators, who have falsely claimed that rules around toasters, vacuum cleaners and energy efficient lightbulbs harm consumers.¹⁰

Overcoming the challenge

Ecodesign is good for consumers. EU standards for lighting, vacuums, boilers and computers will have saved households £290 per year by 2020.¹¹ Rather than leading to a drop in performance, ecodesign drives innovation: vacuum standards saw energy consumption drop as expected, while average carpet dust pickup increased from 72 to 77 per cent, largely due to the regulations.¹² Standards stipulate that vacuum cleaners have to last longer, so consumers do not have to buy new products so often.

Leading electronics producers favour greater ambition. Through the Coolproducts Coalition, companies, including Electrolux, Philips and Bosch, have called for the acceleration of ecodesign regulation, as a more ambitious directive could deliver a net saving of €90 billion a year for businesses and consumers, reduce CO₂ emissions by 400 Mt annually and create up to one million new jobs.¹³

WRAP estimates that longer lasting, repairable and modular products would enable new business models leading to £4.4 billion in financial benefits between 2017 and 2025 for the UK alone, while preventing a million tonnes of waste and saving 14 million tonnes of CO₂ emissions annually.¹⁴

“The UK could become a dumping ground for products containing dangerous substances banned in the EU.”

Retaining the REACH chemicals regime

Why does it matter?

Chemicals, many of them dangerous, are in products all around us, and must be regulated to protect human health and the environment.

What does a positive outcome for the UK look like?

The UK negotiates full access to the EU’s REACH system.

Rationale

REACH (Registration, Evaluation, Authorisation and restriction of Chemicals), supported by the European Chemicals Agency, is the world’s most advanced system for controlling chemicals. Before it was established, industry used chemicals without evaluating their safety, giving the European Commission “justified concern” about significant increases in cancers, endocrine disruptions and environmental harm.¹⁵ Since 2007, REACH has developed a database to assess safety risks and regulate tens of thousands of substances. It replaces dangerous chemicals with safer ones, and makes manufacturers responsible for managing the risks. It also allows free movement of substances throughout the EU.

REACH is a complicated regulation. As it applies directly to member states and is administered at EU level, it will be incredibly difficult to transpose into UK law. Industry and environment sector respondents alike have told an Environmental Audit Committee inquiry that they want “to stay as closely aligned to REACH as possible”.¹⁶

Challenges

In part because full participation implies CJEU oversight, which the government opposes, two arguments have been advanced for a more arms length approach: that it will be possible to abide by REACH’s rulings without full database access, which is only available to full participants in the regime; and that the UK could establish its own chemicals regime.

Overcoming the challenge

Simply copying REACH decisions without full participation is a non starter, it would leave the UK open to legal challenges from businesses that want to use dangerous substances. Without full access to the background information informing decisions to ban or restrict substances, the government could not legally justify them, so it would lose in the courts. The UK could become a dumping ground for products containing dangerous substances banned in the EU.

Setting up a UK REACH equivalent would involve starting from scratch. The UK will not be able to copy the existing REACH database, which covers 25,000 chemicals, and the government has admitted that the cost of taking on the roles currently provided by the European Chemicals Agency could be in the “tens of millions of pounds.”¹⁷ This is likely to be a huge underestimate as, based on a pro rata distribution of current contributions, annual running costs for a chemical agency would likely exceed ten million pounds, before any set up costs are included.¹⁸ Losing REACH would also mean losing existing economies of scale, creating additional costs for both businesses and government.

Moreover, UK businesses will need to abide by and register with REACH to trade in Europe, meaning a UK equivalent would add more unnecessary costs and bureaucracy for industry, while any divergence would subject businesses to conflicting rules. The Alliance of Chemical Associations found 70 per cent of their members think the impact of a separate UK chemical regulatory requirements regime would be negative.¹⁹

Finally, a UK only system would increase animal testing, as any tests would have to be duplicated, and would mean that some chemicals banned in the EU could continue to be used in the UK, as the government has said it might not follow EU bans in some cases.²⁰

The governance gap

The EU's enforcement and compliance regime, with the European Commission (EC) acting as watchdog (or 'guardian of the treaties') and the Court of Justice of the European Union (CJEU) as the arbiter, with the power to levy significant fines, has ensured the effectiveness of resource legislation. This has been especially important for the environment, where most EC infringement proceedings have been pursued, as environment 'commons' are particularly vulnerable, having no individuals or organisations with clear legal and economic interests to defend them.²¹

If the UK wishes to trade with the EU, EC legislation and CJEU rulings will continue to be relevant, at a minimum applying to products sold into the single market and to UK business operations on the continent. CJEU rulings will also need to be taken into account for the UK to adequately regulate chemicals and to maintain trade equivalence, for instance by not undermining definitions of waste. In these areas, the government's hard line on the CJEU will create difficulties.

As laws do not execute themselves and governments do not implement all measures they agree to, a new system of oversight is needed. Environment Secretary Michael Gove's recognition that parliamentary scrutiny and judicial review are not sufficient to "hold the powerful to account", and Defra's promised consultation on creating a new environmental body to avoid a governance gap after Brexit are, therefore, welcome.

Several inadequate alternatives to the EU's systematic oversight and enforcement regime exist. These include independent bodies like the Committee on Climate Change or the now defunct Sustainable Development Commission (SDC). Such organisations are not regulators, cannot enforce policy and have no complaints procedures. As the fate of the SDC shows, they are also at risk of being weakened or abolished over time.

Another option is strengthening parliamentary select committees with power to make the government act, not simply respond to findings. However, while committees are separate from government, MP members are subject to party discipline and electoral pressures, meaning political independence could be compromised. They also have no enforcement powers.

A pan-UK environmental regulator

If the UK loses the oversight of the EC and CJEU, perhaps the most effective replacement would be an environmental regulatory body with power and funding from all four UK administrations, which would limit divergence, ensure more political independence and institute a system of checks and balances.

To be effective, such a regulator would need to be:

- established through primary legislation;
- well resourced and technically expert;
- staffed through long term appointments and financed by the four legislatures, with long term budgets to limit political interference;
- able to compel government to produce plans and reports, crucial to both enforcement and meeting future needs;
- able to initiate infraction proceedings against relevant agencies and impose sanctions for non-implementation;
- in charge of a citizens' complaint procedure similar to the model of the EC and in line with UK commitments through the international Aarhus Convention on accessing environmental justice.

“We must prevent conflicting waste definitions and controls that would jeopardise the health of people and the environment in the UK.”

Maintaining waste regulations, definitions and principles

Why does it matter?

Rules and definitions, guided by principles, are needed to ensure that waste is properly treated, activities like river dumping, fly-tipping and backyard waste burning are prevented and trade equivalence and regulatory stability are maintained.

What does a positive outcome for the UK look like?

The UK continues to co-operate on, and work to improve, the rules and definitions governing how waste is treated, while adhering to guiding principles.

Rationale

The EU's Waste Framework Directive sets a common definition of waste and aims to ensure it is recovered or disposed of responsibly through permitting, registration and inspection requirements. Other related legislation and a large body of case law govern waste treatment, including placing strict controls on hazardous waste. As we leave the EU, we must prevent conflicting waste definitions and controls that would jeopardise the health of people and the environment in the UK, as well as our future trading relationship with the EU.

Already, the Environment Agency estimates that waste crime costs as much as £1 billion a year to legitimate businesses and in lost Treasury revenue, in addition to substantial clean up costs incurred by local authorities and landowners.²² Illegal activity, which would increase with a less strict regulatory and enforcement regime, also poses significant risks to health and the environment through toxic fumes from burning, contamination of land and waterways with dangerous substances, flood risks and so on.

Challenge

Waste regulations are considered burdensome to businesses and the definition of waste has been cited as “operationally unhelpful and restricting positive action” such as increasing reuse and repair activities.²³

Overcoming the challenge

When the government undertook its extensive Cutting Red Tape review in 2016, the waste and recycling sector was one of the first it targeted. Consultation respondents highlighted that the focus would be better placed on enforcing the current regulatory framework to save businesses money and allow them to grow and innovate. Many of the problems identified were in the domestic application of the framework rather than the regulations themselves. These could be solved by resourcing the Environment Agency to: offer more guidance to businesses handling waste; improve the permitting process by making it more timely, consistent and transparent; evaluate and monitor risks; and identify and stop waste crime. As for the definition of waste (see opposite), a 2014 Defra discussion paper suggested that it is the interpretation and application by the regulatory regime rather than the definition of waste that presents barriers to reuse and repair. Worryingly, the Environment Agency's Definition of Waste Panel has been closed for more than a year, “whilst its role and purpose is reviewed”.²⁴

The Environment Agency has now announced a consultation on reopening the panel. If it were able to consider cases, aid businesses and work on waste criteria with initiatives like the North Sea Resources Roundabout, waste could be used as a resource without altering its definition. This would improve resource efficiency while allowing the UK to stay synchronised with the EU's extensive technical notes and policy on definition, which will be necessary for any future trading relationship.

The common definition of waste

One of the main aims of the EU's Waste Framework Directive was to establish a common definition of waste to ensure equivalence across member states, as well as to develop concepts that help to reclassify waste as resources. These are:

Waste

Any substance or object which the holder discards or intends or is required to discard.

By product

A material that is not deliberately produced, but is not waste when it is commonly used for a specific purpose and where a market exists for it.

End of waste

The point at which something that was waste becomes a new non-waste product or material.

Underlying principles

Simply transferring the entire body of EU laws and rules to sit on the statute books in the UK will not be sufficient to truly protect human health and the environment. Over the past 45 years, the letter of EU law has been underpinned by principles guiding a long term vision of sustainability and environmental benefits that has provided coherence and improved the functioning of laws. In the realm of resource use, these principles include:

Waste hierarchy

Waste management strategies must prevent waste generation and reduce harmfulness as a first priority. When this is not possible, the order of treatment preference is: reuse, recycling, recovery for energy and safe disposal.

Precautionary principle

The absence of full scientific certainty should not be used as an excuse for failing to act in response to environmental or human health risks. The burden of proof lies with proponents of an activity rather than potential victims.

Proximity principle

Waste should be disposed of as close as possible to where it is produced.

Producer responsibility

Product manufacturers and other economic operators should be accountable for the full lifecycle of products, including when they become waste.

Polluter pays

Those responsible for generating waste should be required to pay for avoiding or alleviating its adverse consequences.

Although principles, including the waste hierarchy, are mentioned in specific pieces of UK legislation, the Withdrawal Bill does not currently commit to maintaining the values that underpin our environmental legislation. These will have to be enshrined in the UK statute book, to avoid constraining Brexit negotiations and future trade with the EU, as well as ensuring proper functioning of our laws in future and the best environmental outcomes.

“The EU has made it clear that so-called ‘environmental dumping’ would impede UK-EU trade.”

Increasing resource targets

Why does it matter?

Targets are measurable incentives that drive action towards resource efficiency and provide a stable policy environment for investment. Unlike the devolved administrations, England’s current recycling targets will expire in 2020, with no guarantee the country will accept the new EU targets currently under negotiation.

What does a positive outcome for the UK look like?

The UK as a whole adopts the forthcoming EU Circular Economy Package and goes beyond, with targets for minimisation, commercial and industrial waste and resource productivity.

Rationale

Increasing recycling and minimising waste are good for the economy and the environment. Analysis from Defra indicates that 65 per cent recycling would result in £2.5 billion in waste sector savings, £4.9 billion in social savings and £2.4 billion (and 44 MtCO₂e) greenhouse gas emission savings by 2030. Analysis by Eunomia for SUEZ shows that a transformation towards a circular economy, including adopting the Circular Economy Package’s potential 70 per cent recycling target, would deliver economy wide gross value added (GVA) of £9.1 billion a year.²⁵ Our research has also shown that a more circular economy has the potential to employ 667,000 people at different skill levels by 2030, with most benefit going to regions where unemployment is currently highest, including the North East and West Midlands.²⁶

Furthermore, we know that people want to recycle. Ipsos Mori has found that addressing waste is consistently in people’s top two environmental concerns and recycling is ‘personally important’ to 94 per cent of people.²⁷

Meeting targets also matters for the UK’s trade relationship with the EU. Norway is subject to EU environmental directives including recycling targets through the European Economic Area agreement, and Switzerland has higher recycling rates than the EU as a whole, which minimises trade distorting divergence. The EU has made it clear that so-called ‘environmental dumping’ would impede UK-EU trade.

Challenges

The government has opposed recycling targets for several reasons. It considers the Circular Economy Package proposals to be “too high to be achievable”. It prefers voluntary schemes and says targets can result in perverse impacts, such as the increase in free garden waste collections to meet weight based targets.

Overcoming the challenges

The UK has only made rapid progress on recycling following the introduction of targets, raising recycling from 10.3 per cent in 1999–2000 to 27 per cent by 2005–06.²⁸ In contrast to England, Wales has more ambitious targets and has already achieved a 64 per cent recycling rate. While such improvements require investment, as well as proactive policies, local authorities in Wales are saving twice as much as it costs them to meet the targets.²⁹ And, as Defra’s own analysis for England shows, a high recycling rate would result in nearly £10 billion in annual savings.

Without targets to drive action, there is a risk that recycling rates will continue to stall and fall, which would mean more material sent to landfill or incineration, contravening the waste hierarchy, destroying resources, creating negative carbon and pollution implications, and potentially stranding domestic reprocessing assets. Currently, at least £3.8 billion of resources are dumped in UK landfills each year, which account for 2.6 per cent of the UK’s

“To maintain momentum and limit the risk of further perverse outcomes, the UK should target all waste, not just household waste.”

total CO₂ emissions, and incineration also destroys potentially valuable recyclable material and has similar climate change impacts to landfill.³⁰

In contrast to targets, voluntary measures alone have a mixed record. Multiple studies, including a review by RSPB, have questioned voluntary measures’ usefulness in achieving environmental policy outcomes, while OECD research has suggested that voluntary targets do not normally go beyond what would have happened anyway.³¹

In the UK, WRAP oversees multiple voluntary agreements to improve resource use in sectors including grocery, electronics and clothing, with the majority of targets being met. In general, however, most benefit is achieved when they are backed by a credible prospect of government regulation if industry does not deliver.

On the issue of weight based targets, the government is right about the perversity of free garden waste collections. This can be addressed without weakening recycling targets, via setting overall waste reduction targets; incentivising community composting; only offering separate garden waste collections where home composting is not possible; or modulating fees for home composting. More broadly, the government should start to measure the carbon implications of recycling to guide future policy.

To maintain momentum and limit the risk of further perverse outcomes, the UK should target all waste, not just household waste, which accounts for only 13.7 per cent of total waste arisings. Nearly 60 per cent comes from construction, demolition and excavation.³² A lack of reliable data is hampering action, so the government should mandate that businesses, like councils, record waste information electronically and then implement both recycling and waste minimisation goals for all waste streams.

Finally, the government’s *Clean growth strategy* indicates the upcoming resource and waste policy will focus on resource productivity through efficient manufacturing processes. Targets would be particularly welcome but, as the UK has a limited manufacturing sector, it is vital that resource productivity measurements account for all the materials used throughout the whole supply chain.

What impact will Brexit have on the refuse derived fuel market?

The Environment Agency only started permitting the export of refuse derived fuel (RDF) in 2010, but its market reached 3.6 million tonnes in 2016.³³ Our waste found a home in northern European countries that had invested in substantial incineration capacity that they were unable to meet because of increases in recycling and reductions in residual waste. While UK exporters still had to pay to get rid of RDF, landfill tax and diversion targets made European incinerators an attractive destination.

The pound’s post-Brexit plummet has impacted the RDF export market, which is largely conducted in euros. It has meant the gate fees paid by UK exporters have increased. This problem could be exacerbated if the UK leaves the customs union. Material could become subject to tariffs under World Trade Organisation rules or face non-tariff barriers like conformity assessments and rules of origin checks, which would make accessing the single market more difficult.

If we have to deal with more of this waste domestically, it could, in the short term, put pressure on landfill and incineration capacity. Therefore, now is the opportunity to consider how, in the long term, to redouble efforts towards minimising waste, rather than locking ourselves into expensive infrastructure dependent on waste generation.

“UK householders waste around seven million tonnes of food and drink a year, a quarter of all purchases.”

Instituting food waste collections

Why does it matter?

Food waste is a significant source of carbon emissions. However, if it is recovered and treated through anaerobic digestion, it has significant value as a soil improver and a source of energy.

What does a positive outcome for the UK look like?

To show climate leadership and meet its commitment to send zero food waste to landfill by 2030, the government should mandate separate food waste collections from all households and businesses.

Rationale

While more must be done to understand food wastage before the retail stage, WRAP statistics show that UK householders waste around seven million tonnes of food and drink a year, a quarter of all purchases, and businesses contribute three million tonnes, of which 60 per cent is avoidable.³⁴ This has a value of over £17 billion a year, and is associated with around 20 million tonnes of greenhouse gas (GHG) emissions, which is more than four per cent of all UK emissions.³⁵

Food makes up nearly a third of the household residual waste stream and has an estimated environmental impact ten times greater than packaging waste.³⁶ Despite this, fewer than half of English councils offer food waste collections. This makes it impossible for the government to reach its goal of sending zero food waste to landfill by 2030. Mandatory universal food waste collections would increase awareness of food waste, improve the value of recyclable material by lowering contamination and provide feedstock for anaerobic digestion to produce renewable energy and digestate to replace chemical fertilisers in UK farming.

Challenges

Offering separate food waste collection is not always economically efficient and where it is offered participation can be low.

Overcoming the challenges

Evidence shows that councils can save £10-20 per household a year by moving from a weekly to a fortnightly residual waste collection complemented by a weekly food waste service. Where collection is already fortnightly, the Renewable Energy Association has argued that adding a separate food waste collection would allow councils to reduce collection frequency further, which would cut collection costs and increase recycle income.³⁷

For household collections, half of English authorities that collect food waste combine it with garden waste, which captures significantly less food.³⁸ To make the economics stack up, collections must be truly separate and people must be helped to get over any distaste for it, for instance by providing caddy liners. Combining this with low cost interventions such as ‘no food waste’ stickers on refuse bins has increased recovery rates by 20 per cent in a trial in Somerset, saving the council £51,000 a year.³⁹

To get the most out of food waste collections and to minimise waste generation, a system of variable charging, based on residual waste produced, would be the best mechanism. As we set out in our 2016 report, *Recycling reset*, this is a consistent feature of the highest performing European systems, but such a system would be most effective only once people have become accustomed to a consistent approach.

Businesses, meanwhile, currently have little motivation to separate out heavy organic wastes as they are charged per bin lift. Instituting weight based payments or mandating separate collection, as has proved effective in Scotland, would improve capture and could potentially bring down the unit cost of collection, which would also improve the economics of household waste services.

“Councils and, ultimately, taxpayers, who have no control over a product’s design or packaging, currently bear most of the costs.”

Holding manufacturers responsible for product lifecycles

Why does it matter?

Companies should take physical and financial responsibility for the whole lifecycle of their products. Recognising this, the EU’s Circular Economy Package proposes to make producers financially responsible for between 50 and 100 per cent of environmental costs, including when goods become waste, in areas like packaging, electronics, batteries and vehicles.

What does a positive outcome for the UK look like?

Whatever the outcome of ongoing Circular Economy Package negotiations, the UK should adopt a producer responsibility regime, to minimise taxpayer subsidy of a waste management system which allows wasteful design and inefficient recycling, and to maximise opportunities for future frictionless trade with the EU.

Rationale

An extended producer responsibility (EPR) approach makes manufacturers, who control product and packaging design, responsible for the end of life treatment of their goods. This would be fairer than the UK’s packaging recycling system, where councils and, ultimately, taxpayers, who have no control over a product’s design or packaging, currently bear most of the costs. Producers are only responsible for ten per cent of the costs at present.⁴⁰

To make producers fully responsible, the government should design new EPR systems, starting with a well designed deposit refund system for beverage containers. Additional policies will also be required, with options including: individual producer responsibility, to incentivise design improvements, limit freeriding and make enforcement and regulation easier; advanced recycling fees levied on products at the point of sale; raw material or hazardous substance taxes; differentiated VAT or modulated fees for recyclability or recycled content; mandatory recycled content; and durability or reuse targets. Well designed systems would keep more, better quality material in the domestic economy and support more jobs.

Challenge

Producers oppose paying more and are likely to argue against overhauling the current system.

Overcoming the challenge

The UK’s system of tradeable evidence notes for packaging recycling has allowed producers to meet EU targets, but has led to low quality material being collected and exported, with little guarantee that it is actually recycled. This reduces the domestic supply of high quality recycle with which to make new packaging. Some producers are now agitating for change, recognising benefits that include securing a supply of materials while generating local jobs. They understand it is a way to reduce their environmental impact while gaining competitive advantage and customer loyalty. Coca-Cola, for instance, has called for “significant reform” in light of its target to use 50 per cent domestically recycled plastic by 2020.⁴¹ The UK’s largest packaging compliance scheme, Valpak, has recently admitted the system requires reform to meet higher recycling targets.⁴²

Similarly, whilst the UK’s electronics sector is worth £30 billion a year, much of the value embodied in electrical items is being lost through the recycling system, including highly valuable rare earth minerals and precious metals.⁴³ Items are shredded instead of being carefully disassembled for parts. A smartphone is worth £599 new, its highly engineered parts are valued at £188, but the value of it as shredded material is just £1.50.⁴⁴ If products had to be returned to manufacturers at the end of their life, rather than lost in the communally funded recycling system, more value and resources could be recouped and there would be a much greater incentive to design products for repair, reuse and refurbishment.

Conclusion

Over the past 45 years, our relationship with the EU has helped to drive real improvements in how we manage resources and waste in the UK, resulting in both economic and environmental benefits.

As we have outlined, there is still significant scope to manage our resources better. Whatever the final Brexit deal, the government should prioritise resource efficiency and productivity to save money, benefit business, create jobs, protect people's health and reduce environmental impact.

The first step should be ensuring the successes of the past are not eroded and that ongoing co-operation with the rest of Europe continues. This will both raise standards and facilitate frictionless trade. The government can achieve this by continuing to co-operate on and apply ecodesign standards, negotiating full access to the REACH chemical regime and by maintaining waste definitions, regulations and principles. It will also have to ensure the sector continues to benefit from adequate governance arrangements.

Next, the government will need to create evidence based policy and set goals to maintain progress and prevent a highly unpopular domestic policy gap opening up. This must include ambitious targets for resource use, mandatory food waste collections and more emphasis on extended producer responsibility. This is the minimum required to develop a lean, modern, resource efficient UK economy.

Annex

Main resources legislation that the EU (Withdrawal) Bill will transpose

EU directive or regulation	Purpose	Status in the UK	UK performance
Waste Framework Directive*	Provides the legislative framework for the collection, transport, recovery and disposal of waste, with the aim of reducing harm to human health and the environment. Enshrines the waste hierarchy and includes a common definition of waste.	Implemented through the Waste (England and Wales) Regulations 2011 (amended in 2012) and Environmental Permitting (England and Wales) Regulations 2010	The current headline target is 50 per cent household or municipal recycling by 2020, which is the only recycling target currently set in England, and which the UK is on course to miss.
Landfill Directive*	Regulates landfills with the overall aim of reducing negative effects on the environment and human health. Categorises waste as hazardous, active or inert, sets targets for reducing biodegradable waste to landfill and bans certain wastes from landfill.	Implemented through Environmental Permitting (England and Wales) Regulations 2010	Thanks in large part to the landfill tax and the now defunct Landfill Allowance Trading Scheme, the UK has already met the headline 2020 target to reduce biodegradable municipal waste landfilled to 35 per cent of that produced in 1995.
Packaging and Packaging Waste Directive*	Aims to limit the production of packaging waste and promote recycling and reuse. Limits incineration and sets specific material recycling targets (in place since 2008) of 60 per cent overall, 15 per cent for wood, 22.5 per cent for plastic, 50 per cent for metal, and 60 per cent for paper and card.	Implemented through the Producer Responsibility Obligations (Packaging Waste) (Amendment) Regulations 2016	The UK has exceeded the targets up to 2014, and indicative data suggests it will also meet the targets for 2015 and 2016. The country's own 2020 packaging recycling targets, including 80 per cent for glass and 57 per cent for plastic, are higher than the EU's proposed targets. The UK's implementation, however, has been criticised for unfairly burdening the public purse with waste management costs and incentivising export.
WEEE Directive*	Regulates the treatment of most e-waste, with a focus on recycling rather than ecodesign, reuse or remanufacturing. Places financial responsibilities on producers and distributors to pay for collection and disposal schemes.	Implemented through the Waste Electrical and Electronic Equipment Regulations 2013	Collection, treatment and recycling are carried out by producer compliance schemes (PCSs), which met the overall 2016 target, although targets for streams including lamps and IT equipment were missed. PCSs collected less than 37 per cent of electronic equipment placed on the market against a target of 45 per cent, but Defra's "substantiated estimates" for other sources made up the remainder.

EU directive or regulation	Purpose	Status in the UK	UK performance
Restriction of Hazardous Substances Directive	Restricts the use of hazardous substances in electrical and electronic equipment (EEE), aiming to limit their impact when they become waste and making the waste management process safer.	Implemented through the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	Restrictions have eliminated certain dangerous chemicals from EEE, specifically lead, mercury, cadmium, hexavalent chromium, poly-brominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE). Restrictions will extend to all EEE, except those explicitly excluded, by 2019.
Ecodesign Directive	Provides EU rules for improving the environmental performance of products, so far focusing on energy in use, rather than design for durability, reusability or recyclability. The EU's working plan for 2016-19 recognises the need to address this.	Implemented through the Energy Related Products Regulations 2010 as amended by the Ecodesign for Energy-Related Products and Energy Information (Amendment) Regulations 2016	The UK's implementation has seen an enforcement regime created to ensure producers meet directive requirements, largely considered to be effective, although a 2016 government review found that the system suffered from "a lack of visibility of market surveillance and enforcement activity".
Battery and Accumulators Directive*	Prohibits the marketing of batteries containing some hazardous substances and fixes targets for collection and recycling.	Transposed into the UK Waste Batteries and Accumulators Regulations 2009	The headline target was to collect 45 per cent of 'portable batteries' by 2016, which the UK just missed (collecting 44.95 per cent). The UK's definition of 'portable battery', which initially included anything up to ten kilogrammes, has, however, led to an over reliance on lead acid batteries to meet targets. In 2016, only 23 per cent of smaller portable batteries were collected for recycling.
End-of-Life Vehicles (ELV) Directive*	Aims to make dismantling and recycling of ELVs more environmentally friendly and sets targets for reuse, recycling and recovery, as well as pushing producers to manufacture vehicles without hazardous substances.	Transposed as End-of-Life Vehicles Regulations 2003	The headline target was 95 per cent reuse and recovery and 85 per cent reuse and recycling by 2015. As of 2014, the UK was recycling or reusing 86.9 per cent of ELVs, though there are concerns about how increasingly common lightweight materials will impact future recycling rates.
Industrial Emissions Directive	Merged seven directives into one, with the aim of using best available techniques to prevent and control emissions to air, water and soil from industrial installations, including waste incinerators. Also addresses impacts including energy and resource efficiency, as well as raw material management.	Transposed in the Environmental Permitting (England and Wales) Regulations 2010	The UK's system of integrated pollution control under the Environmental Protection Act 1990 heavily influenced the EU's integrated pollution prevention and control regime, which, in turn, has been credited with driving a reduction in industrial emissions, waste and environmental risk and an increase in energy, water and resource efficiency. The UK, however, successfully lobbied to water down the legislation by introducing a range of exceptions for large combustion plants.

EU directive or regulation	Purpose	Status in the UK	UK performance
Regulation on the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH)	Makes companies responsible for the safety of chemicals they place on the market. The technical, scientific and administrative aspects are managed by the European Chemicals Agency in Helsinki.	Directly implemented	The UK currently relies fully on the REACH regime, which has been identified as one of the most difficult aspects of environmental regulation to preserve in UK law.
Shipments of Wastes Regulation	Implements the international Basel Convention, which aims to address the problem of uncontrolled transport of waste, with procedures for the transboundary shipments of waste and a ban on the export of hazardous wastes to non-OECD countries ('Basel ban') as well as a ban on the export of waste for disposal.	Directly implemented	Waste exports are subject to notification and control procedures, but there is concern that some shipments are deliberately mis-described as low level 'green list' waste. China, one of the main destinations for UK recycling exports, has begun cracking down on poor quality shipments that get through, despite the regulations, which could have large implications for the UK recycling industry.
* Directives marked with an asterisk are set to be amended by the EU's forthcoming Circular Economy Package			
Circular Economy Package	Six of the EU's directives in the resources sector will be updated by the Circular Economy Package, which is currently going through final negotiations and expected to be finalised by the end of the year. The main proposals are: increasing the municipal waste recycling target to between 60 and 70 per cent for 2030; limiting landfill to ten per cent; and increasing packaging recycling targets.	Not yet adopted	The UK says it is conducting negotiations "in good faith", but Defra modelling suggests that England would not meet the recycling targets. While the directive will have been adopted by the EU by the UK's exit day, the two year period for member states to transpose directives will not have been passed, making its status in the UK unclear.

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This is the sixth report of the Circular Economy Task Force, a business led group convened by Green Alliance. It is a forum for policy, innovation and business thinking on resource use in the UK.

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Green Alliance is a charity and independent think tank, focused on ambitious leadership for the environment. With a track record of over 35 years, Green Alliance has worked with the most influential leaders from the NGO and business communities. Green Alliance's work generates new thinking and dialogue, and has increased political action and support for environmental solutions in the UK.

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