

Institute for Public Policy Research



BREXIT

AND THE UK'S ENVIRONMENTAL AMBITIONS

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SUMMARY

The post-Brexit relationship between the UK and the EU will play a key role in shaping the UK's future environmental ambitions. The UK's current environmental and climate policy framework is underpinned by a swathe of EU legislation, robust governance structures, and considerable funding and financing opportunities. Once the UK leaves the EU, these relationships could change significantly.

While the EU's policymaking has not been enough to prevent major environmental risks, EU processes have helped to facilitate UK government action in a range of areas, from air quality to climate change. The role of the EU has been threefold. First, a range of EU legislation covering environmental policy, as well as energy and climate change and food and farming, has helped to support the UK's environmental objectives (see table S.1). Second, the role of the European Commission and the Court of Justice of the European Union has been critical in effectively policing this legislation – the UK has often been encouraged into action due to the threat of EU infraction proceedings. Third, the EU has supported environmental projects through several programmes, including the LIFE programme, Horizon 2020 and European structural funding.

TABLE S.1

EU legislation that supports environmental objectives

Environment	Energy and Climate	Food and Farming
Horizontal legislation	Emissions trading	Common agricultural policy
Air quality	Monitoring mechanism	Common fisheries policy
Waste management	Carbon capture	Food safety rules
Water protection	Fuel quality	
Nature protection	Ozone-depleting substances	
Industrial pollution	F-gases	
Chemicals	Internal energy market	
Noise	Renewable energy	
	Energy efficiency	

Source: IPPR analysis of ECRAN (2015–16a) and ECRAN (2015–16b)

We identify four main alternatives for the UK's future relationship with the EU after Brexit and assess their implications for environmental policy.

SCENARIO 1: SINGLE MARKET AND CUSTOMS UNION

In this scenario, the UK would align with single market rules, alongside agreeing a customs union with the EU. The UK would therefore continue to follow much of the EU's *acquis* on the environment, energy and climate change. The UK would continue to participate in the EU's Emissions Trading System, which would support it in meeting its greenhouse gas emission targets. It would also continue to participate in the internal energy market, which would facilitate the efficient importation of electricity from renewable sources at low prices, and would thereby support the UK's decarbonisation objectives. Robust governance procedures would provide strong and independent oversight over the UK's environment and climate objectives.

In sum, there would still be a range of EU mechanisms – including funding schemes, reporting requirements, and the threat of infraction proceedings – to support the UK's environmental ambitions.

SCENARIO 2: CUSTOMS UNION PLUS

In this scenario, the UK would agree to a customs union with the EU, alongside provisions on regulatory alignment to facilitate trade in goods. It is likely that the UK would need to commit to regulatory alignment on most environmental legislation, as well as legislation on food safety. This indicates that the environmental acquis would largely stay in place, and there would be limited scope for backsliding. It is possible, however, that governance mechanisms would be weaker; without any supranational supervision or adjudication, it would be harder to effectively enforce the agreement.

The consequences of this scenario for the UK's participation in the internal energy market are unclear. Assuming the UK were to participate, it is likely that it would agree to aligning on relevant areas of legislation, including renewable energy, energy efficiency, and emissions trading. These would help to support the UK's decarbonisation objectives. The UK may also choose to participate in some relevant EU programmes.

Overall, there may still be several EU mechanisms for encouraging environmental objectives in place under this scenario – including provisions for regulatory alignment, the Emissions Trading System and certain funding programmes – but governance mechanisms may well be less robust than the status quo.

SCENARIO 3: FREE TRADE AGREEMENT

In this scenario, the UK and the EU would secure a free trade agreement, alongside separate arrangements for Northern Ireland. A free trade agreement would mean that the UK and the EU would have an arms-length relationship on most aspects of environmental policy. The UK would, in all likelihood, exit the internal energy market and no longer participate in the Emissions Trading System (though there may be a formal link between the Emissions Trading System and a UK equivalent). It would no longer need to follow the EU acquis on the environment.

Yet despite these changes, the EU would expect the UK to agree to a non-regression clause on environmental standards. In principle, this would prevent the UK from lowering its environmental standards below current levels, but the mechanisms for governing the non-regression clause may be relatively weak – based on the text of the withdrawal agreement's Irish protocol, independent arbitration (and therefore the possibility of sanctions) would only be possible for disputes relating to the effective enforcement of the non-regression clause, rather than the clause itself. Finally, under the backstop arrangements, we can expect that Northern Ireland would remain in the EU's customs union and single market for goods and continue to follow a range of EU environment, food safety, and energy legislation.

Overall, this relationship would offer relatively few EU mechanisms for supporting Great Britain's environmental objectives, though Northern Ireland would be subject to more robust arrangements.

SCENARIO 4: NO DEAL

A 'no deal' Brexit would constitute a significant change for the UK in relation to its environmental protections. The EU would no longer have any role in supporting the UK's targets and commitments on the environment and climate change. All

UK-EU transnational cooperation on environment and climate change would cease: the UK would exit the internal energy market, the Emissions Trading System, and all EU environmental funding programmes.

Of course, none of these changes would preclude the UK maintaining high environmental standards after Brexit, and the government's intentions – through the Withdrawal Act, the environment bill, and secondary legislation – are to retain and improve on EU environmental standards. But without any UK-EU commitments and without any supranational governance structures, it would be far easier for the UK to lower its environmental protections after Brexit – either by explicitly loosening EU-derived legislation once it is translated into UK law or instead by not properly enforcing legislation once supervision from EU institutions is removed.

Our analysis suggests that the closer the relationship between the UK and the EU, the stronger the safeguards for maintaining EU-derived environmental protections. This does not, of course, mean that strong environmental protections are dependent on a close relationship with the EU; even under a no deal, the government could advance an ambitious agenda on the environment. But it does suggest that the choice of the future UK-EU relationship will play an important role in determining the scope of environmental cooperation between the UK and the EU and the extent of supranational oversight over environmental protections after Brexit.

1.

SETTING THE SCENE

The UK's exit from the EU represents a major juncture for the UK's policy framework on the environment and climate change. In recent decades, EU legislation, governance and funding has played a vital role in supporting the UK's environmental ambitions. As the UK's relationship with the EU changes, this raises fundamental questions about the direction of the UK's future environmental policy.

The UK government has made a clear commitment to high environmental standards post-Brexit. This commitment is reflected in strong public support for existing protections. While there have been calls in some quarters for the loosening of environmental rules to reduce costs for businesses, there is little public appetite for such deregulation. Public polling conducted earlier this year for IPPR by Opinium found little support for loosening EU-derived environmental regulations. For instance, a total of 74 per cent of the public backed retaining current renewable energy targets or strengthening them further after Brexit (Morris 2018a).

However, while the EU's environmental and climate legislation has made important strides forward in recent years, it cannot be judged sufficient for meeting current environmental challenges. Air pollution levels in the UK's major cities are lethally high, and are estimated to be responsible for tens of thousands of deaths per year. Biodiversity degradation poses a major environmental threat, with more than 10 per cent of UK wildlife species at risk of extinction. The government has recently warned that soil fertility is likely to be eradicated over the next 30–40 years. Moreover, the UK has been a significant contributor to global environmental decline, including climate change, ocean acidification, habitat loss and plastics pollution (IPPR 2018).

For these reasons, the UK's post-Brexit environmental strategy must be placed on a more ambitious footing. As IPPR argued in the Commission on Economic Justice, the UK should introduce a 'Sustainable Economy Act' as the centrepiece for its new approach. This would provide a framework for an ambitious set of binding environmental targets, aimed at introducing sustainability limits that are 'economy-wide' rather than just targeted at particular businesses or sectors (ibid).

The Sustainable Economy Act would be modelled on the 2008 Climate Change Act, which requires the adoption of five-year 'carbon budgets' by government and introduces a new Committee on Climate Change to provide advice and monitor progress against these budgets. The Sustainable Economy Act would apply this approach to new areas such as biodiversity, soil fertility, air and water quality, plastics, and so on. Just as the Climate Change Act requires the government to set legally binding carbon budgets over successive five-year periods, the Sustainable Economy Act would require government to adopt environmental limits and then periodically set out economy-wide plans for how to meet them. For instance, if the government intended to set a long-term objective of restoring biodiversity to 1970 levels, it would then need to deliver this objective through a series of short-term targets for individual species (ibid).

The act would be overseen by an independent Committee on Sustainability, modelled on the Committee on Climate Change. The committee would advise government on the long-term goals and periodic targets, give policy advice on how to achieve these objectives, and monitor their development. The Sustainable Economy Act would be an opportunity for the UK to demonstrate to its neighbours that it can lead the way in tackling environmental dangers after Brexit and provide a model for other parts of the world, including the EU itself.

While we recognise the need for a more ambitious approach to the environment and climate change after Brexit, it is also clear that the EU's current policy framework can help to facilitate the UK's ambitions and provide a core baseline of minimum environmental standards. The nature of any future framework therefore critically depends on the type of agreement the UK and the EU secure and how its contents affect environmental, energy and climate policy.

The purpose of this briefing will be to set out the scenarios for the UK's future relationship with the EU after Brexit and their consequences for the UK's environmental ambitions. We recognise that there are other important considerations - both economic and political - in determining the nature of the future UK-EU relationship; this paper does not analyse these and explicitly focuses on the environmental implications alone. In the next part of this briefing, we will lay out how the EU currently influences environmental policy in the UK. In the third part, we will explore four Brexit scenarios, detailing how each of these could help or hinder the UK's environmental and climate objectives. Finally, we will conclude by assessing the overall implications of each scenario for the future of UK environmental policy.

2.

THE ROLE OF THE EU IN ENVIRONMENT AND CLIMATE POLICY

The EU has played an important role in shaping the UK's approach to the environment and climate change. This role can be divided into three core areas of influence: legislation, governance, and funding.

LEGISLATION

The EU has introduced a significant body of legislation on the environment and climate change. The environmental acquis alone constitutes more than 200 “major legal acts”, although this figure rises to more than 1,100 pieces of legislation that are relevant to the remit of the Department for the Environment, Food and Rural Affairs (House of Lords European Union Committee 2017).

This legislation takes a range of forms, but there are some common features. First, at the most general level, much environmental legislation sets binding national targets or environmental limits for member states. Second, these targets and environmental limits in turn often require monitoring mechanisms and the development of ‘action plans’ to address instances where targets have not been met or limits have been surpassed. Third, at the most granular level, legislation in many cases obliges member states to take specific actions to meet environmental objectives – for example, through banning harmful substances, introducing licensing or authorisation mechanisms, or requiring businesses to manufacture products in particular ways.

The legislation can be broadly divided into three parts: the EU's core environmental acquis, covering all directly environmental legislation (excluding climate policy); EU climate and energy policy, covering legislation aimed at reducing greenhouse gas emissions and tackling climate change, as well as energy legislation with an environmental bearing; and relevant areas of EU food and farming policy. We briefly summarise the central areas of legislation below.

1. *Environmental acquis*

The EU's environmental acquis is a wide-ranging suite of legislation that has a profound impact on environmental policy in the UK. Broadly speaking, the acquis is comprised of eight core areas: horizontal legislation, air quality, waste management, water protection, nature protection, industrial pollution, chemicals and noise. We cover each of these areas in turn.¹

Horizontal legislation

This area of legislation cuts across multiple policy areas and sets out general procedures for managing environmental challenges. Key legislation includes the following.

¹ This summary is drawn from (ECRAN 2015-16a).

- **The Environmental Impact Assessment (EIA) Directive**, which ensures that relevant public and private projects undergo assessments for any potential negative environmental impacts before they receive approval from member state authorities.
- **The Environmental Liability Directive**, which provides for liability schemes to hold operators responsible where there is environmental damage, or the imminent threat of damage, as a consequence of occupational activities.
- **The Public Access to Environmental Information Directive**, which guarantees a public right of access to environmental information held by public authorities, as well as an obligation for authorities to proactively share environmental information with the public progressively over time.

Air quality

This area of legislation is designed to create a framework for member state efforts to improve air quality. The EU's long-term objective is a level of air quality that does not significantly risk or detrimentally impact human health and the environment. Key legislation includes the following.

- **The Ambient Air Quality Directive**, which sets out a series of thresholds, limit values and targets for concentrations of air pollutants, including fine particles, sulphur dioxide, nitrogen dioxide and carbon monoxide. The directive requires member states to designate zones and agglomerations for the purposes of monitoring air quality. Where targets are breached, member states are required to develop air quality plans to tackle pollution.
- **The National Emissions Ceilings Directive**, which introduces national emissions ceilings for certain pollutants, including sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia.
- **The Regulation on Type-Approval of Light Duty Vehicles**, which sets binding limits (Euro 5 and Euro 6) on pollutants, such as nitrogen oxides, emitting from new cars and light commercial vehicles.
- **The Sulphur Content of Liquid Fuels Directive**, which introduces limits on the sulphur content in particular liquid fuels, in order to reduce sulphur dioxide emissions from their combustion.
- **The Petrol Vapour Recovery Directives**, which aim to prevent the emission of volatile organic compounds (VOCs) during the storage of petrol in terminals, distribution to service stations, and the refuelling of vehicles.

Waste

This area of legislation aims to govern member states' waste management strategies. Key legislation includes the following.

- **The Waste Framework Directive**, which sets out core definitions, objectives and principles of waste management, including the 'waste management hierarchy' principle. This principle prioritises prevention of waste over preparing for re-use, re-use over recycling, recycling over recovery, and recovery over disposal. Member states are required to take a number of steps, including drawing up waste prevention programmes and waste management plans, adhering to the waste management hierarchy, introducing measures to meet recycling and recovery targets, ensuring that waste is managed without endangering human health or the environment, and implementing the 'polluter pays' principle for bearing the cost of waste management and disposal.
- **The Landfill Directive**, which governs the landfilling of waste – for instance, requiring treatment of waste before it is landfilled and prohibiting the mixing of hazardous and non-hazardous waste.

- **The Packaging and Packaging Waste Directive**, which harmonises packaging waste rules, including requiring the establishment of collection schemes and setting recycling and recovery targets for packaging waste.
- **The Waste Shipments Regulation**, which sets out rules for the transboundary shipping of waste, including a ban on the exporting of waste to third countries for the purpose of disposal.

Water protection

This area of legislation aims to secure a high level of water protection across the EU. Key legislation includes the following.

- **The Water Framework Directive**, which sets out a comprehensive framework for the protection of surface waters and groundwater, with the aim of securing ‘good status’ for all water bodies in the EU. This requires member states to develop coordinated ‘river basin management plans’ – based on natural geographies rather than administrative boundaries – for meeting objectives on measures such as ecological status, chemical status, and quantitative status. The directive introduces a ‘combined approach’ to pollution control, combining rules on water quality with limits on pollutant emissions (European Commission 2016a).
- **The Marine Strategy Framework Directive**, which requires member states to achieve ‘good environmental status’ for their marine waters by 2020, through the development of ‘marine strategies’. These strategies involve assessments of the status of their marine waters, the establishment of environmental targets and monitoring programmes, and the development of specific measures to achieve or maintain ‘good environmental status’.
- **The Urban Waste Water Treatment Directive**, which introduces a number of requirements for how urban wastewater should be collected, treated and discharged, as well as specific rules for wastewater from key industrial sectors (largely in agri-food).
- **The Nitrates Directive**, which aims to reduce and prevent water pollution that occurs as a result of nitrates from agricultural sources, by requiring member states to identify ‘vulnerable zones’ susceptible to nitrates pollution and set up action programmes to lower or avoid nitrates pollution in these areas.
- **The Bathing Water Directive**, which aims to safeguard and improve the quality of bathing water in coastal and inland bathing areas. It requires member states to monitor, assess and classify bathing waters and to take action (such as banning public bathing) where bathing waters are classified as of poor quality.
- **The Drinking Water Directive**, which aims to ensure all water intended for human consumption is ‘wholesome and clean’. It requires member states to ensure regular monitoring of drinking water quality and act to uphold minimum quality levels.
- **The Floods Directive**, which requires member states to introduce preliminary flood risk assessments across their territories and then develop flood risk management plans for zones at flood risk.

Nature protection

This area of legislation aims to prevent biodiversity loss and protect and restore ecosystems. Key legislation includes the following.

- **The Wild Birds Directive**, which ensures that member states protect all species of naturally occurring wild birds and their habitats, through measures such as setting up ‘Special Protection Areas’ for the conservation of rare and vulnerable birds and regulating harmful practices such as hunting.
- **The Habitats Directive**, which aims to safeguard biological diversity – including the conservation of more than 1,000 animal and plant species and 200 habitat

types – through provisions such as the introduction of the ‘Natura 2000’ network of protected sites (European Commission 2016b).

- **The Invasive Alien Species (IAS) Regulation**, which aims to tackle IAS, a key contributor to biodiversity loss, by requiring member states to take measures on prevention, introduce a surveillance system for early detection and rapid eradication, and manage IAS where they are already established.

Industrial pollution

This area of legislation aims to control and manage the risk of pollution from industrial sources. Key legislation includes the following.

- **The Industrial Emissions Directive**, which provides a framework for the control of industrial pollution through ‘integrated permitting’. This requires authorities to issue permits for certain industrial activities based on a plant’s whole environment performance. In some cases, permits are tied to whether a plant meets emission limit values for particular pollutants. Emission limit values and other permit conditions are based on the ‘best available techniques’ (BAT) approach – permit conditions that are consistent with an industrial sector following the most effective method of protecting the environment that is both technically and economically viable.
- **The Medium Combustion Plants Directive**, which sets emission value limits for emissions into the air of sulphur dioxide, nitrogen oxides, and dust from medium combustion plants.
- **The Seveso III Directive**, which manages the risk of major industrial accidents involving dangerous substances, including requiring member states to fulfil planning, inspection and reporting obligations and requiring establishments with large amounts of dangerous substances to take preventative action.

Chemicals

This area of legislation governs the regulation of chemicals within the EU to facilitate free trade among member states and uphold strong environmental protections. Key legislation includes the following.

- **The Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)**, which guarantees the safety of chemicals placed on the EU market while maintaining the free movement of chemicals across the EU. REACH requires manufacturers and importers of chemical substances to register these substances in a central database, overseen by the European Chemicals Agency (ECHA), before placing products on the market. The importer or manufacturer is responsible for evaluating risks and demonstrating safety. Where there are serious concerns about the hazardous nature of a chemical substance, the European Commission can judge whether to grant authorisation. Where the risk is considered too high, the authorities can restrict the manufacture, supply, or use of the substance.
- **The Regulation on Classification, Labelling and Packaging (CLP) of Substances and Mixtures**, which harmonises certain rules for chemical substances across the EU, bringing them in line with international standards. It sets out rules for a common system of classification, labelling and packaging of chemical substances and mixtures, taking into account the degree and nature of the hazard.

Noise

This area of legislation aims to tackle environmental noise pollution, defined as noise caused by traffic or industrial activities. Key legislation includes the following.

- **The Environmental Noise Directive**, which requires member states to publish periodic ‘noise maps’ for major transport routes and agglomerations and to develop action plans to address excessive noise pollution in these areas.

2. Climate and energy policy

Climate and energy policy can be broken down into two areas. First, there is the climate acquis – consisting of legislation directly aimed at tackling climate change. Second, there is a considerable bulk of energy legislation outside of the climate acquis that nevertheless has a strong bearing on environmental and climate outcomes.

The climate acquis aims to reduce greenhouse gas emissions and limit climate change (specifically by preventing a global temperature increase of 2°C above pre-industrial levels). The EU’s 2020 climate and energy package includes a set of objectives to be achieved by 2020, including cutting greenhouse gas emissions by 20 per cent (compared to 1990 levels), ensuring 20 per cent of EU energy comes from renewable sources, and securing a 20 per cent improvement in energy efficiency. The 2030 climate and energy framework introduces a set of further objectives for 2030, including a 40 per cent cut in greenhouse gas emissions, a 27 per cent share of renewable energy, and a 27 per cent improvement in energy efficiency.

Key legislation designed to meet these objectives includes the following.²

- **The Emissions Trading Directive**, which establishes the EU’s Emissions Trading System (ETS). The ETS is a ‘cap and trade’ scheme that requires installations in relevant sectors to exchange allowances in return for making greenhouse gas emissions (including CO₂ emissions, N₂O emissions and perfluorocarbon emissions). The number of emission allowances released at an EU level in every year is limited, creating an EU-wide market with a carbon price, where installations can buy allowances at auctions and trade them with each other. The default approach to allocation is through auctions, with remaining allowances being released free-of-charge according to EU-wide benchmarking rules. At the end of each year, installations are required to surrender the number of allowances that corresponds to their level of greenhouse gas emissions. The system is designed to use market mechanisms to reduce greenhouse gas emissions, because the total cap is lower than the level of greenhouse gasses that would otherwise be emitted. The cap gets progressively lower each year, thereby reducing greenhouse gas emissions over time.
- **The Monitoring Mechanism Regulation (MMR)**, which sets out requirements for the European Commission and member states to monitor and regularly report on progress in reducing greenhouse gas emissions to the UN. This regulation reflects the EU’s participation in the Kyoto Protocol and the UN Framework Convention on Climate Change (UNFCCC).
- **The Carbon Capture and Storage (CCS) Directive**, which creates a legislative framework for the safe use of carbon capture and storage techniques to ‘trap’ and isolate carbon dioxide emissions from power plants and industrial facilities. The directive regulates the operation of CCS, including the process of site selection, and requires the operators of new major combustion plants

2 This summary is drawn from ECRAN (2015–16b).

to assess the technical and economic feasibility of retrofitting the plants for carbon capture.

- **The Fuel Quality Directive**, which requires fuel suppliers to reduce the greenhouse gas intensity of transport fuels by at least 6 per cent by 2020 (compared to 2010 levels).
- **The Ozone-Depleting Substances Regulation**, which introduces strict controls to protect the ozone layer, including prohibitions on the use of ozone-depleting substances (with certain exemptions and derogations) and licensing requirements for the importing and exporting of ozone-depleting substances.
- **The F-Gas Regulation**, which aims to reduce emissions of fluorinated gases (F-gases) – a particular type of greenhouse gas. The regulation bans their uses in some industrial applications, ensures operators take precautions to prevent leaks, and reduces the use of hydrofluorocarbons (HFCs) over time.

Beyond these core aspects of the EU's climate acquis, it is important to consider the EU's wider energy policy framework, which underpins the European internal energy market and governs policy in renewable energy, energy efficiency and other areas. While there are some key overlaps with the EU's environment and climate acquis, there are also several independent areas of energy legislation that support environmental objectives. These include the following areas.³

- **The Internal Market in Electricity Directive**, which lays down a shared framework for the generation, transmission, distribution, and supply of electricity. The directive requires the unbundling of electricity supply and generation from transmission, to ensure fair competition. The directive, alongside parallel regulations setting out the legally binding conditions or 'network codes' for participating in the internal market, help to facilitate cross-border trade in electricity. This is a key element of the UK's ambitions to secure more energy from renewable sources, given that the use of these sources can be expanded through smoother and more efficient cross-border trade (Froggart et al 2017).
- **The Renewable Energy Directive**, which ensures that a minimum of 20 per cent of the EU's energy needs will be secured through renewable energy sources by 2020, delivered via the introduction of binding national targets. The directive introduces 'guarantees of origin' – tracking certificates that determine whether a given share of energy has come from renewable sources in order to help consumers confirm the origins of their energy supply (European Commission 2009).
- **The Energy Efficiency Directive**, which introduces a target for improving energy efficiency by 20 per cent by 2020, delivered through a series of binding national measures. These include requirements to develop national energy efficiency action plans, to renovate a minimum of 3 per cent of total floor area of buildings owned or occupied by central government each year, and to introduce energy efficiency obligation schemes, which require energy companies to make annual energy savings of 1.5 per cent of sales through energy efficiency activities (European Commission 2012).
- **The Energy Performance of Buildings Directive**, which requires member states to set minimum energy performance rules for new buildings, to oblige energy performance certificates to be included in advertisements of all sales or rentals, and to ensure all new buildings are nearly zero-energy by 2020 (ECRAN 2015–16b).

Finally, **Euratom** (the European Atomic Energy Community) is legally distinct from the EU but is governed by its institutions. Dating back to the Euratom

3 This summary is largely based on Energy Community 2017.

Treaty of 1957, Euratom sets out a framework for the development and regulation of Europe's civilian nuclear industry. In order to develop the industry, facilitate the movement of nuclear goods and ensure high levels of protection, it sets out provisions for a range of nuclear matters, including a nuclear common market, nuclear health and safety, the proper use of nuclear materials, and the promotion of research (European Commission 2018a).

3. Agriculture, Fisheries and Food Safety policy

The EU's policies on food and farming span a range of regulation, extending far beyond environment-related policy. But there are a number of policies that help to facilitate the EU's environmental goals. These include the following central policies.

- The reform of the **Common Agricultural Policy** in 2013 introduced the concept of 'greening'. This helped to make the policy more environmentally friendly by ensuring that 30 per cent of EU member states' direct payments to farmers are based on environmental commitments. These commitments include crop diversification, protecting permanent grassland, and ensuring that 5 per cent of arable land is dedicated to ecologically beneficial elements. Farmers who do not meet these commitments face reductions in their direct payments. Greening exists in addition to 'cross-compliance' rules on the environment, which are necessary to meet in order to receive payments (European Commission 2013).
- The reform of the **Common Fisheries Policy** in 2013 aimed to place the European fisheries industry on a more sustainable footing. Key environmental measures in the revised policy include the introduction of maximum sustainable yield to prevent overfishing, the phasing out of the practice of discarding unwanted catch, and the introduction of reporting requirements and implementation plans to limit fleet overcapacity (where fishing fleets are disproportionately large compared to the available stocks) (SPICe 2014).
- There is also a significant body of EU legislation on food safety, which has a bearing on environmental objectives. This includes legislation on food hygiene, chemical safety, animal welfare, genetically modified organisms, and pesticides (EUR-Lex 2018).

GOVERNANCE

If the EU's body of environmental legislation has played a vital role in the UK, then the enforcement of this legislation – through supranational institutions, such as the European Commission and the Court of Justice of the European Union (CJEU) – has been of equal importance. Much of the environmental legislation outlined earlier in this section introduces strict reporting requirements and obliges member states to take specific actions where necessary. Where the European Commission believes there is evidence that a member state has failed to comply with a piece of EU environmental legislation, it can intervene. Where necessary, it can issue infraction proceedings, ending in a referral to the CJEU. Ultimately, the CJEU can rule against a member state for failing to properly transpose or implement EU environmental legislation and can impose substantial fines if it fails to comply.

The threat of infraction proceedings has been a significant influence over the UK government's adherence to EU targets in recent years (House of Lords European Union Committee 2017; Farstad et al 2018). Indeed, the Institute for Government has found that, since 2003, around half of CJEU judgments on UK infringements of EU law have related to the environment (Hogarth and Lloyd 2017).

For example, the government recently published its new clean air strategy after three court rulings against the government over illegally high concentrations of NO₂ (Harvey 2018). The limits for these concentrations were set by EU law and enforced by UK courts. The European Commission has now referred the UK to the CJEU for failing to reduce air pollution, which is likely to encourage stricter measures to tackle the issue (European Commission 2018b).

FUNDING

The third area of EU influence over environmental impacts is funding. The EU provides a range of funding and investment opportunities for activities with positive environmental outcomes. Some of the main funding routes include the following.

- **The LIFE programme**, which supports environmental, nature conservation and climate action projects, through co-financing, loans and equity investments, and grants to environmental NGOs (European Commission 2018c).
- **The Horizon 2020 programme**, which provides funding for research and innovation projects, including on environmental issues (European Commission 2018d).
- **The European Structural and Investment Funds (ESIF)**, which include three funds that have relevance to energy and the environment.
 - **The European Regional Development Fund (ERDF)**, which has a funding priority relating to the low-carbon economy and which has a particular focus on sustainable urban development (European Commission 2018e).
 - **The European Agricultural Fund for Rural Development (EAFRD)**, which includes funding priorities relating to the sustainable management of natural resources and combatting climate change (European Commission 2018f).
 - **The European Maritime and Fisheries Fund (EMFF)** which includes funding priorities relating to the transition to sustainable fisheries (European Commission 2018g).
- **The European Investment Bank (EIB)**, which is the bank owned by and representing the interests of member states. It has four priority areas that it supports predominantly through lending: innovation and skills, access to finance for smaller businesses, infrastructure, and climate and environment (EIB 2018a). In particular, the EIB backs the **Marguerite Fund**, which makes capital-intensive infrastructure investments for projects involving renewables, energy, transport and digital infrastructure (Marguerite 2018).

Together, these sources of funding are estimated to contribute £2–3 billion per annum to UK projects related to low-carbon energy, the environment and climate change, as shown in table 2.1.

TABLE 2.1**EU support for UK energy, environment and climate change projects**

Funding Source	Time period	Type of support	Relevant themes	Amount (€)	Amount per year (£)
LIFE programme	1992–2016	Environmental protection funding	Environment, nature conservation and climate action	0.3bn	9.3m
Horizon 2020	2014–2018	Research and innovation funding	Clean energy; food security and sustainable agriculture; climate action and environment	0.6bn	110m
ESIF	2014–2020	Regional development funding	Environmental protection and resource efficiency; low-carbon economy; climate change adaptation and risk prevention	5.5bn	700m
EIB	2010–2018	Project financing	Energy; agriculture, fisheries, forestry; water, sewerage; solid waste	21.1bn	2.1bn

Source: IPPR analysis of European Commission (2017), European Commission (2018h), European Commission (2018i), EIB (2018b)⁴

Taken together, the EU's legislation, governance and funding on the environment and climate change has played a vital role in shaping the UK's environmental policymaking over recent decades. Its future role across these three areas depends on the nature of the post-Brexit relationship between the UK and the EU. This is what we turn to in the next section.

⁴ This is based on a similar chart in Wright et al (2017). Chart based on latest available funding data and exchange rate on 27th November 2018.

3.

SCENARIOS FOR THE FUTURE UK-EU RELATIONSHIP

In this chapter we turn to our analysis of the scenarios for the future relationship between the UK and the EU. This analysis focuses on the long-term agreement after the transition period, since during the transition all EU environmental obligations and mechanisms will remain the same.⁵ While the agreed political declaration on the future relationship sets the trajectory for the EU-UK negotiations, it is clear that there is considerable scope for different alternatives if the UK position evolves. In our assessment, there are four main options for the UK and the EU's future relationship after the transition.

1. **Single market and customs union** (a Norway-style arrangement, based on participating in or aligning with single market rules).
2. **Customs union plus** (based on an expanded version of the EU-UK political declaration).
3. **Free trade agreement** (based on a restrictive interpretation of the EU-UK political declaration).
4. **No deal** (a failure to negotiate any trade arrangement).

Each of these scenarios would have different implications for environmental impacts in the UK. We consider the four scenarios in turn, analysing the implications of each one of the three areas discussed in the previous chapter: legislation, governance, and funding.

1. SINGLE MARKET AND CUSTOMS UNION

This scenario represents the closest trading relationship with the EU. Under this arrangement, the UK would continue to follow single market rules, including the four freedoms of goods, services, people and capital, as well as horizontal and flanking measures. This would help to facilitate trade between the UK and the EU on similar terms as now. The UK would also agree a customs union with the EU, removing the need for rules of origin checks. The arrangement would be dynamic – the UK would be expected to update its legislation in line with developments from the EU.

This arrangement would have some resemblance to the European Economic Area, an agreement between the EU and three EFTA states – Norway, Iceland and Liechtenstein – that facilitates their participation in the single market. It is unlikely, however, that the agreement would be operationalised by simply joining EFTA and the EEA, because the UK would risk disrupting a well-functioning agreement. Instead, it is likely there would be a negotiation for a bespoke arrangement between the UK and the EU. As explained in IPPR's earlier paper, *The shared market*, this could be delivered through a 'participation' model, where the UK is required to abide by single market legislation with minimal flexibility, or an 'alignment' model, where there is greater recognition of potential scope for divergence (Kibasi and Morris 2017).

⁵ One exception to this is no deal, where by definition there would be no transitional arrangements.

Legislation

Under this model, the UK would continue to follow the majority of the environmental acquis. Following the structure of the EEA Agreement, the UK would sign up to most environmental legislation, including the Environmental Impact Assessment Directive, the Ambient Air Quality Directive, the Waste Framework Directive, the Water Framework Directive, the Industrial Emissions Directive, and REACH. Nevertheless, the EEA Agreement does have certain exceptions for legislation not considered 'EEA-relevant' (outside the scope of the single market). This includes legislation on nature protection, including the Wild Birds Directive and the Habitats Directive, and some legislation on water protection, including the Bathing Water Directive (EFTA Surveillance Authority 2018a).

In the fields of climate and energy, this model would also include participation in the EU Emissions Trading System, as well as the internal energy market. EEA states are also required to follow legislation on renewable energy sources and energy efficiency (EFTA Surveillance Authority 2018b). We would expect a similar approach under this model.

One area where substantial policy change may be required is Euratom; while third countries can have association agreements with Euratom (or broader agreements with the EU and Euratom), none are members. The scope of an association agreement with Euratom is unclear. However, the EU/Euratom's association agreement with Ukraine suggests there is a precedent of relatively strong ties. This agreement includes extensive cooperation on nuclear safety, alignment on relevant legislation, and the joint promotion of scientific research (Phinnemore 2017; Journal of the European Union 2014).

Finally, in the fields of agriculture and fisheries, this model's implications are open-ended. The EEA Agreement, which partially excludes agricultural trade, does not require participation in the Common Agricultural Policy (CAP) or the Common Fisheries Policy (CFP), though it does include legislation on food safety and animal welfare. In the UK's case, however, it is likely that a single market and customs union model would cover agri-food goods alongside industrial products (given these are already included in the UK government's Chequers proposal in order to avoid a hard border in Ireland) (DExEU 2018a). Under these circumstances, the EU might expect continued adherence to the CAP and CFP.

Governance

Out of our four scenarios, the single market and customs union model would involve the strictest governance arrangements. It is instructive to analyse the EEA Agreement to understand the type of governance system that would most likely be negotiated. The EEA Agreement is governed under a 'two-pillar' structure: for the EU's pillar, compliance is monitored by the European Commission and adjudicated by the CJEU, while for the UK's pillar, compliance is monitored by the EFTA Surveillance Authority and adjudicated by the EFTA Court. The EFTA Surveillance Authority and EFTA Court in effect operate as 'little cousins' of the Commission and CJEU. The EFTA Surveillance Authority independently enforces the agreement for the EFTA states, bringing cases where necessary to the EFTA Court. For its part, the EFTA Court largely follows the case law of the CJEU in its interpretation of EEA law (Morris 2018b).

There are some differences between the governance arrangements for the EFTA pillar and those of the EU pillar in the EEA agreement. For instance, unlike the CJEU, the EFTA Court does not have the ability to impose fines on member states for not complying with its judgments. Similarly, domestic courts can ask the EFTA court for an 'advisory opinion', but are not required to follow the court's advice as in the case of the CJEU (Bø 2018). Moreover, the principles of direct effect and

primacy only apply with respect to implemented EEA law (Baudenbacher 2012). This suggests that, in legal terms, the EEA Agreement offers somewhat greater flexibility in enforcing its rules for the EEA EFTA states than for EU member states. In practice, however, the governance mechanisms largely deliver the same outcomes; the EEA EFTA states generally follow EEA law closely and do little to disrupt the agreement.

How might a UK-EU agreement on the single market and customs union be governed, given the precedent of the EEA? It is possible that it could be enforced directly by the same institutions – the EFTA Surveillance Authority and the EFTA Court – or alternatively by a set of parallel institutions that mirror much of their functioning. The details of how these might operate would depend on the negotiations. However, it is clear they would comprise some core features.

1. Any single market and customs union agreement would have to be governed by supranational mechanisms – including an independent supervision authority that monitors the agreement and a supranational court that provides interpretations and issues binding rulings on matters related to the agreement.
2. These institutions would be required to interpret the agreement in line with the CJEU.
3. There would be some form of preliminary reference procedure for domestic courts to check the interpretation of the agreement with the supranational court.
4. Finally, any deal on the single market and customs union would require some mechanism for incorporating new EU legislation – including legislation on the environment, energy and food safety – into the agreement. This could be an automatic process, or it could, if there is disagreement over whether a new law should be incorporated, allow an option for the UK to diverge from EU legislation and face consequences for market access.

Funding

A single market and customs union agreement could allow the continued participation of the UK in certain EU-wide funding opportunities. The LIFE Programme is available for EFTA countries that are members of the European Environment Agency. Horizon 2020 also extends to EEA countries (Iceland and Norway), who are involved both as contributors and participants.

TABLE 3.1

EIB funding on energy and environment⁶ projects coming for the UK, the EU, and the EFTA states (Norway, Iceland, Liechtenstein, and Switzerland)

Grouping	Total Funding in € (2010–2018)	Population	€/capita
UK	21bn	67 million	316
EU (including UK)	105bn	513 million	206
EFTA countries	0.74bn	14 million	52

Source: IPPR analysis of EIB (2018b)

However, the European structural funds are not available to any member state outside the EU, even those in the single market (though the EEA states have their own ‘EEA grants’ fund for poorer EU countries, which includes a focus on

⁶ Includes agriculture, fisheries, forestry, water & sewerage and solid waste.

environmental priorities). On EIB financing, it is worth noting that the EIB also provides finance to EFTA states, though on a significantly smaller scale compared to their EU counterparts, as table 3.1 demonstrates.

Summary

In this scenario, the UK would continue to align itself dynamically to much of the EU's *acquis* on the environment, energy and climate change. The UK would continue to participate in the EU's Emissions Trading System, which would support it in meeting its greenhouse gas emission targets. It would also continue to participate in the internal energy market, which would facilitate the efficient importation of electricity from renewable sources at low prices, and would thereby support the UK's decarbonisation objectives. Robust governance procedures would provide strong and independent oversight over the UK's environment and climate objectives. In sum, there would still be a range of EU mechanisms – including funding schemes, reporting requirements, and the threat of infraction proceedings – to support the UK's environmental ambitions.

2. CUSTOMS UNION PLUS

This scenario is the most plausible model that falls between a 'Norway-style' agreement on the single market and customs union and a 'Canada-style' free trade agreement. In the summer of 2018, the government put forward a set of ideas in its white paper on the future relationship that aimed to secure a close trading relationship with the EU, avoid a hard border in Ireland, and maintain the UK's red lines (ending freedom of movement, pursuing an independent trade policy, and removing the direct jurisdiction of the CJEU). This so-called 'Chequers' proposal was designed to maintain frictionless trade in goods between the UK and the EU, while introducing restrictions in trade in services (DExEU 2018a).

There were two core aspects of the Chequers proposal. First, the UK outlined the idea of a 'facilitated customs arrangement' (FCA) with the EU. Under the terms of the FCA, goods imported into the UK from outside the EU would face either UK or EU tariff rates depending on whether their final destination was the UK or the EU. The FCA would in theory obviate the need for customs checks at the Irish border while allowing the UK to vary import tariffs for goods from third countries.

Second, the UK has proposed a 'common rulebook' with the EU for rules relevant for regulatory checks on goods at the UK's borders. The common rulebook would mean the UK fully aligned with these EU rules now and in future, thereby obviating the need for regulatory checks at the Irish border.

Soon after its publication, the European Commission and European Council made clear that they objected to the Chequers proposal because it did not respect the indivisibility of the four freedoms of the single market (BBC 2018). As a result, the political declaration on the future relationship between the UK and the EU implicitly rejects the Chequers proposal and outlines a future framework based on a normal free trade agreement (European Council 2018a). This is based on the principle that the UK will have full regulatory autonomy after the end of the transition period. (See the next section for a further discussion on the political declaration).

However, if the UK shifts its red lines on full regulatory autonomy, it may be possible to negotiate a closer relationship with the EU than the one envisaged in the future relationship, even if the UK is still outside the single market. This could draw on elements of the Chequers proposal.

For instance, it is possible that the UK and the EU could negotiate a customs union – covering both industrial and agricultural goods – as well as an agreement on the alignment of goods regulations in order to facilitate trade. While this would not meet the objectives of ‘frictionless trade’ in goods that the UK seeks – given that the UK would be outside the single market – it could reduce checks as far as possible within these constraints (see Lowe 2018). This ‘customs union plus’ model would be a ‘high alignment’ arrangement, requiring a degree of regulatory harmonisation between the UK and the EU. As this arrangement is different to the framework outlined in the political declaration, and indeed may prove impossible to negotiate, analysing this scenario necessarily requires some assumptions; the following analysis should therefore be treated with caution.⁷

Legislation

The UK and the EU have both proposed a non-regression requirement on environmental standards as part of the future economic relationship. (Non-regression clauses are discussed in more detail under the free trade agreement scenario below.) But it seems plausible that the EU would expect a stronger commitment on environmental standards under a high-alignment ‘customs union plus’ arrangement.

In particular, the EU might expect the UK to dynamically align (ie maintain a common rulebook) with EU environmental protections after Brexit. This is because of concerns that the UK could gain a competitive advantage over the EU by diverging from EU environmental rules and thereby saving costs for businesses. In a high-alignment scenario where there are relatively few trade barriers between the UK and the EU but there is no common rulebook on environmental standards, the UK would in principle have both the ability to trade goods easily into the EU and to lower the relative costs of these same goods by diverging from the EU’s environmental protections over time. In the EU’s eyes, this might represent an unfair competitive advantage for the UK. Indeed, in the European Council declaration accompanying the withdrawal agreement, the EU27 leaders indicate that a close relationship between the UK and the EU could require alignment to environmental standards (European Council 2018b).

The common rulebook on environmental standards is likely to encompass a similar area of legislation as the EEA Agreement. In practice, under this scenario the UK is therefore likely to continue to follow much of EU legislation on environmental standards – except for some legislation on nature and water protection (as with the EEA Agreement).

On energy and climate change, the political declaration on the future relationship assumes a much less integrated relationship, as outlined in the third scenario. However, under a ‘customs union plus’ arrangement – where the UK has shifted on its red lines on regulatory autonomy and is open to harmonisation on EU legislation – there is potentially scope for a closer relationship.

The UK’s white paper on the future partnership suggests a potential way forward on energy, leaving open the possibility of continued membership of the internal energy market (IEM). Under circumstances where the UK were to retain membership of the IEM, the white paper notes that the UK would need to agree a common rulebook on technical rules of electricity trading, including on market coupling, as well as rules on carbon pricing (potentially delivered via participation

⁷ This model is also likely to require the application of the Irish backstop in the withdrawal agreement. This means that special arrangements for Northern Ireland would apply. Yet this should have minimal environmental implications above and beyond the whole-UK arrangements discussed in this scenario, given the UK would in any case follow significant areas of EU environment, energy, and food safety legislation. For a more detailed discussion of the backstop, see the third scenario.

in the Emissions Trading System). However, it explicitly rules out a common rulebook on environment and climate change. Indeed, the white paper avoids any formal commitment on climate change, other than emphasising the importance of high standards (DExEU 2018a).

In practice, the UK's position seems unworkable. This is apparent from an analysis of the Energy Community, an agreement that extends the internal energy market to non-EU neighbouring countries in Eastern and South-Eastern Europe (Energy Community 2018). Participation in the Energy Community requires adopting certain environmental legislation – including the Environmental Impact Assessment Directive, the Environmental Liability Directive, the Industrial Emissions Directive, and the Wild Birds Directive. It also requires adopting a number of parts of the energy acquis, including the Renewable Energy Directive, the Energy Efficiency Directive, and the Energy Performance of Buildings Directive. At a minimum, then, the UK would be expected to sign up to this environmental and energy legislation in order to participate in the internal energy market after Brexit. (This would be in addition to the environmental 'common rulebook' discussed above.)

On Euratom, while continued membership is impossible outside of the EU, as highlighted in the previous section, the UK could seek to secure an association agreement, or alternatively include an agreement with Euratom within the wider negotiations on the future relationship. This could include elements of regulatory alignment with Euratom legislation.

Finally, it is expected that the UK would exit the Common Agricultural Policy and the Common Fisheries Policy under a 'customs union plus' model. Legislation on food safety, on the other hand, is likely to be an area of dispute, given it relates more directly to trade. This is clear from the initial response of the EU to the government's Chequers proposals. In a speech on the UK white paper on the future relationship, the EU chief negotiator Michel Barnier noted that it would be problematic for the UK to diverge from food safety rules under the Chequers proposals, even if such rules do not require border checks (for example, rules on GMOs or pesticides) (European Commission 2018j). It is therefore plausible that in a 'customs union plus' scenario the UK would agree to continue to follow EU legislation on food safety in order to minimise (though not remove) regulatory barriers to trade.

Governance

The withdrawal agreement between the UK and the EU includes detailed provisions on governance. The political declaration indicates that these arrangements will also provide the basis for governing the future relationship. We therefore expect that a 'customs union plus' model would have similar governance arrangements.

According to the withdrawal agreement and the political declaration, the future UK-EU agreement will be managed through a joint UK-EU committee. This committee will supervise the implementation of agreement, deal with disputes, and bring forward recommendations on how the agreement should evolve over time. For disputes that cannot be resolved through consultation in the joint committee, the parties can refer them on to an independent arbitration panel to issue a binding ruling. In instances of non-compliance, either party can impose lump sums or penalty payments. For more persistent instances of non-compliance, either party can suspend parts of the agreement (potentially imposing restrictions on market access).

Where a disagreement relates to an area of EU law, the arbitration panel would refer this on to the CJEU, which would give a binding ruling on the question of interpretation. In the case of environmental, energy and food safety legislation

– much of which, as we have discussed, would continue to align with EU law under this model – the CJEU’s interpretation and case law would therefore still be respected (European Commission 2018k).

On the whole, however, under the ‘customs union plus’ model the governance arrangements for environmental legislation would be weak compared with the status quo. Without a supranational supervision authority, it would be hard to closely and independently monitor the UK’s adherence to the common rulebook. And without the threat of infraction proceedings from a supranational court, the UK would have limited motivation for ensuring full adherence. Of course, the UK’s domestic institutions – including the new UK environmental watchdog and the Committee on Climate Change – would help to ensure the UK meets its environmental objectives, but without a supranational element these are likely to lack the strength and independence to fully enforce EU environmental rules. In principle, issues relating to the environment could be raised at the UK-EU joint committee and undergo the dispute resolution process, but in practice this is likely to be too indirect and blunt a tool to enforce environmental legislation in the UK to the same extent as today.

It is possible, however, that the EU would expect stronger governance arrangements as part of the future partnership under this model, particularly in relation to any agreement on a common rulebook. This could take several different forms. First, it could involve a more direct role for the commission and the CJEU to monitor and interpret areas of EU law. Second, it could involve a new supranational court and supervision authority to monitor the agreement. For instance, a new ‘UK court of justice’ – comprised of judges selected by the UK and the EU – could adjudicate over the UK’s side of the agreement. Third, the agreement could be ‘docked’ to the EFTA court – meaning that the EFTA court would be responsible for enforcing the UK-EU agreement. Each of these options would introduce a more robust set of institutional mechanisms for enforcing the environmental aspects of the UK-EU agreement.

Funding

The UK’s white paper indicates a preference for continued participation in the Horizon 2020 programme and its successors, and the political declaration on the future relationship envisages UK participation in EU programmes in areas such as science and innovation. It is possible that a settlement on Horizon and its successors could be agreed as part of the negotiations, given that the EU allows for third countries to associate with Horizon as long as they meet certain criteria (though it may require compromise in other areas, such as the free movement of people). The Life Programme is also potentially available to the UK via an agreement on participation, provided it makes a fair financial contribution (see European Commission 2018l). However, the European Structural Funds are not available to third countries and, as demonstrated in table 3.1, the European Investment Bank only makes limited investments outside of the EU.

Summary

In this scenario, it is likely that the UK would commit to a common rulebook (ie dynamic regulatory alignment) on most environmental legislation, as well as legislation on food safety. This indicates that the environmental acquis would largely stay in place, and there would be limited scope for backsliding. It is possible, however, that governance mechanisms would be weaker; without any supranational supervision or adjudication, there would be less scope for enforcing the agreement effectively. On the internal energy market, it is possible that the UK would remain a participant. Assuming the UK were to participate, it is likely that it would agree a common rulebook on relevant areas of legislation, including renewable energy, energy efficiency, and emissions trading. These would help

to support the UK's decarbonisation objectives. The UK may also be able to participate in some relevant EU programmes (such as the Life Programme and Horizon 2020). Overall, there may still be some EU mechanisms for encouraging environmental objectives in place under this scenario – including the common rulebook, the Emissions Trading System and certain funding programmes – but governance mechanisms may well be less robust than the status quo.

3. FREE TRADE AGREEMENT (FTA)

The political declaration on the future partnership proposes a free trade agreement with the UK. This is often characterised as a 'Canada-style' deal, because it represents a similar balance of rights and obligations as the EU's recent trade agreement with Canada (the EU-Canada Comprehensive Economic and Trade Agreement, or CETA). An FTA contrasts with the other types of agreements discussed above, because it would leave the UK outside of the single market and customs union, with no 'common rulebook' on EU legislation, and with significantly higher non-tariff barriers for trade in goods and services. It is also sometimes characterised as 'Canada plus', because the political declaration is somewhat more extensive than CETA in some areas, such as security cooperation.

The political declaration suggest that the free trade agreement would include zero tariffs and quantitative restrictions on all goods, agreements on regulatory cooperation, appropriate customs arrangements, provisions for services and investment, and arrangements for other areas such as public procurement and intellectual property. The declaration also includes provisions for mobility, transport services, energy, fishing, EU programmes, data flows, and law enforcement and security issues. It proposes that the free trade agreement should be underpinned by a 'level playing field', to ensure neither side can get an unfair competitive advantage by making policy changes on areas such as state aid, competition, tax, social policy, and environmental protections (European Council 2018a).

While the political declaration refers to the possibility of the UK aligning with EU rules, this appears to be on a unilateral basis, given the emphasis in the text on both parties' regulatory autonomy. The political declaration suggests that alignment will be "taken into account in the application of related checks and controls, considering this as a factor in reducing risk", which suggests that the EU may reduce the intensity of checks on the basis that the UK has unilaterally chosen to align legislation, rather than remove checks altogether. We therefore assume that the political declaration involves minimal formal alignment between UK and EU rules, even if the UK chooses to autonomously align in some areas.

Unless alternative arrangements can be found to prevent a hard border on the island of Ireland, the FTA is likely to be complemented by the so-called 'Irish backstop'. This is a protocol within the withdrawal agreement which contains two elements: first, a UK-EU customs union, and, second, a special arrangement for Northern Ireland that in effect maintains its place in the EU's customs union and the single market for goods. The UK-EU customs union is a 'bare-bones' arrangement that is unlikely to have any significant environmental implications above and beyond the FTA.⁸ Moreover, this part of the backstop is not essential for maintaining a soft border on the island of Ireland; it was included within the Irish protocol to keep Great Britain and Northern Ireland in the same customs territory, but the UK could in all likelihood decide to end the customs union, provided that the special arrangements for Northern Ireland remain in place. For these reasons

⁸ While the level playing field provisions within the UK-EU customs union include strong environmental components, they will in any case be built upon for the future free trade agreement (European Council 2018a).

we put the UK-EU customs union to one side in the following analysis. However, the special arrangements for Northern Ireland in the backstop would have important environmental implications for Northern Ireland, so we discuss these separately below.

It is important to note that the backstop in the Irish protocol is likely to be relevant for any future relationship between the UK and the EU, including the first two scenarios discussed in this chapter. However, in these cases, the models for the future relationship already include a UK-EU customs union and close alignment on environmental issues for the whole of the UK. The backstop is therefore most relevant for the FTA scenario, which is why we discuss it here.

Legislation

In this scenario, there would not be a ‘common rulebook’ – ie regulatory alignment – between the UK and the EU on environmental legislation. However, this does not mean that the agreement would exclude environmental issues. In fact, the ‘level playing field’ provisions would include a non-regression clause on environmental protections. A non-regression clause would aim to ensure either party does not backslide on any of its environmental protections and lower standards below the pre-Brexit levels. It would not, though, require the UK to follow EU legislation precisely: the UK would have the flexibility to diverge from EU legislation provided that it maintained the same level of environmental protections that it had at the end of the transition period.

The withdrawal agreement sets out detailed provisions for a non-regression clause on environmental protections. This non-regression clause is meant to be used as part of the Irish backstop arrangements for a UK-EU customs union. The political declaration on the future relationship indicates that an FTA would build on this non-regression clause, potentially extending it further depending on the depth of the relationship (European Council 2018a). For the purposes of our analysis in this scenario, we take the environmental non-regression clause in the backstop as the basis for the non-regression clause in the UK-EU FTA and highlight some areas where it may be strengthened for the future relationship.⁹

Typically, environmental non-regression clauses in the EU’s FTAs are somewhat weakly worded. They tend to only be applicable in instances where lowering standards encourages trade or investment; they tend to prevent derogation rather than wholesale deregulation of environmental legislation; and they tend to not specify precise areas of environmental policy (Nesbit and Baldock 2018).

The non-regression clause in the backstop is stronger on all three counts. First, it requires environmental protections, as delivered through “law, regulations and practices”, to not fall below the level provided by common UK and EU standards at the end of the transition period. This is designed to apply in all circumstances, not just when there are impacts on trade or investment. Second, it refers to reductions rather than simply derogations from existing legislation.

Third, it refers to maintaining protections in a number of specific areas of environmental policy. Grouping these areas using the themes specified in the first chapter, they include:

⁹ Some have claimed that, because a customs union comprises a closer relationship between the UK and the EU than an FTA, in an FTA scenario the environmental non-regression clause would be weaker than the provisions included in the backstop. This is implausible for two reasons. First, both the customs union and the proposed FTA guarantee zero tariffs and quantitative restrictions. Second, the FTA is likely to cover many further areas of economic cooperation compared to the ‘bare-bones’ customs union. It is therefore hard to argue that competitiveness considerations are less relevant and that a non-regression clause would be weaker in an FTA scenario.

- **horizontal legislation:** access to environmental information, public participation and access to justice in environmental matters; environmental impact assessment and strategic environmental assessment
- **air quality:** air emissions and air quality targets and ceilings
- **waste:** waste management
- **water protection:** the protection and preservation of the aquatic environment; the protection and preservation of the marine environment
- **nature protection:** nature and biodiversity conservation
- **industrial pollution:** industrial emissions
- **chemicals:** the prevention, reduction and elimination of risks to human health or the environment arising from the production, use, release and disposal of chemical substances
- **climate:** climate change.

A comparison with the summary of the environmental acquis in chapter two indicates that this is an expansive list that covers much of the UK's EU-derived environmental legislation. (It does not, however, include other areas of legislation related to the environment, such as energy efficiency and food safety.)

The environmental non-regression clause is also supplemented by a number of further provisions. First, there is a provision to respect core environmental principles, including the precautionary principle, the principle that preventative action should be taken, the principle that environmental damage should as a priority be rectified at source, and the 'polluter pays' principle. Second, there are provisions for precisely how standards should be maintained in a number of areas. The backstop specifies that the UK-EU joint committee should agree minimum rules for reductions in certain air pollutant emissions, maximum sulphur content of marine fuels, and 'best available techniques' in relation to industrial emissions. Third, there is a specific non-regression clause relating to carbon pricing, requiring the UK to implement a system that has at least the same effectiveness and scope as the EU Emissions Trading System. Finally, there are some broad affirmations to meet the parties' commitments on international environment and climate change agreements (for example, the Paris Agreement) (European Commission 2018k).

The environment section in the backstop also includes an article on domestic enforcement. The UK is required to ensure effective enforcement of the non-regression clause. In particular, it is required to set up an 'independent body' to carry out a system for the domestic monitoring, reporting, oversight and enforcement of environmental protections. The text states that this body must have the power to conduct inquiries into potential breaches by public bodies, receive complaints about potential breaches, and bring legal actions before the domestic courts. The UK is planning to introduce an environmental watchdog to fulfil a similar, if somewhat more limited, role, as discussed in the fourth scenario below.

While these provisions are stronger than typical non-regression clauses in EU FTAs, they do not require the UK to follow EU environmental law in full and they do not require the UK to update its environmental legislation as EU policy evolves over time. Instead, the requirement is to maintain the same level of protection as provided at the end of transition. This appears to allow some flexibility in how the UK government goes about delivering this level of protection. For instance, it might be possible for the UK to argue that it meets the commitments in the non-regression clause by setting the same environmental targets, but then implement these targets in different ways to now – for example, through less regular monitoring and reporting or through

a greater shift towards self-certification (see Nesbit and Baldock 2018; Lydgate 2018).¹⁰

It is possible, however, that as part of the negotiations on the future relationship the UK and the EU will agree stronger provisions for the non-regression clause. This could include an expanded scope (such as a longer list of policy areas to which the non-regression clause applies) and more specific procedural requirements (e.g. a requirement for the UK to match the levels of monitoring and reporting currently provided for in EU law).

Beyond the level playing field, there are further ways the free trade agreement would be expected to relate to environmental issues. The political declaration on the future relationship refers to cooperation on global challenges, such as climate change, sustainable development, and cross-border pollution (European Council 2018a).

Yet, overall, the vision set out in the political declaration is an arms-length relationship between the UK and the EU on areas related to the environment. In the section on energy, the political declaration refers to cooperation on electricity and gas supply and a framework for technical cooperation between network operators and EU organisations. The likelihood, therefore, is that under a free trade agreement the UK would exit the internal energy market. Similarly, the political declaration makes clear that in the context of an FTA the UK would leave the Emissions Trading System, though it leaves open the possibility that the UK and the EU could 'link' their emissions trading schemes in future (i.e. allowing the transfer of carbon allowances between schemes, which can help make emissions reduction more cost efficient). Under this scenario, the UK would also exit the Common Agricultural and Fisheries Policies.

On nuclear energy, the political declaration outlines a Nuclear Cooperation Agreement between the UK and Euratom to cover nuclear safety standards, information exchange, and trade in nuclear materials and equipment. It also indicates the intention of the UK to participate in Euratom research and training programmes. But given that the agreement would not include any formal regulatory alignment, it would be likely to fall significantly short of current arrangements.

One exception to the FTA, as highlighted above, would be Northern Ireland. Under the terms of the Irish protocol on the backstop to avoid a hard border on the island of Ireland, Northern Ireland would have a much closer relationship to the EU on energy and the environment compared to the rest of the UK. In particular, the protocol requires Northern Ireland to continue to comply with certain legislation on the environment (including the Packaging and Packaging Waste Directive, the Industrial Emissions Directive and REACH), legislation on climate change (including the Emissions Trading Directive, the Ozone-Depleting Substance Regulation, and the F-Gas Regulation), and legislation on food safety. The agreement would also see the continuation of Ireland's single electricity market. In summary, this means that, at a minimum, Northern Ireland would continue to follow all EU environmental legislation with direct implications for trade in goods and electricity (European Commission 2018k).

Governance

A free trade agreement is likely to have weaker governance arrangements than the above two scenarios, given it is a less comprehensive and integrated relationship. FTAs tend to be governed largely via:

¹⁰ These processes would, of course, still need to meet the 'effective enforcement' provision with respect to the non-regression clause.

- joint committees for monitoring developments and managing the relationship
- state-to-state arbitration procedures for dealing with disputes that cannot be resolved at the political level
- sanctions for ensuring compliance.

Unlike the earlier models discussed, they tend to not involve new supranational supervision authorities or permanent courts (European Commission 2018m).

Moreover, modern free trade deals tend to have separate dispute settlement procedures for their sustainable development chapters. These procedures tend to be weaker than the more formal processes that govern the rest of the agreement. After an initial consultation period, these dispute settlement procedures allow for a referral to an independent ‘panel of experts’, who can issue non-binding recommendations to the parties in the agreement, rather than an arbitration panel with the power to impose sanctions. In practice, these non-regression clauses therefore do not effectively uphold environmental standards, because there is little cost for renegeing on the agreement (Morris 2018b).

The provisions for dispute resolution for the non-regression clause in the withdrawal agreement’s backstop are, however, somewhat more robust than normal. This is critical given they are expected to form the basis for the level playing field arrangements in the future relationship.

As outlined in the second scenario, the withdrawal agreement has a two-stage process for formal dispute resolution. First, the dispute goes to consultations in the joint committee. Second, if the dispute is not resolved through this route then it can be referred to an arbitration panel, which then issues a binding ruling on the matter. In the case of arbitration, sanctions can be issued for non-compliance.

As is typical in FTAs, the environmental non-regression clause in the backstop is exempted from the arbitration mechanism; disputes on non-regression can therefore only be resolved through consultations in the joint committee. However, disputes on the provisions for effectively enforcing the non-regression clause are in principle subject to arbitration (and so sanctions can be applied in instances of non-compliance). This accords with the principle that the first stage for enforcing the non-regression clause should be domestic; but if there are failures in enforcing the non-regression clause at the domestic level, then this can be addressed at the supranational level.

In practice, it is somewhat unclear how this governance procedure might work. The most obvious interpretation is that where the UK’s independent body fails to effectively enforce environmental protections – for instance, by not taking action when the UK exceeds pre-specified emission limits – then the EU could raise a dispute and this could be brought to arbitration. On the other hand, if the UK and the EU disagree over whether the UK’s level of protection is the same as the EU’s in a particular area of environmental policy – for instance, if the UK uses a target based on a measure that the EU considers to be less environmentally robust – then it would be harder to bring this to arbitration, because the dispute would relate to the non-regression clause itself rather than its enforcement. There may well, however, be grey areas where the level of protection and its enforcement are hard to distinguish.

As the negotiations on the future relationship proceed, the UK and the EU may agree to strengthen the governance of the non-regression clause in the context of the free trade agreement. For instance, they could agree to remove the arbitration exemption for the non-regression clause altogether.

But even this approach would be likely to be weaker than a model based on a supranational court and supervision authority. As noted in the second scenario, it is unclear how effective an independent body would be for enforcing environmental protections compared with a supranational authority. Moreover, based on past experience of trade and sustainability chapters in EU trade agreement, the parties would be likely to place little weight on environmental protections in their management of the agreement, given they would often be reluctant to disrupt the agreement's functioning on the basis of environmental concerns.

Funding

As noted in the second scenario, the political declaration highlights the possibility of UK involvement in specific EU programmes as part of the free trade agreement, including participation in the fields of science and innovation (European Council 2018a). This suggests that, under the FTA model, where a programme does allow for third country participation it could be open to the UK, provided it makes an appropriate contribution. This could include the EU's Life Programme and Horizon 2020, but it would not include European structural funds. EIB financing for environmental projects might also be available, but would be on a limited scale compared with the status quo (as demonstrated in table 3.1).

Summary

In this scenario, the UK and the EU would have an arms-length relationship on most aspects of environmental policy. The UK would, in all likelihood, exit the internal energy market and no longer participate in the Emissions Trading System (though there may be a formal link between the Emissions Trading System and a UK equivalent). It would no longer have to continually follow the EU acquis on the environment.

However, despite these changes, the EU and the UK would agree to a non-regression clause on environmental standards. In principle, this would prevent the UK from lowering its environmental standards below current levels. But the provisions in the withdrawal agreement suggest that the mechanisms for governing the non-regression clause could be relatively weak – independent arbitration (and therefore the possibility of sanctions) would only be possible for disputes relating to the effective enforcement of the non-regression clause, rather than the clause itself.

Finally, under the backstop arrangements, we can expect that Northern Ireland would remain in the EU's customs union and single market for goods and would continue to follow a range of EU environment, food safety, and energy legislation.

Overall, this relationship would offer relatively few EU mechanisms for supporting Great Britain's environmental objectives (including non-regression clauses and participation in EU programmes), though Northern Ireland would be subject to more robust arrangements.

4. NO DEAL

The final scenario we consider is the circumstance where no deal is struck between the UK and the EU. There are two different ways a no deal could transpire: a failure to ratify the withdrawal agreement before the date of Brexit, or a successful ratification of the withdrawal agreement, following by the failure to agree the future relationship by the end of the transition period. In the latter case, the Irish protocol on the backstop would be invoked – this would result in special arrangements for Northern Ireland as well as a UK-EU customs union with

level paying field provisions. With respect to the environmental implications of the backstop, this outcome is in effect broadly equivalent to the third scenario. This section therefore deals with the former case, where the withdrawal agreement between the UK and the EU is not ratified and the UK leaves the EU without a deal in March 2019.

Legislation

A no deal Brexit would mean that there would be no agreement with the EU that required adherence to the EU's environmental policies or the upholding of environmental standards. (The UK would still, of course, be bound by other international environmental and climate agreements, such as the Paris Agreement.)

This does not mean that all EU-derived environmental legislation would immediately no longer apply to the UK in the event of a no deal. The EU Withdrawal Act is designed to preserve EU-derived legislation – including environmental legislation – in UK law after Brexit. The government is planning to introduce secondary legislation under the act to make more detailed changes to EU law (for example, adapting legal references to EU legislation and EU institutions). Powers currently within the remit of the devolved authorities will be transferred down to the appropriate level, alongside provisions for UK-wide frameworks where necessary.

The government is also preparing a draft environmental principles and governance bill ahead of the date of Brexit. The environment bill will be designed to help deliver the government's plan for protecting the environment over the next 25 years and will set out core environmental principles and governance arrangements (DEFRA 2018a). In principle, this bill could serve as a framework to replace the type of agenda-driven policymaking cycle developed by the European Commission, though the government's current 25-year environment plan, on which such a bill will be based, has been criticised for its weak commitments (ClientEarth 2018).

Regardless of the government's current stance, over time there is the possibility of UK divergence from EU legislation in parts of the environmental acquis or in related areas. Moreover, under a no deal, those aspects of EU environmental legislation that are transnational in nature – based, for instance, on mutual recognition, coordination between national authorities, or participation in joint programmes – would not be retained, as they would require agreement with the EU rather than unilateral decisions by the UK.

The government's no deal notifications give further details of how legislation would be adapted under a no deal scenario. On industrial pollution, the government states that the Industrial Emissions Directive would be brought into UK law, as would EU-wide decisions on emission limit values based on 'best available techniques' – contained in documents called BAT conclusions. New systems would be introduced for the UK to adopt its own BAT conclusions in future (DEFRA 2018b). On vehicle emissions, the Department for Transport would make corrections to account for deficiencies in EU regulations brought into UK law, such as adapting the formulae for calculating CO₂ targets so that they apply only to the UK (DfT 2018). On ozone-depleting substances and F-gases, the UK would set up its own quota systems and transfer responsibilities for allocating quotas from the European Commission to the Environment Agency (DEFRA 2018c). On chemicals, the UK would aim to replicate the REACH framework by transferring responsibility for managing the registration and evaluation of chemicals from the European Chemicals Agency to the UK's Health and Safety Executive (DEFRA 2018d).

With respect to energy, a no deal Brexit would have a series of ramifications for different parts of the energy system. While a number of these impacts would also take place in the other scenarios discussed above (particularly the third scenario), in a no deal scenario they would happen immediately on the date of Brexit, with minimal time to prepare. Some of these implications include the following.

- The UK immediately exiting the **internal energy market**. The all-Ireland single electricity market would also cease. This would have a knock-on impact on energy security, consumer prices, and the UK's renewable energy ambitions. Indeed, the UK has already contracted several more interconnectors with EU countries. These interconnectors, which are yet to be built, are due to see net imports increase from around 20TWh in 2016 to around 80TWh by the mid-2020s (Froggart et al 2017). While a no deal exit would not prevent the physical movement of electricity along these interconnectors, the UK's electricity market would become 'decoupled' from the EU's internal energy market. The UK government has stated that under a no deal scenario it would immediately seek to prepare alternative access arrangements with the EU (BEIS 2018a). It is unclear how these arrangements would work, but there is a significant risk that they would create disruptions and reduce trade efficiency.
- The UK immediately exiting the **Emissions Trading System (ETS)**. In this scenario, the UK would need to develop alternative carbon pricing measures to meet its climate change commitments. In the event of a no deal, the Treasury has proposed the introduction of a provisional tax on greenhouse gas emissions for stationary installations currently participating in the ETS. The new policy would set an annual emissions allowance in line with the ETS for each installation and then impose a tax at a rate of £16 per tonne of carbon dioxide for all emissions above the allowance. This tax would in effect replace the function of the EU's ETS. This proposal would be a short-term measure; the government has not decided how it would manage carbon pricing in the longer term if it were to leave the ETS (HMRC 2018).
- The UK immediately exiting **Euratom**. The impact of doing so would be highly disruptive to the nuclear sector. A no deal exit would require the UK to replace all Euratom's safeguarding arrangements for nuclear materials by March 2019, transferring responsibility from Euratom to the Office for Nuclear Regulation. The government has taken initial steps to prepare for this scenario (BEIS 2018b). In addition, Euratom provides nearly 90 per cent of funding for the UK's Joint European Torus (JET) nuclear fusion research facility operations, which would also be at risk under a no deal scenario (Downes 2017).

On climate change and renewable energy, the Climate Change Act from 2008 to some extent preserves ambitions to decarbonise the power system. Indeed, the act has always been a UK-derived piece of legislation that complements and goes beyond current EU directives. However, divergence from parts of the EU environmental and energy acquis could make the act's objectives harder to achieve in future (Farstad et al 2018).

In addition, provisions would need to be put in place to deal with 'guarantees of origin', documents that prove to customers how much energy in an electricity supplier's energy mix comes from renewable sources. The UK would continue to recognise 'guarantees of origin' issued from EU countries, though this would not be reciprocated by the EU, which could negatively impact those hoping to export renewable energy from the UK to EU countries (BEIS 2018c).

Moreover, in a no deal scenario, the UK would not be subject to EU state aid rules. It would therefore be free to selectively fund projects which could give industries a competitive advantage and provide an additional incentive to invest

in the UK. This issue would become especially important in the circumstances of a no deal, given that the UK would need to replace EU funding streams with domestic funding mechanisms.

With respect to farming, the UK would exit the Common Agricultural Policy and the Common Fisheries Policy. However, in the short term the government would continue the operation of farm payments under the current rules, until new agricultural legislation is passed in the UK Parliament or devolved parliaments (DEFRA 2018e). On areas of food safety, such as pesticides, the EU Withdrawal Act would maintain the current rules while the government would make additional changes to transfer processes from the European Food Safety Authority to the domestic level. Transnational elements of these policies – for instance relating to mutual recognition of product approvals across the EU – would no longer apply (DEFRA 2018f).

Governance

A no deal scenario would mean that all EU governance arrangements – including the European Commission, the CJEU, and EU agencies – would fall away, and no other international bodies (such as a joint committee, supervision authority, or supranational court) would replace them. Instead, all governance mechanisms would take place at the domestic level.

Recognising the gap left by Brexit, the government has consulted on a new independent environmental watchdog for England, in order to replace the role of the European Commission in monitoring and enforcing EU-derived legislation. This watchdog is likely to be necessary under a number of Brexit scenarios, but it will have particular importance in the case of a no deal. The role of the new body is not confirmed, but it is possible that it will scrutinise the government's progress against its environmental objectives (its 25-year environmental plan in particular), investigate complaints, and take action to require government compliance with environmental law. Enforcement actions could range from advisory notices highlighting non-compliance to the right to intervene in legal proceedings (DEFRA 2018g).

However, concerns have been raised about the government's plans for a new independent body. Critics have highlighted that the watchdog will not have sufficient enforcement powers – such as the ability to initiate court proceedings against public authorities – to ensure the government meets its commitments. (Notably, this is weaker than the enforcement provisions accompanying the environmental non-regression clause in the UK-EU withdrawal agreement.) The watchdog is also limited in scope, covering only elements of the environmental acquis and excluding other areas such as climate change (which the government argues is already monitored by the Committee on Climate Change). Ultimately, whatever form is finally decided, it is unlikely that an independent domestic body will offer the same degree of supervision and enforcement delivered by supranational institutions such as the European Commission and the CJEU (Halfpenny 2018).

To some extent, concern over enforcement already exists for areas related to climate change and energy. Even though the Climate Change Act theoretically provides strict emissions targets – a series of increasingly stringent five-year 'carbon budgets' – the Committee on Climate Change cannot force the government to take action to meet these targets. Instead, it can only provide advice and leverage public opinion to put pressure on the government. These limited powers have made it difficult for the committee to encourage sufficient government action. Already, according to the Committee on Climate Change, the UK is projected to produce too many emissions to meet the fourth and fifth carbon budgets (for the periods 2023–2027 and 2028–2032), and substantial

investment will be needed to correct this trajectory (Committee on Climate Change 2018).

Funding

Under a no deal scenario, the UK would generally no longer be able to participate in EU programmes or in EIB projects. The UK government has made a guarantee that it will continue funding for all projects agreed before Brexit, so no live projects will be affected. The government's no deal notices make clear this applies to LIFE programme funding (DEFRA 2018h), Horizon 2020 funding (BEIS 2018d), and European Regional Development funding (BEIS 2018e). In the event of a no deal, the government has also committed to covering all structural and investment funding for projects that would have been funded by the EU until 2020. In respect of Horizon, it would be possible in some cases for UK-based researchers to apply as third country participants, with the UK government covering their costs.

In the longer term, the government could, of course, replace participation in EU programmes with UK programmes that deliver similar goals. The government has already announced a Shared Prosperity Fund to replace EU structural funds after Brexit. Similarly, in the event of a no deal, the government could choose to replace EU LIFE and Horizon funding with its own UK-based environmental, energy and research programmes. Yet given the scale of funding highlighted in table 2.1, it is clear that replacing EU funding in these areas will involve considerable investment in research and innovation, environmental protection, and regional development.

Summary

A no deal Brexit would constitute a significant change for the UK in relation to its environmental protections. The EU would no longer have any role in supporting the UK's targets and commitments on the environment and climate change. All UK-EU transnational cooperation on environment and climate change would cease: the UK would exit the internal energy market, the Emissions Trading System, and all EU environmental funding programmes. Of course, none of these changes would preclude the UK maintaining high environmental standards after Brexit, and the government's intentions – through the Withdrawal Act, the environment bill, and secondary legislation – are to retain and improve on EU environmental standards. But without any UK-EU commitments and without any supranational governance structures, it would be far easier for the UK to lower its environmental protections after Brexit – either by explicitly loosening EU-derived legislation once it is translated into UK law or instead by not properly enforcing legislation once supervision by EU institutions is removed.

4. CONCLUSION

This briefing has explored the different scenarios for environmental protections in the UK after Brexit. The EU has played a significant role in supporting the UK's environmental ambitions in recent decades, and the UK's withdrawal could transform this role over the coming years.

EU policy has been important across three dimensions. First, it has contributed a significant amount of legislation on environmental issues, ranging from air quality, nature protection and waste management to greenhouse gas emissions reductions, energy efficiency, and food safety. Second, it has played a vital role on governance, through robust supranational supervision and enforcement. Third, it has played an important role in funding and financing environmental projects.

This is not to say that the EU's policymaking is enough to avert environmental breakdown – there are still major environmental and climate risks that pose serious threats to human health and the whole planet. As we argued in IPPR's Commission on Economic Justice, the UK should aim to extend its environmental policy far beyond the EU's minimum standards through a Sustainable Economy Act, modelled on the 2008 Climate Change Act. The Sustainable Economy Act would require government to set legally binding environmental limits and then produce economy-wide plans for how to meet them. This wide-ranging approach could form the basis of the government's new environment bill, announced earlier this year.

While the EU's policy on environmental protection has not been sufficient, it has provided a valuable baseline for the UK's own ambitions. The future relationship between the UK and the EU will therefore have important long-term consequences for the UK's environmental policymaking.

We will now summarise four broad scenarios for Brexit and their implications for the environment and climate change (summarised in table 4.1).

The first is a deal encompassing the single market and the customs union. We would expect this scenario to deliver the strongest safeguards for environmental protections, given it would require the UK to follow much of the environmental, energy and food safety acquis, would involve a supranational court and supervision authority, and would enable continued participation in several environmental funding routes.

The second scenario is a 'customs union plus' arrangement, including extensive agreements on regulatory alignment to facilitate trade in goods. This scenario is likely to require a 'common rulebook' (regulatory alignment) on significant areas of environmental policy, as well as food safety. The UK may also continue to participate in the internal energy market and the Emissions Trading System, alongside agreeing a 'common rulebook' on energy and climate change legislation. The governance mechanisms may be somewhat weaker than the first scenario – at least on the basis of the provisions outlined in the withdrawal agreement – but would still allow for consistency in legislative interpretation and sanctions in cases of non-compliance. The UK would also probably be able to participate in some EU funding programmes related to the environment.

Overall, this scenario would provide moderate safeguards for environmental protections through the UK-EU agreement.

The third scenario is a free trade agreement with a special status for Northern Ireland, which would remain in the EU's customs union and single market for goods. There would be no 'common rulebook' under this scenario but instead a non-regression clause for environmental protections. This would in theory prevent the UK from lowering its environmental standards below the common UK-EU baseline at the end of transition, but in practice it risks being weakly governed. The UK would probably be able to participate in certain EU funding programmes, but it would most likely no longer participate in the internal energy market and Emissions Trading System, which could hinder its efforts to tackle climate change. Overall, this scenario would provide relatively weak safeguards for environmental protections through the UK-EU agreement.

The final scenario is where the UK and the EU fail to finalise a Brexit deal. In this case, the UK would end all transnational cooperation with the EU on the environment and climate change, including agreements on mutual recognition, the internal energy market, the EU Emissions Trading System, and EU funding programmes. Moreover, there would be no formal EU processes for encouraging the UK to meet its environmental ambitions. Under the EU Withdrawal Act and other related pieces of legislation, the UK would maintain its environmental protections in the short term, but over the longer term there would be little to prevent the UK from diverging or loosening EU-derived environmental legislation or failing to properly enforce it. This scenario would therefore provide the weakest safeguards for environmental protections.

TABLE 4.1
Summary of Brexit scenarios and their environmental implications

Scenario	Environmental legislation	Governance of environmental protections	Funding for environmental programmes
Single market and customs union	Alignment with majority of environment, climate/energy and food safety legislation (but possibly not agriculture and fisheries); continued participation in internal energy market and ETS	Strong governance structures through supranational court and supervision authority	Likely access to EU funding (excepting structural funds); likely limited access to EIB financing
Customs union plus	Likely alignment with majority of environment and food safety legislation; possible participation in internal energy market and ETS, provided UK continues to align with relevant energy and climate legislation	Moderate-to-strong governance structures, either through supranational court or a joint committee and arbitration panel with a CJEU link	Possible access to EU funding (excepting structural funds); possible limited access to EIB financing
Free trade agreement	No requirement for regulatory alignment; non-regression clause for environmental standards; probably no participation in EU schemes such as the internal energy market and the ETS	Weak-to-moderate governance structures through joint committee and arbitration panel; priority on domestic enforcement	Possible access to EU funding (excepting structural funds); possible limited access to EIB financing
No deal	No requirement for regulatory alignment; no participation in EU schemes such as the internal energy market and the ETS	No supranational governance structures; reliance on domestic structures	No foreseen access to EU funding

Source: IPPR analysis

Finally, it is important to note that, even if some of the scenarios discussed provide weak safeguards, it does not follow that the UK would use the absence of these safeguards to lower environmental protections. Indeed, there are some ways for the UK to use the policy consequences of Brexit to take a more ambitious approach to environmental protections – for instance, by redesigning agricultural policy to expand green direct payments or by replacing structural funds so that they are channelled to a greater array of projects focused on environmental objectives. While some scenarios offer stronger safeguards than others, ultimately it will be the UK's choice to decide whether Brexit becomes a distraction from its environmental ambitions or an opportunity to extend these ambitions further.

REFERENCES

- Baudenbacher C (2012) 'The EFTA Judicial System Reaches the Age of Majority – Accomplishments and Problems', Speech given at the EEA Seminar of the EFTA Secretariat of 19 January 2012 in Brussels. http://www.eftacourt.int/fileadmin/user_upload/Files/News/2012/CB_The_EFTA_Judicial_System_reaches_the_Age_of_Majority_final.pdf
- BBC (2018) 'Donald Tusk: Theresa May's Brexit trade plan won't work', 20 September 2018. <https://www.bbc.co.uk/news/uk-politics-45586010>
- Bø Ø (2018) 'Should the UK choose the 'Norway model', it would still be subject to the jurisdiction of a foreign court', LSE Brexit blog, 27 March 2018. <http://blogs.lse.ac.uk/brexit/2018/03/27/should-the-uk-choose-the-norway-model-it-would-still-be-subject-to-the-jurisdiction-of-an-international-court/>
- ClientEarth (2018) '25 year plan for the environment full of empty promises', webpage, 11 January 2018. <https://www.clientearth.org/25-year-plan-environment-full-empty-promises/>
- Committee on Climate Change (2018) *Reducing UK emissions – 2018 Progress Report to Parliament*. <https://www.theccc.org.uk/publication/reducing-uk-emissions-2018-progress-report-to-parliament/>
- Department for Business, Energy and Industrial Strategy [BEIS] (2018a) *Trading electricity if there's no Brexit deal*. <https://www.gov.uk/government/publications/trading-electricity-if-theres-no-brexit-deal>
- Department for Business, Energy and Industrial Strategy [BEIS] (2018b) *Civil nuclear regulation if there's no Brexit deal*. <https://www.gov.uk/government/publications/civil-nuclear-regulation-if-theres-no-brexit-deal>
- Department for Business, Energy and Industrial Strategy [BEIS] (2018c) *Generating low-carbon electricity if there's no Brexit deal*. <https://www.gov.uk/government/publications/generating-low-carbon-electricity-if-theres-no-brexit-deal>
- Department for Business, Energy and Industrial Strategy [BEIS] (2018d) *Horizon 2020 funding if there's no Brexit deal*. <https://www.gov.uk/government/publications/horizon-2020-funding-if-theres-no-brexit-deal>
- Department for Business, Energy and Industrial Strategy [BEIS] (2018e) *European Regional Development Funding if there's no Brexit deal*. <https://www.gov.uk/government/publications/european-regional-development-funding-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018a) *Upholding environmental standards if there's no Brexit deal*. <https://www.gov.uk/government/publications/upholding-environmental-standards-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018b) *Industrial emissions standards ('best available techniques') if there's no Brexit deal*. <https://www.gov.uk/government/publications/industrial-emissions-standards-best-available-techniques-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018c) *Using and trading in fluorinated gases and ozone depleting substances if there's no Brexit deal*. <https://www.gov.uk/government/publications/using-and-trading-in-fluorinated-gases-and-ozone-depleting-substances-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018d) *Regulating chemicals (REACH) if there's no Brexit deal*. <https://www.gov.uk/government/publications/regulating-chemicals-reach-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018e) *Farm payments if there's no Brexit deal*. <https://www.gov.uk/government/publications/farm-payments-if-theres-no-brexit-deal>

- Department for Environment, Food and Rural Affairs [DEFRA] (2018f) *Regulating pesticides if there's no Brexit deal*. <https://www.gov.uk/government/publications/regulating-pesticides-if-theres-no-brexit-deal>
- Department for Environment, Food and Rural Affairs [DEFRA] (2018g) 'Environmental Principles and Governance after the United Kingdom leaves the European Union: Consultation on environmental principles and accountability for the environment', consultation document. https://consult.defra.gov.uk/eu/environmental-principles-and-governance/supporting_documents/Environmental%20Principles%20and%20Governance%20after%20EU%20Exit%20%20Consultation%20Document.pdf
- Department for Environment, Food and Rural Affairs [DEFRA] (2018h) *Funding for UK LIFE projects if there's no Brexit deal*. <https://www.gov.uk/government/publications/funding-for-uk-life-projects-if-theres-no-brexit-deal>
- Department for Exiting the European Union [DExEU] (2018a) *The future relationship between the United Kingdom and the European Union*. <https://www.gov.uk/government/publications/the-future-relationship-between-the-united-kingdom-and-the-european-union>
- Department for Transport [DfT] (2018) *Reporting CO2 emissions for new cars and vans if there's no Brexit deal*. <https://www.gov.uk/government/publications/reporting-co2-emissions-for-new-cars-and-vans-if-theres-no-brexit-deal>
- Downes R J (2017) 'What is Euratom and why has it emerged as a Brexit battleground?', *Bulletin of the Atomic Scientists*. <https://thebulletin.org/2017/07/what-is-euratom-and-why-has-it-emerged-as-a-brexit-battleground/>
- EFTA Surveillance Authority (2018a) 'Environmental legislation in the EEA', webpage. <http://www.eftasurv.int/internal-market-affairs/areas-of-competence/environment/environmental-legislation/>
- EFTA Surveillance Authority (2018b) 'Energy', webpage. <http://www.eftasurv.int/internal-market-affairs/areas-of-competence/energy/>
- Emden J (2015) 'Go with the flow: New EU policy supports renewable energy', 6 March 2015, *Felix*. <http://felixonline.co.uk/articles/2015-3-6-go-with-the-flow-new-eu-policy-supports-renewable-energy/>
- Energy Community (2017) 'Energy Community acquis', webpage. <https://www.energy-community.org/legal/acquis.html>
- Environment and Climate Regional Accession Network [ECRAN] (2015–16a) *Handbook on the implementation of EU Environmental Legislation*, European Union. <http://www.ecranetwork.org/Horizontal-Activities/Handbook-EU-Environmental-Acquis>
- Environment and Climate Regional Accession Network [ECRAN] (2015–16b) *Handbook on the implementation of EU Climate Change Legislation*, European Union. <http://www.ecranetwork.org/Horizontal-Activities/Handbook-EU-Climate-Acquis>
- EUR-Lex (2018) 'Food safety', Summaries of EU legislation. https://eur-lex.europa.eu/summary/chapter/food_safety.html?root_default=SUM_1_CODED%3D30&locale=en
- European Commission (2009) 'Renewable Energy Directive', webpage. <https://ec.europa.eu/energy/en/topics/renewable-energy/renewable-energy-directive>
- European Commission (2012) 'Energy Efficiency Directive', webpage. <https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive>
- European Commission (2013) 'Greening', webpage. https://ec.europa.eu/agriculture/direct-support/greening_en
- European Commission (2016a) 'Introduction to the new EU Water Framework Directive', webpage. http://ec.europa.eu/environment/water/water-framework/info/intro_en.htm
- European Commission (2016b) 'The Habitats Directive', webpage. http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm
- European Commission (2017) 'LIFE Programme – Country Factsheet: United Kingdom', briefing document. http://ec.europa.eu/environment/life/countries/documents/uk_en_mar17.pdf
- European Commission (2018a) 'Nuclear Energy', webpage. <https://ec.europa.eu/energy/en/topics/nuclear-energy>
- European Commission (2018b) 'Air quality: Commission takes action to protect citizens from air pollution', press release. http://europa.eu/rapid/press-release_IP-18-3450_en.htm

- European Commission (2018c) 'LIFE Programme', webpage. <http://ec.europa.eu/environment/life/>
- European Commission (2018d) 'Horizon 2020', webpage. <https://ec.europa.eu/programmes/horizon2020/en/>
- European Commission (2018e) 'European Research and Development Fund', webpage. http://ec.europa.eu/regional_policy/en/funding/erdf/
- European Commission (2018f) 'Funding opportunities under the Common Agricultural Policy', webpage. https://ec.europa.eu/agriculture/cap-funding/funding-opportunities_en
- European Commission (2018g) 'European Maritime and Fisheries Fund', webpage. https://ec.europa.eu/fisheries/cfp/emff_en
- European Commission (2018h) Horizon 2020 interactive dashboard. <https://webgate.ec.europa.eu/dashboard/hub/stream/aaec8d41-5201-43ab-809f-3063750dfafd>
- European Commission (2018i) European Structural and Investment Funds – Country Data for: United Kingdom, dataset. <https://cohesiondata.ec.europa.eu/countries/UK>
- European Commission (2018j) 'Press statement by Michel Barnier following the July 2018 General Affairs Council (Article 50)'. http://europa.eu/rapid/press-release_STATEMENT-18-4626_en.htm
- European Commission (2018k) *Draft Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community*. https://ec.europa.eu/commission/publications/draft-agreement-withdrawal-united-kingdom-great-britain-and-northern-ireland-european-union-and-european-atomic-energy-community-agreed-negotiators-level-14-november-2018_en
- European Commission (2018l) Proposal for a Regulation of the European Parliament and of the Council establishing a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EU) No 1293/2013. <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018PC0385&from=EN>
- European Commission (2018m) 'Internal EU27 preparatory discussions on the framework for the future relationship: "Level Playing Field"', Task Force for the Preparation and Conduct of the Negotiations with the United Kingdom under Article 50 TEU. https://ec.europa.eu/commission/publications/slides-level-playing-field_en
- European Council (2018a) 'Draft Political Declaration setting out the Framework for the Future Relationship between the EU and the UK'. <https://www.consilium.europa.eu/en/press/press-releases/2018/11/22/draft-political-declaration-setting-out-the-framework-for-the-future-relationship-between-the-eu-and-the-uk-and-article-132-of-the-draft-withdrawal-agreement/>
- European Council (2018b) 'Special meeting of the European Council (Art. 50) (25 November 2018) - Statements for the minutes'. <https://www.consilium.europa.eu/media/37102/xt20017-en18.pdf>
- European Parliament and Council proposed Regulation (COM/2018/385) establishing a Programme for the Environment and Climate Action (LIFE). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018PC0385&from=EN>
- European Investment Bank [EIB] (2018a) 'The EU bank', webpage. <http://www.eib.org/en/about/index.htm>
- European Investment Bank [EIB] (2018b) 'Financed projects', webpage. <http://www.eib.org/en/projects/loan/list/index>
- Farstad F, Carter N and Burns C (2018) 'What does Brexit mean for the Climate Change Act?', *The Political Quarterly*, 89:2, pp. 291-297. <https://onlinelibrary.wiley.com/doi/full/10.1111/1467-923X.12486>
- Friends of the Earth (2014) *Felled for Fuel? Why burning trees for electricity should not get UK government subsidies*. <https://friendsoftheearth.uk/sites/default/files/downloads/felled-fuel-46611.pdf>
- Froggart A, Wright G, and Lockwood M (2017) *Staying Connected: Key elements for UK-EU27 energy cooperation after Brexit*, Chatham House. <https://reader.chathamhouse.org/staying-connected-key-elements-uk-eu27-energy-cooperation-after-brexit#>

- Halfpenny B (2018) 'Why the government's watchdog consultation is so disappointing', Inside Track – *Green Alliance* blog, 11 May 2018. <https://greenallianceblog.org.uk/2018/05/11/why-the-governments-watchdog-consultation-is-so-disappointing/>
- Harvey F (2018) 'Air pollution: UK government loses third court case as plans ruled 'unlawful'', *Guardian*, 21 February 2018. <https://www.theguardian.com/environment/2018/feb/21/high-court-rules-uk-air-pollution-plans-unlawful>
- HM Treasury (2018) *The government's guarantee for EU-funded programmes if there's no Brexit deal*. <https://www.gov.uk/government/publications/the-governments-guarantee-for-eu-funded-programmes-if-theres-no-brexit-deal>
- HMRC (2018) 'Carbon Emissions Tax', webpage. <https://www.gov.uk/government/publications/carbon-emissions-tax/carbon-emissions-tax>
- Hogarth R and Lloyd L (2017) *Who's afraid of the ECJ? Charting the UK's relationship with the European Court*, Institute for Government. <https://www.instituteforgovernment.org.uk/publications/whos-afraid-ecj-brexit>
- House of Lords European Union Committee (2017) *Brexit: environment and climate change*, 12th report of Session 2016-17. <https://publications.parliament.uk/pa/ld201617/ldselect/ldeucom/109/10902.htm>
- Institute for Public Policy Research [IPPR] (2018) *Prosperity and Justice: A plan for the new economy – The final report of the IPPR Commission on Economic Justice*, Polity Press. <https://www.ippr.org/research/publications/prosperity-and-justice>
- Journal of the European Union (2014) 'Association between the European Union and its Member States, of the one part, and Ukraine, of the other part'. https://trade.ec.europa.eu/doclib/docs/2016/november/tradoc_155103.pdf
- Kibasi T and Morris M (2017) *The shared market: A new proposal for a future partnership between the UK and the EU*, IPPR. <http://www.ippr.org/research/publications/the-shared-market>
- Lydgate E (2018) 'Environmental non-regression in the Withdrawal Agreement: forcing the EU's hand on the Level Playing Field', UK Trade Policy Observatory, 21 November 2018. <https://blogs.sussex.ac.uk/uktpo/2018/11/21/environmental-non-regression-in-the-withdrawal-agreement-forcing-the-eus-hand-on-the-level-playing-field/>
- Lowe S (2018) 'Inching our way towards Jersey', Centre for European Reform, 11 July 2018. <https://www.cer.eu/insights/inching-our-way-towards-jersey>
- Marguerite (2018) 'About us – background', webpage. <http://www.marguerite.com/about-us/background/>
- Morris M (2018a) *Leaving the EU, not the European model? New findings on public attitudes to Brexit (part one)*, IPPR. <http://www.ippr.org/research/publications/leaving-the-eu-not-the-european-model>
- Morris M (2018b) *A level playing field for workers: The future of employment rights post-Brexit*, IPPR. <http://www.ippr.org/research/publications/a-level-playing-field-for-workers>
- Nesbit M and Baldock D (2018) *Non-regression and environmental legislation in the future EU-UK relationship*, Institute for European Environmental Policy. <https://ieep.eu/uploads/articles/attachments/b951ce87-3dcd-4043-85bd-026119d50628/Non-regression%20and%20equivalence%20-%20October%20corrected.pdf?v=63706303892>
- Phinnemore D (2017) 'There's no such thing as 'associate membership' of Euratom', blog post, *LSE EUROPP*, 18 July 2017. <http://blogs.lse.ac.uk/europpblog/2017/07/18/no-such-thing-as-associate-membership-euratom/>
- Scottish Parliament Information Centre [SPICe] (2014) 'The Reformed Common Fisheries Policy 2014', briefing. http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB_14-49.pdf
- Wright G, Froggart A, and Lockwood M (2017) Evidence to the House of Lords – 'Brexit: energy security', Chatham House and University of Exeter (BES0044). <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/eu-energy-and-environment-subcommittee/brexit-energy-security/written/69557.html>

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The image features a solid blue background with several large, overlapping orange shapes. These shapes include a large curved area in the top right, a rectangular block in the middle left, and a curved area in the bottom left. The overall composition is minimalist and modern.

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