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The potential policy and environmental consequences for the UK of a departure from the European Union

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In collaboration with:



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TABLE OF CONTENTS

Summary of the report	6
1 Introduction and Context	13
2 The EU record: strengths and weaknesses as an environmental actor	15
2.1 Establishing an EU Environmental Policy	15
2.2 The EU's Strengths as an Environmental Actor	16
2.3 The EU's Weaknesses as an Environmental Actor	18
2.4 Current and future influences on EU policy	19
3 Brexit and its consequences	22
3.1 The departure of the UK would have effects at several levels:.....	22
3.2 Examining some alternatives to EU membership.....	25
3.2.1 <i>Scenario 1 – Retaining access to the internal market through membership of the EEA ('the inside the EEA Option')</i>	25
3.2.2 <i>Scenario 2: No access to the internal market ('the entirely outside Option')</i>	30
4 Environmental quality: pollution control, wastes and chemicals	34
4.1 Introduction	34
4.2 Air quality.....	34
4.2.1 <i>Air Quality following a UK departure</i>	36
4.3 Water quality and management.....	37
4.3.1 <i>Water quality following UK departure</i>	39
4.4 Controlling pollution emissions	40
4.4.1 <i>Controlling emissions following a UK departure</i>	42
4.5 Waste management.....	42
4.5.1 <i>Waste management following a UK departure</i>	45
4.6 The use of single market measures under the EU Treaty.....	46
4.7 Conclusions	47
5 Nature protection	49
5.1 Introduction	49
5.2 Relevant nature conservation policy in the EU	49
5.3 Policy scenarios for nature conservation following Brexit	54
5.4 Implications of EU departure for nature conservation.....	55
5.4.1 <i>The Birds and Habitats Directives</i>	55
5.4.2 <i>Marine nature conservation policy</i>	56
5.4.3 <i>International – impacts outside the UK</i>	57

5.5	Conclusions	58
6	Climate and energy	61
6.1	Climate policy in the EU	61
6.1.1	<i>The UK's influence on development of the EU's Emissions Trading System</i>	<i>62</i>
6.1.2	<i>The Effort Sharing Decision</i>	<i>63</i>
6.1.3	<i>Climate at the centre of European policy priorities</i>	<i>63</i>
6.1.4	<i>Climate-related aspects of energy policy</i>	<i>64</i>
6.2	Future policy impacts.....	65
6.2.1	<i>International negotiations</i>	<i>66</i>
6.2.2	<i>Future EU and UK climate policy.....</i>	<i>66</i>
6.2.3	<i>Future climate-relevant areas of EU energy policy.....</i>	<i>68</i>
6.2.4	<i>Future of other climate-related policies.....</i>	<i>69</i>
6.3	Conclusions	69
7	Agriculture and the environment	70
7.1	The policy record	71
7.2	Potential changes to UK agricultural policy post withdrawal and the environmental implications.....	73
7.2.1	<i>New Trade Relationships</i>	<i>73</i>
7.2.2	<i>New domestic policies.....</i>	<i>74</i>
7.3	What are the environmental impacts of such scenarios?	78
7.4	Conclusions	81
8	Fisheries policy	84
8.1	Introduction	84
8.2	The track record of CFP and the environment	84
8.2.1	<i>Britain and the CFP</i>	<i>86</i>
8.3	The effects of leaving the EU on fisheries	89
8.3.1	<i>Total Allowable Catch (TAC).....</i>	<i>90</i>
8.3.2	<i>Quota allocation</i>	<i>91</i>
8.3.3	<i>Monitoring and control.....</i>	<i>92</i>
8.3.4	<i>Bilateral fisheries agreements</i>	<i>93</i>
8.3.5	<i>Subsidies and funding</i>	<i>93</i>
8.3.6	<i>The Single Market</i>	<i>94</i>
8.4	International fisheries management	94
8.5	Conclusions	95
	Conclusions	100
	Annex A – Annex to Chapter 8	102

TABLE OF BOXES

Box 1-1 A new settlement for the United Kingdom in a reformed European Union	13
Box 2-1 The EU's 7 th Environmental Action Programme Objectives	20
Box 3-1 The European Free Trade Association (EFTA).....	26
Box 3-2 Selection of EU environmental legislation included in the EEA agreement.....	27
Box 3-3 National room for manoeuvre within the EEA	28
Box 3-4 Switzerland's access to the internal market through Bilateral Agreements.....	29
Box 4-1 The Water Framework Directive and appropriate flood management in the UK	39
Box 5-1 The fate of birds under different protection regimes	51
Box 6-1 Norway and Iceland's relationship with EU climate policy	62
Box 8-1 Banning of discards – a bottom-up approach	88

TABLE OF FIGURES

Figure 4-1 Compliance of UK bathing water with the standards in the EC Bathing Water Directive (expressed in UK Guidelines): 1994-2011. (Defra, 2013)	38
Figure 4-2 Household recycling rates in England 2000-2012 (Defra, 2013b).....	44
Figure 4-3 Recycling rates in all EU Member States for 2001 and 2010 (EEA, 2013)	45
Figure 8-1 The UK Exclusive Economic Zone (EEZ) (MMO, 2013).....	90

Summary of the report

This report considers the potential consequences for the environment and for environmental policy of the UK choosing to withdraw from the EU, based on different scenarios for the UK's future relationship with its neighbours. The assessment identifies potential influences on the decisions to be made in a future outside the EU, including international agreements, the changing context and already established UK policy positions. It builds on an overview of the EU's record, particularly in developing and applying environmental policies, but also in relation to agriculture and fisheries policy.

EU policies affecting the environment

Although the environment was not accorded much consideration in the early years of the EU's development, this has changed dramatically. A comprehensive set of policies has been established, forming what is now one of the most influential bodies of environmental law in the world.

This transition was brought about only with the active engagement and explicit agreement of European governments, including the UK, through a legislative process that requires the agreement of a substantial majority of countries. Indeed, the UK has been among the most influential Member States in the shaping of EU policies. There is now close integration between UK, EU and international environmental law. Separating them would be a considerable challenge and a source of significant uncertainty.

Beyond this are other EU policies which have a significant environmental impact, including those on agriculture, fisheries, research and development, trade, overseas development and foreign affairs. Two of these – the Common Agricultural Policy (CAP) and the Common Fisheries Policy (CFP) – are of particular relevance in the Referendum debate, and are therefore assessed in more detail in this report. Both would cease to apply in the UK if it were to leave the EU, regardless of the scenario for its future international relationships. Immediate questions about the environmental consequences would arise.

The EU's role in environmental policy

The development of environmental policy in the EU took place over several decades starting from the 1970s, and continues today; it has revealed some of the strengths and weaknesses of adopting a common EU approach. It is based on the logic that many environmental issues are cross-border in character or impact, and are better addressed by co-operative action than unilaterally. Being part of a strong unified bloc has allowed the EU to have an influential voice within international negotiations on global environmental issues. In parallel, the growing importance of the single market has provided impetus to create common EU rules, particularly for product standards, permitting and target setting procedures. This helps to avoid problematic differences in national rules as well as distortions in competition.

The relatively demanding process for agreeing measures within the EU can extend over many years, especially when the issues in question are complex, and compromises between different visions for environmental protection are often necessary. Once agreed, however, the broad geographical scope of the measures can have a major impact. Several of the most important measures (on water quality, climate, waste, etc.), involve requirements to meet medium- or long-term targets. This approach provides a clear sense of direction and momentum and, in many countries, it facilitates a more ambitious approach than they might feel able to adopt if they were acting on their own.

The EU's expansion to 28 countries has created a wider diversity of conditions, interests and views, and added to the complexity of negotiations. National concerns need to be accommodated where possible to take account of existing regulatory traditions, and to reflect the specificity of the policy issues within each Member State. It is also necessary in order to respect the important legal principle of "subsidiarity", which seeks to ensure that the EU only acts when it is clearly preferable for action to be taken at EU level.

The process for developing legislation can be lengthy, partly because it is much more open to the checks and balances of democratic processes at national and European level than the media portrayal of the EU often recognises. Once agreed, however, measures are changed rather infrequently, creating considerable confidence in the underlying legal framework and the long-term policy direction. This helps both public authorities and private investors to plan ahead with greater confidence. A record of relative consistency, backed up by a system of strategic forward-planning based on periodic reviews of future challenges, has proved one of the benefits of acting at EU level.

These political and economic considerations have been underpinned by the cross-cutting references to environmental principles in the EU Treaty, and by the formal overall goal of sustainable development, which has no direct counterpart in UK legislation.

The adoption of common rules for products, and of relatively consistent processes and standards in all Member States, is intended to avoid distortions to competition and to prevent governments from lowering national standards to benefit their own industries. Many businesses have benefitted from the establishment of these common rules and from a more harmonised approach. High common standards have created a new and sizeable market on a predictable timescale for a wide range of greener products, ranging from more efficient electrical white goods through to cars and household goods with fewer toxic chemicals.

Whilst rising standards have generated some costs, particularly in some established industries where investment in cleaner production systems has been required, they have also created new markets and business opportunities. There have been both positive and negative effects on employment, which are difficult to quantify for EU environmental policy as a whole. However, "green" industries now account for a significant proportion of new investment and employment in the UK, and the emerging EU initiative to build a "circular economy" could expand this market considerably further.

Overview of key environmental achievements of the EU

The following are some of the key environmental achievements of EU countries working together within a common legislative framework that would have not occurred at the same level if they had acted alone:

- A substantial decline in most industrial sources of air and water pollution, particularly in improving urban air quality and in tackling diffuse water pollution, for example from farming.
- A fall in greenhouse gas emissions and rapid recent growth in the deployment of renewable energy.
- Significant reductions in the pressures on human health from environmental pollution.
- A significantly improved system of protection for species and habitats.
- A transformation in waste management, with a major increase in recycling rates and the first steps towards the creation of a more circular economy.
- The establishment of a thorough system for the review of the safety of chemicals that can be expected to lead to the future withdrawal and substitution of various toxic substances.
- The foundations for addressing the mounting pressures on the marine environment in the form of a legislative framework which is starting to have an effect.
- Improvements on access to information, public participation and access to justice in environmental matters at EU level.

- The wide application of environmental impact assessment and strategic environmental assessment procedures (also adapted and used by the European Investment Bank as conditions for all infrastructure investment decisions inside and outside the EU).

Future scenarios

There is significant uncertainty about the nature of the UK's future relationship with the EU following a vote to leave. The wide range of potential scenarios can, however, obscure the debate on the impacts to be expected. In order to clarify the potential environmental consequences, we identify the two primary options that appear open to the UK. These are based on whether the UK retains access to the EU's internal market or not.

The first scenario represents an arrangement whereby the UK retains access to the internal market through membership of the European Economic Area (Scenario 1 '*inside the EEA*'). This is broadly the status that Norway currently enjoys. In the second scenario, the UK would position itself outside both the EU and the other principal European Agreements (ie the EEA and EFTA). Therefore, this scenario includes the alternatives where the UK has no preferential access to the internal market and no representation within the EU decision-making process (Scenario 2 '*entirely outside*').

Some of the key policy implications are summarised in the table below.

	Membership of the European Union	Inside the EEA Brexit Scenario 1	Entirely outside Brexit Scenario 2
Does the UK retain access to the EU Single Market?	Yes	Yes	No, all access to be negotiated
Does it contribute to EU budget?	Yes	Yes (budget contribution would probably fall, however)	No, unless negotiated as part of an access deal
Do the CAP and CFP apply?	Yes	No	No
Do EU environmental laws continue to apply to the UK?	Yes	Most of them will, with some exceptions e.g. the nature directives and Bathing Water Directive.	No, but UK exporters will need to comply to export into the EU
Does the UK have a say in the formulation and amendment of EU policy on the environment?	Yes	EEA countries are only consulted during the preparation process for legislation. They do not take part in the formal negotiations, and cannot vote; and they have no MEPs to influence legislative outcomes through the European Parliament.	No
Would the UK continue to be subject to mechanisms to ensure compliance and penalties for non-compliance?	Yes	Yes, the European Commission retains enforcement powers and fines can be imposed for non-compliance.	No
Would it be necessary to negotiate new trade arrangements which could have impacts on environmental standards?	No	In some areas, yes, including in relation to agriculture and fisheries.	Yes, across a wide front.

Could a future UK government lower current environmental standards in the UK?	Only by means of an agreement at EU level	Not in the majority of cases where they are covered by EU obligations.	Yes; although UK exporters would need to abide by EU product standards, as well as face tariffs in many sectors
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Under **Scenario 1** (“inside the EEA”), most EU environmental law would continue to apply to the UK with some important exceptions, notably the nature (Birds and Habitats) and Bathing Water Directives. A future government would have the scope to weaken the level of environmental protection in the UK in those excepted areas. This represents a risk that is not balanced at present by any clear evidence of strong ambition by UK governments, for example, to pursue all the goals of EU nature conservation legislation. The CAP and the CFP would cease to apply, almost certainly giving rise to changes in policy, expenditure and environmental outcomes. At the same time, the UK would be excluded from decision-making over EU policy and from participating as part of the EU in international negotiations on a range of environmental agreements. Nor would the UK be likely to significantly exercise influence over the EU’s position in those negotiations. This appears an unequivocal drawback of departure. Meanwhile, the UK would continue to contribute substantially to the EU budget.

Under **Scenario 2** (“entirely outside”), future UK governments would in principle have the scope to adopt either stronger or weaker environmental standards than at present. Judging by UK government responses to a range of environmental proposals from the European Commission in recent years, it seems more likely that the current government, and possibly its successors, would opt for a less ambitious approach than that adopted by the EU in a number of areas, including air pollution, recycling, and aspects of nature conservation. There is a risk that a future government might seek to use arguments claiming that in order to maximise UK competitiveness, it would be necessary to lower standards, including environmental ones. Such an approach, and even the perceived risk of it being adopted, can be expected to create increased uncertainty for business investments in general, and for green businesses in particular.

Finally, if the UK remains in the EU, it remains bound by existing environmental legislation and can play a significant role in future decisions, including the adoption of new measures and the amendment of existing ones. Equally, it can influence the future of the CAP, the CFP and other policies affecting the environment, including trade (the UK is an active supporter of TTIP). Within the EU, it will be in a position to contribute to the shaping of a series of important decisions, for example on climate and energy policy (with major proposals due in 2016), the future of the “Better Regulation” agenda, and the development of a “circular economy” – a key EU project for the next decade or more.

Analysis of different policy areas

This report explores the implications of departure from the EU in a series of chapters covering different themes. The main conclusions from each chapter are outlined below, followed by a set of overarching conclusions on the environmental impact of the choice to be put before the UK electorate in the referendum in June 2016.

Environmental Quality

The establishment of more stringent environmental standards within the EU single market has had significant environmental and health benefits in the UK. Decades of EU air protection legislation, as well as water and waste management policy in the EU, have resulted in better air quality for the UK, dramatic improvements in waste recycling, and much higher quality of bathing waters and rivers and coasts with far lower pollution levels than before. During the last four decades, the UK has shown a strong record of providing scientific and policy advice to the development of EU legislation regarding

environmental quality. However, many of the initiatives to improve environmental quality in the UK would not have taken place, or would not have been pursued as effectively, without the legal pressure arising from EU legislation and the benefits to citizens and businesses would not have been realised.

Although there are differences between the different policy areas, most of EU legislation regarding environmental quality would still apply if the UK were to remain within the EEA (Scenario 1). That is particularly true for air quality legislation, most of the Water Framework Directive, the three main legal mechanisms controlling pollution emissions, and the Waste Framework Directive. However, under this scenario, the UK would not be part of the official decision making processes, and thus would not be able to argue to adapt future legislation to the specific interests of UK citizens. Under Scenario 2 (entirely outside), most of environment legislation would no longer apply, and the UK would be free to relax and lower environmental standards, creating as a result a scenario with real and uncertain environmental and health risks.

Nature Protection

EU legislation on nature conservation has significantly benefited both terrestrial and marine wildlife in the UK by requiring wide-ranging action that otherwise probably would not have been required. The role of EU legislation is likely to continue to be particularly important given, for example, cross-border threats to biodiversity, such as invasive alien species and climate change. To continue working together with the long-term approach adopted in the EU will be essential in order to achieve the target of halting the decline of habitats and species.

The risks of withdrawing from the EU are significant for nature. Regardless of the departure scenario, the Birds and Habitats Directives – policies that are the backbone of conservation in the EU and both of which have generated significant improvement for species and habitats – would no longer apply. Instead, the UK government would be at liberty to change this legislation and the processes in place to deliver it. International environmental law, notably the Bern Convention would continue to apply; however, it does not offer the level of protection nor the enforcement measures provided by the nature Directives and EU membership. In terms of marine nature conservation policy, if the UK becomes part of the EEA following departure from the EU (Scenario 1), the Marine Strategy Framework Directive (MSFD) would continue to apply, and the UK would remain bound by this Directive’s ambitious targets without being able to influence its development. Under Scenario 2, the MSFD would not apply and the UK government would be free to loosen the provisions over time.

Climate Policy

The UK has, over recent decades, exercised significant influence over the development of EU climate and energy policy, and over the levels of ambition the EU brings to international negotiations. The consensus among the main UK political parties in favour of a relatively ambitious approach to climate mitigation targets, which has held through a succession of General Elections, has thus been capable of being pursued in a European context, with relatively limited impact on competitiveness of UK firms vis a vis their competitors in other EU member states. Were the UK to leave the EU, it would face a combination of greater risks to its own, current, domestic decarbonisation ambitions; reduced influence over international negotiations on climate; and a likely reduced level of ambition in EU policy on climate change. It would no longer be possible to exert the same level of influence over decision-making at European level, and thus on the constraints facing UK industry’s competitors in other EU member states.

This assessment in part reflects the necessarily international nature of delivering climate mitigation objectives; in contrast, an alternative policy of significantly reduced UK ambition on climate mitigation would be easier to deliver from outside the EU’s legislative framework. While such a shift

in policy would remain unlikely even in the event of a “Leave” vote, the added policy risk for low carbon investment would have an impact on the costs and effectiveness of UK mitigation policy.

Agricultural Policy

The CAP has been a force for maintaining production in Europe and keeping it higher than it is likely to have been under free market conditions, or under the more liberal policy regime generally favoured by UK governments. This has created pressures on the environment from enhanced production and input use whilst also helping to maintain more traditional low-input and high-nature-value farms. The CAP cuts both ways. Indeed, there is no simple relationship between the level of subsidy and the extent of environmental pressure from farming, as is often assumed. Some of the most intensive and potentially polluting sectors, such as pigs and poultry, receive the least subsidy from the CAP or none at all. Since the 1990s, the CAP has been subject to a series of reforms which have helped to increase its environmental orientation, sharply reduced production subsidies and their harmful impacts. Payments for environmental management on farmland have grown sharply. Nonetheless, considerable distance remains between the present model and a truly ‘green’ agriculture policy, and there are major concerns about the current “greening” provisions.

It is far from clear whether the UK environment would be better served by a new set of national agriculture policies, which would follow from Brexit. Major variations between England, Northern Ireland, Scotland and Wales are likely. However, established UK policy, strongly supported by the Treasury, is to cut expenditure on agriculture. Consequently, there are major questions about how far a future government would maintain funding for managing the rural environment as well as for agriculture. The majority of experts on the topic are sceptical and expect significant cuts. Incentives for greener farming could decline, and there are also concerns about the extent to which governments would be willing to impose environmental obligations on a sector subject to competition from more subsidised counterparts in the remaining EU Member States. All in all, there would certainly be significant environmental risks associated with departure.

Fisheries Policy

Fisheries and the EU Common Fisheries Policy (CFP) are frequently mentioned by critics as an important reason why the UK should leave the EU. During the evolution of the CFP, the performance of the policy in environmental terms has been unsatisfactory in many respects and much further progress is required. Other transnational fisheries management regimes have suffered from similar weaknesses. However, the recently reformed CFP is now steering in the right direction in terms of reducing the environmental burden imposed by industrial-scale fishing in the EU. Meanwhile, whilst it is an important driver, the influence of the CFP in the long decline of the UK fishing fleet should not be overstated.

It is relatively certain that no matter what the Brexit scenario, the CFP would cease to apply in the UK and establishing a new policy regime would likely involve a considerable number of difficult negotiations. This would include politically sensitive discussions between the devolved British jurisdictions, as well as negotiating new fishing agreements with other states, as most stocks in UK waters migrate to and from neighbouring waters and British fishermen today operate also in other states’ waters. There are no grounds for confidence that Brexit would lead to closer alignment of “Total Allowable Catch” levels for fish in UK waters to scientific advice, nor that an immediate “greening” of British fisheries subsidies would follow. Overall, this assessment makes it clear that – compared to any foreseeable alternative – cooperative management of fisheries within the EU policy framework is relatively beneficial for the sustainability of stocks. Departure from the CFP would instead introduce several unwanted risks and great caution needs to be exercised in forecasting what could be achieved unilaterally. The fact that international marine law does not provide the means to ensure compliance is, for example, a very substantial weakness.

Horizontal Conclusions

The bulk of the analysis in this report is subject-specific, and the key elements of each chapter of our analysis are set out above. It is also possible to identify some over-arching, horizontal conclusions:

- Membership of the EU has had, and continues to have, a significant positive impact on environmental outcomes in the UK as well as other parts of Europe, with cleaner air, water and oceans than otherwise could be expected.
- This is because of a range of legislative, funding and other measures with the potential to work in combination. EU environmental legislation is backed up by a hard legal implementation requirement of a kind that is rarely present in international agreements on the environment; and which is more convincingly long-lasting, and less subject to policy risk, than national legislation.
- Complete departure from the EU (Brexit Scenario 2) would create identifiable and substantial risks to future UK environmental ambition and outcomes. It would exclude the UK from decision making on EU law and there would be a risk that environmental standards could be lowered to seek competitive advantage outside the EU trading bloc.
- Departure from the EU whilst retaining membership of the EEA (Brexit Scenario 1) would lessen these risks, as most EU environmental law would continue to apply. However, there would be significant concerns related to nature conservation and bathing water, as well as to agriculture and fisheries policy. In addition, the UK would lose most of its influence on EU environment and climate policies.
- Under both exit scenarios, significant tensions would be created in relation to areas of policymaking where responsibility is devolved to the governments in Scotland, Wales, and Northern Ireland, but where a broadly similar approach has been required as a result of EU membership, including environmental protection, agriculture, and fisheries.
- The uncertainty and period of prolonged negotiation on many fronts caused by a UK decision to leave would, itself, create significant risks both for environmental standards and for the green investment needed to improve the UK's long-term environmental performance.

In conclusion, it is likely that a UK departure from the EU would leave the British environment in a more vulnerable and uncertain position than if the country were to remain as a member of the EU. A future government could either have to accept decisions others will make for them, with a more limited opportunity to pursue goals or influence legislation in ways that are relevant for the British people; or could be relatively unconstrained in its ability to act independently, including through the option of lowering environmental standards in a race for competitive advantage. While these risks differ in character and scale, they are substantial on all the plausible scenarios considered here. These risks apply to over four decades of legislation with a broadly successful track record in protecting the UK's health and environment.

1 Introduction and Context

Following a commitment made by David Cameron in 2013¹, and repeated in the Conservative Party's 2015 Election Manifesto, the UK Government is to hold a referendum about the UK membership of the European Union. The "In-Out" referendum will be held on June 23rd 2016², following the completion of negotiations about a series of UK requests (see Box 1-1) for EU reform in order to seek a "new settlement", resulting in a more "flexible" EU.

Box 1-1 A new settlement for the United Kingdom in a reformed European Union

On February 18 and 19 2016, the European Council agreed a series of reforms within the EU that will become effective on the date the British Government informs the Council that the UK has decided to remain a member of the EU³. The series of agreed changes aims to respond to the concerns raised by David Cameron in a letter sent on November 10 2015 to the European Council President Donald Tusk⁴. These do not refer to environmental policy or the environment at all. The reforms are centred in four main areas (economic governance, competitiveness, sovereignty, and migration). Within this group, those aiming to cut the total burden of EU legislation on business can be identified as the most relevant for environmental policy which includes a significant body of legislation. Mr. Cameron clarified the preferred direction of travel in a recent speech in the House of Commons "[the EU has] *agreed there will now be targets to cut the total burden of EU regulation on business. This builds on the progress we have already made – with the Commission already cutting the number of new initiatives by 80% and it means that the cost of EU red tape will be going down, not up*"⁵.

While the agreed reforms do not include measures with specific references to the environment, the statements on competitiveness reinforce the recently extended European Council and Commission agenda of regulatory simplification, and include a commitment to look at 'feasible burden reduction targets in key sectors'⁶. There does not have to be a conflict between reducing administrative burdens on business and pursuing high environmental standards in an efficient way. However, such initiatives can also open the door to more explicitly deregulatory agendas. Concerns have been expressed that this reduction of burden on business might result in the lowering of EU environmental standards over a period of time⁷. There are many facets to the debate about red tape and better regulation, a topic which arises not infrequently in the history of EU policy within and beyond the environment. How far this current political initiative will impinge on environmental policy in the future is far from clear but to date there has never been a repeal of a substantive EU environmental measure because they have widespread support.

¹ Cameron, David. *Bloomberg speech as summarised in FAC Report The future of the European Union: UK Government policy*, 21 May 2013

² Cameron, David. Statement following Cabinet meeting on EU settlement: 20 February 2016

³ European Council. Conclusions adopted by the European Council at the EC meeting 18 and 19 February 2016

⁴ Cameron, David. Speech at Chatham House The Future of Britain's Relationship with the European Union, 10 November 2015

⁵ Cameron, David. Statement in the House of Commons on the UK's new special status in the EU and the in-out referendum on 23 June, 22 February 2016

⁶ European Council. Conclusions adopted by the European Council at the EC meeting 18 and 19 February 2016

⁷ "EEB Reaction to UK Proposals for EU Reform." EEB. November 10, 2015. Accessed December 9, 2015. <http://www.eeb.org/index.cfm/news-events/news/eeb-reaction-to-uk-proposals-for-eu-reform/>.

This report offers an overview of the EU's record on the environment, particularly in developing and applying policy on a range of environmental themes, including nature conservation, air and water pollution, climate and waste. Two separate areas of EU policy with a significant impact on the environment are addressed as well: agriculture and fisheries. The report considers the potential consequences for the environment of the UK choosing to withdraw from the EU, with reference to different scenarios for the alternatives. Potential influences on the decisions that could be made by UK governments in a future outside the EU are identified, including international agreements and established UK policy positions.

2 The EU record: strengths and weaknesses as an environmental actor

2.1 Establishing an EU Environmental Policy

Over the last four decades, the EU has developed probably the most complete and influential body of environmental law and policy in the world (IEEP, 2013). Today, the measures together constitute the so-called *environmental acquis*⁸, and apply to all twenty-eight Member States (MS). The acquis is focused on delivering an improved environment for all European citizens. The reach of EU environmental policy goes beyond its own borders. Neighbouring countries within the EEA or EFTA also have to apply or are otherwise influenced by large parts of EU environmental law, and a substantial body of law applies to producers from outside the EU exporting products to the EU (Haigh, 2016).

EU environmental policy initially focused on the most apparent transboundary issues within Europe, mostly addressing specific types of pollution or setting standards for the removal of trade barriers within the common internal market (IEEP, 2013). Many policy measures originated in response to political pressure following serious environmental incidents (eg the Seveso Directive), or the need to implement international agreements (eg the Habitats Directive as a measure to implement the Council of Europe's Bern Convention)⁹, or in response to specific public and political support on individual issues (eg the Birds Directive gained support from northern Member States, particularly the UK) (Haigh, 2016).

This diverse and sometimes reactive pattern evolved during the mid-to-late eighties when the EU began to take a more comprehensive approach to introducing legislation, particularly in response to relatively new and often more global environmental topics (eg the thinning of the ozone layer, acid rain, and climate change) (Haigh, 2016). A series of explicit principles were included in the EU Treaties, such as the Precautionary Principle and the Polluter Pays Principle, progressively strengthening the legal and structural underpinnings of EU environmental policy (EU, 2012).

In contrast to most individual countries, environmental policy has been given a systematic, forward looking framework, in the form of "Environmental Action Programmes", usually updated every seven years. These programmes, adopted following negotiation in Council and Parliament, offer an analysis of the challenges and map a way forward that aims to add coherence and a sense of shared direction to a wide ranging policy domain. The current programme (EC, 2015), which runs to 2020, provides a summary of the environmental challenges lying ahead and indicates that the body of EU environmental law has now reached a stage of maturity with few gaps in coverage. It suggests that the main focus should in the coming period be on some key challenges, notably climate change, and on improving implementation of existing legislation.

Despite its apparent level of maturity, the process of addressing environmental challenges on the European scale is far from complete. Many existing standards are going to need to be

⁸ This is the body of European Union environmental law, legal acts and associated court decisions.

⁹ Although since in most cases the EU has been a leading instigator of the international agreement itself, it is perhaps more accurate to see the international agreement as being driven by a desire to legislate internally, rather than vice versa.

tightened over time in light of new evidence (eg air quality, climate change). New environmental issues are going to emerge, some of which are going to require a regulatory response (eg chemicals policy is one of the most recent). Future natural resource scarcities are likely to require international responses in the form of new governance mechanisms (treaties and conventions), for instance in global marine protection or in management of the Arctic. The contribution of the global sustainable development discussion eg SDGs and Agenda 2030 will in due course demand a response from Europe beyond the current status quo.

The EU has a strong record in agreeing a common approach to a wide range of environmental issues. This has raised environmental standards throughout Europe, as explored in subsequent chapters. It has also revealed some of the strengths and weaknesses of adopting a common EU approach. A potential UK departure from the EU would have implications for the future of both the UK and EU environment policy. Consequently, it is important to assess these strengths and weaknesses and to identify the inherent qualities of the EU process in developing environmental policy, focusing on the present and future prospects as much as on the EU's impressive historical record on the environment.

2.2 The EU's Strengths as an Environmental Actor

There are several advantages to addressing a broad range of environmental issues at the European level, which explain why Member States have pooled sovereignty in this policy domain. Some of these advantages, which were summarised in IEEP's 2013 Report on the influence of EU policies on the environment (IEEP, 2013), are:

- The trans-boundary and sometimes global nature of many environmental issues means that a collective approach is either more efficient or is essential to address them effectively. Examples include the protection of migratory birds, and cross-border air pollution. Being part of a strong unified bloc also allows the EU to have an influential voice within international negotiations on global environmental issues.
- Developing policy within the Single Market framework allows and sometimes obliges the EU to set common environmental, technical and financial standards. Negotiating common standards can allow a degree of environmental ambition which often would not be available to individual governments acting alone because of fears about short-term impacts on competitiveness. Common standards also inhibit the possibility of economic advantages accruing to those countries with lower environmental standards on issues like air quality or water pollution from industrial facilities.
- Due in part to the economic importance of the Single Market, the EU can be and has been a highly influential driver for the setting of high environmental health and safety standards around the world. This is particularly true regarding technical, sanitary and phytosanitary standards as any country wanting to export to the EU is required to fulfil the standards of the Single Market.
- By sharing certain resources and costs and some of the benefits of action, the EU Member States have the potential to establish and implement a greater range of

successful initiatives between them. The large scale at which the EU operates also allows faster and lower cost development of technology and its diffusion on a larger scale. The use of economic instruments such as carbon trading can be more comprehensive and more effective.

- The EU has established a long term approach, supported by action programmes, timetabled targets etc. Many environmental objectives can be reached only by sustained action over an extended period, with a clear sense of direction to help guide social, political and economic adjustment and to provide sufficient confidence for investors. The EU has the mechanisms and political culture to pursue this approach. Moreover, the EU provides a sense of direction and momentum, increasing ambition in many Member States in policy areas previously neglected or blocked by special interests, and where action at the national level has therefore been limited. As exemplified by the Water and the Waste Framework Directives, the EU can set long-term targets and frameworks that allow national governments as well as other actors to prioritise and plan systematically for those issues over an extended period knowing others are doing the same.
- The EU relies on a rules-based approach. European environmental legislation mainly consists of obligations imposed on Member States through directives. In order to ensure consistent and demonstrable application of the requirements without excessive staffing at an EU level, EU legislation usually involves greater precision than that adopted by individual governments. This contrasts with those countries (for example the UK) that have a regulatory culture based on approval processes operating through national or local level regulators exercising wide discretion. While this rules-based approach reduces the scope for exercise of judgement on a case-by-case basis, it has the advantage of providing greater clarity to businesses or other interested parties over what is permissible.
- The EU has several institutional advantages that other international fora lack. First, EU institutions make decisions on a democratic basis (through the process of debate and adoption by both the European Parliament and the Council) and have the authority to monitor and enforce binding legislation (ie through the CJEU). This creates accountability for Member States and provides an imperative to act that is absent in most international environmental agreements and sometimes in domestic legislation as well. The Member States, including the UK, are under direct pressure to meet their obligations in a way that does not necessarily apply within the changing political priorities and expenditure plans of national governments. Second, there are provisions to ensure that national interests are taken into account in EU levels processes¹⁰.
- The EU's policymaking benefits from a wide pool of experience and is the result of extensive negotiating processes. Although some Member States have proposed EU

¹⁰ The principle of subsidiarity rules out Union intervention when an issue can be dealt with effectively by Member States at central, regional or local level. Source: Article 5(3) of the Treaty on European Union (TEU)

legislation based on their own¹¹, once adopted the legislation is rarely, if ever, an exact copy of national legislation. For example, the 'environmental impact assessment (EIA) Directive (85/337) differs not only from the American ideas that inspired it but also from the widely varied planning consent procedures that existed in the Member States. EU legislation also benefits from its originality, an example being the Large Combustion Plants (LCP) Directive (88/609) which, in its original form prior to amendment in 2001, introduced the idea of 'burden sharing' under which different Member States agreed differentiated reductions in sulphur emissions depending on their circumstances. The important 'burden sharing' concept then became a key to EU climate policy and subsequently to the international climate convention.

- Finally, decision-making within the EU is generally deliberative and slow and once legislation is approved it is often difficult to change, not least because there can be a reluctance to imperil a hard won consensus. While this has some disadvantages, which we address below, this stability is often helpful when addressing the sort of long term progress which is often required for to secure environmental protection. In addition, it allows for greater investment certainty and a consistent business environment for private sector actors aiming to respond to or deliver EU policy objectives.

2.3 The EU's Weaknesses as an Environmental Actor

Alongside the potential advantages of countries acting together in the environmental sphere and the structural elements that are in place within the EU to facilitate this, there are also drawbacks to this approach. Pooling sovereignty within the EU involves compromise and trade-offs and transaction costs of various kinds. Some of these processes and elements can result in unsatisfactory debates, negotiations and outcomes when addressing environmental issues. Some of these weaknesses include:

- The increased number of jurisdictions with different national, political and physical realities shaping and being subjected to EU environmental policy has added complexity to the EU's decision-making processes and mechanisms. Although the recent enlargement of the EU has helped to strengthen its economic and political coherence and importance in the world, the priorities of some Member States differ from others and may be in conflict with the preferred approach in the UK and other individual countries. An example of this is the common approach sometimes taken by the Central-Eastern European bloc, led by the Visegrad Group¹², which has resulted in the granting of concessions and special arrangements in certain areas such as emission reduction targets (Haigh, 2016).

The need to balance the diversity of national interests within EU policy slows down the pace at which agreements are reached and often results in compromises, which are not always expressed with full legal clarity. For example, Member States

¹¹ The 'large combustion plants (LCP)' Directive 88/609 initiated by Germany, and the 'integrated pollution prevention and control' (IPPC) Directive 96/61 which was based initially on UK regulatory policy.

¹² The Visegrad Group consists of Poland, Hungary and the Czech and Slovak Republics.

collectively struggled to identify the full extent of certain of their obligations arising from the Nitrates Directive, or from the Habitats Directive, leading to a lengthy process of clarification through CJEU jurisprudence¹³, and consequent delays in implementation (Born et al. 2014).

- The negotiation process between the EU institutions does not always produce clear policy or satisfactorily formulated legislation on the environment. An example of this is the EU definition of ‘waste’ which leaves many questions open, creating both uncertainty and unequal obligations on business in different countries. Moreover, approved EU legislation can be slow to adapt to new circumstances. An example of the latter has been the Emissions Trading System where there has been difficulty in securing support for action to reduce the over-supply of allowances and allow carbon prices to rise to a level where they would be more effective in influencing business decisions, in line with the initial policy objectives.
- Although the EU has had a clear positive impact in most areas of the environment, improvements in some areas have been less obvious. As discussed in greater detail in successive chapters below, while there has been significant progress to address the worst failures of the policy, the process of ‘greening’ the Common Agricultural Policy is still far from complete; and more effective protection and management of the marine environment under the Common Fisheries Policy and the Marine Strategy Framework Directive (MSFD) remains one of the key challenges for the future. There can also be tensions between the pursuit of environmental objectives and the powerful drive within the EU to liberalise markets, as illustrated by the current debate over the Transatlantic Trade and Investment Partnership (TTIP).

2.4 Current and future influences on EU policy

In the last decade, and particularly after the expansion of the EU and economic recession of 2008, there has been a change in the overall emphasis of the EU’s environmental policy. Fewer major new proposals have been put forward by the Commission and there is a renewed focus on examining measures already in place. By improving the existing *environmental acquis* and the way it is implemented the EU aims to achieve more robust results. This involves improved implementation of current measures and the filling of gaps (mainly technical) within existing legislation. This policy shift has also been characterised by a retreat from binding legislation in favour of long-term environmental strategies¹⁴. Several of these are based on more cooperative, self-regulatory approaches, an emphasis on the sharing of information and resources, and the use of non-binding economic instruments (Volkery et al, 2012). In addition there has been a push towards pursuing the ‘green

¹³ See for example the updated booklet produced compiling the most important rulings of the European Court of Justice related to Article 6 of the Habitats Directive. Link: http://ec.europa.eu/environment/nature/info/pubs/docs/others/ECJ_rulings%20Art_%206%20-%20Final%20Sept%202014-2.pdf

¹⁴ Some examples include: the Roadmap to a low carbon Economy in 2050 [COM(2011)122]; the EU Biodiversity Strategy to 2020 [COM(2011)0244]; the Roadmap to a resource-efficient Europe [COM(2011)0244]; and the Europe 2020 Strategy [COM(2010)2020].

economy' with the support of measures that deploy clean technologies and promote the growth of green jobs (Haigh, 2016).

The new emphasis within EU's environmental policy is visible within the Seventh Environmental Action Plan (EAP) (Decision 1386/2013), the current overarching framework governing the EU's approach to environmental policy from 2013 to 2020 (See Box 2-1).

Box 2-1 The EU's 7th Environmental Action Programme Objectives

The Programme entered into force in January 2014 under the title "Living well, within the limits of the planet" providing a long-term vision of what the EU wants to be by 2050 with the aim of guiding its environmental policy until 2020. The Programme identifies the following key priorities:

- 'to protect, conserve and enhance the Union's **natural capital**;
- to turn the Union into a **resource-efficient**, green, and competitive low-carbon **economy**;
- to **safeguard** the Union's citizens from **environment-related pressures** and risks to health and wellbeing;
- to **make** the Union's **cities more sustainable**; and
- to help the Union **address international environmental and climate challenges more effectively**.' (EC, 2015)

How far this vision is guiding the current Juncker Commission, in office since late 2014, is less clear. The Commission has emphasised its focus on 10 political priorities, which do not refer to wider environmental issues (climate action is emphasised in the context of energy policy) but focus particularly on the creation of jobs, competitiveness and securing economic growth. There is a strong emphasis on the "big things" than can be achieved within the EU and avoiding administrative burden. This was exemplified with the launch of the 'Better Regulation' package (COM(2014)368); a set of proposals focusing on the aim that all EU policies and laws (including the environmental acquis) are fit for purpose. This has given added impetus to the review of existing policy under the 'Fitness Checks' process currently being applied to the nature directives as well as several other EU measures.

It is too early to assess the potential impact of the new approach being taken by the Commission. Undoubtedly, there is a change in both political focus and in tone and a pronounced disinclination to advance new regulatory measures for the environment and most other policy domains. This reflects a new climate for policy making, including concern about regulatory burdens and a stronger instinct for liberalisation, which originates in part from the UK.

At the same time there is little likelihood of a reversal in the substance of EU environmental policy, or a removal of the requirements on Member States to comply. Few EU environment ministers have argued for the removal of any existing legislation. Long term targets once put in place are not lightly removed, even if there is some elasticity in the real timetable for compliance. The Commission is committed to moving forward a package of measures on the Circular Economy in the coming years and will introduce a major package of legislation on climate and energy policy in 2016. The impetus within the system is more muted but certainly still present.

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3 Brexit and its consequences

In principle there are several options or variations on different alternative scenarios that could arise following a UK departure, from the EU¹. All of these are subject to the caveat that they involve negotiation with 27 other Member States and a range of other parties. . As the UK Government pointed out in a response to the House of Commons Foreign Affairs Committee: 'In Europe's current institutional architecture, any decision as to whether the UK should remain in the EU would to a significant extent be a decision about whether the UK should remain in the Single Market' (House of Commons, 2013a). Therefore, and to simplify a rather complex position with various possible permutations of different trading relationships, we focus here on the two primary options that appear open to the UK. These revolve from whether the UK retains access to the EU's internal market or not. We then use them to identify the consequences for the environment.

Since the Prime Minister has made a point that in his view the single market is the most important characteristic of the EU from the UK perspective, it is useful to consider the implications for environment policy of a potential exit scenario where the UK remains within a European grouping and retains access to the internal market. This scenario will be referred to as the '*inside the EEA Option*', as it represents the departure arrangement whereby the UK retains access to the internal market through membership of the European Economic Area (Scenario 1). This is the position of Norway.

As an alternative, we also consider a scenario where the UK positions itself outside both the EU and the other principal European Agreements (ie the EEA and EFTA). This scenario will be referred to as the '*entirely outside Option*' and includes the alternatives where the UK has no preferential access to the internal market and no representation within the EU decision-making process (Scenario 2).

This chapter will first introduce the potential consequences of the UK choosing to withdraw from the EU and then continue examining the two alternatives to EU membership.

3.1 The departure of the UK would have effects at several levels:

Impacts on the UK (and its constituent parts):

If the British people choose to leave the EU in the referendum, the UK would embark on a series of multilevel negotiations that will be lengthy and will unavoidably create a high degree of uncertainty. First, the UK would have to agree with the EU-27 Member States on both the conditions for departure and on future relations with the EU, with both issues running in parallel. Unanimity is required amongst the remaining 27 Member States so this would not be a simple negotiation and enthusiasm for accommodating UK preferences cannot be assured (Open Europe, 2015). A formal departure would have to be negotiated, almost certainly using Article 50 of the Treaty on European Union (TEU) (House of Commons, 2013a). At the same time, the UK would have to initiate negotiations with third countries to establish a maximum of continuity for present and future relations. These

¹ Some of the most mentioned potential scenarios include: European Economic Area membership, Swiss-style trade and bilateral agreements, Turkish-style customs union; FTA-based approach, MFN-based approach, or WTO going all alone. Source: Global Counsel, 2015

include negotiations with countries with which the UK trades (eg U.S., China, etc) as well as international organisations, membership of which the UK might want to pursue (eg EFTA, EEA, etc.).

If a decision to leave the EU is made, then the policymaking, tactical and strategic demands on Whitehall Departments, and on policymakers in the devolved administrations potentially gaining new flexibility over areas such as agriculture, fisheries and environment policy, will be unprecedented. This will be happening at a time when administrations are coping with significant reductions in manpower and a loss of expertise in key areas; and, initially, while the UK prepares for and then takes on the Presidency of the EU in the second half of 2017. If the UK positions itself outside both the EU and the other principal European Agreements, it would also require a significantly higher level of policymaking attention to bilateral negotiations on trade, including aspects of trade relevant to the environment, requiring the civil service to develop and broaden trade policy skills and expertise rather rapidly. While the risks associated with these challenges extend beyond environment policy, they are unlikely to be very conducive to carefully-considered policymaking on key areas of environmental protection.

Due to the high degree of integration that now exists between legislation in the UK and the EU, and regardless of the legal and political route to EU withdrawal, there would be significant implications for a variety of policy areas, including environmental protection and other policies of particular relevance to the environment such as agriculture, trade and fisheries. The Government would need to reach transitional arrangements for dealing with rights and obligations acquired under the Treaty before withdrawal (eg rights acquired under the CAP, CFP and other EU funding schemes) (House of Commons, 2013a). The repeal and amendment of current laws and Acts, as well as the enactment of new laws and Acts, are bound to be the centre of rather intense and time consuming political negotiations and associated legal work (Open Europe, 2015). Finally, in the event of withdrawal, the UK would lose access to the main EU institutions. Access to some EU agencies relevant to the environment would only be guaranteed if the UK remained in the EEA (eg the European Chemicals Agency).

Since the distribution of competences between the UK and the devolved administrations in Scotland, Wales and Northern Ireland is governed by a UK statutory framework, a potential UK departure would not, in principle, imply the need for any decisions on which level of Government has responsibility for which policy area (House of Commons, 2013a). However, withdrawal would have some implications for relations between the UK and the devolved administrations. The removal of the overall framework of EU law would allow the devolved administrations to implement their own policies in areas now dominated by EU legislation, creating the scope for greater fragmentation of sectoral policies within the UK such as agriculture, animal health and welfare, food standards, and the environment. This fragmentation could potentially lead to the elimination of common EU standards that have been implemented in order to safeguard rights and freedoms of trade and movement. Although the Westminster Parliament could, theoretically, pull back powers from the devolved nations (House of Commons, 2013a), this would be politically highly controversial, and would increase the political tensions that some of the devolved administrations have

already raised regarding the referendum². In any event, the pattern of environmental regulation and levels of investment in restoring ecosystems and wildlife populations can be expected to vary with the political mood of each country.

Regional policy also would be affected. Although the UK as a whole is a net contributor to the EU Budget, a departure would have effects on those nations within the UK which are significant beneficiaries from the EU budget (particularly Northern Ireland and Wales)³, or where EU receipts are an important political issue (Scotland). The Government could either allocate national funds in place of those received from the EU or reduce the level of such regional spending, perhaps buffered by transitional arrangements.

In economic terms, a potential UK departure creates a level of uncertainty regarding forward planning and investment because of the scale of change. If there is a decision to leave, the degree of impact would be highly dependent on many factors including the trading arrangements negotiated between the UK, the rest of the EU and other countries. However, the outcome of those negotiations will itself be uncertain and difficult to know in advance. Investors may delay their investment decisions due to the uncertainties that will arise prior to the referendum and, in the event of a “Leave” vote, up to the end of the EU-UK negotiations, and potentially beyond, especially if the implications of the outcome are considered hard to predict. For example, some businesses are sensitive to the extent to which the UK would choose to roll back established EU rules or standards in different policy areas and there are controversies about the impact on the financial services industry in the UK which contribute more than 3 per cent of GDP (S and P 2015).

While these broader financial and economic impacts are outside the scope of this report, they do have implications for the environment. Both the level of public and private funds available for green investment and the delivery of environmental objectives (for example, through agri-environment schemes) and the level of political focus on environmental issues, would be influenced significantly by the extent of economic disruption that many believe could follow a “Leave” vote⁴.

² Some voices in the SNP have already indicated that a Brexit would probably lead to a second vote on independence from the rest of the UK and, given the expected support in Scotland for remaining in the EU, there is a chance that there would be a vote to leave the UK and Scotland would subsequently apply to join the EU in its own right. Source: BBC (2016): Sturgeon: EU exit could trigger demand for Scottish independence referendum. Access here: <http://www.bbc.co.uk/news/uk-scotland-scotland-politics-35625067>

³ Although the UK is a net contributor to the EU Budget (£48 per capita, 2008/2009) these contributions vary when disaggregated by UK constituent nations between net contributors, England (£72 per capita) and Scotland (£2 per capita), and net recipients, Wales (-£74 per capita) and Northern Ireland (-£106 per capita). Source: See : House of Commons, 2013a.

⁴ In the Financial Times’ annual poll of more than 100 leading thinkers, all of them thought a vote for Brexit would damage UK growth in 2016, and almost three-quarters thought leaving the EU would damage the country’s medium-term outlook. Source: <http://www.ft.com/cms/s/0/1a86ab36-afbe-11e5-b955-1a1d298b6250.html#axzz3zZqbl5qL>

Wider impacts on the EU

Looking beyond the domestic ramifications of a UK departure, it seems reasonable to assume that existing EU policy and law would remain in place. However, Brexit would change the internal political, economic and environmental balance of the EU as a whole and affect its stance on certain issues. For example, some have said it would represent a significant change in the balance of power between EU's more "Protectionist" and more "Free Trade" leaning blocs (Open Europe, 2015). In environmental terms there could be a range of impacts on EU positions and decisions. For example, in the EU without the UK there could be reduced environmental ambition in relation to setting certain standards, particularly climate targets, and reforming the CAP; but more willingness to accept regulatory solutions, for example in promoting a more circular economy (Oberthür, 2015).

An EU without the UK would lose some weight within the global community and there would be consequences of various kinds in different spheres, such as international trade, climate negotiations, and multilateral environmental agreements. These could be significant but are difficult to forecast. The EU would have to make expenditure adjustments in order to adapt to the loss of the UK's net contribution to the EU budget but it would also be able to remove the complex burden of the UK's rebate arrangements. At a broader level, some analysts have argued that the EU might choose to move faster towards greater political integration and perhaps more coherent external representation without the UK (CER, 2014) as a member. While this report is concerned only with the impacts on the environment in the UK and areas that it is responsible for, it is important to acknowledge that there would also be wider ramifications of significance for the environment as a whole, both in Europe and globally. This is a topic that requires further investigation.

3.2 Examining some alternatives to EU membership

There is no clear and undisputed alternative to membership of the EU and considerable scope for negotiation in a number of areas. Nonetheless, for the purposes of this report there are two broad scenarios that facilitate an analysis of the environmental consequences. These are described below.

3.2.1 Scenario 1 – Retaining access to the internal market through membership of the EEA ('the inside the EEA Option')

If the UK wanted to retain in existing access to the internal market outside the EU, first it would have to apply to re-join the European Free Trade Association (EFTA). The EFTA Convention (see

Box 3-1) does not grant direct access to the EU internal market but is the necessary step in order then to be able to join the European Economic Area (EEA)⁵, which does permit access.

⁵ Article 128 EEA Agreement: Any European State becoming a member of the Community shall, and the Swiss Confederation or any European State becoming a member of EFTA may, apply to become a party to this Agreement.

Box 3-1 The European Free Trade Association (EFTA)

The EFTA is an intergovernmental organisation set up in 1960 to promote free trade and closer economic cooperation among its members, of which there are currently four. These are Norway, Iceland, Lichtenstein and Switzerland. The EFTA seeks to promote free trade between its members; with the EU (through the EEA agreement and bilateral agreements between EU and Switzerland); and with third countries (ie Mexico, Canada, Singapore, Chile and the Republic of Korea).

The EFTA Convention governs the trade relations between its members, covering aspects relating to trade in goods and services, investment and the movement of people. It refers to the need for mutually supportive trade and environmental policies in order to achieve the objective of sustainable development and allows for prohibitions or restrictions on trade between the Member States for the protection of, inter alia, the health of the environment. However, this should not constitute a means of arbitrary discrimination or a disguised restriction.

The Convention does not grant direct access to the internal market for its signatories. Current EFTA countries have gained access to the internal market through becoming members of the European Economic Area (Norway, Iceland, and Lichtenstein) or signing a series of bilateral trade agreements with the EU (Switzerland). Under these two routes there are different provisions governing the various requirements that products need to meet on safety, consumer protection, health and environmental grounds

Sources: EFTA, 2010; IEEP, 2013.

The EEA comprises two “pillars”: the EU pillar (28 EU Member States) and the EFTA⁶ pillar (Norway, Iceland and Lichtenstein). It was established in 1994 and allows EFTA countries to participate in the EU’s single market, known as the ‘internal market’. The Agreement on the EEA (OJ No L 1, 3.1.1994) aims to facilitate trade and economic cooperation, covering EU legislation relating to the four freedoms - the free movement of goods, services, capital and people. It also allows for cooperation on certain ‘flanking and horizontal’ policies which are relevant to the four freedoms, including research and development, social policy, consumer protection and the environment.

The Agreement does not cover some EU policies, including the Common Agriculture and Fisheries Policies, the Customs Union, Common Trade Policy, Common Foreign and Security Policy, Justice and Home Affairs, and the Monetary Union (EFTA, 2013a). Although the CAP and CFP are not part of the EEA Agreement, it includes provisions for certain aspects of trade in agricultural and fisheries products (see Chapter 7).

EFTA EEA countries are expected to adopt the full body of EU law (the *acquis communautaire*) relating to the internal market in their national law (European Council, 2008). The objectives relating to the environment in the EEA Agreement (Article 73) mirror those set out in the Treaty⁷ (with the exception of objectives relating to measures at the international level which are included in Article 191 of the EU Treaty (TFEU)). Specific measures relating to the environment are set out in Annex XX of the EEA Agreement (EFTA, 2016) and include cross-

⁶ Switzerland is a member of the EFTA but not a signatory of the EEA Agreement. See

Box 3-1

⁷ Action by the Contracting Parties relating to the environment shall have the following objectives: (a) to preserve, protect and improve the quality of the environment; (b) to contribute towards protecting human health; (c) to ensure a prudent and rational utilization of natural resources. Source: EEA Agreement Article 73.

cutting EU legislation. However, a smaller number of extremely important EU environmental measures are not incorporated in the EEA Agreement, eg the Birds, Habitats, and Bathing Water Directives (see Box 3-2).

Box 3-2 Selection of EU environmental legislation included in the EEA agreement

Future status of important environmental legislation if the UK left the EU and stayed in the EEA	
Would continue to apply	Would no longer apply
Urban Waste Water Directive Treatment Directive Nitrates Directive Groundwater Directive Priority Substances Directive Air Framework Directive (and daughters) Industrial Emissions Directive Emissions Trading Directive Directive on Carbon Capture and Storage Seveso Directive Directives on contained use and deliberate release of GMOs Waste Framework Directive Sewage Sludge Directive Waste Shipment Regulation Landfill Directive End of Life Vehicles Directive WEEE Directive Mining Waste Directive REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Ambient Noise Directive Water Framework Directive ⁸	Birds Directive Habitats Directive Bathing Water Directive

When new EU legislation classified as “EEA relevant” has been formally adopted, the EEA Joint Commission starts the process of incorporation into the EEA Agreement "with a view to permitting a simultaneous application" of legislation in the two pillars (EFTA, 2016).

Governance issues

EEA membership does grant participation in the EU internal market, and so is the closest relationship to the EU in most respects. However, one of its biggest disadvantages is that EFTA EEA countries have no representation or voting power in EU institutions such as the European Commission, the Parliament or the Council. They have no judges or other representation at the European Court of Justice, and have limited opportunities to influence the EU decision-making process (Open Europe, 2015), particularly the process of negotiation in Council and Parliament on new, co-decided, Directives and Regulations. However, they are not completely excluded, as the EEA agreement includes provisions for the input of experts from non-EU EEA countries in the preparation of relevant EU delegated legislation. This can take the form of participation by representatives in expert groups and committee

⁸ Three community acts are not incorporated into the EEA Agreement: 1) Council Directive 79/923/EEC on the quality required of shellfish waters; 2) Council Directive 78/659/EEC on the quality of fresh waters needing protection or improvement in order to support fish life; and 3) Council Decision 77/795/EEC establishing a common procedure for the exchange of information on the quality of surface fresh water in the Community. Source: EEA, 2007

meetings in specific areas (EFTA, 2007), the submission of comments on proposals, and the adoption of resolutions in response to Commission initiatives.

Although EFTA EEA countries are consulted during the preparation process for delegated legislation, they are excluded from the final decisions, which are taken only by EU members, usually in the form of national government experts who receive direct instructions from their capitals. Therefore, EFTA EEA members participate in the 'decision-shaping' rather than decision-making processes of EU legislation (see Box 3-3).

Box 3-3 National room for manoeuvre within the EEA

During the process of incorporation of EU legislation into the EEA Agreement, EFTA EEA states can use three mechanisms in order to contest its incorporation. First, non-EU members can suggest amendments to the new legislation, which the European Commission can then accept or reject. Second, EFTA EEA states can contest whether the new legislation is 'EEA relevant' and therefore should be part of the EEA Agreement. Finally, EFTA EEA states have the right to veto the integration of new EU legislation into the EEA Agreement. If, despite attempts to find a negotiated solution, a state finds it necessary to exercise its right of veto, the affected part of the annex to the EEA Agreement to which the new legislation in question belongs is regarded as provisionally suspended between the EFTA pillar affecting all EFTA countries and the EU, with the negative consequences for trade for all EFTA countries that this might entail. The right to veto has not been yet exercised by any EFTA EEA state. Therefore, even though EFTA EEA states have recourse to these control mechanisms, the overall power to influence EU legislation is minimal and has decreased since they entered the EEA.

Finally, in the last two decades the decision-making process within the EU has changed. The European Council has begun to play a more active role in broader areas of EU cooperation, implementing an increasing number of measures that lie outside the scope of the EEA Agreement but which have implications for the internal market. Since EFTA EEA states' power to influence EU legislation is limited to that considered as EEA relevant, its ability to have a say about these broader, cross-sectoral initiatives that impact the internal market is clearly constrained

Sources: EFTA, 2007; Norway, 2016; IEEP, 2013.

Compliance with EU derived legislation within the EEA is monitored by the EFTA Surveillance Authority (ESA) and handled by the EFTA Court. These authorities act as the equivalent to the European Commission and the European Court of Justice, respectively (EEA EFTA, 2015).

Budget Contributions

EEA members provide financial contributions to the EU Budget in two respects. One is a payment in return for their participation in EU programmes, actions, services and agencies such as the Horizon 2020 Framework Programme for Research and Innovation (EFTA, 2013). This contribution to the EU Programme budget covers both operational and administrative costs and is negotiated individually on an annual basis. It is provided both financially and in kind (EFTA, 2013b).

Secondly, in addition to the contributions to EU programmes, EEA EFTA states also make financial contributions towards EU regional policy goals such as economic and social cohesion in the Union.

The potential UK contribution to the EU budget in the event of becoming an EFTA EEA country would be a matter for serious negotiations but can be assessed to some degree by considering Norway's current contributions. In 2011 Norway provided £524m (or £106 per capita) to the EU budget, compared to the UK's net budget contribution of £8.1bn, or £128 per capita (House of Commons, 2013b). According to recent publications, if the UK joins the EEA its net overall contribution to the EU budget (ie comparing its future contribution with the current net contribution after application of the UK's rebate) would fall only by between 9-17% (Global Counsel, 2015).

However, it is important to note that there would be a significant redistribution in who pays and who benefits within the UK. The new contribution would be a simple transfer from the Treasury to the EU; while the current net contribution represents a much larger Treasury payment, followed by a significant inflow to the UK of receipts in the form of CAP payments to individuals and individual farm businesses, structural funds expenditure in the regions, and other receipts, including to universities and others from the EU research budget. There would thus be scope for the UK Government to maximise the net benefit to the UK's public finances by significantly reducing payments in the form of CAP subsidies including agri-environment schemes, and in the form of regional spending (House of Commons, 2016).

An alternative option: Bilateral agreement ('the Swiss option')

If the UK does not want to pursue the EEA option, one alternative is to try to follow Switzerland's path to access the internal market. This is a looser and less predictable arrangement than the relatively established EEA model.

The basis of Switzerland's economic and trade relations with the EU are governed by a free trade agreement signed in 1972, supplemented by additional Bilateral agreements⁹ signed following the rejection of Swiss membership of the EEA in a referendum in 1992 (see Box 3-4).

Box 3-4 Switzerland's access to the internal market through Bilateral Agreements

Switzerland's access to the internal market is based either on the principle of mutual recognition of the equivalence of legislation (eg agreements on technical barriers to public procurement markets) or, in some cases, on the adoption in Switzerland of the EU *acquis communautaire* (eg in the case of the Civil Aviation Agreement and, vary significantly, the Schengen Agreement). Switzerland has adopted a policy of 'voluntary adaptation' whereby Swiss law is aligned with the EU's *acquis communautaire* in order to make its economy more compatible with that of its main trading partner. The numerous Bilateral Agreements, together with this policy of voluntary adaptation, 'have led to Switzerland being much more deeply integrated with the EU than suggested by its formal status as a non-member. Indeed, in certain respects such integration is deeper than that of EU members such as the UK, as the case of Schengen shows' (House of Commons, 2013a).

Bilateral Agreements are less predictable than the more systematic and legally secure EEA model. Compliance and enforcement of legislation within the bilateral agreements is left to courts and authorities of the EU and Switzerland. As noted within a recent report by Policy Network 'as there are no joint legal institutions (but only political ones), there is no certainty that they will enforce them in the same way, which reduces the extent to which there is a reliable single market between

⁹ Over the years this bilateral relationship has developed into a complex and cumbersome affair with around 100 bilateral agreements currently in place between Switzerland and the EU (DG Trade, 2013).

the EU and Switzerland' (Policy Network, 2015).

Switzerland is also entitled to provide financial contributions to the EU budget in a similar way to the EFTA/EEA countries. Switzerland's overall annual contribution to the EU budget in recent years was around £420m (or £53 per capita) (House of Commons, 2013b). Therefore, if the UK were to enjoy similar conditions, its contribution to the EU budget would fall by 55-60% (Global Counsel, 2015). However, budget contributions help cover the costs associated with the development and compliance of the freedoms in the Treaty, 'as well as flanking measures such as the Common Foreign and Security Policy' (Policy Network, 2015). As stated in a recent policy report, 'neutral Switzerland has much more limited ambition as regards security measures than the UK, and has no bilateral agreement with the EU on services and capital – all key issues from a UK perspective' (Policy Network, 2015).

While the EU traditionally has been relatively accommodating in its approach to relations with Switzerland, in 2010 the European Council concluded that the system has reached its limits and should be changed (IEEP, 2013). The Council considers it necessary to establish a suitable framework for all existing and future agreements with Switzerland to provide a legally binding mechanism for the adaptation of agreements to the evolving EU *acquis*, as well as mechanisms for surveillance and judicial control (European Council, 2012). According to a recent assessment made by Open Europe, 'if the proposals discussed become reality, Switzerland would find itself in an increasingly identical institutional position to that of the EEA states' (Open Europe, 2015).

In short although some proponents of a "Leave" vote consider that the 'Swiss alternative' provides a model for the UK under a potential Brexit scenario, Switzerland's access to the internal market is more limited (CER, 2014) and the mechanism to resolve disputes is less flexible (Open Europe, 2015). The EU has publicly expressed its dissatisfaction with this kind of arrangement and is aiming to reform it so that it replicates the institutional position to that of the EEA states. This is one of the reasons why certain recent policy reports argue that 'the current Swiss model is broken' and it is highly unlikely to be accepted again by the EU (CER, 2016). This is particularly the case given that the Commission and key Member States will be concerned about creating precedents for similarly complex and *à la carte* arrangements in the event of other Member States choosing to leave the EU in future. Any revamped version that the EU and Switzerland may one day agree upon is unlikely to be an appealing model to the sovereignty-conscious UK (CER, 2016). Therefore, and for the purpose of this analysis, the scenario adopted to represent the Brexit option while retaining access to the EU's internal market will be one where the focus is on gaining membership of the EEA – not the Swiss model.

3.2.2 Scenario 2: No access to the internal market ('the entirely outside Option')

Amongst those advocating a UK departure from the EU, there are also supporters of the UK positioning itself outside both the EU and its internal market. This would avoid the strong influence exerted by the EU in the EEA and EFTA countries and represent a much more decisive step away from the obligations set out in EU legislation. Supporters of this option believe that none of the alternatives to EU membership which involve staying within the internal market would address the reasons for the UK wanting to leave the EU, particularly since the UK would still have to adopt a significant part of the *acquis communautaire* while losing the power to influence it as a member (Global Counsel, 2015).

There are several options within this scenario (eg sign a Free Trade Agreement with the EU, perhaps on the Canadian model, or trade simply under the widely applicable rules of the World Trade Organisation, or declare a unilateral free trade regime, or promote further development of the Anglosphere¹⁰). All would involve extensive negotiation with a rather unpredictable outcome. It is only to be expected that the EU would be wary of conceding advantageous trade arrangements with the UK if the expectation was that the Government planned a deregulatory pathway, which could mean applying lower standards within the EU. For the purpose of this analysis we will define this scenario as the one where the UK has no preferential access to the internal market and no representation within the EU decision-making process. As a result, EU regulations and standards would no longer apply to the UK as a matter of course, although some would need to be taken into account in practice or even adopted formally if UK exports were to gain access to EU markets, given that nearly all EU product standards apply equally to domestic and imported products. In this scenario the UK would be completely detached from common EU policies and political structures although negotiations on some issues would need to take place (Open Europe, 2015).

Governance Issues

The implications for the UK environment under this scenario would be complex and difficult to assess. Since the UK would no longer have to adopt the full body of the *acquis communautaire* (EU legislation) relating to the internal market in national law, new UK legislation will be required once EU Regulations cease to apply at the moment of withdrawal. Obligations in EU Directives that have already been embodied in domestic implementing legislation (ie the Birds Directive, Air Quality Framework Directive) would continue to apply until they are repealed or amended by the government. The direction that new legislation might take is hard to predict and would depend on whether a future government is willing to continue applying a similar approach to the way it legislates on environmental issues or decides to take on a new pathway.

In the event of withdrawal, the UK would lose access to EU institutions and funding for research programmes. Access to some EU agencies such as the European Environmental Agency would still be an option as it occurs with other countries positioned outside the internal market¹¹. Moreover, and although the UK will not be required to make any contribution to the EU budget, the full costs of this would not be saved by the Government. For areas like agriculture, regional policy, and research, a future UK Government would need to allocate national funds in place of those received from the EU or reduce the level of such spending.

¹⁰ Some who advocate UK withdrawal envisage the potential further development of the so-called Anglosphere, meaning closer relations with other English-speaking countries, such as the US, Canada, Australia and New Zealand. Others propose a much larger grouping to include India, Ireland, the Caribbean and the Pacific islands Source: House of Commons, 2013.

¹¹ The European Environmental Agency has 33 member countries, including the 28 European Union Member States together with Iceland, Liechtenstein, Norway, Switzerland and Turkey. The six West Balkan countries are cooperating countries. The EEA also engages in extensive international cooperation beyond its own member countries. Source: EEA, 2015

The EU record to date on environmental issues and consequences of Brexit are explored below in a sequence of “stand alone Chapters” covering the main themes. In each case we consider what the consequences of Brexit might be under the two different scenarios outlines here.

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4 Environmental quality: pollution control, wastes and chemicals

4.1 Introduction

The early objective of EU environmental law was to deliver an improved environment for Europe's citizens and this has remained its focus, extending over time to cover many different aspects of the protection of air and water quality, waste management, and control of chemicals. These different areas of law interact, both in relation to the environmental media being protected and in the activities they regulate.

Many of these issues have a transboundary dimension which has been an important influence on the rationale and design of the legislation that has been put in place. In legal terms the great majority of the measures are in the form of directives which need to be transposed into national legislation, allowing some flexibility in the approach to fit national conditions and preferences. This creates an interplay between EU standards and national implementation within which there is considerable scope for national parliaments, administrations, NGOs and industry stakeholders to play an important role. UK stakeholders are amongst the most active and influential in Europe.

Much of EU environmental law covering these issues is adopted under the Environment Article of the Treaty, but there are several important areas where measures are adopted under the internal market provisions of the Treaty¹. The economic logic of establishing a relatively consistent framework of environmental standards within the single market has been a significant driver of policy alongside the more fundamental pursuit of a better environment. This is an important principle for governments.

Whilst this might have resulted in standards being driven down to a lowest common denominator in Europe, in practice this has occurred rarely and the dynamic has been to push standards up to a relatively high level. This has created considerable pressure on certain industries to invest in new plant and processes and cut pollution; at the same time it has provided a predictable and relatively level playing field in which investment takes place. This is why many industrial stakeholders support EU legislation and common standards even if it is relatively demanding for them.

4.2 Air quality

EU air quality legislation establishes strong protection objectives for human health. Since the 1970s, it has set binding air quality objectives and progressively these have been modernised and consolidated. Today, the Ambient Air Quality Directive 2008/50/EC brings together binding limit values with requirements to monitor air quality. This places obligations on governments to develop management plans with measures to tackle air quality problems where these occur, as well as requirements to keep the public informed. This has led, across the EU, to reductions in some pollutants (such as SO₂ and some NO_x and

¹ Under the Treaty on the Functioning of the European Union, Article 114 allows for adoption of measures for the approximation of laws in Member States which have as their object the establishment and functioning of the internal market. For measures relating to meeting the environmental objectives of the Treaty, legislation is adopted under Article 192.

particulate sources), as well as better understanding of the problem by governments and citizens alike.

There is no question that EU air protection legislation has over many years, and still very much continues to, affect measures taken in the UK, leading to air quality improvements. Initial measures for the protection of the air in Britain were adopted primarily in response to severe smog events that caused a significant increase in deaths (POST, 2002). Major pollutants such as black smoke (particulates) and SO₂ were already being reduced by domestic action before the UK joined the EU, but further action was driven by EU membership. Although addressing serious health concerns was already one of the objectives for early actions in the UK, these actions were not on a sufficient scale to address them satisfactorily.

The setting of a limited number of air quality standards in the UK in the decade up to the mid-1990s was entirely the result of action at EC level. Until the passage of the Environmental Protection Act 1990, no specific powers existed for the fixing of statutory air quality standards. Those relating to smoke and sulphur dioxide, lead and nitrogen dioxide (in Directives 80/779, 82/884 and 85/203) were eventually given statutory force through regulations made under the general provisions of the European Communities Act 1972.

Proposals for a comprehensive new framework for improving air quality in the UK were outlined in a discussion paper, *Improving Air Quality*, issued by the Department of the Environment in March 1994 (Defra, 1994), with several subsequent revisions. Then a significant step towards realisation of a more detailed air quality strategy was achieved through the provisions of the Environment Act 1995, which required the Secretary of State to prepare a National Air Quality Strategy, including standards and objectives for air quality, and measures to be taken by local authorities. This mirrored developments with the first EU Air Quality Framework Directive adopted in 1996.

The major difference between domestic legislation in this area and that which has been underpinned by EU law, is that UK air quality standards were not binding, but could help guide regulatory decision making. As a result, the pressure to address major problems, such as road transport pollution was relatively limited within the UK policy framework, and standards rose faster once EU legislation came to apply, with real benefits in terms of reduced emissions.

Despite significant improvements in this area, certain contemporary EU air quality standards are proving difficult to meet in several parts of the UK, particularly for two pollutants - PM10 and nitrogen dioxide. Although Member States may seek derogations from the Commission (ie exemptions from meeting particular objectives in the law or agreed delays to meeting objectives), some requests for these from the UK have not been successful (see European Commission, undated), with London's persistent air quality problems as a good example of these challenges. Although pressure to meet EU legal obligations has been a key reason why London authorities have adopted several measures (congestion charging, low emission zone for HGVs, replacement strategies for the bus fleet, cycle hire, etc.), there are still many areas within the city where standards are not met. It seems unlikely that many (or even all) of

these initiatives would have taken place without this legal pressure and such legal pressure would not have been exerted by UK standards purely on their own.

4.2.1 Air Quality following a UK departure

Under Brexit Scenario 1 (UK becoming a member of the EEA), air quality legislation would continue to apply, but the UK would not have a vote in the processes for altering or augmenting the legislation (see section 3.2.1 for more explanation of EFTA EEA states' governance issues).

Alternatively, if the UK were to be outside the EEA (Scenario 2), the legislation would no longer apply, creating as a result a scenario with real and uncertain environmental and health risks. In recent decades, the UK has tended to be more cautious than many Member States about tightening air quality standards. Outside of the EU and EEA, the UK might well be inclined either to relax them or fail to improve them if the Government was free to do so, representing therefore a significant risk to the health of UK citizens in major urban areas where meeting EU standards is currently a problem. Even though the economic benefits of the health improvements are considered in many studies to outweigh the cost of measures², the pressure to avoid specific measures on grounds of costs which has been evident in recent years would, at the very least, risk delaying their introduction and problematic hot spots may remain unaddressed.

As EU law has impacts on possible new developments in the country which might affect air quality, a potential UK departure could influence the approval of controversial future developments in the UK. An example of this is the debate over Heathrow³, where a proposed expansion presents a risk to air quality in west London. Under Scenario 2, with no requirement to implement EU law, the approval of these kinds of developments could leave populations at risk of increased exposure in the future.

There is ongoing debate concerning the future revision of EU standards and whether it is necessary. This is due, in part, to the fact that the standards are not thresholds for health impacts and that, although further reductions in exposure do deliver health benefits, meeting tighter standards involves incurring sometimes significant cost. Further, the WHO continues to expand its research on the issue and its advice is now in advance of the older EU law. Either by being outside the decision-making table (EEA) or by being completely out of any European membership group, the two Brexit scenarios would mean that the considerable UK experience on this issue would not be taken into account in any revision or development of EU law as it is now. One consequence would be that any specific circumstances for London or other problematic areas would be less likely to be addressed in the design of revised provisions.

In conclusion, the UK has had a strong track record of providing scientific and policy advice (as well as opinion) to the development of EU air quality law, and that law has delivered improvements in the UK environment with resulting health benefits that almost certainly

² See 2005 European Commission Impact Assessment of The Communication on Thematic Strategy on Air Pollution and the Directive on "Ambient Air Quality and Cleaner Air for Europe". SEC (2005) 1133, 21.9.2005.

³ For the latest information about Heathrow air quality data and its comparison with EU air limit values see: <http://www.heathrowairwatch.org.uk/>

would not have occurred within a UK system on its own. UK membership of the EU has, therefore, delivered benefits to both parties. Certain important air quality objectives still remain to be met, both in the UK and in other Member States, and there is a clear reluctance to meet the expenditure involved. However, the evidence on the health consequences of continuing high levels of pollution is very strong so any reduction in willingness to act following a departure from the EU would be significant in environmental terms.

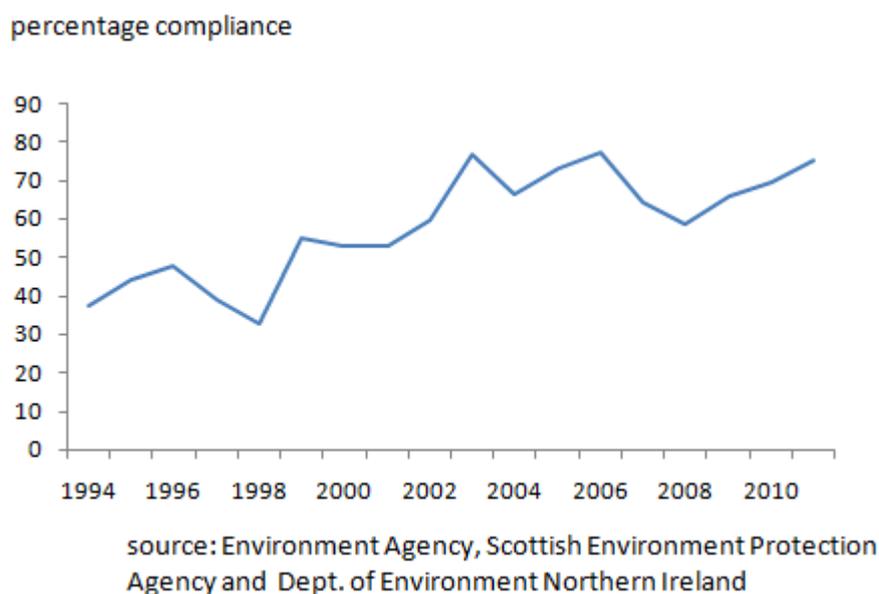
4.3 Water quality and management

The approach to water management in the EU is centred on the Water Framework Directive 2000/60. This legislation requires an integrated approach to river basin management and covers lakes, rivers, estuaries, coastal waters and ground waters. It sets objectives based on ecology, water quality and water quantity for all water bodies. Member States have to produce management plans for each river basin, setting out objectives, identifying problems preventing the achievement of those objectives and measures to tackle those problems. The plans have to be reviewed and updated every six years. This comprehensive legal framework is supplemented by additional legislation setting quality objectives for specific substances. There are also additional directives to control discharges, such as those from waste water plants and for specific standards such as for bathing water. Across the Europe, EU water law has had dramatic impacts in controlling dangerous pollutants, improving waste water treatment and providing a major integration of ecological thinking into practical water management. However, significant challenges remain, such as controlling over-abstraction and tackling agricultural pollution.

The impact of EU water legislation on the UK has been highly significant. The most dramatic change over recent decades has been on waste water treatment. The UK was slow to implement EU law, but has gradually done so, resulting in a much higher quality of bathing waters and rivers and coasts with far lower pollution levels than before. For example, the effect on bathing waters has been dramatic, changing from less than half of waters being compliant with EU law in 1994, to around 80 per cent today (see figure below).

The Water Framework Directive continues to drive improvements. The new super sewer in London is an example of this – the now much cleaner River Thames being an exemplar of the benefits of pollution control measures under older EU law and further improvements are to be expected. This Directive has also influenced the UK Government in investing state funds in catchment management initiatives involving more sensitive farming to reduce diffuse pollution.

Figure 4-1 Compliance of UK bathing water with the standards in the EC Bathing Water Directive (expressed in UK Guidelines): 1994-2011. (Defra, 2013)



The management approach, which was introduced by the Framework Directive, builds on, rather than revolutionises, established UK practice of catchment management. However, it has expanded it, not only in the objectives that are set, but in driving forward measures and enhancing stakeholder engagement.

The UK played an important role in the negotiations leading to the adoption of the EU Framework Directive and much of the text still reflects the key revisions developed under the UK Council Presidency of the time. Nonetheless, the UK has often been resistant to implementing EU law on water protection, demonstrating that the environmental benefits now apparent in cleaner and safer UK waters would not have been achieved without EU pressure.

It is also important to note that the management of water flows and quantities is influenced by the Floods Directive as well. This takes a preventative approach and sets out requirements to assess flood risks and develop management plans which are likely to be increasingly important in the UK and elsewhere. However, it does not set out obligations regarding particular levels of flood protection. Poor interpretation of these requirements in the press has caused the Water Framework Directive to be the focus of unjustified criticism after a series of recent events in the UK (see Box 4-1).

Box 4-1 The Water Framework Directive and appropriate flood management in the UK

Since the floods in the Somerset Levels in winter 2014-15 and the floods in several areas December 2015, statements have appeared in the press that the requirements of the Water Framework Directive prevent activities (notably dredging) which are necessary for flood management. This is not the case. While the Directive sets out ambitious water management objectives, it clearly states (Article 4.7):

“Member States will not be in breach of this Directive when:

- failure to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration in the status of a body of surface water or groundwater is the result of *new* modifications to the *physical* characteristics of a surface water body or alterations to the level of bodies of groundwater, or

[...] and all the following conditions are met:

(a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;

(b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan [..];

(c) the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and

(d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.”

Therefore, where physical modifications are made to channels or water bodies (eg dredging) to maintain human safety, including flood prevention, this is allowed by the Directive (assuming that there is not a better alternative). The inclination to blame the Directive illustrates how easy it is to cause confusion about the underlying causes of environmental management problems and sometimes to portray EU legislation as the source of the problem when it is clearly not.

4.3.1 Water quality following UK departure

Much EU water legislation applies to the EEA and, therefore, Brexit under Scenario 1 would mean that it would still apply. Within the EEA, the UK could continue to contribute to policy debates, but would not be part of official decision making, such as occurs on a regular basis in formal Committees, which represent an important forum in framing the future detailed application of this legislation. One exception in the EEA agreement is the absence of the Bathing Water Directive from the list of EU measures that apply (see Section 3.2.1). While Brexit could have an impact on UK application of this directive with a number of beaches still not compliant on a broader scale, this is less likely to be the case in future that it was in the past. This is because (after much argument and much investment) the UK is now compliant on the great majority of beaches. Apart from environmental concerns the tourism industry would not welcome bathing water standards falling back and poor comparisons being made with beaches in the EU (which already are a challenge to compete with). Nonetheless, pressure from the EU standards is a significant force in maintaining standards along the more than 630 identified bathing waters in the UK.

It is important to note that although the Water Framework Directive is included within the EEA Agreement, some aspects of the Directive are excluded and would therefore not apply under Scenario 1. This omission concerns the Art. 4 requirements on protected areas, which state that river basin management planning must ensure that the objectives of protected areas are fully addressed. However, such areas include bathing waters and Natura 2000 sites, both designated under EU laws that would not apply outside the EU. The rest of the Water Framework Directive would remain applicable to the UK if it remained in the EEA.

Full compliance with the Directive still requires further effort and some expense, not least in reducing more diffusive pollution in rural areas, originating from agriculture and other sources. For example, recent analysis found that there was no significant change in the overall number of water bodies at high or good surface water status between 2008 and 2012. Furthermore, in 2012, only 23% of surface water bodies assessed under the WFD in England were in high or good status (Defra, 2014). Under Brexit (Scenario 2), outside the EEA there could be a retreat from the tough objectives of this directive. Moreover, this scenario would undoubtedly lead to pressure to relax implementation of the Water Framework Directive (assuming its basic framework remains in EU law). This is because compliance would entail costs and there is no question that implementation will require further action by many farmers. The Government can be expected to be reluctant to take such action against this sector even if the benefits outweigh the costs. It is also important to note that major investment in sewage treatment is undertaken (in England and Wales) in the context of the periodic spending and price review of the water companies. Part of the negotiation with Ofwat⁴ is in relation to investment to meet EU objectives (one example being the London super sewer). Being outside the EEA could remove this legal obligation and, therefore, change the spending and investment decisions of the water industry to the detriment of UK water quality.

4.4 Controlling pollution emissions

EU environmental law has a long history of preventing and reducing pollution emissions to air and water. The range of legal mechanisms most used includes:

- controls on discharges or emissions from specific sources,
- legal frameworks for the regulation of industrial emissions;
- controls on the application of pollutants to land; and
- setting emission ceilings for total emissions of pollutants from certain types of industry or from countries as a whole.

While controls on individual pollution sources historically have formed one part of EU policy, it is a broad industrial pollution control system today. The Industrial Emissions Directive (IED) 2010/15/EC, inherits an integrated pollution prevention and control approach that was introduced in 1996. It sets a regulatory decision system for industrial installations that fall within its ambit whereby each requires a permit that contains specific limits on pollutant emissions based on the plant's operation to best available techniques (BAT).

⁴ Ofwat: the Water Services Regulation Authority. It is the body responsible for economic regulation of the privatised water and sewerage industry in England and Wales.

This approach draws heavily on the system that the UK introduced in the 1990 Environmental Protection Act. This was Integrated Pollution Control based on permits and the concept of “best available techniques not entailing excessive costs”, which built on recommendations from the Royal Commission on Environmental Pollution (RCEP, 1988). This was an example of UK thought leadership. The EU system is not the same as the older UK one, but the approach introduced by the EU in 1996 differed strongly from those in some other Member States, such as Germany, where a system of standard operating requirements applied. This flexible, but forward looking approach, exemplifies the regulatory model that the UK had developed, with considerable impact on EU policy development.

By contrast, controls on applications of potentially polluting substances to land are limited in EU law to certain specific issues. The most important of these are controls on the application of biocides (eg spraying of pesticides, controls on sheep-dip). However, application of solid waste in the form of manure is controlled by the Nitrates Directive 91/676/EEC and of sewage sludge by the Sewage Sludge Directive 86/278/EEC. These controls aim at protecting both human health and the natural environment, eg by avoiding or reducing pollution by toxic substances (to water or entering foodstuffs) or reducing eutrophication of water.

The UK has had its own approaches to address and regulate application of polluting substances to land, such as controls on pesticides and aspects of nitrate application. However, there are differences to the EU approach. For example, for nitrates, under the previous UK system, farmers could be compensated for measures to reduce pollution, but this is not allowed under EU law, as this would conflict with the Polluter Pays Principle.

One approach to pollution control that has been widely used in EU policy, but had no roots in the UK, has been the fixing of ceilings on total emissions for individual countries (ie a control on overall volumes of pollutants). The earliest versions of this approach at EU level set total reduction objectives for large combustion plants emitting SO₂ and NO_x in order to tackle acid rain including that falling on Scandinavia from sources in neighbouring countries (the UK particularly). The UK was not supportive of ‘arbitrary’ cuts in emissions. Instead, during the 1980s, the UK promoted an ‘effects-based approach’, which was consolidated as the basis of UK policy under the last Conservative government in the 1990 Environment White Paper. This policy, in a nutshell, stated that emission reductions should be focused on emissions that cause the most harm, rather than pursuing across the board cuts

The setting of national limits for the release of pollutants was first developed for Europe at United Nations level (UNECE) and agreements reached within UN negotiations were taken into EU law. This did not change the obligations on the UK, but provided a mechanism for their enforcement, giving them more weight. Subsequently, the EU has expanded its analysis of air pollution problems and the use of the national ceilings approach. In both the UN and EU contexts, an effects-based approach is now the basis for determining country-level obligations (alongside economic models and other considerations⁵). Thus the UK policy

⁵ For information about the GAINS model see:

<http://www.iiasa.ac.at/web/home/research/researchPrograms/GAINS.en.html>

initiative has coloured the approach taken in Europe more widely. The setting of ceilings for specific pollutants now applies to Member States as a whole under the National Emissions Ceilings Directive (NECD), revisions to which currently are being negotiated.

4.4.1 Controlling emissions following a UK departure

On the scenario whereby the UK remained within the EEA, the IED would still apply. Indeed, even outside the EEA (Scenario 2), it might be assumed that the UK would still retain a version of the IED given its close character to the former UK approach. The UK has played a key role in policy development in this area, for example in the policy review that led to the IED and to technical discussions on how the concept of BAT should be interpreted. However, under Scenario 2 the UK would be completely removed as an active participant in this debate for the EU.

All the EU controls on land pollution apply to the EEA, so under Scenario 1 all of these would remain in place. However, EEA membership would remove direct influence on the future of the legislation while leaving it in force⁶. Since the UK has had a long history of problematic implementation of, for example, the Nitrates Directive, under Scenario 2 the UK might seek to alter the approach, particularly by relaxing standards.

Finally, the National Emissions Ceilings Directive would also still apply to the UK under Scenario 1, as the EEA countries have separately agreed emission reduction levels through a decision of the EEA Agreement. Although Brexit outside the EEA would not exempt the UK from this system of controls as it would still be subject to the UN Convention approach, there would be a risk that the drive for greater control of damaging air pollutants would weaken.

4.5 Waste management

Waste management is a further area of EU environmental law which has caused major positive changes throughout Europe, including in the UK, while sometimes proving challenging to implement. EU waste law includes different elements:

- an overall framework for waste management, including a waste management hierarchy;
- objectives to reduce landfilling of waste;
- Directives promoting recycling of specific types of products, placing responsibilities on producers; and
- measures on the quality of products to allow for their recycling.

Prior to the introduction of EU law, the approach to waste management in the UK generally consisted of little more than the collection and landfilling of the waste in often poor facilities, resulting in both a loss of resources because of low levels of recycling, significant water and air pollution from landfill sites and considerable loss of amenity for many communities close to landfill sites. A series of EU measures has played a central role in changing both the physical processes and the accompanying culture. Particularly important

⁶ See for example National Audit Office (2010). Tackling diffuse water pollution in England. <https://www.nao.org.uk/wp-content/uploads/2010/07/1011188es.pdf>

directives have been: the Waste Framework Directive (75/442/EEC and 2006/12/EC) which includes targets for recycling as well as other provision; the Landfill Directive 1999/31/EC, which has driven reductions in the amount of waste sent to landfill; and directives on specific waste streams (end-of-life vehicles, waste electrical and electronic goods, batteries, packaging) which have radically enhanced recycling rates.

Initially waste management practice in the UK reacted slowly to EU requirements, but today nearly all landfills are maintained to generally high standards, recycling rates are dramatically improved, citizens accept separate collection of different wastes and the UK has introduced additional domestic measures to achieve this, and meet EU targets. National initiatives include the landfill tax, introduced in 1996, specifically to help meet the targets of the Landfill Directive.

In considering how far UK waste management policy has been led by EU policy or possibly would have happened in any case, it is worth examining the views of two reports by House of Commons Select Committees. In 2001 the Environment Select Committee published a report "Delivering Sustainable Waste Management" (Environment Select Committee, 2001). This was highly critical of the then government's waste strategy, stating that it was guilty of 'planning without ambition' and 'thinking without imagination'. However, the Committee further stated "...it is difficult to fully express our disappointment with the continuing inertia and low level of expectation which characterise waste management in this country... the clear implication is that those developing waste policy are merely responding to the thrust of policy at European level without a concept of where the UK should be heading."

In May 2003, the House of Commons Environment, Food and Rural Affairs Committee produced its report *The Future of Waste Management* (House of Commons, 2003), which concluded that government policy was too timid, that Defra and the Environment Agency had too limited resources, and that the UK relied too heavily on the landfill tax to deliver the waste hierarchy. Furthermore, it questioned Defra's ability to negotiate and implement EU legislation to the best advantage of the UK.

As this illustrates, the UK government failed to be ambitious in tackling waste management over a long period and it has been EU law that has been critical to driving far reaching improvements in the UK. Not only has the overall management of waste been improved by broad EU policy measures, but also there are directives aimed at reducing waste and recycling for individual waste streams – vehicles, electrical equipment, paper, batteries, etc. Although the only major UK initiative within this policy landscape has been the landfill tax, the overall effect has been a very substantial change. An example of this is represented by the dramatic increase in the overall household recycling rate in England (Figure 4-2). A recent publication by Defra indicated how England was likely to meet the EU Landfill Directive target of reducing biodegradable municipal waste in 2020 to 35% of 1995 levels. In comparison with earlier challenges of improving UK waste management, this illustrates progress (although there is still much to do).

Figure 4-2 Household recycling rates in England 2000-2012 (Defra, 2013b).

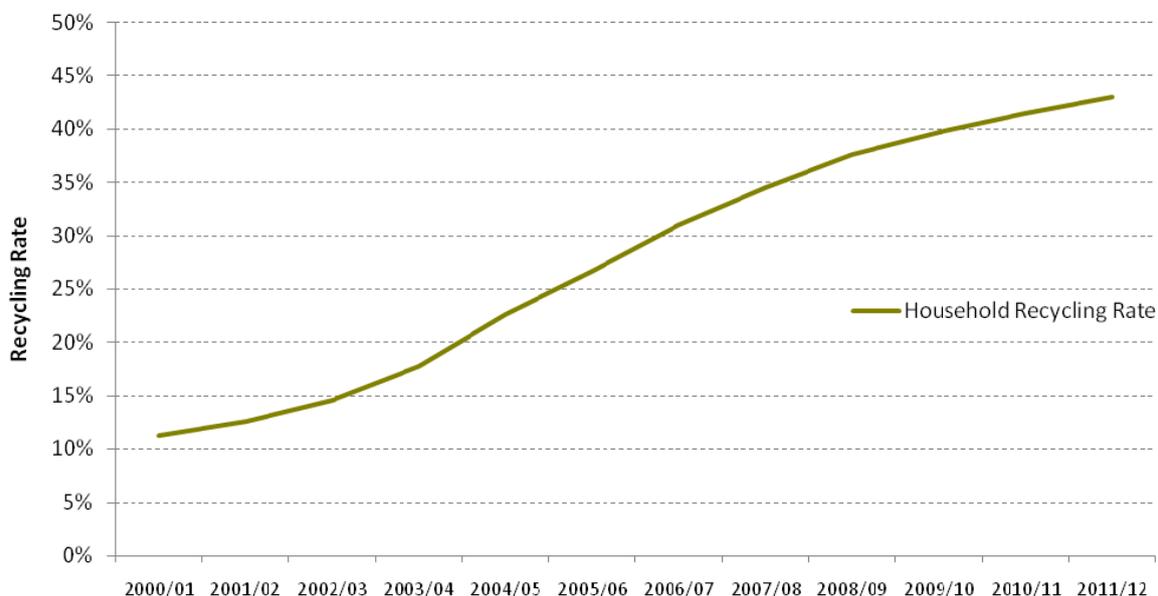
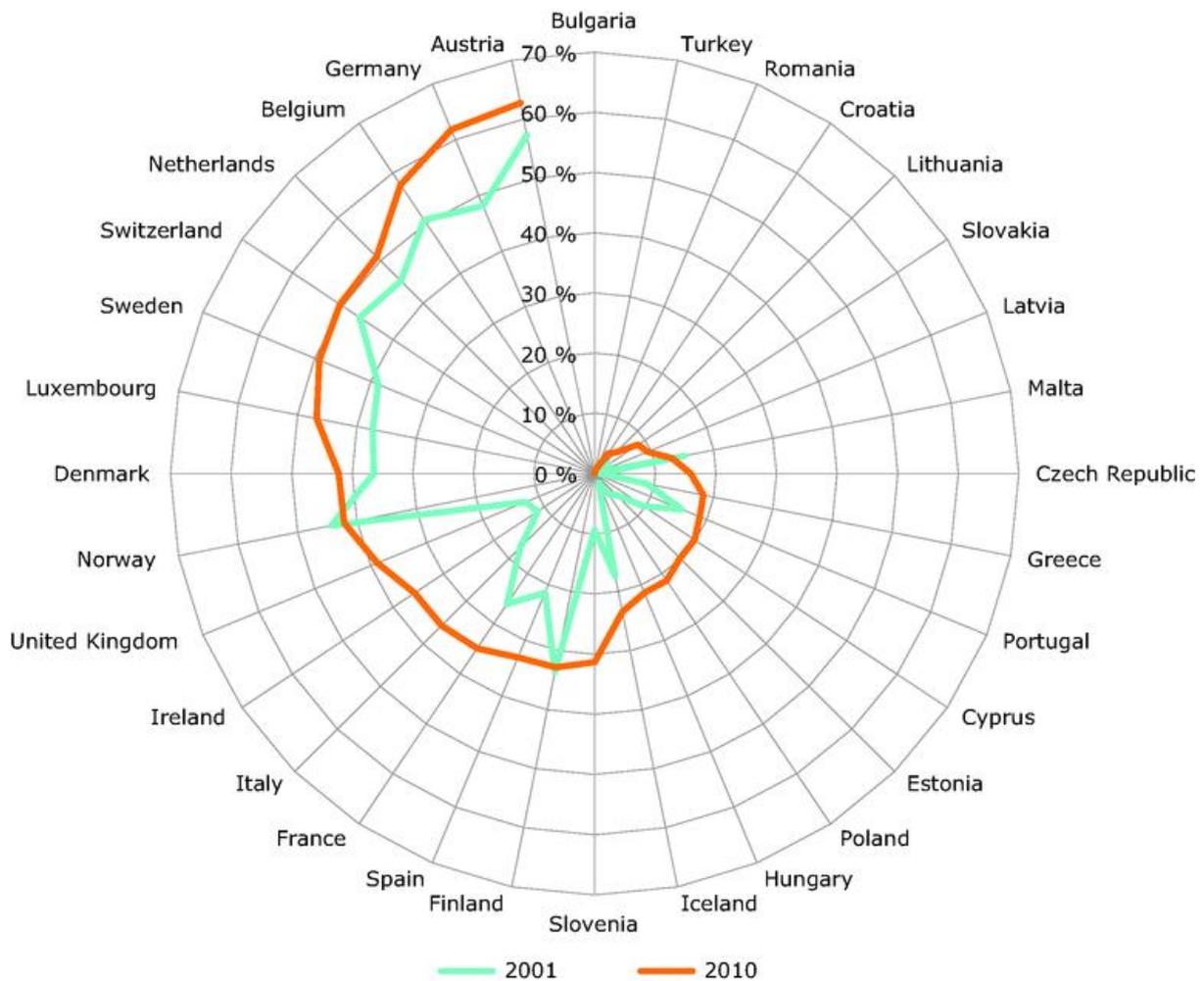


Figure 4-3 provides a further perspective on relative changes in household recycling in the UK and across the EU. It provides comparative data for 2001 and 2012 and shows the dramatic improvement in the UK over this time. All Member States have made improvements in response to EU law, but those in the UK (and Ireland) have been the most dramatic. However, the UK still ranks tenth in the EU. This illustrates both the effect that EU law has had on the UK, but also that further improvement still needs to be made. The Waste Framework Directive sets a target for recycling of 50% of household waste by 2020. Although the UK achieved a recycling rate of 43.2% in 2012/13, the House of Commons Select Committee on Environment, Food and Rural Affairs agreed (Environment Select Committee, 2014) with most witnesses to its recent inquiry that England will miss the 2020 target unless some significant additional Government interventions are made.

Figure 4-3 Recycling rates in all EU Member States for 2001 and 2010 (EEA, 2013)



4.5.1 Waste management following a UK departure

There is a clear single market dimension to much of EU waste management law, consequently making it EEA relevant. An example of this is legislation on specific waste streams, as this both affects product quality and the responsibility of producers. Access to the single market is dependent upon these requirements being implemented and there are also common administrative provisions to permit access for those external suppliers importing goods to the EU which are subject to these provisions (eg under the revised Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU). Any substantive change to these rules in the UK would likely to be considered detrimental to parties on both sides of the trade flows. Consequently, there would be an argument to retain this legislation on either Brexit Scenario 1 or Scenario 2 although the element of uncertainty would remain.

More uncertainty and the greater challenge outside the EU would relate to meeting EU targets under the Waste Framework Directive and the proposed revision (EC, 2015) of those

targets following the release of the Circular Economy Package by the European Commission⁷ on 2 December 2015. In the scenario of Brexit within the EEA, this legislation would continue to drive UK policy and practice. As noted above, the UK has improved its performance in recent years, but there is concern about further improvements and Brexit outside of the EEA would be likely to take off a major source of pressure to improve UK waste management further and would reduce the level of confidence in local authorities and the waste and recycling based industries about the direction of travel and the merits of future investment. This would not only be bad for the environment, but also for the recycling industry in the UK and other businesses which would benefit from a more resource efficient UK economy.

4.6 The use of single market measures under the EU Treaty

It is important to stress that some important EU laws directed at improving environmental quality or standards have been adopted as single market measures under the EU Treaty. The reason for this is that the legal provisions to protect the environment focus upon the way the product is produced and/or marketed in order to achieve the desired outcome. Products are traded freely across the EU, so there has to be a single minimum quality requirement for those products. Measures adopted under the Environment Article of the Treaty also contribute to avoidance or reduction in distortion of competition between companies across the EU. However, this section considers briefly those measures specifically concerned with traded products.

Examples of EU legislation that are designed to protect health and the environment and which have been classified as single market in character include those concerned with:

- Vehicle emission and performance standards: since the 1970s binding standards have been set for emissions of individual pollutants or particular engine performance. Standards have been adopted for different types of vehicles, applying to all sold in the EU, resulting in major reductions in emissions. These need to be taken considerably further and the legal structure for this is now firmly established at EU level where it will remain.
- Chemicals: many years of legislative development, culminating in the REACH Regulation No (EC) 1907/2006 and the related Classification, Labelling and Packaging Regulation (EC) No 1272/2008 control the testing of chemicals being placed on the market, their labelling, and other key sectors. Many of the substances are toxic and ensuring the environmental and health impacts are fully understood and their use is tailored to this understanding is critical to their entry into the single market.
- Fuel quality: the quality (eg the sulphur content) of fuels sold on the EU market is controlled to reduce emissions.
- Restricting hazardous substances: the content of hazardous substances is restricted in electrical products on sale in the EU.
- Product noise levels: selected products are subject to maximum noise levels.

⁷ For further information on the package see: http://ec.europa.eu/environment/circular-economy/index_en.htm

In many cases EU single market measures set minimum quality requirements for products including measures relating to environmental performance, hazardous content, etc. Within these measures there is usually nothing to prevent a manufacturer from going beyond the minimum requirement. However, it is usually not possible for a Member State to require manufacturers to do so, or to require that products on the market in that country meet additional standards. Doing this would impede the free access of products from other Member States to that country's market and be contrary to Treaty objectives for the single market.

If the UK were to remain part of the EEA (Scenario 1), these requirements would continue to apply to the UK itself. Even in the event of Brexit under Scenario 2, any UK products seeking to enter the EU market would have to comply with these minimum requirements. The importance of these product standards can be seen in that they drive manufacturing standards in their countries of origin beyond the simple requirement of their export to the EU. However, and regardless of the out scenario, Brexit would mean that the UK would no longer contribute to the determination of these standards. In particular, British governments have had a strong input into the development of a range of legislation concerning vehicle emission standards, fuel quality and chemicals, where UK industry has strong interests. Brexit would mean this would not be the case in future.

4.7 Conclusions

The establishment of more stringent environmental standards within the EU single market has had significant environmental and health benefits in the UK.

EU air protection legislation, as well as water and waste management policy in the EU, have resulted in a cleaner atmosphere for the UK, dramatic improvements in waste recycling, and much higher quality of bathing waters and rivers and coasts with far lower pollution levels than before.

During the last four decades, the UK has showed a strong record of providing scientific and policy advice to the development of EU legislation regarding environmental quality, demonstrating important UK influence at EU level. However, many of the initiatives to improve environmental quality in the UK would have not taken place without the EU's legal pressure and the benefits to citizens and businesses would not have been realised.

Although EU law on air, water and waste is now mature, there is still much to do to ensure countries, including the UK, fully implement it. Therefore, the next few years probably will not see major additions or changes to law, but a concentration on making sure its benefits are delivered to citizens, in line with the position successive UK governments have taken on this legislation.

Although there are differences between policy areas, most EU legislation regarding environmental quality would still apply if the UK remains within the EEA (Scenario 1). That is particularly true for air quality legislation, most of the Water Framework Directive, the three main legal mechanisms controlling pollution emissions, and the Waste Framework Directive.

However, under this scenario the UK would not be part of the official decision making and thus will not be able to argue to adapt future legislation to its national interests.

Under Scenario 2 (entirely outside), most of environment legislation would no longer apply, and the UK would be free to relax and lower environmental standards, creating as a result a scenario with real and uncertain environmental and health risks.

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5 Nature protection

5.1 Introduction

The EU has developed a nature conservation policy framework that is relatively comprehensive and ambitious compared with many other parts of the world. It has been a driving force for establishing and strengthening nature conservation measures in the UK.

At the heart of the EU nature conservation policy framework lies the Birds Directive¹ and the Habitats Directive². These directives provide the legislation for the general protection of wildlife in the EU, in particular through the protection of sites that are of specific importance for selected species and habitats – creating the ‘Natura 2000 network’³. They reflect agreement that international co-operation is essential in order to tackle the transboundary issues that arise in addressing biodiversity – including the conservation of migrating species and mobile species in the marine environment. To a large extent, the Habitats Directive was developed to meet the requirements of the 1982 Council of Europe Bern Convention⁴. The directives are complemented by other measures such as the recent Regulation on Invasive Alien Species.

Despite these measures, biodiversity remains under acute pressure in the UK and the EU with many species and habitats in decline, not least because of developments in agriculture and fisheries, as well as urban development and climate change ((Burns et al, 2013; Oliver et al, 2015) and elsewhere in the EU (EEA, 2010; European Commission, 2015). Accordingly, the EU’s biodiversity policy objectives are now broader and more ambitious than those encapsulated in the two nature directives alone. The EU has adopted a Biodiversity Strategy with a key headline target of *‘Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.’*⁵ To achieve this will not be easy and will rely not only on implementing the nature directives effectively and marshalling adequate budgets, but also utilising other EU environmental legislation and policies, such as the Water Framework Directive (WFD).

5.2 Relevant nature conservation policy in the EU

The Birds and Habitats Directives

The Birds and Habitats Directives aim to contribute to conserving biodiversity in the EU by maintaining certain vulnerable species and habitat types at levels which correspond to “favourable conservation status”, according to a number of criteria⁶. While the network of Natura 2000 sites only legally protects the species and habitats listed in annexes to the Directives, they also have a protective “umbrella effect” for a number of other species.

¹ Directive on the conservation of wild birds (2009/147/EC, which is a codified version of the original Directive 79/409/EEC)

² Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC)

³ Which comprise Special Protection Areas (SPAs) designated under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive.

⁴ Bern Convention on the Conservation of European Wildlife and Natural Habitats

⁵ The target was endorsed by the European Council on 26 March 2010.

⁶ This is the aim of the Habitats Directive, but case law has confirmed that the aims of the Birds Directive are broadly analogous.

The two directives introduced a systematic pan-European approach to the identification and protection of species and habitats of European conservation interest, as well as monitoring and reporting on their conservation status, adding ambition to previous national law in an approach which has not been replicated in any other part of the world (Crofts, 2014; Romão, 2015). This enables progress to be objectively assessed and Member States held to account, if necessary. The important biogeographical regions approach to conservation has meant that habitats and species relatively common in one country, but of wider EU conservation concern, are now subject to protection measures which were rarely in place previously. Also the selection of sites for the Natura 2000 network takes into account biogeographical, rather than national, requirements. This helps to ensure its international coherence, ie that all sites that are necessary to achieve the aims of the Directives are included.

The nature directives are currently being reviewed in detail by the European Commission in a process known as a “Fitness Check”. This has resulted in a considerable amount of scrutiny of the measures and their implementation and given rise to a greater volume of evidence and stakeholder views than is usually available for an EU measure⁷. The evidence reviewed by the Fitness Check has clearly shown that the nature directives have had a leading role in driving nature protection efforts in EU Member States and that, although initially slow, substantial progress is being made towards their objectives. In particular the terrestrial Natura 2000 network is now virtually complete and covers some 18% of the EU’s land area and, after significant delays; it is currently being extended in the marine environment. This has led to a substantial increase in the extent of protected areas in most Member States, including the UK (EEA, 2012) (Underwood et al, 2014).

The responses of stakeholders to the Fitness Check⁸ also indicate that there is wide agreement amongst conservation organisations (including BirdLife International) that in all Member States, current conservation problems related to bird and mammal hunting are much lower than before the Nature Directives came into force. This is a result of the measures within the Directives and related Commission guidance and cooperation amongst stakeholders (Hirschfeld and Heyd, 2005). In the UK, the directives have provided additional incentives to protect not only sites, but also species that require protection in the wider environment (Langton, 2009; Wilkinson, 2011).

As with any other EU environmental law, it is difficult to be certain about what would have occurred if the nature legislation had not been introduced. Nevertheless, it is clear that the nature directives have considerably increased the level of protection for biodiversity across Europe compared to the policies that were in place in most Member States prior to their adoption. In the case of the conservation of birds, there is some relevant scientific analysis which points to the impact of EU legislation in relation to what has happened to the same species in countries, or in periods where they have not been subject to the protection measures introduced by the Birds Directive (see Box 5-1).

⁷ Over 500,000 people responded to the public consultation to the “Fitness Check” – the highest number of responses ever received.

⁸ The Fitness Check of the EU Nature Directives is still ongoing at time of writing, with [preliminary findings](#) presented in Brussels, 20 November 2015.

Box 5-1 The fate of birds under different protection regimes

A study by Donald et al. (2007) compared bird trend data over two time-periods (1970-1990 and 1990-2000) from the EU-15 and elsewhere across Europe, and found that:

- The population trends of species in the EU-15 that are the focus of protection measures – ie listed on Annex 1 of the Birds Directive – were more favourable compared to non-Annex 1 species. There was no such difference elsewhere in Europe.
- The positive impacts of Annex 1 listing were most apparent for the species that had been on Annex 1 for the longest (ie had the most time to benefit from conservation measures).
- There was a positive correlation across the EU-15 between the population trend of species and the proportion of land designated as SPAs.

Consequently, the authors conclude that “the data are therefore consistent with the hypothesis that the Birds Directive has brought demonstrable benefits to bird populations in the EU”.

Donald et al.’s study was repeated in 2015 using a more up to date data set comprising both long-term (1980-2012) and short-term (2001-2012) trends in the populations of all breeding bird species occurring naturally in the EU. The study found that the positive impacts of the Birds Directive on Annex 1 species noted in the previous study appear to be consistent over time and over the entire EU (Sanderson et al., 2015).

The directives have had a number of other impacts. These include the creation of a more consistent approach to nature conservation in Europe, establishing a more level “playing field” – welcomed by many businesses. It has also generated a huge increase in scientific research which has resulted in the conservation status of most European protected habitats and species⁹.

It is worth noting that some key pieces of UK legislation were driven, directly or indirectly, by the EU nature directives. The 1981 Wildlife & Countryside Act is one example. Whilst domestic calls for comprehensive legislation of this kind had been growing, the new Birds Directive provided the direct political impetus. The standard of protection from potentially damaging development projects that is applied to solely nationally protected areas (SSSIs and ASSIs) under current national legislation remains lower than that afforded to Natura 2000 sites under the Birds and Habitats Directives. This has been illustrated by a number of cases where potentially damaging developments on (non-Natura 2000) SSSIs have been permitted under circumstances that would not have complied with Natura 2000 requirements. Furthermore, national authorities are more motivated to take the necessary steps to protect Natura 2000 sites than those with solely national designations because of the pressure to comply from the European Commission and ultimately the risk of penalties for non-compliance.

⁹ Refers to all wild birds that naturally occur in the EU, and habitats and species of Community interest that are listed in Annexes 1 and 2 of the Habitats Directive.

As shown from the results of the recent State of Nature in the EU report (2015), considerable challenges still remain if the EU is to meet its 2020 target to halt the loss of biodiversity. There is widespread consensus that full implementation of the nature directives will be essential to achieving this target (and this is specified as one of the key actions in the biodiversity strategy). The preliminary findings of the 'Fitness Check' suggest that key challenges include a lack of funding for conservation measures and the negative impacts on many species and habitats associated with land management, some of which could be partly addressed through other policies like the CAP. In terms of the issue of efficiency, the findings suggest that in the small number of cases where unnecessary costs are being imposed on businesses, the problems stem much less from the provisions of the Directives than from the implementation choices that have been made by individual Member States (Milieu, IEEP, ICF & Ecosystems Ltd., 2015).

Trade related measures

Measures to regulate trade and traffic in endangered species (notably the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and imports of tropical forest products) are another important part of the policy machinery for conserving biodiversity globally. The EU has exclusive legal competence over trade matters and so has played a role in regulating trade on a continental scale alongside the efforts of individual Member States. In principle, this improves the consistency and transparency of regulation in this area. The EC Wildlife Trade Regulation 338/97, which implements CITES, is more stringent than the standard regime laid down in the Convention.

A significant recent development in this policy field is EU Regulation 1143/2014 on Invasive Alien Species (IAS), which entered into force on 1 January 2015 and aims to address the introduction and expansion of invasive alien species in Europe and thereby the impact these have on domestic species and ecosystems. It is too early to assess its effectiveness but the logic of addressing this increasingly important issue at a European rather than purely national level is clear. Member States have some flexibility to produce a list of species of national concern and the UK government has been an advocate of collective EU action on this issue (the Great Britain Invasive Non-native Species Strategy, 2015).

Marine focused measures

Another relatively recent policy development in the EU is the introduction of several measures aiming to improve the biological status of marine species and ecosystems. This follows a global trend, arising from the increasingly complex and intensive anthropogenic use of many seas and oceans, and the negative impacts that this has imposed on the marine environment. In response, countries and regions around the world are adopting "integrated ocean policies" embodying more coordinated and cross-sectoral approaches to marine management (Markus et al., 2011), especially as different marine impacts are not easily attributable to specific activities or actors. In the EU, the Integrated Maritime Policy (IMP) has been agreed to seek a management framework that goes beyond national borders. The IMP covers for example "Blue Growth" and spatial planning in the maritime environment

The environmental “pillar” of the IMP is the Marine Strategy Framework Directive (MSFD), which legally binds Member States to achieve good environmental status¹⁰ of their waters by 2020. There is considerable ambition in the MSFD, bringing some of the principles that have been applied to the terrestrial and freshwater environment to bear on the marine world, which has received far less attention until recently. Furthermore, it has introduced a legal obligation to apply certain environmental principles, such as an ecosystem-based management approach and application of the precautionary principle. The MSFD explicitly obliges coastal Member States to adopt spatial protection measures in their marine waters in order to contribute to coherent and representative networks of marine protected areas (MPAs) in Europe. Together with a precedential ruling in the European Court of Justice in 2005 on the marine application of the Natura 2000 network¹¹, the MSFD has provided a strong legal imperative for Member States to review and improve their protection of marine areas which will have a significant impact in the UK¹². This is driving forward policy and practical conservation measures in a realm which has been relatively neglected in conservation terms.

In all other respects, the choice of policy measures to best achieve the ambitious MSFD targets is flexible to suit different national contexts and the European Commission does not seem to be trying to force the pace of implementation beyond the level at which Member States, including the UK, are comfortable. Nevertheless, the goals will not be achieved without some cost and administrative effort. Importantly, conservation measures between 12 and 200 nautical miles (nm) that could have an effect on the fishing interests of other Member States have to be adopted by the Commission, according to the revised the Common Fisheries Policy (CFP) (2014). Although this results in more complicated administrative and political processes for adopting conservation measures beyond 12 nm, the CFP must take the principles of protection of the environment and sustainable development into account, as they are enshrined in the EU Treaties so environmental objectives are in principle protected.

The need for active co-operation between states seems particularly clear in the marine environment and the EU legislation provides a helpful framework for achieving this. It complements rather than replaces international law, particularly the Convention for the Protection of the Marine Environment of the North-East Atlantic (the “OSPAR Convention”), which has also been a significant influence on marine management and conservation, in the UK and elsewhere. The UK has been a key player in OSPAR, acting as a member of the EU.

¹⁰ The definition of Good Environmental Status provided in MSFD, Article 3 says: “The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive”. For a more elaborate definition, see http://ec.europa.eu/environment/marine/good-environmental-status/index_en.htm

¹¹ In 2005, the European Court of Justice addressed a legal dispute between the UK and the European Commission (*Commission v UK*), ruling that the UK had failed to fulfil its obligations under the Habitats Directive for refusing to establish marine Natura 2000 areas in their Exclusive Economic Zone (EEZ). This ruling became a precedent in the EU for the application of Natura 2000 in EEZs and therefore an important step forward in terms of marine nature conservation in the EU.

¹² The European Commission guiding document on the links between the MSFD and the Habitats and Birds Directives (2012) states that “achieving GES is likely to require additional substantive measures outside and inside the Natura 2000 network” (para. 38). In terms of the objectives of the MSFD and the Habitats and Birds Directives, the two “are not necessarily equivalent but can be mutually supportive” (EC, 2012, para. 30).

When spatial nature conservation began in the UK in the 1940s, the perspective was primarily terrestrial. Some protected areas included parts of the coast, although primarily for ornithological reasons¹³. In the 1970s, the need to protect the marine environment for its biological values was increasingly recognised by the international community, including for example the Ramsar Convention in 1971 and the UNESCO World Heritage Convention in 1972. In the UK, the Wildlife and Countryside Act was introduced in 1981, which included a provision for designating Marine Nature Reserves (MNR) in areas close to and away from the coast. However, the Act has only managed to bring about the establishment of three MNRs over the course of 30 years. In 2004, less than 2% of British waters were protected as MPAs (the Parliamentary Office of Science and Technology, 2004), despite the 1981 Act and the provisions under the EU Directives.

Following the rulings in *Commission v UK* (2005) mentioned above, the government worked to identify sites for protection away from the coast. In addition, in 2009, the UK established the Marine and Coastal Access Act (MCAA), enabling designation of a new type of MPA – Marine Conservation Zones (MCZs) – in the territorial waters adjacent to England and Wales and UK offshore waters (JNCC, 2010)¹⁴. MCZs can be designated to protect nationally important marine wildlife, habitats, geology and geomorphology. The MCAA paraphrases article 13.4 of the MSFD on mandatory spatial protection measures. The MSFD was transposed into UK law through the 2010 Marine Strategy Regulations, which also “stick closely to the wording of the Directive and do not go beyond the requirements it sets out” (Explanatory Memorandum to the Marine Strategy Regulations 2010, 4.2).

Taken together, all the different types of British marine designations now create a network of MPAs currently covering about 17% of UK waters (JNCC, 2016). It should be noted that some of the MCZs overlap to a greater or lesser degree with Natura 2000 designations.

5.3 Policy scenarios for nature conservation following Brexit

The two Brexit scenarios (as laid out in Chapter 3) will have rather different outcomes in the area of nature conservation policy:

- **The UK within the EEA (Scenario 1):** The Birds and Habitats Directives would no longer apply, as they are outside the EEA agreement. Trade-related measures as well as the MSFD would continue to apply.
- **Outside the internal market (Scenario 2):** As in other areas of environmental policy, EU environmental law would cease to be binding on the UK. Alongside national legislation, the UK would rely primarily on international agreements on nature conservation, including the Bern Convention. It would also retain the Aichi targets within the Convention on Biological Diversity (CBD). It is likely that the UK would

¹³ Important documents: *Conservation of Nature in England and Wales* (1947) and *the National Parks and Access to the Countryside Act* (1949).

¹⁴ Note, the Scottish equivalent is Nature Conservation Marine Protected Areas under the Marine (Scotland) Act (2009).

seek agreements with the EU and other states on a more voluntary basis for example in relation to aspects of the marine environment and fisheries.

5.4 Implications of EU departure for nature conservation

5.4.1 *The Birds and Habitats Directives*

Regardless of Brexit scenario, the Birds and Habitats Directives would no longer apply to the UK. However, both directives have been transposed into UK domestic legislation and this law would continue to be in place. The immediate difference would be that a future government would be free to change this legislation and the processes in place to deliver it. The pressure for enforcement and to achieve favourable conservation status arising from EU membership would cease.

It is impossible to be certain whether future British governments would seek greater flexibility in the approach to site and species conservation if the pressures imposed via the Directives were released. However, on the one hand, this seems a distinct possibility given the history of government concerns about aspects of the Directives and potentially increased pressure from developers seeking greater flexibility. On the other hand, the government study that was set up to investigate these concerns concluded that ‘in the large majority of cases the implementation of the Directives is working well’ (HM Government, 2012). Furthermore, it is notable that at the 2015 December 15th Council meeting, the Minister made clear that the UK would not be seeking to open the text of the directives for change – a possibility now on the table because of the Fitness Check.

In principle, any relaxation of the nature directives’ requirements translated into UK legislation could take a variety of forms. It may be motivated by a desire to make site- and species protection requirements less stringent for example, or it could aim simply at improving procedures in some areas without relaxing standards. However, no recent British governments have expressed a clear desire to step up the conservation effort in concrete terms. Therefore, there is a distinct risk that more flexibility in this case could weaken the conservation effort.

In the absence of the directives, the UK’s obligation under the Bern Convention would remain since it has been ratified by the UK as well as the EU. However, the EU Habitats Directive provides for substantially stronger species protection measures, particularly by virtue of EU enforcement mechanisms. Evidence of this comes from the analysis of bird trends described in Box 5-1 above. Another example comes from a comparison of wolf numbers and densities, which are significantly higher, and trends, ie significantly more positive, in Member States where both the Bern Convention and the Nature Directives apply (eg France, Germany, Italy, Sweden), than they are in non-EU European states where only the Convention applies (eg Switzerland and Norway) (Fleurke and Trouwborst, 2014). The Directives have also stimulated a large increase in funding for nature conservation from EU sources through the dedicated EU LIFE programme and their influence on the allocation of CAP Rural Development programme budgets and other EU funding instruments (Kettunen et al, 2011). There is no equivalent funding mechanism via the Bern Convention. Across a broad front, the Directives are now clearly the driving force for conservation in Europe; for example, the Bern Convention’s Emerald Network is directly based on the Natura 2000

network (Epstein, 2014), and all Natura 2000 sites are automatically part of the Emerald Network (Evans et al., 2013).

Outside the Directives, a UK government could loosen current requirements. For example it could relax the protection of Natura 2000 sites by no longer requiring developments to have “no significant impacts” on the site. Furthermore, under current national legislation there is no requirement to compensate for (to “offset”) negative impacts on a protected area, although this of course could change.

It would also be possible for a future government to reduce protection levels on species, and to choose which species to protect within Natura 2000 sites and in the wider environment. For example, it could remove some species from the lists requiring strict protection, including relatively common species such as the Great Crested Newt, the protection of which has been controversial. Decisions on which species require protection would need to take into account the requirements of the Bern Convention and the UN Convention on Migratory Species (CMS), as provided for under the Wildlife and Countryside Act. However, these and other international obligations regarding nature conservation carry less weight with governments than the need to comply with EU law. Pressure for compliance is much weaker – even with no major legislative changes there could be pressure to make certain processes less demanding and enforcement less rigorous. If a deregulatory agenda was more pronounced after a referendum, there would be a strong temptation to make at least some domestic provisions weaker, especially given the lack of enforceable international commitment. The risk of a weakening of some aspects of the current domestic legislation is therefore significant.

Finally, and from a wider perspective, for the UK to have no further role in the way in which the Directives are implemented, or to provide insights to management, would be a significant loss in an area where it has historically been active and widely respected.

5.4.2 Marine nature conservation policy

As noted above, the Marine Strategy Framework Directive (MSFD) and the Birds and Habitats Directives are critical measures. Without the influence of the EU nature directives in particular, the development of marine protected areas in the UK would lose its most important legal driving force. It is likely that a few of the existing marine Natura 2000 sites would remain, to the extent they overlap with domestic Marine Conservation Zones (MCZs), although this is difficult to say. It seems likely, however, that the pressure to manage these for conservation would be significantly reduced. Meanwhile, the degree of protection applied to the domestic MCZs is much weaker than for Natura 2000, especially in terms of preventing development impacts.

In principle, the UK could proceed with certain aspects of marine management on its own, but the merits of a properly designed and implemented European approach are widely accepted and the benefits of some national action could be undermined by a lack of collaboration by other maritime states. As in other areas, the presence of these European goals sets a direction and an insurance policy against short termism by Governments elected every 5 years and who are subject to periodically intense pressures to allow inappropriate economic development.

If the UK becomes part of the EEA following Brexit (Scenario 1), and the MSFD therefore continues to apply, the UK would remain bound by the Directive's ambitious targets without having a part in influencing the development of the Directive. The MSFD could evolve significantly given its scope and importance, particularly after 2020. If the UK instead decides to be outside the EU's internal market (Scenario 2), it will lose the impact of the MSFD. The transposed version of the MSFD (in the Marine Strategy Regulation and the MCAA) would still remain, although without external pressure or enforcement to actually deliver on the relatively ambitious targets. Again, there will be a temptation to loosen the provisions over time if future governments want to prioritise development.

The UK could continue in its role in international law, such as OSPAR, as an independent voice following Brexit. Establishment of the MCZ network was partly a result of trying to meet OSPAR commitments as these are binding on signatories. However, OSPAR like most international law, provides no means for enforcement so there is a risk that the drive to establish MCZs may falter in the face of other priorities and calls on public money.

Regardless of which Brexit scenario applies, the Government would still be committed to manage and conserve the resources in its EEZ in accordance with the requirements of the United Nations Convention on the Law of the Sea (UNCLOS) although like OSPAR there is no means of enforcement. In addition, as most other European countries deal with these issues within EU processes, including the CFP, they are likely to be reluctant to invest heavily in other fora. The baseline in marine management is shifting as well. There is a clear logic for managing increasingly industrialised scale fisheries and the wider marine environment within the same arena, seeking alignment with an ecosystem approach as now required within the CFP. EU policy provides this arena and pursuing an independent approach outside it would introduce new uncertainties and risks for the environment (see Chapter 8).

5.4.3 *International – impacts outside the UK*

Efforts to protect habitats and species often need to be collaborations between different states, reflecting for example the cross-boundary nature of many of the pressures threatening species and habitats, the conservation implications of international trade and the fact that many species are migratory and move across borders. The EU system does not hinder Member States from entering voluntary agreements with other states, or distributing aid to international conservation efforts, for example to protect endangered species in Africa. Nor does it prevent Member States introducing domestic schemes of their own. Equally, following Brexit and regardless of scenario, international cooperation on nature conservation can proceed by existing agreements¹⁵ and potentially new voluntary initiatives. However, such agreements are not legally binding or subject to enforcement in the way that EU legislation is. Meanwhile, because the UK's neighbours follow EU law, they are likely to be less tempted to join any additional agreement with the UK, however worthwhile.

¹⁵ For example, the UK has four legally binding CMS Agreements: the Agreement on the Conservation of Populations of European Bats (EUROBATS); the African-Eurasian Migratory Waterbird Agreement (AEWA); and the Agreement on the Conservation of Small Cetaceans in the Baltic, North-East Atlantic, Irish and North Seas (ASCOBANS), and the Agreement on the Conservation of Albatrosses and Petrels (ACAP). It has also ratified two less formal Memoranda of Understanding of direct relevance to the UK.

It is difficult to assess whether the EU would adapt significantly different decisions with partners in international negotiations if the UK were not a member. At the same time, the UK could act alone as a party to international agreements, such as the CBD, promoting its own priorities. However, it would lose the capacity to help shape the overall EU position which often is highly influential given the overall political and economic weight of the Union. The net effects of these changes could be significant, although they are, by their very nature, difficult to forecast. In recent evidence to a House of Commons Committee (2015), the RSPB argued that “Acting as part of an EU bloc has strengthened the UK’s hand in international negotiations and enabled the UK Government to be more ambitious in its targets for environmental protection”. In addition, environmental NGOs based in the UK are a vigorous force in the nature conservation debate in the EU and offer not only their views but also a supply of evidence and practical experience, not to mention periodic funding. If this stream were to cease, undoubtedly it would be noticed.

5.5 Conclusions

Whereas some pressures on the natural environment are local, others cross borders and sometimes even continents. Policy responses to these issues therefore need to be introduced at all these levels collectively. The European level has clearly added considerable value in recent decades. The binding nature of the EU legislation has been the single most important factor in delivering outcomes on the ground, compared with other approaches, such as the Bern Convention.

EU legislation on nature conservation has had a significant benefit for wildlife in the UK by requiring wide-ranging action in both terrestrial and marine environments that otherwise probably would not have taken place. The role of EU legislation is likely to continue to be particularly important given ongoing or growing threats to biodiversity, such as invasive alien species and climate change that are cross-border in nature.

There has been some controversy within the UK about aspects of the EU nature directives because of the particular processes that have been adopted to implement them, but alternatives appear possible. Effective measures of this kind unavoidably will create some tensions with those affected, eg developers, and it is not clear that the processes required by the directives add disproportionately to those required by any system which does control development.

The risks of withdrawing from the EU are significant for nature. Although, in theory, a highly committed future UK government could adopt effective national measures if it chose, it would be much harder to coordinate action to address the cross-border threats faced by many UK species and there is very little to indicate to that this is likely to happen. UK influence on nature conservation in Europe as a whole would be reduced, following withdrawal from the EU, not least because of the diminished role of UK based NGOs as well as public authorities and scientists.

The results of EU policy and its uneven and often incomplete implementation by governments are disappointing in the sense that the decline of habitats and species in Europe continues, as it does in many other parts of the world. However, there is good evidence that what has been achieved in the EU in terms of nature conservation policy is increasingly effective where it is being properly implemented and it provides the conditions

for extending the conservation effect into the marine environment where it has lagged behind. The long-term approach adopted in the EU seems appropriate and probably unavoidable given the scale of the challenge to support the recovery of nature.

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6 Climate and energy

This chapter addresses climate change mitigation policy, including those areas of energy policy which are most closely linked to the delivery of climate mitigation¹. It sets out the process by which climate policy developed at EU level from the late 1980s onwards in response to policy demands from the UK and like-minded Member States, and how this led to the current architecture of climate mitigation policy, and to energy sector policies on renewables and energy efficiency. It then considers the potential impact of our two scenarios for a UK departure on the development of climate policy and relevant areas of energy policy, in terms of ambition and delivery, both in the UK and in the wider EU.

6.1 Climate policy in the EU

European policy on climate change has grown hand-in-hand with UN negotiations on the subject, beginning with the run-up to the Rio conference in 1992. While the EU has consistently been among the most ambitious parties within the UN Framework Convention on Climate Change adopted at Rio, tensions have always been visible between the positions of those Member States keen to make rapid progress on mitigation, and those which are more reluctant; and between on the one hand the Commission and those Member States which are keen to see a greater EU role and legal competence in international negotiations, and those who prefer to retain their own competence. These tensions have complicated Europe's impact on the international negotiations themselves, and the development of internal policy on both climate and energy.

The EU's complex governance is a source of frustration to other parties in UNFCCC negotiations, with EU coordination meetings becoming in effect a negotiation within a negotiation; and the perceived inconsistency between the EU's demands for ambition from other parties, and its own willingness to allow individual, reluctant Member States more generous targets appears to weaken collective credibility.

The UK has consistently been among the Member States most committed to ambition on climate change; but has rarely been as enthusiastic about the sector or technology-specific measures seen by the Commission and many other Member States as being necessary to enable the delivery of climate targets across the EU. It has been sceptical about binding targets for renewable energy supply for example.

The UK has thus both influenced and been influenced by EU climate policy over the last two decades. For example, the UK was a firm supporter of a market-based approach to delivery of the EU's targets, and was therefore a key part of the majority in Council which ensured adoption of the EU Emissions Trading System legislation²; and, indeed, had developed its own, voluntary, emissions trading system in order to test the concept, and gain practical experience in some of the registry and market-making.

¹ We do not deal with issues related to policy on adaptation to climate change, which is both less developed at EU level, and less directly concerned with the delivery of environmental outcomes; nor have we addressed the subject of regulation of nuclear energy.

² [Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC](#)

6.1.1 The UK's influence on development of the EU's Emissions Trading System

The UK's influence on emissions trading has continued, even as policymaking and administrative control has become increasingly centralised at European level. Phase I of the ETS allowed Member States effectively to set their own caps and approaches to allocation of allowances; Phase II, from 2008-2012 (the first Kyoto Protocol commitment period), involved a greater degree of Commission power to approve or reject Member States' caps and allocation plans; and a single cap has been set centrally since 2013. This increased centralisation has increased the UK's ability to influence the overall level of ambition across the EU, and thus the carbon price applying in the UK. This process began with the negotiations over the level of caps for the 2008-2012 period, when, with a few like-minded Member States the UK took a relatively ambitious approach to cap-setting which then helped the Commission to exercise downward pressure on the generous allocation plans of Member States such as Poland, and deliver a Phase II cap which led to an increased carbon price. However, the subsequent collapse in economic activity as a result of the international downturn left a substantial surplus of allowances on the market, and a persistently weak carbon price. Commission efforts to correct this included proposals for delaying the availability of allowances, and a proposal for a Market Stability Reserve, enabling allowances to be taken off the market at times of significant surplus. The UK was, again, among a group of Member States pressing for ambitious implementation of these measures. In the absence of the UK, and of the influence of UK MEPs in the European Parliament, it is doubtful whether these improvements in the ETS would have been adopted, or adopted with as much ambition.

Box 6-1 Norway and Iceland's relationship with EU climate policy

Norway and Iceland's relationship with EU climate policy

Both Norway and Iceland follow EU climate policy closely, and participate in large parts of it, but without exerting significant influence on its development and direction.

Norway participates in the EU ETS. The ETS was always intended to link to other trading systems, with an ultimate intention of helping to create a global carbon price. Norway established a parallel trading system with the intention of linking to the EU ETS. Initially, it was only able to do so through a one-way voluntary acceptance of EU ETS allowances to meet its own trading system's obligations, but joined fully in 2008, once the European Commission had accepted its proposals for a cap and allocation of allowances. Its participation in the ETS continues to allow it the flexibility of a wider carbon market; but it has no influence on the carbon price applied, or the level of ambition set for the ETS. This would be the position of the UK if it were an EEA member outside the EU.

Iceland has less need of an emissions trading mechanism, since its domestic energy supply is 100% renewable; but has been part of the EU's wider emissions target since the EU and Iceland jointly ratified the Kyoto Protocol. Its contribution to the Paris Agreement is aligned with the EU's, although it had no voice in European Council discussions on the targets, and (like Norway with the ETS), its only choice in implementation is either to accept EU rules, or to comply separately without the flexibility allowed by the European "bubble".

6.1.2 The Effort Sharing Decision

The agreement on “burden sharing” among the EU 15 for the Kyoto Protocol first commitment period was set out formally in the 2002 Council decision approving the Protocol on behalf of the EU. In the run-up to the Copenhagen Conference of the Parties in 2009, and following the accession of the EU-12, decisions were needed on the EU27’s contribution to mitigation in future periods. The European Council set out in March 2007 a commitment to a 20% unconditional offer of emissions reductions by 2020, with a 30% reduction put forward in the event of a binding global deal. Once the Commission had put forward the idea of a centralised approach to cap-setting under the Emissions Trading System, as referred to above, a new approach was needed to dealing with national targets – which were now only of relevance to the part of the economy not covered by the ETS (including significant sectors such as transport and agriculture, and much of the emissions from heating). It put forward, alongside the proposal for revisions and cap setting for the ETS, and as part of its “20-20-20” climate and energy package (reductions of 20% in emissions and energy efficiency, and a 20% share for renewables) an approach to the allocation of responsibility for mitigation among Member States which it now described as an “Effort Sharing Decision”. This was in due course adopted, and essentially imposes an annual cap on emissions from each Member State’s non-ETS economic sectors, declining steadily towards the 2020 level, with Member States having responsibility for implementing additional policies and measures to achieve their targets. Targets were determined on the basis of GDP per capita; poorer Member States were allowed to increase emissions slightly, with the main reductions focused on richer Member States; the Decision also allows for the limited use of carbon credits from outside the EU, and of trading among Member States. In practice, as with the ETS, the economic downturn made the targets significantly easier to achieve, and there has thus far been no need for trading between Member States.

As Box 6-1 explains, EU climate mitigation instruments have been open to participation by non-EU countries, particularly members of the European Economic Area; although, as with other areas of EEA participation in environmental legislation, the scope for those countries to exercise influence over outcomes is very limited.

6.1.3 Climate at the centre of European policy priorities

Climate policy has become over time the centrepiece of EU environment policy, partly because of its links to and impact on energy and wider industrial policy, and partly because of its central role in the public debate on environment issues. Integration with the objectives of other sectors and the broader economy is being put in place. It has, for example, been incorporated into the process for measuring progress towards the EU’s key priorities, through the Europe 2020 targets, and Member State reporting against them under the so-called Semester process – alongside policies on growth, the economy, and fiscal balances. It has also been made a specific focus of the European budget for the 2014-2020 period, with a commitment³ to ensure that at least 20% of the budget is devoted to delivering climate policy objectives. The weight that climate policy had acquired in EU policy led to the creation of a separate climate policy DG in the second Barroso Commission (2010-

³ See, for example, the European Council (2013) Conclusions (Multiannual Financial framework) 7/8 February, EUCO 37/13, Brussels, which state that: “Climate action objectives will represent at least 20% of EU spending in the period 2014-2020”.

2014); and was also reflected by it being the sole environmental issue identified in the political priorities set out by president Juncker on his election in 2014⁴. This has meant that EU climate policy has, at least in theory, exerted an influence beyond the energy supply sector and affected the trajectory of economic development in Europe in a way that could not have been achieved by Member States acting alone. In practice, however, the economic downturn meant that Member States collectively have not yet found delivery of the emissions reduction targets particularly challenging; and it is thus difficult to identify to what extent emissions are significantly lower than they would otherwise have been as a result of EU targets. However, it seems reasonable to conclude that the targets have exercised some influence, particularly on the development of mitigation policies at national level; and they have also driven the adoption of product standards at EU level, for example for energy-using products.

6.1.4 Climate-related aspects of energy policy

As EU ambition and international commitments on climate development have developed, they have required a coordinated policy response in respect of energy, the main source of EU greenhouse gas emissions. Climate mitigation ambitions have driven the development of legislation on renewable sources, and on energy efficiency; and are now a core component of future energy policy, including the development of an “Energy Union”.

Legislation on renewable energy has kept pace with developments in international climate commitments. For example, legislation to support renewable energy was adopted in 1993 in response to the policies endorsed in the run-up to the Rio Convention. However, this was confined to providing financial support from the EU budget, and avoided any constraining measures. The subsequent development of renewables policy at EU level has centred around the question of whether Member States should be set targets for the development of renewable energy sources, and whether those targets should be binding. The current legislative framework – the second Renewables Directive – sets binding targets for the share of renewables in each Member State to 2020, following agreement to this approach by then Prime Minister Blair at the March 2007 European Council, notwithstanding a strong UK policy preference for a “technology neutral” approach to climate mitigation policy, and concerns over the downward pressure renewables targets would exert over the carbon price in the Emissions Trading System. The UK’s agreement to national targets was, in part, seen as necessary to secure a relatively ambitious EU approach to the overall mitigation targets for the Copenhagen climate negotiations).⁵ However, the initial guidance from heads of government meeting in the European Council in October 2014 has been that the subsequent 2021-2030 energy targets should not involve binding targets at Member State level, a decision reached largely as a result of pressure from the UK and a few other Member States keen to reassert national sovereignty over energy policy. The European

⁴ See [“A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change”](#), President Juncker’s statement to the European Parliament of October 2014, which says: “I want the European Union to lead the fight against global warming ahead of the United Nations Paris meeting in 2015 and beyond, in line with the objective of limiting any temperature increase to a maximum of 2 degrees Celsius above pre-industrial levels”

⁵ And, arguably, it was difficult for Prime Minister Blair to appear unambitious on energy policy, given that his earlier October 2005 speech to the European Parliament had called for the development of an EU energy policy, albeit one largely focused on single market ambitions.

Council called instead for a 27% overall target for renewables, which would be “binding at EU level”; although there has been widespread scepticism among commentators on what, if anything, “binding at EU level” means in practice⁶, since it is unclear who would take action against whom to enforce such a target.

Legislation on energy efficiency has been both more detailed, in particular in relation to product standards, and on subjects such as the need for public buildings to play an exemplar role; but at the same time less ambitious, in terms of the targets allocated to individual Member States, with (as yet) no binding targets. Since the adoption of the Energy Efficiency Directive in 2006⁷ Member States have been required to set indicative national targets (but with wide discretion over both the level of ambition, and how those targets are expressed), to prepare and submit National Energy Efficiency Action Plans, and to encourage or require energy distributors to provide energy efficiency advice and support to their customers.

European policy on energy in recent times has been dominated by the concept of an Energy Union⁸. The Energy Union concept now covers a broad range of topics, all of which have been (to a greater or lesser degree) elements of EU energy strategy for more than a decade: energy security; the internal energy market; energy efficiency; decarbonising energy supply; and research and innovation. The ambition to take a more holistic approach to the subject of energy looks likely to lead to a more integrated approach to Member State reporting and strategy preparation, which should have the benefit of improving the strategic value of Member States plans. However, the current European Council preference for not setting binding or even indicative targets at Member State level on either renewable energy or energy efficiency may significantly weaken the decarbonisation impetus provided by the current legislative framework.

6.2 Future policy impacts

The impact of a UK departure from the EU on climate outcomes would depend on the nature of the UK’s continuing relationship with the EU – whether entirely out (Scenario 2), or remaining involved with the EU in a Norway-like EEA arrangement (Scenario 1). We look at potential impacts first in relation to the UK’s influence on international negotiations; then in respect of EU climate policy; and then in respect of climate-related aspects of energy policy, and of cross-cutting policies such as the EU budget.

⁶ See, for example, Wyns T et al “EU Governance of Renewable Energy post-2020: Risks and Options”, Heinrich Böll Stiftung, December 2014

⁷ [Directive 2006/32/EC](#), subsequently repealed and replaced by [Directive 2012/27/EU](#)

⁸ Initially put forward by Poland, under then Prime Minister Donald Tusk, and largely a response to geopolitical concerns about Russia and the exposure, particularly of the Central and Eastern European Member States, to Russian control over gas exports to the EU, it became an important element in discussions over the new European Commission appointed in 2014, with the June European Council which selected Jean-Claude Juncker as president emphasising, in its conclusions, the importance of climate and energy policies, in particular security of supply. The political guidelines presented by President Juncker to the European Parliament included a commitment to “A Resilient Energy Union with a Forward - Looking Climate Change Policy”, and he created a new Vice Presidency portfolio responsibility for Energy Union. The Energy Union concept – loose though it remains – has been endorsed further at the December 2014 and March 2015 European Councils, and explained in more detail in the Commission’s February 2015 Energy Union communication.

6.2.1 International negotiations

Regardless of the Brexit scenario, the impact on the UK's negotiating status within the UNFCCC, as with other multilateral environmental agreements, would involve both a greater degree of independence in formal in status, but a likely significant practical diminution in relevance. While the UK would, provided it were able to retain an experienced and engaged team of negotiators at a time of public expenditure cuts, be able to exercise some influence behind the scenes, including through advice and support to other negotiators, its key importance comes from its perceived ability to influence the position of the EU. While, arguably, the EU's own relevance as a key negotiator in climate talks has itself waned in recent years, as both the US and China demonstrate increased ambition, there will be a continuing need for the EU to ensure that global commitments, both on mitigation and on climate finance, are sufficiently ambitious. The opportunity afforded by the Paris agreement, and its inclusion of a process of regular review and (ideally) more ambitious revision of the targets set by Parties for their own emissions, has implications both for the process for deciding on Europe's own level of future ambition, and the scope for using an increased level of ambition to leverage new commitments from other parties. Without the UK's voice, the balance of opinion within the EU is likely to shift away from climate ambition, with potentially negative impacts on global outcomes. UK negotiators have often played key roles on behalf of the EU in UNFCCC discussions; this contribution (and the influence that comes with it) would not be possible in the event of the UK leaving the EU.

6.2.2 Future EU and UK climate policy

There are three main factors to consider in terms of the impact of a UK departure from the EU on domestic climate policy (both within the UK, and more widely across Europe, which is more important to emissions reductions globally). The first is the likely impact on the dynamics of EU policy. The second is the impact on the UK's ability to control its own opportunities for mitigation. The third is the likely impact on investment conditions for green technology, including renewables, in the UK.

The impact on EU climate policy dynamics is likely to be negative. While the UK has been reluctant on some low-carbon energy policies, particularly where these conflicts with what Treasury orthodoxy has seen as an economically logical, technology-neutral approach, it has been a consistent voice in favour of overall climate ambition, both generally and in relation to the Emissions Trading System in particular. The UK was, for example, able to exercise influence against the development of a blocking minority in 2014 on measures to improve the credibility of the ETS through the creation of a Market Stability Reserve. In the absence of the UK, the potential for the Visegrad group⁹ and other relatively climate-sceptic Member States to be able to achieve a blocking minority in Council would be greater; and could in turn exercise a chilling effect on the level of ambition in Commission proposals. UK MEPs, with the exception of the climate-sceptic members of the EDD group, are also often an important factor in securing an ambitious majority in Parliament. Therefore, and regardless of the Brexit scenario, EU policy could be expected to be less ambitious than would otherwise have been the case, with a weaker carbon price, and less stringent caps applying to emissions in the rest of the EU economy.

⁹ Poland, Hungary, the Czech Republic and Slovakia, which have cooperated formally on European issues since the early 1990s.

As far as the impact on **domestic UK climate policy** is concerned, this would reflect the degree of continuing engagement of the UK with the EU process – whether as part of the EEA (Scenario 1), or entirely outside the EU framework (Scenario 2). In either case, policymakers in the UK are likely to continue to want to see links between emissions trading schemes, as a means of moving towards a global carbon price, and of securing least-cost emissions reductions at regional and global level. However, the UK’s ability to influence the carbon price would appear to be significantly lower.

On the one hand, it would have no voice in the setting of the EU cap for the ETS, as noted above; and would therefore be likely to face a weaker carbon price domestically. On the other hand, it would either (if as part of the EEA) have little or no influence over the cap set within a wider European trading system; or, if outside the EEA, would have scope to set a lower cap (for example, in order to meet more demanding targets under the domestic Climate Act), but in the knowledge that the carbon price impact of such a lower cap would be dissipated by the greater availability of EU allowances. At the same time, the higher revenues which in principle should accrue to Government from the sale of allowances under an ambitious cap would be dissipated, with the continuing EU member states gaining from the price impact of relatively high UK ambition. The alternative of developing an entirely separate trading system is unlikely to be attractive. The likelihood is that, faced with these difficulties in making a more ambitious climate policy have an effect within the UK, decision-makers would mimic the possible reduced level of climate ambition at EU level, notwithstanding that this would make meeting Climate Change Act targets unlikely.

While there would be greater scope for more ambitious policy-making within the sectors not covered by the ETS, notably heating, transport and agriculture, this would be tempered by concerns that those sectors – particularly agriculture – which are exposed to competition from the remaining EU member states should not have significantly greater demands placed on them than their competitors. A move towards greater electrification of both transport and heating, which the Committee on Climate Change identifies as being necessary to meet Climate Change Act targets, would in any case diminish the relevance of the non-ETS parts of the economy within the UK’s future emissions total.

More significant risks apply in the event of a current or future UK government deciding to move away from an ambitious climate policy (either by proposing the repeal of the Climate Act, or, more plausibly, by maintaining the formal long-term targets but reducing the level of policy and financial investment in meeting them), and instead free-ride on the mitigation efforts of other economies. It would, under such circumstances, be reasonably straightforward to remove the regulatory underpinning of the Emissions Trading System, if the UK were also outside the EEA. This increased level of policy risk, in turn, could undermine investors’ confidence in the carbon price signals applied in the short term, and this – particularly if coupled with the current Government’s sharp dislike of technology-specific subsidies outside the nuclear sector – could in turn lead to a shortfall in the investment necessary in the short term to deliver medium- to long-term decarbonisation of the UK economy. Thus, even if the UK political consensus in favour of climate ambition is maintained, which seems the more likely outcome, investors’ perception of an increased level of policy risk could itself damage the delivery of UK mitigation targets.

6.2.3 Future climate-relevant areas of EU energy policy

A UK departure would be likely to lead to a less market-focused, and less technology-neutral, approach to the delivery of climate mitigation through **future EU energy policy**. On the one hand, this would potentially create the scope within the EU for more ambitious approaches to legislation on renewable energy and energy efficiency (at the expense, potentially, of driving down the carbon price within the ETS). On the other hand, this could come at the expense of competition and at the expense of a wider and a more efficient European market for low-carbon innovation. The UK's capacity to influence European policy-making to ensure that issues relevant to UK generating capacity, UK consumption, and UK connectivity is adequately considered in decisions on grid development and investment would be likely to be lower. However, it is also likely that pragmatic instincts among grid operators would to some extent mitigate those risks.

Since legislation on energy-using products is adopted under single market rules, the UK would continue to be required to implement its rules if it joins the EEA following Brexit. Even under a scenario outside the internal market, this legislation would continue to affect UK consumers and manufacturers; in practice, manufacturers operating in the wider European market would follow EU requirements, without bothering to produce different models to a more relaxed specification for the UK market. Arguably, there would be reduced scope for ensuring, through UK influence on the legislative process, that the interests of emerging low carbon sectors in the UK – for example, the batteries sector – were protected and the prospects for such sectors enhanced, although the extent to which the UK has been successful in exploiting that scope in the past is debatable.

The renewables legislation to be adopted by the EU for the 2020-2030 period would almost certainly have some application to the UK under Scenario 1 (EEA membership); EEA countries currently comply with the requirement to produce National Renewable Energy Action Plans, and with elements of the legislation which have direct single market relevance, such as rules on sustainability requirements for biofuels, and rules on guarantee of origin certificates for renewable energy. However, the targets for renewable energy they set in their national plans are not set out in the renewables directive, but are determined nationally; and, as noted above, individual Member State targets are in any case not the most likely outcome of the negotiations on the next renewables directive.

As noted in section 3.1, a UK departure from the EU is likely to result in significant uncertainty regarding forward planning and investment in many sectors of the economy. Low carbon investment in the UK would be likely to be significantly harmed by a decision to leave the EU. In the first place, the period of uncertainty while the UK tries to negotiate the nature of its future relationship with the EU would create a degree of political risk making it very difficult to finance the sort of long-term investment decisions required for decarbonisation of energy systems. Even when the likely long-term relationship of the UK with the EU were determined, however, the EU underpinning to UK commitments on emissions reductions and on the phasing out of fossil fuels would be removed, creating (as noted above) a greater level of policy risk, similar to those (also noted above) for the carbon price.

6.2.4 Future of other climate-related policies

Among the impacts likely to accompany a lack of UK influence on climate policy at European level are impacts on broader EU policy instruments – for example, the semester process, underpinning delivery of broad EU policy objectives; the EU budget; and EU investments in science and innovation. The UK has, in line with its relatively ambitious stance on climate mitigation objectives, been a force behind the integration of climate policy considerations into all three areas. In the case of the budget, in particular, the UK's stance in favour of a smaller but more focused EU budget has led it to argue (in relation to the Common Agricultural Policy and Cohesion Policy) for climate objectives to guide expenditure. If the UK were to become a member of the EEA (Scenario 1) it is likely, as noted in section 3.2.1, that it would continue to have to contribute to EU Cohesion Policy; but with little or no ability to influence either its objectives or the detailed rules governing its expenditure.

6.3 Conclusions

The UK has, over recent decades, exercised significant influence over the development of EU climate and energy policy, and over the levels of ambition the EU brings to international negotiations. The consensus among the main UK political parties in favour of a relatively ambitious approach to climate mitigation targets, which has held through a succession of General Elections, has thus been capable of being pursued in a European context, with relatively limited impact on competitiveness of UK firms vis a vis their competitors in other EU member states. Were the UK to leave the EU, it would face a combination of greater risks to its own, current, domestic decarbonisation ambitions; reduced influence over international negotiations on climate; and a likely reduced level of ambition in EU policy on climate change. It would no longer be possible to exert the same level of influence over decision-making at European level, and thus on the constraints facing UK industry's competitors in other EU member states.

This assessment in part reflects the necessarily international nature of delivering climate mitigation objectives; in contrast, an alternative policy of significantly reduced UK ambition on climate mitigation would be easier to deliver from outside the EU's legislative framework. While such a shift in policy would remain unlikely even in the event of a "Leave" vote, the added policy risk for low carbon investment would have an impact on the costs and effectiveness of UK mitigation policy.

7 Agriculture and the environment

The way in which land is managed for agriculture is important not only for food production but also for the landscape and biodiversity. Beyond this, it also affects the environment in a multiplicity of ways such as the pollution level in water, the storage and release of carbon and the health of soils. Agriculture both creates pressure on the environment and helps to protect elements of the countryside. It occupies about 70 per cent of the UK land area.

Governments in all European and many other countries, including the US and Canada intervene in agriculture in a number of ways and provide subsidies on a considerable scale. In the EU these are designed within the CAP and financed largely from the EU budget. In this sense it is a truly Common Policy but with considerable discretion for national governments. Unlike environmental policy, the majority of regulations and rules are concerned with the delivery of the subsidies and the conditions attached to them rather than laying down standards and prescriptions, although some do have this function.

The Common Agricultural Policy (CAP) and accompanying policies including those on trade, animal health and welfare are an important, although by no means the only, influence on farm management decisions throughout the EU. They can have significant environmental consequences.

A common agricultural policy was first established to introduce a reasonably consistent approach inside the single market and avoid disruptive differences in policy and levels of subsidy in farming between countries.

The key elements of the contemporary CAP include:

- Financial support from the CAP budget for safety net intervention to stop prices crashing too low in certain agricultural markets e.g. milk products.
- Financial support for farm incomes, paid directly to farmers on an annual basis, subject to certain conditions (direct payments)
- Financial support for a wide range of activities in rural areas, particularly in agriculture and forestry, including environmental management, farming in mountainous and other agriculturally "less favoured" areas and organic farming.

In addition, there is a range of EU standards applying to aspects of agriculture, such as farm animal welfare, production of certain traditional, local and quality foods, (including organic products), marketing standards for a variety of foods and some influential regulations on food hygiene applying right through the food chain from the farm onwards. These regulations are important but they do not have the same influence on the way in which farmland is used and managed as the CAP. Consequently, the focus in this chapter is on the CAP itself. If the UK were to leave the EU there would be impacts on the family of accompanying regulations referred to here, some of which would apply to any UK agricultural exports to the EU and so remain either in force or be very influential. As with most EU environmental legislation, the UK would cease to have a role in the making or amending of these measures in the future.

The CAP itself is frequently the topic of environmental critique, not least by commentators in the UK. This chapter addresses three questions. What is the record of EU agricultural policy, particularly the CAP, in relation to the environment? How might agricultural policy in

the UK change post withdrawal from the EU? What could be the environmental impacts of such a change?

7.1 The policy record

The UK, and especially England, has relatively small areas of forestry and virtually no wilderness; agriculture occupies a very high proportion of the land area. Agricultural practices therefore have a profound impact on the rural environment. For much of the period during which the UK has been a member of the EU there have been technological and structural changes towards a generally more intensive and specialised agriculture in all developed countries and in most of Europe. These have been associated with substantial and well-documented¹ negative environmental impacts on biodiversity, soil quality, water and air pollution.

At the same time, the character of the rural landscape in significant parts of the countryside and the status of a number of species of wildlife depends on sympathetic, often more traditional, farming techniques. Many of the farms utilising these techniques, particularly low intensity livestock systems in the hills, are struggling to survive financially and are heavily dependent on subsidies.

It is not straightforward to assign responsibility for driving these developments to policy rather than other forces and the role of the CAP should be dissected carefully and kept in perspective for the following reasons.

- First, although EU agriculture is amongst the most intensive in the world, qualitatively much the same technical and structural changes in agriculture are seen in most of the developed world under significantly different agricultural policies (Buckwell, 2014).
- Second, the sectors of agriculture that receive the least direct funding from the CAP (i.e. pigs, poultry and horticulture), have become the most intensive of all.
- Third, the CAP itself has evolved steadily, and was subject to a series of important reforms between 1992 and 2003. It changed from a predominantly agricultural commodity market protection policy to a complex mix of direct aids and rural development support. In this new architecture, environmental concerns have moved from the periphery to be one of the three main objectives, although resources and effective policy measures on a scale to match this ambition have not yet materialised.
- Fourth, the implementation of many aspects of the CAP, including detailed rules on several environmentally critical issues, is heavily influenced by national decisions. These vary greatly between countries in the level of priority given to the environment.

What then has been the effect of the CAP on the UK environment, and how is it performing currently and prospectively? There is no simple answer to these questions. The relatively high prices for agricultural products brought about by CAP interventions through the 1960s into the 1980s undoubtedly encouraged an over-expansion of many sectors (including cereals, oilseeds, milk, beef, sheep) and some of this was associated with observed environmental damage² for example from over-stocking. However, since EU prices have

¹ Baldock, D., 2015 Twisted together: European agriculture, environment and the Common Agricultural Policy 125, Research Handbook on EU Agriculture Law, Edward Elgar, Edited by J. A. McMahon & M. N Cardwell.

² Brouwer, F., & Lowe, P. (1998). *CAP and the rural environment in transition: a panorama of national perspectives*. Wageningen Pers.

been better aligned with world market prices from the 1990s, the surpluses are no longer endemic and over-protected sectors have shrunk somewhat. For example, the numbers of sheep and cattle have fallen. Since the mid-1990s, support for production *per se* has been scaled back and, with periodically strong intellectual and political support from the UK, there have been successive attempts to integrate more environmental concerns into CAP support measures for farmers. In terms of the areas engaged and resources deployed the principal expression of this policy change has been in three policy tools.

- First, starting in the late 1980s, the introduction of agri-environmental, and more recently climate, measures, whereby farmers enter contracts to adopt practices aimed to reduce environmental harm and provide environmental public goods in return for annual payments.
- Second, since 2004 the receipt of direct payments from the CAP to farmers has been linked to respect for certain environmental rules and regulations (cross-compliance).
- Third, to provide additional support to farms in geographically more challenging areas, often in the hills and mountains. Many of these farms are engaged in less intensive pastoral agriculture, although the financial support that they receive is not tied explicitly to any environmental outcomes, rather to the continuation of farming (rather than forestry for example).

Over the last two decades there have been reductions in cattle and sheep numbers and fertiliser (Defra, 2015) and significant changes in pesticide use (FERA, 2012). Net greenhouse gas emissions from agriculture and from land use, land use change and forestry have fallen. Water quality has improved, and efforts to reduce the rate of biodiversity loss have intensified, with varying success. The role of the CAP, and other EU policies (including the nitrates, birds and habitats, water framework and sustainable use of pesticide directives) on driving these on-the-ground developments are difficult to tease out and distinguish clearly. Other factors, especially developments in market prices and conditions, have played a part. However it is reasonable to conclude that the 1992 to 2007 reforms of the CAP have been environmentally beneficial, building in provisions that were not there previously, greatly increasing expenditure aimed at environmental objectives and contributing to a broader effort to stem environmental decline and environmentally damaging structural changes within agriculture. At the same time, environmental pressure, particularly from more intensive and often specialised forms of production, has continued.

The current CAP was put in place by the (relatively recent) 2013 reform, and continues until the end of 2020. It was planned to be a significant further step towards the integration of environmental concerns into agricultural policy whilst also providing a rationale for substantial expenditure on the CAP. A key part of this reform is the decision that 30 per cent of the direct payments to farmers, which themselves account for 75 per cent of the CAP budget, are allocated to support practices 'beneficial to climate and the environment' – the so-called greening payments. They are concerned with the protection of permanent grassland, the diversity of arable crops (fewer monocultures) and aiming to create more space on farmland for ecological priorities (Hart, 2015).

The three greening measures are in the process of being implemented in all Member States, including the UK, but already are subject to criticism from both environmental and farming stakeholders. Some environmental NGOs have little confidence that the measures will produce significant environmental benefit, especially in relation to the considerable

resources deployed. Many farmers view the measures as highly bureaucratic and some argue that they serve no useful purpose. This poses several challenges. The need to reduce GHG emissions and reliance on large-scale monocultures and give space for biodiversity on farms is not universally accepted but is clear from analysis by the European Environment Agency and others (European Environment Agency 2015). The best means of reaching these goals is also controversial; measures to guide environmentally sensitive management need to be well targeted without being too bureaucratic and significantly sensitive to practical farming realities whilst still delivering better environmental results. Effective ways of achieving better outcomes need to be in place even if they are not universally popular. It would be premature to dismiss the potential of the greening measures but it is clear that they do not command widespread support and so the trajectory towards a greener CAP is subject to considerable uncertainty at this point.

7.2 Potential changes to UK agricultural policy post withdrawal and the environmental implications

The most critical factors that would shape agricultural development after a UK departure from the EU would be the decisions taken on trade policy, on the regulatory standards adopted and enforced for food and agriculture, and most of all, the replacement for the CAP, especially any new supports to farmers paid for by UK authorities. Exit from the EU implies exit from the CAP on both scenarios considered in this report with implications for production, trade, farm livelihoods and the environment. Indeed for some of those advocating exit this would be a significant advantage of departure.

On either Scenario 1 or 2, formulating both alternative trade and agricultural policy arrangements are two of the key tasks that would have to be settled during the two-year or more withdrawal negotiation period. These policies would affect agriculture in a variety of ways explained below, for example the profitability, the number and size of farms, and the types of crop grown and livestock raised and the practices adopted. These in turn have environmental impacts to be weighed up alongside more direct policy effects from potential changes in the rules and funding for environmental schemes on farmland. Some effects would be fairly immediate, others longer term. This will be a time of great uncertainty for farmers and other organisations involved and there will be active debate about the nature and duration of transitional arrangements from the CAP to whatever succeeds it. Given agriculture is currently in a state of recession with low dairy, cereal and meat prices the shock of a Leave vote in the referendum would almost certainly undermine confidence, could reduce rents and could freeze lending to the sector until the replacement policies became clear³.

7.2.1 New Trade Relationships

In negotiations to withdraw from the EU a future UK government is likely to aim to create least disturbance to UK exporters' access to the EU single market. Through whichever route this is achieved via membership of EEA, EFTA, or negotiation of a new bilateral Free Trade Agreement (FTA), UK agricultural and food producers will wish to continue to have the same access to the EU market as now, and correspondingly EU producers will want to continue to

³ See Buckwell A (2016) for a discussion of the agricultural implications of Brexit which teases these issues out at some length.

have free access to the UK⁴. As far as trading relationships with the rest of the world are concerned, guided by the long history of the UK trade stance since the 19th Century, the presumption is that the UK will choose to be less protectionist than the EU, with few tariffs on agricultural products. How, and how soon, this is given effect is unclear. The UK could seek to replace existing EU regional and bilateral free trade agreements with its own bilateral agreements having similar terms and effects, or it could, country by country, negotiate new FTAs with a more open approach. The latter would take many years to accomplish and would face opposition from the farming community who would be likely to be exposed to a further drop in prices⁵.

Decisions on trade outside the EU would have to take account of a new domestic strategy towards agriculture that might be developed at the UK level or, more likely, by the constituent countries. Perspectives are likely to be different in England from other parts of the UK. The critical decision is the extent to which the UK or its constituent countries will arrive at reasons, as the EU does, for agricultural exceptions to the broader principle of free trade.

Given the tradability of agricultural produce, differing policy supports in adjacent territories give rise to great concern about un-level playing fields, i.e. unfair competition. Many of the CAP measures in both pillars offer financial support to agriculture and they will be available to farmers in the remaining EU 27 Member States, many of which have an interest in the UK market. The terms of trade effects between farmers within the UK regions and between them and the rest of the EU are therefore highly sensitive issues.

If the UK adopts a liberal stance and therefore seeks essentially free trade with third countries including the Americas, Australia and New Zealand, this will certainly expose many sectors of domestic agriculture to strong competition and affect the structure, scale of and footprint of UK agriculture and, without strong environmental and social measures in place, on the rural environment and cultural landscapes too. A smaller number of generally larger and highly cost conscious farms could be created with larger field sizes and fewer grazing livestock for example. The extent to which current environmental regulations are maintained would also be important in determining the consequences of leaving the EU. These are more predictable if the UK stays within the EEA, where the majority of EU regulations applying to agriculture, with the exception of the nature directives, stay in place (see chapter 4).

7.2.2 *New domestic policies*

Because it will take considerable legislative time to change regulatory and trade policies and many existing EU environmental regulations might continue to apply at least for a time on either scenario, the most important short run policy changes would be those associated with the domestic agricultural policies which replace the CAP. There are many who are keen to escape the Common Agricultural Policy and its associated bureaucracy and budget cost (currently 36 per cent of the EU budget). It must therefore be presumed that on exit from the EU the CAP will be replaced by British agricultural policies (BAPs) which are

⁴ Of course if none of these mentioned options materialises and the UK finds it trades with the EU on WTO market access terms then UK exporters will face significant tariffs on exports to the EU.

⁵ These UK choices of third country trade stance is of more than passing interest to the rest of the EU which will be concerned about the ability of rules of origin to prevent flows of imports to the EU via the UK. This is not a problem likely to arise with other EEA/EFTA members because they are more protectionist than the EU.

intended to be simpler and less costly to the public purse⁶. The plural is used because implementation of the CAP is already a devolved matter for the four UK territories. They already have significant differences in the way CAP measures are used – for example the Scottish Government makes use of coupled direct payments which are virtually anathema in English administrations, and the regions make different use of rural development measures including different approaches towards agri-environment schemes. Post exit, variations in policy could widen – although not very far before intra-UK trade is affected. These will heighten the difficulty and tensions in determining the new agricultural policies (see Grant et al 2016).

There is a large list of measures currently available and used in the UK territories under the CAP⁷. The two “pillars” of the CAP offer measures dealing with all of the following: farm income; risk management; emergency market support; young, small & organic farmers; farmers in “areas with natural constraints” (previously “less favoured areas”), innovation & competitiveness, processing & marketing, “quality products”, cooperation, skills & training, economic diversification, rural infrastructure, forestry, renewable energy, rural institutions, and of course environmental management of agricultural land. The future for each one of these will be of very considerable concern, particularly to farmers, but also to other stakeholders, including environmental agencies, NGOs and other sectors of the rural economy.

It should be noted that the CAP itself may change post-UK exit. Agricultural support levels in real terms have been falling for some time and this would be expected to continue, not least if the EU loses its second largest net contributor. However, pushing in the opposite direction the loss of one of the strongest pro-reform members might well slow adjustments to the CAP and increase potential support for payments that are coupled directly to production.

There is a deeply held, and probably correct, belief – at least amongst farming organisations - that there has been, and probably still is, a greater willingness to support farming in Continental Europe than in the UK (Buckwell 2016). Thus if, after departure from the EU, the UK seeks to maintain close-to-status-quo access to large parts of the EU market and simultaneously operates a less protectionist agricultural policy and more open third country trade policy, this would significantly increase competitive pressures on UK agriculture, causing a chain of adjustments with impacts on the natural environment.

There is no space to examine all the facets of the CAP and their fate after a UK departure from the EU. The analysis focusses on two key high level issues for an independent policy regime in the UK countries with perhaps the greatest potential long run environmental impacts: (1) the future of income support for farmers, including mechanisms such as direct payments, and (2) the willingness of governments to support explicitly environmental forms of management on agricultural land.

⁶ It is noted immediately that although some will suggest that the UK returns to its pre-EEC agricultural policy based on guaranteed prices and deficiency payments this will be a non-runner as it does not respect the WTO principles for non production and trade distorting supports.

⁷ See the tables in Hart (2015) which list the CAP support implementation choices selected by the devolved territories of the UK. The list serves to illustrate both the numerous facets of agricultural policy the future of which will have to be discussed and decided, and also how differently these matters are treated in the four territories of the UK.

Implications of changes in support payments

Perhaps the key question will be the fate of the direct payments and other annual payments that are now received by most UK farmers as the principal subsidy for income under the CAP. These made up 68% of total Income from farming in the UK over the five years 2010 to 2014, ranging from 80% in 2010 to 52% in 2014⁸. Averages disguise a wide range of farmers' dependence on direct payments by region and type of farm. Cereals, beef and sheep farms have highest dependence, with EU payments accounting for well over 100 per cent for cattle and sheep farms, especially in the marginal areas, which are widespread in the uplands⁹.

Past UK governments have taken a relatively consistent approach to this topic. The general UK stance on the CAP as expressed by governments of nearly all parties and held by many academics and stakeholders – although with strong qualifications by farmers' organisations – was exemplified by the 2005 Treasury/Defra's vision for the Common Agricultural Policy. (HM Treasury / Defra, 2005). This has not been superseded by a newer approach although it probably no longer represents the view of agricultural ministers in parts of the UK outside England, who are more inclined to protect agricultural production and interests (Grant et al 2016).

The established Treasury view suggests that direct payments should be seen as transitional compensation which is phased out over a reasonable adjustment period. The residual core of agricultural policy is then seen principally as the kinds of measures found in the Rural Development, second pillar of the CAP. This logic suggests the basic payments¹⁰ are phased down, and possibly out. Critical questions would be how fast this is done¹¹, and whether phasing would be uniform for all payments or if there would be a progressive reduction in the largest payments on a faster timetable. Whilst both Labour and Conservative governments have strongly resisted disproportionately reducing the scale of payments to larger holdings when EU funds were heavily involved, they might take a different position when they are nationally funded.

Structural change involving a drop in farm numbers, accompanied by amalgamations and potentially some withdrawal of land from farming could follow a sustained reduction of direct payments under national agricultural regimes and the associated fall in profitability. On either of the scenarios considered here the post withdrawal administrations in the UK will encounter strong pressure from agricultural interests to provide support to compensate for the loss of CAP direct payments. Following the approach in CAP negotiations, the request is likely to be for minimal environmental conditions to be attached to such aid, given that producers will be facing direct competition from their counterparts on the continent and in the Irish Republic. Such requests will be most forceful if the borders with the EU remain open and direct financial support to UK farmers is substantially cut, even if the cuts are phased over time and modulated.

⁸ Subsidy values in pounds vary with the €/£ exchange rate. Source: Defra (2015) Agriculture in the UK 2014, Table 4.1, HMSO, London.

⁹ That is, for these types of farm the commercial operations are run at a loss so the farm family live on an amount which is less than their direct payments. Source: Gardner (2015) Preparing for Brexit. What UK withdrawal for the EU would mean for the agri-food industry, Fig 5.3, p52 Agra Informa, London, and Buckwell (2016).

¹⁰ And probably top up payments earmarked the young farmers, small farmers, and possibly those in geographically challenging zones as well.

¹¹ There are plenty of precedents for phasing such changes over five to seven years.

The likely response from a future government is a matter of conjecture. For example, one policy option is that some of the resources saved from CAP direct payments could be directed at a more limited form of support for agriculture on an entirely new model. This could comprise a “modern” strategy of investment in higher productivity, innovation and, perhaps, greater sustainability more akin to the approach to support in other sectors of the economy. It is possible however that escaping the confines of the EU would trigger moves towards an overtly liberalising model, driving structural change in agriculture and a less ‘precautionary’ approach to regulating crop protection products and new biotechnology¹². A more widespread planting of GMOs could occur on this scenario. A smaller number of larger and more corporate farms could emerge, as occurs in the US where support levels are generally lower. It may be argued that if British agriculture has to face competition from the Americas then it must be allowed to compete on equal terms. What seems highly unlikely is that national administrations would opt for a system of more generous support for agriculture and smaller producers on the Norwegian model, although in principle this would be possible (Gardner 2015).

Implications of changes to support environmental management

At present support for environmentally sensitive farming, including organic production is funded together with other activities (such as support for forest management and aspects of food processing) with a large proportion of aid from the rural development pillar (Pillar 2) of the CAP. The agri-environment and climate measures under Pillar 2 of the CAP are one of the largest and most important sources of funding for the environment in the UK. Expenditure over the period 2014-2022 is expected to be nearly £3 billion, of which over two thirds is funded by the CAP.

The objectives of this part of the CAP are similar to those of the UK administrations and are probably not controversial. Major changes in objectives seem unlikely under either of the Brexit scenarios. Measures on the ground may not change dramatically but could vary more between countries. However, the escape from some of the CAP Pillar 2 rules, particularly with respect to control and verification could, given the political will, provide an opportunity for a new generation of more creatively designed and effective rural, environmental and social policy measures in the UK. There is substantial support for this group of measures from most civil society groups in Britain. Whilst farming organisations naturally pay more attention to the much larger CAP direct payments, their attitude towards environmental and social payments to farmers and other organisations in the rural economy might be different if they account for a larger proportion of future support post Brexit.

The key would be the level of resources that the government was willing to commit to pay for land-based public environmental services and protecting the marginal, especially high nature value, farming areas. There is risk that budgets could be reduced significantly, particularly in the light of the recent heavy cuts to DEFRA expenditure. It is worth noting that there are stark differences at present in the willingness to support the marginal farming areas as between England and the other devolved territories, with more enthusiasm in the latter. Agri-environmental payments schemes probably will continue to be run based on the principle amount of income forgone and payment for direct costs. The costs for the government might not be very different in the ‘out’ scenarios. But, to be effective, in the

¹² This was certainly the tone of a presentation by former Defra Secretary of State Owen Paterson to the 2016 Oxford Farming conference.

absence of support akin to CAP direct payments, the costs of support for farming in the marginal and high nature value areas would have to change (that is, rise) from the current position where (pillar 2) payments for areas with “natural constraints” are essentially top-ups to the (pillar 1) basic payments. There is considerable knowledge, experience and will in the UK to design and run such schemes. Their effectiveness would therefore depend heavily on the resources allocated to them in the different countries within the UK and the attitude of farmers in the new context.

7.3 What are the environmental impacts of such scenarios?

Most of the policy changes expected with a UK departure from the EU would be negotiated after the referendum during the two-year period before exit, and phased in over a number of years. The response is likely to vary within the UK, with distinctive policies emerging in Scotland, Wales, Northern Ireland and England, given different conditions and political priorities. At a minimum this will create uncertainty, although it could lead to better targeted policies over the long term. Buckwell (2016) adduced many political statements from which he concluded that direct payments to farmers would probably not be abolished overnight. In parallel, changes in regulatory standards may well occur but this is considerably more likely under Scenario 2.

More rapid change cannot be ruled out, however. If the exit strategy is Scenario 2, to move outside the EU single market, and if the wider trade policy stance is to move towards a freer trade regime without acceptance of a special case for agriculture, then there would be sectors in which UK farmers would lose their tariff free access to the EU, affecting lamb for example, and thus many livestock grazing areas. The competition for most other sectors could increase too, with those particularly affected by reduced profitability and output potentially including milk, beef and sheep producers. If, however, the strategic choice is scenario 1 with more or less continued access to the single market and if trade relations beyond the EU were to change little, at least initially, then there would be less disturbance to UK agricultural market conditions. The impacts of Brexit would then be largely settled by the domestic agricultural policies which emerge. Farming practices and intensity will adjust as the new policies are rolled out and implemented and the environmental impacts will then appear, some rapidly, others over a longer period.

The decisions taken on these issues would have significant, and regionally distinct, impacts on the environment. The more livestock oriented farming systems in Wales and Scotland for example could suffer more from a more liberal trade regime with less generous payments unless compensation was put in place. This could lead to greater concentration of livestock on more viable farms and grazing over a smaller area. A further outflow of labour from agriculture could encourage greater mechanisation and might also imperil the capacity to perform some more labour intensive environmental management work on farms and increase the abandonment of farmland with a variety of environmental consequences, such as the growth of scrub and, in some places, afforestation.

At the same time, environmental authorities, civil society organisations and some farmers could be expected to make the case that the principal market failures surrounding land management concern the rural environment and society. First, if agricultural payments are phased down and perhaps out, then the leverage of environmental conditionality attached to those payments is diminished and perhaps lost. Cross compliance may disappear and this element of environmental protection would be weakened.

In terms of agricultural adjustment and land management, outcomes will depend considerably on the degree of severity with which agriculture has its current financial support curtailed, any steps taken to restrain EU imports from displacing UK production, and to what degree UK farming is more exposed to greater competition from lower cost suppliers globally such as Brazil and New Zealand. Assuming a reduction in support, it is unclear whether the same proportion of total spending would be earmarked for environmental objectives as under the CAP (ie 30 per cent of direct payments and a large proportion of the UK rural development programme). The risk is that the “green” component might well shrink given anticipated pressures on government expenditure and the level of pressure to support farming incomes. In turn this could lead to a reduction in agri-environment scheme budgets affecting most elements of the rural environment including biodiversity, water quality, climate mitigation and conversion to organic production. In parallel, there could be reductions in budgets for other land support measures including aspects of woodland management and investment in food processing.

There are also questions about how far climate, environmental, animal health and welfare, food safety, worker safety and plant and animal health regulatory standards or ambitions will be affected by an EU exit. It is difficult to imagine them being strengthened given the history of UK policy in this area and more likely that they could be weakened, especially in Scenario 2 where EU constraints are more limited.

Given the probable level of political support for most of these standards, major changes in regulation are perhaps unlikely. However, some change can be expected. For example, UK governments have been more favourable to the adoption of GMOs in agriculture than many other EU Member States and have been less inclined to regulate certain pesticides on the basis of hazard, notably neonicotinoids. On any scenario there is likely to be pressure on agriculture to contribute to climate mitigation goals as UK authorities work towards meeting commitments in domestic carbon budgets. Forms of intervention may change as well, with a tendency to draw back from regulatory approaches which many associate with the EU. For example, there could be more reliance on trust and responsibility to meet desired objectives through voluntary approaches for farmers, as has been the case for pesticides, and for private certification and standards. Conceivably the quid pro quo for such an approach might be stronger sanctions when infringements are detected, but this is conjectural as well.

Assuming significant changes, the adjustment process, which may take a decade to work through, will mean protracted uncertainty for UK farming and for those who supply it with goods and services. This will probably not be a climate of confidence and investment. At least in the short to medium run, the uncertainties and dampening effects of the withdrawal and prospect of further withdrawal of significant financial support may inhibit major intensification projects with some environmental benefits. However, at the same time there is likely to be sustained pressure on farmers to cut costs which is likely to cause a cut back in labour along with a motive to reduce expenditure on “non-essential” environmental management. Those high tech farming systems offering cost savings may be attractive if the regulatory climate towards them is also more sympathetic.

In such circumstances, those nationally-funded agri-environment schemes, which continue to be available would provide some income surety for a section of farmers, assuming that payment levels are adequate. Nonetheless the level of farmers’ confidence in the continued availability of these payments, including those for maintaining organic farming, may diminish given their reliance on UK political priorities, including Treasury support. This could

well be perceived as less predictable than the CAP. The willingness of farmers to commit to environmental practices which require relatively long-term public sector support may be significantly tempered by such concerns.

If there were to be very significant cuts in farm support payments, and strong competition from imports acute difficulty could be experienced by those who have substantial borrowings, or have bid high rents to acquire or expand their holdings, and those highly dependent on hired labour. There could be a spate of business collapses that puts land onto the market for purchase or lease under duress. This would certainly reverse the still continuing trends of rising land rents. Such a farming recession is likely to further encourage the long-established process of farm consolidation, with smaller farms being absorbed into larger holdings at a faster rate than now. On balance, this is likely to have adverse consequences for the landscape and biodiversity as it is often accompanied by the enlargement of field sizes, more specialisation and sometimes the removal of field boundaries and other natural features. The more the changes are signalled ahead, and the slower the cuts in direct payments, the less dramatic these effects. As a side effect, lower prices could provide land acquisition opportunities for those not dependent on farming income or whose interest is in more environmentally sensitive land management.

Briefly considering the major farm types, for **arable farming**, already concentrated in relatively large scale units, there is little reason to expect further intensification in the sense of more fertilisers and pesticide applications per hectare as price ratios will not signal this; indeed they may signal the reverse. But, the likely harsher economic climate may encourage larger scale production, larger field sizes more use of contractors and perhaps more efficiency in the use of purchased inputs such as fertilisers through precision agriculture. There could be bankruptcies in this sector, but generally land is unlikely to go out of cereals unless there are strong local alternatives or the crop is ill suited to the land. Investment in hedges and field margins, buffer strips and small-scale habitats is likely to be even more dependent on agri-environment payments than it is now, and pressure for crop diversification introduced under the CAP is likely to be removed

As noted earlier, it is the **grazing livestock sector** that is most likely to face economic pressure and to adjust, especially, but not only, those farms located in remoter and marginal areas. From an environmental perspective, the greatest concern here is the capacity to sustain the management of areas of High Nature Value farmland which is concentrated in these areas. There is a danger that their current decline will accelerate. Much will depend on the decisions taken in the constituent countries of the UK on any offsetting environmental or social payments if CAP style direct payments are phased out. This is the group of farms most dependent on direct payments for whom almost any cuts will drive some out of business and holdings to be merged. The outcome may be fewer farms and also lower livestock numbers with a mixture of both environmental benefits, from reduced methane emissions for example¹³, and environmental costs in the form of the withdrawal of grazing from some sensitive habitats. Some of the land will be driven out of agricultural production, some may revert unmanaged, to scrub and eventually woodland.

¹³ Lower emissions from livestock in the UK contribute to global climate mitigation only if they are not replaced by emissions elsewhere. These can arise from additional livestock in other countries which export to the UK market (unless the net emissions of the adjusted food chain are lower.)

However, particularly if appropriate incentives were available for environmentally sensitive afforestation there could be an opportunity to increase the woodland area in a beneficial way. Other areas of land will be attached to surviving farms with larger holdings emerging in many parts of the country. The social and environmental consequences will vary by region and by the counter measures offered in each region. The main danger is that measures to counter the environmental costs of adjustment will not be sufficiently funded.

For the **dairy sector** already, tightly stretched by low prices, a great deal will depend on the willingness and ability of major retailers of liquid milk to negotiate sufficiently remunerative contracts to keep sufficient production capacity in business. Consolidation of dairying is likely to continue and this could be expected to reinforce the existing trend towards intensification.

Intensive livestock production and horticulture are least helped by the CAP. If lower feed costs materialised this would help the pig and poultry sectors in economic terms while exposure to more competition from outside the EU could be damaging. Again, further consolidation might be expected and the role of regulation then becomes more important in containing pressure on the environment. Weaker regulation on water quality under Scenario 2 could be a major concern for example.

Specialised contractors may play an even more pronounced role in farming under both scenarios. This could have a mixture of impacts. Environmental benefits could arise if it brings more knowledge-intensive precision arable and livestock farming. But the opposite could be true if instead it means more consolidated and specialised farm businesses that are even more sensitive to any environmental regulation which is seen as imposing costs.

7.4 Conclusions

The classic, commodity-based, CAP supported environmentally destructive agriculture until the mid-1990s. For two decades the move towards decoupled direct payments and expansion of rural development measures have been in a preferred direction for the environment. Yet the CAP is still far from a well-conceived and executed policy for the environment; support payments are not sufficiently linked to the provision of environmental public goods. Relatively high levels of support for farming under the CAP have held back some labour outflow and structural change and contributed to a more diverse patchwork of farms including substantial areas of HNV farmland, not least in the UK. However, the expansion of rural development spending has been halted and the potentially bold concept of greening Pillar 1, taking 30 per cent of the main CAP budget, is not being implemented in the way that the Commission originally intended. Its 'green' status is very actively questioned.

Outside the EU the CAP would cease to apply and it is likely that a new regime in the UK would include a greater diversity of approaches in the different countries than exists now. Nearly all commentators agree that levels of government support for agriculture would fall, both because of well-established UK positions on agricultural policy (particularly the CAP) and the sharp pressures on the budgets of Defra and its equivalents. Economic pressures on farms are likely to increase, triggering structural change towards fewer and larger farming units with immediate environmental consequences.

The scale of adjustment will depend on many factors including ruling market prices and the willingness of national administrations to provide farmers with support and protection from

competition, not least from exporting EU countries. There must be a concern that national funds devoted to agricultural support will be focused more on economic survival, particularly in the livestock sector, than on promoting environmental management or the survival of hill farms and HNV farming systems. Funds for agri-environment measures could well be reduced, perhaps substantially. In parallel, the leverage to encourage good environmental practice provided through cross compliance would lose considerable force if annual support payments fell heavily.

As the UK was one of the pioneers of agri-environment schemes it would be surprising if the new national policies did not include significant provision for such schemes. However, their impacts will depend mostly on the generosity of funding, the corresponding commitment to effective implementation, as well as farmers' willingness to engage in such schemes. The latter is difficult to predict.

The importance of environmental regulation and its enforcement would grow in a less protected, more 'free market', agriculture. Under Scenario 2, there is a significantly higher probability that regulations would be withdrawn, including those with environmental objectives. Much would then depend on the resources and will for better regulatory enforcement.

Given the resource constraints, entirely domestic agricultural policies could be worse for the environment than the CAP; especially if funding for agri-environment schemes was cut or not increased significantly to meet the enhanced challenges, which seems a significant risk. There could be a heightened tension between agricultural production and the environment in the medium term if a less protectionist more technologically focused government were elected and pursued agricultural policy accordingly.

The green element of the current CAP sends an important new message that 30 per cent of support should be tied to environmental delivery. This is a step forward but the mechanisms for implementing this and the scope which it gives to governments, including the UK, to avoid more substantive environmental commitments are causing many to question what will be achieved (Hart et al., 2015). Aspects of the CAP, such as the draconian penalties for minor auditing errors, are a barrier to greening support for agriculture in an effective way. Whether these can be changed is unclear. However, UK withdrawal is likely to lead to less financial support for environmentally sensitive farming and a more free market approach, introducing new environmental pressures unless balanced by appropriate regulation and expanded expenditure on farm environmental management. Most experienced observers are sceptical that this would occur.

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8 Fisheries policy

8.1 Introduction

Britain has a long history as a fishing nation and its waters are some of the most productive in Europe. Today, however, the British fishing industry is a shadow of what it once was – both in terms of number of fishermen and in economic terms¹, although, its political influence remains strong. In the current “Brexit” debate, critics often blame the decline of the UK fishing industry on the EU Common Fisheries Policy (CFP), which has bound the UK, like other coastal EU Member States, since its accession in 1973 (Annex A – Annex to Chapter 8 provides a background to the CFP and the establishment of equal access to marine fisheries in the EU). Undoubtedly, the evolution of the CFP has been complicated and controversial and its reputation is poor in environmental circles. However, the policy has undergone significant changes in its most recent reform and care needs to be taken to distinguish the impacts of the policy itself (particularly the consequences of past policy) from those of rapid technical and economic change in the industry as a whole. This chapter explores the implications of a UK departure from the EU for the sustainability of fisheries both in the UK and in the EU overall. Regardless of Brexit scenario (see Chapter 3), it is unlikely that the UK would be bound by the CFP if leaving the EU².

8.2 The track record of CFP and the environment

It is widely acknowledged that the CFP has not been able to ensure sustainable fishing in the EU – neither from an ecological nor economic perspective (see eg Froese and Proelß, 2010)³. A fleet capacity that is too large and use of harmful gear have contributed to only 12% of assessed stocks being in good environmental status in terms of both fishing mortality and reproductive capacity (EEA, 2015). Of assessed stocks in the Northeast Atlantic, 39% were overfished in 2013; 88% in the Mediterranean and Black Sea (EC, 2013a). At particular risk are migratory and straddling⁴ stocks as they are exposed to fishing pressure at different life stages, as well as species and habitats on which there is limited scientific knowledge. In fact, 40% of commercially targeted stocks remain unassessed (EEA, 2015). Nonetheless, fisheries issues cannot be dealt with in isolation as marine ecosystems are interconnected and targeted species are dependent on the state of their surroundings.

The general view is that the new CFP is a big step in the right direction, albeit less ambitious than environmental organisations had pushed and hoped for. Table 8-1 outlines some of the major environmental concerns regarding the CFP prior to 2013 and how these have been addressed in the most recent reform. These are important to be clear about, as some issues

¹ The British fleet has shrunk by 75% since 1938. A majority of the catch is landed by the Scottish fleet while there is also a politically important English inshore sector comprising smaller boats (MMO, 2014). Meanwhile, British aquaculture production has increased steadily over the past 30 years (Ellis et al., 2015).

² The UK implementation of the CFP is a devolved issue. In case of Brexit, potential impacts on devolved policies will be an internal matter for the UK, but one can assume a high level of further devolution to occur.

³ In 2010, the EU was still far from achieving its commitments made to the World Summit on Sustainable Development of maintaining or restoring stocks to levels capable of producing Maximum Sustainable Yield by 2015, where possible.

⁴ The United Nations defines “straddling stocks” as: *stocks of fish such as pollock, which migrate between, or occur in both, the economic exclusive zone (EEZ) of one or more States and the high seas* (UNEP, 2015).

that have in fact been addressed are sometimes still used as arguments for why Britain should leave the EU.

Table 8-1 Steps to address major concerns about the CFP – the 2013 reform

Major CFP concerns	Changes introduced in 2013
<p>The EU has provided some of the world’s highest subsidies to its fishing industry (European Court of Auditors, 2011). Originally intended to make the EU fleet more competitive; this financial support has led to major overcapacity and overfishing of many stocks. There is widespread criticism that EU tax payers are paying millions to maintain an unsustainable private industry which operates in a competitive market (Lagares and Ordaz, 2014), and it is estimated that, in many Member States, the costs of fishing are a greater burden to the public budget than the total value of the catches (EC, 2009b). This is exacerbated by extensive fuel tax exemptions for fishing vessels across the EU (Borrello et al., 2013).</p>	<p>The new European Maritime and Fisheries Fund (EMFF) introduces a substantial increase in funding for data collection, control and enforcement. This has been widely supported by environmental groups. The 2002 CFP reform achieved significant reduction of capacity-enhancing subsidies. The new policy also includes obligations to adjust fleet capacity to fishing opportunities over time, report on this progress annually and take measures on identified overcapacity.</p>
<p>Annual scientific advice on sustainable TAC levels has been exceeded by EU decision makers by on average 33%, influenced by a strong industry lobby. TACs are often set in relation to fleet capacity or historic shares rather than from the perspective of a sustainable future of the industry (O’Leary et al., 2011). Importantly, however, when stocks decline, it is the distribution of fish that is reduced rather than the density of fish. Scientists generally chose study sites randomly to maximise representability of their results, whereas fishermen actively search out stocks as their ambition is to fill their quota. Fishermen’s data may therefore give a rather different view than scientific results.</p>	<p>An obligation to set TACs in accordance with maximum sustainable yield (MSY), forcing politicians to listen to scientific recommendations of catch limits. Although this is yet to solidify in practice, and political tension can be expected to increase as the MSY constraint becomes more binding (cfp-reformwatch.eu, 2015), the introduction of the concept into the legislation is important progress.</p>
<p>EU rules have long compelled fishermen to discard catch that they do not have quota for – partly a result of quota being assessed based on landings rather than catch. This unsustainable practice, probably amounting to between 10 and 60% of catches (EC, 2008), has been criticised by international organisations and fishermen alike (see Box 8.1).</p>	<p>A ban on discards will be gradually implemented from 2015 to 2019 (see Box 8.1).</p>
<p>Fisheries Partnership Agreements (FPAs) between the EU and other nations have enabled industrial European fleets to fish in the EEZs of several developing nations (including Mauritania and Morocco). This has caused criticism for its impacts on local communities, their livelihoods and their marine environments.</p>	<p>A requirement that future FPAs are to be “sustainable” and only allow fishing of surplus stock. Resource conservation and environmental sustainability is part of the aim.</p>
<p>There has been recurring criticism of the CFP generating too much centralisation of decision-making to Brussels. It is argued that, in the area of fisheries especially, formulation of regulation is better kept closer to practitioners.</p>	<p>Increased regionalisation of governance in order to avoid micro-management (Salomon et al., 2014). One example is management plans being shifted increasingly towards regional and national scale.</p>

Application of the reform is far from straightforward but, recent trends indicate that the most economically valuable stocks in the EU and generally the most intensely managed, are

showing signs of improving⁵. The majority of these stocks have been managed under the CFP and under annual Total Allowable Catch (TAC) limits. Fishing pressure across EU waters appears to have reduced, especially following the 2002 CFP reform (Fernandes and Cook, 2013). While this certainly is a positive development, it is important to acknowledge that intensively managed stocks only represent about 25% of all EU stocks and are mainly located in the North Sea. Less economically important stocks that are not allocated TACs – to the extent their status is assessed – do not seem to be improving. For example, 91% of monitored stocks in the Mediterranean are still fished above a level where they can produce Maximum Sustainable Yield (MSY) (EC, 2013b). The state of stocks that are not managed at all and species which are not commercially targeted is still largely unknown.

A sufficient level of integration between fisheries management and environmental conservation is yet to be achieved in the EU. Nonetheless, the EU has gradually managed to legally enforce environmental principles that are still merely an aspiration in international law (see Section 8.4). The new CFP includes, for instance, acknowledgement of the marine environment at large (which is also reflected in financial aid via the new European Maritime and Fisheries Fund, see 1.3.3 and 1.3.5), the concept of ecosystem-based management and a legal obligation to protect the marine environment and apply a precautionary approach to fisheries management (CFP, Art. 2(2)). It also states that its implementation should contribute to achieving good environmental status of marine and coastal areas in the EU by 2020 under the EU Marine Strategy Framework Directive (MSFD) (CFP, Art. 2(5)(j)). In parallel, the MSFD includes a provision that all populations of commercially exploited fish and shellfish are to be kept within safe biological limits by 2020, and exhibit a population age and size distribution that is indicative of a healthy stock. Both pieces of legislation encourage regional cooperation to achieve this ambitious target, in view of the interconnectedness of European waters and the mobility of fish stocks. With these explicit references to environmental concerns in the new CFP and the MSFD, there is a reasonable chance that these principles may in time give rise to environmentally more demanding standards, which may have influence beyond the EU through trade in marine species between the EU and other markets⁶.

The new CFP also sets out to boost the growth of the EU aquaculture sector, which has grown less than in other parts of the world in recent years. Ambitions include, for instance, reducing administrative burdens, facilitating access to suitable locations and improving overall competitiveness. To achieve this, an Aquaculture Advisory Council is being established as a consultative body that will enable cooperation among relevant stakeholders and sharing of best practice (Dubolino, 2013).

8.2.1 Britain and the CFP

The UK has been an important player in the development of the CFP, not least in the latest reform. UK Ministers argued in particular for the importance of a science-based approach, a regionalised system of fisheries management allowing greater scope for Member State

⁵ According to Fernandes and Cook (2013), 70% of assessed stocks in the EU showed either decreasing fishing rates or an increasing stock abundance in 2011. See also Cardinale et al. (2013); Hilborn and Ovando (2014); and Beddington et al. (2007).

⁶ For example, the EU is currently trying to influence Thailand to combat illegal fishing by warning the Thai government that it might impose trade bans on Thai fisheries products into the EU.

cooperative decision-making, and (partly in response to media concerns) the issue of discards (see Box 8-1). Prime Minister David Cameron argued in the House of Commons that the recent development of the CFP demonstrated that reform could be achieved in the EU from positive engagement (Gov.uk, 2014).

For different reasons, the UK has often raised concerns that, for example, the EU systems of shared access and way of allocating fishing rights have been unfair to British fishermen (see Section 8.3.2 and Annex A – Annex to Chapter 8). In the current debate, fisheries and the CFP are often used as key arguments for why the UK would be better off outside the EU, pointing to the fishing industries in Norway and Iceland as inspiration (HM Government, 2014b). Not surprisingly, matters are not that simple.

Three points are particularly worth clarifying:

Point 1 – Claims are often made that the CFP has been responsible for the decline of the British fishing fleet, but actually this decline is mirrored elsewhere. The CFP has indeed imposed pressures on the UK that may otherwise not have been present, eg greater competition, cumbersome governance processes, and little regionalisation until recently. Since British accession, the number of people employed in UK fisheries has decreased by about 46%. Notably, however, between the first records of statistics from 1938 and the early 1970s, the number of UK fishermen decreased by 55% (Marine Management Organisation (MMO), 2014). According to the Scientific, Technical and Economic Committee for Fisheries (STECF) (2015), the drop in employment between 2008 and 2013 was primarily caused by a continued substitution of capital for labour and a declining number of fishing vessels. The drop in the number of vessels in the UK is attributed to technological development and new more effective vessels replacing old ones. Significantly, fishing industries have shrunk also in other European states over this time (STECF, 2015; Baker, 2015)⁷, also due to eg technological development and structural challenges. For instance, the number of Norwegian fishermen has dropped over 85% since the 1940s. In the period of 2000–2011 alone, the number of registered Norwegian vessels fell from 13,000 to 6,250⁸ (FAO, 2011).

Point 2 – Managing your own stocks does not necessarily lead to more fish. To blame the decline of British catches on the CFP alone is incorrect. For example, Thurstan et al. (2010) present an analysis of 118 years of statistics, showing that most of the decline of the important demersal fish stocks around the UK in fact occurred prior to the CFP and that stocks have been relatively stable since. Globally, stocks harvested for human use have dropped by half in the last 40 years (WWF, 2015). The FAO (2015) points out that nations that have achieved a relatively sustainable fisheries management (eg New Zealand, Australia and the USA) owe their achievement to 20 to 40 years of effort and adjustment. All these countries have sole jurisdiction of their EEZs, but they are also geographically isolated in relation to other nations' waters. In Europe, coastal states' waters neighbour one another and most of the stocks found in UK waters, for example, move between administrative borders to other EU states, to Norway and the Faroes. Attempts to manage fisheries in one

⁷ Between 1973 and 2009, UK catch fell by 47%. EU-15 average was a 42% decline (Baker, 2015).

⁸ In parallel, the number of Norwegian fish farmers (involved in aquaculture of various species) increased from about 4,300 in 2000 to 5,800 in 2011 (FAO, 2011).

EEZ would inevitably affect other fisheries (see Section 8.3.4). This should be acknowledged when considering how long it is taking the EU to establish a successful management regime.

One issue that has caused particular concern in the UK has been the mismatch between political decisions on the allocation of quota and the development of European Court of Justice case law which has made it clear that there should be no restrictions on the European nationality of fishing vessel owners either locating or landing catch in EU waters. One common complaint is that this has led to British quota being used by Spanish-owned vessels – sometimes called “quota-hopping”. However, Spanish companies in this case exercise their freedom of establishment and set up companies in the UK, which then allows them to acquire British fishing vessels and apply for a UK quota (see, eg rulings in the *Factortame* cases, Case C-213/89). The primary allocation of fishing opportunities in EU EEZs is primarily based on historic catch shares, as agreed by Member States in 1983 (see Annex A – Annex to Chapter 8), a method that is a common approach for quota setting. It is also worth noting that the UK fleet operates in other States’ EEZs (MMO, 2015b).

Point 3 – Britain’s previous priorities do not necessarily indicate that the British marine environment would benefit from being outside the CFP. In theory, the UK could pursue more environmentally sustainable fisheries management than current EU management. The UK has generally been uncomfortable with the CFP and often a leading critic. On many issues, especially recently, it has in principle been in favour of a more environmentally sustainable approach. However, it has not always been active in the vanguard of leading players on issues that would have potential effects on its main fleets. Furthermore, there is sometimes confusion between the role of politicians and the role of civil society and the British media in driving the environmental credentials of domestic and EU fisheries (see Box 8-1). For example, in the latest CFP reform, the UK Government has been criticised for having missed several chances of being more proactive in the negotiations (HM Government, 2014a).

Box 8-1 Banning of discards – a bottom-up approach

Discarding fish catch – throwing unwanted or excessive catch over board dead or dying – is an unsustainable and wasteful practice which, until the 2013 reform, was effectively compulsory under the CFP. This was a result of different aspects of the policy’s design, such as quota being assessed based on landings, meaning that catch that fishermen did not have quota for would had to be thrown back. The same applied if fishermen had exceeded their quota or did not use sufficiently selective fishing gear (EC, 2013). An average 23% of catches in EU fisheries were thrown back dead into the ocean (EC, 2011) – figures varying widely, from 1.4% in some fisheries and as high as 90% in others (Kelleher, 2005).

A discard ban was discussed already in the 1992 reform, following the banning of discards for certain fisheries by Norway in the late 1980s (Norwegian Ministry of Fisheries and Coastal Affairs, 2009). This had resulted in discards becoming prohibited north of latitude 62°N, the border to Norwegian waters, but compulsory south of it (in EU waters). However, the Commission concluded that a ban was not feasible in EU waters at the time (European Commission, 1992). Interim measures have since been in place at the Norwegian and EU borders (Clucas, 1997). In 2012, European fisheries ministers addressed the issue again and eventually agreed on the Commission’s proposal which included a gradual ban on discards in EU waters. The process was encouraged by recent public outrage and extensive viral protests of the practice, such as the British Fish Fight petition with over 870,000 signatures. Maria Damanaki, EU Fisheries Minister at the time, stated that “We need effective campaigns like Hugh’s Fish Fight to wake up people to support change” (EC, 2015). The particularly UK heritage of the discard ban was thereby largely derived by advocacy from campaigners, media coverage and NGOs, rather than British politicians. The UK fishing industry considered the proposal too prescriptive and difficult to enforce. The final provision agreed on was a gradual implementation of a landing obligation which is not as ambitious as initially proposed. In the final vote on the formulation of the CFP discard ban, the UK stepped down from its leading position and only

Sweden voted for a more progressive obligation.

A British fisheries regime outside of the CFP would likely include a ban on discards, considering that both the EU and Norway now ban this practice. Also, the UK is in a good place to implement a ban following extensive British research and exploration of fishing techniques with better selectivity and substantial reductions have been made in some fisheries (80-90% in the North Sea roundfish fishery over 20 years) (Reeves, 2013).

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8.3 The effects of leaving the EU on fisheries

In whichever relationships the UK would resurface following Brexit – as an EFTA/EEA member or entirely detached – the CFP would likely have to be replaced by national policy as the CFP is not covered under the EEA Agreement. The UK would need to develop a management body to develop the new legislation and take the decisions that the EU currently takes. It is safe to say that this process would involve extensive negotiations, both regarding the practicalities of leaving the EU institutions and schemes related to the CFP, as well as trying to establish a new domestic system in collaboration with the devolved British jurisdictions. Political tension between central and devolved administrations is likely, especially reflecting the large differences in the relative importance of the fishing industry between the devolved nations. Scotland, with its heavy economic dependence on demersal and shellfish fisheries, its EU markets and its robust support for EU membership, is critical in this regard.

It is impossible to predict the outcomes of any of these negotiations; however, the complexity of the related scientific issues; the high number of relevant stakeholders and the cross-sectoral nature of fisheries management indicate that negotiations would be difficult and lengthy. CFP departure will generate an immediate high level of uncertainty. For example, fishing rights are allocated on an annual basis following EU-wide negotiations (deep-sea stocks every two years). While the UK could base its allocation on the scientific advice provided by ICES, it would not be able to simply maintain EU rules waiting for a domestic alternative, which puts significant time pressure on domestic and international negotiations following Brexit.

Brexit would involve compromise on many issues and the UK would be under pressure to be cooperative, especially in areas that more directly affect other EU states. Commercial fisheries are a typical example. On the one hand, it is therefore likely that the UK would aim to adopt a “collaborative neighbour” approach, seeking to develop a shared stock management framework with states with neighbouring fishing waters. Norway and its arrangement with the EU is the most appropriate comparator here (see Annex A – Annex to Chapter 8). It is also possible that, given the size of the UK EEZ and its relevance in fisheries

terms to other Member States, that agreement on access to UK fisheries would become an issue in any negotiations to join the EEA. The UK could be expected to re-apply for membership of important international bodies, such as the regional fisheries management organisation (RFMO) North East Atlantic Fisheries Commission, in which it plays a leading part already, but as a member of the EU. The UK would have to be a member of the relevant RFMO in order to retain access to high seas fisheries.

On the other hand, one could envisage a more strictly autonomous approach by the UK outside the EU, the outcomes of which are even more difficult to foresee. This approach may be appealing, not least to demonstrate a robust national stance, although a combination of science and experience suggest that considerable cooperation is essential when it comes to fisheries management as stocks know no national boundaries. In addition, the access that UK fishermen get to other EU Member State waters means greater diversity of fishing opportunities for the UK. Respondents to the Review of the Balance of Competences between the UK and the EU related to fisheries overwhelmingly support some form of supranational cooperation for successful management (HM Government, 2014a).

Ultimately, the environmental credentials of post-Brexit UK fisheries management would depend on whether the assigned UK management body was able to resist short-term political pressure to allow fishing above sustainable levels (unlike the EU in the past), the quality of decision-making in shared management bodies, and the degree of compliance by UK fishermen with management measures (R. Churchill, personal communication, 25 January, 2016). Several key issues would need to be confronted following departure from the CFP in order to create an effective and sustainable management regime. Some of the aspects which seem relevant to making a reasonable judgement about the potential implications are outlined in the following sections.

8.3.1 Total Allowable Catch (TAC)

Currently, setting of TACs and allocating shares to individual states is the prerogative of the Council⁹. Outside the CFP and the equal access principle, the UK would gain sovereign right to access marine resources in its EEZs. Excluding other nations' vessels would theoretically give British fishermen access to stocks of which they currently land only parts (Fernandes and Stewart, 2015)¹⁰. Importantly,

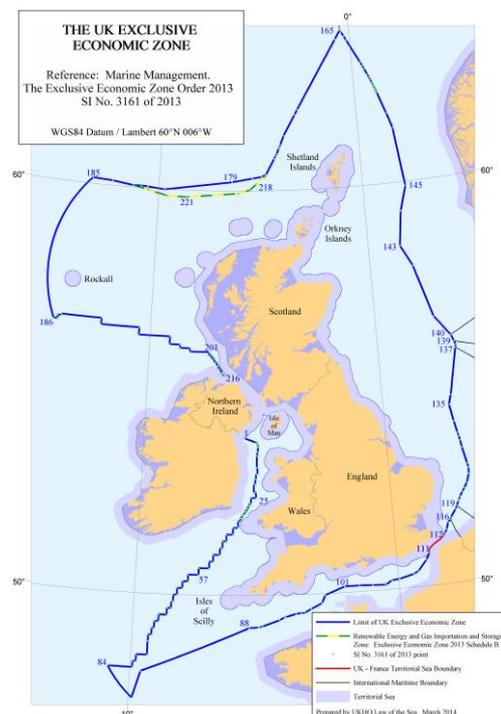


Figure 8-1 The UK Exclusive Economic Zone (EEZ) (MMO, 2013)

⁹ TACs are based on scientific information from the International Council for the Exploration of the Sea (ICES). Certain stocks are negotiated together with Norway and Iceland.

¹⁰ Bilateral fishing agreements made prior to UK accession in 1973 may remain in force, meaning that some resource sharing will continue. However, because the United Nations Convention on the Law of the Sea (UNCLOS) and other relevant pieces of international law have been put in place since 1973, it could be assumed that all previous agreements would need to be renegotiated.

for geographical reasons, the UK's EEZ only extends out to 200 nm in a few places (see Figure 8-1). The most valuable commercial fish species for British fishermen (including mackerel, herring, haddock, cod and plaice) spend parts of their lives in the EEZs of other countries (Fernandes and Stewart, 2015). It is therefore a fair assumption that the UK would partake in negotiations with the EU for TACs of stocks which are currently fished by several nations.

Business for Britain (2015) argues that, alone, the UK would have *a greater incentive to reach realistic quotas based on scientific advice and genuine community assessments of where stocks currently lie (geographically and numerically)* (p.442). However, the New Economics Foundation (NEF) has recently shown that the UK has one of the highest average tonnages above scientific advice among the studied cohort of 15 Member States. Meanwhile: *While published data does not allow for a full comparison, TACs that involved non-Member States such as Norway, the Faroes and Iceland are even more likely to exceed scientific advice* (NEF, 2015, page 3). In the 2014 TAC negotiations – the first time that the new stricter CFP rules applied – UK representatives negotiated, for example, for a considerable reduction of the quota cuts for Celtic Sea cod advised by scientists. The scientific proposal to cut quotas by 64% to allow the population to recover was reduced to a 26% cut. Both these stocks have previously been severely overfished and still need time to recover (ICES, 2015).

If the UK leaves the EU, it might need to negotiate individual TACs with each other state sharing that particular fishery. With the UK negotiating as a non-member state and given its track record of priorities, and particularly given the likely impact of devolved decision-making on the conduct of those negotiations, Brexit will not necessarily lead to closer alignment of TACs to scientific advice. This could prove detrimental to stocks and to the recent positive progression of the CFP. NEF (2015) shows that, although TACs have exceeded scientific advice by on average 20% between 2001 and 2015, this has fallen from 37% at the beginning of the period to 11% at the end. Meanwhile, the amount by which the annual advice has been exceeded has decreased from 69 to 21%. Although still a formidable problem, these trends illustrate that the efforts to pursue more sustainable EU fisheries are starting to have effect.

8.3.2 Quota allocation

Allocation of TAC shares to individual fishermen is a Member State competence and will not be directly influenced by Brexit. Yet, it is important to mention as it may explain some of the British fishing industry's discontent. In fact, allocation of quota has been controversial and disputed in the UK for decades (see Annex A – Annex to Chapter 8). In April 2015, Greenpeace received permission from the High Court to take the UK Government to court for potentially not adhering to the new CFP provision stating that Member States must allocate fishing opportunities based on, for example, environmental and social criteria (Greenpeace, 2015). Leaving the CFP would not necessarily bring an end to the internal controversy. Brexit may instead complicate the quota allocation system further as it would bring a period of uncertainty for industry as well as investors. It is likely that, following Brexit, the industry will expect a more generous approach to quota, which could add to the political pressures working against conservation objectives. There may be larger quota to allocate for certain fisheries in the British EEZ, and depending on how quota allocation is

executed; the UK market for quota may be flooded initially leading to a drop in quota value. This could affect those who have secured bank loans using quota as collateral as well as those hoping to enter the market. From an environmental perspective, turmoil and uncertainty about who gets to fish what is not optimal. If nothing else, it could distort monitoring of fishing pressure and thereby the important assessments of how stocks are doing.

Whether Brexit would make more fish available for UK fishermen depends on how the UK would establish catch limits post-Brexit (as discussed above) and how fishing opportunities would be allocated. It is not clear whether quota-hopping between Member States would end following Brexit, as it would depend on the terms agreed in any subsequent agreement between the UK and the EU, particularly with regard to the degree of access that EU fishermen would continue to have to UK waters and vice versa (R. Churchill, personal communication, 25 January, 2016). Importantly, freedom of establishment is included under the EEA agreement (Art. 31), meaning that quota-hopping might continue to some degree if the UK joins the EEA following Brexit.

8.3.3 Monitoring and control

Internationally, failure to manage fisheries has in many cases been a result of lack of implementation and enforcement (Beddington et al., 2007). Enforcement of the CFP is indeed an issue, partly because Member States have extensive legal competence in this area (HM Government, 2014a). According to the OECD (2003), enforcement services constitute the largest share of total costs of fisheries management in the most advanced fishing nations (about 40%). The USA, New Zealand and Iceland had the highest total fisheries management costs per vessel in a 2003 OECD assessment¹¹. It is probably safe to say that pursuing sustainable UK fisheries as a single nation would require substantive resources, not least for enforcement.

As fishing opportunities are shared among EU Member States, so is the effort of monitoring and controlling landings to some extent¹². Outside the CFP, the UK would need to independently police its EEZs to ensure that both national fleets and fleets under any bilateral agreements comply with catch limits, new domestic regulations and international law. This certainly may have an impact on the effectiveness of control. The long-term survival of marine fish stocks and therefore of the fishing industry would be closely linked to the ability of the British Government to impose and enforce strict provisions ensuring the environmental quality of the industry. This would need to be a priority for the Government at a time of substantial cuts in the Defra budget. Furthermore, under the new European Maritime and Fisheries Fund (EMFF), a significant part of the budget received needs to be spent on monitoring and control, and only a 10% match from Member States is required for this share. Although the UK Treasury would save on gross EU contributions, Brexit would result in a loss of access to this budget for monitoring and control.

¹¹ This is also reflecting (with the exception of the USA) the relatively small fleets of these countries (OECD, 2003).

¹² In order to harmonise CFP enforcement among Member States, the EU Control Regulation (No. 1224/2009), which entered into force in January 2010, gave EU inspectors stronger authority.

8.3.4 Bilateral fisheries agreements

Regardless of the Brexit scenario, the UK will have to decide whether or not to allow foreign vessels to operate in the British EEZs (House of Commons Library, 2013). Post Brexit, UK fishermen would lose access to EU waters as well as non-Member State waters (including Faroese and Norwegian waters). The UK would need to renegotiate and/or establish new bilateral fisheries agreements with states whose waters are of interest to UK fishermen. Norway has, as mentioned, bilateral fishing agreements with the EU, but also trilateral agreements with Sweden and Denmark and one neighbour agreement with Sweden (Regeringen.no, 2014). The UK is surrounded by a higher number of neighbouring coastal states with strong fishing interests in British waters¹³, and the British fleets have interests to continue fishing also beyond UK waters. In addition, a number of EU countries (Netherlands, Belgium, France, Germany, and Ireland) have specific access to fishing rights in the 6–12 nm zone of UK waters under historic agreements. Brexit would potentially invoke difficulties over negotiating reciprocal fishing access and quota allocation between the UK and the waters of these countries. A multitude of different agreements may therefore be necessary. The British Angling Trust points out that: *The current ongoing dispute between the UK, Iceland and the Faroe Islands over access to mackerel quota has highlighted the fragility of these third party agreements and the exposure to changing climatic conditions.* These so-called “mackerel wars” have been difficult and lengthy – starting in the mid-2000s and still only partially resolved (see Annex A – Annex to Chapter 8).

8.3.5 Subsidies and funding

In the period of 2007–2013, the UK received €138 million from the European Fisheries Fund (EFF) (now EMFF), or 3.20% of the total EFF funds for this period (Lagares and Ordaz, 2014). Britain also has access to other EU funds for broader marine application. As the UK provides more money to the EMFF EU budget as a whole than it gets back, some British EU critics argue that this money would be better directed straight to the British fleets. Others point out that the UK Government’s wider funding priorities would indicate that this money might not remain available to the fishing industry in case of Brexit (HM Government, 2014a). Brexit would allow the UK to set its own subsidies and chances are these will be lower, and especially more unpredictable, than the current EU scheme. In addition, the industry would have to make its own case to the Government for why it should receive funds. Interestingly, a study by STECF (2015) has shown that the gross profit margin of the UK large scale fleet has increased from 15% in 2008 to almost 39% in 2014 – the third highest in the EU and the net profit margin is also the third highest in the EU. The Treasury would be aware of this.

If the most environmentally harmful subsidies, such as funds for capacity-enhancing upgrades, were removed, the least viable fisheries might be pushed out of the market which could relieve pressure on stocks. In a favourable political climate, financial support would focus on assisting the transition to more sustainable operations. However, the largest share of UK’s EMFF funds are currently dedicated to helping fishermen improve and modernise their vessels (MMO, 2015a). An immediate “greening” of British fisheries subsidies following Brexit seems rather unlikely.

¹³ British waters are important for many Member States, including Spain, Denmark and the Netherlands.

8.3.6 The Single Market

Access to the single market is crucial to the British fishing industry in terms of exports. France and the Netherlands are by far the two largest recipients of UK fish and seafood exports (76 and 74 thousand tonnes respectively in 2014). Meanwhile, about 75% of fish consumed in the UK is imported, much of it from the EU (MMO, 2014). The UK is furthermore the largest (2012) aquaculture producer in the EU by value (and third by production tonnage), with Scotland representing the bulk of production (Ellis et al., 2015). In fact, farmed salmon is Scotland's most valuable food export, sent to 55 countries around the world in 2012 (the Scottish Government, 2015). If the UK leaves, its relationship to the EU market would change with a range of implications and it would lose access to the new Advisory Council for Aquaculture and any opportunities this might bring.

8.4 International fisheries management

Outside the CFP, UK policy would primarily be constrained by elements of international marine law to which the UK is a signatory. According to Business for Britain (2015), the international institutions available for management of migratory and at-risk stocks, including the FAO, ICES, and the Regional Fisheries Management Organisations (RFMOs), make the CFP redundant. However – a central point in this context – this type of analogy fails to appreciate several things.

Firstly, the regulatory instruments under these institutions are voluntary and only apply to those states that have chosen to become parties to them. FAO measures, such as the International Plans for Actions, are not legally binding at all. Secondly, attempts in the international fora to address harmful fishing subsidies (notably under the WTO Agreement on Subsidies and Countervailing Measures) have stalled. Thirdly, there is little integration and collaboration between the different international regimes, resulting in controversies, inertia and potentially sub-optimal outcomes. They are also very different types of instruments with varying applicability to UK waters – FAO tools are global measures, ICES is a purely scientific advisory body and the RFMOs apply primarily to the high seas. There is also significant overlap between different self-standing international fisheries legislation, such as the United Nations Convention on the Law of the Sea (UNCLOS), CITES, and regional fisheries organisations, an example of what is known as 'fragmentation of international law' (Young, 2009). This complex web of legislation often creates uncertainty in litigations (see eg the *Southern Bluefin Tuna Case*, 2000), and is arguably a significant hurdle in trying to address fisheries issues in the international arena. Most importantly, however, none of these international agreements and bodies have the enforcement power that EU membership entails. For example, there is heavy reliance on RFMOs in international fisheries management, which have been criticised for deficiencies especially in terms of implementation, monitoring and sanctioning (see eg Ceo et al., 2012).

In terms of the environmental performance of fisheries, international agreements and pieces of soft law are relatively weak. The main piece of international legislation – the United Nations Convention on the Law of the Sea (UNCLOS) – is widely acknowledged to have failed to reduce negative impacts on fish stocks and the marine environment. The conservation obligations of UNCLOS are often loose and aspirational and its wording promotes "optimum utilization" of living marine resources which is a narrative focused on use and not one centred to conservation (UNCLOS, Art. 62(1)). In fact, many of the

international institutions related to fisheries are commercially led organisations with an interest in industrial-scale fishing and with marginalised attention to holistic management of the marine environment. As mentioned in Section 8.2, the CFP has a, comparatively, strong legal basis for conservation and ecological consideration. The UK's alignment with the CFP obliges it to apply and transpose this strong environmental legislation. Brexit would be at serious risk of weakening this influence, given the current deregulatory climate in the UK administration. Importantly, Brexit would remove the UK's influence on the continued formulation of marine and fisheries policy in the EU, with the likely effect that the balance of power in Council would swing further away from those Member States willing to place some priority on sustainability issues.

Brexit would give the UK a single vote in negotiations on relevant pieces of international legislation, soft law and in RFMO discussions. On the one hand, this could give the UK greater direct influence (HM Government, 2014a), similar to that which Norway is experiencing (North, 2013). On the other hand, it would arguably reduce the UK's bargaining power compared to the current situation where the EU negotiates on behalf of Member States (HM Government, 2014b). This could prove especially evident for fisheries issues, as the EU's status as the world's largest market gives it a decisive role in international fora. Negotiations might also become more complicated and lengthy as a larger number of single negotiators with a strong stake in the issue can create stalemate, illustrated for example by the lengthy disputes over mackerel catches in the north-east Atlantic mentioned earlier (HM Government, 2014a). The climate for agreeing on international protocols is currently not ideal due to concerns about national sovereignty and arguments over the right to development. It may therefore not be the preferable route to resolve sensitive issues. It is difficult to forecast the direction in which the UK would drive environmental objectives in these fora.

8.5 Conclusions

Fisheries and the EU Common Fisheries Policy (CFP) are frequently mentioned by critics as an important reason why the UK should leave the EU, and it is relatively certain that no matter what the Brexit scenario, the CFP would cease to apply in the UK.

Fishing industries both within and outside the EU have been transformed in the past century and fleets diminished following rapid technological and economic change – not only in the UK but also elsewhere, including Norway. Whilst an important driver; the influence of the CFP should not be overstated. The evolution of the CFP since the early 1970s has been complicated and controversial. The performance of the policy in environmental terms has been unsatisfactory in many respects and much further progress is required. Nevertheless, the policy is slowly starting to steer in the right direction in terms of reducing the environmental burden imposed by industrial-scale fishing in the EU. A number of important problems with the established policy have been addressed in the most recent reform of the CFP. The relatively high environmental ambition of the new CFP compared to international law, for example, in combination with on-going implementation of the Marine Strategy Framework Directive (MSFD), means that we can expect to see a continuation of ongoing improvements in coming years.

This assessment makes it clear that – compared to any foreseeable alternative – cooperative management of fisheries within the EU policy framework is relatively beneficial for the sustainability of stocks. Departure from the CFP would introduce several unwanted risks. Regardless of Brexit scenario,

- ...the UK would need to develop new domestic legislation, replace EU funding streams and take the management decisions that the EU currently takes. This is likely to involve difficult negotiations, including politically tense discussions between the devolved British jurisdictions as well as taking other EU states into account. The need to reach agreements would be urgent.
- ...it is probably safe to say that a considerable number of extended negotiations would also be required concerning fishing agreements with other states, including non-EU states. Most stocks in UK waters migrate to and from neighbouring waters, for example, and the UK is likely to aim to develop a shared stock management framework post-Brexit.
- ...there are no grounds for confidence that it would lead to closer alignment of TAC levels in UK waters to scientific advice. Furthermore, the immediate and undesirable turmoil about how to establish and allocate domestic fishing rights would create a high level of uncertainty for policy makers and industry alike.
- ...considering current UK priorities for financial support to the fishing industry, an immediate “greening” of British fisheries subsidies following Brexit seems rather unlikely.
- ...international marine law and governance arrangements to which the UK is a signatory would continue to apply, although the UK may have to reapply to those organisations where its current membership is as an EU Member State. This process would not necessarily be straightforward. Furthermore, the fact that international governance is horizontal and does not provide means to ensure compliance is a very substantial weakness.
- ...the history of policy in this area does not suggest that drastic reform in favour of sustainable fisheries and ecosystem-based fisheries management in the UK would be more likely outside the CFP.

Governing industrial-scale fisheries is complex and those nations that have achieved a relatively sustainable fisheries management have spent 20–40 years testing different approaches. They have also generally had sole jurisdiction of their EEZs and are relatively isolated in relation to other nations’ waters. These conditions do not apply to the UK so caution needs to be exercised in forecasting what could be achieved unilaterally.

While there are serious issues left to address in EU fisheries governance, particularly regarding its environmental credentials, Brexit would introduce significant risks and does not immediately appear to be a desirable alternative. Meanwhile, the EU will retain its strong leverage in influencing international development on fisheries and aquaculture thanks to its position as the world’s largest market – a mechanism which the UK would lose its influence over.

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Case law

Australia and New Zealand v Japan (Award on Jurisdiction and Admissibility) (2000) 119 ILR 508 (Arbitral Award constituted under Annex VII of UNCLOS) (*Southern Bluefin Tuna Case*).

UK Association of Fish Producer Organisations -v- Secretary of State for Environment, Food and Rural Affairs (2013) EWHC 1959 (Admin) Case No: CO/4796/2012 High Court (Queen's Bench Division) Administrative Court 10 July 2013
Before: Mr Justice Cranston.
R (Factortame Ltd) v Secretary of State for Transport, (1992) Case C-213/89 (*Factortame* cases).

Conclusions

Although, in principle, there are several scenarios and variations on them that could arise following a UK departure from the EU, our analysis focuses on the two primary scenarios that emerge from whether or not the UK retains access to the EU's single market.

- In Scenario 1 ("*inside the EEA*"), the UK remains inside the European Economic Area. Under this scenario, the UK would remain bound by most EU environmental laws and still make significant contributions to the EU budget. However, it would have no voice within the EU decision-making processes.
- In Scenario 2 ("*entirely outside*"), the UK decides to position itself outside any European grouping, thus losing privileged access to the single market. This option represents a much more decisive step away from the obligations set out in EU legislation – and involves much greater uncertainty about the future.

It is difficult to forecast the results of the negotiations that would follow a vote to leave the EU. However, there must be doubts that the EU 27 would wish to agree to any arrangement that granted the UK privileged access to the single market without requiring compliance with many of the obligations that apply to EU members. Consequently, intermediate scenarios are likely to involve compliance with a large body of EU environmental law, if not the full suite applying within the EEA. On the other hand, Scenario 2 where the UK stands more defiantly alone, negotiating fresh agreements with a multiplicity of partners, suggests that liberalisation could be a central tenet of policy in future governments. The temptation to lower standards and lighten compliance procedures would be very considerable in these circumstances, even if that was not the intention at the outset. Environmental standards that impinged on economic interests could be most at risk in the race for competitive advantage over other countries.

From an environmental perspective we can be fairly confident that the challenges for the coming decade or more will include:

- Implementing the Paris Accord, implying a progressive escalation in climate mitigation efforts and tighter targets;
- Making further efforts to halt and reverse the continuing decline in biodiversity, responding to the requirements of the Convention on Biodiversity, not to mention EU targets;
- Putting in place a more circular economy, including a reduction in waste, and built in obsolescence, reducing Europe and the UK's level of natural resource consumption;
- Managing the seas and oceans in ways that address pollution, degradation and over exploitation of resources; and
- Building a more sustainable agriculture and food system that incorporates better soil management, reduced environmental impacts, more space for nature and less wastage.

This agenda will require action at a variety of levels from the global to the local. However, most require an enhanced degree of cooperation and coherence; governments working together as much as businesses in a supply chain. The European framework and the machinery offered by the EU, despite its imperfections, fills some of the requirements for

accelerating cooperation in ways that increasingly are necessary. The setting of ambitious targets and negotiation of compromises along the way, as occurs in the EU, will be required for many different issues. If the UK intends to be a significant actor in this sphere it is not the most obvious time to step back from Europe.

In conclusion, it is likely that a potential UK departure from the EU would leave the British environment in a more vulnerable and uncertain position than if it were to remain as a member of the EU. A future government might either have to accept decisions others will make for them, or be relatively unconstrained in its ability to act independently, including the option of lowering environmental standards, in a race for competitive advantage. While these risks differ in character and scale, they are substantial on all the plausible scenarios considered here. These risks apply to over four decades of legislation aiming to protect the UK's health and environment.

Annex A – Annex to Chapter 8

Background of the CFP

“If we were not members of the Common Market and were able to decide our fishing policy for ourselves, we would be in an extremely happy position”

Bruce Millan
Former Scottish Secretary and future European Commissioner
(HC Deb 09 Dec. 1981)

Fisheries were strategically important in the early formulations of European collaboration. In 1970, shortly before the potential accession to the European Economic Community (EEC) of some of the primary fishing nations in Europe – the UK, Norway, Denmark and Ireland – the existing six Member States agreed that fisheries should be shared and accessed equally. The “equal access” principle was introduced as a basic component of the first CFP, which was still being drafted, allowing any Member State access to fish in any EEC waters (House of Commons Library, 2013; CFP preamble (18)). Notably, it had recently been agreed that any new applicant for EEC membership must accept the existing EEC legislation at time of accession. Not surprisingly, the new provisions were anything but popular among the four aspiring applicants in the early 1970s, as their fisheries resources and interests far exceeded those of the existing Member States (Churchill and Owen, 2010). During the subsequent negotiations of the first CFP in the 1970s, the UK was therefore primarily concerned with weighing the potential costs of equal access to British waters with the benefits of the British fleet accessing other Member States’ waters (the UK was especially interested in the potential of accessing Norwegian and Danish waters, the latter surrounding the Faroe Islands and Greenland) (O’Neill and Hannay, 2000). By 1973, it was clear that Norwegian waters would not become part of EEC waters (although Greenlandic waters would), and in 1975 it was clear that neither would Faroese waters⁸³. The UK then found itself deprived of the possibilities it had calculated and hoped for (HC Deb, 1981) – a notion that has persisted all through to today’s political negotiations.

In parallel to the developments in Europe, the United Nations (UN) established an international regime for management of marine resources. Following nine years of difficult negotiations, the United Nations Convention on the Law of the Sea (UNCLOS) was finally adopted in 1982. One of UNCLOS’ fundamental provisions was the establishment of Exclusive Economic Zones (EEZ), giving coastal states sovereign rights to explore, exploit, conserve and manage the natural resources of waters out to 200 nautical miles (nm). As over 90 % of the world’s fishing occurs within the ecologically productive 200 nm off land, this new regime was a substantial gain for coastal states and a loss for those states who until then had been fishing in other nations’ EEZs.

The introduction of EEZs in 1982 certainly influenced the formulation of a CFP in Europe and the negotiations for designing one of its key policy mechanisms, the Total Allowable Catch

⁸³ *The fisheries provisions of the Act of Accession are widely believed to have been a leading factor in the decision by a majority of Norwegians to vote against EC membership in a referendum. Norway did not therefore join Denmark, Ireland, and the UK when they became members of the EC on 1 January 1973. (Churchill and Owen, 2010, page 6).*

(TAC) system and the system for allocating fishing opportunities, or “quotas”. Already by the mid-70s, it was clear that EEZs were to be established as part of UNCLOS and Norway and Iceland decided, in 1977 and 1975 respectively, to unilaterally extend their fisheries jurisdictions from the existing 12 nautical miles to the new limits (Churchill and Owen, 2010). Distant-water vessels that had previously fished these waters were now likely to turn to fish in EEC waters instead, increasing the pressure on already heavily exploited stocks.

Following seven years of negotiations, the first CFP was formally established in 1983 and entered into force. While the EC Treaty Article 32(1) in 1983 included “products of /.../ fisheries” in the definition of agricultural products to be covered by the common market, EU competence in relation to fisheries policy was not explicitly incorporated into the Treaty until the Treaty of Lisbon (2007), in Article 3 of the Treaty of the Functioning of the European Union.

In 1983, Member States of the EEC agreed to share fishing opportunities in the new EEZs on the basis of “relative stability” based mainly on historic catches (EC, 2009a). Essentially, this limited the rights of all coastal states in their newly expanded waters. The UK argued that the recently forgone fishing opportunities should be taken into account and a preferential allocation of catch allowances was introduced for British fishermen – the appropriateness and factual benefits of which have been debated ever since. In addition, Spain and Portugal were preparing to enter the EEC in 1986 – two countries with huge fleets but little stock resources of their own. Their accession therefore led to little increase of the EEC TAC ceiling but to an almost doubling of the EEC fleet (Cardwell, 2012).

The EU agreement with Norway allows Norwegian vessels to fish in EEC waters and vice versa, while the parties are obliged to cooperate to manage and conserve marine resources. The EU and Norway are jointly negotiating annual TACs for stocks which they both have access to (Regeringen.no, 2014). Norway has otherwise retained control over stocks in its EEZs, although 90 % of its fisheries are conducted on stocks which are shared with other nations. International cooperation is consequently a central aspect of the Norwegian fisheries management model.

The Mackerel Wars

One example of how difficult international cooperation on fisheries can be is currently taking place in the North East Atlantic. These protracted events originated after Iceland and the Faroe Islands drastically increased their quota of mackerel in the mid-2000s. Mackerel is a high value species of great importance for the Scottish fishing fleet. The total fishing pressure on these stocks consequently rose dramatically, far exceeding the scientific advice provided by the International Council for the Exploration of the Seas (ICES). A dispute followed between Iceland and the Faroes and the UK, who was backed by the EU and Norway. A trilateral deal was eventually met in 2014 between the EU, Norway and the Faroes, resulting in restricted access for Scottish (EU) fishermen and new mutual quota arrangements. Iceland remains outside the agreements and we are yet to see the last of this dispute.

The UK quota allocation system

Fixed Quota Allocations (FQAs) were introduced in 1999 to simplify the quota management system. In parallel, the British fleet had gradually transformed into one largely comprising vessels under ten meters (MMO, 2014), as these did not have to record landings or stick to catch limits according to EU regulations. Commodification of quota continued among larger vessels, although in a more restricted manner, and fishermen were able to use FQAs as loan collateral with banks to build their capacity further. Taken together, this created a highly polarised British fishing industry. When the 2002 CFP reform significantly reduced TACs to address falling stocks, the British Ministry of Agriculture, Fisheries and Food (MAFF; later DEFRA) started to gradually tighten the requirements for under ten meter vessels including introducing catch limits for this part of the industry. The details of this process have been highly controversial among small-scale fishermen; especially regarding the number of quotas allocated not reflecting their actual catches. Years of domestic debate followed with, for example, a controversial decommissioning of the under-ten fleet to better match quota. In 2011, the Government decided to reallocate quota from the English over-ten fleet to the important under-ten fleet. This in turn was met by considerable opposition from over-ten vessels arguing unfair treatment considering the investments made and the use of quota as loan collateral. Events culminated in the High Court of Justice in 2013 where the UK Association of Fish Producers Organisations lost its case about reallocation of FQAs against the Government (*UK Association of Fish Producer Organisations -v- Secretary of State for Environment, Food and Rural Affairs*, 2013).