



Report on the influence of EU policies on the environment



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EXECUTIVE SUMMARY

The need to contain pollution, reverse environmental degradation and progress environmental sustainability has been a major policy challenge particularly in recent decades; it continues to be a priority for governments throughout Europe, including the UK. It requires action at all levels, from the local to the global.

Development of EU Policy

Within this spectrum the European level has grown progressively since the 1970s to become the core framework in most areas of environmental policy. It now covers air and water pollution, major aspects of climate change mitigation, waste and recycling, biodiversity conservation, the regulation of chemicals, noise, energy conservation, environmental liability and justice, marine protection and several other issues. It provides a common EU framework within which there can be considerable flexibility for tailoring approaches to specific national and regional conditions. It is now the most developed and influential body of environmental law and policy on the global stage as well as within Europe.

This has been achieved with the active support of governments from an increasingly diverse EU because it has been viewed as the most effective and efficient means of addressing much of the environmental and climate agenda – both in environmental and in economic terms. Successive British governments of all political outlooks have shared this view and the UK has exerted a significant influence on the evolution of the policy – in terms of the priorities set, the scientific evidence, the policy tools employed and some of the key measures adopted. These include the Water Framework Directive and core legislation on industrial emissions.

Merits and drawbacks of an EU approach

The advantages of an EU wide approach, with the sometimes uncomfortable compromises this entails, can be summarised as:

- Many environmental problems require concerted action because they are essentially cross-border issues, such as many forms of air pollution and marine management.
- Where the issues are global, such as climate change mitigation, deforestation, emissions from ships and aircrafts and the depletion of the ozone layer, European nations have much greater influence and leverage when working together; a critical concern in the ongoing climate negotiations.
- A further set of environmental issues are not necessarily cross-border but can be addressed more efficiently and transparently with common Europe-wide standards, providing a level playing field for business and avoiding a diverse mix of national standards and procedures. This is one of the primary reasons why many businesses are anxious to maintain a strong EU component in environmental policy.
- In effect, there is a strong link between environmental policy at the European level and the operation of the single market.

- In the push for a low carbon, green economy, the scale of the EU market and value of common standards for energy and resource efficiency is particularly clear. There are also practical advantages of a joint approach where high levels of scientific and administrative effort are required, for example in the testing and regulation of the thousands of chemicals now in circulation.

The EU is equipped to take forward policy on this collective basis in a way that other international bodies generally are not. It has the machinery for making decisions on a democratic basis, the crucial power to make and enforce binding rather than advisory measures, the capacity to draw on the necessary expertise and clear legal foundations and principles embodied in the Treaty (TFEU). Common research, infrastructure and targeted funding can be utilised to support the policy when appropriate. The main drawback is the loss of flexibility for national administrations to choose a different approach or significantly lower standards.

While the expansion of the EU to include 28 countries can make decisions slower and more cumbersome, and there can be a loss of clarity in politically negotiated legislation, there continues to be sufficient political consensus to agree new measures and modify existing ones. In addition, a forward looking approach has been adopted, set out in successive Environmental Action Programmes and Road Maps. Given the importance of a reasonable level of policy certainty for companies and utilities investing in large projects with long pay-back periods, such as renewable energy plant and transmission lines, the relative stability offered by the EU and its longer term approach is particularly valuable.

The Form of Policy

The EU Treaty embodies clear environmental principles and provisions in the text. The Polluter Pays Principle and the Precautionary Principle provides a clear foundation for many policies, while the principle of “subsidiarity” seeks to steer EU policy away from issues best handled at the national or more local levels. The Treaty also gives priority to the concept of sustainable development in a way which has no parallel within the UK. Partly because of this, the practical effect of EU action on the environment has been to provide a clear sense of direction and momentum in environmental policy of a kind that was not previously experienced in the UK, or in most other European countries. The EU’s Environmental Action Programmes provide good examples of how the EU seeks to set out a clear strategic framework in this area.

The policy tools available have been extended and modified over time and now include a much more sophisticated set of measures than available at the outset. While there are some measures which take the form of binding regulatory standards with a quantitative dimension, others are more flexible and adaptable to national and more local circumstances. An important feature of EU environment and climate policy is that it has an influence beyond the EU’s borders, not only through agreements which extend EU standards to trading partners, but also acting as an exemplar in critical areas of policy development.

Impacts of EU Policy

As EU policy on the environment first began to emerge in the 1970s, the UK already had a significant body of environmental law and an active engagement in many international fora. The approach was generally pragmatic, responding to domestic political concerns, advancing incrementally and in many cases seeking to utilise the capacity of the environment to absorb pollution and other pressures rather than to set binding standards of the kind preferred in certain continental countries. This gave rise to tensions between different philosophies as EU policy was hammered out, particularly in areas such as air and water pollution. The result was a compromise, with significant British influence on the evolution of EU policy which has continued over time and been reflected in the formulation of several measures, including, for example, the Integrated Pollution Prevention and Control Directive and the Water Framework Directive.

The extension of EU policy into the areas of pollution control, waste disposal and recycling, biodiversity, chemicals and dangerous substances, environmental impact and liability and more recently into climate has had a profound effect on all Member States, including the UK. There is evidence of both changes in practice and measurable improvements in the quality of the environment in most of these areas. The report sets out evidence of these benefits. For example:

- In 1995, around 83 per cent of municipal waste generated in the UK was landfilled, but this had fallen to 49 per cent by 2011 in response to a series of European Directives.
- EU legislation is the principal driver of rising UK standards on air and water pollution with major health benefits. Improvements in UK air quality between 1990 and 2001 alone avoided 4,200 premature deaths per annum and 3,500 hospital admissions per annum. Continuing air pollution in the UK is estimated to reduce the life expectancy of every person by an average of seven to eight months.
- Emissions of sulphur dioxide fell by 94 per cent in the UK between 1970 and 2011, while emissions of nitrogen oxides fell by 61 per cent over the same period. The central role of European legislation in these outcomes is indisputable.
- A scientific review of the impacts of the Birds Directive shows that on average the more land that is designated as an EU protected area, the more likely it is that bird populations will increase.
- National targets under the Renewable Energy Directive have led to a dramatic increase in renewable energy capacity throughout the EU. Between 2000 and 2012, 51 per cent of new power capacity in the EU has been in renewable energy with a growth of nearly 97 GW in wind power and 69 GW in solar photovoltaics.

The priority given to the environment in decision making and to public participation has been strengthened as well. The report includes examples such as the recent strengthening of access to justice on environmental issues and the development of environmental impact assessment procedures substantially extending previous UK practice.

- As a direct result of EU legislation, the UK has adopted a new costs regime for facilitating access to justice so that citizens and civil society groups can bring legal action relating to environmentally significant decisions when no alternative avenues are available.

Because of the potential sanctions entailed in failure to comply, EU legislation has been implemented more rigorously than is often the case for purely national measures, although there are exceptions to this rule (such as the Air Quality Framework Directive). Within the UK itself, there remains some flexibility for devolved administrations to adopt their own approaches to meeting European requirements. At the same time, they are exposed to the same pressures as national administrations and this has helped to contain a tendency for some administrations, such as Northern Ireland, to fall behind other parts of the UK. The need to ensure compliance with EU law at a UK level helps to address any such divergence.

Economic and Social Impacts

One of the primary rationales for EU policy is to prevent unfair competition between EU Member States as a result of differing environmental standards. At the same time a common EU approach avoids the inconsistencies and fragmentation likely to arise from the alternative model of primarily national or regional regimes for addressing climate and environmental issues. For companies operating at a European scale this is a vital aspect of EU legislation and the reason why so many companies are keen to maintain European standards and legislation wherever possible. Furthermore, EU standards provide a higher level of security for investors relative to national measures in many areas because they are less likely to alter over time with changing political circumstances.

Whereas there are some costs involved in adopting EU environmental legislation, the evidence at a European level is that some of the countries with the most thriving manufacturing sectors are precisely those with high environmental standards. Germany is an outstanding example. One reason for this is that environmental costs frequently are not a large component of total production costs. Another is that rising environmental standards can help to stimulate innovation, improve efficiency in production processes and contribute to new markets. Much of the “green economy” now identified as a motor for growth in the UK and elsewhere is based on environmental legislation, creating new opportunities and the need for new investment. Global markets for a range of green products are expected to increase by 5 to 9 per cent per annum in the period to 2025 according to analysis in Germany.

EU measures have also helped to stimulate innovation across the EU. For example innovation in the car industry has been driven by binding standards on emissions which came into place after the demise of a voluntary approach. This has helped the industry to remain competitive at a time when manufacturers in less regulated zones such as the US failed to adapt so rapidly. Indeed, UK production of cars is now rising.

Thus EU policy can be seen as contributing to a number of economic and social changes and benefits in the UK. The report sets out some key areas where this is evident, for example:

- A recent report by the Department of Business, Innovation and Skills on the low carbon and environmental goods and services market in the UK, heavily dependent on EU

driven standards, employed around 938,000 people in 2011-2012. The CBI has proposed a similar figure.

- A substantial number of additional jobs could be created with more vigorous implementation of environmental legislation. For example, a 2010 study by Friends of the Earth found that meeting EU targets in the Waste Framework Directive for recycling/composting of municipal waste could create 18,591 new direct jobs, 9,296 jobs in the supply chain and 4,648 induced jobs in the wider economy by 2025.
- Employment in nature conservation, again partly dependent on EU law, is also growing, much of it in more remote areas with relatively little alternative sources of work.

Given these considerations, and the strong economic potential in the green sector it would be incorrect to depict EU environmental policy as a brake on growth.

The Long Term

Many environmental issues require progressive and sustained action over a long period. Some depend on relatively large investments with medium to long term paybacks, such as the construction of new power stations. The stability of EU policy can be particularly valuable in this context. EU legislation can be difficult to amend in the short term and this can create environmental drawbacks, for example in the case of biofuels incentivisation through the Renewable Energy Directive. However, this feature of European legislation renders it fairly resistant to political fashion. It allows EU action to offer the stable conditions required to consolidate environmental progress. This longevity of policy can yield extremely significant positive environmental outcomes, for instance through the Birds Directive, which has achieved important conservation successes for European and UK bird species.

Balance of Advantage for the UK

Given its development in a politicised international framework based on compromise, EU policy will not always precisely suit the conditions in the UK or elsewhere, and in some cases legislation is not well drafted, well transposed or well-implemented and enforced. While these drawbacks should not be glossed over, they are substantially outweighed by the multiple benefits of a set of EU policies implemented throughout twenty-eight Member States. Climate policy is a good example of where the UK would benefit from a more vigorous and ambitious approach at EU level and indeed argues for such, recognising that it does not have exactly the same priority in every other Member State.

The future agenda for the environment, including the reversal of the current continuing decline in biodiversity, suggests that an EU dimension to climate and environmental policy will remain highly relevant, for economic as well as environmental reasons. There are also opportunities for the UK and other governments to express their views about new approaches which may be desirable not least in the reviews of environment policy now taking place through the so-called "Fitness Checks".

Beyond the environment itself, there has been benefits for human health and welfare in the UK for an environmental policy that has led to reduced ill health from pollutants, better waste management and a greener society.

The Alternatives

Should the UK choose to disengage from the EU or opt out of EU environment and climate policy it is far from clear that any advantage would be gained. Countries which are members of the European Economic Area (EEA) but not the EU are still subject to a substantial body of EU environmental legislation with no say in its formulation and adoption. Several examples are given in the report. Switzerland, which is outside the EEA, has adopted a policy of “voluntary adaptation” whereby Swiss law is aligned with EU legislation and all measures linked to the internal market to a large degree, but measures have to be negotiated on an ad hoc bilateral basis, which is cumbersome, creates uncertainties and may not be offered to other countries in the future.

Furthermore, in the event of any disengagement, and in the face of continuing domestic and global pressures on the environment, on biodiversity and the use of national resources as well as climate, it would be necessary to ensure continued protection for the environment in the UK at an equivalent or superior level to that afforded by current EU legislation. As the report demonstrates, many environmental threats – to the climate, to migratory species, to air quality and more – require international approaches. It is difficult at this point to ascertain where the necessary rigorous, implementable and internationally effective action to protect the UK’s environment, nature and climate would derive from, if not from the EU.

For these reasons the overall impact of EU membership in the environmental domain can be judged to be strongly positive to the UK. The action taken has been well balanced, with benefits for human health and welfare and the sustainability of the economy as well as the environment itself.

1 INTRODUCTION

This report has been prepared in the context of the Review of the Balance of Competences now taking place at the behest of the UK government and the broader more political debate on the environmental aspects of Britain's relationship with the EU. It considers the role of the EU in influencing the environment both in Europe more broadly and particularly in the UK. It begins with some consideration of the rationale for addressing environmental and climate policies at a European level and then considers the approaches which have been adapted in practice as the policy has developed. In examining the impacts of EU policy the report considers both a range of key themes, such as water pollution and climate policy and some important individual measures. A number of case studies are included to illustrate different issues. Some of these apply at the UK level and others are more specific to different countries, including examples in England, Scotland, Wales and Northern Ireland.

Scope of this report

The principal focus is on those elements of EU policy focussed on internal affairs within Europe but with some reference to global issues, such as the EU's role in international environment and climate agreements. It is recognised that a parallel review is taking place on transport policy and this is touched on only to a limited degree. Similarly, other EU policies which have an important bearing on the environment, including the Common Agricultural Policy (CAP), the Common Fisheries Policy and Energy Policy, which are being addressed in a separate "semester" in the Review of the Balance of Competences are not addressed here either.

A two-sided relationship

It is worth emphasising that the relationship between the EU and the UK in this sphere is two sided. Whilst the main weight of this report is on the impacts of EU policy on the UK, and in Europe more widely, the UK's influence on EU policy is also touched on, albeit much more briefly. It would be incorrect to depict the UK as a passive recipient of EU policy in this sphere, as sometimes occurs in domestic debates. Rather, it should be underlined that since its accession to the EU in the early 1970s, the UK has been an active participant in decision-making processes, having had and continuing to have a significant influence on the shaping of EU policy in this sphere.

2 THE RATIONALE FOR ADDRESSING ENVIRONMENTAL ISSUES AT THE EU LEVEL

Over time, the EU has emerged as a major force in driving environmental policy in all the Member States and beyond the EU, building up a body of law and policy in a wide range of areas. Several hundred measures are now part of the so-called EU environmental acquis (see IEEP, 2010). This gradual expansion, starting in the 1970s, has occurred for a number of different reasons which together have been sufficiently persuasive to attract support from an increasingly diverse set of EU Member States at varying levels of economic development and with a wide spectrum of political outlooks. The rationale for individual measures varies. Many have been put forward primarily in order to pursue environmental objectives, while others have been proposed on the basis that they were needed to provide a coherent single market within Europe.

These developments at the EU level did not occur because of a lack of interest in the environment in individual European countries. Rather, there has been wide acceptance of the advantages to addressing many, although not all, environmental concerns at the European level. These can be summarised as follows:

- The **trans-boundary nature of many environmental issues**, including those relating to air quality, the marine environment and migratory species, etc – see Box 1.

Box 1: The Marine Environment

The marine environment is one example of where transboundary issues are critical and growing in importance given the difficulties in mobilising action in this area, partly because so many parties are involved. For example, marine litter is clearly a trans-boundary problem, of global proportions. In 1992, a shipping container full of plastic bath toys was lost overboard from a ship traveling from China to Seattle. This accident has provided useful insights into ocean current pathways: by 1994, some had been tracked to Alaska, while others reached Iceland in 2000, and Scotland in 2003 (Ebbesmeyer and Ingraham, 1994; Hohn, 2012).

The trans-boundary nature of the problem means that isolated action by one country will not be sufficient to tackle the problem. This reality generates unwillingness on the part of any state to act and potentially shoulder a disproportionate share of the costs and perhaps limited results. This means that the problem will not be addressed without cooperation between countries. Indeed, in this case action will also be needed on an international level in order to protect EU waters from litter. Certain actions are more readily addressed through the EU level than through other channels, provided the relevant states are involved. The existence of formal EU processes, less formal relationships, overlap with other policies and ability to agree legally binding measures are all relevant.

Amongst the most important EU initiatives in response to this problem was agreement on the Marine Strategy Framework Directive (MSFD) (2008/56/EC). This establishes a framework within which Member States need to take the necessary measures to achieve or maintain good environmental status (GEnS) in the marine environment, by 2020, implemented through marine strategies.

It focuses on 11 qualitative descriptors to determine GEnS, which may all be trans-boundary in nature; relating to; biological diversity, non-indigenous species introductions, commercially exploited fish and shellfish populations, food webs, human-induced eutrophication, sea floor integrity, impacts on hydrographical conditions, concentrations of contaminants, contaminants in fish and other seafood, marine litter and underwater noise.

At the same time the MSFD recognises that European seas have different characteristics ('specificities' – Art. 4). Member States sharing a marine region or subregion are expected to cooperate to ensure that their strategies are coherent and coordinated. The burden of this is reduced as they are encouraged to use existing regional structures (the Regional Sea Conventions) to achieve this coordination.

- The **global nature of some of these issues**, with the consequence that where Europe acts as a bloc it is more likely to be able to lever global change than where countries act in isolation or in shifting alliances. Addressing the threat of climate change is a frequently cited example. Another is protecting global and freshwater ecosystems.
- The **value of common standards** for certain products with environmental impacts, as opposed to predominantly national standards being applied within a single European market where goods and services are traded freely. Lower environmental standards, and indeed higher standards, can lead to barriers to trade and fragment markets. Individual countries with lower standards may confer an economic advantage on their own producers. This argument is particularly relevant where climate and environment goals are best advanced through binding standards, but some increase in costs may occur, at least initially. Energy efficiency standards for appliances, such as fridges, are a case in point.
- The possibility of **sharing the resources, benefit and costs** of an initiative within a group of cooperating countries. This has become an important issue in climate policy for example since the "burden" of emission reductions within the EU can be shared, at least to some degree, and hence a collective willingness to move forward together created. Since the EU has a common budget, there is a possibility of resourcing at least some such joint endeavours in a way that is difficult in looser federation arrangements, such as the European Free Trade Association (EFTA) or North American Free Trade Agreement (NAFTA).
- The **economies of scale** which can be achieved through working together to develop new technologies, create the necessary infrastructure to stimulate the emergence of a green economy and, indeed, for a more coherent set of protected ecosystems, such as Natura 2000. One example here would be the development of new technologies to a commercial scale, such as Carbon Capture and Storage (CCS).
- The capacity to use **economic instruments** on an appropriate scale and in an effective way. For example, the EU has exclusive competence in the sphere of trade and the consequent capacity to include an environmental dimension in common external tariffs, introduce absolute prohibitions on certain imports or regulate exports. Common technical standards, common subsidies and taxes, will have merits over national initiatives in some circumstances because of the scale involved, the need to avoid

negative impacts on the competitiveness of individual countries and the political “comfort” derived from moving forward alongside neighbours in a new direction, rather than alone. Many of these economic instruments have a politically sensitive element but may prove more important over time as environmental issues are embedded more deeply in what we hope will, in the medium to long term, be progressively greener economies.

- The EU can provide a **sense of direction and momentum** in an area where there is broad political agreement that progress is required but the capacity to initiate it is limited at a more national level and external expertise and willingness to propose ways forward adds value. Unlike most national governments, the EU has developed forward-looking programmes on the environment which are agreed with the Member States and the European Parliament. These set out the issues that are seen to be relevant for the coming decade at a European level and indicate where initiatives might be appropriate, in some cases elaborating the form which they will take. This provides a future perspective which can be helpful in guiding those outside government as well as national authorities in forward planning and stimulating a debate about the nature of priorities to be addressed for the years ahead. The recently agreed Seventh Environmental Action Programme is the latest example of such a strategic document (EC, 2013a). In climate policy a similar role is played by the EU’s Low Carbon Road Map which looks further ahead at the steps that would need to be taken to reduce European emissions by 80 per cent by the year 2050 (EC, 2011).

The EU provides the structure in which the advantages of working on a collective basis can be utilised. The EU has the institutional capacities which other international fora lack. It has the machinery for making decisions on a democratic basis, the power to make and enforce binding rather than advisory measures, the capacity to draw on the necessary expertise and clear legal foundations and principles embodied in the Treaty (TFEU). Common research and infrastructure can be utilised to support the policy where this is required. These characteristics have been decisive in persuading governments to pool sovereignty in this domain of policy, for the benefit of both environment and their own societies.

3 CREATING AN EU ENVIRONMENTAL POLICY

EU policy on the environment has been built up in a gradual process since 1973 to become what is perhaps now the most developed set of measures and principles in any part of the world. It has acquired global influence in the process, reinforced by the increasing size and economic importance of the EU.

Many of the earliest measures addressed specific forms of environmental pollution or set standards for products traded within Europe. There was also early political support for legislation on pressing issues which were not connected very significantly to trade concerns. For example, the European Parliament was a prime supporter of the case for a Directive to protect birds in Europe, with British MEPs amongst the most enthusiastic (Haigh, 1984).

Some measures arose from political reaction to particular incidents, such as the “Seveso Directive”, follow others from the desire of one or more national governments to address a key issue, leading eventually to a European rather than a national solution. Often this was a compromise. Some measures stem from international agreements that EU governments have signed up to and subsequent agreement that a common EU approach would be beneficial. For instance, the Habitats Directive is based closely on the provisions of an earlier Council of Europe agreement - the Bern Convention.

While the response to political imperatives has been one driver for what is now a rather comprehensive set of policies, there has also been a more strategic process underlying developments. Policies have been modified and extended to be more coherent and to address new issues; often with a global rather than purely European dimension. For example, policies on climate change, particularly the “package” of strategic EU measures put in place in 2006-2009 are an outstanding example. Initial conflicts between a continental preference for binding, numerically expressed, emission values for specific substances, like toxic wastes, and a British preference for setting environmental quality standards, have been reconciled to a large degree, with both approaches in use. Forward plans for the environment have been proposed and debated in detail in a relatively comprehensive way which does not occur in national policies. A succession of “Environmental Action Programmes” has developed new themes and approaches for the coming 10-12 years, including the integration of the environment into other EU policies, such as fisheries and regional development, an initiative which the UK fostered in its 1998 Council Presidency. However implementation in practice often has proved more difficult.

Beyond this, environmental policy has been under-pinned by a series of principles embedded in the EU Treaties from the Single European Act onwards. Sustainable development is explicitly one of the core objectives of the Union; there is no counterpart in the UK’s constitution. The Polluter Pays Principle, fundamental to modern environmental policy, although not always respected in practice is amongst the most crucial of the explicitly environmental principles in the EU Treaty (TFEU 2012).

National interests are taken into account through established EU decision-making mechanisms and processes. Furthermore, adherence to the principle of subsidiarity means that action is only taken at the EU level if it cannot be satisfactorily pursued by at the national, regional or local levels. This principle is often overlooked in the UK debate where

the EU is sometimes portrayed misleadingly as an autonomous external force which imposes requirements on the UK in pursuit of its own aims, with little concern for national interests. Subsidiarity remains a major touchstone in the development and agreement of EU legislation. An annual report by the European Commission on the subject refers also to opinions expressed by national parliaments as to whether proposals from the Commission on different topics have given due regard to the subsidiarity principle. Member States, including the UK, that are opposed to a new Directive on soils have utilised this principle to considerable effect. In summary, EU policy has extended the UK's previously substantive but often incremental set of environmental policies in several different directions; frequently standards have been set higher and longer than goals have been set. A strategic dimension to national policy has been added and buttressed with specific measures, such as the Strategic Environmental Assessment Directive. Conflicts between UK and continental approaches have been minimised with benefits accruing for the single market and the environment as a more stable and consistent approach has been adopted. The environment has been cemented into the Treaty and into Europe's economic goals. This is no small achievement in forty years and goes beyond what the UK or any other European country could have achieved on its own.

4 THE IMPACTS OF EU POLICY

The primary purpose of nearly all EU measures is to address concerns at a European level, rather than to seek the ideal outcome for a specific Member State, such as the UK – unless this happens to coincide with the best achievable outcome for Europe as a whole. Consequently, it is not wholly appropriate to judge a particular measure or initiative solely by virtue of its impact in the UK as opposed to its consequences in Europe as a whole or, in some cases, at a global level. This applies to the UK as well as other countries. Generally one would expect that meeting European objectives also will advance those of the individual Member States through virtue of their membership of the EU. The responsibilities of national governments and members of the European Parliament in decision making is intended to allow all Member States to participate fully in the decision making process and to minimise any adverse consequences for individual countries arising from EU measures.

In considering the impact of EU policy and measures in the text below we have chosen many examples drawn from the UK experience. But this should not be taken to imply that UK citizens only benefit from environmental or other improvements achieved within their own shores. They will also benefit from improvements taken up in other countries. This applies at varying levels. They may benefit from clean water or well protected nature reserves in other countries or from collective European action, for example to reduce pollution of the marine environment or the atmosphere.

There are several different ways in which the exercise of EU competence in the environmental and climate spheres and the actions flowing from this have an impact in Member States including the UK (see Haigh, 1984). These can be summarised as follows:

- Certain environmental issues have been addressed in the UK, and elsewhere in Europe which would not otherwise have been on the national agenda. Nonetheless the UK environment has benefited. Examples include sewage sludge dumping in the North Sea and the recent suspension of some uses of neonicotinoid pesticides accompanied by improved safety tests for crop protection products necessary for more certainty about the risks to the health of pollinating insects.
- The UK as a participant in global negotiations has gained more influence through its position within the EU and in turn the EU has been able to achieve more, eg on climate change, than it would have done if nations had acted alone. Ultimately, the global gains benefit UK citizens too.
- EU legislation has raised standards relating to products, processes and ecosystems, higher than they would otherwise have been in a substantial number of areas (but not in all). The comfort offered by simultaneous action on a European scale has made it more palatable in political and economic terms to raise standards above what otherwise might have been the UK's chosen level.
- The penalties associated with non-compliance with EU legislation, including the introduction of fines in recent years, often have motivated national authorities to attend

to implementation more vigorously than they would have done in relation to a purely national set of legislation, although still imperfectly.

- EU policy has expanded the range of tools for pollution control and other environmental purpose that are employed in the UK and refined the use of existing tools. This has also influenced the institutions responsible for taking forward policy. In the early 1980s Nigel Haigh observed that “the institutional arrangements for administering environmental policy have been changed. The reliance on voluntary agreements and guidelines which previously prevailed with detergents, polychlorinated biphenyls, the composition of fuels, and with drinking water has shifted to reliance on legislatively prescribed standards” (Haigh, 1984). The palette of policy instruments has widened considerably as well (see Chapter 5).
- Funding available to the UK through LIFE+ has led directly to some valuable projects and environmental improvements.
- The scale of the EU internal market probably has encouraged the faster development of certain environmental technologies and techniques than would have occurred in its absence. EU legislation on vehicle emissions, particularly carbon dioxide (CO₂) emissions from passenger cars, is one example.
- The EU has provided direction, momentum and a sense that environmental standards have to be raised as a strategic priority in policy. This is expressed partly, but not exclusively, in the environmental action programmes.
- In some areas of policy the demands imposed on the authorities concerned are sufficiently large that there are economies of scale from a pooled approach under a single authority as well as with environmental and trade related benefits. Chemicals policy is perhaps the clearest example (See EU Chemicals Policy Box 2)

Box 2: EU Chemicals Policy

Some chemicals used by industry and found in commercially available products have been shown to be dangerous to the environment and human health and therefore need to be controlled. Any restrictions on marketing and use, or labelling requirements, affect trade and therefore are now made at EU level in order to maintain the integrity of the EU internal market. If the UK ceased to be a member of the EU it would still be bound by EU standards for products that it exported to the EU. It would also have less say in how chemicals are controlled in the future.

EU chemicals policy has evolved in a series of steps starting in the 1970s. It was revised and largely consolidated in 2006 into a single Regulation 1907/2006 known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals). REACH is still developing, but the EU now has in place a maturing regime for controlling chemicals which, despite its imperfections, is providing a model for countries outside the EU.

Instead of relying on purely national risk assessments REACH places responsibility on manufacturers to carry out tests and assessments and on the European Chemicals Agency (ECHA) to evaluate them. Member States remain free to carry out their own evaluations but

the burden has been lifted off their shoulders by ECHA which should offer economies of scale. If the UK left the EU it would either have to create a new bureaucracy for this purpose or continue to rely on ECHA while having little or no control over it.

The main impacts considered here are environmental, given the objectives of the policies under consideration. However, later in the Report we consider other impacts, including economic performance, implications for investment and jobs, the health of citizens and the costs of treating pollution related diseases. Less tangible changes in the quality of life will have occurred as environmental policy develops; these are more difficult to document but should not be overlooked.

In examining the environmental impacts of EU policy our main focus is on its role in driving legislation either directly or through implementing measures adopted by UK administrations. There are large numbers of examples of where EU legislation has led to stronger environmental protection in the UK, either by introducing entirely new measures or amending existing ones. Implementation of many of these measures has been more vigorous than it might otherwise have been if purely domestic legislation had been involved. In some fields we also have evidence of how the physical environment has improved in response to more demanding legislation, eg improvements in water quality, reductions in industrial emissions and reduced levels of waste going to landfill. In others, change is more difficult to measure or the data is not available, but it is clear that policy has exerted a significant influence. In some cases this is apparent in new processes or procedures, as noted below.

Other benefits from the legislation need to be noted as well. These vary but in some cases include:

- The commercial benefits of common EU standards for companies which operate in an increasingly pan-European market. Manufacturers from other parts of the world may need to adapt to these standards if they want to sell into the EU market, therefore extending the environmental benefits more widely.
- The commercial success of some industries subject to regulation. For example the car industry where investment in the UK has continued to take place, despite and probably with help from more demanding EU standards for CO₂ emissions from vehicles which has forced the pace of development in recent years. This has allowed the industry based in Europe to remain competitive in global terms and in the UK output of vehicles has grown in recent years. The importance of a widening range of “green” industries, for example in renewable energy technology and water treatment equipment is in many cases linked to regulation and other policy changes.
- Social impacts also can be identified although they are not studied or reported in a significant way. There is a growing body of evidence that higher environmental standards have been associated with improved human health particularly where air pollution can be reduced, by measures that are adequately implemented and enforced. Several EU measures on the environment are aimed at sources of pollution which are concentrated in urban sources and impact lower income groups particularly as they are more likely to live in the vicinity of industrial plants.

- The employment impacts of environmental regulation are mixed but we can draw attention to some positive stories and are considered briefly below.

4.1 Environmental Impacts

There is substantial evidence of the impacts of EU measures in raising environmental standards or protecting the environment in other ways in the UK. In most cases this is based on the additional effort generated by the UK's need to respond to EU legislation relative to what otherwise would have occurred under a "business as usual" scenario where purely domestic or globally determined measures were in place. This counterfactual cannot be specified in absolute terms but there is a broad consensus in the literature that the UK would not have aspired to the same level of environmental ambition without the presence of EU drivers in many spheres of policy. A number of examples are given in this section and a broader picture of the relationship between UK and EU legislation in a range of different sectors is set out in section 5 which follows.

4.1.1 Protection of birds

There is clear evidence from a paper published in Science (Donald et al, 2007) that the Birds Directive has contributed significantly to the protection of those species considered to be at most risk and in need of most urgent protection and has made a significant difference in protecting many of Europe's birds from further decline.

Four aspects of this result were noted in the paper:

a) The most threatened species are progressing better

Before being given special protection on Annex I of the Directive, this group of the EU's most threatened species were doing significantly worse than non-Annex I species. However, once these species were put on Annex I, and received the targeted conservation help associated with Annex I (e.g. they can be the focus of EU Species Action Plans, can receive specific EU LIFE funding etc), these species did better than non-Annex I birds.

b) The Birds Directive was more successful than non-EU conservation measures

Outside the EU, where the Birds Directive does not apply, Annex I species did no better than birds that were not on Annex I. Following implementation of the Birds Directive, Annex I species did better inside the EU than outside the EU.

c) Bird populations take time –more than ten years– to recover

It is shown that the longer a bird spends on Annex I of the Birds Directive, the more likely it is to show recovery. On average it takes over ten years of policy measures before improvements in whole populations are detectable.

d) EU protected areas are directly helping European birds

On average, the more land is designated as an EU-protected area (in particular as a 'Special Protection Area' identified by the Birds Directive), the more likely bird populations are to

improve. Annex I species respond nearly twice as well as the average due to specialised conservation measures targeted at them.

Box 3: Funding for the Environment: the LIFE Programme

Launched in 1992, LIFE (The Financial Instrument for the Environment) is the only area of European spending that is dedicated solely to the environment. LIFE supports projects that contribute to the implementation of the EU's Birds and Habitats Directives (the Natura 2000 Network), the integration of biodiversity into other policy areas, the assessment and monitoring of pressures on biodiversity and its response to those pressures. The LIFE programme represents a major contribution to the EU's goal of halting the loss of biodiversity by 2020 and also plays a role in increasing the leverage effect of the EU budget.

The UK receives a share of this Fund and this has been used to support a number of influential and sometimes ground-breaking projects. Some of these have had an influence beyond the UK. For example, in 2001 the EU's LIFE programme helped to fund a £2.8 million project, led by a partnership of RSPB Scotland, Scottish Natural Heritage, the Forestry Commission and Plantlife, to bring conservationists and foresters together to restore damaged blanket bog at a landscape scale in the Flow Country in Caithness and Sutherland.¹

In another example, EU LIFE funding supported two projects focussed on reedbed habitat restoration and creation that have helped bring the Bittern (*Botaurus stellaris*) back from the brink. With the help from these projects by 2004, the UK bittern population had risen to a minimum of 55 booming male birds, thus achieving the UK's 2010 Biodiversity Action Plan target.²

For the UK, LIFE funding has been instrumental in improving the status of some of our most charismatic species and habitats, and enabling the UK to meet national, EU and international biodiversity conservation objectives. The RSPB has been one of several British organisations that have delivered projects in the UK in partnership with UK nature conservation agencies, local groups and the private sector.

4.1.2 Marine Policy

EU law has been important in improving protection of marine waters, most notably the Birds, Habitats, Bathing Waters and Urban Waste Water Treatment Directives described elsewhere in this report. However, more recently the Marine Strategy Framework Directive (MSFD) (2008/56/EC) has been a key motor for progress in addressing marine issues throughout Europe, including in the UK where it has been transposed in the Marine Strategy Regulations 2010. The Marine and Coastal Access Act (2009) covers licensing, planning, management, and marine protected areas, but the scope of the MSFD is much broader. Good environmental status must be achieved across all aspects of the UK's marine ecosystem and the legislation covers all key pressures and impacts on it, including cumulative impacts. The UK could have included broader provisions in the Marine Act but chose not to.

¹ http://www.rspb.org.uk/Images/flowcountry_tcm9-286460.pdf and <http://www.rspb.org.uk/reserves/guide/f/forsinard/work.aspx>

² <http://www.rspb.org.uk/ourwork/conservation/species/casestudies/bittern.aspx>

The MSFD allows for considerable interpretation of its provisions by Member States, allowing flexibility in decision making for the UK. While the Directive appears to have had a strong influence on national legislation, the environmental benefits could be enhanced by more ambitious levels of implementation.

Under the MSFD Member States are required to set targets for the different descriptors. For marine litter, the targets are supposed to cover litter on coastlines, the seafloor, in the water column, microparticles, and the impacts of litter on marine life. However the UK has only set a target for marine litter found on coastlines, and this is trend based, requiring 'an overall reduction in the number of visible litter items'. It has set surveillance indicators to monitor litter on the seafloor and water column, but no indicator for microparticles or impacts of litter on marine life.

In a second example, the UK Marine and Coastal Access Act (2009) and the Marine (Scotland) Act (2010) include provisions for the establishment of an ecologically coherent network of marine protected areas, which will be critical for meeting the MSFD's requirements to put in place spatial protection measures which contribute to a coherent and representative network of marine protected areas. However the evidence so far suggests that implementation has been unimpressive (Baldock et al, forthcoming 2013). It appears that a lack of scientific evidence has been employed as a reason for postponing marine protected area site selection, sitting uncomfortably with the precautionary principle, and that scientific criteria have been superseded by socio-economic considerations. Resource constraints and a short-term focus on capital costs have undermined implementation (Baldock et al, forthcoming 2013).

Given this less than impressive record at implementing national provisions it is unlikely that the UK would be advancing its marine protection to required levels to build an ecologically coherent network without EU policies such as the MSFD and the Birds and Habitats Directives driving progress and seeking to ensure that consistent standards are maintained.

4.1.3 Waste and recycling

One area where environmental legislation has been taken forward largely at the European level in recent years, not least because of the need to avoid inappropriate trans-border transfers of materials and concerns about a level playing field, with respect to wastes, recycling and the progressive development of new approaches to sustainable consumption and production. Although implementation of extant EU legislation is known to be weaker in this sector than in many others, there has still been demonstrable progress both at the EU and national levels which would not have occurred without it.

The key measures in this sector include the Waste Framework Directive (2008/98/EC), the Landfill Directive (1999/31/EC), the Packaging Waste Directive (1994/62/EC), the Batteries and Accumulators Directive (2006/66/EC), the End-of Life Vehicles Directive (2000/53/EC) and the Waste Electrical and Electronic Equipment Directive (2002/96/EC).

In terms of environmental impact, EU-27 wide data on municipal waste management does mask significant differences in performance between the Member States. However, it does show an impressive improvement in municipal waste management performance over the past two decades:

- In 1995, 62 per cent of municipal waste generated in the EU was landfilled, 14 per cent incinerated (including with energy recovery), and 15 per cent recycled/composted.
- By 2003, 50 per cent of municipal waste generated in the EU was landfilled, 16 per cent incinerated (including with energy recovery), and 29 per cent recycled/composted.
- By 2011, 36 per cent of municipal waste generated in the EU was landfilled, 22 per cent incinerated (including with energy recovery), and 39 per cent recycled/composted.

The targets in EU waste legislation have certainly helped to drive these improvements.

Within the UK, EU waste laws have helped to bring about an important switch from dumping waste in landfills to collecting it for recycling and re-use. It is extremely unlikely that such a turnaround would have been achieved so quickly without a series of EU initiatives (IEEP, 2012).

The Environment Agency states that the Landfill Directive has changed for the better the way that waste is managed in the UK, helping to apply consistent high standards of design, construction, operation and aftercare. In accordance with the requirements of the Directive, 812 UK landfill sites have stopped accepting waste since it came into effect in July 2001 (the Directive was transposed in the UK on June 15 2002 as the Landfill (England and Wales) Regulations 2002) (EA, 2013).

According to Eurostat³ data, in 1995 around 83 per cent of municipal waste generated in the UK was landfilled (9 per cent incinerated, including with energy recovery, and 7 per cent recycled/composted). By 2003 (the year following national transposition of the Landfill Directive), landfilling had fallen to 74 per cent (8 per cent incinerated and 18 per cent recycled/composted). By 2011 (the most recent year for which data are available), landfilling had dropped dramatically to 49 per cent (12 per cent incinerated and 39 per cent recycled/composted).

The capacity to use economic instruments in an effective way for waste management appears to have been enhanced very substantially by EU measures, and indeed the European Commission is currently investigating ways to encourage wider use of economic instruments by Member States to improve their waste management performances.

The UK landfill tax was introduced in 1996 (prior to the Landfill Directive, but after the 1990 Community Strategy for Waste Management). Initially the aim of the tax was to internalise the external costs of landfill, but more recently the aim became to encourage alternative means of managing waste (which is in line with the requirements of the Landfill Directive and with other EU waste strategy and legislation). The tax has steadily increased from an initial rate of £7 per tonne to £72 per tonne as of 1 April 2013 (from 1 April 2014 this will rise again to £80 per tonne, and will not fall below that rate until at least 2020).

Several waste stream Directives have required the creation of producer responsibility schemes, whereby producers of waste are held (financially) responsible for the

³ Eurostat, Municipal waste generation and treatment, by type of treatment method (kg per capita), data code: tsdpc240

management of that waste. The introduction of such schemes in the UK has generally happened following the implementation of the relevant Directive: the Packaging Waste Directive dates from 1994 and the UK producer responsibility scheme commenced in 1997, and similar patterns can be seen for the Waste Electronic and Electrical Equipment Directive (2002 Directive, first UK scheme commenced 2004), Batteries and Accumulators (2006 Directive, UK scheme commenced 2009) and End of Life Vehicle Directive (2000 Directive, UK scheme commenced 2005). Whilst it is not necessarily the case that the UK would not have developed such schemes independently, EU legislation clearly can be seen as a motivating factor and driving force for their development.

4.1.4 Strengthening Access to Justice

The UK ratified the United Nations Economic Commission for Europe's (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the 'Aarhus Convention') in February 2005.

The European Community also became a Party to the Convention in 2005 and, in preparation for compliance, Member States were required to bring into force the necessary laws, regulations and administrative provisions to transpose the requirements of the Public Participation Directive (PPD) (2003/35/EC) into domestic law. The PPD incorporates the wording of Articles 7 and 9 of the Aarhus Convention (concerning public participation in respect of certain plans and programmes and access to justice respectively) of the Aarhus Convention into EC Directives covering Environmental Impact Assessment (EIA) and Integrated Pollution Prevention and Control (IPPC).

Articles 3(7)⁴ and 4(4)⁵ of the PPD are central. They require legal review mechanisms in respect of EIA and IPPC to be "fair, equitable, timely and not prohibitively expensive". It has been widely recognised that legal procedures in the UK typically are very costly, primarily on the basis that the application of the loser pays principle (the losing party bears the legal costs of the winning party) can expose claimants to uncertain, but usually high, adverse costs. For example, in one recent case (which has been the subject of an interpretative ruling from the Court of Justice of the European Union) one local resident fighting the legality of the continued operation of a cement works in Rugby, Warwickshire, was exposed to just under £90,000 in legal costs.

In 2005, the Coalition for Access to Justice for the Environment (CAJE) submitted a complaint to the European Commission alleging that the UK was failing to comply with the new Article 10a of the EIA Directive⁶ which states that access to the courts be 'not prohibitively expensive'. The complaint resulted in a letter of formal notice to the UK in October 2007, a Reasoned Opinion in March 2010, and an announcement that the case was being referred to the Court of Justice of the European Union (CJEU) in April 2011. A hearing is expected in late Summer 2013.

⁴ Amending Article 10a of the EIA Directive

⁵ Amending Article 15a of the IPPC Directive

⁶ The original EIA Directive of 1985 and three amendments have been codified by Directive 2011/92/EC of 13 December 2011

Shortly afterwards, CAJE acted as an *amicus curiae* in respect of a Communication submitted to the Aarhus Convention Compliance Committee regarding the UK's failure to comply with Article 9(4) of the Convention concerning environmental cases more generally. In 2011, the Aarhus Compliance Committee found the UK in breach of Articles 9(4), 9(5) and 3(1) of the Convention concerning costs and injunctive relief.⁷ The Committee recommended the UK review its system for allocating costs in environmental cases within the scope of the Convention and undertake practical and legislative measures to ensure that such procedures are fair and equitable and not prohibitively expensive and also provide a clear and transparent framework.

In 2013, the Civil Procedure Rules were amended in respect of costs and environmental cases. As of 1st April, adverse costs liability for unsuccessful claimants in environmental judicial reviews is capped at £5,000 for individuals and £10,000 for 'all other cases'. Costs protection will apply from the time the application is made to the court (unless contested by the defendant). However, successful claimants will also be subject to a 'cross-cap' (i.e. their ability to recover legal costs in the event that they are successful will also be capped). The present cap in England and Wales is £35,000 inclusive of VAT. With respect to injunctive relief, the court must have regard to the question of prohibitive expense when considering whether a cross-undertaking in damages⁸ is required and must make necessary directions to ensure the case is heard at the earliest opportunity.

It is too early to tell whether these changes will make a significant difference on the ground to the ability of citizens and civil society groups to bring legal action and so have the opportunity to participate more fully in potentially significant decisions when other avenues are no longer available. However, the mere fact that automatic costs caps now exist for cases that fall under the Aarhus Convention is a substantial improvement on the previous position. The rules are not perfect; however, the very fact that individuals and NGOs are starting to talk about the possibility of bringing cases suggests they will make a difference. One thing is certain though - these amendments would not have been effected were it not for the Aarhus Convention and the EC Public Participation Directive.

4.2 Impacts on different parts of the UK

In considering the impact of EU environmental law on the UK, it is important not simply to focus on the impacts on England, or usually England and Wales. Scotland had and continues to have some common areas of environmental law with England and some areas of difference. The most notable changes due to EU law have been legal (e.g. the adoption of new primary legislation to implement the Water Framework Directive) and political (e.g. to ensure protection of habitats of European importance which were under increasing threat). However, without EU law, it is likely that environmental law in Northern Ireland would be seriously lagging behind. Over many years the UK has been subject to infringement proceedings due to failure to transpose EU law in Northern Ireland. While some of this can be explained by changing governance during the troubles, the pressure arising from the EU has meant that environmental protection has not been allowed to take a back seat despite

⁷ ACCC findings available at http://www.unece.org/fileadmin/DAM/env/pp/compliance/C2008-33/Findings/C33_Findings.pdf

⁸ An undertaking from the claimant to compensate the defendant for any 'profits' foregone' as a result of ceasing the development while the hearing takes place in the event that the claimant loses the case

other political preoccupations. On a very much smaller scale is the case Gibraltar, where there would have been far less impetus to develop environmental legislation without EU law.

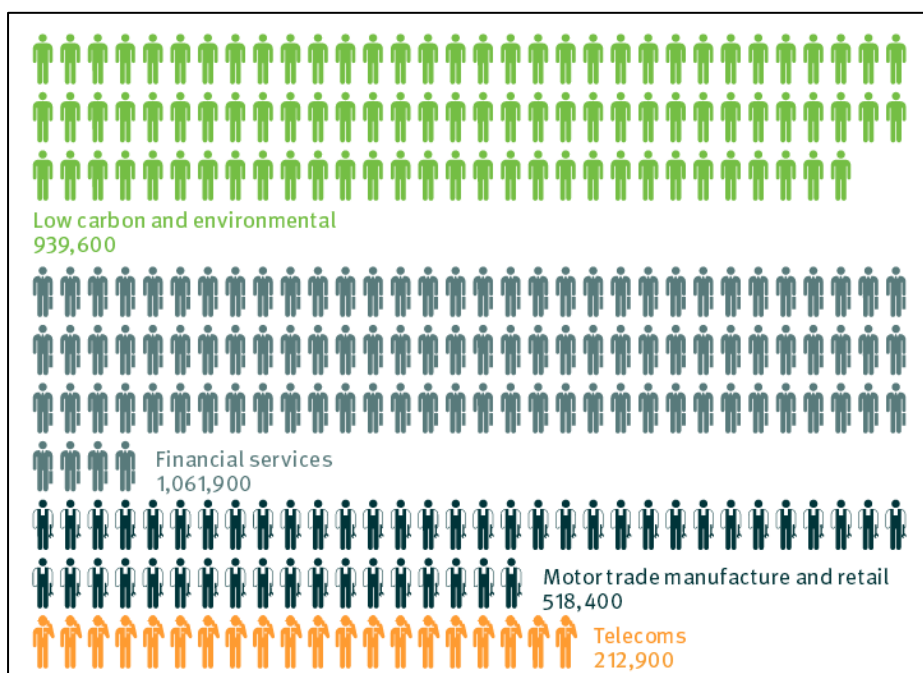
EU law has, therefore, both provided flexibility for sub-national approaches and prevented parts of the UK from falling behind in achieving contemporary levels of environmental protection. This appears a positive result of EU level action which very likely would not have arisen if there was simply UK competence on these issues. This has helped produce a more level playing field for business across the UK as well as benefitting the environment.

4.3 Economic and Social Impacts

Environmental and climate policy has a multiplicity of impacts on economic performance, driving changes in infrastructure, the use of different resources and technologies, investments and in some cases affecting the competitiveness of different companies and industries as well as national economies in a broader sense. For example the 2012 EU Global Competitiveness Report points to a close link between energy efficiency and competitiveness (European Commission 2012). Generally it is difficult to separate the costs and benefits arising from environmental policy from the multitude of other factors influencing economic performance. Within Europe, however, it is clear that many of the Member States with the strongest economic performance, including in manufacturing industry, also have some of the most demanding environmental regulations. Germany is a particularly clear example in this regard. While environmental policies probably will have contributed to the demise of certain “sunset” industries, they also have a key role in contributing to the development of a new set of industries and investments. For example there are huge opportunities related to the ‘green economy’ from which the UK is expecting to derive a significant proportion of new growth. Many of these opportunities are underpinned by policies, including environmental and energy related standards, the majority of which are, and will continue to be, established at the EU level.

Analysis by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety suggests that global markets in environmentally friendly power generation and storage will grow by 9.1 per cent per annum between now and 2025. For material efficiency the figure is 7.7 per cent; for sustainable water management and sustainable mobility 5 per cent (BMU, 2012).

As noted by the CBI (2012), the UK’s green business sector has continued to grow in real terms in 2010/2011, accounting for a £122 billion share of a £3.3 trillion global market and resulting in close to one million jobs (CBI 2012). The latest report by the Department of Business, Innovation and Skills on the low carbon and environmental goods and services (LCEGS) market in the UK indicated that the number of people employed in these sectors was 937, 923 in 2011/2012 (BIS 2013). Car production in the UK is increasing alongside a growing emphasis on reduced emissions, including binding EU regulations. Industry experts expect output from Britain’s eight main car plants to continue to rise, amounting to two million vehicles by 2018 (Jones, 2013). See Figure 1 for a comparison of low carbon and environmental jobs compared to jobs in other sectors in 2010/2011.

Figure 1: Low carbon and environmental jobs compared to other sectors (2010-2011)

Source: Green Alliance (2012) Green economy – A UK success story

A report by Green Alliance concludes that the growth in green businesses ‘is the outcome of setting ambitious environmental targets and creating long term market incentives for green goods and services’ (Green Alliance 2012). A very considerable part of this target setting and long-term framing is driven by EU legislative processes and policies. Thus, EU environmental policy can be seen as contributing to a number of economic and social changes and benefits in the UK in addition to the environmental impacts outlined in the section above. This impact is partly indirect through the influence of EU policy on the development of national legislation and subsequent responses by companies and other affected actors. Some key areas where this is evident are outlined below.

Increased employment in the waste management and recycling sector

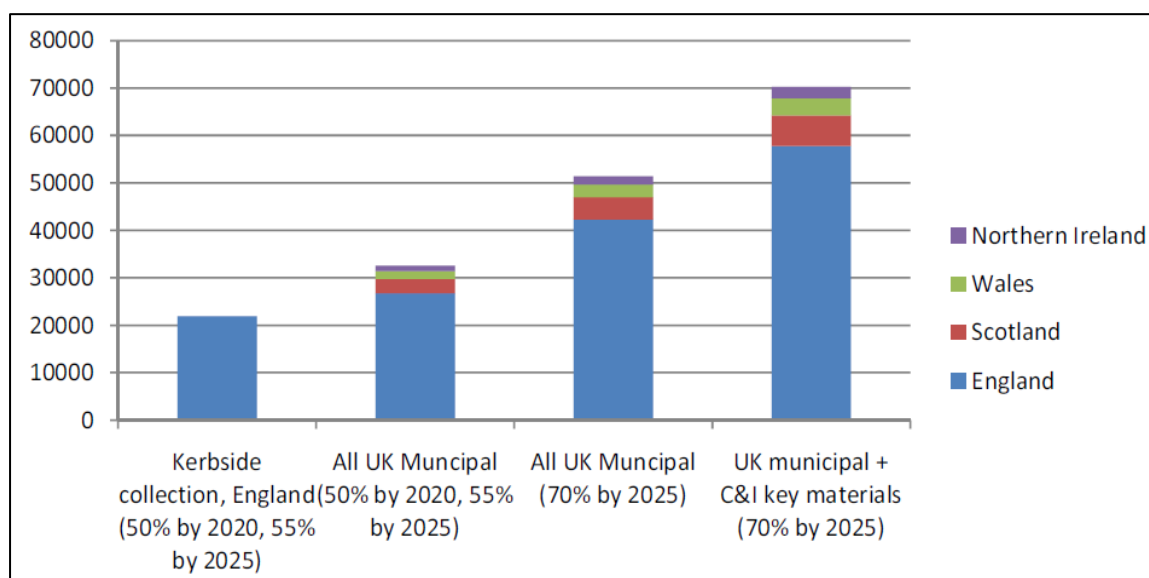
Employment in the waste management businesses (which includes collection, recycling and reuse) in the UK increased from 47,000 jobs in 1998 to 118,000 in 2008 (although changes in the Standard Industrial Classification (SIC) codes produced inconsistencies in the data) (FoE 2010). As noted in section 4 of the report, EU waste legislation has had a major impact on waste management practices in the UK with certain measures such as the Landfill Directive playing a significant role in driving the switch from landfill to recycling and re-use. Thus, employment opportunities created from this shift can to a large part be attributed to the influence of EU waste policy in motivating and driving changes at the national level. For example, take-back elements of the WEEE and ELV Directives, and the extension of the Packaging and Packaging Waste Regulations are expected to have stimulated job creation in remanufacturing and refurbishing of products (Waste Watch 1999).

An EU-wide study found that full compliance with EU waste legislation would increase turnover in the waste management and recycling sector by €42 billion each year and create over 400,000 new jobs (BIOIS 2011). More specifically in the UK, a study by Friends of the

Earth (2010) found that meeting the current EU target set in the Waste Framework Directive of 50 per cent for recycling/composting of total municipal waste by 2020, rising to 55 per cent by 2025, will increase total recycling from 10.9 million tonnes (2006) to 17 million tonnes in 2025. This is estimated to create 18,591 new direct jobs in recycling of municipal waste which would in turn create 9,296 jobs in the supply chain and 4,648 induced jobs in the wider economy (through spending by employees in the sector and in related supply chains) by 2025. The majority of new jobs will be in England (26,800), with nearly 3,000 in Scotland, 1,660 in Wales and 1,150 in Northern Ireland – see Figure 2 (FoE 2010).

Employment prospects are expected to increase further with higher recycling targets, for example the same study found that if a more ambitious recycling target of 70 per cent was achieved by 2025 for all municipal waste, this would create 51,400 new jobs across the UK – see Figure 2 (FoE 2010). This is an initial order of magnitude estimate based on existing sources of data which helps to illustrate the job opportunities from further recycling and reuse in the UK.

Figure 2: Potential new jobs created from increased recycling in the UK by 2025 (compared to 2006 baseline)



Source: Friends of the Earth (2010) More jobs, less waste – Potential for job creation through higher rates of recycling in the UK and the EU, September 2010

Another more recent report makes a number of estimates of the economic value of recycling. From 2013 to 2020, around 395 million tonnes of recyclable material will pass through UK waste management systems. At current rates, only around 255 million tonnes will actually be recycled; if the other 140 million tonnes were also recycled, an extra £1.4 billion could be generated through revenues from recycled materials. If recycling were increased and more efficient resource use pursued, 10,000 new jobs could be created in the UK’s recycling sector by 2020, and the sector could generate net exports worth over £20 billion. If activities such as research and development on new design techniques and improved reuse of materials are also taken into account, up to 50,000 new jobs could be created and annual GDP in the UK could increase by £3 billion. The knock-on impacts of

savings in raw materials and energy consumption for businesses outside the recycling sector could add up to £50 billion per year (Environmental Services Association, 2013).

Employment in the nature conservation and biodiversity area

The natural environment provides a wide diversity of employment opportunities in the UK supporting almost 750,000 full-time equivalent (FTE) jobs and an economic output valued at £27.5 billion (RSPB, 2011a). These jobs include those focused on the conservation of biodiversity and those that benefit from ecosystem services or are involved in the management of the countryside and are often located in remote rural areas suffering from decreasing employment and a lack of alternative job opportunities (RSPB, 2011a; Jurado et al., 2012). In Scotland, it has been estimated that activities and outputs dependent on the natural environment contributed to 11 per cent of output (£17.2 billion) and supported 242,000 jobs (14 per cent of FTE employment) in the country in 2009 (SNH, 2009). In England, direct and indirect employment linked to natural environment activities was estimated to be 299,000 FTE in 2004, exceeding those from the chemicals and motor vehicle industries (GHK, 2004). This appears to be a growing area, for example between 2002 and 2009, RSPB reserves experienced a 90 per cent increase in visitors and an increase in jobs on sites from 998 to 1,872 (RSPB, 2011b). Environmental policy, much of it established at the EU level, will have contributed significantly to these developments as discussed in section 5 below.

At the EU level, a 2010 report for DG Environment found that full implementation and management of the Natura 2000 network alone can be expected to directly support 122,000 FTE jobs and to generate €3.05 billion of Gross Value Added (GVA) in those regions where Natura 2000 sites are located (GHK et al., 2010). The total impact at the EU level, taking into consideration indirect effects, is estimated to generate €5.2 billion of GVA and support 207,400 FTE jobs. Full implementation of the EU Biodiversity Strategy is also expected to result in the creation of significant numbers of new jobs with Targets 1 and 2 expected to have the greatest potential for job creation with respect to the management of Natura 2000 sites and restoration of degraded ecosystems. The Strategy is also expected to have a net positive effect on the quality of jobs as a significant number of “generally higher skilled, knowledge intensive jobs” will be needed in rural areas (Jurado et al., 2012).

Box 4: Benefits of Protected Areas - SSSIs

The DEFRA study on “Benefits of Sites of Special Scientific Interest WC0768” (Rayment, 2011) identifies the range of valuable ecosystem services that the UK’s network of Sites of Special Scientific Interest (SSSIs) provides, and gives estimates for the monetary value of the benefits derived from protecting biodiversity. These estimates significantly exceed the costs of delivering them, and illustrate the importance of valuing the benefits of nature’s services. The report found that the ecosystem services provided by SSSIs were valued at eight times the cost of protecting these sites. The report also highlights that SSSI’s protected by higher level designations under EU law enhance the conservation benefits and ecosystem services that these sites deliver. Natura 2000 designation offers both higher levels of protection from land use and other changes, and additional access to EU funding for SSSIs.

Health impacts related to air quality

Potential health impacts associated with the failure to meet targets set by the EU are highlighted in a 2011 report from the UK Environmental Audit Committee on air quality. The report noted that the UK is failing to meet European targets for safe air pollution limits across many parts of the country including targets for PM₁₀ particulate matter and NO₂ and is predicted by some to also miss its targets for fine particulate matter (PM_{2.5}). The report found that poor air quality is shortening the lives of up to 200,000 people in the UK by an average of two years. The report found that in 2008, 30,000 deaths in the UK were linked to air pollution, with 4,000 of these deaths in London alone. The report also found that poor air quality is costing society up to £20 billion per year (EAC 2011).

5 FIVE ENVIRONMENTAL THEMES IN EU POLICY

In this section five important areas of EU policy are explored in rather more depth, considering both their impact in the UK and other issues of relevance. There has been a deliberate choice to include a combination of broader thematic areas where the EU has established a leading role in determining policy and to more specific measures which have a particular impact on the ground in the UK and elsewhere. The themes are:

- Air and Industrial Emissions
- Climate Policy
- Water
- The Habitats Directive
- Environmental Assessment

In most cases it is difficult to estimate precisely the difference made by the existence of the EU measure as opposed to reliance on purely national, or indeed regional, policies. However, some case studies and more local experiences helped to provide a greater sense of the significance of the measures involved than reliance on more abstract estimations.

Box 5: Taxonomy of EU Environmental Measures

The Defra/Department of Energy and Climate Change consultation document on the Balance of Competences divides EU environmental measures primarily on a thematic basis. This has some merits as there is a relationship between a group of measures acting in the same sphere, eg air pollution. It is an approach which has been followed broadly in this report. However, there are also advantages in assessing EU interventions in relation to the type of policy instrument involved. For example, a taxonomy could distinguish between:

- Standards for traded productions with a strong internal market dimension (Article 114 of the Treaty).
- Numerical standards for emissions from fixed plant eg titanium dioxide, large combustion plants, etc.
- Numerical environmental standards, eg air, bathing water (these are not internal market measures).
- Legislation requiring procedures to be followed or plans drawn up, eg the EIA and Seveso directives.
- Overall numerical targets to be met by deadlines, eg sulphur dioxide reduction in the Large Combustion Plants Directive, ozone layer, greenhouse gas emissions, emissions ceiling.
- Underpinning measures, eg establishing the European Environment Agency, requiring exchange of information on the state of the environment.

One of the most direct impacts of EU policy on UK policy and practice has been to increase the use of a wider range of policy tools and approaches than have been utilised previously

at the national level, some of which are particularly applicable where a larger European frame applies. (Haigh & Coffey, 1997)

5.1 Air and industrial emissions

EU level legislation relating to industrial pollution control and establishing standards for ambient air quality both date back to the 1970s. This was influenced by the highly charged political debate on transboundary air pollution which emerged at this time and which became increasingly prominent in the 1980s and 1990s. This included the issue of acid rain, perhaps the major reason why the UK had achieved the sobriquet of the “Dirty Man of Europe” (Rose, 1990), but also encompassed other pollutants such as tropospheric ozone, polyaromatic hydrocarbons, etc.

Therefore, a critical driver to justify European intervention was the transboundary nature of the sources and impacts of air pollution. For the early years of this policy debate, the primary focus for intervention was at UNECE level, but with increasing expansion of the Community (including the accession of Sweden as a major player), the importance of EU law grew and has expanded over time.

Three types of intervention have been developed:

- Setting standards for local ambient air quality to reduce the exposure of people and ecosystems.
- Setting overall emission limits for specific pollutants from each Member State.
- Establishment of regulatory processes and objectives for industrial activities.

Ambient air quality standards (limit values) have been established in EU law since the 1970s, but were reframed and made stricter in the 1996 Air Quality Framework Directive and subsequent daughter Directives. There has been much debate on the practicalities of meeting some of the limit values, particularly for nitrogen dioxide and fine particulates. However, there is little doubt that without their legally binding nature the UK would not have made the progress it has. This is particularly the case with innovations on transport emissions, such as the congestion charge and low emission zone, domestic initiatives designed to help meet EU standards.

Analyses at EU and UK level show the benefits to health outweigh the costs of these measures. This point can be lost in the current debate on problems being encountered in the UK in meeting the limit values, but it is critical. At one level, UK performance on improving air quality has been good, with several pollutants being significantly reduced. The 2007 UK air quality strategy (Defra, 2007), for example, stated that improvements from 1990 to 2001 have avoided 4,200 premature deaths per annum and 3,500 hospital admissions per annum. However, significant problems remain. Thus the strategy also concluded that continuing air pollution is estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months with health costs of up to £20 billion each year. A 2010 Defra report (Defra, 2010) concluded that the health impacts of PM2.5 alone were over £16 billion per year. EU law in this area, therefore, has been an important driver in improving the UK environment and, in particular, in effect providing a counter balance to

short-term 'cost' arguments which do not in fact stand up to critical examination, but nonetheless can be politically attractive.

The determination of overall emission limits for pollutants from Member States is set out in the National Emission Ceilings Directive (NECD). This type of approach is entirely equivalent to that of several protocols under the UNECE Convention on Long Range Transboundary Air Pollution. The NECD does not set the same limits for each Member State, but was developed using models linking sources and impacts. In the 1980s the UK challenged the earlier UN approach to common emission reductions and instead championed the 'effects based approach' (as set out in the 1990 Environment White Paper). In order to understand the impacts on air pollution, the UK strongly supported and put extensive resources into developing critical loads for different receptors. The outcome was the ability to identify where (and to what extent) emission reductions were most likely to bring the greatest benefit across Europe. This was the basis for the NECD and was a major contribution by the UK to European environmental policy making.

Box 6: Emissions of air pollutants in the UK

For the pollutants covered by the NECD, substantial reductions in emissions have been achieved and the UK has met its targets with subsequent environmental benefit (Defra, 2012):

- Emissions of sulphur dioxide fell by 94 per cent between 1970 and 2011 and the UK agreed to revised targets under the Gothenburg protocol of a 59 per cent reduction by 2020 from 2005 levels.
- Emissions of nitrogen oxides fell by 61 per cent between 1970 and 2011 and the UK agreed to revised targets under the Gothenburg protocol of a 55 per cent reduction by 2020 from 2005 levels.
- Emissions of non-methane volatile organic compounds (NMVOCs) fell by 62 per cent between 1970 and 2011 and the UK agreed to revised targets under the Gothenburg protocol of a 32 per cent reduction by 2020 from 2005 levels.
- Emissions of ammonia fell by 20 per cent between 1980 and 2011 and the UK agreed to revised targets under the Gothenburg protocol of an 8 per cent reduction by 2020 from 2005 levels.

Reductions in these emissions from major industrial processes in the UK between 1990 and 2005 has led to an improvement in average life expectancy of equivalent to around five days per person, a UK increase of a million life years, and a reduction in the numbers of premature deaths and hospital admissions due to air pollution (Executive, 2009).

The regulation of the broader sweep of emissions from industrial plants initially was approached by measures aimed at individual pollutants. However, in the 1980s, this was largely replaced by a system of "Integrated Pollution Control" (IPC). For a time this was in conflict with a more continental approach based on limit values. However, in this area of policy the UK invested considerable effort in "expanding" its regulatory model to the EU, with some success, leading in time to the adoption of the 1996 IPPC Directive (now the

Industrial Emissions Directive). Rather than setting standard emission controls (which the UK has traditionally opposed), the IPPC Directive took a more flexible approach, yet focused on effective control linked to continuing assessment of emerging technologies and on sensitivities of the local environment. However, IPPC was also an improvement on IPC, addressing some important new areas of regulation not covered in UK legislation (IEEP, 2010). It did, therefore, affect UK practice and has driven pollution reductions and increased environmental protection to an extent that IPC would not have achieved. The impacts of this approach depend on the way in which it is applied in practice but this extension of the UK approach has been important in providing a more level playing field for industry, including British companies across the EU, in particular since there have been some Member States where industrial regulation was at a much weaker level than the UK. In an area where the impacts of different costs can be sensitive in competitiveness terms this was only possible through an EU level instrument.

5.2 Climate Policy

Addressing climate change requires a very strong global dimension, supported by concerted responses at the European, national and more local levels. In terms of mitigation the effort needs to be global. Nonetheless, given the constraints on the UK's capacity to mobilise an effective global agreement there is a strong role for groups of countries to seek an appropriate global response. Since there are few such groupings other than the EU (and it is the only grouping in the developed world which is committed to tackling climate change) it has acquired a critical role in the development of a global regime. At the same time the EU has accepted a collective target for reducing emissions, a system of burden sharing for meeting at least some elements of its target and adapted a major legislative programme to reduce emissions and meet its targets. In this sense it has become a laboratory for experimenting with, and developing approaches to, climate policy involving the trade-offs necessary where different national interests are involved.

The UK has been a force in shaping the EU's international and domestic climate policy significantly over the last two decades. The UK's role as frontrunner in many climate policies has helped to shape EU climate policy and hence climate policies in other EU Member States and at international level. This could be seriously jeopardised if the UK were to withdraw substantially from this area of EU policy making or leave the EU altogether.

The UK has itself set on an ambitious decarbonisation pathway with a legally binding target of 80 per cent reductions in emissions from 1990 to 2050. A medium-term target of a 34 per cent reduction by 2020 also has been adopted, which should be further tightened in the event of a global deal on climate change. UK climate policy, as with any other national climate policy, is strongly interlinked with and dependent on developments at international level. Where they work satisfactorily, the combination of an international agreement and an EU-wide approach help to generate the leverage required to reduce emissions on a global scale to achieve a level-playing field, reduce compliance costs and hence limit potential negative impacts on the economy.

5.2.1 International climate politics

Although recent international climate negotiations have been very slow and disappointing in terms of concrete post-Kyoto commitments, there is wide agreement that the EU has been

a major player in international climate negotiations and has decisively helped to establish an international climate regime (Oberthür et al, 2008). The EU's leadership can be explained by several factors. First the EU's example of setting relatively ambitious targets and introducing what were at the time innovative climate policy instruments, such as the EU ETS, the EU's scale, economic heft and market power which allows it to take unilateral action on emission standards, and the EU's ability to influence policy instruments in other parts of the world (House of Commons Energy and Climate Change Committee, 2012).

Individual countries such as the UK can make important contributions in international climate negotiations but will not be able to have the same influence as the EU as a whole, which is the world's biggest trading bloc. At the same time the EU's ambition in international climate negotiations and its negotiation strategy is determined by its Member States. It is not a given that the EU will continue to pursue an ambitious approach at the international level but this is precisely what is required if the UK's climate policy ambition is to be realised and not undermined by hesitation and lack of sufficient action by EU partners within the single market, some of whom may be motivated by competitiveness concerns. On the contrary there are increasing doubts raised within the EU as to whether the EU should continue its leadership role or rather wait for other international competitors to take the lead. In terms of both the global and purely national priorities it is essential that the UK maintains its influence within the EU to help to keep the EU on track to fight for an ambitious international climate regime in line with the UK climate policy objectives. The UK can only gain from a strong EU position in this respect.

5.2.2 The Emissions Trading System

The UK has been a strong supporter of the EU Emissions Trading System (ETS) as a carbon pricing policy instrument since its inception and has shaped the instrument significantly to its advantage over time. In fact, the UK was one of the few Member States that supported the Commission in the initiation phase of the EU ETS (Skjærseth & Wettstad, 2008). The UK's national experience with emissions trading was an important example for the development of the EU ETS. Although the initial design of the EU ETS was not fully in line with UK preferences due to differences with the UK system and the UK was overruled (as was Germany) by a qualified majority in the final vote on the introduction of the EU ETS, the EU ETS as a market based instrument has been very much in line with the UK's approach to climate policy design. The EU ETS is designed to establish a level playing field for European industry and hence prevent competitive disadvantages for the national economy as a result of (more ambitious) national climate policies. GHG emission reductions are intended to be achieved at lowest cost based on a technology neutral approach. In practice the performance of the EU ETS has been disappointing in terms of reducing emissions below business as usual and substantial modifications are needed. However, its key features are those displayed by UK climate policy. Both reflect a market-led and technology neutral approach.

For good reasons, the UK would prefer a more ambitious EU ETS. Given the low carbon price under the EU ETS the UK decided to introduce a carbon floor price by removing exemptions from the Climate Change Levy (CCL) on fossil fuels used for electricity generation based on their carbon content. This may help to stimulate low carbon investment in the energy sector. While the CBI supported the introduction of a carbon floor price under the condition

that compensatory measures were introduced at the same time (Ares, 2013), UK industry representatives and other observers pointed to the increase in final energy prices and its potential negative effects on UK competitiveness within Europe and globally (Clark & Tighe, 2013). This remains a sensitive point, particularly with carbon prices below €5 per tonne on the European market.

The scale of such an effect is uncertain and needs to be better understood. There remain strong arguments for a higher domestic carbon price in order to progress at sufficient speed towards national emission reduction targets. Nonetheless, it is clear that the conditions for meeting UK climate targets under the Climate Change Act would be much improved by both a more effective EU ETS leading to higher carbon prices and an ambitious EU climate and energy package for 2030. The UK has been an influential player in pushing for this to happen.

The inclusion of the aviation sector under the EU ETS shows the challenge and difficulty in exerting leadership in the implementation of climate policies. Although the inclusion has been suspended, due to pressure from the US, China and other countries, such a step forward in international climate policy is only possible at EU level and no individual European country would have the ability to act alone. A similar step forward should be made for the shipping sector. In both cases a proactive EU approach is strongly in the interest of the UK

5.2.3 Energy and other aspects of climate policy

EU climate policy is difficult to distinguish from energy policy. At one end of the spectrum, it relates to renewable energy; at the other end it overlaps with resource efficiency and transport policies.

The EU is particularly well adapted to setting binding product standards including those for vehicles, domestic appliances, building components and other products which have a bearing on energy efficiency of the economy and ultimately on greenhouse gas emissions. Several measures are available to do this, including the Ecodesign Directive. There is little commercial or practical sense in developing measures of this kind at a purely national level. As the world's biggest trading bloc EU standards can be a platform and a model for the introduction of global standards.

Renewable energy policy has had a major positive impact on the UK and most other EU Member States. It has led to a step change in levels of investment in renewables and associated equipment, has accelerated cost reductions of new technologies and has delivered these achievements whilst working in association with domestic climate legislation. Whilst the financial crisis is having some impact and investments declined in 2012, the binding nature of the EU's renewables target (and the supportive national policies it created) has allowed the EU to witness a strong growth in renewable energy capacity since 2000, aided as well by the drop in costs of technologies like onshore wind and solar PV that a high and sustained demand for renewable energy has created. Between 2000 and 2012, 51.2 per cent of new power capacity in the EU has been in renewable energy, with in particular a growth of 96.7GW in wind power and 69GW in solar PV. New renewables and gas plant combined amount to 91.2 per cent of all installed capacity in the EU since 2000

with a sharp decline in carbon intensive plants such as coal (-12.7GW) and fuel oil power stations (-17.4GW).⁹

If the UK were to withdraw from the EU, national climate policies would remain in place, one presumes, although new levels of uncertainty would apply. However, it is clear that the Renewable Energy Directive is a key driver of industry confidence and cost reductions, as evidenced by current concerns that there may no longer be an EU renewables target by 2030. Investor confidence relies on the combination of stable and long-term national and EU measures.

In addition, addressing the challenge of moving towards a low-carbon economy within the next 20 years will be cheaper and easier to achieve European collaboration than in a scenario where each country through proceeds on a national basis. For instance, there is considerable evidence showing that by increasing the UK's interconnection with Europe (which requires both physical links and regulatory harmonisation), the UK could substantially reduce the amount of back-up capacity required to maintain power supplies when its renewable energy plants are providing smaller outputs of electricity. The European Climate Foundation's *Roadmap 2050 report*¹⁰ found for instance that greater interconnection between European power grids could reduce the amount of back-up installed capacity in power stations required by 35 per cent to 40 per cent in a future European renewables system (European Commission, 2011). Similar findings were made by WWF's *Positive Energy Report*, which found that renewables could be a major source of secure low-carbon power for the UK and that this could be delivered at lower cost through an approach which enabled greater interconnection with the EU.¹¹

5.3 Water

EU water law has had a major impact on the UK. Older Directives such as the Drinking and Bathing Water Directives radically changed UK practice, ending long-sea outfall discharges, driving investment in lead pipe replacement, etc. Waste water treatment was further driven by the standards set out in the Urban Waste Water Treatment Directive (UWWTD), requiring major investment to treat discharges tackling major riverine and coastal pollution. This has meant serious investment. The following table sets out the capital investment (2003-4 prices) requirements for water supply and sewage services for England and Wales between 2005-2010, identifying the investments necessary to deliver environmental improvements (source: Ofwat). However, over the course of implementation of the UWWTD, Defra (2012) states that £8 billion has been spent since 1990.

	Water supply (£ billions)	Sewerage (£ billions)	Total (£ billions)
Capital maintenance	4.2	4.2	8.4
Supply/demand balance	1.7	0.6	2.3
Drinking water and environmental	2.1	3.4	5.5

⁹ Wind in Power, 2012 European Statistics, EWEA, February 2013: <http://www.ewea.org/statistics/>

¹⁰ <http://www.roadmap2050.eu/downloads>

¹¹ The high interconnection scenario in WWF's Positive Energy report (scenario B) shows that an increase in interconnection capacity of up to 32GW above today's levels could reduce the amount of back-up power stations by over 50%.

quality improvements			
Enhanced service levels		0.6	0.6
Total	8.0	8.8	16.8

According to the Drinking Water Inspectorate (2013), overall compliance with drinking water standards has increased markedly due to the investments made in the UK. In 1992 the number of samples taken which breached regulatory standards was over 50,000. By 2002 this had dropped to around 4,000 and has continued to decline ever since.

The investment in waste water treatment has delivered benefits to river water quality, shellfish waters, bathing waters, and other components of the aquatic environment. For example, in 2009 the general quality assessment of rivers in England (Defra, 2010) found 73 per cent was of good biological quality – an improvement from 63 per cent in 1990.

Of course these changes were achieved only by a programme of sustained investment, with undoubted impacts on costs and not without a considerable number of challenges in the Court of Justice of the European Union (CJEU). However, few today would view these investments as anything but positive. Rivers have improved, fish returned and bathers do not repeatedly fall ill through exposure to sewage. Without EU law such changes would have not occurred or would have occurred at a much slower pace.

Box 7: Urban Waste Water Treatment

The impact of the UWWTD in the UK was clearly illustrated in Liverpool where, prior to 1991 sewage ran into the Mersey untreated making a significant contribution to the Mersey's reputation as one of the most polluted estuaries in the UK. In a move to comply with the Directive a new collector system was built to feed this sewage into a state of the art sewage treatment works Sandon Dock.¹²

The fact that Liverpool had one of the oldest Victorian sewer networks but no treatment works until this occurred in response to EU legislation suggests that simply waiting for regional or national legislative drivers had produced little result for generations – a picture repeated across the UK.

Today the most important item of EU water law is the Water Framework Directive (WFD). This is a measure of where the UK influence on in its design was highly significant. The proposal for the Directive coincided with the UK Council Presidency and the UK put considerable effort into re-writing much of the Commission's text as it viewed the river basin approach embodied in the Directive as building on the UK's catchment management approach. Overall the text of the Directive was influenced more by the UK than any other Member State (indeed the eagerness of the UK Presidency caused significant friction with the European Parliament).

The WFD does, however, go beyond earlier UK practice. While the UK was developing biological approaches to river classification, the WFD takes this further to a full ecological

¹² http://www.unitedutilities.com/documents/Sandon_Dock.pdf

classification. Furthermore, it sets binding obligations to meet ecological status targets which results in the need for controls on pollution sources (and abstraction) beyond previous UK practice.

The greatest change in the UK has been seen in Scotland, where primary legislation was adopted (given a less extensive pre-existing regime to England and Wales). Furthermore, Scotland extended the scope of the WFD in coastal waters beyond WFD requirements so as to capture fish farming – an important potential threat to the health of such waters. Scotland also introduced new mandatory controls for farmers, to the extent that its regulation is possibly more strict than the rest of the UK.

The WFD is a far reaching measure with a long implementation period. Therefore, at this stage there is still some uncertainty as to the full scale of action required in order to deliver the good status requirements. However, there is no doubt that farming practice will need to change given the widespread load of pollutants from diffuse sources in this sector. In environmental terms, this will be a major beneficial outcome of EU law in the UK as in most Member States since the agriculture sector is now the major source of water pressures, but domestic regulatory initiatives are limited. This is a good example of where EU level law has been able to address an issue for which there has been limited national momentum, but for which there are significant national level problems.

The WFD (and related law) also provides a key mechanism for taking forward transboundary co-operation in water catchment management. Although, co-operation across river basins has a long history in Europe, several river basins have had a poor record of co-operative frameworks and the WFD has begun to address these. This is a useful role for a European framework provided by the EU. While transboundary river management is not an issue for much of the UK, it is important to highlight the impact the WFD has had on co-operation between Northern Ireland and the Irish Republic. There are significant transboundary water issues and the transboundary assessment and planning on the island of Ireland has been a considerable success. Much of this has been driven by the WFD (although assisted by the changed political situation).

5.4 Nature Conservation

The Habitats (92/43/EC) and the Birds (2009/147/EC) Directives contain a wide range of obligations designed to protect a range of habitats and species, including the rarest and most vulnerable types. These Nature Conservation Directives have helped to conserve the species and habitats for which they were designed, and in so doing they have helped to conserve the natural environment more widely and the supply of ecosystem services associated with protected sites. This legislation is also an important element in seeking to ensure that one Member State does not gain competitive advantage over others through the adoption of lower environmental standards, and that populations of migratory species are not adversely affected throughout their range by a Member State allowing damaging development.

The Habitats and Birds Directives have added a layer of protection for nature in the UK above and beyond that provided in previous national legislation. This process of reinforcing national legislation began with the Conservation (Natural Habitats etc) Regulations 1994 (SI No 2716) and has continued subsequently. The opinions of the Court of Justice (CJEU) and

accumulated case law in Europe have had a bearing on the understanding of the directive's requirements and the consequent implications for the UK and other Member States.

Strong examples are available to demonstrate the ability of the Directives to help planners adopt plans that establish robust frameworks designed to avoid or substantially reduce project level conflicts between social and economic development, and the protection of Natura 2000 sites. Box 8 presents one such example, demonstrating how the Habitats Regulations adopted in the UK pushed local authority planners, Natural England, developers and NGOs to collaborate, developing a practical response to managing urban expansion in the Thames Basin Heaths SPA, in the form of a sub-regional strategic assessment. As this assessment was required under the Birds Directive it is unlikely that this would have occurred had the site not had an SPA designation but only an SSSI designation under national legislation. The presence of the SPA resulted in 11 planning authorities working together to create a strategic solution which achieves continued protection of a significant habitat whilst creating a framework for developers to work within to allow appropriate development of the area.

Box 8: A practical response to managing urban growth

The Thames Basin Heaths SPA comprises an aggregation of 13 separate SSSIs within 11 local planning authority (LPA) areas, each with different levels of population growth likely to exert a significant adverse pressure on the site from recreational activities. In the absence of a strategic solution, LPAs were faced with a substantial planning issue: the Habitats Regulations require likely impacts of any development, both alone and in combination with other developments potentially affecting the site, to be assessed. In principle all applications for residential development close to the SPA would need to be screened to establish whether an Appropriate Assessment was required because they were likely to add to recreational pressure and thus have an adverse impact on the populations of ground and near-ground nesting bird species for which the site had been classified.

To overcome the problem, English Nature devised a strategic approach that enabled any housing development which met defined standards to proceed without the need to undertake an Appropriate Assessment. The standards applied were deemed to ensure that such developments would not be likely to have a significant effect on the integrity of the SPA. These standards comprised: avoiding housing development within 400 metres of the SPA; and allowing housing development between 400m and 5km of the SPA (without recourse to an Appropriate Assessment) on condition that sufficient alternative natural greenspace is available to divert recreational pressure from the SPA, and access management measures and monitoring across the areas of the SPA open to public access have been supported by an appropriate developer contribution.

These measures result in consistency across all the local authorities involved and reasonable certainty that housing development individually and in combination will not adversely affect the Thames Basin Heaths. Any development proposals that do not meet these standards will, of course, be subject to an Appropriate Assessment to determine their likely impacts on the SPA.

The following case study (Box 9) presents the case of Strangford Lough SPA in Northern Ireland. The case clearly demonstrates that the Habitats Directive has been a legislative driver which has enabled considerable progress to be made in achieving the protection needed for the unique and valuable horse mussel reefs for which the SPA was designed to protect, which would not have been the case under national jurisdiction.

Box 9: Role of EU intervention in driving protection of horse mussel beds in Northern Ireland

Unique natural features, outstanding beauty and high economic, recreational and cultural value have led Strangford Lough to be the most highly designated and protected site in Northern Ireland. However management of certain aspects of wildlife and ecosystems within the Lough, particularly horse mussel reefs, has been of concern to conservationists since the late 1980's. The uniqueness of the horse mussel (*Modiolus modiolus*) reefs in Strangford led to them being a key feature in the Lough's European designation as an SPA. However, the horse mussel community was in decline due to a lack of appropriate regulation and management of activities in the Lough.

Over two decades of lobbying the local and UK government on the need for action by the Ulster Wildlife had no effect until 2003, when the European Commission investigated a Wildlife Trust complaint regarding Horse Mussel community decline and inadequate protection as required by the Habitats Directive. The European Commission responded by notifying the government that it was considering taking infraction proceedings against them. This led to increased focus on the issue, the implementation of a temporary ban on mobile fishing gear, a restoration plan aimed at bringing the Horse Mussel communities back to 'favourable conservation status', and £1 million of funding over three years to undertake the restoration work.

Despite these efforts the decline continued and timelines and specific objectives within the plan were not met (including a commitment to bring in total protection for both pristine and damaged reefs by 2007). Again Ulster Wildlife issued a complaint to EU officials, which again has acted as a catalyst and a driver for change. It has since resulted in a new restoration plan with more robust management, monitoring and enforcement measures, perhaps most notably a 'Total Protection Zone' has been legislated for through a Fisheries Exclusion Zone and a byelaw on anchoring and diving. These measures collectively are designed to provide the conditions for recovery of the Horse Mussel beds, which should in turn benefit the fisheries as the horse mussels support the diversity of life that previously covered extensive areas of the seabed of Strangford Lough.

There is a commonly held but misplaced view that the European nature conservation Directives place large costs on UK businesses and are a barrier to growth. The 2012 Government Review of the Habitats and Birds Directives (HM Government, 2012) however found that in the vast majority of development cases major problems do not arise as a result of objections on Habitats Regulations grounds. Of the 26,500 land use consultations Natural England receives annually, less than 0.5 per cent are objected to on Habitats Regulations grounds, and most of these are successfully dealt with at the planning stage (HM Government, 2012). It is only in a relatively small number of cases that problems have arisen, leading to unwelcome delays and additional costs for developers, as well as

uncertainty for local communities and the environment. These well publicised individual cases risk clouding the reputation of the Directive (HM Government, 2012).

The issues relating to the effectiveness of the Regulations have been explored and reviewed in detail by the Government recently; the reasons for the occurrence of these objections are well understood, and the Implementation Review of nature conservation Directives provided a series of recommendations to improve implementation and thereby minimise the potential for unnecessary delays and costs (HM Government, 2012). Thus the evidence shows, that despite misconceptions, the problems associated with the Habitats Regulations are few in number, and the policy is moving in the right direction to reduce those further. In addition, it appears that lack of understanding and familiarity with the Habitats Regulations and their requirements can lead to unwillingness to engage with the issues that the Regulations raise, and that familiarity with the Regulations facilitates constructive outcomes (RSPB, 2012) (see Box 8 and Box 10 for example). The time invested to date by developers and conservation organisations to work alongside each other through this regulatory process has led to constructive relationships being formed and has established knowledge of the procedures, enabling outcomes that are both good for business and the natural environment (RSPB, 2012). This should not be undermined through a misplaced notion that the Regulations are burdensome and costly on business.

Box 10: Proposed wind farm developments at the Dogger Bank, North Sea

The Dogger Bank is a large sand bank complex in the North Sea located in UK, Dutch, German and Danish waters. It is an important marine habitat supporting large numbers of sandeels and fish which in turn support marine mammals and seabirds. Due to the importance of the sandbank habitat, the UK, Dutch and German Governments have designated their parts of the Dogger Bank an SAC for the feature 'sandbanks covered slightly by water at all time'. In the Dutch and German sites, harbour porpoise and grey seals are also listed as features of the site. In addition, the Dogger Bank is an important area for seabirds and many birds from designated SPA colonies forage in the area. This makes it important for the viability of these populations.

The Dogger Bank also has many favourable attributes that make it an attractive site for offshore wind farm development. Under the Habitats Regulations and the Offshore Habitats Regulations, the granting of approval (i.e. planning permissions, licenses and consents) for developments is restricted if they are likely to have a significant effect on an SAC or SPA. If the development is likely to have a significant effect, then an appropriate assessment must be made by a competent authority of its implications for the site in view of the site's conservation objectives.

If these designations were carried out under national law, with differing requirement for assessment it would mean that the developer would have to carry out several different assessments, dealing with different governments and conservation bodies resulting in the assessment being a more drawn out process and less joined up. However, the Habitats Regulations Assessment process established for the Habitats and Birds Directives has enabled just one assessment to be carried out for the offshore wind development which is able to assess the potential transboundary effects of the development on SACs and SPAs outside of UK jurisdiction. The same applies for the development of an environmental

impact assessment. Again the developer must consider the transboundary impacts of their proposed development, and the process under the EIA Directive allows this to be done in a joined up manner across Member States.

From an environmental perspective this is also of benefit as it is possible to assess the full impacts of the development over the North Sea area, rather than only discreet pockets of impacts within the control of specific countries. This is especially important when considering mobile marine mammals and seabirds populations off which may be affected by the development

5.5 Assessing environmental impacts

One area of environmental policy where it is clear that the UK would not have introduced an instrument that has been adopted in the EU is in relation to assessing the environmental impacts of projects and plans. Yet there is evidence that the effect has been to improve the level of scrutiny and transparency of a range of developments, particularly where the process has been approached in an appropriate and constructive way.

There are two main rationales for EU law on environmental assessment:

- EU law on EIA contributes to harmonising the conditions of competition between Member States to a reasonable level. New power stations would be an example.
- The environment is a matter of common concern across the EU, such that Member States have transferred certain elements of sovereignty to the EU level over development decisions that are likely to have significant environmental impacts, irrespective of whether these impacts are felt across national borders. In other words, the EIA Directive was adopted in order to protect the environment throughout the EU (Bell et al., 2013). The same applies to the subsequent legislation on strategic environmental assessment

5.5.1 *The origins of EU policy: the EIA Directive (85/337/EC)*

EIA was originally developed as a formal assessment method in the USA, in the shape of the 1969 National Environmental Protection Act (NEPA), with a focus on of the environmental impacts of major developments (IEMA, 2011).

When the proposal was made for an EU measure in this sphere, the UK expressed its fears that opponents to a development would be provided with the opportunity to seize on some procedural failure as a ground for challenging a planning decision in the courts” (IEEP, 2010). These fears may well have been fuelled by stories of the early days of NEPA in the United States where there had been much litigation, but where the tradition of resolving disputes over policy matters in the courts is well established (ibid).

The UK was not the only country to have reservations about the proposal and reservations were maintained until November 1983 by which time the proposal had been amended in significant ways.

5.5.2 Impacts

The EIA Directive (85/337/EEC) forms the basis of UK EIA practice and has been amended three times in 1997, 2003 and 2009. It has been implemented through secondary legislation, in the form of Regulations that link into a number of existing development consent regimes; “with nearly two thirds of all EIA undertaken in relation to applications for planning permission” (IEMA, 2011). Since 1988 when it was formally introduced into the UK considerable experience of EIA has been built up and practice has developed progressively.

“At national level, the environmental impact of development projects has always been a material consideration in making planning decisions, but, for many projects, the process for assessing environmental impact has now been formalised under EC law” (Bell et al., 2013).

In the UK environmental considerations were already taken into account in development decisions prior to the introduction of the EIA Directive. However, the Directive has contributed to making mitigation measures compulsory and for developers to take more responsibility for compensating development with environmental measures (GHK and Technopolis, 2008).

In a 2009 study for the European Commission on the implementation of the EIA Directive Member States were asked to identify the main benefits of the EIA system. The majority of “old” Member States (ie Members prior to 2004) referred mostly to the following two benefits. First, the EIA procedure ensures that environmental considerations are taken into account in decision-making processes. Second, it provides for transparency in environmental decision-making (COWI, 2009).

Some old Member States also identified the following benefits:

- Many projects subjected to an EIA are adapted in favour of the environment.
- Many project changes are introduced prior to or during the screening process.¹³
- EIA encourages project developers to deliver better project proposals in environmental terms (and developers may gain from being better informed and more able to offset or mitigate risks).
- Projects are submitted to public scrutiny much earlier than in the absence of an EIA procedure. As a result stakeholders have better and more opportunities to influence the design and planning of projects (COWI, 2009).

In a 1996 study on the costs and benefits of EIA in Europe it was concluded that in 61 per cent of cases studied the environmental credibility of developers has been enhanced (European Commission, 1996; as cited in Bell et al., 2013). This was confirmed by a UK study which suggests that a large majority of planning officers (88 per cent) and developers or consultants (76 per cent) felt that environmental impact assessment had been a net benefit in cases in which they had been involved (Jones et al., 1998; as cited in Bell et al., 2013).

¹³ For certain projects (Annex II projects), the national authorities have to decide whether an EIA is needed; this is done during the screening process.

Many of the same principles apply to the related Directive on Strategic Environmental Assessment (2001/42EC). This covers plans and programmes which are likely to give rise to significant effects on the environment, with more than one project involved. It is intended to make the implications of these potentially major decisions more transparent and allow scrutiny of the environmental implications and the alternatives available at an appropriate stage. In principle this can reduce available conflicts at a later stage. An example of where this has been applied in the UK is given below.

Box 11: Nuclear National Policy Statement

National Policy Statements (NPSs) in the UK issued under section 5 of the Planning Act 2008, explain the Government's objectives for national infrastructure development, and are intended to provide the basis for decisions made by the Infrastructure Planning Commission on specific applications. DECC published an 'Appraisal of Sustainability' for the Nuclear NPS as required under the Planning Act 2008, which was revised during the consultation process following concerns expressed by a number of environmental NGOs. This revised document was also challenged by Friends of the Earth on 9 March 2011, on the grounds that it did not fulfil the criteria of a Strategic Environmental Assessment (SEA) under Directive 2001/42/EC. DECC responded by reviewing what reasonable alternatives were available, ensuring a fuller assessment of the alternatives than would otherwise have occurred (DECC, 2011).

5.5.3 Burdens on public administrations and private sector recipients of policy

Some additional effort is required because of this measure, and costs are increased. However, the evidence cited below suggests the costs do not seem disproportionate to the outcome. EIA costs to developers are moderate and do not constitute a disproportionate burden.

A study on the costs and benefits of the 1985 EIA Directive in Greece, the Netherlands, Spain and the UK concluded that costs in excess of 1 per cent of total capital expenditure were only exceptional. According to this study costs may be as low 0.2 per cent (as a proportion of total capital expenditure), with costs for the EIA being lowest for the largest projects. EIA costs of more than 1 per cent of total capital expenditure mostly emerged in relation to especially controversial projects in sensitive areas or in projects where good EIA practice had not been followed (European Commission, 1996 as cited in Bell et al., 2013).

According to a 2008 study, the cost of an EIA is roughly 1 per cent for small projects and 0.1 per cent for larger projects, indicating a relative disadvantage for small projects (GHK and Technopolis, 2008). However, the level of application of EIA to small projects is not well documented. There are grounds for doubting that it is applied assiduously in relation to agricultural projects throughout the UK, for example (IEEP, forthcoming).

Some additional effort is required because of this measure, and costs are incurred. However, these do not seem disproportionate to the outcome. "Previous survey research into screening for environmental impact assessment (EIA) in England has found that few local authorities have very much experience of dealing with EIA projects. This research examined actual case files of projects that fall within the ambit of the UK's EIA Regulations and found an explanation for this lack of experience. In the majority of the cases examined they were not even screened to see if an EIA was required. This suggests that there is

widespread misunderstanding of the EIA regulatory requirements by English local planning authorities. It is also suggested that there may be a culture of resistance to EIA among planners and that this can undermine both EIA effectiveness and the theories used to justify its use.” (Weston, 2011)

5.5.4 Future challenges

“Despite the many methodological and administrative advances in EIA over the past two decades, recent experience in many countries confirms that there is still considerable scope for strengthening the process. Immediate and cost-effective measures could help improve the process in four key areas: scoping, evaluation of significance, review of EA reports, and monitoring and follow-up.” (Morgan 2012)

“However, problems with practice persist. For example, a recent report of the state of EIA in the UK based on practitioner opinions identifies problems in four key areas of practice: screening, scoping and engagement, assessment, and outcomes and outputs (IEMA 2011). An earlier European Union report (Commission of the European Communities 2009) on the application and effectiveness of the EIA Directive identified a number of areas where improvements in practice are needed, including screening, scoping, consideration of alternatives, monitoring, public participation and EIA quality control.” (Morgan 2012)

“One area of impact assessment is still comparatively under-developed: cumulative effects assessment (CEA). Most legislated EIA processes refer to cumulative effects as one of the characteristics of proposed activities that need to be considered, but in practice they are often not addressed or are handled inadequately (Duinker and Greig 2006, Gunn and Noble 2011).” (Morgan 2012)

6 EXAMINING SOME ALTERNATIVES TO EU MEMBERSHIP

6.1 Alternatives to the EU

If the UK were to withdraw from the EU, it would most likely opt to remain a member of the European Economic Area (EEA) or at least the European Free Trade Association (EFTA). 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 would be rather perverse to withdraw from these fora where trade is the main focus. Therefore, it is useful to consider the implications for environment policy of membership of one or both of these agreements, both of which are likely to involve accepting a considerable proportion of EU environmental policy without participating in the decision making process.

Given the agreed importance of trade and the single market, if the UK was to eventually withdraw from the EU, it would likely opt to remain a member of the EEA (like Norway, Iceland and Lichtenstein) or at least of EFTA (like Switzerland) so as to continue to benefit from access to the common market. A brief overview of what some alternative membership options would entail, in particular the implications for environmental policy, is set out below.

6.2 The European Economic Area

The EEA comprises of all EU Member States and also Norway, Iceland and Lichtenstein. It was established in 1994 and allows members to participate in the EU's single market, known as the 'internal market', without being a member of the EU. 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 (although it includes provisions on certain aspects of trade in agricultural and fisheries products), the Customs Union, Common Trade Policy, Common Foreign and Security Policy, Justice and Home Affairs, and the Monetary Union (EFTA, 2013a). EEA members provide financial contributions to the EU Budget in return for their participation in EU programmes, actions, services and agencies such as the 7th Framework Research Programme and the Competitiveness and Innovation Programme (EFTA, 2013b). EEA EFTA members' financial contribution and payments to EU programmes, agencies and other activities was EUR 206,084,000 in 2011 and EUR 241,220,000 in 2012 (EFTA, 2013c). In addition, grants are provided to contribute to economic and social cohesion in the area and strengthen bilateral relations with 15 EU Member States in Central and Southern Europe. For the 2009-2014 period, around EUR 1.789 billion of funding has been agreed, made up of EEA Grants amounting to EUR 988.5 million (of which Norway provides the vast majority 94 per cent, Iceland provides around 5 per cent and Liechtenstein just over 1 per cent) and also of Norway Grants, amounting to EUR 800 million (which are funded solely by Norway) (EFTA, 2012).

Acts referred to or contained in the Annexes to the EEA Agreement are considered binding on the Contracting Parties and are to be made part of their 'internal legal order' (Art. 7 EEA Agreement). Parties are expected to adopt the full body of the *acquis communautaire* (EU legislation) relating to the internal market in their national law (Council of the European Union, 2008). The objectives relating to the environment in the EEA Agreement (Article 73) mirror those set out in the Treaty (with the exception of objectives relating to measures at the international level which are included in Article 191 TFEU). Specific measures relating to the environment are set out in Annex XX of the EEA Agreement (EEA, 2013) and include cross-cutting EU legislation, e.g. on environmental impact assessments, access to environmental information, reporting, EMAS, environmental liability, INSPIRE and eco-labels; as well as thematic legislation, e.g. on water (e.g. Groundwater, Drinking Water, Nitrates and the Water Framework Directives), air (e.g. air quality, industrial emissions, ETS, ozone), chemicals, industrial risk and biotechnology, waste and noise. A number of EU environmental acts are not incorporated in the EEA Agreement, e.g. the Birds, Habitats and Bathing Water Directives.

Non-EU EEA countries have no representation in EU institutions such as the European Commission, the Parliament or the Council and have limited or no opportunities to influence the EU decision-making process (EFTA, 2013d). The EEA agreement does however include provisions for the input of experts from non-EU EEA countries in the preparation of relevant EU legislation. Input can take the form of participation by EEA EFTA experts in expert groups and committee meetings including comitology committees, programme committees and other committees in specific areas (EFTA, 2007); the submission of EEA EFTA comments, and the adoption of resolutions in response to Commission initiatives. Once a piece of EU legislation has been adopted and, after consultation with EFTA experts, is considered EEA-relevant, it is incorporated in the EEA Agreement through decisions of the EEA Joint Committee and subsequently implemented with the aim to ensure simultaneous application in the EU and in non-EU EEA countries. Non-EU EEA countries thus 'have to incorporate into the EEA Agreement what has ultimately been decided, if not necessarily shaped, by others'. For example in 2012, 64 acts relating to the environment were incorporated in the EEA Agreement (EFTA, 2012).

EU legislation included in the EEA agreement and which would continue to apply if the UK left the EU and stayed in the EEA

Water Framework Directive	Waste Framework Directive
Urban Waste Water Treatment Directive	Sewage Sludge Directive
Nitrates Directive	Waste Shipment Regulation
Groundwater Directive	Landfill Directive
Priority Substances Directive	End of Life Vehicles Directive
Air Framework Directive (and daughters)	WEEE Directive
Industrial Emissions Directive	Mining Waste Directive
Emissions Trading Directive	REACH Regulation
Directive on Carbon Capture and Storage	Assessment and Management of Ambient
Seveso Directive	Noise Directive
Directives on contained use and deliberate release of GMOs	

Legislation not included in the EEA agreement and which would no longer apply if the UK left the EU and stayed in the EEA

Birds Directive

Habitats Directive

Bathing Water Directive

According to the Centre for European Reform, if the UK was to withdraw from the EU and join the EEA, it would be able to opt out of the CAP and Common Fisheries Policy which could save around £1.1 billion a year, or 0.07 per cent of GDP. However it would still have to implement all single market legislation into law (including any future laws that are agreed among EU Member States) (Centre for European Reform, 2012) with little or no ability to shape this legislation.

6.3 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 - Norway, Iceland, Lichtenstein and Switzerland. The UK was among the founding members of EFTA, along with Austria, Denmark, Norway, Portugal, Sweden, and Switzerland. Membership has changed over the years with the accession of successive countries to the EU. The EFTA seeks to promote free trade between its members; with the EU (through the EEA agreement and bilateral agreements between EU-Switzerland); and with third countries.

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 recognises 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, although this should not constitute a means of arbitrary discrimination or a disguised restriction (EFTA, 2010).

The Convention does not does not require the adoption of particular pieces of EU legislation. However, it incorporates the principles and rules established between the EU and EEA-EFTA States in the EEA Agreement and between the EU and Switzerland in the EU-Swiss Bilateral Agreements, which include provisions on the requirements products need to meet on safety, consumer protection, health and environmental grounds.

6.4 Bilateral agreements between the EU and Switzerland

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 agreements on trade in agricultural products, a protocol on processed agricultural products, mutual recognition in relation to conformity assessment and public procurement (EEAS, nd). Following the rejection of Swiss membership of the EEA in a referendum in 1992, a series of additional bilateral agreements have been signed in a number of areas. A package of sectoral bilateral agreements were signed in 1999 (known as 'Bilaterals I') covering: free movement of

people, technical trade barriers, public procurement, agriculture and air and land transport, and a scientific research agreement which integrates Switzerland in the EU's framework research programmes. A further set of sectoral agreements signed in 2004 (known as 'Bilaterals II') covering Switzerland's participation in Schengen and Dublin, agreements on taxation of savings, processed agricultural products, statistics, combating fraud, participation in the EU Media Programme and the European Environment Agency¹⁴, as well as on Swiss financial contributions to economic and social cohesion in the new EU Member States. In 2010 an agreement was signed on Swiss participation in EU education, professional training and youth programmes. In these areas, EU law directly applies to Switzerland. At least 120 other technical agreements are also in place (Church et al, 2012).

Switzerland makes financial contributions to help reduce social and economic inequalities among EU Member States in Eastern and Central Europe and pledged CHF 1 billion over a period of five years to support projects and programmes in the 10 new EU states (EU-10) (Swiss Federal Department of Foreign Affairs, 2012a). Switzerland also makes contributions to certain EU programmes and activities in which it participates such as the 7th Framework Research Programme where Switzerland's contribution in the 2007-2014 period was around CHF 2.4 billion.

The Agreements are based either on the equivalence of legislation (e.g. agreements on technical barriers to public procurement markets) or, in some cases, on the adoption of the *acquis communautaire* (e.g. in the case of the Civil Aviation Agreement and the Schengen Agreement). Some agreements regulate cooperation under EU programmes and agencies (e.g. the agreements on research and on participation in the EEA). The Agreements are administered by joint committees, which serve as platforms for information exchange, advice, and consultation. The Agreements can only be amended with joint agreement of both parties and are not subject to automatic amendment. As the Agreements are based on the equivalence of legislation it is in the interest of both Switzerland and the EU to maintain this equivalence following developments in relevant legislation. In general, it is necessary to adopt developments of relevant EU law so as to maintain equal competitiveness conditions (e.g. avoid technical barriers to trade). In addition, there is also an interest in equal standards in areas such as security, health and the environment (Swiss Federal Department of Foreign Affairs, 2012b). Procedures to facilitate information exchange and consultation have been established in cases where one party plans to change certain legal requirements in areas of relevance to the Agreements (ibid).

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. According to Church et al (2012), recent research indicates that around 55 per cent of laws passed by the Swiss parliament concern the transposition of international, including EU. Switzerland is thus compelled (both directly and indirectly) to adopt a large part of EU law without having any influence on the decision-making process.

¹⁴ A bilateral agreement on the Environment governs Switzerland's participation in the European Environment Agency (EEA) which allows Switzerland to participate in the activities and projects of the EEA, access the European Environment and Observation Network (EIONET), influence the focus of European environmental research projects (although it has no formal voting right), participate in EEA programmes and invitations to tender etc. Swiss Directorate for Economic Affairs, Bilateral agreements – Switzerland-EU, Factsheets, <http://www.europa.admin.ch/themen/00500/index.html?lang=en> [accessed 4/7/2013]

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' (ibid).

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). In 2010, the Council concluded that although the system has worked well in the past it has reached its limits. 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 (Council of the European Union, 2012). The Swiss government has discussed proposals on the basis of which Switzerland would 'provisionally' adopt the evolving EU acquis under the supervision of a Swiss monitoring agency and subject to direct democracy challenges; however the EU has indicated its opposition to such an arrangement (Church et al, 2012). While the EU has been more accommodating in its approach to relations with Switzerland, this is changing as indicated in current tensions, and could influence its attitudes to the UK.

7 SOME FUTURE CHALLENGES

How far can EU policy be expected to be relevant and valuable in meeting the next generation of environmental challenges? This will continue to be a live debate, particularly when it comes to the merits of EU intervention in specific topics, where there will be differences in view, as there have been in the past and UK views will not necessarily prevail. However, given the continuing validity of the rationales for a substantive European dimension to environmental and climate policy set out in Chapter 2, there appear to be several areas where the case for EU level action will remain strong, assuming any intervention is needed. For example:

- Improvements need to be made to a number of policies that are not functioning satisfactorily, such as the EU Emissions Trading System.
- The principal EU climate targets run to 2020 and soon further targets (or alternative policies) will need to be put into place if significant emission reductions are to be achieved in the coming decades and the EU is also to respond to a global agreement, if this is achieved. While it would be possible to rely on purely national targets and measures there is a significant danger that this would result in a fragmented and variable approach, both achieving less within Europe and probably weakening the EU's capacity to influence other states result in a global agreement. The UK government already has stated its preference for an EU 2030 emissions reduction target at a sufficiently demanding level to deliver significant results.
- There are a growing number of international issues where the EU could add value especially where transboundary or trade related questions are prominent or the EU's size and influence are potentially crucial. Examples include the control of greenhouse gas emissions from aircraft and shipping and the control of invasive alien species from outside Europe.
- In many areas, common standards or approaches within the EU are required to maintain a level playing field while addressing common environmental problems, such as energy efficiency in manufactured goods, vehicle emissions, policies on alternative fuels and new measures to reduce waste and increase investment in a resource efficient economy. Businesses investing in products and facilities for a green economy need an adequate scale of market and sense of confidence in the direction of policy.
- If agreed targets for biodiversity are to be met, new approaches are likely to be required and some of these are likely to have a European dimension. An example would be the development and utilisation of more environmentally sensitive fishing techniques, not just in UK waters but in the wider fishing grounds controlled by EU Member States. Action by one country alone is not going to be sufficient.

It is unlikely that EU environmental policy will continue to give rise to new measures at the pace adopted in the 1990s. Most of the major areas are now covered as acknowledged in the recently agreed Seventh Environmental Action Programme. Furthermore, any proposals for new regulations are subject to an intense level of scrutiny in an atmosphere of much higher sensitivity to any cost burden either on governments or the private sector than prior

to the recession. Nonetheless, new measures will continue to come forward, such as on toxic substances or vehicle emissions and there is little sign that many EU governments would prefer to revert to a model where national measures were pre-eminent. Consequently, if the UK were to withdraw from EU decision making in this realm it would most likely continue to face an evolving set of EU policies over which it had no control, as set out in the previous section.

The process of reviewing and, where necessary, amending existing EU environmental policy can be slow and often requires a high level of political consensus if serious changes are to be made. This does not occur very often, providing some stability but also rigidity, and sometimes frustration.

However, processes to adapt policy do exist and some are being used more often. In 2011/2012 for example a “Fitness Check” of EU water policy took place with extensive consultation of governments and stakeholders. Waste policy is the current topic for a Fitness Check, which examines how existing policies are performing and how they might be improved in future.

Governments have the opportunity to express their views forcibly in this and other contexts, and can, if they choose to, work with like-minded governments elsewhere in Europe. There is also the option to initiate new approaches within the EU in a way that the UK Government often has been reticent to do. Publishing relevant analysis, holding events for participants at an EU level, working closely with other governments and partners can build the case for new approaches. If the UK remains a participant in EU environmental policy it could adopt a more proactive stance than historically and increase its already considerable influence. With the widespread use of English and broad exposure of UK media in several countries in Europe, the capacity to influence thinking in the EU, including within the European Commission, is often under-estimated.

8 CONCLUSIONS

One of the most notable achievements of the European Union has been to create a widely respected framework of environmental and climate policies. This has influence beyond the EU, in the EEA and rest of the world. It reflects the concerns and interests of now more than 28 countries with diverse priorities and economic conditions. Its development has been supported by a wide range of political parties as well as both NGOs and business interests.

Policy at the EU level has grown for a series of practical reasons since a cooperative approach has clear advantages in many spheres. The environmental gains are potentially larger, both within Europe and globally through the political and economic leverage that the EU can exert. The inefficiencies of separate and potentially conflicting national regimes are avoided and a level playing field can be created to the benefit both of business and governments concerned about being out of step with their neighbours.

The UK has played an important role in shaping significant elements of EU policy, including pivotal legislation on industrial pollution and water (including the Water Framework Directive). Recognising the advantages of advancing policy at an EU rather than purely national level, the UK is currently one of the main advocates of a more ambitious EU climate policy. In this and other spheres the EU framework and weight in global negotiations complement national policy.

Both climate change and many other environmental issues require progressive action over a long time period. Some also depend on relatively large investments with medium to long term paybacks. In such areas, policy stability has particular value. The EU can provide this in a different way to national governments since it is less subject to shorter term political perturbation and the impacts of national electoral cycles. Whereas EU policy sometimes can be difficult to amend in the short term which can be frustrating, as in the case of biofuels, equally it is resistant to political fashion at the national level. This is a more important requirement in the realm of climate and most environment policy than it may be in other spheres where a more nimble policy may have greater merits.

As several examples in this report illustrate, including air and water pollution and waste management, EU measures can provide direction, drive and a clear context in which more locally specific initiatives can be framed. Political compromises will be involved periodically and some of these are problematic but there is a greater potential to steer the evolving framework than in European countries outside the EU, where governments are recipients rather than moulders of a policy framework which is likely to remain dominant.

The evidence points to greater environmental progress on a wide range of fronts because of EU policy than would have occurred in its absence. In spheres as varied as air and water pollution, waste management and recycling, nature conservation, noise and impact assessment, EU measures have augmented or moved beyond previous UK measures with substantial environmental benefits. Whilst there is no conclusive proof of exactly where national legislation would have stood in the absence of EU measures there is a consensus in the literature and amongst those consulted in the course of this review that the baseline has been raised. Even in areas where the UK had relatively well established law and systems prior to the implementation of EU measures, their introduction has added value. The long

term commitments to raising the ecological status of fresh water and the conservation status of key sites within the Natura 2000 series are both founded on binding EU legislation (the Water Framework, Birds and Habitats Directives respectively).

At the same time, EU measures have been crucial in laying the foundations for the “green economy” driving innovation, the emergence of new industries and products and helping to create opportunities for competing in new markets, for example in Asia where highly efficient low impact products are prominent in the market place. The CBI has acknowledged the crucial role of “green” industries in creating growth and new employment within the UK in recent years. A cleaner and healthier environment has economic as well as inherent benefits, not least in attracting new investment. The successful car industry in the UK shows that manufacturers can adapt to rising EU standards and remain competitive, creating new jobs while reducing pollution levels.

While there are costs associated with EU Environmental policy and it can force adjustments in production and infrastructure it should not be misrepresented simply as a source of constraints on economic activity when it also leads to innovation, new investment, evolving technologies and the increased sustainability of production systems.

A large portion of the UK’s environmental policies rely to a very considerable extent on EU legislation or other policy measures. They are no longer entirely distinct. British institutions, procedures, IT systems, monitoring arrangements and other elements of environmental policy are heavily geared to the amalgam of European and domestic requirements that has evolved. It is questionable what could be gained in the sphere of environmental policy by a looser relationship between the UK and the EU. As a member of the Union the UK is able to contribute to the formal as well as the less formal channels for determining EU policy. This includes the review of existing policy through mechanisms such as the recently created “Fitness Checks”. Opportunities to express views on the value of EU policy in certain areas and the operation of the “subsidiarity” principle can be taken. Outside the EU in the EEA, EU policy on the environment is applied in a large number of spheres but with no opportunity to play a substantive role in the legislative process. For Switzerland, with looser and more cumbersome arrangements than EFTA countries, the leverage on a dominant EU policy framework is even less.

The UK has shown that it can be an influential force in environment and climate policy from inside the EU and for climate mitigation particularly needs a strong EU position to complement national objectives. A deliberate choice to act as an outsider in this sphere now would have much greater drawbacks than would be justified by any gain in flexibility.

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