



# The future of EU environmental policy: challenges & opportunities

A special independent report commissioned by  
the All-Party Parliamentary Environment Group

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# Foreword



**Dr Phillip Lee is the Conservative MP for Bracknell and chair of the All-Party Parliamentary Environment Group**

**W**e are in tough economic times and there is no doubt that the overall British approach and our short-term expectations with regards to environmental policy will have to be revised. At the same time, as the impact of climate change becomes apparent, we do then have to address the fundamental problems and act swiftly to protect the environment.

Britain has a dual approach to European and international climate change policy: to work with key countries, partners and sectors to demonstrate the potential of low carbon growth, and at the same time to make progress with a legally-binding global deal curbing emissions to tackle climate change. Our focus will now have to be on building a global roadmap to an agreement by 2015 and we also need a strategic and viable approach to renewable energy.

I am delighted that, under the UN Framework, both developed and developing countries were able to join together and agree on the strategy at the recent Durban Climate Change Conference – European leadership played a large part in this. In addition, a second commitment of the Kyoto Protocol was agreed and I am proud of the role that the UK played in galvanising support for both agreements.

Europe is an essential global player in shaping overall targets and leading the way on environmental policy. It is a hugely complex area and so I am pleased to present this report. I hope that you will find it useful in guiding you through the maze of proposals that cover the wide range of issues that need to be tackled. These issues are certainly very significant, but it is clear that we have the opportunity to make real progress if we act now.

**Dr Phillip Lee MP  
Chair, All-Party Environment Group**

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# 1. Executive summary

EU environmental policy is facing a new and challenging context. The current economic and financial preoccupations in Europe are unlikely to fade away quickly. It is difficult to forecast when instabilities in financial markets, uncertainties over economic and job prospects and pressure to maintain austerity regimes will end. The crisis in the Eurozone has led to bigger questions concerning the role of regulation and aspects of the EU project itself, particularly but not exclusively in the UK where political tensions have been brought to the fore in recent months. Details of a new inter-governmental agreement on the economic governance of the Eurozone are currently being negotiated. Most existing EU policies, including those concerning the environment, are not likely to be affected by this agreement. However, the political repercussions and dynamics of the new economic governance structure are yet to unfold and may spread beyond the arenas of fiscal and budgetary policy.

For these reasons, conditions for the further development of a proactive EU environmental policy may not look favourable. Nonetheless, several environmental challenges call for a response as a matter of urgency, both within Europe and on a global scale. Many of these issues need to be addressed at a European level and there is a clear link to the single market as well as the ecological integrity of the continent. The current economic situation also offers a number of opportunities for promoting the environmental policy agenda, particularly in view of fostering an efficiency revolution. It has given an impetus to concepts such as the green economy, green growth, resource efficiency etc., which are increasingly reflected in mainstream political discourse both in the EU and domestically. Thus, even in a period of economic recession and political upheaval, the environmental perspective should remain a cornerstone of strategies for the future economy.

Whilst far from perfect, environmental policy is certainly one of the success stories of the EU and is an area in which one can clearly see the benefits of the Union, both on the ground and internationally. Over the past four decades, a range of key pressures on the environment have been reduced and several aspects of Europe's environment have improved. Major progress has been made, including reductions in overall air and water pollution, improvements in the preservation of the natural environment and efforts in relation to waste and resource use. EU policy has played a very significant role in achieving these results. A particular strength of EU policy is that it addresses the environmental agenda rather systematically and is less affected by short-term political and budgetary shocks than most national governments. This has provided the conditions for a longer-term view which is particularly valuable in environmental policy.

In the next two to three years, safeguarding jobs and stimulating growth are likely to remain an over-riding political priority. Thus securing support for new environmental measures will mean convincing leaders of the costs of inaction and the cost-effectiveness of action. Strong arguments and solid evidence will be at a premium. At the same time, policy is moving in new directions. The rise of emerging economies is dramatically changing the international landscape and the role of the EU therein. Moreover, the nature of contemporary environmental challenges is such that many cannot be addressed by environmental policy alone. Rather, they require wider economic and social changes, with implications for a suite of policies, ranging from trade and international relations to industrial policy, research and development, and fisheries.

Although relatively comprehensive already, the body of EU environmental policy remains dynamic and is constantly being updated, subjected to scrutiny and potential modifications or roll-back. It is now at a critical point, with a number of important policy processes and strategic discussions taking place in various areas. Many of the key areas of policy development are reviewed in Chapter 4 of this report, while Chapter 5 provides an overview of the wider strategic context. The Annexes of the report provide an overview of forthcoming strategic events, EU targets and legislative proposals awaiting adoption. The following are amongst some of the key issues and policy processes that will be prominent on the agenda in the next two to three years:

- Climate change concerns have infiltrated the main political discourse and there are currently several issues on the agenda. A shift to a 30 per cent EU greenhouse gas emission reduction target remains possible, as well as desirable, despite the reduced impetus from global negotiations. There are also specific proposals to promote

energy efficiency more effectively. Other issues on the agenda include addressing emissions from the transport sector and the decarbonisation of transport fuels, as well as securing finance for climate-related investments within the EU and externally

- A new approach to resource use in Europe is signalling efforts in the next eight years to improve resource efficiency and, more tentatively, to reduce resource use, while linking to strategies to promote green growth. This emerging agenda needs to be converted into concrete actions at EU and national level starting with the development of concrete targets and indicators for reducing resource consumption.
- With regard to the natural environment, the valuation of natural capital and ecosystem services is increasingly recognised. However, it needs to be translated into concrete measures to protect biodiversity in practice, including adequate funding for Natura 2000 and a revised approach in the CAP.
- Comprehensive reviews of existing legislation in a number of important areas of EU environmental policy are underway. A 'Blueprint to safeguard Europe's waters' is expected to be presented in November 2012, addressing the broad scope of EU water policy and making recommendations for improvements. These might include legislative changes and initiatives to improve implementation, which has been slow in the case of the Water Framework Directive for example. A review of the EU's approach to regulating the production and use of chemicals through the REACH Regulation is also expected in 2012. A review of EU air quality policy should conclude in 2013, with the presentation of a new clean air package, updating existing policies and directives.
- In addition to specific legislative developments, there are also a host of strategies and roadmaps which set out where the EU is heading on the economy, energy policy, climate, innovation and the environment itself. Particularly significant in 2012 will be the emergence of a proposal for the 7th Environment Action Programme which is expected to set the direction for EU environmental policy for the coming years.
- Funding for the environment will be a frontline issue with the EU budget for 2014-2020 in principle being agreed during the year. Reforms of the Common Agriculture, Cohesion and Common Fisheries Policies, all with large environmental components, will run through 2012 and beyond. The investment needed to achieve EU environmental objectives and to support the transition to a low-carbon, resource efficient economy is substantial. Rising public debts in several Member States and flailing capital markets have dented the ability to invest in the critical infrastructure and innovative technologies and services. Therefore, securing adequate financing to support environmental commitments in the main EU funds will be an important test of the commitment to environmental progress.

The outcomes of these processes will have an important influence on the context and scope of EU environmental policy to 2020 and beyond.

In broad terms, the main environmental challenges ahead include reducing the intensity of natural resources used for economic activity, decreasing the negative environmental impacts associated with the use of natural resources, preserving and restoring natural capital and ecosystem services, and improving human well-being and quality of life. The inter-linkages and trade-offs between different thematic areas such as climate change, biodiversity, and natural resources, as well as between environmental policy and sectoral policies such as agriculture, energy or transport will need to be addressed more vigorously.

Improving the implementation of existing environmental policy has been and remains a key challenge. It requires a more honest alignment of aspirations, regulatory means and implementation capacity with the political realities of a Union of 27 Member States. Maintaining sufficient institutional and administrative capacities for good governance and regulatory foresight in the face of fiscal austerity and pressures for budgetary cuts will be an important challenge for national authorities as well as the EU institutions. However, recent history suggests that well designed and effectively implemented environmental policy can provide some of the foundations for long term prosperity, as well as steering us towards a more sustainable society.



## 2 Introduction

The European Union (EU) is currently embroiled in significant turmoil. The crisis in the Eurozone has not only had serious economic, political and social ramifications, but has also led to bigger questions concerning the EU project itself. It has exposed some of the weaknesses of the Union within a rapidly changing global context, and has highlighted the overwhelming need for reform in the Eurozone, with possible implications beyond fiscal policy. Growing scepticism about the EU has been voiced in a number of Member States, including the UK where a skirmish over a referendum on the UK's membership of the EU in the autumn brought some of the underlying political tensions to the fore. A veto exercised by the British Prime Minister at a December Council meeting of EU leaders created further furore, both among other Member States and domestically, and may have marked a significant moment in the history of the UK's relationship with its European partners. The details of the subsequent inter-governmental agreement are currently being finalised. Although many existing EU policies, including those concerning the environment, are not likely to be affected by the agreement; the new economic governance structure can be expected to create a momentum of its own and the political repercussions and dynamics of this are yet to unfold.

Given this rather volatile climate, some are likely to question the value of having a discussion on EU environmental policy at all. However, it would be a mistake to underestimate the significance of environmental policy on account of the current situation. Whilst far from perfect, environmental policy is certainly one of the success stories of the EU and is an area in which one can clearly see the benefits of the Union, both on the ground and internationally. In the short- to medium-term, the EU is likely to remain the primary source of environmental policy within Europe, driving most national decisions in the same way it does today. Many environmental issues need to be addressed at a European level and there is a clear link to the single market as well as the ecological integrity of the continent. Moreover, while there is a preoccupation with economic performance at present, this needs to be linked to a green agenda, both in the EU and domestically. Concepts such as the green economy, green growth, resource efficiency etc., are increasingly reflected in mainstream political discourse. A relevant example is the Europe 2020 Strategy which has an explicit environmental dimension to it. Thus, even in a period of economic recession and political upheaval, the environmental perspective should remain a key component of strategies to stimulate growth.

Despite progress in a number of areas, the overall state of Europe's environment and the EU's impacts on the environment in other parts of the world still require further action (EEA 2010). Inter-linkages between thematic areas such as climate change, biodiversity, natural resources and environment and health, and their links with

sectoral policies such as agriculture, energy or transport are far from being adequately addressed. As in the UK, the EU's environment and climate change agenda is now covered by different departments within the European Commission, thus further increasing the need for coherence and coordination. Improving implementation of the substantial body of law already agreed has been, and still is, a key challenge. There are also a number of remaining gaps in the coverage of EU environmental policy, such as tackling climate change adaptation, addressing water scarcity, issues related to nanotechnologies and the cocktail effects of chemicals, where new measures may still be developed. Markets and consumers continue to get distorted price signals that do not fully account for the cost of environmental damage and significant knowledge gaps exist for several environmental problem areas. Addressing these and other remaining challenges will be a priority in the coming years.

Although relatively comprehensive already, the body of EU environmental policy remains dynamic and is constantly being updated, subjected to scrutiny and potential modifications or roll-back. It is now at a critical point, with a number of important policy processes and strategic discussions underway. They include the adoption of new strategic plans including in relation to future biodiversity policy and comprehensive reviews of existing legislation in important areas of EU environmental policy such as water, air and chemicals. Substantial discussions on the future EU budget are currently taking place, as are efforts to take forward the EU's new economic strategy - the so-called Europe 2020 Strategy and related Flagship Initiatives. Alongside this, there are also a number of reform processes in sectors with a large environmental impact such as agriculture, transport and energy. These different processes are taking place against the backdrop of a difficult economic and political climate and will have an important influence on the context and scope of EU environmental policy to 2020 and beyond.

This report provides an update to the 2009 IEEP report for the All-party Parliamentary Environment Group on the 'The Future of EU Environment Policy: Challenges and Opportunities'. It begins with a brief review of the development of EU environment policy and the changing nature of environmental issues addressed. It then goes on to provide a brief review of the key environmental challenges facing the EU in a number of different thematic areas. This is followed by an overview of the main policy and strategic discussions currently underway. The report concludes with a discussion on some of the prospects and key challenges for the future.

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# 3 Setting the scene

Over the past 40 years, the EU has set up a relatively comprehensive and dense body of environmental legislation (the environmental acquis) which is accredited with reducing several pressures on the environment and improving environmental standards in the majority of its Member States, including the UK. The number of items of EU environmental legislation has increased rapidly over the years (see Figure 1) and in the UK it is estimated that over 80 per cent of environmental legislation originates in the EU. The same is probably true of most other EU Member States. Major progress has been made, including in relation to reductions in overall air and water pollution, improvements in the preservation of the natural environment and efforts in relation to waste and resource use. A number of factors have contributed to these achievements including strong networks of environmental actors, political will, and the effective use of ‘windows of opportunity’. While there has been a good pace in the adoption of EU policies relating to the environment, progress has not been linear and has tended to be sensitive to wider economic and political cycles (Hey, 2005).

The focus of EU environmental policy has shifted from an initial emphasis on addressing issues within Europe to growing consideration of the international dimension. The approach has evolved from an emphasis on controlling pollution from point sources, mainly through ‘end of pipe’ legislation towards a more holistic, integrated approach aimed at tackling the underlying causes of environmental damage, particularly in key economic sectors such as agriculture, transport and energy. Actor constellations have changed accordingly. The formulation and implementation of EU environmental policy now takes place in a complex system of multi-level governance involving not only environment Ministries and the Commission’s Directorate-General (DG) for the Environment, but also sectoral Ministries and other DGs within the Commission, different levels of government, and a growing number of non-state actors. The European Parliament has also played an increasingly active and assertive role in relation to the development of EU environmental policy over the years.

Today’s environmental challenges are no longer distinct, independent and straightforward. The increasing complexity of inter-linkages between policies on climate change, biodiversity, natural resources, and environment and health has become ever more apparent in recent years. For example, the link between water and climate change is increasingly evident as large parts of Southern Europe are affected by water scarcities while other parts of

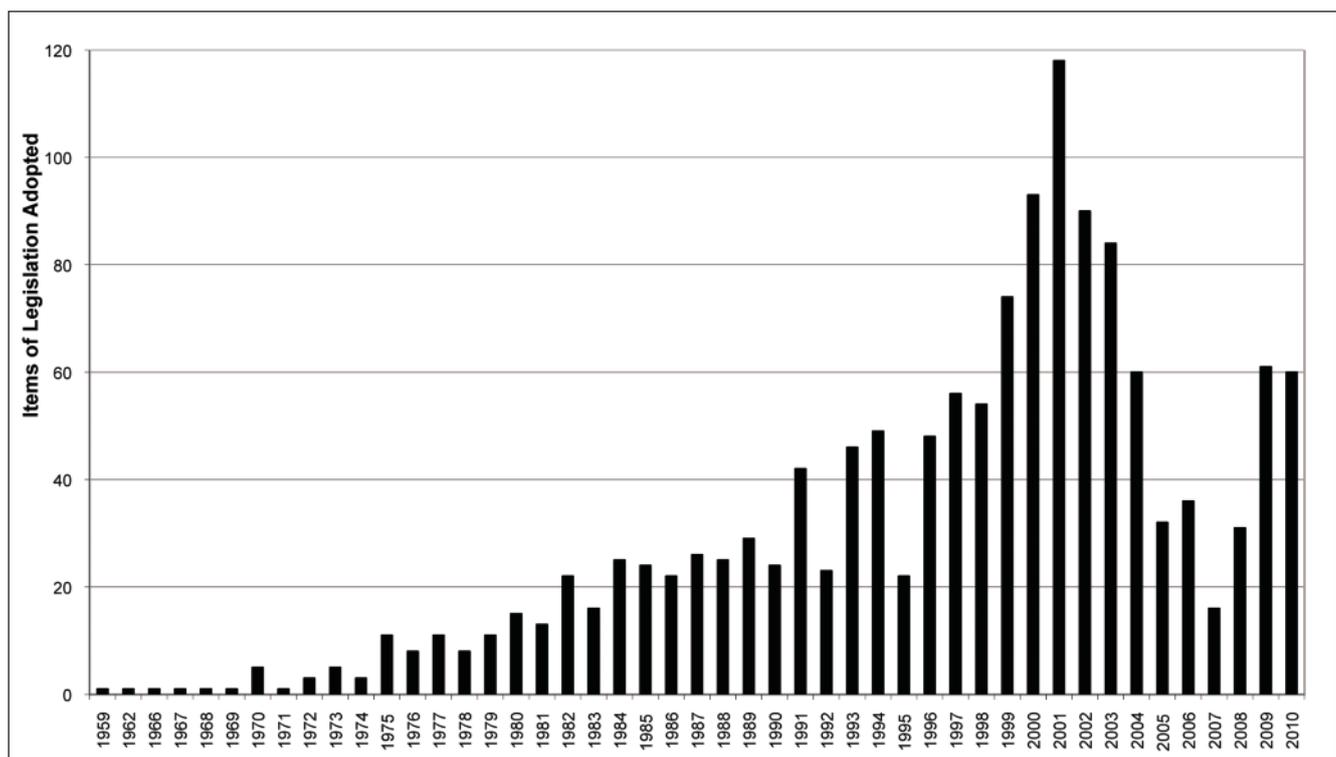
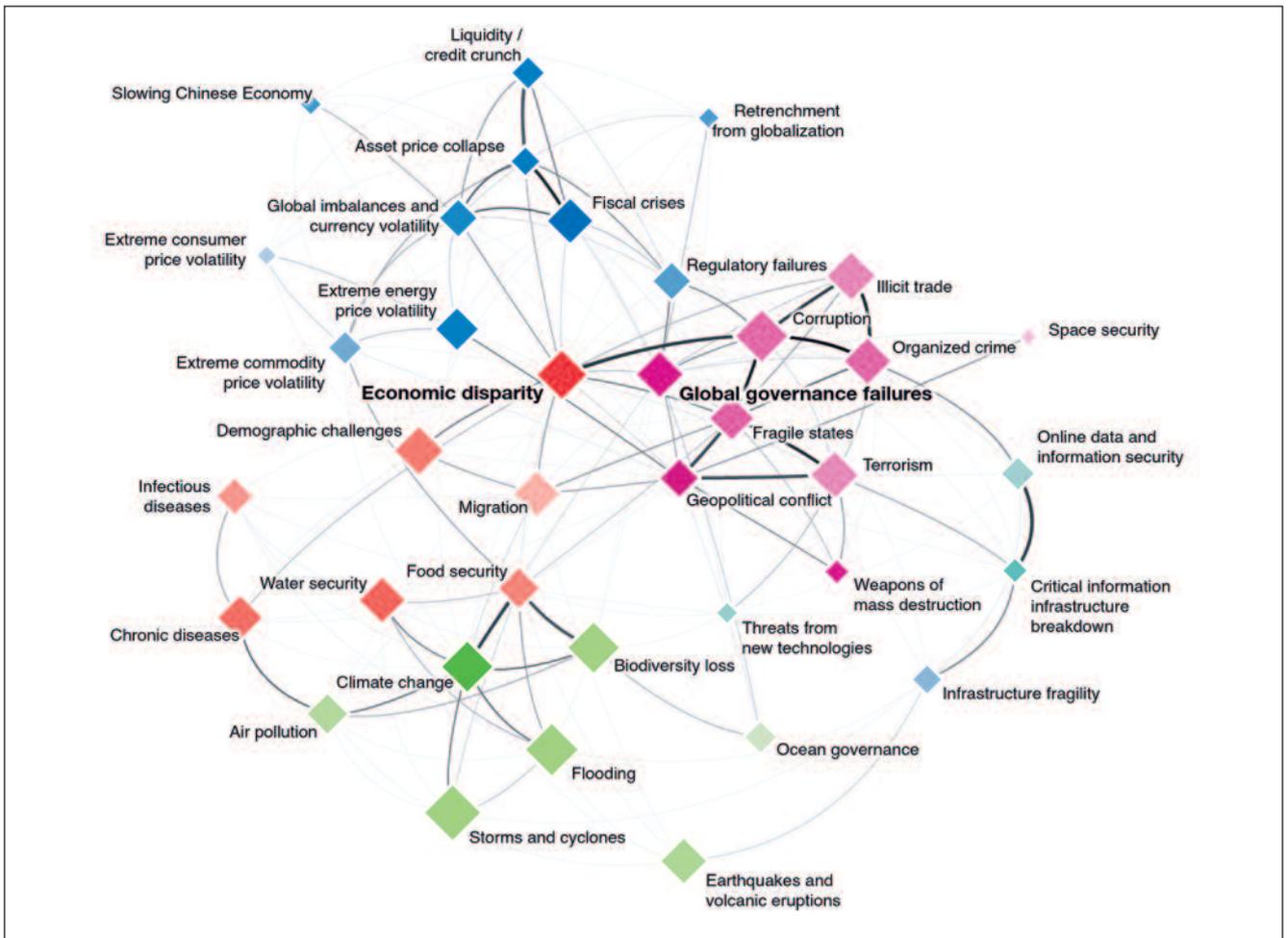


Figure 1: Number of items of EU environmental legislation adopted each year, 1962-2008 Source: IEEP 2011



**Figure 2: Risk interconnections – complexities, interactions and synergies** Source: WEF 2011

Europe suffer from a rise in the frequency of major floods and related damage. Over the past few years, the focus of environmental policy has also shifted towards resource inputs in the economy and their environmental impacts. This agenda is taken forward not only by focussed environmental initiatives but also by economic policy drivers and their offshoots, including the Europe 2020 Strategy and related Flagship Initiatives. In particular, the 2011 resource efficiency Flagship Initiative has spawned a number of relevant strategies including the low carbon Roadmap and the resource efficiency Roadmap and has led to the re-conceptualisation of a number of environmental issues to relate them to the resource efficiency agenda.

The web of different policies and strategies and the links between them is becoming more complex and sometimes less transparent. For example, feedback mechanisms between policies can lead to unintended negative side effects from well-intended measures, such as the case of indirect land use change impacts of biofuels (Bowyer 2010). Moreover, in a highly interdependent world, many key drivers of environmental pressures operate on a global scale and are likely to unfold over decades. Changes in one region can trigger a cascade of impacts that also affect other regions. The World Economic Forum has warned that a comprehensive set of interlinked global risks (see Figure 2) is evolving and that domestic governance systems lack the capacity to deal with them effectively (WEF 2011).

Against this challenging backdrop, the political difficulty of agreeing different response options has increased markedly. In the current context of an extended economic crisis, many of the enabling conditions which have helped advance the development of EU environmental policy in the past are no longer fully present. How to ensure sustainability and promote environmental objectives in times of austerity is thus a critical question as we move forward. Policy is moving in new directions and a major expansion of the EU environmental acquis no longer seems likely in the coming decade. Moreover, the nature of environmental challenges faced today is such that they cannot be addressed by environmental policy alone. Rather, they require wider economic and social changes and relate to a suite of policies from trade and international relations to industrial policy, research and development and fisheries.



## 4 Environmental challenges

Over the past four decades, a range of key pressures on the environment have been reduced and several aspects of Europe's environment have improved. EU policy has played a very significant role in achieving these results. However, a number of serious challenges remain; some in areas with a long history of policy efforts (e.g. managing waste, biodiversity) and those where efforts have been more limited to date (e.g. aviation, marine environment, transport). The EU's impact on the environment in other parts of the world, our so-called 'footprint', continues to grow. Further action is still required.

The 2010 review by the European Environment Agency on the state of the European environment and outlook (EEA 2010c) identified a number of future priorities. These included the need to improve implementation and the management of natural capital and ecosystem services, to further integrate environmental considerations in sectoral policy domains, such as the CAP, and to achieve the transformation to a green economy.

These will be amongst the principal challenges in the years ahead. However, it is less clear how we are going to address them. Given the current economic and political climate, there is a growing sense that the EU cannot proceed by regulation alone. There are active debates underway on the pros and cons of different types of intervention, their effectiveness, the associated administrative burden, costs entailed, etc. Issues of competitiveness and growth have been brought to the forefront of political priorities, creating tensions with environmental objectives. These questions are not purely theoretical; they are feeding into contemporary decisions over the next generation of policies.

In the following sections we offer an overview of how these issues are being addressed in a range of themes of particular environmental significance. They include a summary of the current EU policy response and future options being explored. It is not intended as a comprehensive account of all areas of EU environmental policy, but is deliberately selective.

### 4.1 Climate change and energy

Despite being among some of the largest emitters of greenhouse gases (GHGs) in the world, EU Member States are also among the most active in seeking to address the issue. At the international level, the EU negotiates as a bloc within the UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. The Kyoto

## Box 1. EU progress in reducing GHG emissions

Since 2008, progress towards the EU's 20-20-20 targets has been aided by the economic downturn and the burgeoning development of renewable energies. In 2009, the EU's total GHG emissions decreased by 7 per cent. However, the combination of economic growth in some countries and a cold winter led to a rise in emissions in 2010 by 2.4 per cent.

Overall emissions in the EU-15 had fallen by 10.7 per cent by the end of 2010 as a result of domestic emission cuts and activities in the sphere of land use, land use change and forestry (LULUCF), assisted by the use of flexible mechanisms. Hence, the EU-15 is expected to go beyond its very modest Kyoto targets. Although it has no specific target under the Kyoto Protocol, the EU-27 countries as a block follow a similar trend and by the end of 2010 had reduced emissions by 15.5 per cent (not taking LULUCF into account).

Source: EEA 2010b; EEA 2011; EEA 2011b

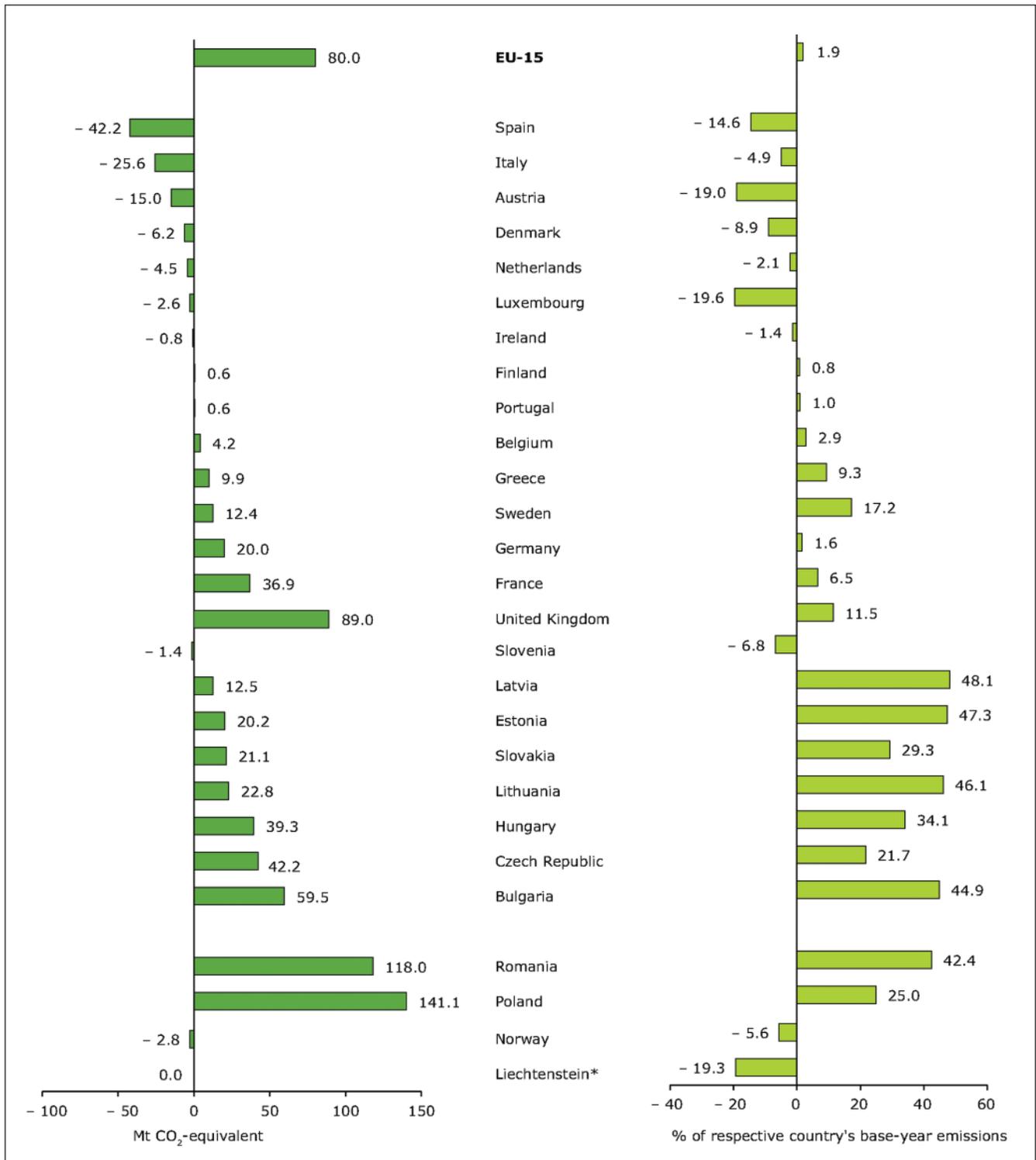
Protocol commits the EU-15 to reducing average GHG emissions by 8 per cent below 1990 levels between 2008 and 2012.<sup>1</sup> The EU has developed an array of internal policies to implement its international commitments and also to achieve the more ambitious overarching objective of limiting global warming to two degrees Celsius above average pre-industrial temperature levels. In 2009, the EU adopted a package of climate and energy measures to implement the so-called '20-20-20' targets agreed by EU leaders in 2007 as the centrepiece of EU climate policy. The targets are to reduce GHG emissions by 20 per cent, increase the share of renewable energy by 20 per cent, and reduce energy consumption by 20 per cent, all by 2020. Although a number of Member States, including the UK, continue to support a move to strengthen EU emission reduction targets, from 20 to 30 per cent, political efforts have yet to bear fruit in this regard.

While overall figures offer some encouragement (see Box 1 above), major differences remain between Member States (see Figure 3). On an individual basis, only 16 of those EU Member States with a Kyoto target are currently on track to meet their individual objectives (Bulgaria, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia Sweden and the UK) (EEA 2011). Some, including Austria, Italy and Spain, are significantly off track. Moreover, these figures do not cover Europe's emissions effectively imported through the substantial trade of goods and services with third countries. Net emission transfers from third countries, particularly from newly advanced economic countries such as China, have increased continuously since 1990 and in total may offset Europe's emission reductions (Peters et al., 2011).

Progress towards the achievement of the other 20-20-20 targets is mixed. Despite progress under several energy saving policies, estimates suggest that the projected impact of these policies would need to triple in order to meet the target of saving 20 per cent of energy use by 2020 (Ecofys and Fraunhofer Institute 2010). By contrast, the share of renewable energy sources continues to increase steadily (Figure 4 overleaf). Several Member States (Austria, Bulgaria, Czech Republic, Denmark, Germany, Greece, Spain, France, Lithuania, Malta, Netherlands, Slovenia and Sweden) are forecast to surpass their own targets, putting the EU on track to meet (or even exceed) its target of increasing the share of renewable energies in the overall energy mix to 20 per cent by 2020 (EC 2011d). The UK has a challenging target under the renewable energy Directive which it aims to meet mainly by a sizeable increase in wind power.

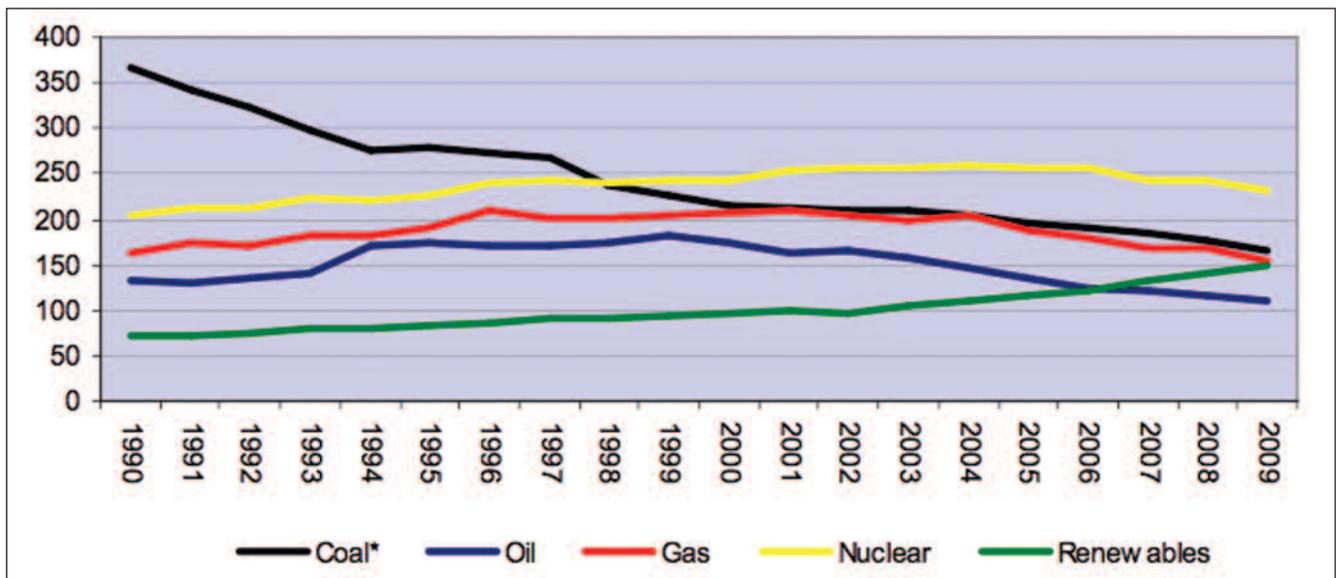
A number of studies have demonstrated that more ambitious climate mitigation policies are needed in Europe and are technically and economically feasible. They point to the economic benefits of an ambitious climate policy which could function as a motor for modernising the EU economy and its infrastructure, create jobs and enhance

<sup>1</sup> The EU-27 does not have a Kyoto target, since the Protocol was ratified before 12 other countries joined the EU. Most Member States that joined the EU since 2004 have the same 8 per cent reduction target, with the exception of Hungary and Poland which have a reduction target of 6 per cent. Cyprus is a non-Annex-I Party to the Convention and thus does not have a target.



**Figure 3: Gap between average 2008–2010 emissions and Kyoto targets in sectors not covered by the EU ETS**  
 Source: EEA 2011

competitiveness in fast growing global markets for low-carbon goods and services. Such a proactive approach is supported by many Member States including the UK, and a substantial group of commercial as well as environmental stakeholders are arguing for the adoption of a 30 per cent emissions reduction target as soon as possible (see Box 2 overleaf). However, there continue to be some Member States which are reluctant to take this step and the debate over moving to a 30 per cent target remains central to EU climate policy. Whilst it is important to resolve this, the eight year period to 2020 is only the near horizon. Looking beyond 2020, current information indicates that existing and planned measures on their own are not likely to be sufficient to bring the EU on a pathway to achieve its long-term emission reduction objective of 80–95 per cent by 2050 compared to 1990 levels (EEA 2011).



**Figure 4: Primary energy production in the EU, by fuel, EU-27 (Mtoe)**

Source: Eurostat May 2011

In the near future, new climate measures will be coming into force and others are in the pipeline. These include progressive reinforcement of the EU Emissions Trading System (ETS) which is entering its third phase in 2013 and has a pivotal role in mitigation policy, although some are questioning this in the light of the low carbon price at present. The ETS has been extended to include additional GHG gasses and to include aviation from January 2012 (see next section on transport).

Energy efficiency has been less prominent in EU policy but is the topic of considerable action at present. The background is provided by the Commission's *energy efficiency* Plan presented in March 2011 which aims to ensure the EU delivers on existing policy commitments and goes beyond this to achieve a 25 per cent overall GHG emission reduction by 2020 (EC 2011e). The public sector is allocated a key role in driving change, in particular through the market power of public spending. The Plan was followed by a proposal for an energy efficiency Directive, currently under scrutiny by the European Parliament and the Council (EC 2011f). This sets out a number of measures for energy using sectors, and for the European energy supply sector and other proposals to remove barriers and overcome market failures that impede efficiency. As it stands, the draft Directive requires the Commission to assess in 2014 whether the EU can achieve the current EU energy savings target and, if appropriate, to propose binding legislation with mandatory national targets for 2020 which do not exist at present.

Looking further ahead, several strategic documents relating to future climate and energy policy have appeared over the past year. In March 2011, as well as the energy efficiency plan, the Commission presented the '*Roadmap for moving to a low-carbon economy by 2050*', as part of the Europe 2020 resource efficiency Flagship (EC 2011g). The overarching objective is to reduce GHG emissions by 80-95 per cent by 2050. The Roadmap also sets out the percentage reductions that would have to be achieved in key sectors (power, transport, the built environment, industry, agriculture and forestry) by 2030 and 2050 respectively. Investment needs are estimated to be, on average, around €270 billion annually over the next 40 years. Substantial investment needs have also been identified in

## Box 2. European companies support more ambitious EU climate policy

In June 2011, 72 leading European and global companies signed a declaration calling on the EU to increase its current target of reducing GHG emissions to 30 per cent by 2020. Together the signatories account for more than 3.8 million employees with an annual turnover of more than €1 trillion. The companies call for an ambitious EU policy framework that can spur innovation and investment, notably in renewables and energy efficiency, lead to the creation of new jobs and enable Europe to maintain its leadership position in a global low carbon economy.

Source: WWF 2011

### Box 3. Adaptation to climate change

Adaptation has been another issue on the EU policy map, although less prominently and with less specific measures. The Commission White Paper on adaptation in 2009 (EC 2009a) proposed more than 30 concrete actions in a number of areas, such as the development of a knowledge base, and the integration of adaptation into other EU policies. It called on the EU and Member States *inter alia* to explore the possibility of making climate impact assessment a condition for public and private investment and to develop indicators to better monitor the impact of climate change, (including vulnerability impacts), and the progress on adaptation. A follow-up EU adaptation Strategy is expected in 2013.

relation to sustainable energy and transport infrastructure, low carbon technologies, research and development and adaptation (see Medarova et al, 2011). The question of securing financing for climate change related action is reflected quite prominently in the Commission's proposals for the future EU budget, although the sums available directly from this source are limited (see section 5).

Complementary to this are the November 2010 *energy 2020 strategy* and the December 2011 *energy Roadmap 2050* which explores different scenarios for the decarbonisation of the energy system (EC 2011h). The Roadmap concludes that the decarbonisation of the energy system is technically and economically feasible and that the overall costs of transforming the energy system are similar in all scenarios. The Roadmap maintains that while energy prices will rise until 2030 or so, new energy systems can lead to lower prices after that. A major programme of new investments will pay off in terms of growth, employment, greater energy security and lower fuel costs. The Roadmap is to be followed by initiatives in specific energy policy areas starting with proposals on the internal market, renewable energy and nuclear safety in 2012.

The EU has been prominent in *international climate change negotiations*, playing a leading role in the establishment of the Kyoto Protocol and in maintaining a future for it after 2012. To some extent it has been willing to accept greater emission reduction commitments than most other major players, such as the USA and Canada, although these have not been very demanding. However, it is now signalling that further European action depends on the willingness of others to commit. The latest round of UNFCCC negotiations in Durban, South Africa led to an agreement among all parties to draft a new protocol, legal instrument or an agreed outcome with 'legal force' by 2015. This was a key condition of the EU to commit to new binding emission reduction targets under a second commitment period of the Kyoto Protocol from 2013. Several countries, including Norway, Iceland and Switzerland, will also be part of this second commitment period; although others including Canada, Russia, and Japan will be notably absent. The targets and time span of this new scheme will be discussed and finalised next year. The EU remains pivotal to the future of the Kyoto Protocol and after a disappointing performance at the 2009 conference in Copenhagen seems to have somewhat re-established its leadership on climate change on the global stage. This is to be welcomed and has provided a much needed boost to EU morale in this area. However, a significant amount of work lies ahead to deliver on the agreed deal and to mobilise the resources that have been committed to developing countries to help them respond to the climate challenge. This will be a priority for the EU and for the more active national governments, such as the UK.

Globally or domestically, it will only be possible to adequately address the climate agenda by building a low carbon economy. This is a very substantial undertaking but the EU has started to move in this direction. Climate change concerns have begun to infiltrate the economic discourse and are now reflected in the EU's core economic strategy and in its spending priorities to 2020. Despite the difficult economic context, efforts are being made to incorporate climate change concerns in relevant policies such as energy, transport and regional policy, and are leading to the gradual acceptance of a new approach. Key challenges for the EU in the next decade include the following:

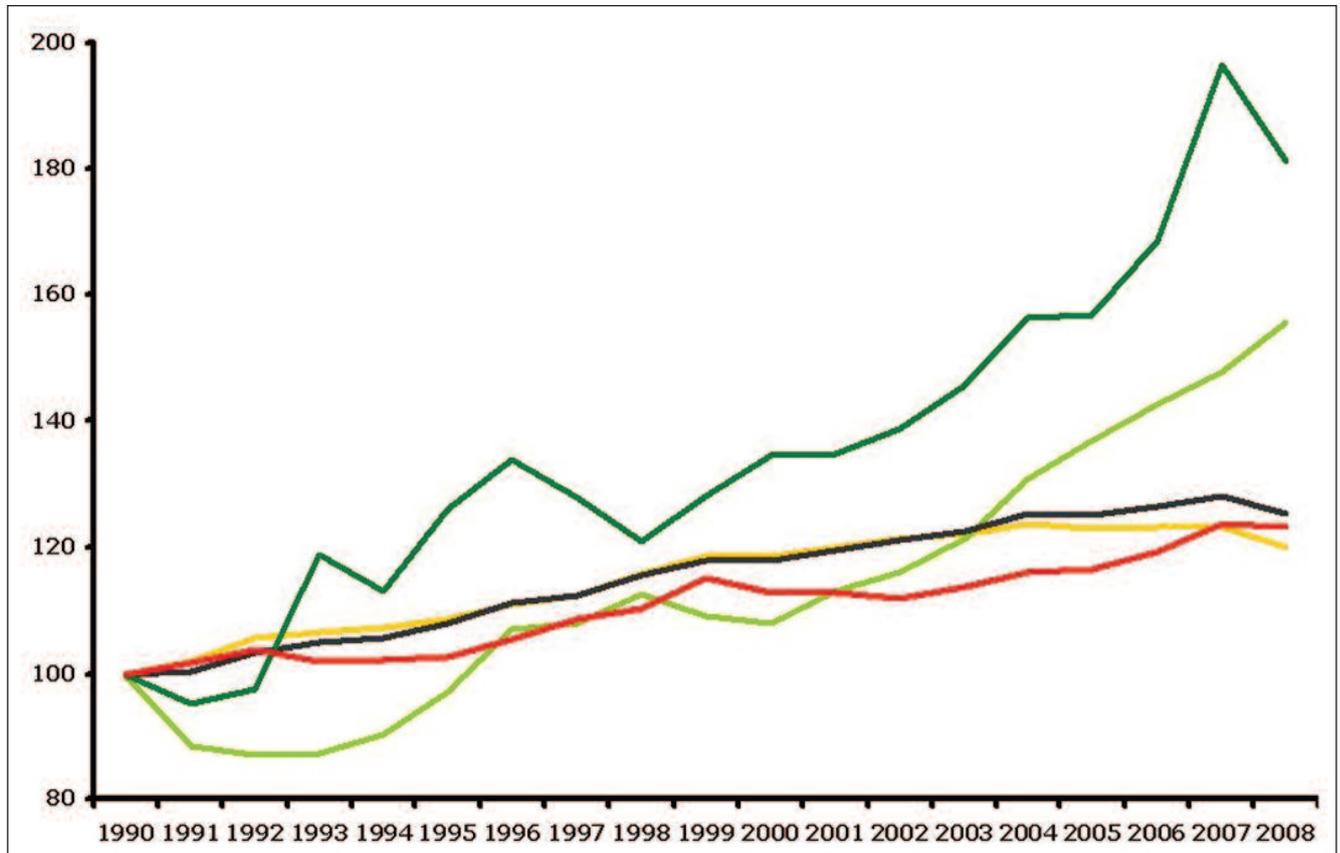
- Consolidating, reinforcing and strengthening the existing agenda (e.g. extending action on energy efficiency through mandatory and other measures) so that it is in line with the trajectory set out in the EU's 2050 low carbon roadmap.

- Building climate concerns more tightly into economic policy, including measures aimed at innovation and research and at key sectors such as energy supply and transport.
- Making more progress with securing adequate finance for climate related investments both within the EU and externally.
- Improving coherence between climate change and other environment policy areas so as to ensure an integrated approach in which climate change considerations are sufficiently embedded in other policies and to address any potential negative environmental aspects of climate measures, as exemplified by the biofuels debate.
- Securing an appropriate global framework for addressing climate issues more urgently.

## 4.2 Transport

The transport sector continues to be a source of significant environmental pressure in the EU. Emissions from transport are a major source of the EU's GHG emissions (Figure 5 below). In 2010 transport was responsible for more than a fifth of GHG emissions from the EU (EEA 2011c). The increasing demand for transport has offset potential gains from improvements in the energy efficiency of new vehicles. Transport emissions also exacerbate problems with poor air quality and noise, particularly in urban areas. Additionally, transport infrastructure and its users constitute one of the main drivers of pressure on Europe's ecosystems and biodiversity, particularly with regard to the fragmentation of landscapes and ecosystems, and account for the use of large quantities of raw materials.

Given its contribution to EU GHG emissions, the transport sector has become an increasingly important target of the EU's climate change and energy policy. Under the 2009 renewable energy Directive, there is a **target** that a minimum of 10 per cent of the final energy consumption used by transport is to come from renewable sources by 2020 in each Member State. A 2009 amendment to the fuel quality Directive included a target for the reduction of



**Figure 5: Total GHG emissions from transport, 1990-2008**

Source: Annual European Community GHG inventory 1990-2008 and inventory report 2010, Submission to the UNFCCC Secretariat, EEA Technical Report No 6/2010, EEA

lifecycle GHG emissions from liquid transport fuels of at least 6 per cent by the end of 2020. In March 2011, for the first time, the Commission proposed a specific GHG emission reduction target for the European transport sector. In the White Paper on transport, the target is to reduce GHG emissions from transport by 60 per cent by 2050, in addition there are a number of goals for a competitive and resource efficient transport system (EC 2011i).

Policy on *vehicle emissions* is now an important means of pursuing progress in the sector, albeit relatively slowly. Fuel efficiency requirements for new passenger cars are established in the passenger car CO<sub>2</sub> Regulation. This sets an average target of 130gCO<sub>2</sub>/km to be met by manufacturers by 2015 and an average target for 2020 of 95gCO<sub>2</sub>/km. Another Regulation aims to reduce average CO<sub>2</sub> emissions from new vans to 175gCO<sub>2</sub>/km by 2017 and 147gCO<sub>2</sub>/km by 2020 (Skinner 2011). A report on progress towards the targets set out in the passenger car CO<sub>2</sub> Regulation suggest that in 2010, the average new car in the EU-27 had CO<sub>2</sub> emissions of 140.3g/km. This is an improvement of 3.7 per cent on the 2009 figure. In the UK, average CO<sub>2</sub> emissions of new cars declined from 150g/km to 144g/km (Transport and Environment 2011). These figures provide some initial indications of the effectiveness of the regulatory measures introduced following the failure to deliver significant emission reductions under an earlier voluntary agreement between the Commission and car manufacturers.

A revised euro-vignette Directive on *road charging* of heavy good vehicles (HGVs) agreed in 2011 allows Member States to levy additional charges on HGVs to cover the cost of the air and noise pollution they create in addition to existing infrastructure charges. Although Member States are currently not obliged to introduce such charges, the measure paves the way for a more intelligent approach both to taking account of external costs in charges and achieving greater European harmonisation, and could ultimately enhance incentives for the use of cleaner vehicles.

Concrete measures have also been introduced in relation to *aviation*. In 2008, a new Directive was adopted to expand the scope of the EU ETS to include the aviation sector. However the Directive, which requires all flights landing and taking off from EU airports to be covered by the ETS from 2012, therefore levying costs on airlines, has been condemned by a number of developed and emerging economies which do not have equivalent measures themselves. Just how controversial the measure has been is evident in the actions taken over the past few months which include the approval by the US House of Representatives in October 2011 of a draft law that if passed would ban US airlines from participating in the ETS; threats of legal action by the Chinese Air Transport Association and the Indian government; and a legal challenge brought before the High Court of Justice of England and Wales by a group of US airlines.

Aside from the question of emissions, the transport sector is the principal consumer of oil-based fuels on which it is almost wholly dependent.<sup>2</sup> Currently there is a major push to encourage the use of biofuels and to accelerate the process of electrifying road vehicles. There are, however, many challenges to ensuring that these *alternative fuels and energy sources* are sustainable and in fact low carbon. Efforts to decarbonise the transport sector are inevitably linked to efforts to decarbonise energy supply (European Expert Group 2011) as the use of low carbon electricity in the transport sector requires the decarbonisation of the electricity supply industries. Moreover, GHG benefits from biofuels varies according to the feedstock used, direct land use change and associated emissions from planting feedstock, emissions from processing, transport and the use of the by-products, as well as the potential impact of indirect land use change (Bowyer 2010).

In addition, EU and other public spending will need to be shifted to the creation of new low-carbon *infrastructure* (such as high-speed rail, new bus and rapid urban transit systems in cities) and charging facilities for electric vehicles, as well as initiatives to reduce the need to travel. In October 2011, the Commission set out its proposal for the funding mechanism for EU infrastructure priorities in the transport, energy and telecommunications sectors in the 2014-2020 period - the Connecting Europe Facility (CEF) (EC 2011j). A proposed budget of €31.7 billion is to be invested in transport infrastructure. However the total amount of financing available may be significantly larger with the use of the new EU financial instrument - the Project Bond Initiative – which will be used to attract additional private finance to EU priority projects (Withana et al 2011). These are potentially powerful levers for

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<sup>2</sup> Transport within the EU is heavily dependent on imported oil and oil products which account for more than 96 per cent of the sector's energy needs - EC (2011) Roadmap to a Single European Transport Area, Facts and Figures, [http://ec.europa.eu/transport/strategies/facts-and-figures/putting-sustainability-at-the-heart-of-transport/index\\_en.htm](http://ec.europa.eu/transport/strategies/facts-and-figures/putting-sustainability-at-the-heart-of-transport/index_en.htm)

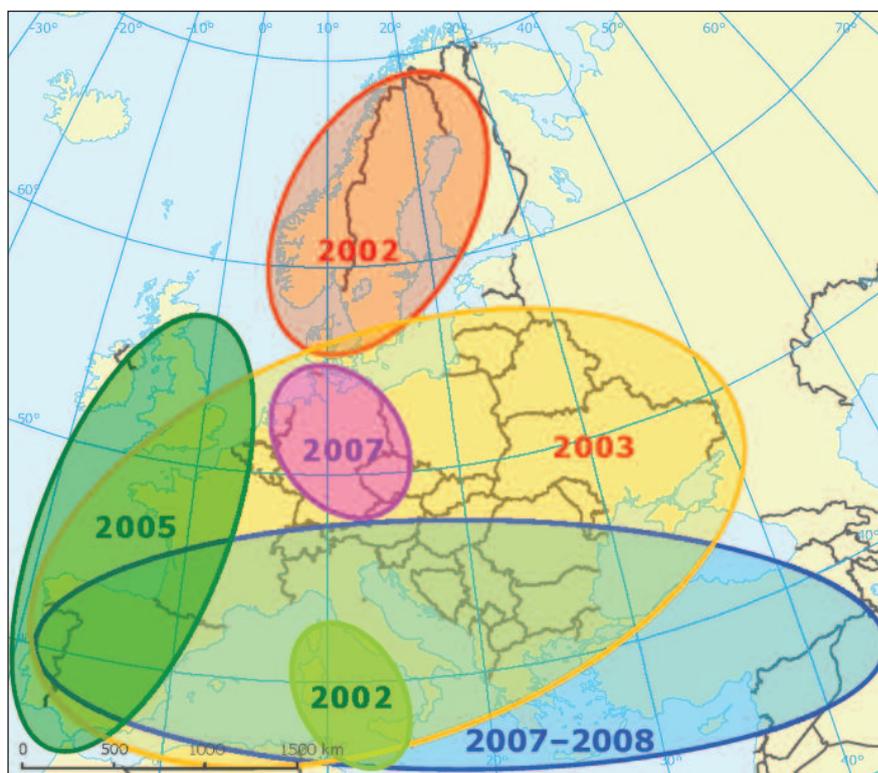
change if they can be directed into the most appropriate areas of investment.

The transport sector is one in which GHG emissions continue to rise; policy interventions remain quite controversial and in some cases are relatively recent. There are a number of important issues on the horizon, including the following:

- The adoption of mandatory targets for vehicle emissions has proved quite successful in reducing emissions in the last year, although there remains some way to go. A proposal to amend legislation on CO<sub>2</sub> from cars and vans is due in 2012 and may lead to the development of targets beyond 2020. Similar legislation for CO<sub>2</sub> emission standards for vehicles in other modes could be developed in the coming years, as called for in the 2011 White Paper on transport.
- We are now part way through the process of extending provisions in the EU ETS to the aviation sector. Although this expansion has been agreed by the EU, it has proved to be particularly controversial among international players and is under heavy fire from the US in particular. It is nonetheless important if rising emissions from the sector are to be tackled effectively and addressing related concerns will be a key challenge in the coming year.
- The issue of shipping emissions is still at an early stage in development and the Commission is expected to put forward proposals in this regard in 2012 in the absence of international action.
- Another key challenge relates to the decarbonisation of transport fuels and ensuring the sustainability of alternative fuels and energy sources as well as addressing issues arising from the use of ‘unconventional’ sources such as oil sands which have the potential to increase the carbon content of transport fuel. Here the fuel quality Directive is pivotal (Skinner 2011).
- At the same time, the need for new approaches to transport infrastructure is increasingly recognised, at least in principle; including the weight of investment in rail, the provision of charging points for electric cars etc. Whether this will be translated into actual results on the ground remains to be seen.

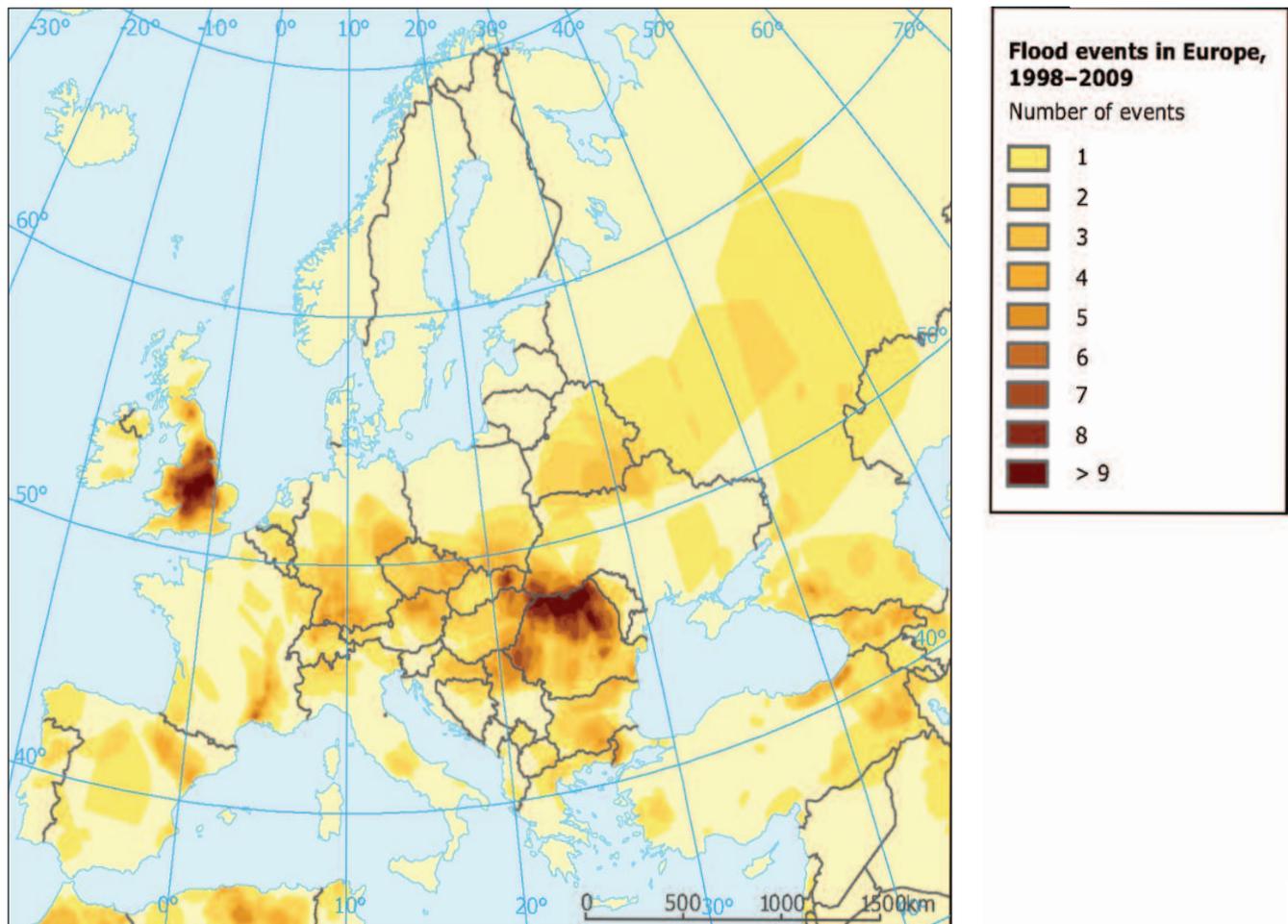
### 4.3 Water

Over the years, the discharge of pollutants to fresh and coastal waters has fallen in much of Europe, leading to improvements in freshwater quality, for example in relation to inland bathing waters. However, pollution levels remain significant in several European rivers which show a mix of different pollutants, including nutrients, biocides, industrial and household chemicals or pharmaceuticals. The quality of coastal waters is also affected (EEA 2010c). The concentration of nitrates in rivers and ground waters remains a persistent challenge. Diffuse pollution from agriculture is the main source of nitrate pollution, contributing to eutrophication in coastal and marine waters and pollution of drinking water, particularly where ground waters are contaminated.



**Figure 6: Main drought events in Europe (2000-2009)**

Source: EEA, 2010c



**Figure 7: Occurrence of floods in Europe (1998-2009)**

Source: EEA, 2010c

There are also growing problems in relation to water quantity. Although water abstraction rates have fallen in the majority of EU Member States, particularly in the eastern Member States, overexploitation remains a challenge in many parts of Europe. While water scarcity is a growing problem, in particular in the south of Europe, (see Figure 6), other parts of Europe, including many urban areas in England are suffering from a rise in the frequency of major floods (see Figure 7) and related flood damage. The costs of floods have increased markedly as a consequence (EEA 2010c). European water bodies have also been altered through physical modifications, leading to changes in water flows, habitat fragmentation and obstructions to species migration.

The *water framework Directive* (WFD), adopted in 2000, provides the overall policy framework for preserving and restoring the quality of European water bodies. It creates a timeframe for policy action that should bring all water bodies in the EU to good status by 2027. The WFD is widely appraised as a good example of integrated approaches to environmental policy-making, highlighting the ecological assessment of ecosystems and the focus on river-basin management, full cost-recovery and water pricing. It is complemented by daughter directives on groundwater and on environmental quality standards; and is linked to the emission-oriented approach to water protection set out in the urban wastewater treatment Directive and the nitrates Directive. Due to its broad character, the WFD lacks clarity in detail and leaves a lot of room for diverging interpretation by Member States of the actions required. Implementation remains a major challenge with many Member States making slow progress towards their obligations. The recent publication of Member States' river basin management plans (RBMPs), which are required by the Directive, has made clear that a variety of emissions of hazardous substances continue to pose a threat to the quality of Europe's surface water (EEA 2011g). For these reasons the achievement of the targets under the Directive are uncertain. Further action is needed, particularly with regard to using water in agriculture and buildings more efficiently. Progress by Member States in introducing economic instruments such as water pricing needs to be accelerated, while the principle of cost-recovery remains controversial.

The scope of EU policy was expanded to **flood risk management** by the 2007 floods Directive. The Directive aims to establish a framework for the assessment and management of flood risks and is strongly linked to the WFD implementation process. The Directive requires Member States to assess flood risks for each of their river basins and associated coastal zones, develop good hazard maps, and produce flood risk management plans. By the end of 2011, Member States are to undertake a preliminary assessment to identify the river basins and associated coastal areas at risk of flooding; flood risk maps are to be developed by 2013. The mapping phase will provide a major improvement in information available. By 2015, Member States are to establish flood risk management plans focused on prevention, protection and preparedness. This requires a particular effort by the legally competent authorities within Member States to get the new system in place. Drafting these plans would benefit from a stronger link to issues of land management, including agriculture. The approach taken so far has tended to be rather reactive, in terms of better preparation for floods, rather than seeking to mitigate their causes.

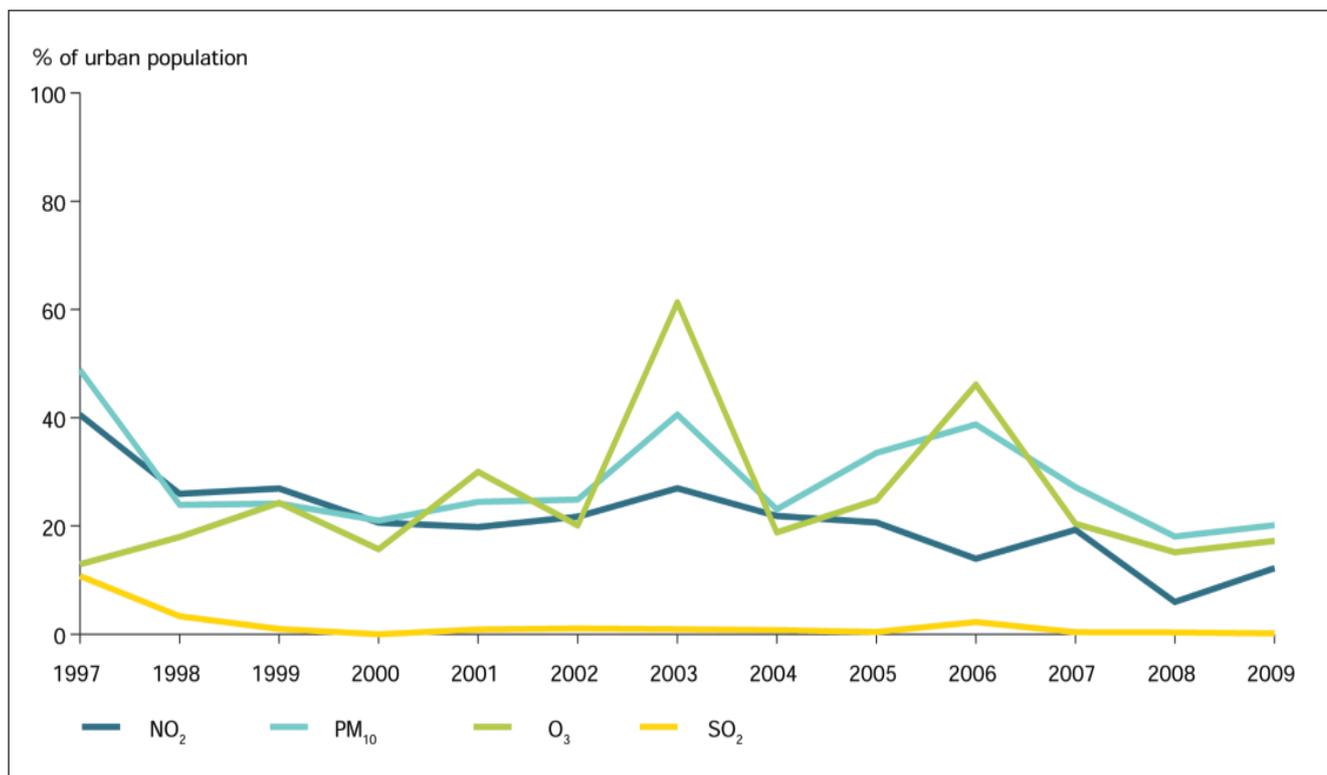
EU water policy provides a comprehensive legislative framework that aims to address issues related to water quality as well as water demand and availability. However a number of challenges remain, including the following:

- EU Member States have considerable autonomy and flexibility with regard to meeting the objectives of the WFD, for example in relation to adequate pricing of water use. Many are proceeding slowly, so implementation continues to be a significant challenge.
- Economic instruments focusing on efficiency in water supply are not widely used in Europe, while the principle of cost-recovery and water pricing remain controversial.
- An effective approach to better integrating water concerns in key sectoral policies is missing, particularly with regard to increasing the efficiency of water use in agriculture and buildings. For example the introduction of efficiency standards for water use in building offers significant potential for future savings.
- Despite some progress in addressing the potential of water savings in different sectors, the widespread and potentially growing challenges of water scarcity and droughts are largely outside the current policy framework. There is currently no consensus on whether future regulatory action on droughts is needed although there is widespread agreement on the need for increased policy coordination in the area.
- There is also a need to improve the quality and availability of information and data on water issues, together with related institutional capacity, even more so to help improve understanding and respond to climate change in future (Deloitte and IEEP, 2011).

The year 2012 will be important for EU water policy. The Commission is currently undertaking a ‘fitness check’ of EU water law, covering the WFD, groundwater, environmental quality standards for water, urban waste water treatment, nitrates and floods Directives and the Communication on water scarcity and droughts. The aim of such ‘fitness checks’ (which are part of the EU’s better/smart regulation agenda) is to identify excessive burdens, overlaps, gaps, inconsistencies and/or obsolete measures which may have appeared over time. The conclusions of the fitness check, together with a report on implementation of the WFD, an assessment on the RBMPs and the vulnerability of water resources to climate change, will feed into a ‘Blueprint to safeguard Europe’s waters’. This is expected to be presented in November 2012. The Blueprint is due to address the broad scope of core EU water policy, making recommendations for improvements, which might include legislative changes.

#### **4.4 Air**

Forty years of EU policy on air pollution have resulted in an absolute decoupling of direct air emissions from economic growth (ETC/SCP 2011). In the period 1990-2009, levels of several air pollutants in Europe dropped significantly, in particular of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and lead (Pb) (EEA 2011d). However, a reduction of emissions does not equate to a reduction of ambient concentrations, in particular for ground-level ozone (O<sub>3</sub>) and particulate matter (PM), concentrations of which have not decreased despite a reduction in respective emissions. It is estimated that 17 per cent of the EU urban population lives in areas where the EU ozone target value set by the air quality framework Directive is not met (Figure 8 opposite). The WHO has estimated that large majorities of the European urban population breathe air that largely exceeds their recommendations for PM10 (WHO/JRC, 2011), causing a decrease in life expectancy and a rise in respiratory and cardiovascular problems among others.



**Figure 8: Percentage of the EU urban population potentially exposed to air pollution exceeding acceptable EU air quality standards**

Source: EEA, 2011d

Past emission reductions have not always produced a corresponding drop in atmospheric concentrations because of complex linkages between the two, making it more of a challenge for policy-makers to move trends downwards. Poor air quality is also linked to the increase in transport volumes in the EU (see section on transport). Moreover, while action taken to improve air quality is expected to yield benefits for climate change and vice versa, in certain cases the use of some new technologies to reduce CO<sub>2</sub> emissions could be counter-productive to efforts to improve air quality. For example, a 2011 report by the EEA points to the risk of increasing air pollutant emissions if carbon capture and storage (CCS) technology is to be applied widely in power and industrial plants in the EU (EEA 2011e).

The last strategic review of the EU air policy framework resulted in the *Thematic Strategy on air pollution* in 2005 which set objectives for air quality for the period up to 2020 related to impacts on, and risks to, human health (e.g. a 47 per cent reduction in loss of life expectancy) and the environment (e.g. a 43 per cent reduction in areas or ecosystems exposed to eutrophication). To reach these objectives, sector specific priorities for EU action were identified and revisions of the three main air pollution directives called for. These were the air quality framework Directive, the national emission ceilings (NEC) Directive and the integrated pollution prevention and control (IPPC) Directive.

The *air quality framework Directive* was subsequently revised with some modernisation in assessment and monitoring and changes to air limit values, including the introduction of new air quality limit values for fine particulate matter (PM<sub>2.5</sub>). The *IPPC Directive* was recast as the industrial emissions Directive, incorporating other industry-related legislation, including the large combustion plants Directive. This should lead to tighter controls on industrial air pollution emissions, both in terms of conditions set in permits and enforcement of those conditions. However, no proposal to revise the *NEC Directive* has emerged, despite repeated rumours that it would be forthcoming. Various reasons for this delay have been cited over the years, including first the need to develop GHG emission targets, then the need to take account of the revision of the IPPC Directive and, now, the need to take account of the economic crisis. Furthermore, measures taken to reduce GHG emissions, such as those contained in the climate and energy package, are also expected to lead to important reductions in pollutant emissions.

The *implementation of EU air quality policy* continues to be a major challenge. Issues relating to compliance and enforcement in the Member States were identified as problems associated with the previous IPPC Directive. The new industrial emissions Directive was designed to address some of these issues and progress can be expected over time. However, given that implementation problems were significant with the preceding legislation it will be necessary to pay close attention to implementation of the new Directive on the ground. This will be an important factor in the functioning and performance of the measure, particularly where limit values are more stringent or where installations are included for the first time. Moreover, the value of the air quality Directive depends on the performance and functioning of measures introduced at the European level to reduce emissions at source and on the implementation of national, regional and local measures to ensure air quality limit values are met. Several Member States, including the UK, have requested and been granted derogations from meeting their obligations under the air quality framework Directive. A 2011 report from the UK Environmental Audit Committee on air quality noted that the UK is still failing to meet European targets for safe air pollution limits across many parts of the country. The report found that 30,000 deaths in the UK were linked to air pollution in 2008, with 4,000 in London alone, and that poor air quality is shortening the life expectancy of people in the UK by an average of seven to eight months; costing society up to £20 billion per year (EAC 2011).

Given the scale of the challenge and the on-going threat to health, especially in urban areas; the continued problems of non-compliance, in particular for particulate matter and ozone need to be addressed and the legislative framework brought up to speed. Although economic concerns need to be taken into account, they should not derail the process entirely. Moreover, interactions with other policy developments (such as on agriculture, transport, biodiversity etc.) will need to be taken into account more fully. Such issues could be among those taken up in the *review of EU air quality policy* currently underway. This is expected to conclude in 2013 with the presentation of an EU clean air package, updating existing policies and directives including the NEC Directive. The review is expected to propose stricter emission ceilings for 2020 and potentially see the introduction of a ceiling for fine particulate matter. To support this, a broad consultation process has been launched, which includes an online public consultation, the establishment of a stakeholder group, the organisation of dedicated workshops and events and dialogue with international organisations (such as the WHO, UNECE) (EC 2011).

## 4.5 Chemicals

The production, use and disposal of chemicals have been linked to a range of environmental and health related problems. Human exposure to chemicals takes place through multiple sources like water, air, food, consumer products and indoor dust. Of particular concern are persistent and bio-accumulative compounds, endocrine-disrupting chemicals and heavy metals used in plastics, textiles, cosmetics, dyestuffs, pesticides, electronic goods and food packaging (EC 2010b). Chemicals in consumer goods may also be of concern when products become waste and chemicals migrate to the environment and can be found in wildlife, ambient air, indoor dust, wastewater and sludge. There is also growing attention to the possible combined effects of exposure to a mixture of chemicals found at low levels in the environment or in consumer goods, especially among vulnerable young children (EEA 2010).

The cornerstone of the EU's approach to regulating the production and use of chemical substances is the *Regulation on the registration, evaluation, authorisation and restriction of chemicals (REACH)*. The Regulation entered into force in 2007 following a major lobbying offensive by industry groups, consumer, health and environmental organisations. Under REACH, all chemical substances manufactured or imported in quantities of 1 tonne or more must be registered by the manufacturer/importer with the European Chemicals Agency (ECHA). The registration contains a dossier with information to enable the substance to be used safely. The ECHA can evaluate dossiers and substances. Downstream users are to contribute to the dossier. Substances of very high concern are not to be used unless authorised. Companies will be required to make efforts to find safer substitutes as part of the authorisation procedure; and the manufacture, marketing and use of substances can be restricted. The Regulation is based on the principle that it is for manufacturers, importers and downstream users to ensure that they manufacture, place on the market or use only those substances that do not adversely affect human health or the environment. REACH is an important piece of legislation, not least since it combines traditional regulation with other approaches, notably enhanced producer responsibility. It is also one of the more ambitious and complex environmental regulations, involving a lengthy implementation process.

As part of the REACH procedure, substances of very high concern (SVHC) are identified as part of a process to phase out the use of the most hazardous substances. So far 53 SVHC substances of very high concern have been identified and included in the candidate list. From this candidate list priority substances are recommended by the ECHA and their inclusion into the so called Annex XIV list is decided through comitology. Once a substance is added to this list any manufacturer, importer or downstream user of that substance must apply for an authorisation from the Commission or they will not be permitted to use it after a certain deadline (the sunset date). In September 2010, the first six SVHCs were added to the authorisation list. The substance specific sunset dates range from 2014 to 2015. In December 2011, ECHA added twenty SVHCs to the candidate list. Nineteen of these substances are classified as carcinogenic and/or toxic for reproduction. In addition, for the first time, one substance has been identified as an SVHC because of its endocrine disrupting properties which give rise to an 'equivalent level of concern' due to likely serious effects on the environment (ECHA 2011).

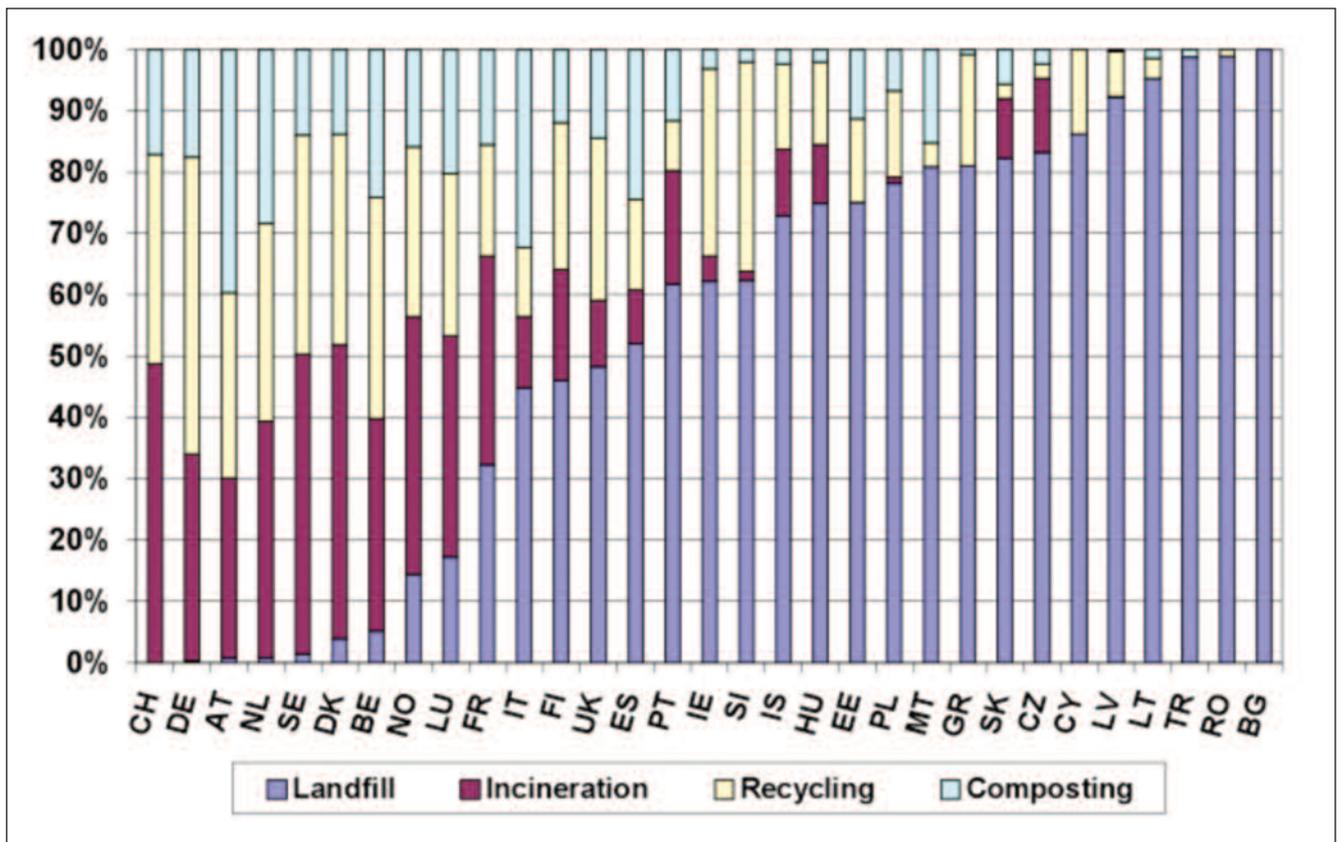
Specific legislation on the authorisation and use of *pesticides* has had a considerable impact in recent years. A new Regulation concerning the placing of plant protection products on the market and a Directive establishing a framework for EU action working towards the sustainable use of pesticides were adopted in 2009. The new rules on pesticides are based on hazard-based criteria for granting authorisations and apply tougher controls or a ban on several SVHC. The Regulation aims to harmonise rules for placing pesticides on the market while also addressing agricultural practices. The Directive establishes a framework by promoting the use of integrated pest management (IPM) and alternative approaches or techniques, such as non-chemical alternatives to pesticides. Under the Directive, Member States are required to adopt national action plans to set up quantitative objectives, targets, measures and timetables to reduce risks and the impacts of pesticide use on human health and the environment, and to encourage the development and introduction of IPM and alternative approaches to reduce dependency on pesticides in farming. Member States are also required to ensure that the use of pesticides is minimised or prohibited in certain specific areas.

**Implementation** of the REACH Regulation remains a critical challenge, as is evident in the slow pace of application to date. Implementation is likely to be further complicated by the fact that many binding dates under REACH lie quite far in the future and by the complex procedures of authorisation and restrictions. Moreover, REACH places administrative and procedural burdens, not only on public authorities, but also on the ECHA to compel industry to discharge its responsibilities. Thus resource constraints and the need for prioritisation, has meant that there is still a long way to go before appropriate risk management measures are actually taken for many 'phase-in' substances. Implementation of new pesticides rules will also prove challenging. There remains a need to improve knowledge on the environment and health impacts of chemicals, particularly with regard to the effects of low doses and multiple exposures, methods for risk assessment of endocrine disruptors, cumulative risk assessment, effects of chemical cocktails etc.

Planned reviews of relevant legislation to be presented in 2012 may help to address some of these challenges. The forthcoming **review of the REACH Regulation** is expected to assess the operation of the Regulation to date, identify lessons learnt in particular with regard to the costs and administrative burden, review the scope and potential overlaps of REACH with other EU legislation on chemicals, and review the ECHA. Although the review is more likely to focus on enforcing existing rules rather than a major overhaul of the legislation, one can expect sensitivities concerning the competitiveness of the European chemical industry to be brought to the fore yet again. A revision of the EU strategy on endocrine disruptors is also expected from the Commission in late 2012.

## 4.6 Waste

In 2011, the EU economy generated around six tons of waste per person every year. Although Europe has become more efficient in managing material resources, in absolute terms, the consumption of materials continues to increase and a consistent trend to reduce waste has not (yet) been achieved. The EU has a long policy tradition and track record in waste management, with the emphasis shifting over time from disposal to recycling and prevention. Reduction of waste generation however, has not proved easy to achieve on the ground and there remain substantial differences in results achieved between Member States (EEA 2010). On the positive side, waste policy has contributed to higher recycling rates, now amounting to up to 60 per cent for packaging waste and 39 per cent for municipal waste (ETC/SCP, 2011). However, half of the total waste generated is still sent to landfills, with large



**Figure 9: Waste management performance/waste treatment in EEA countries in 2010**

Source: Derived from information on Eurostat waste data centre 2010,

[http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/sectors/municipal\\_waste](http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/sectors/municipal_waste)

differences between Member States (see Figure 9). Waste legislation continues to suffer from sub-optimal implementation and enforcement in many Member States which has meant less change on the ground than implied by the legislation in place.

The philosophy behind current EU waste policy was set out in 2005 in the *Thematic Strategy on waste prevention and recycling*. This advocated a lifecycle approach and shift towards a materials-based approach to recycling, a new focus on the prevention of waste and a transition towards more flexible mechanisms of policy making and standard setting at the EU level. In 2008, the revised waste framework Directive reset the baselines for much of EU waste management, redefined key terms and concepts, reinforced the waste hierarchy and set the EU's first ever sector-wide targets for re-use and recycling, complementing existing product-based action.

However, progress to date has been disappointing. A 2009 Commission report on the *implementation* of EU waste legislation from 2004-2006 underlined a series of weaknesses including a lack of waste treatment infrastructure, separate waste collections, recycling and recovery targets in many countries (EC 2009). While 90 per cent of hazardous waste is estimated to be treated in the EU-15, the monitoring of illegal shipments of waste still needs improvement. Volumes of electronic waste have grown rapidly and exports need to be better regulated to avoid the potential environmental burdens arising from such waste (which contains hazardous substances) being treated in third countries with less stringent environmental standards than those in the EU. This requires a recast of the WEEE Directive which was first proposed in 2008, but divided the European Parliament and the Council until a recent agreement in December.

The 2011 review of the Thematic Strategy on waste (EC 2011a) found that significant progress has been made in the improvement and simplification of legislation, the establishment and diffusion of key concepts such as the waste hierarchy and lifecycle thinking, an increasing focus on waste prevention, efforts to improve knowledge, and new European collection and recycling targets. In terms of waste management performance, recycling rates have improved, the amount of waste going to landfill has decreased, the use of hazardous substances in some waste

streams has been reduced, and the relative environmental impacts per tonne of waste treated have decreased. These achievements are however offset by the negative environmental impacts caused by the increase in overall waste generation.

The review concluded that the Thematic Strategy has played an important role in guiding policy development, but that the EU is still some way from a 'recycling' society. More impetus is now needed in a number of areas to *inter alia*:

- Properly implement and enforce existing EU waste legislation. In this regard, the Commission suggests the development of a 'proactive verification procedure' and early warning system on compliance with key EU targets, based on national waste management plans.
- Define new and more ambitious (material-specific) prevention and recycling targets,
- Improve the knowledge base on waste and resources,
- Support national actions on waste prevention,
- Increase coordination of national inspection activities,
- Promote combinations of economic and legal instruments for waste management,
- Improve the competitiveness of EU recycling industries and develop markets for secondary raw materials,
- Improve measures to prevent illegal waste exports,
- Improve stakeholder participation and raise public awareness on waste, and
- Promote lifecycle thinking (e.g. through more consistency between waste and product design policies).

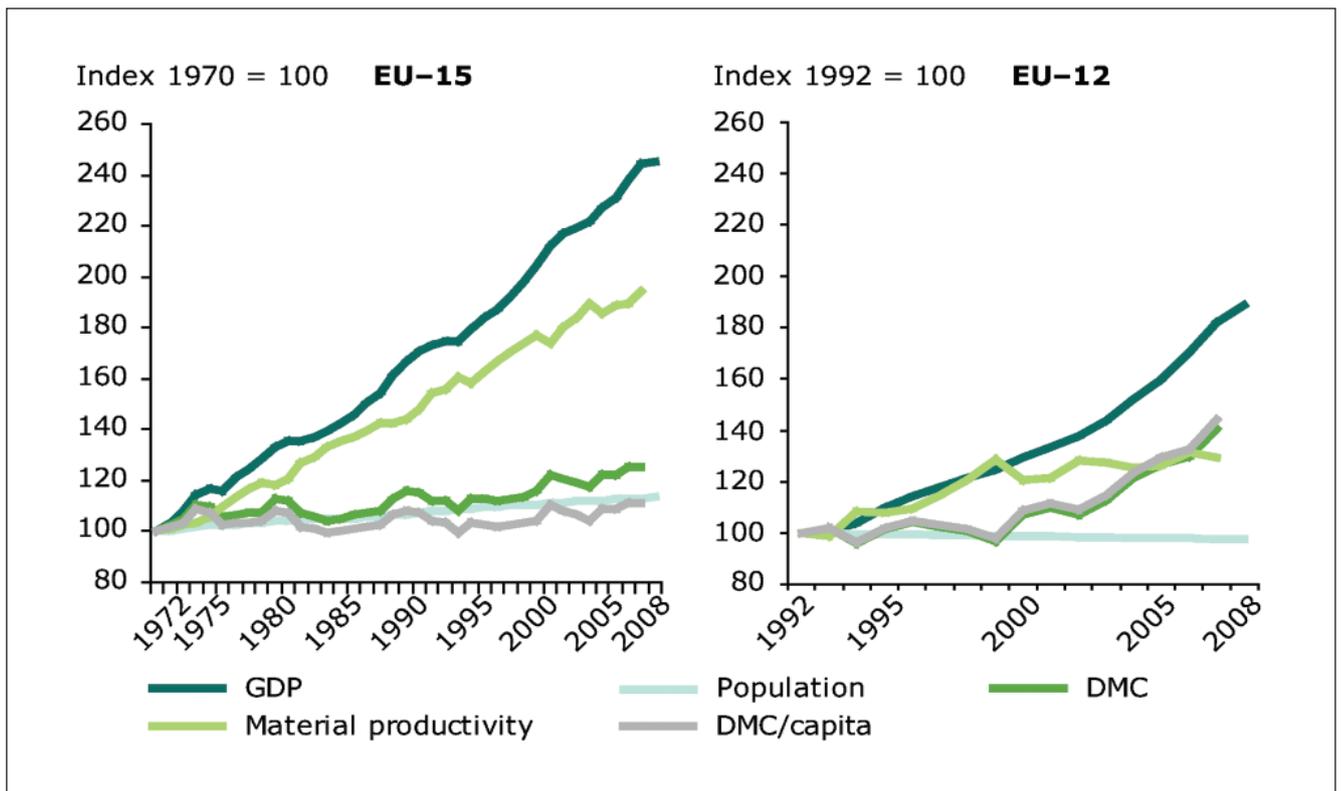
The Commission is expected to set out proposals to address some of the above mentioned issues in 2012.

#### 4.7 Resource use

The overall environmental impacts of EU natural resource use in and beyond Europe are growing. Europe is struggling to achieve absolute decoupling of resource use from economic growth, despite a range of efforts to improve resource efficiency over the years. Growth in resource productivity has been significantly lower than growth in labour productivity. While many products are gradually becoming more energy-efficient, efficiency gains are often off-set by changing consumption patterns. Some forms of material use are expanding significantly and the ecological footprint of the average European citizen exceeds 4.5 global ha per capita (ETC/SCP, 2011).

A new approach to resource use in Europe is increasingly seen as a central plank of the EU environmental agenda for the next decade. There is growing recognition that Europe cannot continue to consume more than its share of global resources and an understanding that the problem goes well beyond the issue of industrial raw materials. This is not a new theme in EU policy; there has been a history of efforts to achieve sustainable consumption and production (SCP) for example, as well as more sectoral initiatives concerned with water, wastes etc. However, there is now a much stronger link being made to the EU's economic strategy (see section 5). Improving resource efficiency and, more tentatively, reducing resource use, is being seen as part of a strategy for green growth. The economic benefits and scope for win-wins for business and also for consumers are being emphasised.

In January 2011, the Commission published a *Flagship Initiative on resource efficiency* (EC 2011b) as part of the Europe 2020 Strategy. It provides a long-term framework for actions in several areas to support the shift towards a resource-efficient, low-carbon economy aiming at sustainable growth. Policy is to be developed in a set of roadmaps, namely on the decarbonisation of Europe's economy, improving resource efficiency and initiating long-term energy transition, as well as more sectoral plans such as the Blueprint for water policy and the 2020 biodiversity Strategy. The Flagship Initiative lacks ambition in tackling the ever increasing trends in European consumption, which are one of the main roots of the problem. Greater efficiency alone will not lead to a decrease in absolute resource use, and some voices in the EU are now calling for a 'resource-intelligent' Europe which refers to the combination of a less materialistic approach to well-being and new economic models (e.g. a goods-as-services based economy).



**Figure 10: Use of material resources and material productivity for the EU-15 and EU-12**

Note: Domestic material consumption (DMC) is an aggregate of materials (excluding water and air) which are actually consumed by a national economy, calculated based on domestic extraction and physical imports (mass weight of imported goods) minus exports (mass weight of exported goods).

Source: EEA, 2010c

The Commission's thinking is developed considerably further in the *Roadmap to a resource-efficient Europe* published in September 2011 (EC 2011c). Natural resources, ecosystem services and natural capital concerns are linked with resource use which is understood in a broad sense to include biodiversity. The Roadmap postulates an ambitious long-term policy vision, including no net land-take in 2050 and a sustainable use of resources within planetary boundaries. These are coupled with more detailed milestones of varying levels of ambition, including the phasing out of environmentally harmful subsidies by 2020. However, there are no overarching targets, such as those that apply in the area of climate change policy. Agreement on concrete and detailed indicators to guide action by policy-makers, business and investors is deferred to 2013. Although this may delay critical progress, the Roadmap does refer to the principal areas of European resource consumption, namely buildings, transport and food, and while it is cautious in approaching the topic of absolute reductions in consumption, the implications of inaction are not disguised.

The main question now is how far the Roadmap will be converted into concrete proposals at a national as well as EU level over the next eight years. A potentially large range of measures could be introduced over the next decade or so if the Roadmap is to be converted into a concrete action plan, although it would require a step change in the level of determination, starting with the adoption of targets and indicators. Future measures could include:

- The review and tightening of existing standards and targets, not least to increase recycling rates for metals and other materials, e.g. current targets for collection rates under the batteries Directive are for 25 per cent in 2012 and 45 per cent in 2016.
- Stimulating changes in the design and use of certain products, for example by extending the scope of the eco-design Directive.
- More focussed efforts to apply existing measures, such as realistic pricing for water under the WFD and respect for the principle of Maximum Sustainable Yield for commercial fish stocks under the CFP.

- The wider application of economic instruments, including appropriate incentives for recycling and refund systems, the selective use of levies and taxes (generating funds that can be applied to complementary uses), the withdrawal of environmentally harmful subsidies, greater use of green public procurement etc.
- An initiative to bring a land-use dimension to EU policy, globally as well as domestically.
- Investment in innovation, research and development, education and more innovative approaches to addressing consumption levels.

The resource efficiency agenda extends well beyond the sensitive issue of reducing dependence on raw materials, such as rare earths and must embrace the health of ecosystems more broadly. The Roadmap is a good foundation for building a new generation of policies that grasp the opportunity to make resource efficiency central to the creation of a greener economy.

## 4.8 Soil

Soil has received much less attention than other environmental media in EU policy, even though soil degradation is accelerating in many parts of Europe. European soils continue to face multiple threats such as erosion, organic matter decline, contamination, compaction, salinisation, landslides, contamination, sealing and biodiversity decline (EEA 2010c). Although a number of sectoral EU policies have an impact on soil management practices, including measures taken under industrial emissions policy, as well as water, waste and agricultural policy; they provide only a patchy level of protection. The development of specific EU legislation addressed primarily to issues of soil protection and prevention of land degradation has been limited by concerns among many Member States that soil protection is as an area of national competence and potentially costly, particularly with respect to contaminated land restoration.

The last serious EU-level initiative in this area was the Commission's 2006 *Thematic Strategy on soil protection* intended to pave the way for future policy. The Thematic Strategy aimed to develop a new approach to the management and protection of Europe's soils and was built around four pillars for action: the integration of soil protection into national and Community policies; closing recognised knowledge gaps; increasing public awareness; and the development of framework legislation aimed at protection and sustainable use of soils. The Commission's 2006 proposal for a soil framework Directive was meant to have a significant impact on soil protection and the retention of soil functions in Europe. In its current form, it would require the identification of soils at the greatest risk of degradation and actions to address this, with the precise obligations on Member States being a matter of controversy. The UK, Germany, France, Austria and the Netherlands have established a blocking minority, resisting the adoption of the proposal in its current form for the reasons cited above. Many other Member States support the proposal quite strongly.

Some progress has however been made under the other pillars of the Thematic Strategy. Under the first pillar, efforts have been made to integrate aspects of soil protection into relevant EU policies, e.g. the requirements of the IPPC Directive to ensure the protection of soil when an industrial operation is discontinued were too vague to enforce changes in actual practices and they have been clarified in the new industrial emissions Directive. Under the second pillar, a number of studies have considerably improved the existing body of knowledge in the area of soil protection. However, a continuing concern relates to the lack of harmonised information at EU level on soil conditions. Under the third pillar, the adoption of the Thematic Strategy led to several EU-wide stakeholder conferences on soil related issues, attended by scientists, Member State representatives, civil society and other stakeholders. This rising level of awareness has been one of the factors in deepening stakeholder engagement in the debate on future policy in an area which has received much less attention than others such as air and water. There has also been a growing level of awareness of soil issues linked to the climate change debate (e.g. carbon sequestration) and the role of soils in delivering ecosystem services. There is now greater understanding of soil interactions with other priorities such as the need to sequester carbon, manage land in a way that enables adaption to climate change and ensure the protection of water both, in terms of quality and quantity.

It is clear that soil conservation needs more priority in both agricultural and environmental policy. However, it is

not yet clear whether the adoption of a new framework Directive will be the way forward in this regard. There are a number of issues on the horizon which could contribute to soil protection. They include a Commission technical document on soil sealing expected to be published in early 2012. Also relevant will be the outcome of deliberations on CO<sub>2</sub> emissions associated with land-use change, discussions on carbon credits for the protection of forests (and other terrestrial carbon sinks), the evolution of criteria for the sustainable production of biofuels, cross compliance in future EU agriculture policy, or the EU climate adaptation strategy which is expected to appear in early 2013. Soil management certainly should attract more attention within the CAP in the future.

## 4.9 Biodiversity

Despite a fairly wide ranging regulatory framework in place and considerable efforts to establish a European network of protected areas (Natura 2000), the loss of Europe's biodiversity remains a persistent problem. On a global scale, biodiversity is still threatened by increases in the five principal pressures: habitat change, overexploitation, pollution, invasive alien species and climate change (CBD 2010). In Europe, species decline is particularly marked in agricultural and grassland ecosystems, mainly due to intensified farming and unsustainable land-management. The fate of wildlife rich habitats varies. Some face very considerable pressures; whilst others, such as European forest coverage grow despite being affected by acidification, eutrophication, forest fires and other regional pressures (Forest Europe, UNECE and FAO 2011).

In 2001, EU leaders committed to halting the decline of biodiversity in the EU by 2010 and to restoring habitats and natural systems. Despite some progress in various areas such as the extension of the Natura 2000 network, the EU failed to achieve this target. This is due to continuing negative trends in key pressures, such as changes in agricultural systems, pollution of freshwater, land abandonment, and habitat fragmentation. There have been particular problems related to the implementation of the nature Directives and the biodiversity action plan, including slow or incomplete identification and designation of Natura 2000 sites (especially in the marine environment), inadequate management of habitats and species within Natura sites and especially in the wider environment, as well as problems related to relevant sectoral policies.

Over the last two years there has been increasing recognition of the *economic value of biodiversity and ecosystem services* (such as healthy soils, clean water, carbon sequestration) in the policy process. This has been driven in part by developments in the knowledge base, including *inter alia* the TEEB (The Economics of Ecosystems and Biodiversity) initiative. This has helped to raise the political profile of biodiversity issues in recent years. A new biodiversity target was agreed by the Council in March 2010 to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020 and restore them in so far as feasible; while stepping up the EU contribution to averting global biodiversity loss. The explicit addition of ecosystem services to the target reflects the increased recognition of the value of biodiversity to society and the need to broaden concern for biodiversity across society and sectoral interests (see Box 4).

### Box 4. Business and biodiversity - Making the case for a lasting solution

**A 2010 report by the United Nations Environment Programme (UNEP) set out a case for incorporating biodiversity in business models. The report looks at a broad spectrum of businesses across different sectors and for each provides examples of companies that have taken actions to reduce their impacts on biodiversity.**

**The report outlines the case for businesses to examine their impact on biodiversity including expanding market opportunities, brand advantage, opportunities for new business ideas, and the potential of new green technologies. The report argues that a failure to address biodiversity issues could affect the supply of resources, access to markets, reputation, licenses to operate and access to finance. In addition, companies could face a consumer backlash, as an increasing number of customers demand sustainably produced products and services.**

Source: UNEP-WCMC and UNEP-DTIE, 2010

A new *EU biodiversity Strategy to 2020* was subsequently produced in May 2011 which sets out six main targets, 20 actions and 36 measures (EC 2011k). The targets relate to full implementation of the birds and habitats Directives, maintaining and restoring ecosystems and their services, increasing the contribution of agriculture and forestry to maintaining and enhancing biodiversity, ensuring the sustainable use of fisheries resources, combating invasive alien species and helping to avert global biodiversity loss.

Biodiversity remains a contested area and despite being one of the oldest areas of EU environmental policy, issues of implementation remain a major challenge, including in several older Member States, such as the UK. The EU's 2010 biodiversity target was very difficult to achieve, particularly given the scale of the task and insufficient political support and action by Member States in this regard. It is not clear whether there will be sufficient commitment to the action now required and whether necessary mechanisms are now in place to deliver the new EU biodiversity objectives for 2020. Some key challenges going forward include how to secure Member States commitment to full implementation of existing measures, the development of new measures to address gaps in the coverage of EU policies (e.g. on invasive alien species, on green infrastructure), how to 'mainstream' biodiversity policy in other relevant policy areas and secure adequate financing for implementation of biodiversity commitments including expansion of the Natura 2000 network.

#### **4.10 Marine environment and fisheries**

The European marine environment and the ecosystem services it provides are under considerable pressure. The majority of pollutants in freshwater bodies (described in the section on water above), is ultimately discharged to coastal waters. Runoff from fertilisers and pesticides from land-based sources has led to oxygen depletion and to ecosystem collapses (e.g. Black and Baltic Seas) (EEA 2010c). While some marine protected areas have been established under the Natura 2000 network, marine sites currently only account for around 6 per cent of Sites of Community Importance (SCIs) and 10 per cent of Special Protection Areas (SPAs) (EEA 2010a). Other concerns relate to the threat of invasive species, marine plastic litter and the future impact of climate change. The fisheries sector has a major impact on the overall state of the marine environment. Despite changes made during and since the 2002 reform of the Common Fisheries Policy (CFP), overexploitation of marine fisheries remains a major problem and has led to a situation where 26 per cent of fish stocks are below safe biological limits (Sissenwine 2010). Despite an apparent improvement in the current state of stocks, there is also pressure to reduce levels of by-catch, eliminate discards of non-target fishing species, and avoid damage to habitats from several types of fishing gear (Lutchman et al 2009).

In 2008, the EU adopted the *marine strategy framework Directive* (MSFD) under which Member States are required to take measures to achieve or maintain good environmental status in the marine environment by 2020. To this end, marine strategies are to be developed and implemented to protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems and prevent and reduce inputs in the marine environment. Working groups have been established to support the interpretation and practical application of parts of the MSFD. In some countries the structure and responsibilities for implementation of the MSFD are clear. However, some Member States are still discussing how the Directive should be implemented; while others are still working on a process for the identification of potential programmes and/or parameters for good environmental status. When fully implemented, the Directive can be expected to make a significant contribution to improving the state of the marine environment. However, there are some limitations to its use and a number of issues it cannot address which will have to be confronted through other instruments such as the CFP.

The MSFD is the environmental pillar of the EU's *integrated maritime policy* (IMP) which aims to provide a framework for the development of policies affecting maritime areas. The IMP has resulted in, or influenced, a number of subsequent policy documents covering substantive issues (e.g. on maritime spatial planning and integrated maritime surveillance) as well as on sectoral policies and regional policies (e.g. on offshore wind energy and maritime transport). A 2009 report on implementation of the IMP (EC 2009b) highlights a number of positive developments at Member State level in integrating maritime governance, including the UK's Marine Bill. A key challenge in the years ahead will be the issue of integration not only in terms of making marine spatial planning work, but also integrating it with the separate domain of fisheries policy. It will become increasingly necessary to address conflicting policy objectives which will inevitably arise.

The pressure to manage fisheries sustainably and responsibly is growing and the current reform of the **common fisheries policy** (CFP) has highlighted the shortcomings of the current approach and the need for critical changes. The reform is to be completed by 2012 and is likely to include major changes to the principle CFP Regulation including a ban on discards, the introduction of transferable quotas, decentralising some decision-making powers to the regions, measures to move towards multi-species fisheries management, and the introduction of market-based quota management. The most significant proposed change to the general objectives of the CFP is the aim of reaching maximum sustainable yield of commercial fish stocks by 2015. Another new objective is that the CFP shall integrate the requirements of EU environmental legislation.

The Commission's proposals for fisheries funding under the future EU budget also appear to be moving in the direction of sustainability not just of fisheries but of the broader marine environment, with the introduction of a new **European Maritime Fisheries Fund** (EMFF) (replacing the current European Fisheries Fund). As proposed it should support fishing which is more selective, producing no discards, doing less damage to marine ecosystems and relating to the science that supports these activities. The extent to which these provisions are taken up in final legislation will depend on the outcome of on-going negotiations between the European Parliament and the Council.

The 2010 BP Deepwater Horizon oil spill in the Gulf of Mexico and the observed shortcomings of response strategies promoted a review of EU practices and provisions covering **off-shore oil and gas exploitation**. Developments in technologies and in oil and gas exploration techniques have also rendered current legislation obsolete or ineffective. An assessment of the EU approach concluded that there is insufficient coverage of environmental protection, disaster prevention and response and that the industry's liability for environmental degradation is not clearly defined. Moreover, only segments of the EU's environmental liability Directive, habitats Directive and birds Directive directly apply to off-shore petroleum activities (EC 2010). The Commission thus proposed new rules for the safety of off-shore oil and gas prospecting, exploration and production activities in October 2011. The proposal extends the environmental liability Directive to cover all EU marine waters within 370 kilometres from coastal areas and sets rules that cover the lifecycle of all exploration and production activities. Given the sensitivity of the proposal in terms of its encroachment on an area of traditional national competence, discussions on its finalisation are likely to be contentious.

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## 5 The wider strategic context

Whatever the outcome of current efforts to address the Eurozone crisis, the current economic and financial preoccupations in Europe are unlikely to fade away rapidly. Instabilities in financial markets, uncertainties over growth and job prospects and pressure to maintain austerity regimes could continue in some form for several years. Safeguarding jobs and stimulating growth is thus likely to remain an overriding political priority. The added value of EU policies will frequently be measured against this yardstick. Similarly, political support for specific environmental measures is likely to only be achieved by convincing leaders of the costs of inaction and the cost-effectiveness of action. At the same time, the current economic situation also offers a number of opportunities for promoting the environmental policy agenda, particularly in view of fostering an efficiency revolution.

There are currently a number of strategic and sectoral processes underway in the EU which will affect the general context and scope for environmental policy action to 2020 and beyond. This includes taking forward the EU's 10-year economic strategy known as the Europe 2020 Strategy, promoting eco-innovation, discussions on the EU budget for the 2014-2020 period and on the future strategic framework for EU environmental policy under the 7th Environment Action Programme (7th EAP). Improving implementation of the substantial body of environmental law already agreed has been, and still is, a key challenge. This section provides a brief overview of some of these wider strategic issues and the challenges and opportunities they offer for future EU environmental policy.

### 5.1 The Europe 2020 strategy: promoting smart, sustainable and inclusive growth

In 2010, the EU adopted a new medium-term growth strategy known as the 'Europe 2020 Strategy' (EC 2010). The Strategy aims to turn the EU into a smart (based on knowledge and innovation), sustainable (promoting resource efficient, greener and more competitive growth) and inclusive (high employment, delivering economic, social and territorial cohesion) economy. These priorities are linked to five headline targets for employment, social inclusion, education, innovation, climate change and energy, which are to be reached by 2020 (see Table 1). These targets are common goals to be achieved through a mix of European and national action. The targets have been translated by Member States into corresponding national objectives and measures reflective of their own geographic, socio-economic and political situation<sup>3</sup>.

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<sup>3</sup> For Member State targets set in National Reform Programmes submitted in April 2011, see [http://ec.europa.eu/europe2020/pdf/targets\\_en.pdf](http://ec.europa.eu/europe2020/pdf/targets_en.pdf)

The Europe 2020 Strategy also identified ‘Flagship Initiatives’ in seven areas within which EU and national authorities should coordinate their efforts (see Box 5). The ‘Flagship Initiatives’ were presented by the Commission in 2010/2011 and have led to the adoption of a series of subsequent strategies, roadmaps and measures. Of particular relevance to the environmental agenda is the resource efficiency Flagship Initiative which has spawned a number of strategies and roadmaps (see section on environmental challenges), and has led to the re-conceptualisation of a number of environmental issues so as to relate them to the resource efficiency agenda.

Progress in implementing the Europe 2020 Strategy at both EU and Member State level is pursued via the EU’s new cycle of economic and fiscal policy coordination (the ‘European Semester’) and is to be closely followed by EU leaders. The six-month cycle includes the preparation of an annual growth survey by the Commission, the assessment of Member States’ stability and convergence reform programmes and national reform programmes, and the adoption of country-specific recommendations. The first cycle of the European Semester ended in June 2011 and it is still too early to judge the results. Some initial assessments suggest that although the topics of energy efficiency, addressing environmentally harmful subsidies and the reduction of GHG emissions in key sectors are highlighted in Member State reports, the treatment of climate change concerns and the overall performance of the Strategy have been relatively weak. A report for the Greens/EFA in the European Parliament concluded that the priorities of the 2011 Annual Growth Survey do not cover all the agreed headline targets, with particular gaps for those concerned with climate change. National recommendations do not appear to be based on Member State progress towards respective goals, but rather focus on fiscal consolidation needs (Derruine and Tiedemann, 2011).

The Europe 2020 Strategy aims to be central to economic policy in the EU and is strongly supported by the Commission and its President. It has thus become a key strategic document directing EU action across the spectrum, including EU spending (see section below). Most recent Commission policy documents have been linked to the priorities of the Europe 2020 Strategy and framed accordingly. The Strategy underlines the need to combat climate change and increase Europe’s resource efficiency, thus placing these objectives high on the overall EU policy agenda. However, given its overarching priority to stimulate economic growth, its primary focus is on ‘win-win’ environmental options (i.e. those that can bring financial gains, improve competitive advantage, and in some cases reduce dependence on foreign resources). This narrow focus ignores other key policy objectives that are nonetheless firmly embedded in the EU environmental acquis. For example issues such as biodiversity and the broader notion of ecosystems and their services, which are of central relevance to human well-being and economic performance, are side-lined. Too much of a focus on ‘win-wins’ also creates the risk of developing policies that do not take into account the inter-linkages and trade-offs between different areas.

## Box 5. Headline targets and flagship initiatives of the Europe 2020 strategy

### HEADLINE TARGETS

#### Employment

- 75 per cent of 20-64 year olds to be employed

#### Innovation

- 3 per cent of the EU’s GDP (public and private combined) to be invested in R&D/innovation

#### Climate change and energy

- Reduction in EU GHG emissions to at least 20 per cent below 1990 levels (reduction of 30 per cent if conditions are right)
- 20 per cent of EU energy consumption to come from renewable resources
- 20 per cent increase in energy efficiency

#### Education

- Reduce school dropout rates below 10 per cent
- At least 40 per cent of 30-34 year olds should complete the third level of education

#### Poverty and social exclusion

- Reduce the number of people in or at risk of poverty and social exclusion by at least 20 million

### FLAGSHIP INITIATIVES

- Digital Agenda for Europe
- Innovation Union
- Youth on the Move
- Resource efficient Europe
- An industrial policy for the globalisation era
- An agenda for new skills and jobs
- European platform against poverty

Source: European Commission 2010

## 5.2 Promoting eco-innovation

Environmental challenges and resource constraints have led to growing demand for greener technologies, products and services and have facilitated the emergence of new types of manufacturing and services. Their development creates huge market opportunities as well as new challenges and pressures on companies. The global market for eco-industries is estimated to stand at roughly €600 billion a year, with over one third of this stemming from the EU. The US and Japan account for a large part of the remaining global turnover of eco-industries (ECORYS 2009). The EU's comparative advantage and niche markets are in the areas of renewable power generation technologies (with over 40 per cent of global market share) and waste management and recycling technologies (with 50 per cent of global market share). Although an established market player in certain segments; the EU's eco-industry sector is facing increasing competition from Japanese, US, Taiwanese and Chinese players (ECORYS 2009). There has been some investigation of the factors affecting the level of innovation in the EU. While environmental regulation can help to promote eco-innovation, a number of negative factors persist including under-investment in the knowledge base (where other countries like the US and Japan are out-investing the EU and China is rapidly catching up); unsatisfactory framework conditions, such as poor access to finance, high costs of intellectual property rights, ineffective use of public procurement; and fragmentation and duplication of efforts (EC 2010c).

Eco-innovation represents a key area of synergy between environmental and economic objectives and is an important part of delivering smart, sustainable and inclusive growth. The Commission estimates that European eco-industries currently have an annual turnover of €319 billion, or about 2.5 per cent of EU GDP and have recently been growing by 8 per cent each year. The main sub-sectors deal with waste management (30 per cent), water supply (21 per cent), wastewater management (13 per cent) and recycled materials (13 per cent). The sector directly employs 3.4 million people, with around 600 000 additional jobs created between 2004 and 2008 (EC 2011d). The annual growth rate in employment in all subsectors between 2000 and 2008 was roughly 7 per cent (see Figure 11). Germany (24 per cent), France (20 per cent) and the UK (17 per cent) have the highest number of eco-industry jobs (WIFO 2006). When taking into account those people directly employed in jobs related to the environment, including jobs in sectors that depend on a good quality environment as an input, such as organic agriculture, sustainable forestry, and tourism, the number of people employed in the sector in 2008 is estimated at 5.6 million (ECORYS 2009).

	employment (2000)	employment (2008)	Employment: annual growth rate	EPE: annual growth rate corrected for inflation
Waste management	844.766	1.466.673	7,14%	5,89%
Water supply	417.763	703.758	6,74%	4,04%
Wastewater management	253.554	302.958	2,25%	3,62%
Recycled materials	229.286	512.337	10,57%	13,12%
Others	129.313	193.854	5,19%	6,23%
Renewable energy	49.756	167.283	16,37%	17,65%
Air pollution	22.600	19.067	-2,10%	3,10%
Biodiversity	39.667	49.196	2,73%	5,29%
Soil & Groundwater	14.882	18.412	2,70%	3,02%
Noise % Vibration	4.176	7.565	7,71%	7,76%
<b>Total</b>	<b>2.005.764</b>	<b>3.441.102</b>	<b>6,98%</b>	<b>6,69%</b>

**Figure 11: Employment in various sub-sectors of the EU eco-industry sector**

Source: ECORYS 2009

The EU can help to accelerate eco-innovation through well-targeted policies and actions such as regulatory initiatives, voluntary agreements, incentives, private and public procurement, standards and performance targets all of which can help to create stronger and more stable markets for eco-innovation. The EU can also help to mobilise additional funding for investment in eco-innovation and policy measures to lower and manage risks for entrepreneurs and private investors (EC 2011d). Over the years, the EU has introduced various measures that seek to promote further eco-innovation. Recent developments have been closely related to the Europe 2020 Strategy.

In October 2010, the Commission presented a Flagship Initiative on the Innovation Union with the aim of improving conditions and access to finance for research and innovation, ensuring that innovative ideas can be turned into products and services that create growth and jobs (EC 2010c). This was followed in December 2011 with a new ***Eco-innovation Action Plan*** (Eco-AP) (EC 2011d). The programme is the successor to the EU's Environmental Technologies Action Plan (ETAP) launched in 2004. The new plan has a broader remit than its predecessor and includes a variety of measures intended to overcome the barriers preventing the development and spread of eco-technologies, particularly among SMEs. Proposed actions include the use of environmental policy and legislation as a driver to promote eco-innovation, supporting demonstration projects and partnering to bring promising technologies to the market, developing new standards which will boost eco-innovation, mobilising financial instruments and support services for SMEs, and supporting the development of emerging skills, jobs and training programmes.

The EU also has several sources of ***funding to support the research and deployment of environmental technologies***. As part of the 2007-2013 multi-annual financial framework, the Commission supports research, development and demonstration of eco-innovative technologies and their market penetration within the 7th Framework Programme for Research and Technological Development (FP7) under the 'environmental and climate change' (€1.8 billion) and the 'energy' (€2.3 billion) themes; the Competitiveness and Innovation Framework Programme (CIP) which has a budget of €3.6 billion for the same time period, as well as the Eco-innovation First Application and Market Replication Projects, the European Eco-innovation Platform, and the environmental pillar of the LIFE+ Programme. Moreover, Member States and regions can also draw on funding under Cohesion Policy for the further deployment and replication of eco-innovation (EC 2011d).

For the 2014-2020 period, the Commission has proposed a new ***Horizon 2020 Framework Programme for Research and Innovation*** which brings together all existing EU research and innovation funding. Horizon 2020 is expected to strengthen the role of eco-innovation and provide financing for the implementation of the Eco-AP. Of the total budget of €87bn of the programme, the Commission proposes that at least 60 per cent support sustainable development objectives, out of which around 35 per cent should be climate change related. More specifically it is proposed that €4.7bn will be used to secure sufficient supplies of safe and high quality food and other bio-based products by developing productive and resource-efficient primary production systems; €6.5bn will be allocated to the transition to a reliable, sustainable and competitive energy system; €7.7bn will be allocated to a resource efficient, environmentally-friendly and safe transport system; and €3.5bn will support the objective of achieving a resource efficient and climate change resilient economy, protected ecosystems, biodiversity and sustainable supply of raw materials (EC 2011e). The Horizon 2020 package is expected to be adopted by the end of 2013 with a view to enter into force on 1 January 2014. The Commission has also included a strong innovation component in its proposals for the 2014-2020 Cohesion Policy (EC 2011d).

### **5.3 The EU budget: financing environmental policy in times of austerity**

The growth focussed agenda of the Europe 2020 Strategy is met by an increasingly vigilant push for financial austerity in many Member States. This tension underlies the on-going discussions on Europe's next long-term budget (the so-called multi-annual financial framework (MFF)), that will set out EU spending priorities for the 2014-2020 period. From an environmental perspective there are however a number of opportunities to re-focus significant elements of EU spending so as to support the transition to a low-carbon, resource-efficient economy. Raising further revenues from environmental fiscal reform may also be possible. In both ways a greener budget could contribute positively to the wider political objectives of promoting economic recovery and creating jobs.

## Box 6: The EU budget – Some key facts

The EU has traditionally had funds for pursuing several key policies. Since the late 1980s the EU budget has been planned ahead within seven year 'multi-annual financial frameworks' (MFF) or 'Financial Perspectives'. These set the maximum amount of money that can be committed to different categories of spending which is then organised within annual budgets. The current MFF runs from 2007 to 2013 and places a ceiling on expenditure of €975,777 billion (or 1.12 per cent of the EU Gross National Income (GNI) over the seven years.

The lion's share of funds is currently spent on two EU policies: the Common Agricultural Policy (CAP) and 'Cohesion Policy' which is devoted to regional development, social priorities, infrastructure and aid to poorer parts of the EU (see Figure 12). A relatively minor fund is dedicated to environmental objectives (LIFE). However environmental spending also takes place through a number of other funds including the Structural and Cohesion Funds and the Rural Development element of the CAP.

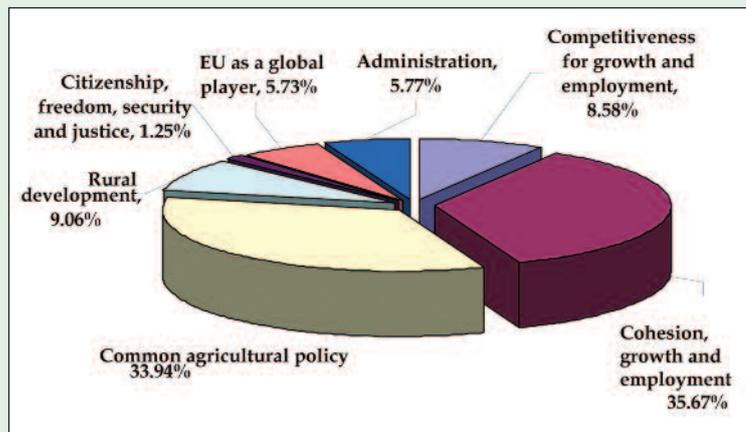


Figure 12: EU budget composition, 2007-2013 MFF

Source: CEPS 2009

### *Reforming EU spending for environmental purposes*

Public expenditure through the EU budget, albeit relatively small in size, remains an important source of financing for the environment and can exert a strong influence on patterns of investment and related policies in Member States. Since the launch of the review of EU spending and resources in September 2007, there has been growing recognition of the need for reform of the EU budget to reflect new and emerging challenges, such as climate change. The Commission Communication on the EU budget review (EC 2010b) presented in October 2010 argued that the future budget should be closely aligned to the Europe 2020 Strategy and play a key role in its delivery. The need to address climate change, resource efficiency and energy security is highlighted and the case for ensuring the necessary investments in green technologies, services and jobs is clearly made.

In June 2011, the Commission formally tabled its proposals for the 2014-2020 MFF under the title 'A Budget for Europe 2020' (EC 2011). The Commission proposes an overall increase for the period to €1,025 billion (1.05 per cent of GNI, which is in fact a slight decrease from the current budget which represents 1.12 per cent of GNI). The CAP (€372 billion) remains a sizeable element of the overall budget but is now to account for a fractionally smaller share than Cohesion Policy (€376 billion). A key function of the budget is to provide a means of responding to persistent and emerging challenges that require a common, pan-European approach such as environmental protection and climate change. With a relatively small sum (€3.2 million) allocated to the future environment funding instrument (LIFE); 'mainstreaming' is put forward as the principal mechanism for financing environment and climate change priorities. Most notable is a requirement that at least 20 per cent of the EU budget is allocated to climate change financing. If mainstreaming is applied rigorously it could help to shift investment patterns in several sectors, aiding energy conservation, the growth in renewables, a greener transport infrastructure etc.

To make mainstreaming effective, it requires policy shifts in the main spending areas embodied in EU regulations and willingness in the Member States where the money is spent to take such considerations into account in their planning and decision-making. The first step is in the political spotlight at present. New draft regulations for the CAP, Cohesion Policy and Research Policy among others are being negotiated in 2012-13. At present the main environmental concerns addressed in the Commission's draft regulations relate to climate change and energy, while

issues of resource efficiency and biodiversity etc. feature less prominently. More balance is required to take into account the wider suite of environmental issues.

Several governments are now arguing for an effective freezing of the future budget (including the UK, Denmark and the Netherlands), while others such as France and most central and eastern European countries aim to defend the traditional spending blocs on agriculture and cohesion (Medarova et al 2011). This positioning contrasts with that of the European Parliament which supports *inter alia* a 5 per cent increase in the overall EU budget and the abolition of all rebates and correction mechanisms. Whilst there is no environmentally optimal size of budget, one that is squeezed down may well lose key environmental elements as almost occurred earlier in 2011 with an attack on rural development spending. Despite its small size, the EU budget can have significant multiplier effects in important policy areas such as energy and transport and build institutional capacity at a European scale. However, Member State positions indicate that traditional issues (e.g. the total size of the MFF, the share of CAP and Cohesion Policy, national rebates and new sources of revenues) could dominate the debate. The risk in doing so is that the 'greener' elements of the proposals will be watered down or lost (Medarova et al 2011).

### ***Exploring new revenue sources***

The difference between national contributions to the EU budget and national receipts is a matter of significant contention and underlies the position of many Member States on the EU budget. The UK has negotiated a sizeable national 'rebate' to reduce the size of its national net contribution and defends it as far as it can during the decision-making process. Some other Member States have smaller rebates. The Commission's proposals for the 2014-2020 MFF aim to simplify Member State contributions, introduce a new system of own resources, and reform 'correction mechanisms' (including a review of the UK rebate). With its proposals, the Commission aims to move towards a system in which revenue flows directly to the EU budget, thus reducing reliance on national contributions. The most controversial Commission proposals in this respect concern the introduction of a new EU financial transaction tax (FTT) and new EU VAT resource. The FTT in particular has been criticised by several Member States including the UK. Given the need for unanimity in the Council for the adoption of any fiscal measures the future of these proposals is uncertain.

Given continued constraints on public budgets, the Commission is also proposing to increase the use of 'innovative financial instruments' as a means of attracting additional public and private financing to projects of EU interest. Most of the proposals extend, with some modifications or extensions, existing financial instruments. These include risk-sharing instruments (e.g. the Risk-Sharing Finance Facility for investments in research, development and innovation (RSFF)), financial engineering and technical assistance under Cohesion Policy, guarantees and venture capital for SMEs under the Competitiveness and Innovation framework Programme (CIP), and equity instruments such as the Marguerite Fund. One new proposal under the Connecting Europe Facility is the EU project bond initiative, which focuses on securing investment for strategic infrastructure projects in the energy, transport and ICT sectors (Withana et al 2011).

The current focus on fiscal issues in the EU raises questions about whether there should be a shift towards environmental fiscal reform in the years ahead. In principle, shifting part of the current national tax bases from labour to environmentally damaging activities, though environmental tax reform (ETR) could bring about an improvement in both the environment (by properly pricing externalities) and the economy as a whole (e.g. by making the cost of labour cheaper and therefore encouraging employment). The reform and/or phasing out of environmentally harmful subsidies (EHS) could also help to release additional financial resources, including for the environment. Following a significant increase in the use of environmental taxes in the 1990s among EU countries, these levels have remained stable and in some countries have decreased over the past decade. Moreover, despite various EU and international commitments to reforming EHS, progress has been slow. Fiscal issues have always been a particularly sensitive area as can be seen in the on-going discussion on the Commission's proposal to revise the energy taxation Directive to introduce a carbon element which would reflect the environmental impact of various types of fuels. This proposal has been met by resistance from several Member States, including the UK, and the European Parliament. Nevertheless, in the current economic and financial crisis, reforms in this area could play a significant role in the restructuring of EU finances and could also contribute to achieving wider environmental and climate change objectives.

## **5.4 Developing the future strategic framework for EU environmental policy: The 7th Environment Action Programme**

Since 1973, the Commission has periodically issued Environment Action Programmes (EAPs) setting out forthcoming initiatives, legislative proposals, broader approaches and principles for EU environmental policy. In July 2002 the sixth Environment Action Programme (6th EAP) was adopted. The Programme establishes a ten-year framework for EU action on the environment, focusing on four thematic areas: climate change, nature and biodiversity, environment and health, and natural resources and waste. It also outlines governance mechanisms to improve the environmental policy-making process in the EU. More detailed measures to meet the objectives of the Programme were set out in seven Thematic Strategies covering soil protection, marine environment, pesticides, air pollution, urban environment, natural resources and waste.

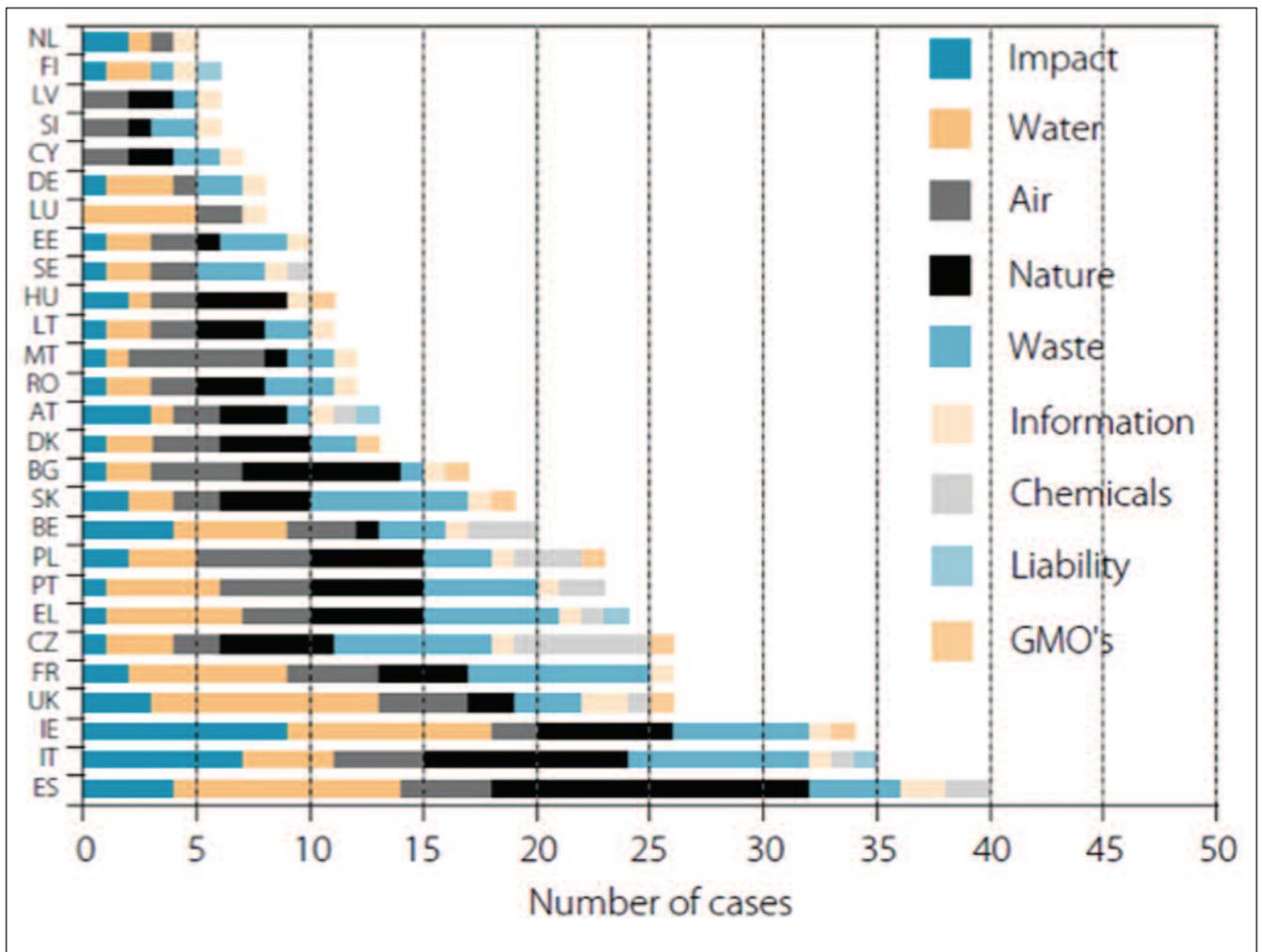
As the Programme nears its last phase, there has been much discussion on its achievements and shortcomings as well as its successor. In August 2011, the Commission presented its final assessment of the 6th EAP (EC 2011a) which concluded that on balance, the Programme has been helpful in providing an overarching framework for EU environmental policy. The 6th EAP acted as an important reference point for Member States, local and regional authorities and other stakeholders. In some areas, the 6th EAP helped to build political will for action (e.g. on marine, soil, urban, resources), while in others it focused on revising existing measures and addressing specific gaps (air, pesticides, waste prevention). However, a number of shortcomings of the 6th EAP were also recognised. The large number of actions (156 in total) and the absence of a longer-term vision were seen to have compromised its capacity to deliver a clear, coherent message. Inadequate implementation and enforcement of EU environmental legislation was another concern, although this problem is not attributable to the EAP.

There has been considerable debate and uncertainty about the need for and political added value of a successor EAP. The added value of such a Programme given the current plethora of strategic documents such as the resource efficiency Roadmap was one question on the table. This debate has now been resolved and the Commission has formally announced its intention to present a proposal for a seventh Environment Action Programme (7th EAP) in October 2012. The 7th EAP is expected to set out strategic orientations for EU environmental policy for the short-to-medium term and a longer-term vision, bringing together action to protect natural capital and ecosystems, encourage resource efficiency and improve implementation. The 7th EAP is also expected to build on proposals in the resource efficiency Roadmap and deal with a number of challenging issues including changing consumer behaviour, improving policy coherence, examining environmental determinants for improving public health, the international aspect of environmental policy, and securing better financing (EC 2011b). The development of the 7th EAP is still in its early stages and will be subject to consultation in 2012, thus providing an opportunity to feed strategic thinking into discussions on the future framework for environmental policy in Europe.

## **5.5 The implementation challenge**

Member States' record of implementing a large part of EU environmental legislation remains poor. At the end of 2010, environmental infringement procedures accounted for approximately one fifth of all open cases for non-communication, non-conformity or bad application of EU law in the 27 Member States. A large number of cases relate to waste, nature, and water matters (see Figure 13). The number of judgements of the European Court of Justice (ECJ) in environmental matters has increased continuously over the years as has the number of cases of non-compliance by Member States (EU-15) with ECJ judgements (IEEP 2011). Deadlines set in EU environmental legislation are regularly missed by a large number of Member States, with transposition of the environmental liability Directive for example proving a particularly problematic case. These issues are however normally resolved after the launch of infringement proceedings, and protracted delays only occur in a minority of Member States (EC 2011c).

There are implementation gaps across most of the main topics of environmental law and in almost all Member States. At the end of 2009, Spain had the highest number of on-going infringements cases (40), most of these relate to nature legislation (14) and water legislation (10). Italy and Ireland had more than 30 open infringements each and the Czech Republic, France and the UK had 26 each. In the UK, the majority of infringements related to water, air and environmental impact assessments (see Figure 13). Although a number of Member States have received significant fines for poor compliance, the problem persists.



**Figure 13: Infringements of EU environmental legislation by Member State and by sector (as of the end 2009)**  
 Source: EC 2010

A recent study for the Commission (COWI et al., 2011) attempted to estimate the cost of not implementing the EU environmental acquis. The report notes that the lack of full implementation of the acquis could have negative effects on eco-industries, as uncertainty about environmental measures may hamper investments in new environmental technologies. Uneven implementation can also distort competition across Member States and lead to higher administrative costs when standards vary across countries. Overall, the study suggests that the current cost of not fully implementing key EU environmental legislation, in the fields of water, air, nature and biodiversity, waste, chemicals and noise, may represent about €50 billion per year. Furthermore, it suggests that missing future environmental targets could cost up to €250 billion per year. Although the study is only a first order-of-magnitude estimate, it shows that the lack of full implementation can have real economic impacts.

Implementation of the environmental acquis is in the first place the responsibility of EU Member States. However, action at EU level can also be helpful to improve the situation. The Commission has made various efforts over the years to guide Member States in implementing EU law, such as issuing guidance documents interpreting specific matters of EU law, sharing good practices, setting up early ‘package meetings’ to discuss transposition difficulties with national administrations, etc. Current EU efforts build strongly on a preventative approach, seeking close cooperation with Member States before taking enforcement action via the court. In 2008, an ‘EU Pilot project’ was launched which aims to correct infringements of EU law at an early stage without recourse to infringement proceedings through closer collaboration between the Commission and Member States. At the end of 2010, the initiative covered 18 Member States, including the UK, and has reportedly contributed to a reduction in the number of infringement proceedings among participating Member States (EC 2011c).

Different factors explain implementation failures, including an unwillingness to accept costs, insufficient administrative capacities, lack of political priority for environmental inspections and associated limited resources for inspection authorities at Member State level. A critical barrier remains the lack of political will for real action. Efforts to improve implementation are also not helped by the lengthy nature of litigation procedures, which – depending on the procedure – can take several years. It can also prevent the Commission from taking action in cases where damage has already occurred and cannot be repaired (IEEP 2011).

Full implementation of environmental legislation is not only an issue of credibility but also has economic and social implications. Improving implementation of EU environmental law is a key priority of the current environment Commissioner, Janez Potočnik, and is expected to form an important part of the upcoming 7th Environment Action Programme (see previous section). A new communication on implementing EU environmental law and policy is also under development by the Commission. The Communication is expected to explore practical avenues to improve current gaps in implementation, examining issues of improving coherence, enhancing compliance, strengthening inspections and enhancing the role of national judges in supporting implementation of EU legislation (EC 2010).

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## 6 **Conclusions:** priorities for the future development of EU environmental policy

EU environmental policy is facing a new and challenging context. Political attention is currently focused on the EU's economic and financial crisis, leaving little appetite for major new legislative initiatives in other areas. The crisis in the Eurozone has led to bigger questions concerning the EU project itself and growing scepticism about the EU has been voiced in a number of Member States, including the UK where political tensions have been brought to the fore in recent months. Details of a new inter-governmental agreement on the economic governance of the Eurozone are currently being negotiated. Many existing EU policies, including those concerning the environment, are not likely to be affected by this agreement. However, the political repercussions and dynamics of the new economic governance structure are yet to unfold.

While the difficult economic conditions clearly require attention, strategic environmental priorities are in danger of being neglected or watered down in the face of concerns about streamlining legislation and reducing administrative burdens. Often this is based more on ingrained assumptions than a clear appraisal of the evidence. This more cautious approach has led to a narrower focus on those environmental initiatives that provide win-win solutions and are backed by broader economic interests. Rising public debts in several Member States and flailing capital markets have dented the ability to invest in critical infrastructure and innovative technologies and services necessary for the transition to a low-carbon, resource efficient economy. Moreover, the rise of emerging economies is dramatically changing the international landscape and the role of the EU therein.

The crisis also provides EU environmental policy with a number of new opportunities. Addressing the inter-linkages and trade-offs between different thematic areas such as climate change, biodiversity, natural resources and environment and health, as well as between environmental policy and sectoral policies such as agriculture, energy or transport will also be important. The current economic downturn has made it cheaper and thus easier to achieve certain policy objectives, such as the EU's 2020 climate change objectives. Climate change concerns have infiltrated the main political discourse and are now increasingly reflected in the EU's Europe 2020 Strategy, as well as in spending priorities under the future EU budget. The EU has started to develop a policy agenda on resource efficiency that may in the future lead to concrete targets and indicators for reducing resource consumption, thus addressing the key driver behind many of the environmental challenges faced today. Discussions on greater economic convergence among some Member States could provide the conditions for extended efforts on green fiscal reform. Preconceptions

are also gradually changing, with growing recognition among policy-makers and business actors that the current model of economic growth is inherently unsustainable and cannot be pursued indefinitely. The inter-connections and inter-dependencies between different economic, political, social, cultural, technological and environmental systems are being re-appraised. Developments in other regions are increasingly affecting Europe and vice-versa. Consequently, there is a need for a more holistic, integrated perspective that looks at the coherence and trade-offs of different policies, and points to a new focus on a green economy.

In broad terms, the challenges ahead include reducing the intensity of resources used for economic activity (resource decoupling), reducing the negative environmental impacts from the use of natural resources (impact decoupling), preserving and restoring natural capital, and improving human well-being and quality of life. Improving the implementation of EU environmental policy will remain a key challenge and requires a more honest alignment of aspirations, regulatory means and implementation capacities with the political realities of a Union of 27 Member States. In the face of fiscal austerity and pressures for budgetary cuts across the board, there is a need to defend administrative capacities for good governance and regulatory foresight. The investment needs for achieving EU environmental objectives and to support the transition to a low-carbon, resource efficient economy are substantial and securing adequate financing to support environmental commitments will be another key challenge. Additional financial resources will need to be mobilised through new approaches complementing traditional grant funding, while proper take-up of the proposed mainstreaming approach in the future EU budget could have major implications for investment patterns in Member States.

In the current context of economic austerity, there is a tendency to see environmental regulation as a brake on growth without necessarily considering the evidence at hand. Recent history suggests that well designed and implemented environmental policy, regulatory or not, can provide some of the foundations for long term prosperity as well as steering us towards a more sustainable society. Thus, even in a period of economic recession and political upheaval, EU environmental policy is likely to remain dynamic and relevant, offering a number of opportunities and avenues to help move forward from the current stasis.

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## 7.1 Annex I: timeline of key strategic events and EU targets

2012	
Jan - Jun	Denmark holds Presidency of the Council
	Deadline to reduce administrative burdens of EU legislation by 25 per cent
	Water framework Directive programme measures become operational
	Commission report on implementation of renewable energy Directive (and every two years thereafter)
	Commission communication on inclusion of LULUCF in EU GHG reduction commitment
	Review of REACH Regulation
	Legislative proposal on a framework for maritime spatial planning
	Commission reports on national measures on biofuels sustainability criteria
Q2	Communication on renewable energy Strategy
20-22 Jun	UN Conference on Sustainable Development (Rio+20)
Jly -Dec	Cyprus holds Presidency of the Council
Jly	End of 6th EAP
Jly	Review of the environmental impact assessment (EIA) Directive
15 Jly	Deadline for determining targets and status under marine strategy framework Directive
Q3	EU Strategy for invasive alien species, including legislative instrument
Q3	Measures to include maritime transport emissions in EU GHG reduction commitment if no international rules agreed
Q3	Proposal to improve regulatory framework on nuclear safety
Oct	Proposal for 7th Environment Action Programme
Nov	Presentation of a Blueprint to safeguard Europe's water resources
Nov	Revision of EU Strategy on endocrine disruptors
Dec	Proposal to amend legislation on CO <sub>2</sub> from cars and vans
Dec	End of first commitment period of Kyoto Protocol
2013	
Jan-Jun	Ireland holds Presidency of the Council
1 Jan	New Common Fisheries Policy Regulation comes into effect
	Third phase of EU ETS begins
	Review of EU forestry Strategy
	Strategy for reducing CO <sub>2</sub> emissions of heavy duty vehicles
Q1	Communication on energy efficiency
Q1	Communication on EU adaptation Strategy
Q1	Communication on energy technologies in future European energy policy
Jly-Dec	Lithuania holds Presidency of the Council
Oct	Review of EU air quality legislation
20 Dec	Deadline for development of flood hazard and risk maps for floods Directive
31 Dec	Member States report on progress in implementation of renewable energy Directive (and every two years thereafter until 31 December 2021)
Dec	National waste prevention programmes to be established under waste framework Directive
2014	
Jan-Jun	Greece holds Presidency of the Council
1 Jan	Start of new EU Multi-annual Financial Framework (to 2020)
1 Jan	New Common Agriculture Policy Regulations come into effect
1 Jan	New EU Cohesion Policy Regulations come into effect.
	Commission report on establishing marine protected areas

	Mid-term review of 2020 EU biodiversity Strategy.
	Commission Communication on limiting nitrogen oxide (NOx) from aviation
Apr	Commission report on implementation of environmental liability Directive and proposals for revision if necessary
	Start of new term of European Parliament (to 2019)
	New Commission term (to 2019)
Jly-Dec	Italy holds Presidency of the Council
15 Jly	Deadline for monitoring programmes to be operational under marine strategy framework Directive
	Review of diversion targets under landfill Directive and proposal for new diversion targets for other waste streams
End 2014	Commission report on feasibility and sustainability of 10 per cent target for transport fuel from renewables by 2020 and implementation of Directive
Dec	Review of waste framework Directive, including proposed revision to targets
<b>2015</b>	
Jan-Jun	Latvia holds Presidency of the Council
	Target to achieve good surface water status under water framework Directive
	Programmes of measures to be developed under marine strategy framework Directive
	Review of water framework Directive
Jun	Commission report on potential for increasing use of renewable energy in transport sector
Jly-Dec	Luxemburg holds Presidency of Council
22 Dec	Deadline for achievement of environmental objectives of water framework Directive
22 Dec	Deadline for producing risk management plans for floods Directive
<b>2016</b>	
Jan-Jun	Netherlands holds Presidency of the Council
Jly-Dec	Slovakia holds Presidency of the Council
<b>2017</b>	
Jan-Jun	Malta holds Presidency of the Council
Jly-Dec	UK holds Presidency of the Council
<b>2018</b>	
Jan-Jun	Estonia holds Presidency of the Council
	Commission to present renewable energy Roadmap for post-2020 period (may be with proposals)
Dec	Review of floods Directive
Jly-Dec	Bulgaria holds Presidency of the Council
<b>2019</b>	
Jan-Jun	Austria holds Presidency of the Council
Jly-Dec	Romania holds Presidency of the Council
<b>2020</b>	
Jan-Jun	Finland holds Presidency of the Council
	Deadline for achievement of EU 20-20-20 climate and energy targets
	Deadline to achieve or maintain good environmental status in the marine environment under marine strategy framework Directive

## 7.2 Annex II: key EU legislative proposals awaiting adoption

CLIMATE AND ENERGY		
Energy taxation	COM(2011)169	Proposal to revise the existing energy taxation Directive 2003/96/EC under which taxation would be split into two components: a minimum tax rate of €20 per tonne of CO <sub>2</sub> and minimum rates for energy based on the energy content of a fuel rather than volumes. The proposed CO <sub>2</sub> tax rate will apply to all sectors not subject to the EU ETS, namely transport, households, agriculture and small industries. Provisions for some derogations are included.
Energy efficiency	COM(2011)370	Proposal for the establishment of a common framework for promoting energy efficiency in the EU to ensure the target of 20 per cent primary energy savings by 2020 is met. Provisions for end-use sectors, for the energy supply sector, and other measures are included. The proposal requires the Commission to assess in 2014 whether the EU can achieve the current energy savings target and, if appropriate, to propose legislation with mandatory national targets for 2020.
TRANSPORT		
Connecting Europe Facility	COM(2011)456	The Connecting Europe Facility (CEF) is a new integrated instrument for investing in EU infrastructure priorities in the transport, energy and telecommunications sectors. The proposed budget is €50 billion of which €31.7 billion will be invested in transport infrastructure, €9.1 billion in energy infrastructure and €9.2 billion in broadband networks and digital services. The proposed Europe 2020 Project Bond Initiative will be one of a number of risk-sharing instruments upon which the CEF may draw to attract private finance.
AIR QUALITY		
Recreational craft	COM(2007)851	The proposal aims to harmonise recreational craft and personal watercraft with stricter emission limits for NO <sub>x</sub> , hydrocarbons and particulate matter.
Two or three-wheel motor vehicles and quadricycles	COM(2010)542	The proposal aims to simplify the existing legal framework, decreasing the share of emissions from two or three-wheel vehicles to overall transport emissions and improving aspects of vehicle functional safety.
WASTE		
Waste electrical and electronic equipment	COM(2008)810	Proposal to add new provisions to the WEEE Directive (2002/96/EC), including new measures on registration and reporting requirements, broaden its scope, new collection and recycling targets, minimum inspection rules and make producers financially responsible for household collection.
CHEMICALS		
Export and import of dangerous chemicals	COM(2011)245	Proposal to recast the Regulation on the export and import of dangerous chemical, changing and clarifying some definitions and aspects of the consent procedure and transferring certain tasks to ECHA.
Placing on the market and use of biocidal products	COM(2009)267	The proposal will repeal and replace Directive 98/8/EC on the placing of biocidal products on the market. The Proposal aims to address weaknesses identified in the implementation report on the Directive, such as the costs of compiling a dossier in support of the inclusion of active substance. For the first time the Proposal identifies which active substances may not be used in biocidal products.
Control of major-accident hazards involving dangerous substances	COM(2010)781	Proposal to revise Directive on major accident hazards. The main proposed changes are: to align Annex I of the Directive to changes to the EU system of classification of dangerous substances; to include mechanisms to adapt Annex I in the future to deal with changing situations; to strengthen the provisions relating to public access to safety information, participation and access to justice; and to introduce stricter standards for inspections.
SOIL		
Soil protection	COM(2006)232	Proposal for the establishment of a framework for the protection of soil defining seven key functions of soil and introducing EU rules on soil condition monitoring, soil erosion, decline in organic matter, and contamination. The Directive would oblige sellers and buyers to provide a soil status report for any transaction of land where a potentially contaminating activity has taken, or is taking, place.

<b>BIODIVERSITY</b>		
GMOs	COM(2010)380	Proposal to amend Directive 2001/18/EC on the environmental release of GMOs so as to grant Member States the power to restrict or ban the cultivation of GM crops on all or part of their territory on grounds other than those covered by EU health and environmental risk assessments. In practice this means that Member States could ban GMO cultivation for socio-economic reasons in addition to restrictions made on environmental or human health grounds under the current safeguard clause.
<b>MARINE ENVIRONMENT AND FISHERIES</b>		
Detergents	COM(2010)597	The proposal aims to extend the scope of Regulation 648/2004 to introduce a limitation on the content of phosphates and others phosphorous compounds in household laundry detergents. The proposal will set a phosphorous content limit of 0.5 per cent of the total weight of the product in all laundry detergents on the EU market
Safety of offshore oil and gas operations	COM(2011)688	Proposal for a Regulation on the safety of offshore oil and gas prospecting, exploration and production activities which establishes minimum requirements for industry and national authorities involved in offshore oil and gas operations. The Regulation aims to reduce the risks of a major accident in EU waters, and to limit the consequences should such an accident occur.
Oil pollution	COM (2000)802 amended by COM(2002)313	Proposal for a Regulation concerning oil pollution in European water. The proposal, part of the Erika package, is to establish a fund (COPE) to compensate for oil pollution damage in European waters and to complement the existing international two-tier regime on liability and compensation for oil pollution damage by oil tankers.
Sulphur content of marine fuel	COM(2011)439	Proposal to amend Directive 1999/32/EC as regards the sulphur content of marine fuels. If adopted, the Directive would transpose into EU law global limits on the sulphur content of marine fuels adopted in 2008 by the modification of the MARPOL Agreement of the IMO. By 2020 the limit for sulphur in marine fuels would be lowered from 4.5 per cent to 0.5 per cent. Alternative compliance methods are introduced, such as exhaust gas cleaning systems. The strengthening of the EU monitoring and enforcement regime is also proposed. For example, the Commission would be allowed to specify the frequency of sampling, the sampling methods and the definition of a sample representative of the fuel examined.
Common Fisheries Policy	COM(2011)425 COM(2011)416 COM(2011)424 COM(2011)418	2012 reform of the CFP. The most significant change is the aim to reach maximum sustainable yield by 2015 and the integration of environmental legislation requirements. An ecosystem-based approach to fisheries management has been given greater prominence.
<b>CROSS-CUTTING</b>		
Access to justice in environmental matters	COM(2003)624	Proposal for a Directive to implement the third pillar of the Aarhus Convention which would guarantee public access to justice in environmental matters in EU Member States.
EU budget	COM(2011)398 COM(2011)403 COM(2011)510	Proposals for the 2014-2020 Multi-annual Financial Framework (MFF) include legislative proposals for a Regulation adopting a new multiannual financial framework, an inter-institutional agreement on budgetary matters and sound financial management, and a Decision on own resources.
Common Agricultural Policy	COM(2011)625, COM(2011)626 COM(2011)627 COM(2011)628	Legislative package of proposals for the 2014-2020 CAP. Includes proposals for four basic regulations for the CAP on Direct Payments, the Single Common Market Organisation (CMO), Rural Development and a Horizontal Regulation for financing, managing and monitoring the CAP as well as three smaller regulations to address transition arrangements to the new rules.
Common Agricultural Policy	COM(2011)615 COM(2011)614 COM(2011)607 COM(2011)612 COM(2011)611 COM(2011)610	Legislative package of proposals for the 2014-2020 Cohesion Policy. Includes a Regulation setting out common rules governing the five EU funds under shared management, which also includes a separate section laying down general provisions for the ERDF, ESF and the Cohesion Fund; three specific Regulations for the ERDF, the ESF and the Cohesion Fund; and two Regulations dealing with European territorial cooperation.

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One of the larger all-party groups in Parliament, the All-Party Parliamentary Environment Group was set up twelve years ago to strengthen the influence of Parliamentarians on public policy and public debate on the environment. The Group also aims to assist Parliamentarians by improving their access to specialist information through regular group meetings and contact with senior environmental managers and directors from industry and NGOs, written briefings and special reports such as this one.

The Group has over 150 Members of Parliament and the House of Lords, and some 180 associate member companies and organisations. It holds regular meetings and receptions at the House of Commons, with talks by leading British and International politicians and captains of industry on key environmental issues. A newsletter and briefing sheet is produced after each meeting.

Over the years the Group has played host to quite a number of different British Ministers including David Miliband, Margaret Beckett and Michael Meacher, the Dutch, German and Danish Environment Ministers, senior Brussels officials including Margot Wallstrom, EU Commissioner, and many others from government, business and the campaign groups both in the UK and abroad.

The Group meets 5 or 6 times a year at the Houses of Parliament and membership is by invitation. If you would be interested in joining the Group as an associate member, please contact the membership office shown opposite with details of your company or organisation.

## The Institute for European Environmental Policy



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