

Running out of time?

Stepping up action
for Europe's environment



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Contents

Summary	6
Prologue	8
1 THE CHALLENGES AHEAD	10
2 BUILDING ON PAST EXPERIENCE	16
3 GOVERNANCE PRINCIPLES TO GUIDE FUTURE ACTION	25
4 THEMATIC PRIORITIES	29
4.1 Decarbonising Europe's economy	30
4.2 Better use of natural resources	36
4.3 Preserving the natural environment	44
5 CROSS-CUTTING PRIORITIES	49
5.1 Better implementation	49
5.2 Better financing, use of environmental taxes and reform of harmful subsidies	54
5.3 Improving assessment, information, monitoring and accounting	58
6 MAKING IT HAPPEN	67

Executive summary

The limits to a business-as-usual approach to economic recovery are increasingly recognised. There is now a real opportunity to set the EU on a path to a low-carbon, resource-efficient economy. However the appetite for action seems to be fading at a time when it is most needed. The slowing momentum behind the environmental agenda needs to be revived. This requires a clear vision and a coherent message on the policy horizon to 2030. This report calls for increased leadership and political courage to reinvent the EU's economic development model at this critical point in time.

The challenges and opportunities that lie ahead

The EU is exposed to an exceptional set of global risks and opportunities. Each year of incremental action means that future responses will be more costly and difficult to realise. There is an urgent need for much more decisive efforts if we are to avoid lock-in of high carbon, resource intensive development.

In the years ahead, environmental policy advocates have to improve their ability to argue the economic case and be better prepared to guide progress towards a greener economy. Part of this transformation has already started and there is a wealth of action worth building on. The EU needs to refocus on its undoubted strengths, and proven capacities while building stronger common interests within Europe.

Priorities for future action

The current economic and financial context requires different tactics. A strategic focus to 2030 will need to be combined with a more pragmatic approach to address critical issues and build capacity in the shorter term. Scaling up action on energy efficiency is a key priority, followed by measures to restore trust and momentum in the EU's renewable energy transition. The EU also needs a clearer, targeted approach for improving natural resource use

as well as guidance and financial support to protect the integrity of its natural environment.

EU environmental policy continues to confront a number of cross-cutting challenges, many of which are far from new. These include weak implementation of legislation, limited engagement of civil society and tentative use of market-based and planning instruments. An earnest discussion about rules, competencies, capacities and costs is needed if these issues are to be addressed more effectively in the next decade

Making it happen

While this may seem a tall order, it is not an insurmountable challenge. The EU has the ability to enact tremendous change when the direction is sufficiently clear and the case well-argued. This has been demonstrated several times over the past four decades.

There are a number of practical steps which can be taken forward in the next few years as set out in this report. Now is the time for investing more in developing partnerships and building relationships of trust between a larger group of actors. Different pathways can be accepted if they clearly lead to common objectives over a defined period and do not violate the essential requirements of EU environmental law. Our increased understanding of the true scale of environmental pressures raises difficult questions but equally it can invigorate a new sense of the European mission.



Prologue

There is growing recognition of the need to move away from a business-as-usual approach when discussing paths for economic recovery in Europe and globally. This is evident in several recent publications, statements and strategies on “green growth”, “green new deals”, “green economy”, “resource efficiency revolutions” and the like. These rallying calls, however, stand in stark contrast to the distinct loss of momentum behind the environmental agenda in everyday political transactions.

In the EU, the economic and financial crisis has led to resurgent concerns about the competitiveness impacts of new policy initiatives and reduced the appetite for action. Interest in supporting relevant policy initiatives among governments and other key actors seems to be fading at a time when it is most needed. Yet it would be a mistake to underestimate the potential or the future role of environmental policy on account of the current situation.

A ‘wait and see’ strategy risks undermining the EU’s long-term competitiveness, future sources of growth as well as the quality of life of its citizens.

Each year of incremental action increases the rate at which decarbonisation and resource-efficiency improvements will be required in the future, thus making it more difficult and costly to achieve long-term objectives. Although some Member States have been at the forefront of progress, windows of opportunity are closing. Particularly on a global scale we see a significant failure to reduce resource and carbon-intensity at sufficient speed. Are we running out of time, as some already fear?

This question cannot be answered easily. However, it is both possible and necessary to sharply accelerate energy and resource-saving measures with

an eye on 2030, not only 2020 which dominates the EU's current planning horizon. The political, technical and financial barriers to progress are well known and both policy and corporate decision-makers have access to the options required. The slowing momentum behind the environmental agenda needs to be revived, with the aid of a clear vision and a coherent message on the 'green economy'. In the future, environmental policy will need to be located more strategically inside an economic context as we will only be able to meet environmental goals by achieving a transformation of the economic model in Europe, whilst acknowledging social and economic concerns along the way.

The EU has the ability to enact tremendous policy and institutional change as demonstrated over the past 40 years. It has exclusive competence in the

The EU has the means at its disposal to lead this transformation and embed a transition to an economy that is low-carbon, zero-waste, resource-efficient and strongly based on sustainable rural and urban areas into the broader European project.

area of trade policy and it is a major force in climate and energy policy. It sets the regulatory framework for waste and recycling policy, dominates agriculture and fisheries policy, and is an important source of investment in many parts of Europe. The EU is also well-

placed to maintain a longer-term perspective which is critical at a time when short-term concerns dominate domestic politics.

A number of encouraging steps forward have already been taken with the preparation of forward looking roadmaps and strategic framework documents. These efforts need to be stepped up and the pace of change quickened significantly in the years ahead. Political leadership and courage is required now. The EU's leadership potential needs to be revived and policy tools deployed in a coherent and mutually supportive way. How to achieve this and change the overall development model needs to be debated inside and beyond the framework of the forthcoming 7th Environmental Action Programme. This report aims to sketch the changing context in which the EU operates, explore the key challenges ahead and assess what further action is needed.



1. The challenges ahead

In a highly interconnected, inter-dependent world, there is no immunity from global environmental, economic and social changes. Europe's challenges are increasingly interlinked with those of other regions, forming a dense web of threats and opportunities.

Increasing global risks

The latest edition of the Global Environmental Outlook (GEO-5) confirms that the state of our planet is a cause for significant concern. Burgeoning populations and growing economies are pushing environmental systems to destabilising limits. Critical thresholds are being approached or even crossed beyond which abrupt and non-linear changes to the planet's life-support functions could occur². Degradation is accelerating. Acceleration rates might even be grossly underestimated (see Box 1).

The World Economic Forum has warned that a set of interlinked global risks are evolving³. Population growth and higher living standards are likely to accelerate competing demands for food, energy, water and land, with knock-on effects on security of supply and increased prices, putting additional pressure on the planet's strained natural ecosystems⁴.

The EU has little influence on these global drivers of change. It is already experiencing the impact of competing demands for food, feed, fuel, fibre and raw materials. According to one estimate, real commodity prices increased by between 75 and 150 per cent from 2000-2008, but have since fallen⁵. Global water demand has increased six-fold in the 20th century. Water security is a critical challenge for Europe's south⁶.

Box 1: Accelerating change in the Arctic¹

Environmental system change may be accelerating beyond scientific theory or prediction. For example, there is now sufficient data to indicate that the Arctic is entering a new, considerably warmer state. The Arctic sea ice extent in September 2011 was the second-lowest of the past 30 years. The unexpected record loss of Arctic sea ice in 2012 potentially influenced weather changes in parts of Europe including increased precipitation in the north and droughts in the south.



The EU can and should take a leadership role. It stands to benefit from being a first mover. At the same time, we need to be realistic and acknowledge the limits of what EU policy can achieve alone. Overall progress continues to depend on global action and greater coordination. Solutions to address some of these challenges are already available with a range of new technologies and advancing scientific knowledge. Modern communication and information technology enables humankind for the first time to share the race for solutions to global problems. At its core, this is a challenge of motivating change, of governance and economic choices. Corporate and private decision-making will become increasingly important, but implementing solutions at a larger scale will need a decisive policy framework.

Multiple challenges within the EU

It is difficult to foresee when instabilities in financial markets, uncertainties over economic and job prospects and pressure to maintain austerity regimes will end. Recent developments in the economic governance of the Eurozone and the setting up of a banking union are likely to have repercussions and dynamics which may spread beyond the arenas of fiscal and budgetary policy.

The crisis in the Eurozone has led to bigger questions concerning aspects of the EU project itself. Growing scepticism about the EU has been voiced in a number of Member States. Recent months have seen more strained relationships with some Member States, most notably the UK. At the same time, the EU faces the challenge of managing an increasingly diverse group of members.

These are challenging political circumstances for addressing environmental priorities such as halting the continued degradation of ecosystems and natural capital, meeting targets for water and air quality particularly in cities, exposure to multiple pollutants and chemicals, the EU's growing impact on the environment beyond its borders, its so-called 'ecological footprint' and its dependence on imports of energy, raw materials and other goods⁷.

The economics of climate and resource concerns

Over the course of the last two decades, environmental policies at both the domestic and international level, have helped create new markets and opportunities for a growing range of products and services. In many cases this has been brought about by new binding standards for manufactured products, regulations designed to eliminate polluting activities and measures to raise the price of natural resources. While not the main aim of environmental measures, they have created a growing dynamic which is now of real economic significance.

The 2012 EU Global Competitiveness Report points to a close link between energy efficiency and competitiveness ⁸. Improved energy, resource and material productivity can not only provide a key competitive advantage but are also a source of growth and strengthened security of supply. There has also been dynamic growth in environmental and resource-saving technologies in recent years which has increased the economic relevance of eco-industries (see Table 1). Global investments in renewable energies were estimated to be USD 257 billion in 2011, six times more than in 2004. Of this total, USD 101 billion was invested in Europe ⁹. Net investment in renewable power capacity (including hydropower projects of over 50 megawatts) exceeded that for fossil fuels by some USD 40 billion in 2011 ¹⁰.

Table 1: Global volume of single lead-markets for environmental and resource-saving technologies in 2011 and prospected change to 2025

Market segment	Status 2011 (in billion Euro)	Estimated average annual change to 2025 (in %)
Energy efficiency	720	3.9%
Sustainable water management	455	5.0%
Environmental friendly power generation and storage	313	9.1%
Sustainable mobility	280	5.0%
Material efficiency	183	7.7%
Waste management and recycling	93	3.2%
Total	2044	

Source: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) (2012) GreenTech made in Germany 3.0 Environmental Technology Atlas for Germany, February 2012

Global competition is rising rapidly and maintaining the EU's competitive advantage in these markets in the future will not be easy.

The EU is currently strongly positioned in these markets. For example, EU companies lead international investment activity and R&D in renewable energies, engine and turbine industries. However

global competition is rising rapidly and maintaining the EU's competitive advantage in these markets in the future will not be easy. The EU attracted more than one third of global green Foreign Direct Investments (FDI) in the period of 2003-2011, putting it ahead of the US, China and India. It's attractiveness as a destination for green FDI has however been waning slightly over the last four years, and greater market uncertainties cloud the horizon ¹¹.

Moving forward

As we look ahead to the next phase of environmental policy, its relationship to the wider economy will be of growing importance. Current policy discussions contain a defensive element whereby measures to address climate change and resource use continue to be resisted by certain sectoral interests concerned about jobs, competitiveness and market share. But they also contain a proactive element, stressing new opportunities and the first mover advantage from a strategic shift to ecological modernisation as an economic driver. This tension will continue in the coming decades as environmental policy objectives will only be met by achieving a transformation in the European economy.

In the coming decades, environmental policy objectives will only be met by achieving a transformation in the European economy

The seeds for moving forward in the EU have been planted but are currently being held back by a number of factors including the following:

- *Fragility of markets*: Within the EU and globally, many eco-industries are still scaling up capacities and striving to achieve cost-competitiveness in markets often shaped by policy demand. At the same time, EU and national policies to boost energy and resource conservation are subject to ad-hoc changes. In many circumstances investors lack a long-term perspective ¹².
- *Barriers to finance*: Many banks have constrained lending in the wake of the financial crisis. At the same time, likely changes to the low-interest rates of the recent past may mark an end to the era of “cheap” capital ¹³. Securing sufficient levels of finance and appropriate institutional structures now is however critical since postponing action is likely to increase the costs of adjusting to a carbon-constrained world.
- *Infrastructure path-dependencies*: Large scale economic transformations need to be rolled out on the back of infrastructure systems that are often slow to change. Clear and predictable market signals are needed over periods of time.
- *Barriers to innovation*: High risks, lack of funds, information gaps and uncertain market demand often lead to incremental rather than ambitious innovation. In certain cases public subsidies lead to lock-in and hold back innovation as more environmentally-friendly technologies and practices are unable to compete on an equal basis with the subsidised sector. Reducing uncertainty about longer-term policy direction is important to build confidence among industry and investors.

While this panorama may look overwhelming at first sight, the EU has risen to face numerous challenges before and has some strong policy foundations to build on. The gravity of current challenges ahead and their greater economic and social significance requires vision, leadership and more advanced governance approaches. However as the next chapter will show, the EU has substantial experience to draw on.



2. Building on past experience

Over the past 40 years, the EU has established a systematic and increasingly comprehensive body of law and policy relating to the environment. In many places, EU environmental policy has developed against the odds. It has successfully addressed issues that were characterised by complexity, uncertainty and considerable costs when first discussed. This includes, for example Integrated Pollution Prevention and Control, the Urban Waste Water Treatment, protection of water bodies, actions to curb landfilling, habitat protection (Natura 2000 network) or addressing chemical safety.

Whilst far from perfect, environmental policy is one of the success stories of the EU. The benefits of coordinated EU action stand out clearly and visibly, both in terms of improvements in environmental standards in Member States and in driving forward the international agenda. The EU has been flexible to changing circumstances, adapting its approach to suit the situation at hand.

This chapter briefly maps out how EU environmental policy has developed, setting out its broadening focus, the engagement of a wider group of actors, and the evolving approach to governance. Chapter 3 then takes up the theme of governance and key principles which need to be strengthened in future policies.

Expanding policy focus

The EU's approach to environmental policy has shifted considerably over the years. The 'first generation' of environmental policy focusing on the state of the environment, direct impacts and pressures, is being complemented

by a ‘second generation’ of policies more concerned with managing natural resource inputs, production and consumption and efforts to “green” different sectors of the economy. The principle of integrating environmental objectives in relevant sectoral policies underpins this development. In the 1990s, the international dimension began to attract increasing attention as well.

These changes have been reflected in successive Environment Action Programmes (EAPs) adopted over the years (see Figure 1). Environmental objectives have been enshrined in the EU Treaties. Environmental concerns have also been reflected in high-level strategic documents such as the EU Sustainable Development Strategy, in the EU’s medium-term growth strategy – the ‘Europe 2020 Strategy’, and in proposals for the future budget – the 2014-2020 EU Multi-annual Financial Framework (MFF).

In certain areas, EU policies have laid down global benchmarks (e.g. in the area of climate change). EU legislation has also been a key reason for advancing domestic environmental policies and acted as a guarantee for sticking to environmental standards which are, on the whole, higher than they would be if purely national measures were relied on.

There has been a strong momentum behind the environmental agenda which over the years has extended its coverage to most of the critical topics, with the major exception of soil. However, with the adoption of an expanding *acquis* and widening disparities in economic and technical capacity within Europe, the gap between the development of the regulatory framework and the record of implementation on the ground has gradually widened.

Engaging actors

The principal actors involved in the development of EU environmental policy have changed considerably over the years. Policy formulation and implementation is now shared between different Commission DGs, Council formations and Parliamentary Committees. These are now separate Commission DGs for environment and climate. New agencies have been set up, such as the European Environment Agency (EEA) and the

European Chemicals Agency (ECHA), and a growing number of non-state actors such as non-governmental organisations (NGOs), business, trade-unions, think tanks and researchers support the policy-making process. The expanding membership of the EU has also led to an increase in the number and diversity of actors participating in these processes.

These new actor constellations reflect the changing nature of contemporary environmental challenges which increasingly require a broader, integrated approach that goes beyond the remit of environmental policy alone to involve other sectors and actors.

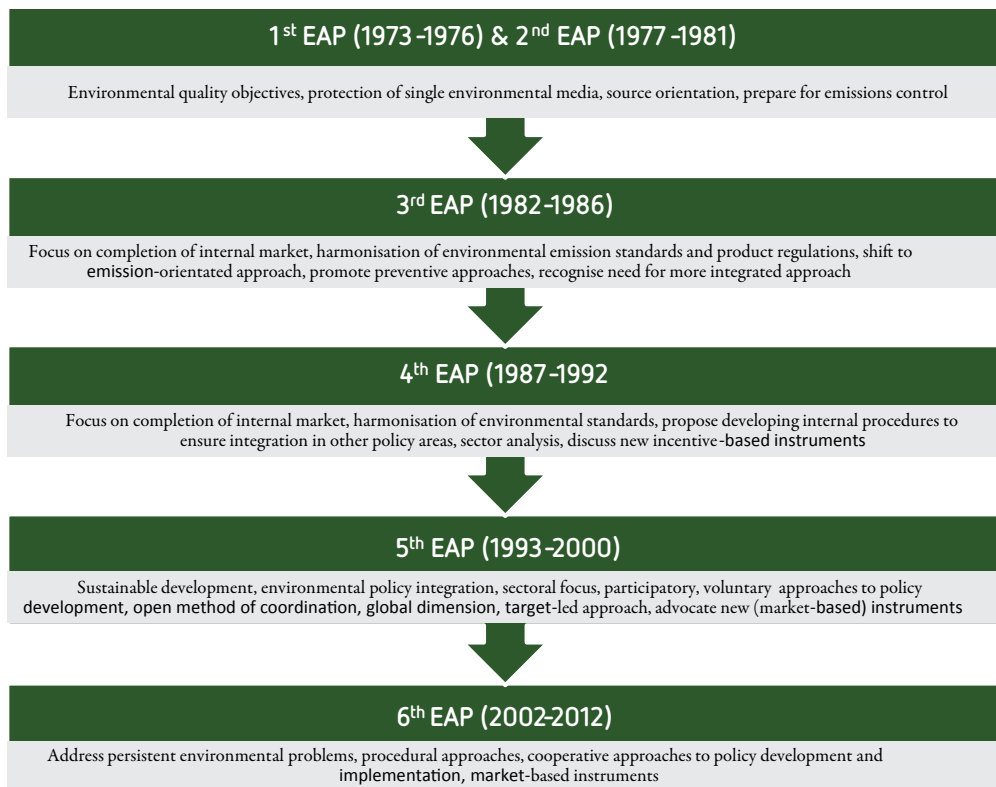
Despite fears that the 2004 eastward enlargement of the EU would slow this momentum down, with some exceptions particularly within the Council, this has not been the case. Wide-ranging advances have been made in recent years, including the adoption of important measures such as the 2009

Climate and Energy Package. Support for the environmental agenda only faltered more recently against the backdrop of the severe economic and financial crisis. This

Environmental actors have formed strong networks and 'green' coalitions which together with political will and 'windows of opportunity' have been important factors driving forward the advance of EU environmental policy.

has led to resurgent concerns about the competitiveness impacts of major new policy initiatives and reduced the appetite for action among several actors including the Commission, many Member States and certain groups in the European Parliament.

Figure 1: Changing orientations of EU environmental policy



Source: IEEP compilation

An evolving governance approach

The initial period of EU environmental action (1970-1980) was characterised by a focus on intervention through direct command-and-control legislation, mostly responding to acute threats to the environment and health (eg the Large Combustion Plan Directive and concerns of acid rain and forest loss). Reaction to high profile events and disasters was sometimes the trigger for new measures (eg the Seveso Directive was introduced in response to an accident in 1976 at a chemical plant in Seveso, Italy). The dominant technocratic and science-driven approach to decision-making went some way to depoliticising environmental policy and helped facilitate the approval of measures¹⁴.

From the mid-1990s, the rhetoric changed and the EU's approach gradually evolved to also embrace economic, information, cooperative or self-regulatory approaches. Economic measures, such as taxes and charges or trading schemes, have been used intermittently in some strategic areas, such as encouraging cost recovery via water charging and the EU Emission Trading System (ETS). Other approaches include voluntary agreements between industry and public authorities or among private actors themselves¹⁵ and the Open Method of Coordination (OMC) which seeks to share experience between governments and encourage the spread of best practice¹⁶. Recent years have also seen increasing recourse to framework legislation (eg the Water and Waste Framework Directives) and use of the comitology procedure (eg eco-design requirements for energy-using products) which have led to a decentralisation of responsibilities and the involvement of a wider range of actors.

Whether these changes in governance represent “better regulation” or are rather indicators of declining support for binding measures is the subject of intense debate. Regulation remains a dominant governance model. The EU does not make full and effective use of the wider palette of instruments it has at hand. Market-based and planning instruments, for example, remain weak or underutilised in many areas of the Acquis¹⁷.

There are indications that self-regulation or voluntary agreements often do not live up to expectations and require the “shadow of hierarchy” to work. Nonetheless, new approaches to governance are helpful in areas where there is a need to address a certain problem in a coordinated way but the EU has only limited competence. New governance approaches are also helpful in areas where there is a need for substantial technical and scientific expertise and input from targeted sectors and wider stakeholders. In some cases, they can be interim solutions to subsequent stronger policy responses as political capital increases with a growing evidence base (see Box 2)¹⁹.

Box 2: From a voluntary to a regulatory approach: Mitigating CO₂ emissions from cars ²⁰



Facing the threat of legislation from the European Commission, in 1998/1999 automotive manufacturers signed 'self-commitments', or voluntary agreements, to limit average specific emissions from newly registered passenger cars to 140g CO₂/km. The target was to be met by 2008 for ACEA members (European Automobile Manufacturers Association) and by 2009 for JAMA members (Japan Automobile Manufacturers Association) and KAMA members (Korea Automobile Manufacturers Association).

It became increasingly evident that manufacturers would have difficulty honouring their voluntary agreements. A series of studies were conducted by the Commission, NGOs and Member States which culminated in a proposal for a Regulation to reduce CO₂ emissions from new passenger cars in December 2007. After months of intense lobbying and negotiations, the Regulation was agreed in 2009. It sets an average CO₂ emission limit for new cars of 130g CO₂/km (120g CO₂/km if additional CO₂ saving measures are factored in) which is to be gradually phased in by 2015. Although a number of compromises were added in the final text, a medium-term target of 95g CO₂/km for 2020 was also introduced and a process to review modalities for reaching the target agreed.

The Regulation represents an important step forward and there has been a trend of much faster emission reductions since adoption of these mandatory targets. Carmakers in Europe are expected to reach the 130 g/km CO₂ target for 2015 several years in advance. Nonetheless the Regulation is just one of a range of instruments needed to fully address CO₂ emissions from passenger cars in the context of the 2050 decarbonisation challenge.

Learning from past experience

Overall progress has been most marked in areas where it has been possible to agree on specific outcomes and work towards them through binding legislation. A clear example is water policy where a succession of measures on key issues, such as drinking water, led to a more comprehensive catchment-based approach in the Water Framework Directive which is now the cornerstone of EU water policy. This sets ambitious, binding targets for water quality over an extended timescale to 2027. The recent “fitness check” of water policy showed consistent support for the current suite of regulation by a number of government, NGO and industrial interests²¹.

There are many other areas where a progressive regulatory model has proved successful. Air pollution has been reduced step-by-step through a series of measures, some specific, others covering a wide section of industrial emissions. The Regulation setting CO₂ emissions standards from new cars is an example of the former. The Industrial Emissions Directive, the most recent broad spectrum measure, takes forward the provisions in the 1996 IPPC Directive and gives regulators the potential to address resource efficiency questions as well as direct emissions from regulated plants, thus forming a platform for developing performance criteria.

The regulatory model has been less successful where there has been a lower level of political commitment, where addressees of the policy are numerous and dispersed and where a lack of resources on the ground has inhibited action. Examples of this include the Nitrates Directive and a number of waste directives. In these conditions, policy needs to be re-examined, the sources of failure identified and solutions implemented. The planned “fitness check” of EU waste policy in 2014 is such a response.

In certain areas, the EU’s regulatory framework has been linked to its financing programmes, for example through cross compliance provisions under the CAP. Less formal relationships have also been important. For example, implementation of the Urban Waste Water Treatment Directive

in several regions has been supported by funding under EU Cohesion Policy. This funding has helped support implementation of important pieces of EU environmental legislation.

The expansion of the EU's regulatory framework has however come at the expense of systematic implementation. Ineffective application and enforcement of law remains the Achilles heel of EU environmental policy. In 2010, environment stood out again as one of the three most infringement-intensive areas of EU policy (the other two being internal market and taxation), with more than one fifth of all active cases (444) associated with environmental legislation ²².

The way ahead

Rather deeper challenges await the EU in the years ahead as environmental policy will have to combine its traditional role with that of guarding progress towards a low-carbon, resource-efficient and climate-resilient economy (ie a green economy). This discourse has a strong resonance in Europe as part of a progressive agenda. It faces stronger resistance in international discussions, but its value as a concept to inform EU development strategies remains.

At the very minimum a green economy is more carbon efficient. In some reports this is the primary focus. A more satisfactory version is much more ambitious than this. It embraces the wider agenda of reducing the burden we place on the planet's natural resources, involving both increases in resource efficiency and reductions in absolute consumption per capita of many materials. Even with more radical innovation, there remains a need for complementary measures that are not always compatible with the market logic or able to generate win-wins, but are of overall public concern, such as maintaining and restoring the integrity (or resilience) of ecosystems and their services.

In the years ahead, environmental policy will have to combine its traditional role with that of guarding progress towards a green economy.

The EU needs to build on its agenda, moving towards policy formulation and action to achieve the transition to a green economy within environmental limits. This will require more advanced governance approaches, a new language, different policy tactics and coalitions. This is admittedly a more difficult challenge than the EU has faced in the past. However, the last four decades have provided a solid foundation on which to build. Good governance principles to guide the next generation of EU policies are explored in Chapter 3.



3. Governance principles to guide future action

While there is no blueprint for addressing the challenges described in preceding chapters of this report, the design and balance of European policies to manage the transitions ahead should be informed by a number of principles of good governance. These reflect the nature of the new agenda and draw on past EU experience. Some proposed principles are shown in Figure 2 and elaborated briefly in this chapter. These draw on the principles set out in the Commission's 2001 White Paper on Governance²³ and are mutually supportive.

Long-term orientation and predictability

Long-term target-setting and well-designed policies help reinforce inter-linked cycles between market and technology developments and create a sense of predictability. In order to trigger serious action by relevant actors, these need to be supported by clear short- to medium term-targets which are sufficiently adaptable to take into account advances in knowledge. It is critical to strike the right level of ambition when framing this long-term orientation²⁴. Overly ambitious targets which exceed institutional and administrative capacities run the risk of not being respected or abandoned following changes in government, whereas weak targets provide little incentive for innovation and policy change.

Figure 2: Good governance principles



Source: IEEP compilation

Using a balanced mix of measures

It is a mistake to look at the choice of policy instrument in isolation. Market-based instruments are often compared to regulatory instruments, which are then compared to voluntary instruments. However in reality policy instruments interact and there is often a need for a balanced mix of different instruments including regulatory, market-based, planning, information/participatory, voluntary and cooperative approaches. Instruments in place need to be sufficient to address the challenge at hand.

Ensuring policy coherence and integration

Direct and indirect inter-linkages and trade-offs within individual policies, between different policies, and across levels of governance need to be assessed in the early stage of design and throughout implementation of a policy. There is a need to take into account linkages between different areas of environment policy and to ensure that environmental concerns are adequately reflected in objectives and measures in other relevant policy areas. Full policy coherence is difficult to achieve but rationales should be clear and major conflicts avoided.

Support through robust financing

Maximising the impact of scarce financial resources in times of austerity is imperative. Public expenditure both through EU and Member State budgets should achieve added value and multiplier effects. Ear-marking of funding to environmental priorities and wider environment proofing overall expenditure are important principles²⁵. Ensuring a stronger focus on result orientation and performance of spending is also critical to improve public accountability and legitimacy.

At the same time, the continued presence of environmentally harmful subsidies (EHS) constrains the transition towards a low-carbon, resource efficient economy and often represents inefficient, distortive spending. Removing or phasing out such subsidies can help correct market signals

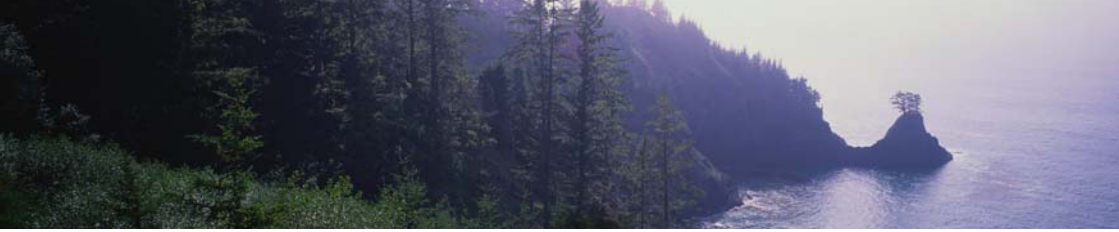
and yield long term socio-economic and environmental benefits. In parallel environmental tax reform (ETR), which shifts the burden of taxation from labour to environmentally damaging activities, if properly applied can lead to an improvement in the environment (by properly pricing externalities) and the economy (if used to invest in low-carbon growth areas or decrease taxes on labour at a national level).

Improving implementation

The track record on implementation is affected by the quality of legislation as well as administrative capacities and institutional cultures in Member States. Legislative provisions should not be too vague or ambiguously formulated as this may lead to lengthy judicial clarification processes and to inadequate/incoherent policy transposition. Timetables for implementation need to be realistic, particularly when broader responsibilities are delegated to subsequent levels of policy-making. Cooperation and pilot testing with Member States authorities and target groups, including inspectorates and non-compliance enforcement agencies²⁶ during early stages, can help improve implementation. Requirements for monitoring implementation efforts should be clear and effectively linked to established systems of inspection and enforcement, environmental complaint handling and access to environmental justice.

Strengthening information, monitoring and accounting

Criteria for data quality, data analysis and data comparability should be clear. Information should be streamlined and effectively shared to support well-informed policy-making and raise public awareness. Reporting cycles should be harmonised to the extent possible, balanced in terms of detail needed and resources required, and responsibilities made explicit. Other accounting systems should be supplemented by natural capital accounting systems and environmental-economic accounts to provide a balanced assessment of costs and benefits of policy action.



4. Thematic priorities

Much more decisive action is needed in the years to come if we are to avoid lock-in of high carbon, resource intensive development and preserve the integrity of Europe's natural environment. A robust mix of policy initiatives and instruments will be required to provide long-term orientation and restore market confidence. These should be informed and guided by the good governance principles outlined in Chapter 3. In the process, deeper linkages need to be made between environment policy and a wider range of economic sectors than has been the case in the past. Trade policy is a clear example.

A long-term policy agenda is clearly evolving in the EU as seen in the adoption of various roadmaps, strategies, and action plans –in recent years. The forthcoming 7th Environment Action Programme (7th EAP) will add to a sizeable collection of other forward-looking strategies and roadmaps of relevance to future EU environmental policy. These are laudable efforts and present a useful way of preparing the ground for the future and establishing support among different actors. They are, however only the start, and conditions for creating greater momentum behind them are not yet in place or are only slowly emerging.

Given the breadth of the environmental agenda and the economic constraints on most European governments at the present time, it is essential to prioritise issues which build towards longer term goals as well as addressing more immediately urgent issues. This requires a balance between the strategic focus and the pragmatic, thereby sustaining progress in relatively adverse circumstances. In this section we consider how this approach might be applied in some key sectors of importance both to the environment and the building of the green economy.

4.1 Decarbonising Europe's economy

Tackling climate change remains the single most critical issue on the medium-term agenda. Progress depends on action by the EU, both domestically and globally. While some Member States have set ambitious targets this is not sufficient to create wider momentum. Several studies commissioned by the European Commission, business and industry and NGOs have analysed pathways towards a low-carbon economy in Europe. They come to unsurprisingly similar conclusions²⁷. Priorities are reasonably clear:

- The first is to significantly **speed up improvements in energy end-use efficiency**. This is even more important if the additional demand from electrifying major segments of the transport sector in the coming decade is to be accommodated.
- A second priority is keeping or regaining the momentum of **dynamic growth in renewable energy sources**, while limiting the construction of CO₂ intensive power plants. A renewable energy system is also a key precondition for a sustainable transport system in Europe, based more on electric vehicles.
- A third is **increasing the flexibility in Europe's power grids** to cope with the higher shares of more dispersed renewable supplies that will be needed.

These priorities will not be achieved without additional policy intervention. Markets alone will not trigger changes of this kind. For example, even under current economic conditions, passenger transport demand is growing. In spite of methodological difficulties, it is safe to state that the EU's global carbon consumption is much higher than its own carbon production.

Medium-term target setting is essential

The EU, particularly the European Commission has begun to address the implications of an effective mitigation strategy in three Roadmaps to 2030 and beyond:

- The Roadmap to a Competitive Low-carbon Economy considers overall cuts in GHG emissions of 40 per cent in 2030 and 60 per cent in 2040 (compared to 1990) as a feasible, cost-effective pathway to 2050.
- The Energy Roadmap to 2050 estimates that considerable emission reductions (57-65 per cent) are needed in the power sector by 2030 (compared to 1990).
- The Transport White Paper considers emission reductions of around 20 per cent in 2030 compared to 2008 as feasible (including international aviation, but excluding shipping), as well as a reduction of 50 per cent of the use of conventionally fuelled cars in urban transport.

Building consensus around these Roadmaps continues to be important if they are to become more operational and inspire investor confidence, particularly if global climate negotiations continue to prove difficult. At the same time more specific proposals and targets need to be articulated and political reservations addressed as far as possible. A critical mass of actors needs to be convinced of the direction of the change. Consequently, the Commission's plan to adopt a proposal in 2013 for a climate and energy framework for the period to 2030 is welcome ²⁸. Delaying action will increase future costs of decarbonisation.

The debate on the appropriate policy framework post-2020 is likely to focus on two issues: how to reform the EU Emission Trading System (ETS) to ensure a carbon price that is sufficiently high enough to drive low-carbon investments and whether there should be a continuation of the three EU targets on GHG emission reductions, renewable energy, and energy efficiency.

The European Commission initiated necessary reforms to the EU ETS by proposing to backload 900 million emission allowances in phase three to 2019-2020 to rectify an oversupply of emission allowances as result of

the economic crisis²⁹. Going one step further, the Commission published options for structural reforms of the European carbon market including the increase of the EU GHG emission target from 20 to 30 per cent in 2020 and the inclusion of other sectors in the ETS³⁰. If reforms now under discussion are not implemented until 2017, as seems likely, they will need to be sufficiently ambitious to compensate for the delay. The Commission will also need to make a calm appraisal of the chances of an international agreement on the treatment of air travel before deciding whether to continue the unexpected suspension of the ETS in this sector.

In addition to setting appropriate targets for GHG emission reductions is the task of establishing targets for renewable energy in 2030, which is now in train but becoming increasingly urgent. The targets of the Renewable Energy Directive have been a powerful driver of investment throughout Europe and if they have no successor beyond 2020, impetus is very likely to be lost in the sector and confidence eroded. Analysis for the European Commission shows that binding targets beyond 2020 are likely to lead to positive economic impacts (in terms of overall investments and growth) and improved energy security (in terms of reduced expenditure on imported fuel) as well as helping the EU maintain its research and industrial leadership in the sector³¹. A demanding 2030 target for renewables is technically and economically feasible, some in the renewable energy sector suggest a target of at least 45 per cent of the EU energy mix³².

Beyond this however lies perhaps the most critical policy challenge for the next two decades which is to achieve a step change in energy efficiency. This is essential for a number of reasons. First, it is the most durable and cost effective means of reducing emissions and so contributing to the climate change mitigation effort. Second it is becoming more important as a means of containing domestic and industrial energy costs in the face of persistently high oil prices and relatively costly investment in new supply capacity. And finally, energy efficiency reduces the need for new investment in energy supply and grid infrastructure and reduces the negative environmental externalities that accompany them. There remains huge untapped potential in this regard (See Box 3).

Box 3: The untapped potential of energy efficiency ³³

The economic potential of energy efficiency measures remains largely untapped in the EU. Energy efficiency measures have multiple benefits including environmental and financial benefits in the long-term as well as increased comfort and living standard for consumers.

The Commission estimated that the Energy Efficiency Directive as initially proposed might have resulted in a reduction of energy consumption of 368 Mtoe by 2020, leading to an increased EU GDP of €34 billion, increased net employment of 400,000, and an overall average reduction in energy spending of about €20 billion as result of reduced fuel expenditure.

Whilst the new Energy Efficiency Directive is a welcome step forward, it is only the first phase of what is required. Energy use needs to fall below the 17 per cent savings projected by 2020. As the IEA has argued recently it requires public policy to pursue energy efficiency and the cost effective potential needs to be identified individually for each sector and sub-sector of the economy ³⁴.

There is a growing consensus that binding targets for energy efficiency at European level are required, particularly to improve performance in the built environment for example. Binding targets for greater energy efficiency are novel and more difficult to achieve than for supply side investments, with so many actors involved and questions about allocating responsibilities in a reasonable and effective way. However, other approaches have failed and the time for more ambitious binding measures has arrived.

Several steps can be taken in support of this strategy. One is to ensure that the new Energy Efficiency Directive is effectively implemented and outcomes monitored. The Commission should propose additional binding measures and/or targets if necessary to meet the 20 per cent level based on

the assessment of Member States' National Energy Efficiency Action Plans. Some of the funding required for investment in new plants and buildings should be made available through various EU funds relating to infrastructure, housing, industry, agriculture, etc. The proposal to earmark 20 per cent of funds for climate related expenditure in 2014–2020 ³⁵ is helpful and efforts to water it down during negotiations should be resisted.

At a more technical level, action at EU level is also needed to remove barriers that prevent Member States from overcoming a patchy policy framework for energy efficiency. For instance, the EU VAT Directive currently prevents Member States from applying a reduced VAT rate to products that contribute to energy efficiency. The current EU review of existing legislation on reduced VAT rates may provide an opportunity to revise this.

Achieving a step change in energy efficiency is a critical policy challenge for the next two decades.

There is already an established framework for setting energy efficiency standards for specific products in the shape of the Eco-design Directive. There remains considerable scope for deploying this to a wider range of products and integrating resource efficiency objectives alongside improvements in energy efficiency, accepting that there may be trade-offs to be addressed.

Additional priorities

Alongside the development of strategies for 2030, and the adoption of targets for renewables and energy efficiency, there are several other priorities for climate policy. Without attempting to summarise all of these, it is worth highlighting a few in particular :

- Biofuels policy needs to be adjusted in the light of new understanding about their actual contribution to emissions savings and their wider social and environmental impact. The Commission's proposal for a cap on food-based sources of biofuel is to be welcomed, but more action is required to address the indirect land use change implications of first generation biofuels.

- A dedicated EU measure concerned with bioenergy is worth exploring as it raises particularly complex questions. The merits of using biomaterials for energy supply depend on their alternative uses, technologies concerned and costs involved. Unlike most other energy supply sectors, there is a strong social and environmental interest in directing raw materials such as wood to the most appropriate application rather than relying on the market. In some cases it is preferable to utilise feedstocks in more durable products, at least initially, both from the perspective of minimising GHG emissions and meeting other resource management goals. An inventory of bio-resources in Europe would help inform a new policy framework linking renewable energy strategies to waste policy, the wider bio-economy and biodiversity priorities.
- The scale of investment needed in energy supply and infrastructure is so great that there is a danger that a current lack of finance will slow down the rate of project development and consequently extend Europe's carbon footprint. A range of new financing instruments is being explored both by the private sector and by public authorities, including climate bonds. A European dimension to this effort is required, building on ideas being explored by the Commission, the European Investment Bank and others. This will be particularly important to support larger scale projects in countries where credit is in most limited supply (see Chapter 5).

Given the sheer scale of investment needed and limited (public) financing available, new financing instruments should be explored

New approaches to infrastructure

An extensive investment in new grid connections is needed to build an infrastructure capable of dealing with variable and decentralised energy generation technologies. This will have transnational consequences and a measure of EU strategic policy direction is required to trigger and steer critical grid infrastructure investments over the next two decades.

Renewing energy infrastructures will require scaling up R&D efforts for storage technologies and widespread deployment of smart transmission and distribution grids, which can build on initiatives under Horizon 2020. At the same time links between technology deployment, regulation and planning in the EU internal market will need to be further explored. For example, permitting procedures may need to be speeded up to ensure grid development keeps pace with renewable deployment. Potential implications for the natural environment need to be kept in mind, as extension of grid infrastructure, if not planned well, can have a detrimental impact on the environment.

There are also important natural capital solutions to support climate mitigation and adaptation. There are significant levels of carbon stores in Europe's soils and the use of appropriate agricultural practices can make an important difference in storage, sequestration or release. Cultivation may for example need to be restricted on some land with high organic carbon. Similarly, carbon stored and sequestered in nature ("green carbon") in the Natura 2000 network, in forests, wetlands and the sea ("blue carbon") are critical components of the carbon cycle - the Natura 2000 network is estimated to store around 9.6 billion tonnes of carbon, equivalent to 35 billion tonnes of CO₂ ³⁶. Peatlands are particularly important and there is potential to increase carbon sequestration, for example through the restoration of wetlands. This underlines synergies between climate and biodiversity policies and related sectoral initiatives such as forest policies, soil management plans and rural development programmes.

4.2 Better use of natural resources

A second domain where Europe's pathways to 2030 need to be identified, debated and activated can be summoned up under the heading of "natural resources". This covers water, land and a wide range of raw materials other than those used in the energy sector. Without the imperatives defined through the work of the IPCC and political negotiations on climate change, there is no parallel target to reduce resource depletion on a particular scale or by a specific date. A low-carbon focus needs to be complemented by sufficient regard for the sustainable use of overall resources. The danger of diverting

too many biomaterials such as wood into the energy market referred to above is one such example. Equally there is a connection between energy and water use, for example with fracking techniques for extracting shale gas being heavily dependent on the exploitation of large scale water supplies.

As the Commission noted in its Roadmap on Resource Efficiency ³⁷, there is a need to take action in several different fields to reduce the EU's unsustainably large share of the world's natural resources and to mitigate the

A low-carbon focus needs to be complemented by sufficient regard for the sustainable use of overall resources

environmental impact of extracting raw materials. Although policy is developing more slowly in this sphere, the need for European leadership appears as strong as it does in the case of climate. Individual Member States are active in developing their own initiatives, however these can only advance to a certain level without encountering serious concerns about competitiveness and cross-border issues. The EU can take the lead in identifying issues, developing strategies and investing in appropriate research so that practical approaches for the whole of Europe can be devised and ultimately agreed.

Medium-term strategies

The Resource Efficiency Roadmap covers the period to 2020 with concrete milestones for action, but in many respects these remain quite tentative. The Roadmap lays the ground for the selection of targets and indicators to measure progress by 2013. It opens an agenda on several different resources where action could be taken, in most cases, to improve efficiency of their use, decrease absolute levels of consumption, or both. The question of how far the EU should have an active policy on land use, now primarily the responsibility of Member States, is raised in the Roadmap and this is one of many issues which need to be explored further.

The importance of increasing the efficiency of the ways in which we use water is also underlined in the Roadmap. This is an area where there is no separate EU strategy but a major review exercise has been undertaken,

leading to the publication of a “Blueprint” on the future of EU water use by the Commission in November 2012³⁸. Effectively this proposes a series of actions to take forward current policy on water but does not propose a major European initiative on water conservation and increased efficiency. Political sensitivities about obligations on Member States to take action seem to have been an important constraint in this case.

Building on this foundation, there are at least four priorities for strategic development in this area of EU policy between now and 2030:

- **Operationalising the Roadmap on Resource Efficiency** to include more specific targets, provide certainty behind proposed actions and a longer timescale. The Roadmap has not had the attention it deserves as a path-finding document or the level of intense discussion with Member States and other actors that would be appropriate for a major initiative of this kind. The establishment of the High-Level Resource Efficiency Platform marks a major achievement and could be the start of the process of building a larger critical mass of stakeholders. Determining priorities for channelling assistance for resource efficiency relevant activities under the different EU funds would also help to create impetus.
- Critical to the creation of a green economy is the creation of a new chain of activities which find uses for materials that are currently wasted or under-utilised. A natural extension of existing EU policies on waste and on sustainable consumption and production to establish routes to a **circular economy in Europe** would be a more strategic exercise worth taking. The circular economy could give rise to new businesses and sources of employment on a large scale as well as reduce the use of natural resources (See Box 4).
- The issue of **improved water management**, including appropriate water pricing, promotion of water efficiency measures in all sectors and removal of incentives for inefficient water use, needs to be the focus of a medium term European strategy to follow in the footsteps of the Blueprint, with appropriate linkages to energy and agriculture policy.

- Strategic and longer term thinking on **land use** needs to be developed within the EU. At present a number of EU policies have a direct impact on land use both within Europe and globally, e.g. policies on agriculture and bioenergy. Yet these are not informed by a larger picture of how far it is possible or desirable to meet long-term requirements for food, fibre, energy, biodiversity and many other ecosystem services from the limited land resource within Europe and a sustainable share of the planet's overall stock of land. Given the active debate on the scale at which biofuels might displace petroleum in vehicles and aircraft it is no longer viable to treat land use as a secondary concern; it is clearly central to a coherent energy and agriculture policy. There is also a case for more active intervention in the protection of Europe's soils and land with long-term food production potential. The urban dimension is getting more important. Local decision makers will continue to play a central role but a European framework could be valuable.

Box 4: Benefits of an EU circular economy³⁹

A circular economy is an approach which offers a potential avenue to resilient growth, a systemic answer to reducing dependency on resource markets, and limiting exposure to associated resource price shocks as well as societal and environmental 'external' costs that are not picked up by the private sector. This approach would shift the economic balance away from energy-intensive materials and primary extraction over time and create a new sector dedicated to reverse cycle activities for reuse, refurbishing, remanufacturing and recycling.

The circular economy approach should bring multiple benefits. Net material savings are estimated to be between USD 340 - 380 billion p.a. at EU level for a 'transition scenario' and between USD 520 - 630 billion p.a. for an 'advanced scenario'. These numbers are indicative as they only cover 'sweet spot' sectors which relate to complex products that contain multiple parts so are suitable for disassembly or refurbishment. They include machinery and equipment, radio, television, communication equipment, motor vehicles, furniture, and other manufactured goods. In addition to these savings, other benefits include the mitigation of price volatility and supply risks, sectoral shift and possible employment benefits, reduced externalities and lasting benefits for a more resilient economy.

Developing the resource efficiency agenda

Over the next three years, work is needed to elaborate issues in the Roadmap, identifying priorities for future action and pursuing them in more depth. As part of this exercise, issues of scale, cost and political targets need to be addressed. A framework for addressing specific issues, such as inefficient water use, food waste, rare earth metals, and inefficient use of phosphorus, will need to be developed. Different approaches will be required in different sectors. The analysis of policy options should be underpinned by continuing research, not least in relation to behaviour change.

Priority resources have already been identified and include agricultural goods and biotic materials, fossil fuels, materials, metals, and construction materials⁴⁰, as well as other resources such as water, soils and land. Such an evaluation should be delivered by 2017 and mechanisms to reduce resource use or global environmental impacts such as sustainability criteria, bilateral agreements or product norms identified. This could be developed as part of an EU resources programme which systematically analyses and develops policy action on the use of priority natural resources and related environmental impacts along the lifecycle and across sectors. This would complement the focus on some metals and minerals in the existing Raw Materials Initiative (RMI) and could eventually replace the RMI.

An EU resources programme could help to address resources with significant environmental impacts.

Targets and indicators

A debate is currently underway about potential indicators to measure Europe's overall use of natural resources. One question concerns the selection of a lead indicator to provide a headline story of trends in Europe's use of resources at a general level. One option is to use total domestic material consumption in tonnes per unit of GDP (DMC) which tries to capture overall consumption within a nation's boundaries. More satisfactory, however, would be an indicator which gave a better picture of the EU's impact on global resource use including imports. Here the

leading contender is total material requirement per unit of GDP measured in tonnes (TMR). Further research and data gathering to allow this to be measured and to develop long-term sectoral targets is a priority⁴¹.

One recent study for the Commission notes that within a period of 20 years, the EU could reduce natural resource use by 17 per cent to 25 per cent (compared to the baseline)⁴². Long-term targets will however not be easy to agree for several reasons including the differential impacts on individual Member States and the consequent issue of potential burden-sharing between countries. Most Member States have adopted relevant strategic objectives and targets of their own in key areas such as waste, energy, or air emissions including GHG emissions. Few, however, have adopted targets on material efficiency or productivity or land use other than forestry or aspects of agriculture.

Waste policy and the circular economy

The forthcoming fitness check of EU waste policy in 2014 should include discussion about longer-term goals, make the link to the vision of the circular economy and examine the potential role of extended producer responsibility. Targets need to be reviewed accordingly, the EU waste hierarchy strengthened and links made to demands of the emerging bio-economy and appropriate use of wastes for energy purposes. Extending product policy and producer responsibility should be informed by an assessment of all product-related policies which could be complete by 2017. A Framework Directive on ecologically sound products might help provide a useful structure for this unavoidably patchy field of policy making.

To develop a truly circular economy, strong links need to be built between waste policy and other policies such as eco-design, eco-innovation and broader resource use management. Stakeholders need to be engaged in a joined-up process which allows theoretical studies to be translated into practical action, with synergies and conflicts clearly identified. For example issues of food waste and packaging standards need to be considered together. Specific policy measures could include bans on sending certain products to landfill, increased use of MBIs such as taxes or levies, labelling, certification

Box 5: Unlocking the potential of waste ⁴³

Inadequate implementation of EU waste policy is recognised as a problematic issue; yet there are many economic benefits to be gained from better waste management, increased recycling and use of reprocessed materials. It has been estimated that full implementation of the EU waste acquis would lead to an increase in waste management and recycling turnover of €42 billion per year and the creation of 400,000 jobs. In principle if all the recyclable municipal, commercial and industrial waste were recycled, this would result in:

- 148 million tonnes CO₂ eq emissions reductions, equal to taking 47 million cars off the road per year; and
- Savings of €5.25 billion in materials costs.

and educational initiatives, a greater role for deposit/take-back systems and wider application of true cost pricing.

There could also be value in a thematic approach addressing key consumption areas such as food, housing and mobility. Policy packages could be developed to promote better coherence across a number of policies and to guide pathways for 2030 and beyond. For example, a sustainable buildings package could include a revised Energy Performance of Buildings Directive (EPBD) to extend standards to more priority resources (including water and certain materials), a revised Construction Products Regulation in line with targets set in the revised EPBD and a levy/tax on construction minerals to stimulate the development of a circular economy.

Putting land on the European map

Land often appears to be the invisible resource in the European policy panorama. Many EU policies affect land use and land management but most are driven by sectoral concerns such as the designation of Natura

2000 sites and Nitrate Vulnerable Zones or farm management conditions required through cross compliance. Future policy needs to be coherent in land use terms and informed by the need to manage sustainably a resource on which society places increasing demands.

One priority is to establish a consistent database to assess land use and land use change dynamics in Europe and to monitor changes over time. This would require Member States to participate in a monitoring and reporting regime covering essential data on land use and soil conditions including intensity of use which could feed into environmental, agricultural and energy policies. This needs to be coupled to more systematic engagement with land use beyond Europe, capturing the impact of EU policies and appropriate responses.

Mechanisms are also required to slow the loss of agricultural land and more natural habitats to built development uses in order to protect Europe's long-term capacity to produce food and conserve the environment. The majority of policies such as land use planning will be established at the national and more local levels. However, a European dimension could reinforce these efforts. For example by setting guidelines for the maximum level of urban land growth, supporting good practice in land use planning, creating appropriate networks and addressing pan-European issues such as strategic infrastructure.

The majority of policies such as land use planning will be established at the national and more local levels. However, a European dimension could reinforce these efforts

There are great political sensitivities in this sphere and the value of a more proactive European approach would need to be demonstrated. On the other hand, continuing to treat land use as a purely subsidiary issue is detracting from overall policy coherence and this weakness will become more severe as pressures on natural resources increase.

4.3 Protecting the natural environment

The EU has set the target to “halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, restore them insofar as feasible, while stepping up the EU contribution to averting global biodiversity loss”⁴⁴. The EU and Member States also signed up the global Strategic Plan for Biodiversity 2011-2020 agreed in Nagoya in 2010, which included twenty targets around five strategic goals. These EU and international targets are critically important for biodiversity (species, genes and ecosystems), and for the range of benefits it offers in areas of water and food security, climate mitigation and adaptation, health, knowledge, and development.

These targets are relatively ambitious, particularly when judged against the failure to meet an earlier rather similar EU target by 2010⁴⁵. Furthermore a range of important milestones for implementation are around the corner, for example mapping and assessing the state of ecosystems and their services by 2014 (Action 5), setting priorities for ecosystem restoration by 2014 (Action 6) and the development of a Green Infrastructure Strategy by 2012 (Action 6.2). There is progress in some Member States, but the lack of action and ambition in several other Member States and the scale of the task are cause for concern.

While there is a role for new measures including for example on Invasive Alien Species and the protection of soil, much of the effort required to deliver the objectives of the Biodiversity Strategy need to take the form of implementation at all levels. This needs to be supported by sufficient (financial) resources by both the public and private sectors and a robust evidence base. There is also a need for the more systematic pursuit of biodiversity objectives in a variety of policy interventions including land use planning, development of new energy systems and infrastructure, agriculture and fisheries, forestry and bioenergy.

Improving policy action through information and assessment

Conservation measures, such as the Birds and Habitats Directives, can make an important contribution to reverse the continuing loss of biodiversity in most parts of Europe, especially when fully implemented. This has not yet been achieved to the necessary level. While the Natura 2000 Network covering around 18 per cent of the EU territory is close to being fully established, a number of governments continue to battle with legal and financial challenges of establishing and managing the Network ⁴⁶. Moreover, the appropriateness of investments in conservation in times of financial austerity is increasingly being questioned in many countries.

Member States need robust arguments on the added value of implementing the full range of actions set out the Biodiversity Strategy. Investments can be justified more convincingly when links between habitats, ecosystems, services and the provision of related economic values can be demonstrated. Better information about the value and importance of ecosystems and their services can also help to integrate biodiversity considerations in related policies, for example planning and permitting, land use and management choices, and infrastructure investments. Such data and analysis is also needed for the development of new instruments such as Payments for Ecosystem Services (PES) schemes, support appropriate offsetting and help identify areas where conservation, wise use and restoration could be particularly important.

Member States need robust arguments on the value of implementing actions in the Biodiversity Strategy. They need to be able to argue an economic case.

The information currently available is however fragmented and in certain cases missing altogether. For example, many ecosystems and their associated species remain poorly monitored, while the relationship between biodiversity and ecosystem services is not well known. This undermines our ability to assess targets such as restoring 15 per cent of degraded ecosystems. Addressing remaining knowledge and data gaps and strengthening the European

ecosystem assessment and mapping exercise by 2014 as required under the Biodiversity Strategy is critical. How to organise this mapping and assessment is a key challenge and requires better utilisation of available information in other policy areas such as agriculture, forestry or fisheries. This will require EU guidance.

Natural capital accounts should be developed by all Member States and the process encouraged and supported by the EU. Some efforts being made in this context include the development of experimental Ecosystem Capital Accounts (ECA) by the EEA, an approach also being tested in some Member States. This has the potential to be an important tool in addressing the under-representation and under-valuing of nature in standard accounting systems. Despite some concerns about the limits of such an approach, if the EU wants to address the persistent decline of biodiversity, it needs to have a robust evidence base on the state and functions of natural capital and to be in a position to clearly and robustly argue its economic case.

Improving policy action through integration and financing

Several persistent pressures on the EU's natural environment are driven by other policies. Changes in agricultural and fishing practices and land use planning are required to manage and acquire nature reserves and connect them as well as to support approaches to maintain a healthy environment outside protected areas. Biodiversity and wider ecosystem impacts, including benefits, need to be integrated in impact assessments, decisions and policies on a bigger scale, including water policy (eg integrating ecosystem based water purification and provision), trade (eg addressing embedded biodiversity, water and carbon in imports), climate and energy policies (eg informing mitigation and adaptation strategies). These efforts need to be supported by sufficient funding and capacity building.

In this context, current reviews of EU spending under the CAP, CFP and Cohesion Policy could make a significant contribution over the next seven years. Despite some useful proposals, such as more extensive greening of CAP

Pillar 1 funding and a very modest extension of the LIFE budget for 2014-2020, other areas such as cohesion policy, seem likely to contribute less to biodiversity in the next MFF. Furthermore there is a high risk that funding of biodiversity measures under Pillar 2 of the CAP may decline and this is by far the most important source of funding for biodiversity in many countries. Defending these budget lines is essential to sustain biodiversity management at its present level as well as providing some of the additional resources required in many parts of Europe to reverse continuing pressures on habitats, species and ecosystems.

Equally, if not more important is the question of how to ensure that EU spending as a whole is in line with overall strategic objectives including biodiversity protection. For example plans for infrastructure projects often directly affect high-nature value areas protected under the Habitats Directive. A coherent biodiversity proofing methodology should be developed by 2014, as set out in the Biodiversity Strategy. This exercise should address the screening of damaging projects and budget lines in an effective and transparent way to weed out those that are damaging for biodiversity and establish procedures for better medium-term planning of Natura 2000 sites (see Box 6).

Box 6: Biodiversity proofing the EU budget ⁴⁷

Action 7a of the EU Biodiversity Strategy requires the development of a methodology for assessing the impact of EU funded projects, plans and programmes on biodiversity by 2014. 'Biodiversity proofing' is a structured process of ensuring the application of tools to maximise biodiversity benefits of spending and avoid or minimise harmful impacts. This exercise should be applied to all spending streams under the EU budget, across the whole budgetary cycle and at all levels of governance.

Numerous tools exist to enable biodiversity-proofing. These include: ex ante Regulatory Impact Assessments, spatial planning, Strategic Environmental Assessment (SEA), project level Environmental Impact Assessment (EIA), environmental selection criteria for projects, cost-benefit analysis that takes into account ecosystem services values, the setting of environmental targets and indicators, and mid-term and ex post policy evaluations.

In parallel, a systematic effort to identify and reform incentives harmful to biodiversity will help address pressures on biodiversity while at the same time reducing the need for funding as pressures decline and funds can be released for other objectives. Member States should develop and implement roadmaps for the reform of such harmful incentives (see Chapter 5) ⁴⁸.

Finally, increased attention is being given to PES schemes to finance the maintenance and restoration of ecosystem services and new means to achieve no net loss of biodiversity, such as offsetting and habitat banking. PES schemes are promoted by the Biodiversity Strategy and the Resource Efficiency Roadmap and are a field of emerging action with potential to play a much greater role in the future ⁴⁹. However while it will be possible to attract some additional resources from the private sector through such new tools, experience suggests that the role of public funding for public goods will remain important.



5. CROSS-CUTTING PRIORITIES

The EU's competencies and its arsenal of instruments have grown impressively since 1972. Nevertheless, 40 years down the line, EU environmental policy still confronts a number of cross-cutting challenges many of which are far from new. These include weak implementation of legislation, limited engagement of civil society, tentative use of market-based and planning instruments, and inadequate information and accounting systems to underpin policy. An earnest discussion about rules, competencies, capacities and costs is needed if these issues are to be addressed more effectively in the next decade. This Chapter examines some priorities for addressing these cross-cutting challenges.

5.1 Better implementation

Efforts to strengthen implementation of EU environmental legislation to date have rested too much on unsystematic, rather ad-hoc single measures. These efforts have been partially successful in some areas and less successful in other areas. The implementation gap, however, remains considerable despite previous efforts and is a source of internal market distortion and economic costs. It is thus welcome that better implementation has been signalled as a priority for the forthcoming 7th EAP.

Better implementation requires action at different stages of the policy cycle including better policy design, information, inspections, access to justice and other dispute settlement mechanisms, use of complaints, and prioritisation of infringement procedures. Partnerships are important as they create opportunities for policy learning and build trust between authorities. However, if the EU really wants to tackle the implementation gap, voluntary action alone will not suffice.

Better policy design and information

Improving the quality of EU environmental law should be the first point of action. Although the Commission's 'impact assessment procedure' (IA) has led to policy learning and improved the quality of final proposals in many cases, a number of challenges remain. IAs have not always detected policy inter-linkages and unwanted trade-offs, changes added during negotiation phases with the European Parliament and Council are often not systematically appraised, and the current emphasis on quantifying administrative burdens may affect cases where environmental and social benefits can only be expressed qualitatively. More harmonised approaches to the use and delivery of IAs are needed.

Introducing a final 'check' on the clarity and consistency of legislative texts adopted by Council and Parliament in terms of the language/terminology used compared to other areas of the acquis and a 'coherence check' of how the new law relates to other relevant measures would be useful innovations.

In many parts of the acquis, questions arise as to whether the regulatory framework in place is 'fit for purpose', particularly in older policy areas with multiple objectives and instruments. A more systematic use of comprehensive ex-post policy evaluations through 'fitness checks' would be valuable in such cases (see Box 7).

Better policy design could be improved significantly through a system of regular reporting and tracking of implementation efforts. Currently information is scattered and patchy. A Compliance Scorecard could be developed to compare the performance of Member States on environmental legislation.

Box 7: Is EU freshwater policy fit for purpose? ⁵⁰

The first 'Fitness Check' in the field of the environment concerned EU water policy. It directly fed into the 'Blueprint to safeguard EU waters' presented by the Commission in November. This exercise underlines the usefulness of looking in detail at what works and what does not work in a particular policy area.



The assessment found that the policy set out in the Water Framework Directive is robust and largely coherent with other European law. However, implementation remains challenging. The EU needs to step up action on policy integration, particularly with regard to using water in agriculture and buildings more efficiently. Member States have made only sluggish progress with introducing economic instruments such as water pricing, while the principle of cost-recovery remains controversial. Other issues such as climate change impacts on water are increasingly recognised and are a major future regulatory challenge.

Better inspections and enforcement

To date attempts to revise the EU approach to environmental inspections include complementing the non-binding minimum requirements laid down in Recommendation 2001/31/EC with specific binding provisions in individual directives such as SEVESO II (2012/18/EU). This approach allows for targeted revisions, but is bound to scheduled reviews of Directives where they exist. The alternative is to transform the Recommendation into a horizontal Directive, enabling binding criteria to be met by Member States across all areas of the acquis. This was supported by the European Parliament's Environment Committee, but turned down by the Commission and Council in 2001. The Commission is currently evaluating options on how to proceed. A legal push is needed, but the diversity of national contexts may favour a targeted approach.

A further step would be to couple minimum criteria with the establishment of an EU inspection force that also has the power to refer Member States to the European Court of Justice (ECJ). Different options are possible including expanding the mandate of the EEA, creating a new dedicated Executive Agency for inspections and enforcement (drawing on similar arrangements in other areas of EU action such as food safety), or strengthening capacities within the Commission. A new dedicated Executive Agency could be a promising option as assigning the task to either the EEA (an agency with a primary scientific background and mission) or the Commission (given its limited resources) does not seem optimal.

Structured partnerships between Member States and between Member States and the Commission remain a key tool. The future, could for example, include an expansion of mutual learning initiatives such as the IMPEL Review Initiative Scheme (see Box 8).

Better involvement of civil society

Access to environmental complaint-handling, mediation and access to justice form pillars of a basic strategy of enhancing the role of the public as a ‘watchdog’ for better implementation. However provisions remain poorly developed and conditions vary substantially between Member States.

The European Court of Justice (ECJ) strengthened the rights of environmental organisations in courts through two rulings (the ‘Trianel’ case ⁵² and the ‘Lesoochranarske Zoskupenie’ case ⁵³) which have relevance for all Member States. Rather than rely on a piecemeal approach to judicial enforcement and extension of citizens’ rights, it would be appropriate to renew the discussion on the Access to Justice Directive.

This can be complemented by alternative dispute resolution (ADR) solutions (eg mediation) which are less costly and confrontational options for aggrieved or interested parties but which nonetheless can contribute to local stakeholders’ dialogues.

Box 8: Learning through peer reviews ⁵¹

The IMPEL Review Initiative Scheme (IRI) was designed in 2000 to implement Recommendation 2001/331/EC on minimum criteria for environmental inspections (RMCEI). It is a voluntary scheme for reporting and offering advice on inspectorates and inspection procedures. It provides informal reviews of environmental authorities in IMPEL Member countries, identifying good practices and opportunities to develop existing practices within the host authority and authorities in other Member Countries. The IRI is based on a peer review process and is carried out by environmental inspectors and Member State environmental agencies. Since the IRI was established, approximately 24 IMPEL member countries have gone through an IRI review (2 reviews are underway in 2012).

Feedback on the IRI reviews has been positive. The process has led to changes in the organisational and operational systems in participating Member States. Communication and dissemination of findings remains a key area of improvement.

Better processes to enable and report complaints and petitions by citizens will improve the responsiveness of competent authorities to breaches of legitimate environmental law and enhance trust and cooperation. Current practice in the EU-27 is patchy and citizens enjoy different rights in various countries. Minimum criteria for environmental complaint-handling mechanisms in Member States need to be set up, either in the form of a Recommendation or a Framework Directive.

5.2 Better financing, use of environmental taxes and reform of harmful subsidies

The question of finance is critical for the transition to a green economy. The principal challenges are both to improve expenditure of EU funds and to assist the deployment of private investment to projects of key public importance. Notable steps forward have been proposed to integrate environmental, primarily climate change, in the next EU multiannual financial framework (MFF) ⁵⁴. However further action is merited. For example, despite some useful proposals, such as more extensive greening of CAP Pillar 1 funding and a modest extension of the LIFE budget for 2014-2020, other funds, such as Cohesion Policy, seem likely to contribute less to biodiversity in the next MFF. Furthermore there is a considerable risk that funding of biodiversity measures under Pillar 2 of the CAP, which is by far the most important source of funding for biodiversity, may decline.

At the same time, the structural changes in the Eurozone represent an opportunity to launch a major initiative on environmental tax reform and the reform of environmentally harmful subsidies (EHS). Financial austerity would drive a move towards better spending and a number of existing EHS will not stand this test. Consumption taxes, including environment-related taxes, are less distortive to growth than income taxes ⁵⁵ and a number of organisations, including the IMF ⁵⁶ and the OECD ⁵⁷ point to the benefits of environmental tax reform if properly applied.

Better spending and attracting private capital

There is a need for a stronger focus on result-orientation, evaluation of actual performance and better mainstreaming of environmental concerns to ensure better spending of limited public monies. One of the low-hanging fruits in this area concerns better guidance on approaches for environmental/climate proofing and mainstreaming to support financial programming cycles under the EU budget ⁵⁸. The EU should adopt such guidelines quickly, including a list of common approaches, instruments and tools to be used, as well as on how to interpret conditionalities, select priority projects and choose indicators.

The Commission's proposals for the next MFF for a greater thematic concentration of EU spending, result-orientation and performance review as well as an earmarking of relevant expenditure for climate and environmental concerns should not be watered down by Member States. Upfront investment in administrative capacities is also warranted. Furthermore, the right to constrain EU budget expenditure in cases of systematic violations of EU environmental law should be exercised more actively in the years to come, where justified.

The EU has already adopted a number of instruments which seek to attract private financing to key investments, but these need greater coherence, streamlining and capital. The role of bonds in establishing a low-carbon, climate resilient infrastructure should be further explored. The proposed EU project bonds initiative should be rolled out, and efforts to link bonds to climate change and environmental concerns given due consideration. This can draw on Member State experience such as in the UK and France which are leaders in issuing climate-related bonds⁵⁹.

Eco-innovation is grossly underfunded across the EU-27. It is hence welcome that the Commission's proposals for Horizon 2020 and COSME put a greater emphasis on climate change and environment. However, clear criteria for enhanced eco-innovation support are still needed, including long-term orientation, predictability, revision rules and priority areas for investment.

Better use of environmental taxes and charges

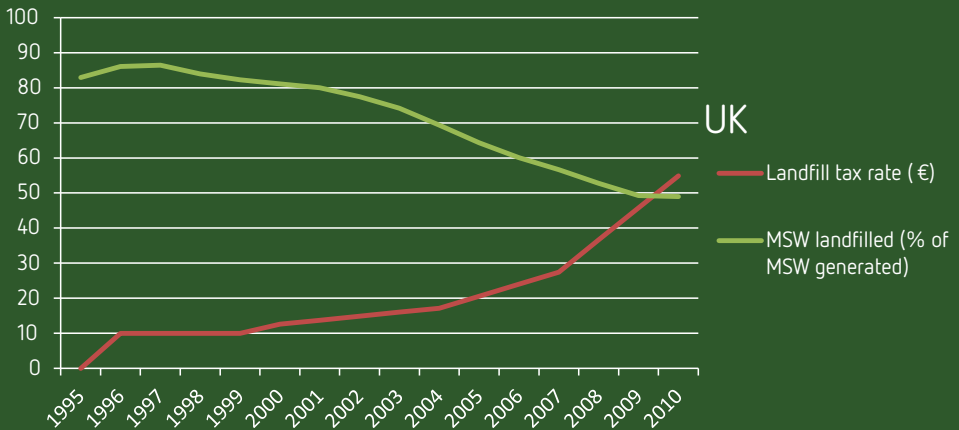
The EU should revise and as appropriate extend existing EU market-based instruments. Important items include reaching agreement on the stalled proposal to revise the energy taxation directive. Similarly, the current EU review of the structure of VAT rates should be used to revise reduced VAT rates on goods and services of relevance to the environment such as water, energy and waste. The Eurovignette Directive should be revised to facilitate charging to reflect wider environmental externalities than currently allowed.

Box 9: Reducing landfill through taxes – Lessons from the UK ⁶⁰

The UK has one of the highest per capita rates of landfilling of municipal waste among EU Member States. In the UK a tax on landfilled waste was introduced in October 1996. The tax is applied at two rates: a standard rate, applied to a range of materials, including municipal waste; and a lower rate, applied to specific materials, mainly non-hazardous inert waste. As the standard tax rate has increased, the effect on waste subject to this tax rate has become more dramatic (see Figure 3).

By 2009, 13 of the EU-27 were landfilling more municipal waste (in kg per capita) than the UK. The introduction of recycling targets for local authorities and the Landfill Allowance Schemes have also had a strong effect on the management of waste collected by local authorities. Although the effect of the landfill tax is not entirely certain, it is worth noting that the revenue of the tax has been directed towards waste prevention activities.

Figure 3: Landfill tax rates compared to percentage of municipal waste sent to landfill in UK



Better implementation of existing measures such as cost recovery of water as required under the Water Framework Directive should be further encouraged. Similarly, there is arguably scope for making greater use of economic signals through the use of fines linked to implementation of the Environmental Liability Directive.

Charges and levies fulfil similar functions to taxes, but are subject to less controversy. A Recommendation on introducing minimum environmental levies on critical resources, products or emissions (e.g. landfill, pollution, products, and materials) could be put forward. This could build on best practice in Member States and help prepare the ground for future EU legislation (See Box 9).

Reform of environmentally harmful subsidies

Transparent inventories of harmful subsidies to highlight impacts and communicate the benefits of reform should be developed. This could build on a number of interesting initiatives underway in different countries (see Box 10). Regular and transparent reporting by Member States on progress should be carried out under the European Semester. Annual reports and country recommendations could become more explicit and so advance progress.

The EU should lead by example, identifying and developing an inventory of EU-level harmful subsidies and roadmaps for reform in key sectors, identify restrictions and loopholes at the EU level that may prevent EHS reform (e.g. exemption clauses) and explore options to support reform efforts (eg through an extension to the environmental accounts Regulation)⁶¹.

Box 10: Identifying EHS: Some examples in practice ⁶²

Initiatives by EU Member States to identify and assess EHS include:

- The Federal Environment Agency in Germany regularly publishes a report on “Environmentally harmful subsidies in Germany”. The latest update is from 2010, a new update is expected in 2012.
- An inventory of subsidies is being developed in Flanders (Belgium) which will cover both environmentally harmful subsidies and environmentally friendly subsidies. This broad approach is being taken to help identify best practices and how to improve the environmental return of subsidies.
- In France two reports were produced in 2011 – one by the Committee to Evaluate Tax Expenditures and Social Security Contribution Exemptions which stressed the environmentally harmful effects of tax exemptions on certain fossil fuels and one by the Strategic Analysis Centre on government subsidies harmful to biodiversity.
- A 2012 report by the Swedish Environment Protection Agency examines government subsidies that have a potentially negative environmental impact and discusses how subsidies can be better handled in policy instruments.

5.3 Improving assessment, information, monitoring and accounting

Information and accounting systems in the EU are due for an overhaul. New information technologies allow different forms of reporting that are less burdensome for authorities. They also allow the inclusion of different sources of information, including informed laymen observations, which can increase responsiveness to changes, but also pose challenges to scientific robustness. At the same time, increasing complexity and uncertainty pose new challenges to the evidence-base underpinning environmental policy.

Despite progress, substantial knowledge and data gaps remain, eg on adaptation to climate change and the relationship between biodiversity and the provision of ecosystem services. Nature is systematically under-evaluated in standard accounting systems which need to become more inclusive and accommodate the economic relevance of environmental factors. Core economic indicators, such as GDP, need to be complemented by suitable environmental headline indicators.

Better assessment

There is a long-standing need for better coordination between assessment-related Directives. With its recent proposal to revise the Environmental Impact Assessment Directive, the Commission suggests streamlining administrative procedures in Member States ('one-stop-shop' procedures⁶³). This needs to be extended to the Strategic Environmental Assessment Directive and other relevant Directives which would require changes to a number of pieces of legislation and the merger of others. This would help address the issue of administrative burden and provide greater clarity and orientation for project developers and authorities alike.

Better information and monitoring

A number of important policy areas are fraught with data problems, including climate vulnerability, ecosystems and services, resource use, and the overall status of implementation of EU environmental law. Producing a succinct assessment of the most important data and knowledge gaps can inform planning under relevant programmes such as Horizons 2020.

In other areas, reporting requirements might be too detailed, including specific air, water or waste pollutants. Moreover, reporting cycles under different Directives differ, eg reporting under the Urban Waste Water Treatment Directive happens every two years, under the Nitrates Directive every four years and under the Groundwater Directive every six years. Reporting cycles and requirements should be reviewed and streamlined where possible.

Another key problem is the comparability of data and information. The importance of the Shared Environmental Information System should be underlined, particularly by the forthcoming 7th EAP. Streamlining legislative requirements for the provision and sharing of data and information, strengthening the coherence and comparability of existing data (eg LUCAS and CORINE) and improving links between different datasets (eg land cover/use and environmental quality of land) will benefit implementation and integration of environmental concerns in spatial planning frameworks. Guidance for effective and comparable monitoring could be developed by 2016.

At the same time, issues of how to act in the face of scientific uncertainty, how to find the right evidence, how to weigh this and how to bring in the broader public are non-trivial challenges. There is a need for greater investment in science-policy-interface mechanisms which go beyond the current format of standardised consultations.

What risks society is willing to take differs across Member States. Risk assessment procedures particularly in the area of environment and health should provide minimum standards but also allow Member States the opportunity to deviate in the pursuit of more ambitious practice (see Box 11).

Better accounting

The EU Regulation on National Environmental Economic Accounts should be fully implemented. Furthermore the Regulation foresees a window of opportunity every three years (starting in December 2013) to expand the scope of the areas covered by the national accounts. Full advantage should be taken of these reviews, building on progress with the global System for Environmental-Economic Accounts (SEEA), the EEA's Ecosystem Capital Accounts (ECA), the WAVES partnership and national efforts.

Box 11: Insights from the REACH experience ⁶⁴

The REACH Regulation aims to balance risks to human health and the environment with socio-economic benefits. Substances identified as being of very high concern can still be authorised even if they are not adequately controlled. In these cases it needs to be shown that socio-economic benefits outweigh the risk to human health or the environment and that there are no suitable alternative substances or technologies.

Risk assessments for potential substances to be banned under REACH are not always straightforward and there are uncertainties that give room for different interpretations. This is further complicated by different perceptions of risk in EU Member States. For instance Denmark has already banned four endocrine disrupting phthalates, arguing that the risks for these substances are so clear that it will not wait for the EU decision as part of REACH, thus risking conflict with the EU.

Finally, the EU should support the development of natural capital accounting systems and use them to assess progress towards specific targets such as Target 2 of the 2020 Biodiversity Strategy. The EU should respond to the UN SEEA's more ambitious endeavours such as the development and inclusion of ecosystem capital accounts in national accounting frameworks including continued support to the EEA's efforts to test the feasibility of ecosystem capital accounts.



6. MAKING IT HAPPEN

The EU needs to build on its agenda, moving to concrete policy formulation and action if it is to achieve the transition to a low-carbon, resource-efficient economy within overall environmental limits. Global limits are becoming more apparent and some are approaching rapidly. We are already close to locking in the physical infrastructure that will make it virtually impossible to prevent at least 2°C warming of the planet.

An adequate response requires major processes of transformation, diffusion and engagement covering an active and ambitious programme of measures. This cannot be achieved overnight. Part of this transformation has already started and there is a wealth of action worth building on. The EU must refocus on its undoubted strengths and abilities and its common interests. Achieving the sorts of priorities outlined in Chapter 4 will require more advanced governance approaches structured around a new language, different policy tactics and coalitions with a wider group of actors including business and the financial sector.

This is not an insurmountable challenge for the EU which has the ability to enact tremendous change as demonstrated over the past four decades. The current context requires the balancing of a strategic focus with a more pragmatic approach. This concluding section outlines some practical steps which can be taken forward in the next few years to regain momentum behind the environmental agenda as well as considering some of the larger issues lying ahead.

Building coalitions and understanding

Now is the time for investing more in developing partnerships and building relationships of trust between a larger group of actors with different interests but supporting a green agenda and needing to work together. These should form at different levels and behave more strategically than the one-off, tactical relationships witnessed to date⁶⁵. A more powerful and convincing platform is needed from which to launch initiatives attracting the necessary scale of support. For example, in the UK, the work of the Climate Change Committee has helped to underpin the increased ambition of national climate policy.

These new partnerships need to be underpinned by a more robust evidence base. As noted in preceding chapters, the Commission has an important role to play in this regard. For instance, the Commission has helped improve the availability of information on the economic benefits and costs of EU environmental policy and its (non)-implementation as well as on the impacts of new instruments such as environmental taxes. The depth and level of such analysis and evidence gathering needs to be stepped up.

Developing partnerships and building relationships of trust between the public and private sector will be increasingly critical as we move forward.

Useful steps along this path have been taken already. For example the Resource Efficiency Platform brings together several high-level actors including corporate decision-makers; European Innovation Partnerships have been launched in the areas of water, raw materials and sustainable agriculture; and specialised partnership task-forces between the EU, Member States and industry are to be set up (see Box 12). These initiatives are welcome. They provide a useful foundation for building wider networks and coalitions on a European scale and for launching policy initiatives of most relevance to key players. Such networks need to include a scientific dimension and both corporate and civil society representation alongside government, as many already do.

Box 12: Partnership task forces ⁶⁶

The recent Commission Communication on future industrial policy proposes setting up specialised partnership task-forces between the EU, Member States and industry to define roadmaps to step up investment and innovation in six priority areas. These are markets for advanced manufacturing technologies for clean production, markets for key enabling technologies, bio-based product markets, sustainable industrial policy and construction and raw materials, clean vehicles, and smart grids.

Such collaborative approaches are to be encouraged, however would benefit from more transparency, in particular relating to the membership and decision-making processes.

Wider engagement of public and private stakeholders

There is growing recognition that environmental governance in the 21st century needs to involve corporate actors more strategically and that greater responsibility for environmental achievements needs to be secured. Various initiatives are already being taken forward by private actors on their own accord (e.g. the introduction of Environmental Profit and Loss Accounts by some companies), although these are patchy and vary in ambition.

Public-private networks and dialogue need to grow outside the established pathways of corporate lobbying. Private investors and commercial actors are unlikely to provide the substantial investments needed to achieve the environmental transition unless they are convinced there is a relatively stable regulatory framework in place and they are engaged at some level in the policy dynamics affecting the sector. Thus, developing partnerships and building relationships of trust between the public and private sector will be increasingly critical as we move forward alongside a stronger emphasis on accountability and transparency of these relationships. The various platforms the Commission has built in this respect provide fertile soil for further action.

Regions and cities are often test-beds for policy innovations. Likewise, small and medium-sized enterprises (SMEs) push forward novel ways of dealing with resource and energy challenges. New information and communication tools can significantly improve the diffusion of these ideas and engage local and regional authorities as well as corporate stakeholders in processes of relevance to EU decision-making. This potential needs to be activated with a view to restoring trust in the responsibility of policy-making.

Moreover, new information and mapping tools can help bypass the technical and capacity-constraints of public authorities and companies at local and regional levels. For example, companies can be supported in understanding their environmental impact better as well as the risks they face in terms of supply constraints. Public authorities can be helped through processes of information exchange and policy learning across regions and cities in various ways. The power of information and communication methods as a governance tool need to be harnessed more rigorously.

The power of information and communication methods as a governance tool need to be harnessed more rigorously

Improving implementation

As emphasised on many occasions in this report, the implementation gap needs to be addressed. This is another area where the Commission has scope to strengthen and prioritise efforts. There is no single intervention to achieve this but a range of measures from the consolidation of legal texts to improved enforcement and a better information base. The Commission needs to take a stricter stance on legal enforcement, instigating infringement proceedings more rapidly, and undertaking a serious discussion on a European inspection force. It should also have the courage to place further pressure on Member States where needed and relevant and make full use of the tools it has at hand, including funding under the EU budget.

Making full use of the European Semester

The European Semester process offers the Commission an important avenue for tracking and encouraging progress in Member States in a number of areas through the regular system of reporting and country recommendations. Some environmental issues (primarily relating to climate change and environmental fiscal reform) have been highlighted in National Reform Programmes in several Member States and have been picked up in country recommendations. For example, 2012 recommendations to France, Spain, Latvia and the Czech Republic included a call for greater emphasis on environmental taxation and tax reform, while strengthening energy efficiency were among the recommendations to Malta, Lithuania, Latvia and Estonia⁶⁷.

However, there remains a need to broaden the initial focus of this reporting system, which has been on fiscal consolidation and efforts to stabilise the financial system to a broader macro-economic approach that takes into account the low-carbon economy transition. The Commission could make better use of annual reports and country recommendations under the European Semester process to guide Member State progress in key areas such as environmental fiscal reform.

Working towards common ends

Member States that want to progress on a particular issue should not be held back by more reluctant counterparts over an unreasonable period. Enhanced cooperation procedures can make a fruitful contribution in this respect. Different speeds of development should be permitted and may indeed be necessary given the diversity of national contexts. Different pathways can be accepted if they clearly lead to common objectives over a defined period and do not violate the essential requirements of EU environmental law.

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