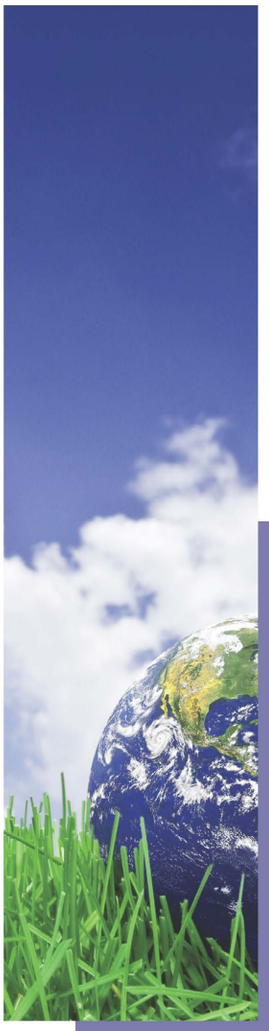
EUROPEAN PARLIAMENT

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY



Economic and Monetary Affairs

Employment and Social Affairs

Environment, Public Health and Food Safety

Industry, Research and Energy

Internal Market and Consumer Protection

Environment and Climate Change Policies

Study for the ENVI Committee

EN

2014

Environment and Climate Change Policies

EUROPEAN PARLIAMENT

DIRECTORATE GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

Environment and Climate Change Policies

STUDY

Abstract

This study reviews the state of play of on-going EU environmental legislation and pinpoints key issues for Europe in the area of environmental and climate policies for the next five years. In addition to traditional themes that require urgent actions (biodiversity, air and water, chemicals), special attention is paid to emerging cross-cutting issues (circular economy, sustainability of cities, eco-innovation). EU efforts in addressing climate change are reviewed, highlighting specific implementation challenges and their relevance for international climate policy. This document was provided by Policy Department A in view of the Hearings of Commissioner-Designates of the Environment, Public Health and Food Safety Committee (ENVI).

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CONTENTS

LIST OF ABBREVIATIONS

BPR	Biocidal Product Regulation
CCP	Carbon Capture and Storage
CDM	Clean Development Mechanism
CO_2	Carbon dioxide
COP	Conference of Parties
EAP	Environment Action Programme
EC	European Commission
EcoAP	Eco-Innovation Action Plan
EEA	European Environment Agency
EED	Energy Efficiency Directive
EEP	Energy Efficiency Plan
EESS	European Energy Security Strategy
EIB	European Investment Bank
EIO	Eco-Innovation Observatory
EP	European Parliament
EPBD	Energy Performance of Buildings Directive
EPR	Extended Producer Responsibility
EREP	European Resource Efficiency Platform
EU	European Union
EU ETS	EU Emissions Trading System
GCF	Green Climate Fund
GDP	Gross Domestic Product
GDP	Gross Domestic Product

GHG	Greenhouse Gas
ICAO	Civil Aviation Organization
ILUC	Indirect Land-Use Change
IMO	International Maritime Organization
IU	Innovation Union
JI	Joint Implementation Mechanism
KP	Kyoto Protocol
NEC	National Emissions Ceilings
NEEAP	National Energy Efficiency Action Plans
NGO	Non-Governmental Organization
PIC	Prior Informed Consent Regulation
PIC	Prior Informed Consent Regulation
RFSC	Reference Framework for Sustainable Cities
SDG	Sustainable Development Goal
UK	United Kingdom
UNFCCC	United Nations Framework Convention on Climate Change
US	United States of America
WFD	Waste Framework Directive

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EXECUTIVE SUMMARY

This short study presents a summary of on-going policy developments in the area of environment and climate change. The most distinctive trend of environmental policy is the shift from legislation that exclusively focuses on clean-up and conservation activities towards legislation that reshapes boundaries for the new European smart, sustainable and inclusive growth strategy.

Environmental policies

The vast scope of work of the last parliamentary term has been characterised by the introduction of new strategic documents in areas of air and water quality, biodiversity, as well as broad activities in chemicals legislation. It has also been marked with the failure of the EU to meet significant goals in stopping biodiversity loss and ensuring high water quality standards, leaving these crucial challenges for the legislative activities of the coming years, especially with respect to implementation and fine-tuning mechanisms to achieve targets and goals.

In 2014, a new 7th Environment Action Programme (2014-2020) was enacted with a vital statement to regard thematic environmental priorities not separately, but address them systemically with the aim of shifting the EU towards a low-carbon, resource-efficient economy and safeguarding human health. The Programme puts strong emphasis on enabling options for policy implementation and addresses the need to facilitate changes linking local and international challenges.

Environmental policy is now expected to be a driving force for societal transformations. It is seen as an opportunity to boost value creation in the economy and make the EU a frontrunner in the transition towards innovative business models, the generation of green jobs and the fulfilment of high life-quality standards. Three key issues are likely to guide this process and define legislative challenges in the coming years: resource efficiency and circular economy, sustainable urban development, and eco-innovation.

Climate change

Climate change has been identified as one of the key challenges of our time. Greenhouse gas emissions, in particular of CO_2 resulting from the burning of fossil fuels, are putting us on a pathway towards a 4 degrees Celsius hotter world by 2100. This would be a world characterised by frequent and extreme heat waves, a sea level rise of up to 1 meter and other extreme weather events, as well as a slow onset of events that undermine the functioning of our societies (Schellnhuber et al. 2012).

The discussions about the 2030 climate and energy framework are at the cornerstone of EU climate policy. The so-called 20-20-20 targets adopted in March 2007 by the European Council are currently negotiated. The original 2007 targets of a unilateral reduction goal of greenhouse gas emissions by (at least) 20 % by 2020 compared to 1990 levels, an increase in the share of renewable energy in final energy consumption to 20 % and a non-binding energy efficiency target of -20 % by 2020 of primary energy consumption compared to baseline projections[1] are now being adapted and further developed in order to strengthen the EU climate and energy transition pathways.

International climate negotiations are a continuous process that evolves stepwise and with different degrees of momentum over time. The European Union is a single party to the

[1] As given by the baseline projection study of 2007 for the Council of the European Union Presidency Conclusions Doc. 7224/1/07 REV 1.

United Nations Framework Convention on Climate Change (UNFCCC) and to the Kyoto Protocol (KP). Its internal climate and energy policy performance is cautiously observed and decisive for the EU negotiating position at the climate conferences. The crucial milestone in international climate negotiations is the aim to adopt a new climate agreement at the next Conference of the Parties in Paris at the end of 2015.

Moreover, with the current crisis in Ukraine the issue of energy security receives increasing attention, significantly influencing the debate on EU's future climate and energy policies.

1. EU ENVIRONMENTAL POLICIES

KEY FINDINGS

- Current environmental policy is seen as elemental towards transforming and innovating socio-economic development. The progress in environmental legislation has already shown positive results in the transition towards sustainable economic leadership and overall European competitiveness, however it still provides enormous potential for improvement.
- Thematically, the upcoming years will bring significant challenges in designing and implementing on-going legislation, especially in the fields of biodiversity, water and air quality, as well as chemicals.
- Overcoming societal challenges requires addressing increasingly complex, cross-cutting issues. In the future policy areas like resource efficiency and circular economy, green sustainable cities and eco-innovation will by key to tackling these challenges by going beyond traditional views on environment-society interactions and ensuring high levels of consistency and coherence with multiple other policy areas and actors.

This chapter reviews the main elements of the state of play of on-going EU environmental legislation and pinpoints the forthcoming key issues and challenges for Europe in the area of environmental policies for the next five years.

1.1. General framing / institutional context

Evolution of themes

In the European Union, environmental policy regulations follow the well-ridden track of the Environment Action Programmes (EAPs). More than 40 years have elapsed since the announcement of the 1st Environmental Action Programme in 1973. Thematically, the legislation has advanced along three steps. First, it started by addressing environmental problems related to the opening of EU-wide markets. Second, legislation focused on moving towards the establishment of thematic priorities for green and sustainable development. Finally and most recently, an expansion from the "environment arena" towards all other areas of the economy and society has been seen. The environmental legislation now focuses not only on cleaning up (clean water, clean air, etc.) and preserving (conservation areas, zoning, etc.) the environment, but innovates and defines new boundaries of society-environment interactions. Especially as regards resource efficiency, an emergence towards integrating environmental concerns in a more systemic way in society and the economy has become evident. This thematic development has been influenced by the increasingly complex societal challenges facing policy makers in the 21st century (e.g. concepts of global planetary boundaries and safe operating space). The aim of environmental policy now includes reducing resource footprints, which requires a paradigm shift in our economic models (e.g. circular economy model, green economy, sustainable consumption and production, etc.). This seems to be one of the key aspects of Horizon 2020[2], which aims to address societal challenges in a

[2] COM(2011) 808 final.

more holistic way[3]. In other words, environmental policy must be integrated with social policy and economic policy. The resulting legislature is not expected to contradict economic objectives, but rather to take an innovating role in setting the course.

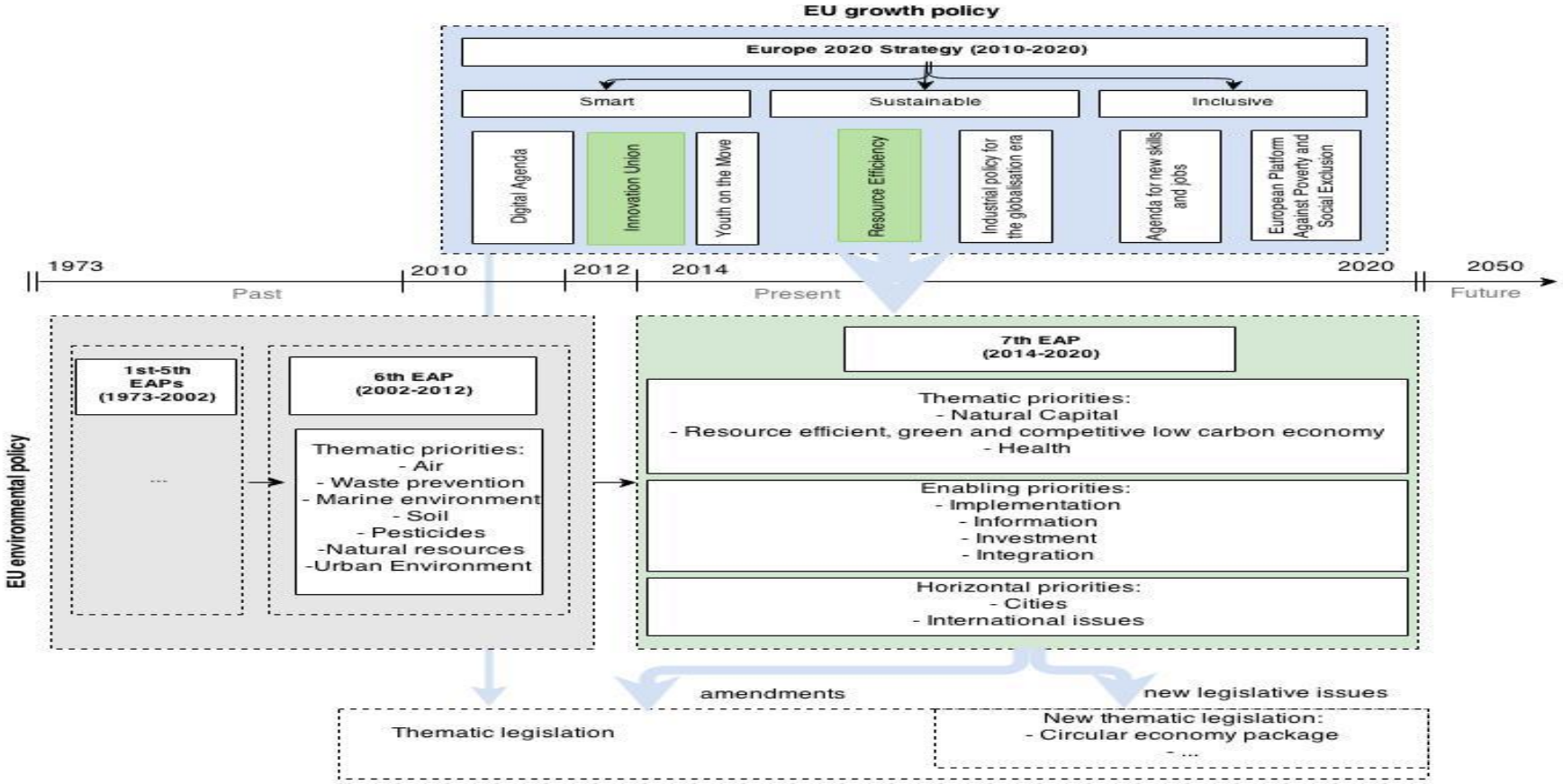
Evolution of instruments and structure

In addition to shifts in the thematic agenda of the EAPs, the environmental policy-making processes have significantly evolved. Emerging issues require flexibility and differentiation as well as participation of non-state actors (civil society, industry associations, trade unions, etc.) and soft legislation. Modern environmental policy-making in the EU does not follow a strict hierarchical mode, but consists of different interacting positions, thematic fields and actors. Historically the environmental acquis consists of "hard" law, but in most cases, strategies, white papers and guidelines ("soft" law) present a cluster of initiatives and set the agenda in a variety of legislative fields. Different (often competing) policy goals demand consistency and coherence among the various stakeholders.

In total, environmental policy faces a number of challenges that will tend to reshape the legislative processes in upcoming years. These challenges include an increasing tension between the national and supranational levels of governance, the difficulties in engaging non-state actors in the policy-making process, needs for better implementation of environmental laws and the ambition of the EU to become a front-runner in environmental policy-making (Jordan and Adelle 2013; Orlando 2013).

[3] Horizon 2020 is the EU Research and Innovation funding programme introduced at the core of the EU's strategy for smart, sustainable and inclusive growth (€80 billion of funding from 2014 to 2020).

Figure 1: Recent thematic evolution of the environmental policy in the EU



Source: Authors

1.2. Current development of environmental policy

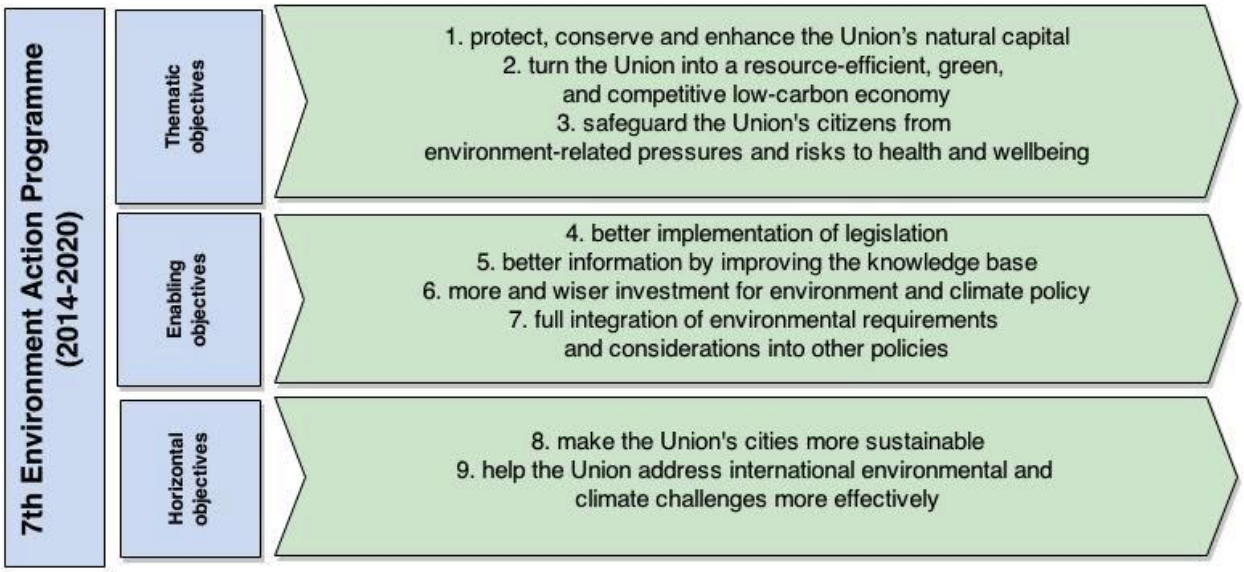
The 7th parliamentary term (2009-2014) has produced a wealth of information, in terms of legislative activities, scrutiny and oversight, as well as direct experiences with engaging with public consultations (EP 2014). The current state of environmental legislation in the EU is now concerned with 3 different types of work:

- development of new legislation to face freshly arising challenges under the 7th EAP;
- amendments to on-going environmental thematic legislation in line with the 7th EAP;
- integration of environmental objectives in other policy areas under the EU 2020 strategy towards smart, sustainable and inclusive growth.

1.2.1. 7th Environmental Action Programme

The 7th Environmental Action Programme came into force in January 2014 and is the framework for action until 2020. It is consistent with other existing key policy initiatives, such as the EU growth strategy, its flagship initiatives and the implemented initiatives from the previous 6th EAP. A key element of the 7th EAP to 2020 "Living well, within the limits of our planet" is a structure of 9 priority objectives. These objectives are centred around the 2020 time frame and strive toward reaching the 2050 vision of living "well, within the planet's ecological limits" (EC 2014).

Figure 2: Structure of the 7th EAP (2014-2020)



Source: Authors

Several new aspects of the 7th EAP can be highlighted as particularly key for the achievement of environmental objectives:

- a shift from isolated environmental thematic priorities (air, water, soil, etc.) towards an integrated understanding of natural capital;
- the explicit aim to transform the EU into a resource-efficient and low-carbon economy, highlighting the need to improve the environmental performance of products over their life cycle and turn waste into resources;
- the need to improve legislation related to quality of life and health, requiring e.g. updates of air quality and noise, chemicals and water legislation;

- a special attention towards how goals can be achieved, focusing not only on long-term issues and themes, but also on instruments and actions to achieve those aims;
- the acknowledgement of the need to integrate global challenges requiring multi-level governance from the local to global levels.

The 7th EAP could drive a transition of the current unsustainable economic system. The EU is already taking a leading role on the global market for many environmental technologies. New policy initiatives integrating EU environmental objectives with innovation, research and social inclusion could make Europe a frontrunner, and global role model, in the transition towards sustainable development and green economy.

1.2.2. Recent highlights of thematic environmental policy

Air Quality

In order to improve the impact of the EU's air quality directives, new requirements with regard to improving the reporting and exchange of air quality information were introduced effective 1 January 2014[4]. The proposed Clean Air Policy Package intends a mid- and long-term increase of air quality. To this end, the National Emissions Ceilings Directive (NEC Directive)[5], as revised in 2009, will be amended to reflect (i) reductions in the current pollutants subject to the directive and (ii) introduce ceilings on further pollutants. Additionally, emissions of air pollutants from specific sources will be targeted by further legislation, including by transport and industrial facilities[6].

Biodiversity

European Biodiversity legislation mainly encompasses the Habitats Directive[7] and the Birds Directive[8], which gave rise to the Natura 2000 network of protected areas. The European Biodiversity Strategy was originally based on the 2001 Strategy for Sustainable Development. As the 2010 targets were not reached, the strategy was amended in 2011 with biodiversity targets for 2020 and 2050[9]. The failure to meet the 2010 goals means that implementing Biodiversity legislation will be one of the major challenges of the coming years.

The main goals relate to (i) fully implementing the Birds and Habitats Directives, (ii) ensuring the sustainable use of fisheries resources, (iii) controlling invasive alien species and (iv) helping to avert global biodiversity loss.

Chemicals

Chemicals regulation was mainly enacted in three areas.

REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. Since 1 June 2013, chemicals of which 100 tonnes or more p.a. are manufactured or imported into the EU have become subject to REACH provisions[10], substantially increasing the scope of REACH legislation.

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4 Decision 2011/850/EU.

5 Directive 2001/81/EC.

6 e.g. the proposed Directive on Medium Combustion Plants.

7 Directive 92/43/EEC.

8 Directive 2009/147/EC.

9 COM(2011) 244 final.

10 Previously 1,000 tonnes p.a.

In 2012, the Biocidal Product Regulation (BPR)[11] was first enacted. BPR concerns the marketing and use of biocidal products, which are used in order to protect humans, animals, materials or articles against harmful organisms.

Also in 2012, the Prior Informed Consent Regulation (PIC)[12] was enacted. It governs the import and export of hazardous chemicals and places obligations on companies who wish to export these chemicals to non-EU countries. PIC applies since 1 March 2014.

Land Use

While the 2011 Roadmap for a resource-efficient Europe[13], part of the Europe 2020 Strategy, had recognised the general reduction of land use as a needed target, activities in the area of land use have not resulted in hard or soft law in recent years. The Commission is preparing a communication on the use of land as a resource. Land-use has already been addressed in ancillary actions, such as the 2013 review of the Nitrates Directive[14] and the Flood Directive[15] in 2013.

Natural Resources

After adoption of the thematic Strategy on the Sustainable Use of Natural Resources[16], activities in the area of natural resources in recent years were mostly research-related and focused on thematic resources. Reports issues included assessments regarding consumption and resource efficiency (EEA 2014). In cross-border issues related to industrial policy, work has been focused on establishment of raw materials initiative[17], followed by reviews of criticality of materials and adoption of a list of 14 critical raw materials (of high economic importance and high supply risks). Other activities relate to reducing waste and promoting circular economy (see below).

Noise

After having enacted the framework Environmental Noise Directive in 2002[18], EU activities in the area of human exposure to noise have mostly been in a research and advisory function. In particular, a 2012 stakeholder consultation on the necessity of amending the Environmental Noise Directive was carried out.

Waste and a circular economy

The Waste Framework Directive of 2008[19] required Member States to establish waste prevention programmes by the end of 2013. Concrete targets were set and provisions enacted for specific waste streams (e.g. the 2010 Industrial Emissions Directive)[20]. The EEA has been active gathering data on the status of waste and contamination as well as on indicators and decision-making progress. The legislative focus in recent years was on the reduction of plastic waste, including inter alia the 2013 proposal for a directive to reduce the consumption of lightweight plastic bags, amending the Waste Framework Directive[21].

[11] Regulation (EU) No 528/2012.
[12] Regulation (EU) 649/2012.
[13] COM(2011) 571 final.
[14] COM(2013) 683 final.
[15] Directive 2007/60/EC.
[16] COM(2005) 670 final.
[17] COM(2008) 699 final.
[18] Directive 2002/49/EC.
[19] Directive 2008/98/EC.
[20] Directive 2010/75/EU.
[21] COM(2013) 761 final.

The Commission recently issued a Communication with the goal to establish a common and coherent EU framework to promote the circular economy[22].

Water

The 2010 Water Framework Directive[23] aimed to protect water ecosystems in terms of water quality, water quantity, and their role as habitats. In 2012, the EEA published a series of reports revealing that the targets set by the Water Framework Directive for 2015 will largely be missed, resulting in numerous water bodies being in poor ecological conditions[24]. In the same year, the Commission published the Communication "A Blueprint to Safeguard Europe's Water Resources"[25], with the goal to improve implementation of water legislation, and to integrate water policy objectives into other policies.

1.3. Upcoming crucial issues

Environmental problems are caused by the over-exploitation of ecosystems and resources (EEA 2010). They can be connected in a global, long-term and systemic perspective and cross-cut different themes within the environment-economy-society nexus. Thus, they cannot be addressed with isolated regulative approaches, but require a systemic approach based on innovative and forward-looking concepts in times of economic austerity, demographic and democratic transitions. Three headline issues are likely to shape the political discourse in the new legislative term: circular economy, green urbanism and eco-innovation.

1.3.1. Resource efficiency and circular economy

During the past legislative term resource efficiency and a circular economy have received considerable political attention. In addition to decreasing environmental pressures associated with the (over)consumption of natural resources the strategies aim to improve economic and social opportunities by improving overall productivity and increasing the value of the produced goods and services. Thus, they also offer the opportunity to improve the competitiveness of European industry and create jobs. The European Commission highlights that in order to harvest the low-hanging fruits of a resource-efficient and low-carbon economy, actions should be taken immediately.

The Flagship Initiative for a Resource-Efficient Europe

The Commission under José Manuel Barroso has put resource efficiency high on the political agenda. More than ever, issues of sustainable resource use have been reflected in the Europe 2020 strategy. The flagship Initiative for a Resource-Efficient Europe[26] aims at providing a long term framework for actions in different policy areas, including agriculture, climate change, energy, raw materials, industry, transport, biodiversity, fisheries and regional development (see Figure 3 below).

The Roadmap for a Resource Efficient Europe[27]

addresses targets for the design and realisation of actions of the EU resource efficiency policy. The main emphasis is put on the need to integrate policy and market instruments. It recommends that actions towards higher resource efficiency and more long-term innovative

[22] COM(2014) 398 final.

[23] Directive 2000/60/EC.

[24] http://www.eea.europa.eu/themes/water/water-assessments-2012.

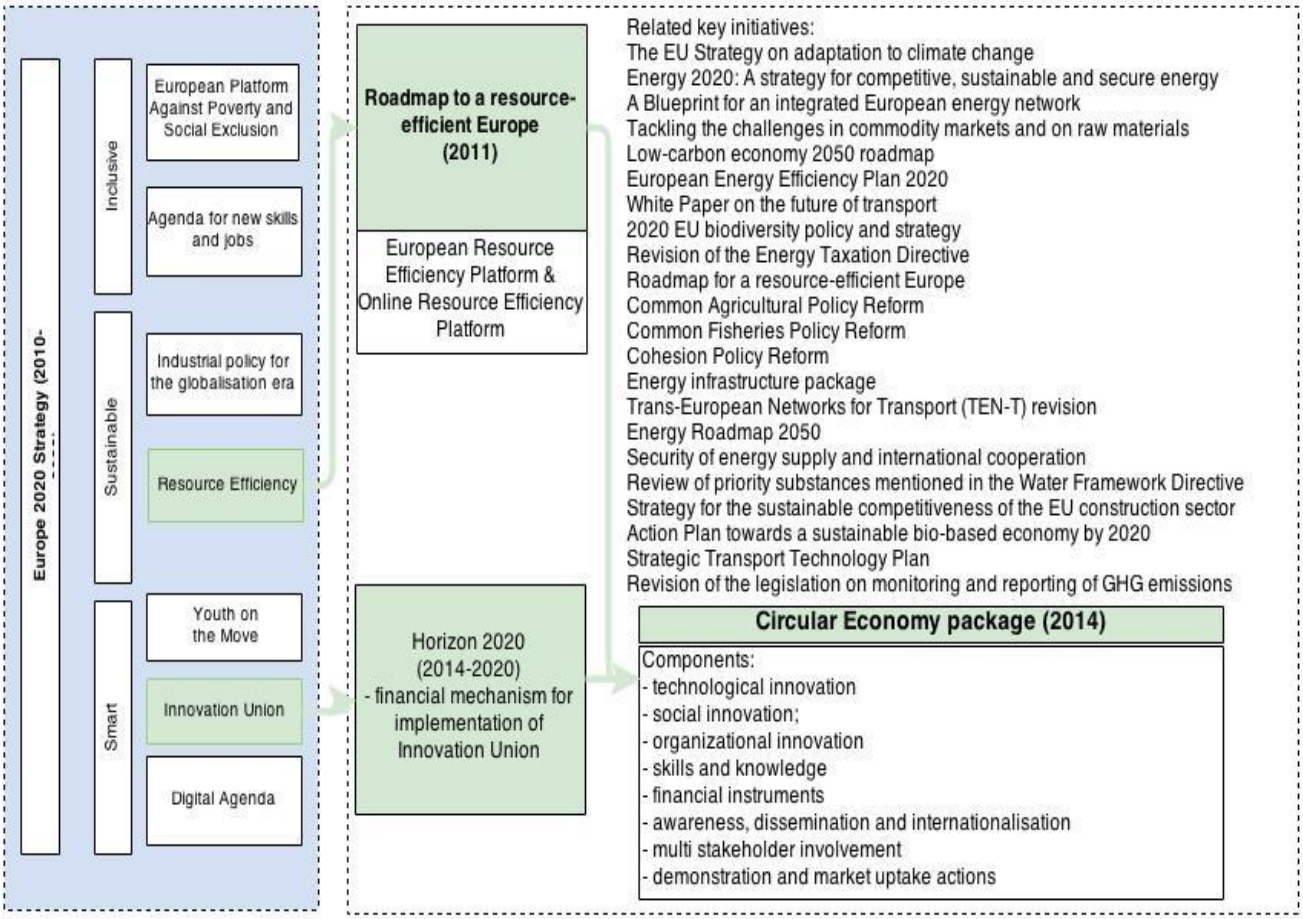
[25] COM(2012) 673 final.

[26] COM(2011) 21 final.

[27] COM(2011) 571 final.

thinking should take place in relation to the use of minerals, energy, water, land and ecosystem services, including linkages between resources and the possible utilisation of waste as a resource. In addition, it identifies key research priorities in sectors with the highest environmental impact like food, housing and transport. Finally, it proposes the definition of resource efficiency targets, legislative measures and a methodology to identify the environmental footprint of products. The Roadmap for a Resource Efficient Europe identifies policies that are directly or indirectly related to resource use and drivers of this use (Figure 3). The consultation role for the EU institutions, the national governments, the local and regional authorities, and the business and civil society are represented in the European Resource Efficiency Platform (EREP).

Figure 3: Circular economy/resource efficiency



Source: Authors

Circular economy package

The European Commission has adopted the Communication "Towards a circular economy: a zero waste programme for Europe"[28] to establish a framework to promote a circular economy. Circular economy provides opportunities for value generation and new jobs by the repair, re-use, remanufacturing, and recycling of goods. The new proposal aims to push the EU beyond the linear "take-make-consume and dispose" economic model.

In the circular economy package, the European Commission included also a *legislative proposal to turn waste into a resource and to address waste and recycling targets in the EU*

[28] COM(2014) 398 final.

aiming at an extensive number of thematic directives (on waste, on packaging and packaging waste, on the landfill of waste, on end-of-life vehicles, on batteries and accumulators and waste batteries and accumulators, and on waste electrical and electronic equipment)[29].

Behind this proposal is the intention to simplify waste legislation and to improve implementation, such as through the introduction of minimum operating conditions for producer responsibility schemes (Extended Producer Responsibility), as well as targeted approaches for handling different types of waste in the circular economy (marine litter, phosphorus, construction and demolition, food, hazardous and plastic waste).

A circular economy cannot be implemented without coordination with other policy initiatives. Essentially, it will not only require adequate infrastructures, but also skills and knowledge. A circular economy depends on technological, social and organisational innovations (e.g. leasing society). These can be triggered by actions such as demonstration, promotion of market acceptance, diffusion and internationalisation. This will require adequate funding instruments, extensively proposed by the Framework Programme for Research and Innovation Horizon 2020[30].

In the following years, a task will be to translate the Commission's circular economy package into binding legislation. The implications for related policy areas will have to be defined (e.g. research, innovation, industrial and digital political agenda). Targets, timetables and review mechanisms need to be defined to monitor the implementation of waste legislation and its impacts on value creation and employment. Practically, legislative attention must take into account the EU Ecodesign Directive[31] and improvement of financial incentives (e.g. VAT taxes on repair work that trigger growth in repair and maintenance sector). Finally, a coherent approach to remanufacturing in contrast to re-use and recycling should be implemented together with the development of an integrated European recycling infrastructure to allow recycling facilities to better use waste as a resource for both "downcycling" and high-quality "upcycling".

1.3.2. Sustainable urban development

Urban areas are the source of many of today's environmental challenges. Two out of three Europeans live in towns and cities. European institutions have enacted several policies to respond to urban challenges.

There is no consolidated policy with regard to sustainable urban development, it is rather a conglomerate of three areas: environmental friendliness in general, low carbon strategies and sustainable development. While European institutions have recognised sustainable mobility and low carbon strategies as particularly relevant areas, the main focus of sustainable urban development remains on general environmental friendliness and provision of high life quality.

[29] COM(2014) 397 final.

[30] COM(2011) 808 final.

[31] Directive 2009/125/EU.

General Environmental Friendliness

In 2006, the Council adopted the Renewed EU Sustainable Development Strategy[32], which promotes inter alia a "European Sustainable Cities & Towns Campaign", and the Commission issued a thematic strategy on the urban environment[33].

With the Leipzig Charter of 2007, Member States outlined an ideal model for the European Sustainable City. This resulted in the Reference Framework for Sustainable Cities (RFSC), adopted by the Member States in 2008, aiming at providing a common framework for sustainable urban development, a common format for communication within and between cities on sustainable urban development policies and best practices, encouraging a dialogue and exchange within and beyond the cities. Signed-up cities can use the RFSC to develop and improve current strategies and projects and to learn from other European cities. Politicians, planners, project managers, stakeholders as well as citizens are the target users of this tool.

On a high level, priority objective 8 of the 7th Environment Action Programme explicitly recognises the importance of a sustainable development of European cities. Problems that are explicitly addressed are poor air quality, high levels of noise, greenhouse gas emissions, water scarcity, and waste. The intended means to address these problems are to promote initiatives that support innovation and the diffusion of best practices.

Local, regional, national and European institutions have already initiated numerous programmes. Most importantly, the EU budget 2014-2020 provides that at least 5 % of the European Regional Development Fund will have to be used for sustainable urban development (EC 2014b). In particular, the following programmes may be accessed by cities:

- RFSC, offering a web-based tool for cities to interact and communicate, as well as training and information. Furthermore, cities may be appointed as RFSC ambassador, allowing them to act as coaches and be involved in development. Cities can also make use of the European Urban Knowledge Network, allowing them to acquire and share knowledge;
- LIFE+, the Union's financial instrument supporting environmental and nature conservation projects;
- URBACT, the European exchange and learning programme promoting sustainable urban development, which aims to enable cities to work together to develop solutions to major urban challenges;
- INTERREG IVC, which provides funding for interregional cooperation across Europe;
- Horizon 2020, the 80 billion Euro long-term research and innovation funding programme, which promotes investments in future jobs and growth, addresses peoples' concerns about their livelihoods, safety and environment, and strengthens the EU's global position in research, innovation and technology;
- the Smart Cities and Communities European Innovation Partnership, proposing to pool resources to support the demonstration of energy, transport and information and communication technologies in urban areas;
- EU Cities Adapt, an initiative for the development of adaptation strategies for European Cities for dealing effectively and efficiently with the future impacts of climate change.

[32] Doc. 10917/06.

[33] COM(2005) 718 final.

Urban mobility

Urban mobility accounts for a substantial part of road-transport related CO_2 emissions and other pollutants. European institutions have defined policies in the field of urban mobility since the mid-90s. After adaptation of the Green Paper "Towards a new culture for urban mobility" in 2007[34], the Commission enacted the 2009 Action Plan on urban mobility[35] and the 2011 Transport White Paper Roadmap to a Single European Transport Area[36], resulting in actions taken in the 2013 Urban Mobility Package[37]. Tools are mainly provided in the context of the Urban Mobility Package. Several initiatives support (1) exchanging experiences, spreading best practices, raising cooperation; (2) establishing targeted funding, focussing research and innovation on distributing solutions for urban infrastructure challenges; and (3) local and international facilitation: engaging Member States and international cooperation.

The Commission furthermore provides the ELTIS portal on urban mobility, facilitating the exchange of information, knowledge and experiences, aimed at individuals working in the field of transport, as well as in related disciplines. ELTIS supports the creation of urban transport systems that use less energy and produce fewer emissions.

Finally, the "City-Vitality-Sustainability" or "Cleaner and Better Transport in Cities" (CIVITAS) supports cities in introducing transport measures and policies promoting sustainable urban mobility, with the goal to achieve a shift towards using sustainable transport, through encouraging both innovative technology and policy-based strategies. The Commission has provided funding for measures under this programme amounting to over EUR 300 million.

Low Carbon development

The policies regarding urban carbon neutrality are part of the larger commitment of the European Union to reduce its total carbon impact. Several policies relate to urban carbon emissions. Under the Digital Agenda for Europe[38], several projects aim at intelligent mobility, impacting in particular carbon neutrality. The European Local Energy Assistance (ELENA), financed under the EU's Intelligent Energy-Europe Programme, is an informal scheme run by the European Investment Bank (EIB). The 2009 Energy-Efficient Buildings Public-Private Partnership examines energy-efficient construction and the refurbishment of existing buildings, as well as the design of new neutral/energy-positive buildings and energy-efficient communities. Beyond the EU, the mayors of numerous cities have voluntarily committed to meet and exceed the EU target of 20 % CO_2 reduction through increased energy efficiency and the development of renewable energy sources (Covenant of Mayors). The ELENA scheme provides up to 90 % of technical assistance costs related to the development of bankable large-scale sustainable energy investments. ELENA also assists local and regional authorities in the efficient spending of cohesion policy funds for energy efficiency and renewable energy.

Several key legislative challenges for the next years arise in the field of green urbanism. First, the EU environmental policy needs to better respond to urban complexity, and to better reflect cities' role as implementers of EU policy. In particular, this requires a strengthened and coordinated knowledge database (stimulating networking activities and best practice within RFSC, URBACT, Urban Europe Joint Programming Initiative, etc.), while enhancing promotion of best practice examples (Green City Award). Finally, there is a strong need to create a well-defined set of criteria to assess the environmental performance of cities, which

[34] COM(2007) 551 final.

[35] COM(2009) 490/5.

[36] COM(2011) 144 final.

[37] COM(2013) 913 final.

[38] COM(2010) 245 f/2.

reflects the different thematic fields of sustainable urban development considering economic, social and territorial differences of the EU cities.

1.3.3. Eco-Innovation

Eco-Innovation is one of the key tools to reaching resource, climate and sustainable development targets. It is defined as "any form of innovation resulting in or aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment, enhancing resilience to environmental pressures, or achieving a more efficient and responsible use of natural resources"[39]. It joins economic, social and environmental aims as a business strategy for greening production, opening new market opportunities and providing new solutions for the provision of goods and services to meet human needs.

In 2004 the Environmental Technologies Action Plan (ETAP)[40] supported the further development and growth of eco-industries (such as renewable energy, waste management, etc.) in the EU. These industries boomed with an annual nominal growth rate of 8.3 % between 2004 and 2008 to reach an annual turnover of EUR 319 billion in 2008 (or a 2.5 % share of GDP) (Ecorys 2009). The Eco-Innovation Action Plan (EcoAP) was the successor to ETAP. It expanded the focus to eco-innovation as a strategy that extended beyond "traditional" environmental sectors to all parts of the economy. It was developed with insights from an extensive public consultation, giving business the opportunity to let policy makers know what was important to them.

The EcoAP is explicitly linked to Commitment 18 of the Innovation Union (IU)[41], one of the seven Flagship Initiatives of the Europe 2020 Strategy, and complements three other Flagship Initiatives: Resource efficient Europe, Industrial policy for a globalised era, and Agenda for skills and jobs. The EcoAP will build on the IU in three ways: (1) expanding the focus of innovation policies toward eco-innovation, (2) targeting barriers specific to eco-innovation to accelerate market uptake, and (3) highlighting the role of environmental policy for economic growth. All in all the EcoAP encompasses a broad policy framework with directions for eco-innovation policy and funding.

The main challenge of the EcoAP, and eco-innovation policy in general, seems to be moving beyond eco-industries to promote widespread development, implementation and adoption of "win-win" eco-innovations—which are good for business and for the environment—across all sectors of the EU. A long-term challenge is fostering the type of eco-innovations needed for meeting ambitious environmental targets.

In 2013 the European Parliament in its Resolution on *Eco-innovation—Jobs and growth through environmental policy*[42] called "on the Commission to develop a systematic approach to eco-innovation policy, with sound framework conditions enabling a level playing field for eco-innovation in businesses and an infrastructure, that allows businesses and consumers to make sustainable choices" (EP 2013).

Indeed, mapping eco-innovation policies from across the EU, the Eco-Innovation Observatory (EIO 2012) found that while recognition of the importance of eco-innovation has been growing across the EU, it has not become a central element of government strategies or an over-arching principle guiding policy interventions. EU policies and regulations seem to be an

[39] COM(2011) 899 final .

[40] COM(2004) 38 final.

[41] COM(2010) 546 final.

[42] European Parliament Resolution of 12 December 2013 on Eco-innovation - Jobs and Growth through environmental policy - Texts adopted, P7_TA-PROV(2013)0584.

important driver of eco-innovation policy agendas in Member States, but eco-innovation itself is mostly supported by numerous, often uncoordinated policy measures. An overwhelming focus has been on providing financial support to eco-innovation through science, innovation and entrepreneurship policies without a more fundamental action to adapt overall framework conditions. The need for changes to the regulatory and institutional framework to foster eco-innovation is raised in policy debates (e.g. issues of resource taxes, removal of harmful subsidies, setting of clear and binding environmental targets), but it has not yet been followed-up by concrete actions.

At the European level the availability for funding has increased significantly over recent years. Approximately EUR 433 million were available for the promotion of eco-innovation under the EU's Competitiveness and Innovation Framework Programme and nearly EUR 200 million were earmarked to support market replication projects on eco-innovation in the LIFE+ Programme (EP 2013). Under Horizon 2020 eco-innovation is seen as one of the key enablers of the transition to a green economy, and the first Work Programme aims to address gaps in the knowledge base needed to identify the policies, methods and tools to effectively support innovators and businesses in developing and bringing to market eco-innovative solutions capable of tackling societal challenges, in particular in the Waste and Water calls. European Structural and Investment Funds support and facilitate the application of technologies (including environmental technologies and eco-innovations). Under the EU's 2014-2020 budget one of four key priorities of the European Regional Development Fund is innovation and research, including eco-innovation.

Beyond funding, the 2013 Parliament Resolution also "underlines the need for mainstreaming the eco-innovation concept in all policy fields, given that eco-innovation is a cross-cutting policy area; calls on the Commission and the Member States, in this connection, to encourage cooperation across ministries and policy levels and to monitor the implementation of the policies concerned on a regular basis" (EP 2013).

Currently the European Commission and Member States provide governance for eco-innovation policies with a dedicated High-Level Working Group. Other public and private actors form a Multi-Stakeholder Group, so as to enlarge the dialogue to businesses and the civil society – which are vital transmission points for eco-innovation initiatives. The Commission and Member States coordinate national and EU policies on eco-innovation, for example by identifying and exchanging information on good practices and through tools like the Eco-Innovation National Roadmaps.

Nevertheless a significant gap in the understanding of eco-innovation exists. Most Member States do not have their own explicit definition of "eco-innovation" and instead policy documents most often use related terms (e.g. environmental technologies, environmentally friendly innovation, eco-industries, etc.) (EIO 2012). The EU can play a significant role to build a shared understanding of eco-innovation, which includes a universal understanding of the eco-innovation challenge and highlights regional and sectoral differences across the EU. Such an understanding enables better informed and transparent policies. The Eco-Innovation Observatory (EIO 2013) suggestions establishing an inter-service Eco-Innovation Competence Centre, comprising relevant Directorate Generals and agencies (notably European Environment Agency, Executive Agency for Competitiveness and Innovation, Research Executive Agency) in order to create a shared understanding and guidelines underpinning different EC programmes and policy initiatives, including Horizon 2020, COSME, Cohesion Policy, etc.).

To create a broad understanding and raise awareness on the role of eco-innovation in the transition to a resource-efficient, low-carbon economy, continuous work on building a European-wide vision and setting long-term targets is necessary. To this end, an Eco-Innovation Roadmap could be developed by the Commission. Such a Roadmap could

complement the EcoAP with a shared vision, targets and milestones and set key eco-innovation priority areas for Europe, based also on the national EcoAP roadmaps (EIO 2013).

All in all eco-innovation policy has to be designed to respond to the systemic problems it is addressing. The combination of a stable eco-innovation policy framework ensuring a level playing field for eco-innovation and policy instruments creating demand for eco-innovation can offer strong incentives for "first movers" to take risks and invest in more radical forms of eco-innovation (EIO 2013). Such eco-innovations are the key to reaching a resource-efficient and circular economy model—incremental eco-innovations will "green" the current economic system, but not transform it at the scale needed to meet long-term sustainability targets. At the city level, eco-innovation showcases (e.g. path-breaking mobility solutions, urban farming, industrial symbiosis) could demonstrate successful initiatives. This is one example of the links between the upcoming crucial areas of environmental policies identified in this report (sustainable urban development and resource efficiency and circular economy). It also highlights the upcoming challenges facing European Environmental policies in this legislative period, namely moving beyond reactive policy regulations toward proactive and integrated policy setting geared toward reaching new, innovative and visionary systemic solutions.

2. CLIMATE ACTION POLICIES

KEY FINDINGS

- The EU Climate and Energy Policy Framework provides the basis for the EU's external positioning and credibility in the international climate negotiations on the 2015 agreement where expectations are high that the EU will re-engage as a leader also by providing financial support to developing countries.
- Leading by example, the EU will have to decide on how to deal with the current surpluses in the EU ETS and non-ETS sectors which risk undermining its credibility and find ways on how to avoid future surpluses. Discussions on key questions how to reform the ETS are under way and the EP is involved in this process.
- The currently observed energy saving achievements are to a large part due to the economic downturn and a related drop in the EU's energy demand. This means that energy efficiency has improved less than progress towards the target would suggest. Aiming for a higher target, such as the 40 % target the EP called for in February 2014, will both stimulate investment and economic recovery, and prevent energy consumption from snapping back after full economic recovery. Given this, a concentration on supporting complete, timely and 'good' implementation of the existing legislation at Member States level appears crucial.
- Large untapped energy saving potentials remain e.g. in the transport sector, but also for energy-related products. The upcoming revisions of the Labelling Directive and parts of the Ecodesign Directive represent a good opportunity to reduce this gap enhancing both individual and social welfare.

2.1. General framing / institutional context

Over the last two decades the European Union and in particular the European Parliament and the European Commission have recognised the climate change challenge and the potential for mutual gains of energy and climate policies with other community policies and several measures have been put in place to act on mitigating climate change.

2.2. Crucial issues in European climate policy

This chapter provides insights into key issues of European climate policy. Section one presents three issues we consider to be of major relevance: EU action in international climate policy, the EU integrated energy and climate package, and EU energy efficiency policy. The second section provides an overview on related other crucial issues.

2.2.1. EU position in international climate policy

Background

The ultimate objective of the UNFCCC "is to achieve (…) stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (UN 1992, Art 2). The Convention requires developed countries to take the lead in combating climate change. Binding emission targets for mitigating climate change for developed countries were set by the Kyoto Protocol (KP) in 1997. The EU and its (then 15) Member States committed to collectively reduce their emissions by 8 % compared to 1990 levels for the first commitment period of the Kyoto Protocol (from 2008 to 2012). This overall target was then redistributed among the Member

States, taking into account the national conditions of each Member State, such as the expectations for economic growth, the energy mix and the industrial structure[43].

The first commitment period of the KP expired in 2012. Early in 2005, discussions on new emission targets for the period after 2012 as well as on a new global climate agreement started. However, the goal of having an "agreed outcome" at the 15th Conference of the Parties (COP15) in Copenhagen, 2009 was not reached[44]. Instead, COP 15 resulted in the so-called "Copenhagen Accord", a mere political statement without the legal character of an international agreement. Subsequently, only non-binding pledges to reduce emissions, which were determined bottom-up by each country individually were made. This structure was favoured by the US, which clearly opposed a Kyoto-like structure of setting legally binding emission reduction commitments derived from a global target.

At COP 17 in Durban (2011) however, the EU was able to forge a coalition with a group of developing countries[45] and succeeded in pushing for a new negotiation mandate for a legally binding agreement. In return, the EU agreed to commit to a second commitment period of the Kyoto Protocol (Sterk et al. 2011). As a result, Parties established the Ad hoc working group on the Durban Platform for enhanced Action (ADP) and decided that it shall complete its work in 2015, allowing for the adoption at COP 21 taking place in Paris at the end of that same year.

In the ADP negotiations, the EU advocates for a "single, fair and comprehensive legally binding agreement under the Convention that is applicable to all Parties" (EU 2013, 3). The EU supports the position that the new agreement should take the form of a new Protocol under the Convention and aim at covering 100 % of all global GHG emissions with legally binding mitigation commitments for all Parties. These commitments should "represent what each Party considers is a fair and ambitious reflection of its responsibilities and capabilities" (EU 2014b, 3). Hence, the EU supports applying the principle of common but differentiated responsibilities and respective capabilities, one key principle of the Convention, in a "dynamic way" that is operational at the level of individual mitigation commitments. Parties with the greatest responsibilities and capabilities should commit to economy-wide absolute emission reduction targets, as under the Kyoto Protocol, while countries with limited responsibilities and capabilities might – as an interim – also provide other types of commitments (EU 2014). Other types of commitments may include GHG intensity targets (such as GHG emissions per GDP), deviation from business as usual or sets of policies and measures (EU 2014a).

In order to stay on track to achieve the 2 degree objective and to ensure that these commitments reflect the individual responsibilities and capabilities of the Parties, the EU advocates an international assessment phase to consider the individual and collective levels of ambition, before they are inscribed in the 2015 agreement. Similarly, the EU supports a procedure to regularly assess the commitments, allowing Parties to adjust their individual commitments to be ambitious and fair. The EU further strives for strengthening the multilateral rules based regime with clear rules for measurement, reporting and verification as well as for accounting and compliance (EU 2013).

[43] Decision 2002/358/CE.

[44] Decision 1/CP.13, Bali Action Plan, para 1.

[45] The Coalition consisted of the EU and several countries most vulnerable to the impacts of climate change, such as Least Developed Countries and Small Island Developing States.

Current action

Until now, the EU has only unveiled an emission target for the pre-2020 phase: By subscribing to the second commitment period of the Kyoto Protocol, the European Union committed to reduce emissions by 20 % by 2020 compared to 1990 levels. While this is in line with the unilateral reduction target agreed by the European Council in 2007 (see section 2.2.2 below), this target has been criticised for not being ambitious enough: Recent data shows that the EU has already in 2012 reduced its emissions by 18 % compared to 1990 levels. Hence, the EU has almost met its reduction target eight years ahead of 2020 (European Environment Agency 2013a). Without increasing its emission reduction target, the EU is currently only committing to keeping its emissions stable for the rest of the decade. This already significantly undermined the EU negotiating position at the climate conference in Doha in December 2012 (COP 19) as the EU was unable to again form a coalition with progressive developing countries (Sterk et al. 2012). A reduction of a mere 20 % by 2020 has further been criticised for not being compatible with the goal for developed countries to reduce emissions by 80-95 % in 2050 compared to 1990, as endorsed by the European Council in 2009.

All past intents to increase the 2020 target have, however, proven unsuccessful, in particular due to the opposition from individual Member States, such as Poland and Romania (EurActiv 2012a). The discussions first addressed the possibility to directly increase the 2020 target from 20 % to 30 %. The next formal possibility to tighten the reduction target is in the context of KP Parties agreement to revisit their reduction targets in 2014. In terms of an emission target for the period after 2020, the EU announced that it would come forward with its own mitigation commitment in the first quarter of 2015.

Next action

In determining the EU's mitigation commitment for the 2015 agreement, the negotiations on a new climate and energy policy framework can be expected to be of crucial relevance (see section 2.2.2 below). If these internal negotiations lead to a successful outcome, the EU will play a key role in demonstrating how to distribute a mitigation target among a large number of countries with large socio-economic differences and differing interests.

For a successful outcome of the international negotiations on the 2015 agreement, financing of climate mitigation and adaptation measures in developing countries will also be an issue of key relevance. At the Cancún conference in 2010, the EU and other developed countries committed to mobilise 100 billion US$ per year by 2020. Since then, progress in this area has been considerably slow and negotiations mainly revolved around the structure of the Green Climate Fund (GCF), a new multilateral fund that is meant to be the key institution for channelling climate finance to developing countries. These have in the past repeatedly voiced their disappointment about the lack of financial means provided by industrialised countries. With the Green Climate Fund being made fully operational at the last meeting of the GCF Board in May 2014, the question on finance pledges now looms particularly large. While Germany has pledged to contribute EUR 750 million and France announced its willingness to also contribute, the European Commission refused to contribute to the GCF, apparently due to governance issues (EurActiv 2014b).

Due to the relevance of climate finance for developing countries, a successful capitalisation of the GCF can be considered a crucial step towards the adoption of the 2015 agreement in Paris. This makes it key for the EU and its Member States to announce their pledges before the end of the first capitalisation round in November 2014.

2.2.2. EU climate and energy framework

Background

The integrated climate and energy package adopted in 2009 comprised four pieces of complementary legislation:

- The revision of the **EU emission trading directive**[46] introduced significant changes for the third phase (running from 2013 to 2020) of the EU Emissions Trading Scheme (EU ETS). The EU ETS is the EU's key climate policy instrument, covering more than 11,000 power stations and industrial plants (see section 2.3.1 below). The revision of the EU emissions trading directive inter alia introduced an EU wide cap on emissions instead of previous national caps by making auctioning of allowances the default measure for allocation (instead of free allocation).
- The **Effort Sharing Decision**[47] established binding annual greenhouse gas emission targets for those sectors not covered by the EU ETS.
- The **renewable energy directive**[48] requires that 20 % of the energy consumed within the EU by 2020 is renewable and distributes this target among the Member States.
- The **carbon capture and storage directive**[49] establishes a legal framework for the geological storage of CO_2.

With these targets expiring in 2020 (with the exception of the cap set for the EU ETS), discussions on how to further develop EU's climate and energy policies after 2020 have been initiated. In 2011, the Commission launched three initiatives related to the long-term perspective.

i. Roadmap for moving to a competitive low carbon economy in 2050"[50]

The cross-sectoral roadmap was presented in February 2011. Building on a comprehensive global and EU modelling and scenario analysis, the 2050 Roadmap outlines cost effective milestones towards meeting the target of a reduction of at least 80 % by 2050. One of these milestones is a domestic reduction of GHG in the order of 40 % by 2030. The Roadmap further comprises transition pathways for several key sectors (including: power, transport, building, industry and agriculture).

In addition to the cross sectoral roadmap on a low carbon economy the Commission further adopted two sector specific roadmaps:

ii. Energy Roadmap 2050[51]

The Energy Roadmap 2050 shows several pathways towards a low-carbon energy system by 2050 while ensuring security of energy supply and competitiveness. The pathways are to assist in the identification of future areas of action. The roadmap indicates that a decarbonised energy system in 2050 is possible and that it can be less costly than current policies in the long run.

[46] Directive 2009/29/EC.
[47] Decision No 406/2009/EC.
[48] Directive 2009/28/EC.
[49] Directive 2009/31/EC.
[50] COM(2011) 112 final.
[51] COM(2011) 885 final.

iii. White Paper Roadmap to a Single European Transport Area[52]

The Transport White Paper focussed on solutions for transforming the transport sector in order to reduce its emissions by at least 60 % by 2050.

The cross-sectoral 2050 Roadmap was discussed by the Council of the EU in summer 2011 but the Council was unable to endorse the roadmap, mainly due to a reference to a possible 25 % GHG emission reduction by 2020, over which Poland and other Member States were concerned. The Council discussed the Roadmap at a second occasion in March 2012, but unanimous adoption was again not possible since Poland opposed any mention of milestones towards the 2050 targets GHG reduction target of 80-95 % (ENDS Europe 2011; ENDS Europe 2012; EurActiv 2012b). However, the Council's presidency conclusions called for presenting timely and cost-effective policy proposals to meet the proposed emissions reductions for the period to 2030. Similarly, the EP invited the Commission to bring forward the measures necessary to achieve the 2030 objectives.

Current action

Building on these previous roadmaps and proposals, the Commission in 2013 published a "**Green Paper on the 2030 framework for climate and energy policies"**[53]. Member States, other EU bodies and stakeholders provided feedback in a subsequent consultation process. The Commission proposed **"A policy framework for climate and energy in the period from 2020 to 2030"**[54] on 22 January 2014.

In terms of targets the 2030 framework comprises a GHG reduction target of 40 % (domestic) by 2030 compared to 1990 levels and an increase of the renewable energy share of at least 27 %. In contrast to the 20-20-20 targets of 2007 the Commission has not included a specific target for energy efficiency but pointed at the review of the Energy Efficiency Directive. As a result of the latter, in July 2014 the Commission proposed to add a target of 30 % of primary energy savings relative to the baseline projection from 2007 for the year 2030. The 2030 framework is currently being discussed by the European Council. In its meeting on 27 June 2014, the European Council reiterated its willingness to take a final decision on the new climate and energy policy framework no later than October 2014 and stressed that all efforts will be made in order to meet this deadline (European Council 2014).

The EP in its Resolution of 5 February 2014 regretted that the Framework of the Commission "is short-sighted and unambitious on a number of levels, specifically as regards the lack of national targets for renewable energy and of any meaningful new action to incentivise energy efficiency"[55]. It also insisted that any legal proposal should be based on full codecision between the EP and the Council.

Next action

While there seems to be a general consensus that the EU should adopt a GHG emission target for 2030, the discussions revolve around the number of additional targets and their nature as well as the question whether the negotiations shall (again) result in a package of decisions or if decisions should be taken sequentially.

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[52] COM(2011) 144 final.

[53] COM(2013) 169 final.

[54] COM(2014) 15 final.

[55] European Parliament Resolution of 5 February 2014 on a 2030 framework for climate and energy policies - Texts adopted, P7_TA(2014)0094 .

i. Number of targets

One issue of contention relates to the question of whether an emission reduction target should be complemented by specific targets for renewable energy and/or energy efficiency or even sectoral targets. The group of countries in favour of setting a GHG reduction target was originally led by the United Kingdom, who favoured a so called "technology neutral" approach, allowing for a broad range of measures – including nuclear energy and carbon capture and storage – to be used (Geden and Fischer 2014). However, in March the UK has also agreed on accepting a renewables target. Two countries (Ireland and Austria) favour the combination of a GHG emissions reduction target with a renewable energy target, mainly pointing at the non-carbon benefits provided by renewable energies. Several member states, among them the Ministers of the Green Growth Group[56] (Green Growth Group 2014), have expressed their preference for maintaining the current structure with three targets. Similarly, the EP has adopted a resolution calling for three binding targets in February 2014[57]. Draft Council Conclusions[58] for the October meeting, which were leaked at the beginning of September, indicate that the threefold structure might be maintained, as the text includes a GHG emissions target, a renewables target and an energy efficiency *goal (Flynn 2014a).*

ii. Nature of GHG target

Discussions also relate to the very nature of the emission reduction target as well as to the design of the other targets. One key question is the target level of the GHG emission reductions: In its proposal for a new EU framework, the Commission put forward a reduction of 40 % by the year 2030. This value has also been supported by the Ministers of the Green Growth Group (Green Growth Group 2014). The final level of ambition will, however, not only be determined by the target, but also whether it will be met through domestic action only or if emission reductions achieved outside the EU (offsets) can also be used. Another open point is the relationship between EU's target and the progress in the UNFCCC negotiations on a global climate deal: While some countries, such as those of the Green Growth Group, argue in favour of the target to be set unilaterally, others, such as Poland, Slovakia, Hungary, the Czech Republic and Romania, want the GHG target to be conditional, making it dependent on the proposals put forward by other large GHG emitters (Geden and Fischer 2014). The legal status of the GHG reduction target is another point of contention: Some countries, such as Denmark, France, UK and Spain, call for a legally binding target while others (Cyprus and Lithuania) favour an indicative (political) target (Meyer-Ohlendorf et al. 2014).

iii. Implementation of targets

Ultimately, the question about how these targets are to be implemented will be crucial for finding political agreement.

One open question relates to the effort sharing among Member States in those sectors not covered by the ETS. In this regard, the leaked draft council conclusions propose a distribution of the non-ETS target according to the Member States' GDP and level of emissions, resulting in individual emission reduction targets ranging from -1 % to -40 % compared to 2005 levels. Regarding the question on how the EU ETS allowances will be

[56] The group includes Belgium, Denmark, Estonia, Finland, France, Germany, Italy, the Netherlands, Portugal, Slovenia, Spain, Sweden and the United Kingdom.

[57] European Parliament Resolution of 5 February 2014 on a 2030 framework for climate and energy policies - Texts adopted, P7_TA(2014)0094.

[58] The leaked draft Council Conclusions can be downloaded using the following link: http://www.endseurope.com/docs/140902a.pdf.

auctioned, the draft proposes a quota of 10-12 % of the allowances to be distributed among the low income Member States, in order to reflect their limited investment capacity, while 2 % may be distributed on the basis of the Effort Sharing Decision. The draft further proposes the installation of a fund – the "Modernisation Fund" – aimed at helping Member States with particularly low GDP per capita (Flynn 2014a).

Both instruments, the EU ETS and the Effort Sharing Decision suffer from significant surpluses stemming from the EU's climate target of 20 % by 2020. The question on how to address these surpluses will be of major relevance, since banking of emission allowances from this period would significantly undermine efforts in achieving the EU's reduction target. Both instruments will be treated in more detail in section 2.3 below.

Since the final decision on the targets will be taken by the European Council, the European Parliament can be expected to only have a consulting role in this process. However, through voicing its position the EP can also indirectly influence the final outcome. A more direct influence is possible through decisions related to the design of individual instruments, such as the EU-ETS. Here the EP is involved through the codecision procedure (Geden and Fischer 2014).

2.2.3. EU energy efficiency policy

Background

i. Rationale for EU energy efficiency policy

Energy efficiency is a crucial building block in the transformation process towards a decarbonised, sustainable economy and is addressing four key political challenges at the same time: climate protection, energy security, energy affordability, and competitiveness of European industry. It is also the most cost-effective and fastest way to reduce the EU's energy import dependence and GHG emissions, while simultaneously creating economic stimulus through increased public and private investment, as well as positive employment and competitiveness effects. These multiple benefits along with strong remaining barriers[59] hindering energy efficiency uptake have pushed energy efficiency policy further and further up the EU's energy policy agenda in the last decade. Growing political consensus on the importance of energy efficiency improvement has ultimately led to the adoption of the indicative target of 20 % energy saving by 2020 (as part of the so-called 20-20-20 targets mentioned above) and a number of directives and regulations to achieve this target.

ii. Relevant strategic documents

In the last 15 years, EU energy efficiency policy has been guided mainly by the energy efficiency (action) plans. These documents tabled by the Commission outline strategies and propose concrete measures for achieving the EU's cost-effective energy saving potential. A first energy efficiency action plan came out in April 2000[60]. It was followed by another in 2006[61], and then an energy efficiency plan (EEP)[62] in March 2011. The latter was translated into legislation in the form of the Energy Efficiency Directive (EED)[63] in late 2012.

[59] Typical obstacles to energy efficiency include financial barriers (e.g. high upfront costs), technical barriers (e.g. performance uncertainties), information barriers (e.g. lack of information on costs and benefits of energy efficiency measures), market failures (e.g. split incentives), and regulatory barriers (e.g. energy price regulation and tariff structures that discourage energy efficiency investments).

[60] COM(2000) 247 final.

[61] COM(2006) 545 final.

[62] COM(2011) 109 final.

[63] Directive 2012/27/EU.

In July 2014, the Commission released its most recent strategic communication on energy efficiency[64], in which it assesses progress towards the 2020 energy efficiency target and proposes a new 30 % target for 2030.

Current action

i. Current legislative framework

With the adoption of the EED the EU's energy efficiency policy has been significantly strengthened. In particular noteworthy are the EED's explicit role in achieving the (non-binding) 20 % target (Art. 1, EED) and the first-time introduction of a binding target at member state level: between 2014 and 2020, at least 1.5 % final energy per year must be saved by way of energy efficiency obligations or other measures (Art. 7, EED).

Apart from the EED, which establishes the overall framework of measures for improving energy efficiency in Europe, EU energy efficiency legislation is complemented by minimum energy performance standards, energy performance certification and further requirements for buildings as laid down in the Energy Performance of Buildings Directive (EPBD)[65], requirements to implement minimum standards and labelling for energy-related products (Ecodesign Directive[66] and Energy Labelling Directive[67]), as well as several transport-related directives and regulations (see section on road transport in chapter 3 below). Further relevant EU policies that, albeit not focussing on energy efficiency directly or exclusively, provide incentives for energy efficiency improvement include the EU ETS, the Industrial Emissions Directive and the Energy Taxation Directive, with the latter, however, being outdated and due for revision (EEA 2013)[68].

ii. State of play of implementation of energy efficiency legislation

The EED was due for transposition in June 2014. Yet, while the 2014 National Energy Efficiency Action Plans (NEEAPs)[69] indicate good progress and a strengthening of national energy efficiency policy frameworks, still only five Member States had reported full transposition by July 2014. As regards the EPBD, nine Member States still had not fully transposed the Directive as at July 2014, i.e. two years after the deadline[70].

Analysis conducted in 2013 by the European Environment Agency found that only four Member States (Bulgaria, Denmark, France and Germany) were making good progress in reducing final energy use and primary energy intensity through well-balanced policy packages in all relevant sectors. In most other Member States, however, the current policies had not been sufficiently implemented and/or enforced, and gaps remained in terms of sectorial coverage (EEA 2013).

iii. Progress towards achieving 20 % energy efficiency target

Back in 2009/2010, analysis showed that the EU was going to miss the 20 % target by more

[64] COM(2014) 520 final.

[65] Directive 2010/31/EU.

[66] Directive 2009/125/EU.

[67] Directive 2010/30/EU.

[68] A more detailed but still concise overview of recent evolutions in EU energy efficiency policy can be found in EEA 2013b, p. 91.

[69] The EED (as already did its predecessor, the Energy Services Directive) requires Member States to submit every 3 years a comprehensive plan outlining implemented and planned energy efficiency measures and including detailed calculations of achieved and expected energy savings.

[70] COM(2014) 520 final.

than half – a fact that ultimately led to the proposal for and later agreement on the EED (ECEEE 2013). More recent projections (Coalition for Energy Savings 2013; European Environment Agency 2013a) indicated that the EED was indeed effective in reducing this gap, but that the target would still be missed by about 3-5 %. The latest available analysis, the Commission's July 2014 communication on energy efficiency, estimates that 18-19 % of the envisaged savings will be achieved in 2020 and that full target attainment will be possible if Member States increase their efforts to fully implement the existing legislation[71]. It is, however, essential to note that these improved projections are in large part due to the economic crisis which reduced energy demand and facilitated target achievement in this way.

Next action

While the January 2014 Commission proposal on a 2030 climate and energy policy framework - in view of the pending mid-2014 EED review - did not specify a 2030 target for energy efficiency, it nevertheless stated that energy savings of 25 % would be needed to achieve the proposed GHG reduction target of 40 % in 2030[72]. However, backed by severe energy security concerns arising from the Ukraine crisis, the Commission ended up proposing a more ambitious energy efficiency target of 30 % for 2030 in its July 2014 energy efficiency communication[73]. Several NGOs reacted by criticising the proposed 30 % target as being too low and disregarding the full benefits of energy efficiency (Flynn 2014d). Likewise, the European Parliament had already in February issued a resolution calling for three mutually supportive targets for 2030 including a binding 40 % target for energy efficiency to be implemented through individual national targets[74]. Heads of state and government are now to decide at the upcoming Council meeting on 23/24 October 2014 about the level of ambition, nature and legal status of the 2030 energy efficiency target. As mentioned above, the leaked draft Council Conclusions on the 2030 framework indicate that the proposed structure with three separate targets will likely be supported. While the leaked document deals only very briefly with energy efficiency as a stand-alone policy topic, energy saving nevertheless has an important role in the context of the pressing energy security issue: the Council requests analysis from the Commission as to where large untapped energy efficiency potentials remain and how to address these, so that Member States can focus their policy efforts on these sectors (Flynn 2014b).

2.2.4. Key issues in next legislative period

In the following, a brief summary of current legislative issues will be given to provide the reader with an overview of the tasks in the next five years. As can be seen from section 2.2.2 above, the debate on the EU's future climate and energy policy framework 2030 has an overarching character. Discussions revolve around targets (for GHG emissions, renewable energies and energy efficiency) as well as concrete measures (reform of the EU ETS, Effort Sharing decision) and further touch upon several complementary policies in other areas, such as transport, agriculture, Carbon Capture and Storage (CCS), and adaptation measures. Subsequently, some of these and other key issues will be briefly presented.

2.2.5. Reforming the EU ETS

Covering around 45 % of the EU's greenhouse gas (GHG) emissions, the European Union Emissions Trading Scheme (EU ETS) is a key instrument of EU climate policy. As a so called

[71] COM(2014) 520 final, p. 4.

[72] COM(2014) 15 final.

[73] COM(2014) 520 final.

[74] European Parliament Resolution of 5 February 2014 on a 2030 framework for climate and energy policies - Texts adopted, P7_TA(2014)0094.

cap-and-trade system, the EU ETS puts a cap on the total amount of certain GHGs that can be emitted by those companies and installations covered by the system. Below this overall limit, participants of the EU ETS can trade emission allowances among each other. The system is currently suffering from a massive oversupply of allowances, inter alia caused by a significant fall of emissions in the wake of the financial crisis. With this oversupply there is currently no price signal that could trigger climate change mitigation activities among participants, potentially making it necessary to implement much more expensive emission reduction activities at a later point in time.

As a first temporary measure, an amendment to the EU ETS Auctioning Regulation was agreed, allowing the postponement of the auctioning of 900 million emission allowances until 2019-2020[75]. However, additional measures will be needed to correct the supply-demand imbalance in the mid and long-term. Therefore in January 2014, the Commission proposed to establish a market stability reserve that would adjust the number of allowances to be auctioned according to pre-defined rules, thereby acting as a surplus regulation mechanism[76]. Against the backdrop of the 2030 framework for climate and energy policy, the Commission further made a proposal to tighten the linear reduction factor, by which the ETS cap is reduced annually, from currently 1.74 % to 2.2 % per year from 2021 onwards.

The legislative proposal for a market stability reserve still must be adopted by the European Parliament and the Council. One of the key questions will be whether it should be implemented before or after 2020 (Flynn 2014c). Similarly, an agreement on adjusting the linear reduction factor is still outstanding.

2.2.6. Effort-sharing decision

The effort sharing decision (ESD) agreed as part of the integrated energy and climate package establishes a binding GHG emission reduction of 10 % compared to 2005 levels in sectors not covered by the EU ETS, such as transport, buildings and agriculture. This target is distributed among Member States according to their relative wealth in terms of GDP per capita. In 2012, the emissions from sectors not covered by the EU ETS were already 10 % below 2005 levels, meaning that the target that was meant to be achieved by 2020 has already been met (Meyer-Ohlendorf et al. 2014). This low target together with the possibility to use external credits from the Kyoto flexible mechanisms (CDM and JI) does not incentivise additional emission reductions, leaving significant (low-cost) GHG emissions reduction potential untapped.

The ESD is currently being discussed under the 2030 climate and energy policy framework. Potential measures for strengthening the ESD include setting a more stringent reduction target (such as -30 % by 2030 as proposed by the Commission), the use of new criteria for distributing the overall target among Member States and a reduction in using offsets and carrying forward of emission reductions (Meyer-Ohlendorf et al. 2014).

However, the leaked draft Council Conclusions indicate that the distribution of the overall target among Member States according to their GDP might be maintained and that Member States may further be provided with more flexibility in achieving the non-ETS targets through inter alia increased carry forward of overachievements (Flynn 2014b). The debate on how to distribute the non-ETS reduction target among the Member States can be expected to be controversial.

[75] Commission Regulation (EU) No 176/2014, also known as "backloading".

[76] COM(2014) 20/2.

2.2.7. Reducing emissions from transport

The transport sector is responsible for about one quarter of EU's GHG emissions. In the following, EU policies to reduce emissions from aviation, shipping and road transport will be briefly presented.

Aviation

In order to reduce emissions from aviation, the EU in 2008 adopted legislation to include under the EU ETS all flights from and to European airports[77]. This unilateral push has raised considerable criticism from other countries, in particular from India and the USA. In reaction to this criticism and to allow the negotiations under the International Civil Aviation Organization (ICAO) to proceed in establishing global market-based measures, the requirements were suspended for flights from and to non-European countries in 2013. If the ICAO fails to agree on the measures to address emissions from aviation at the next assembly in 2016, the inclusion of foreign flights under the EU-ETS might again be of major relevance (EurActiv 2014a).

Shipping

To address emissions from shipping the EU favours a global approach under the International Maritime Organisation (IMO). In June 2013 the Commission set out a strategy to integrate EU's maritime emissions into EU climate policy[78]. It further proposed to establish a system for measuring, reporting and verifying emissions from large ships using European ports[79]. Reducing these emissions such as particulate matter / black carbon or nitrogen oxides will not only address climate change, but also create significant health benefits. The proposal needs still to pass through the European Parliament and the Council.

Road Transport

Emissions from road transport are addressed through regulation on vans, heavy duty vehicles and passenger cars. To reduce CO_2-emissions from cars - responsible for about 12 per cent of the total CO_2 emission in the EU - the EU set mandatory CO_2-fleet emission limits. The legislation was adopted in 2009[80]. The fleet of vehicles sold may not exceed the limit of 130g CO_2 per kilometre in 2015 (tank to wheel emissions[81]) with gradual phasing-in since 2012. There is a similar regulation applying to light commercial vehicles[82]. Vehicles emitting below 50 g CO_2 per kilometres (such as plug-in hybrid and electric vehicles) are granted "super credits", i.e. these vehicles are counted multiple times.

In February 2014, the target of 95g CO_2 was approved for 2020, and will be fully phased in by 2021[83]. For 2025, the Commission suggested a target in the range of 68 to 75 g CO_2/km[84]. The impact of the regulation on overall CO_2 emission might be reduced by increased utilisation of flexibilities in the procedure used to determine the emission data of each new vehicle (TNO 2012). An adaptation of the EU's fuel test cycle is therefore also on the agenda. The overall impact of the regulation is further affected by the share of alternatively fuelled vehicles.

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[77] Directive 2008/101/EC.

[78] COM(2013) 479 final.

[79] COM(2013) 480 final.

[80] Regulation EC No 443/2009.

[81] The term "tank to wheel" emissions refers only to those emissions stemming from the operation of the vehicle.

[82] Regulation EC No. 510/2011.

[83] Regulation EU No 333/2014.

[84] COM(2012) 394 final.

2.2.8. Biofuels

In 2009, the EU set a target of 10 % for renewable transport fuels in the Renewable Energy Directive[85]. At the same time, with the fuel quality directive[86], a mandatory target to achieve a 6 % reduction in the GHG intensity of fuels used in road transport and non-road mobile machinery was introduced. Since research has shown that the implementation of these targets has resulted in significant adverse ecological and environmental impacts, the Commission proposed in October 2012 to cap the biofuel target at 5 %[87]. In September 2013 the EP supported a 6 % limit and called for indirect land-use change (ILUC) impacts of biofuels to be accounted for under the fuel quality directive.

After the Council was unable to agree on a limit for biofuels in December 2013 political agreement on a 7 % cap was finally reached in June 2014 (ENDS Europe 2014). The Council Common Position is awaited for November. The European Parliament is currently preparing for its second reading.

2.2.9. Energy Efficiency Policy

Apart from the crucial decision on the level of ambition and legal nature of a 2030 target for energy efficiency, there are a number of further topics on the EU's energy efficiency policy agenda in the coming years:

Next steps following the EED review

Since the Commission found that Member States are very close to being on track to achieve the envisaged energy savings in 2020, it can be expected that no new EED measures will be proposed for now. Even though these savings are not all due to improved energy efficiency, this also makes sense in light of the fact that an (in large parts) ambitious and comprehensive policy framework for energy efficiency is already in place. The EU's main short-term focus should therefore rather be on supporting complete, timely and 'good' implementation of the existing EED requirements at Member States level through close co-operation with Member States and thorough monitoring of progress. This also links to the implementation of other Directives (such as the Energy Performance of Buildings Directive, cf. below) and the use of the structural funds, of which now a minimum percentage must be invested in sustainable energy, including energy efficiency (from 12 % for less developed regions to 20 % for more developed regions).

In a mid-term perspective, the next EED review is due in 2017, as is the fourth round of NEEAPs.

Revision of Energy Labelling Directive and certain aspects of Ecodesign Directive

Recently, DG Energy commissioned an evaluation of the effectiveness of (parts of) the abovementioned directives to prepare their review due in 2014. The resulting study (Moelenbroek et al. 2014) found a significant number of shortcomings and respective recommendations for improving the EU's energy efficiency policy for products, thus indicating an upcoming revision of the directives. Most prominently, the label scale needs to be revised to allow for communicating higher energy efficiency levels, and a mandatory online product registration system is to be established. An expansion of the scope of products covered (e.g. to include vehicles) is also being discussed.

[85] Directive 2009/28/EC.

[86] Directive 2009/30/EC.

[87] COM(2012) 595 final.

Energy Performance of Buildings Directive implementation and review

In view of the many challenging requirements Member States have to implement and ensure compliance with at the national level, and with several countries still lacking full transposition (see above), the focus should again be on completing and improving implementation. Mutual learning between Member States as well as guidance and support provided by the Commission should continue to facilitate this process. The EPBD is due for review in 2016 at the latest.

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• Regulation EU No 510/2011	Regulation (EU) No 510/2011 of the European Parliament and of the Council of 11 May 2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO2 emissions from light-duty vehicles.
• Regulation EU No 333/2014	Regulation (EU) No 333/2014 of the European Parliament and of the Council of 11 March 2014 amending Regulation (EC) No 443/2009 to define the modalities for reaching the 2020 target to reduce CO 2 emissions from new passenger cars.

ANNEX 1: DESCRIPTIVE LIST OF FURTHER UPCOMING ISSUES AND CHALLENGES

The following table lists further issues and challenges for the next parliamentary term. As practically everything can be a potentially upcoming issue, the focus was put on issues that are currently in the pipeline and require extensive work from the EP in the upcoming years.

ISSUE	CHALLENGE(S)	REFERENCE
Environment		
Net loss of species	There is strong evidence that the implementation of biodiversity legislation needs further action. Such action is currently seen, in particular, as addressing no net loss approach to biodiversity and ecosystem services to halt biodiversity and ecosystem service loss by 2020. Some Member States (Germany and France) already have a "no net loss" objective in their policies. The next step is to integrate this concept on EU-level.	No net loss initiative http://ec.europa.eu/environment/nature/biodiversity/nnl/index_en.htm
Marine resources and fisheries	According to the letter sent by the President-elect of the European Commission, Jean-Claude Juncker, there will be a new Commissioner for Environment, Maritime Affairs and Fisheries merging the responsibilities for Environment (DG ENV) and for Maritime Affairs and Fisheries (DG MARE). It is expected that the "Green Growth" approach to environmental policy should complement a "Blue Growth" approach in the field of maritime affairs and fisheries to be "further developed by mobilising emerging and innovative industries". With regard to fisheries the President-elect expects that the new Commissioner implements the reform of the Common Fisheries Policy "to put the EU firmly on the path of a sustainable fishing sector and fishing communities". Furthermore, he should engage in "shaping international ocean governance in the UN".	Mission letter by the President-elect of the European Commission, Jean-Claude Juncker
Wildlife Crime/ trafficking	The scale of wildlife trafficking has increased considerably in the recent years (includes trade in timber, wild and marine species). This type of crime is posing dramatic impacts on biodiversity and ecosystems. The current stakeholder consultation process will provide the EC with a new review of existing policies and will propose key changes in tackling this issue.	COM(2014) 64 final
Endocrine Disruptors (EDCs)	Strong concerns about endocrine disruptive chemicals have been raised since 2012 study on the State of the Art of the Assessment of Endocrine Disruptors. The EC was expected to issue some key documents related to this issue in 2013, however the issue was pushed until 2014. The key documents would focus on review of the current and revised EDC Strategy, how to relate EDCs and REACH system and a set of Criteria to identify which chemicals to include and their risks.	http://ec.europa.eu/environment/chemicals/endocrine/index_en.htm

ISSUE	CHALLENGE(S)	REFERENCE
Environment		
Nanotechnologies	Nanotechnology has been identified as one of the key enabling technologies in Horizon 2020 and therefore as having significant innovation potential. In 2013, the EC held a consultation with intention to facilitate REACH requirements for nanomaterials to ensure that industry demonstrates safe use in the registration dossiers in accordance with the aims of REACH. In 2014, talks on the possible amendment of the REACH annexes failed to deliver key document, however the EC presented a 'non paper' describing what the proposal might look like, with a number of points that need to be addressed, making this issue of special importance in upcoming year(s).	http://ec.europa.eu/enterprise/sectors/chemicals/reach/nanomaterials/index_en.htm
Waste	The European Commission has tabled a Proposal for a directive amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment. A major challenge is to define ambitious waste management targets supporting a transition towards a Circular Economy.	COM(2014) 397 final
Sustainable Development Goals (SDGs)	The SDGs will contribute to a new international framework to succeed the Millennium Development Goals. The framework will be universal and apply to all, on the basis of a partnership between all countries, as well as with civil society and the private sector. The framework will be based on the three dimensions of sustainable development: social, environmental and economic. The Commission Communication of June 2014 "A Decent Life for All: from Vision to collective Action" describes key principles and proposes priority areas and potential targets for the years following 2015, as a contribution towards establishing a limited number of Sustainable Development Goals. The outcome will guide the EU's position in the negotiations at UN level and contribute to the preparation of the UN Secretary General's report on the post-2015 framework.	COM(2014) 335 final
Water	In 2014, the Commission published a Communication in response to the 1st citizens initiative on water and committed itself for further actions. Several such actions include implementation of the Water Blueprint, launch of an EU public consultation on the Drinking Water Directive, better water data management plans and facilitation of innovative approaches between water operators, etc. The European Commission has launched a European Innovation Partnership on Water with the aim to support and facilitate the development of innovative solutions to water related challenges. The EIP on Water is supposed to bring together all relevant stakeholders to identify the priority areas for action, to identify barriers to innovation and to propose solutions to break down these barriers.	COM(2014) 177 final http://ec.europa.eu/environment/water/innovationpartnership/index_en.htm

ISSUE	CHALLENGE(S)	REFERENCE
Environment		
Land degradation	Land resources are recognised as crucial for ecosystem services and now are subject to significant degradation. The EU Commission is working to consolidate the common elements that affect the land management in the EU and is expected to publish a communication on "Land as a resource" in 2015, which will offer guidelines pointers for further legislative activities at EU level.	http://ec.europa.eu/environment/land_use/index_en.htm
Air	Drawing on the conclusions from a general policy review, the Commission has adopted a Clean Air Policy Package in December 2013, consisting of A new Clean Air Programme for Europe with new air quality objectives for the period up to 2030, a revised National Emission Ceilings Directive with stricter national emission ceilings for the six main pollutants, and a proposal for a new Directive to reduce pollution from medium-sized combustion installations.	COM(2013) 918 final

ISSUE	CHALLENGE(S)	REFERENCE
Climate Action		
Reducing Heavy-Duty Vehicles' fuel consumption and CO2 emissions	EC announced intention to propose legislation in 2015 that would require CO2 emissions from new heavy duty vehicles (HDVs) to be certified, reported and monitored. Further future measures may include mandatory limits on CO2 emissions from newly registered HDVs and the development of modern infrastructure supporting alternative fuels for HDVs.	http://ec.europa.eu/clima/policies/transport/vehicles/heavy/index_en.htm
Working towards an international carbon market	The EU is advocating an international carbon market that is developed bottom-up through linking of several existing cap-and-trade systems. In the international climate negotiations the EU is further pushing for the establishment of a New Market Mechanism as part of the 2015 agreement.	http://ec.europa.eu/clima/policies/ets/linking/index_en.htm
Energy Security Strategy	Against the background of the political crisis in Ukraine and related concerns regarding the security of gas supply, the European Commission presented in May 2014 its European Energy Security Strategy[88], which it considers an integral part of the 2030 policy framework on climate and energy. Several of the areas set out by the strategy are not only relevant to increase energy security but are also key in terms of climate change mitigation and increasing climate change resilience. The proposal is currently being discussed by the heads of state together with the 2030 framework for climate and energy policy. A decision on measures to increase energy security is expected for October 2014.	European Energy Security Strategy (EESS) COM(2014) 330 final

[88] COM(2014) 330 final.

ISSUE	CHALLENGE(S)	REFERENCE
Climate Action		
Carbon Capture and Storage (CCS)	The directive on Carbon Capture and Storage (CCS) is the EU's regulatory framework for the capture and geological storage of carbon adopted in 2009. It is intended to reduce the risks of CO2 leakage and other adverse environmental and social effects related to the application of CCS technologies. The Commission is requested to report on the review of the directive by March 2015 and decide whether it is still an adequate regulatory framework for CCS activities. Against this backdrop, an external contractor was commissioned to evaluate the current deployment of CCS in Europe and the functioning of the CCS directive. As part of this evaluation, public stakeholder consultations were held from May to July 2014, with stakeholder workshops taking place in September. The final report is expected for December 2014. The final report is to inform the review of the CCS directive. The Commission is expected to present its report to the Parliament and Council by March 2015.	(Flynn 2014e), (Triple E, Ricardo-AEA, and TNO 2014)
SUMP-Sustainable Urban Mobility Plans	The SUMP concept is one of the cornerstones of the Urban Mobility Package (published 12/2013). With the guidelines on the development and implementation of SUMPs and the launch of European Platform on SUMPs the concept was strongly promoted by the EU in 2014. In contrast to initial plans, SUMPs are not mandatory to receive funding, but there is the ambition to link EU-funding to integrated planning	http://www.mobilityplans.eu
Adaptation to climate change	Adverse effects of climate change will be felt globally, including Europe. The EU intends to support its Member States in developing adaptation strategies and establishing respective capabilities with the Adaptation Strategy adopted in 2013. It aims at contributing to a more climate resilient Europe, improving knowledge on adaptation as well as mainstreaming adaptation into EU policies in sectors particularly vulnerable to climate change. With the EU adaptation strategy in place, the focus is now on the implementation of adaptation measures on the ground. However, not all Member States have developed a national strategy or plan for adaptation and action is further needed at other policy levels, including the regional and local level. The EU is further engaged in supporting particularly vulnerable countries in their efforts to increase their climate resilience. In this context, the role of adaptation in the 2015 climate agreement and strategies to mobilise financial and other means of implementation for adaptation will be crucial.	Adaptation Strategy, COM(2013) 216 final

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