

EU Environment and Climate Change Policies

State of play, current and future
challenges



Policy Department for Economic, Scientific and Quality of Life Policies
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Abstract

This study reviews the state of play of on-going EU environmental and climate legislation and pinpoints key challenges for the next five years. Challenges arise from the plans released by the president-elect, such as a new European Green Deal, the completion of work started in the previous term (e.g. the Regulation on a framework for sustainable finance and the completion of the multiannual finance framework), by reviews of legislation foreseen for the next term and the need for action where indicators show that current EU environment targets may not be achieved.

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LIST OF ABBREVIATIONS

AECMs	Agri-environment-climate measures
BGD	Bee Guidance Document
BP	Biocidal Products
CAP	Common Agricultural Policy
CBD	Convention on Biological Diversity
CFP	Common Fisheries Policy
CLP	Classification, Labelling and Packaging of substances and mixtures
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
EAP	Environment Action Programme
EC	European Commission
ECA	European Court of Auditors
ECHA	European Chemicals Agency
EcoAP	Eco-innovation Action Plan
EDCs	Endocrine disrupting chemicals
EEA	European Environment Agency
EFSA	European Food Safety Authority
ELV	End-of-life vehicles
EMAS	Eco-management and Audit Scheme
ESG	Environmental, social and governance
EU	European Union
EU ETS	EU Emissions Trading System
EUEB	EU Ecolabelling Board
EuP	Energy-using products

EU SDS	EU Sustainable Development Strategy
GHG	Greenhouse Gas
GMO	Genetically modified organism
GPP	Green Public Procurement
IAS	Invasive Alien Species
ICAO	International Civil Aviation Organization
LULUCF	Land Use, Land Use Change and Forestry
MAES	Mapping and assessment of ecosystems and their services
MFF	Multiannual Financial Framework
MSs	Member States
MSFD	Marine Strategy Framework Directive
MSR	Market Stability Reserve
NDC	Nationally Determined Contribution
NECP	National Energy and Climate Plan
NGO	Non Governmental Organization
NOx	Nitrogen oxides
PCBs	Polychlorinated biphenyls polychlorinated terphenyls (PCTs)
PEST	Special committee on the Union's authorisation procedure for pesticides
PIC	Prior Informed Consent
PPP	Plant Protection Products
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation
REFIT	Regulatory Fitness and Performance Programme
RoHS	Restriction of hazardous substances
SCP	Sustainable Consumption and Production

SCoPAFF	Standing Committee on Plants, Animals, Food and Feed
SD	Sustainable Development
SDG	Sustainable Development Goals
UNFCCC	United Nations Framework Convention on Climate Change
WFD	Water Framework Directive
WTO	World Trade Organization

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EXECUTIVE SUMMARY

Part 1 of this study summarizes the status of EU legislation, major EU targets and strategies in the area of environment and climate change policies, with a particular focus on the most recent actions adopted. The 7th EAP established three thematic priorities (protection and enhancement of the natural capital, establishment of a resource-efficient, green low-carbon economy and protecting the citizens' health and well-being). These priorities will continue to be very relevant and it is important to continue EU policy implementation in these areas without disruption. A considerable number of environmental and climate targets and strategies up to 2030 have already been adopted. However, the progress in the EU is not always on track with these targets. Compliance of Member States (MSs) and enforcement of environmental legislation was an important task in the past and needs to be tackled more decisively in the subsequent period.

A significant amount of new or revised legislation has been finalized in the past legislative period up to 2019. As part of the implementation of the Circular Economy Action Plan, a comprehensive package of six Directives in the waste sector was adopted, a new strategy for plastics in the circular economy and a monitoring framework. Comprehensive legislative packages have also been adopted under the title of the 'Clean energy for all Europeans package' with updated legislation related to energy efficiency, renewables and energy performance of buildings. The '2030 Climate and Energy Framework' includes targets for 2030, a revised EU ETS Directive, an Effort Sharing Regulation with Member States' targets for the non-ETS sector, a regulation for the land use, land-use change and forestry (LULUCF) sector and a new governance regulation integrating climate and energy. Related to transport, regulations on CO₂ emissions of new cars and new light commercial vehicles and a new regulation on CO₂ emissions and fuel efficiency of heavy-duty vehicles were updated. As regards to chemicals, the regulation on persistent organic chemicals was revised. In the area of air quality, EU legislators responded to the use of software to manipulate NO_x emissions by car manufacturers and worked on improvements related to air pollution from ships and non-road mobile machinery. A new area of work started on a package of legislative measures implementing an EU strategy on sustainable finance.

Part 2 addresses upcoming challenges and crucial issues for the next legislative period. Crucial issues are those areas in which legislative work from the previous legislative period still needs to be completed. This includes, for example, the framework to facilitate sustainable investment where the in the Council is ongoing and the adoption of the post-2020 Multiannual Financial Framework (MFF). Upcoming challenges also include areas in which previous programmes need to be replaced by updated priorities and strategies such as the 8th EAP. In relation to the EAP, sustainable development and a Union strategy for non-toxic environment, resolutions of the European Parliament (EP) have already identified the need for future action.

Legislation already scheduled for revision are: several parts of the water legislation, the Ecolabel Regulation, the Ambient Air Quality Directive, action on endocrine disrupters and the combination effects of chemicals and an improved pesticide authorization system as well as action to tackle microplastics in products.

In addition, there are areas in which significant gaps in implementation, enforcement, financing or policy integration are threatening the achievement of EU targets, such as the prevention of biodiversity loss, further reduction of air pollutants (in particular NO_x and particulate matter in urban areas), compliance with waste legislation or the phase-out of subsidies for fossil fuels.

A crucial decision needs to be taken on the increase of the EU GHG mitigation target for 2030 from at least 40% to 55% compared to 1990 as proposed by the EP and the target of net zero emissions by 2050. A more ambitious 2030 climate target will require updated implementing legislation such as for the EU ETS or the Effort Sharing Regulation. After the agreement of the International Civil Aviation Organization (ICAO) on a basket of measures to keep the international aviation sector's growth carbon neutral from 2020, which includes a Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), the EU has to evaluate and decide whether CORSIA is sufficient to address GHG emissions from international aviation or whether the Commission will take additional action. Upcoming challenges related to GHG emissions from shipping are: a decision on whether to include maritime transport in the EU ETS and the further development of the MRV regulation towards a policy for reducing operational GHG emissions of existing ships. MSs need to present their final National Energy and Climate Plans (NECPs) for 2030 at the end of 2019, which will also trigger discussions on actions related to GHG mitigation.

Part 2 also addresses priorities outlined by Commission President-elect von der Leyen such as a European Green Deal, a New Circular Economy Action Plan focusing on sustainable resource use, especially in resource-intensive and high-impact sectors such as textiles and construction, a Biodiversity Strategy for 2030, or more ambitious targets on GHG emission reduction).

At international level, the Conference of the Parties under the Convention on Biological Diversity (CBD) in 2020 in China and the Conference of the Parties under the UN Framework Convention on Climate Change (UNFCCC) in 2019 in Chile will present important opportunities to tackle global challenges and strengthen the multilateral environmental governance framework.

STUDY ON ENVIRONMENT AND CLIMATE CHANGE POLICIES

KEY FINDINGS

- This study reviews the state of play of on-going EU environmental and climate legislation and analyses key challenges for the next five years.
- Key areas of EU legislation completed or substantially advanced in the past legislative term include inter alia the Circular Economy Action Plan with a substantial revision of legislation on waste and a new strategy on plastics, improvements in the monitoring of air pollutant emissions after the discovery of deployment of manipulating software by car manufacturers or the climate and energy framework for the 2021-2030 period with a revision of the EU-ETS Directive, the adoption of the Effort Sharing Regulation, the LULUCF Regulation and the Governance Regulation.
- The thematic priorities established in the 7th EAP continue to be of high priority and several of the key thematic elements have been included in the pledge for a European Green Deal recently announced by President-elect von der Leyen, for example more ambitious GHG reduction targets for 2030 and 2050, a Biodiversity Strategy for 2030, a zero-pollution ambition policy for air quality, water or chemicals or a new a Circular Economy Action Plan.
- Other specific priorities in the area of environment highlighted in the programme of president-elect von der Leyen are micropoplastics, a 'Farm to Fork' strategy, the reformed CFP and action against illegal fishing and subsidies that contribute to overfishing, while in the climate area she proposes a European Climate Law, a new European Climate Pact, a Carbon Border Tax and the review of the Energy Taxation Directive.
- Progress in the EU is not always on track with its environment targets. Gaps in implementation exist in relation to municipal waste recycling, the release of microplastics in the environment or the status of urban air quality and water quality. The loss of biodiversity continues as well. The EU is likely to miss its key 2030 climate and energy targets unless governments implement further action. Subsidies for fossil fuels have not been reduced despite related commitments to do so.
- Some legislative files could not be completed in the previous term. The most important discussion at the beginning of the new term will be the finalisation of the multiannual finance framework backing the planned initiatives with financial resources. This is also linked with the adoption of a new green architecture of the CAP. The work on a revised Drinking Water Directive and on a Regulation on Minimum Requirements for the Re-use of Wastewater are also pending. Another important area for completion is the proposal for a regulation on the establishment of a framework to facilitate sustainable investment, revision of state aid guidance. In relation to GHG mitigation, the EU has to decide to what extent it will recognise the Carbon Offsetting scheme CORSIA for aviation and also tackle potential inclusion of Maritime Transport into the EU ETS.
- The SD strategy also needs to be continued and the EP has requested a comprehensive EU SD strategy with detailed timelines up to 2030, objectives and concrete measures as well as concrete proposals for institutional structures and a governance framework.
- Fitness checks or reviews of legislation foreseen in the new legislative term include the Directives on Energy Taxation, Ambient Air Quality, Water Framework, Urban Waste Water Treatment and Ecodesign, as well as the Regulations related to CO₂ emission performance by vehicles.

1. SUMMARY OF CURRENT LEGISLATIVE DEVELOPMENTS AND EU STRATEGIC DOCUMENTS

1.1. Legal basis and principles

Articles 11 and 191 to 193 of the Treaty on the Functioning of the European Union (TFEU) are the foundation of the EU's environment policy. Article 11 requires that environmental protection must be integrated into the Union's policies and activities, in particular with a view to promoting sustainable development. Article 191 implements the key legal principles: precaution, prevention and rectifying pollution at source and the 'polluter pays' principle which guide the EU environmental policy. These Articles provide the EU with competences to act in all areas of environment policy, such as air quality and water, waste management, climate change or sustainable development. Article 192(2) requires unanimity in the Council in the fields of fiscal provisions, town and country planning, land use, management of water resources, the choice of energy sources and structure of energy supply. The Treaty of Lisbon introduced competences for the EU to conclude international environmental agreements.

The integration of environmental concerns into other EU policy areas has become an important concept in European environment politics. In recent years, environmental policy integration has made significant progress, for instance in the field of energy policy, as reflected in the EU's climate and energy package with combined energy and climate targets or the integration of environmental concerns into the Common Agricultural Policy (CAP). Likewise, it has become evident that action to tackle climate change, halt biodiversity loss and safeguard environmental quality, as well as an overhaul of current consumption and production patterns should also contribute to reduce 'inequalities and social disparities' and to 'safeguarding and bolstering social cohesion and securing social and political stability in and between MSs in the EU'.¹

1.2. EU Environment Policies

1.2.1. Overarching policies

a. 7th Environmental Action Programme

The 7thEAP established three thematic priorities for the period until 2020²:

- 'To protect, conserve and enhance the Union's natural capital';
- 'To turn the Union into a resource-efficient, green and competitive low-carbon economy'; and
- 'To safeguard the Union's citizens from environment-related pressures and risks to health and well-being'.

In addition, it includes four priority objectives for an enabling framework:

- 'To maximise the benefits of Union environment legislation by improving implementation';
- 'To improve the knowledge and evidence base for Union environment policy';
- 'To secure investment for environment and climate policy and address environmental externalities';

¹ [COM/2019/22 final of 30 January 2019](#).

² [Decision \(EU\) No 1386/2013](#) OJ L 354, 28.12.2013, pp. 171–200.

- 'To improve environmental integration and policy coherence'.

Two horizontal priorities address the objectives 'to make cities more sustainable' and 'to address international environmental and climate challenges more effectively.' The 7th EAP builds on policy initiatives in the Europe 2020 strategy and other strategies in thematic areas, such as the 'climate and energy package', the 'Roadmap for moving to a low-carbon economy in 2050', the 'EU Biodiversity Strategy to 2020', the 'Roadmap to a Resource-efficient Europe', the 'Innovation Union Flagship Initiative' and the 'European Union Strategy for Sustainable Development'. These strategies include specific targets for 2020 as described below in the respective thematic sections. In 2018 and 2019, the Commission carried out an evaluation of the 7th EAP, based inter alia on the European Environment Agency (EEA)'s report on the state of the environment and on a consultation with interested stakeholders.³ Another cross-cutting activity was the fitness check on reporting and monitoring of EU environment policy which resulted in Regulation (EU) 2019/1010⁴ on the alignment of reporting obligations in the field of legislation to the environment adopted in June 2019.

b. Sustainable Development

The first sustainable development strategy in the EU was released in 2001.⁵ In 2008, the Commission proposed a package of actions and proposals on Sustainable Consumption and Production (SCP) and a Sustainable Industrial Policy Action Plan.⁶ These proposals introduced Life Cycle Thinking into European policies. The SCP Action Plan led to initiatives in a number of areas, which are presented below. The review of the Sustainable Development Strategy for the EU (EU SDS) in 2009 focused on mainstreaming sustainable development into EU policies.⁷ A key example of this mainstreaming approach is the EU's Europe 2020 strategy for smart, sustainable and inclusive growth⁸ published in 2010. The Commission publishes a bi-annual monitoring report on sustainable development and Eurostat developed Sustainable Development Indicators together with MSs in order to track implementation of the goals.

In 2015, the United Nations General Assembly formally adopted the 2030 Agenda for Sustainable Development, along with a set of 17 Sustainable Development Goals (SDGs) and 169 associated targets. In November 2016, the EU adopted a sustainable development package and presented its next steps for a sustainable European future in response to the 2030 Agenda and the SDGs.⁹ As part of this package, the EU has committed itself to 'fully integrat[ing] the SDGs in the European policy framework and current Commission priorities.'¹⁰ In January 2019, the Commission published a reflection paper 'Towards a Sustainable Europe in 2030'¹¹, which proposed three scenarios for the future EU policy (cf. Chapter 2.1.2).

³ [COM/2019/233 final of 15 May 2019](#) Report on the evaluation of the 7th EAP.

⁴ [OJ L 170, 25.6.2019, pp. 115–127.](#)

⁵ [COM/2001/0264 final of 15 May 2001](#) - A European Union Strategy for Sustainable Development.

⁶ [COM/2008/0397 final of 16 July 2008.](#)

⁷ [COM/2009/0400 final of 24 July 2009.](#)

⁸ [COM/2010/2020 final of 3 March 2010.](#)

⁹ [COM/2016/0739 final of 22 November 2016](#), European Commission, [JOIN/2016/052 final of 22 November 2016](#) 'A renewed partnership with the countries of Africa, the Caribbean and the Pacific'.

¹⁰ COM/2016/0739 final of 22 November 2016, p. 3.

¹¹ [COM/2019/22 final of 30 January 2019.](#)

1.2.2. Sustainable consumption and production policies

a. Corporate Social Responsibility

In 2011, the Commission renewed its earlier “Corporate Social Responsibility” (CSR) Strategy¹², defining CSR as the responsibility of enterprises for their impact on society. It suggested horizontal and sectoral approaches to promote CSR including, inter alia, market rewards for CSR, company disclosure of social and environmental information and integration of CSR into education, training and research. Subsequently, the EU adopted Directive 2014/95/EU¹³, which requires public-interest companies with more than 500 employees to disclose non-financial and diversity information since 2018, notably on the companies’ policies on environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery as well as diversity on company boards. The Commission published voluntary guidelines for companies on the disclosure of environmental and social information in 2017¹⁴, and on additional climate-related information in 2019.¹⁵ In addition, two documents were produced to guide SMEs on responsible business practices.¹⁶

CSR has increasingly expanded to include social and environmental issues in businesses’ global supply chains. This includes human rights, which are in many ways also relevant with regard to protecting the environment. The EU Regulation on Conflict Minerals from 2017 operationalises the UN Guiding Principles on EU-level, requiring EU companies to ensure from 2021 on – based on due diligence provisions – that they import specific minerals and metals from responsible sources only. The EU Timber Regulation¹⁷ also lays down due diligence duties to prevent the sale of illegally harvested timber and derived products in the EU.

The Commission published a progress report on its 2011 CSR strategy in March 2019.¹⁸ It gives an overview of activities carried out with regard to CSR, human rights and sustainability.

b. Eco-management and Audit Scheme (EMAS)

EMAS is a management tool enabling companies and other organisations to evaluate, report and improve their environmental performance. In 2001, the scheme was extended from industrial companies to all economic sectors, including public and private services. A 2009 revision of the EMAS Regulation¹⁹ aimed to encourage further registration with EMAS. In 2017, Regulation (EU) 2017/1505²⁰ amended the Annexes I, II and III of the EMAS Regulation to include changes associated with the revision of the ISO 14001 standard on quality management systems.

c. Ecolabelling and energy labelling

Labelling aims to provide information to consumers so that they can make informed choices. The European Ecolabel is a voluntary scheme established in 1992 through the Ecolabel Regulation²¹ and

¹² [COM/2011/681 final of 25 October 2011](#).

¹³ [Directive 2014/95/EU](#) OJ L 330, 15.11.2014, pp. 1–9.

¹⁴ [C/2017/4234](#), OJ C 215, 5.7.2017, pp. 1–20.

¹⁵ [C/2019/4490](#) OJ C 209, 20.6.2019, pp. 1–30.

¹⁶ [My Business and Human Rights: A Guide to Business and Human Rights for SMEs](#); CSR Handbook for SMEs.

¹⁷ [Regulation \(EU\) No 995/2010](#) OJ L 295, 12.11.2010, pp. 23–34.

¹⁸ [SWD\(2019\) 143 final of 20 March 2019](#).

¹⁹ [Regulation \(EC\) No 1221/2009](#) OJ L 342, 22.12.2009, pp. 1–45.

²⁰ [OJ L 222, 29.8.2017, pp. 1–20](#).

²¹ [Council Regulation \(EEC\) No 880/92](#) OJ L 99, 11.4.1992, pp. 1–7.

was last revised in 2010.²² So far, cleaning products, appliances, paper products, clothing, home and garden products, lubricants and services such as tourist accommodation have received the label. Ecolabel criteria are based on impacts identified in a life cycle assessment.

The EU Energy Label established by Directive 92/75/EEC²³ guides consumers with regard to the energy efficiency of appliances (white goods). The Energy Labelling Directive²⁴ was revised in June 2010 to cover a wider group of energy-related products. Regulation (EU) 2017/1369²⁵ established new energy labelling requirement for specific product groups. Requirements will be stepped up from 2021 onwards: for fridges, dishwashers, washing machines, TVs and lamps, an A⁺⁺⁺ label will be replaced by a B categorisation for the same level of energy consumption. Products will need to prove that they are more energy efficient than those classified as B in order to be labelled as A class.

d. Eco-design

The Eco-design Directive²⁶ established a framework for setting eco-design requirements applicable to energy-using products, such as boilers, computers and televisions. It aimed to foster the technical improvement of products. A 2009 revision²⁷ extended the scope of the Directive to products with an indirect impact on energy consumption such as water-using devices, windows and insulation material.

e. Green Public Procurement (GPP)

GPP is a voluntary policy whereby public authorities opt to purchasing products, services and works with a better environmental performance and reduced negative impacts. The first two Directives referring to public procurement were adopted in 2004.²⁸ Three Directives were adopted in February 2014 as part of the reform of public procurement under the Single Market Act.²⁹ These Directives aim to simplify the relevant procedures by improving the conditions for business to innovate and encouraging wider use of green public procurement. To date, 21 sets of GPP criteria have been published for selected sectors such as transport, office IT equipment, cleaning products and services, construction, thermal insulation, and gardening products and services. MSs implement GPP through National Action Plans.

f. Eco-innovation Action Plan (EcoAP)

The EcoAP³⁰ was introduced in 2011 and aims to enhance the development and deployment of environmental technologies and to make the EU more competitive in this regard. The concept for a circular economy recently incorporated a number of EcoAP goals (see below).

²² [Regulation \(EC\) No 66/2010](#) OJ L 27, 30.1.2010, pp. 1–19.

²³ [OJ L 297, 13.10.1992, pp. 16–19.](#)

²⁴ [Directive 2010/30/EU](#) OJ L 153, 18.6.2010, pp. 1–12.

²⁵ [OJ L 198, 28.7.2017, pp. 1–23.](#)

²⁶ [Directive 2005/32/EC](#) OJ L 191, 22.7.2005, pp. 29–58.

²⁷ [Directive 2009/125/EC](#) OJ L 285, 31.10.2009, pp. 10–35.

²⁸ [Directive 2004/17/EC](#) OJ L 134, 30.4.2004, pp. 1–113 and [Directive 2004/18/EC](#) OJ L 134, 30.4.2004, pp. 114–240.

²⁹ [Directive 2014/23/EU](#) OJ L 94, 28.3.2014, pp. 1–64 on the award of concession contracts, [Directive 2014/24/EU](#) OJ L 94, 28.3.2014, pp. 65–242 on public procurement and [Directive 2014/25/EU](#) OJ L 94, 28.3.2014, p. 243–374 on procurement by entities operating in the water, energy, transport and postal services sectors.

³⁰ [COM/2011/0899 final of 15 December 2011.](#)

1.2.3. Resource efficiency, the circular economy and waste management

a. Resource efficiency

The 'Resource efficient Europe' is one out of seven flagship initiatives of the Europe 2020 strategy.³¹ As stipulated by the flagship, the EC published the 'Roadmap to a Resource Efficient Europe'³² in 2011 "to define medium and long term objectives and means needed for achieving them". The objective is to achieve a shift towards sustainable growth, to use fewer resources for the same production levels and to move towards a circular economy where resources are recycled and re-used. Therefore, resource efficiency, the circular economy and waste management practices are strongly interlinked. The roadmap builds on the earlier 2005 Thematic Strategy on the Sustainable Use of Natural Resources.³³

b. The circular economy

In 2015, the EC presented the Circular Economy Action Plan³⁴, which 'includes measures that will help stimulate Europe's transition towards a circular economy, boost global competitiveness, foster sustainable economic growth and generate new jobs'. The Plan identifies the priority sectors plastics, food waste, biomass and bio-based products, critical raw material and construction and demolition. Furthermore, it includes a comprehensive work programme with a detailed time schedule for 54 actions covering the whole cycle: from production and consumption to waste management and the market for secondary raw materials. In 2018, the EC adopted a monitoring framework for the circular economy, allowing policy makers to identify good practices and prioritise areas requiring further action.³⁵

The EC adopted a report on the implementation of the Circular Economy Action Plan³⁶ in March 2019. It states that all 54 actions of the plan have been completed and work on some will continue beyond 2019, e.g. actions on eco-design, product reparability, premature obsolescence, quality standards for sustainable chemicals and for secondary raw material, marine litter and food waste. For more details on open challenges, please refer to chapter 2.1.5.

In 2018, the revised legislative framework on the circular economy adopted amendments to Directives on waste³⁷, packaging and packaging waste³⁸, on the landfilling of waste³⁹, on end-of-life vehicles (ELVs), on batteries and accumulators and on waste electrical and electronic equipment⁴⁰ and included the following central aspects:

1. An EU target to recycle 65% of municipal waste by 2035 (55% by 2025 and 60% by 2030);
2. An EU target to recycle 70% of packaging waste by 2030;
3. A binding landfill target to reduce landfill to a maximum of 10% of municipal waste by 2035;

³¹ [COM/2010/2020 final of 3 March 2010.](#)

³² [COM/2011/0571 final of 20 September 2011.](#)

³³ [COM/2005/0670 final of 21 December 2005.](#)

³⁴ [COM/2015/0614 final of 2 December 2015.](#)

³⁵ [COM/2018/029 final of 16 January 2018.](#)

³⁶ [COM/2019/190 final of 4 March 2019](#) and [SWD/2019/90 final of 4 March 2019.](#)

³⁷ [Directive \(EU\) 2018/851](#) OJ L 150, 14.6.2018, p. 109–140.

³⁸ [Directive \(EU\) 2018/852](#) OJ L 150, 14.6.2018, p. 141–154. ³⁹ [Directive \(EU\) 2018/850](#) OJ L 150, 14.6.2018, p. 100–108.

³⁹ [Directive \(EU\) 2018/850](#) OJ L 150, 14.6.2018, p. 100–108.

⁴⁰ [Directive \(EU\) 2018/849](#) OJ L 150, 14.6.2018, pp. 93–99.

4. A ban on the landfilling of separately collected waste, requiring separate collection for biowaste by 2023 and for textiles and hazardous waste from households by 2025;
5. The promotion of economic instruments to discourage landfilling;
6. Simplified and improved definitions and harmonised calculation methods for recycling rates throughout the EU;
7. Concrete measures to promote reuse of materials among industries;
8. Mandatory extended producer responsibility schemes for producers to put greener products on the market and support recovery and recycling schemes (for packaging, batteries, electric and electronic equipment and ELVs, for example).

Progress towards meeting the targets for recycling of municipal waste and of packaging waste is depicted in Annex II in chapter 5.1.1. Information on the reuse and recovery rates of end-of life vehicles is provided in chapter 5.1.2

Finally, the 2018 EU Strategy for Plastics in a Circular Economy⁴¹ confirms that all plastic packaging should be designed to be recyclable or reusable by 2030. The strategy aims towards enhancing plastic recycling, reducing littering of plastic waste, addressing the plastics value chain and taking advantage of global action. The Council and Parliament decided in 2018 to restrict certain single-use plastic products.⁴² Accordingly, single-use plastic cutlery, plastic plates and straws, food and beverage containers made of expanded polystyrene and cotton bud sticks made of plastic are prohibited from 2021 onwards. PET beverage bottles are required to contain a minimum of 25% recycled plastic from 2025 and of 30% recycled content from 2030 onwards.

c. Waste management and prevention

Waste legislation in the EU started more than 40 years ago with the Directive on toxic and dangerous waste⁴³ and has since then led to a considerable amount of legislation. The more recent developments are described above under 'circular economy'. Earlier Regulation includes the 2006 Waste Shipment Regulation⁴⁴, which prohibit exports of hazardous waste to countries outside the OECD and exports of waste for disposal outside the EU/European Free Trade Association. A 2014 amendment⁴⁵ of the Waste Shipment Regulation addressed the issue of illegal waste shipments inter alia by enhancing inspections. A number of additional directives and regulations in the EU address specific waste types:

- Directive 86/278/EEC⁴⁶ on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture;
- Directive 96/59/EC⁴⁷ regulates the controlled disposal of polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs) and of equipment containing these substances with the aim of eradicating them entirely;

⁴¹ [COM \(2018\) 028 final of 16 January 2018.](#)

⁴² [Directive \(EU\) 2019/904](#) OJ L 155, 12.6.2019, pp. 1–19.

⁴³ [Directive 78/319/EEC](#) OJ L 84, 31.3.1978, pp. 43–48.

⁴⁴ [Regulation \(EC\) No 1013/2006](#) OJ L 190, 12.7.2006, pp. 1–98.

⁴⁵ [Regulation \(EU\) No 660/2014](#) OJ L 189, 27.6.2014, pp. 135–142.

⁴⁶ [OJ L 181, 4.7.1986, pp. 6–12.](#)

⁴⁷ [Council Directive 96/59/EC](#) OJ L 243, 24.9.1996, pp. 31–35.

- Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)⁴⁸ aimed at protecting the environment and health from the use of six hazardous materials found in electrical and electronic products;
- Directive 2011/65/EU⁴⁹ known as RoHS-Recast or RoHS 2 required RoHS compliance for CE marking of products while Directive 2015/863⁵⁰ known as RoHS 3 added four additional restricted substances (phthalates) to the list of six and specified maximum levels in products for the restricted substances. In 2017, a further modification of the RoHS Directive was adopted to enable secondary market operations and allows the use of spare parts for electronic and electrical equipment.

1.2.4. Air quality

Air quality in Europe has improved in recent decades due to joint efforts by the EU and national, regional and local authorities. Directive 2008/50/EC on ambient air quality⁵¹ set limits for the main air pollutants (sulphur dioxide, nitrogen dioxide, oxides of nitrogen, (fine) particulate matter, lead, benzene, carbon monoxide and ozone). Figure 5-3 in chapter 5.1.3 shows progress made towards meeting those limits. The Clean Air Programme for Europe⁵² started in 2013 and aimed to promote compliance with EU law by 2020 and with new air quality targets up to 2030. The revised National Emission Ceilings Directive⁵³ mainly supports this aim by tightening the limits for the five key pollutants and obliges MSs to establish national programmes to control air pollution. In addition, a new Directive to diminish air pollution from medium-sized combustion plants⁵⁴ resulted from the programme. Industrial installations need to fulfil specific standards to prevent the pollution of water air and soil in accordance with the Directive (EU) 2010/75 on industrial emissions.⁵⁵

In 2018 the Commission came forward with the Communication 'A Europe that protects: Clean air for all'⁵⁶, which outlined measures available to help MSs fight air pollution and set into motion more high level national Clean Air Dialogues.

To address pollution from road transport, a number of Directives define emission performance standards for different types of vehicles and set standards for fuel quality. Currently, for cars and light vans Euro 5 and Euro 6 emission standards define maximum emission quantities for air pollutants, specifically nitrogen oxides and particulate matter.⁵⁷ In response to the 'dieselgate' scandal with the employment of software to manipulate NO_x emissions, new cars need to undergo a test for ascertaining 'Real Driving Emissions' (RDEs) since 2017 and cars and heavy-duty vehicles are required to fulfil a number of other new standards. Additionally, a temporary committee investigating the measurement of emissions in the automotive sector has been calling for accountability of MSs and car manufacturers and for retrofitting or pulling out highly polluting cars from the market.⁵⁸

⁴⁸ [OJ L 37, 13.2.2003.](#)

⁴⁹ [Directive \(EU\) 2011/65/EU](#) OJ L 174, 1.7.2011, pp. 88–110.

⁵⁰ [Commission Delegated Directive \(EU\) 2015/863](#) of 31 OJ L 137, 4.6.2015, pp. 10–12.

⁵¹ [OJ L 152, 11.6.2008, pp. 1–44.](#)

⁵² [COM/2013/0918 final of 18 December 2013.](#)

⁵³ [Directive \(EU\) 2016/2284](#) OJ L 344, 17.12.2016, pp. 1–31.

⁵⁴ [Directive \(EU\) 2015/2193](#) OJ L 313, 28.11.2015, pp. 1–19.

⁵⁵ [OJ L 334, 17.12.2010, pp. 17–119.](#)

⁵⁶ [COM \(2018\) 330 final](#) of 17 May 2018.

⁵⁷ [Regulation \(EC\) No 715/2007](#) OJ L 171, 29.6.2007, pp. 1–16, [Commission Regulation \(EU\) No 459/2012](#) OJ L 142, 1.6.2012, pp. 16–24 and [Commission Regulation \(EU\) 2016/646](#) OJ L 109, 26.4.2016, pp. 1–22.

⁵⁸ European Parliament, [Report on the inquiry into emission measurements in the automotive sector](#) (2016/2215(INI)). 2017

Furthermore, a new regulation⁵⁹ on type approval and market surveillance of motor vehicles aims to more closely monitor technical services and the compliance with standards for authorised vehicles from 2020 onwards.

Caps on the sulphur content of marine bunker fuels are in place to reduce air pollution from ships in accordance with standards agreed by the International Maritime Organization (IMO).⁶⁰ Non-road mobile machinery (e.g. bulldozers, chainsaws or excavators) as well as tractors employed in agricultural and forestry activities and recreational craft (e.g. sport boats) are also subject to emission performance standards.

1.2.5. Chemicals and pesticides

The environmentally sound management and safe use of chemicals is the focus of EU chemicals legislation. The regulations on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)⁶¹ and on Classification, Labelling and Packaging of substances and mixtures (CLP)⁶² are the key elements of this legislation. However, specific groups of products such as biocides, pesticides, pharmaceuticals or cosmetics are covered by their own legislation. In addition, legislation in the waste sector also includes restriction for hazardous chemicals.

a. Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The REACH Regulation entered into force in 2007 and established a new legal framework for all chemicals with regard to their development and testing, production, introduction on the market and use. Henceforth, companies were responsible for assessing the risk of substances instead of public authorities. The European Chemicals Agency (ECHA) manages the implementation and application of REACH. An evaluation under the Regulatory Fitness and Performance Programme (REFIT) concluded in 2017 that REACH is effective but could be improved.⁶³

b. Classification, packaging and labelling

Regulation (EC) No 1272/2008 aligned the EU system on the classification, labelling and packaging of substances and mixtures (CLP) with the UN Global Harmonised System so that the same criteria and labels for classifying chemical hazards are used. The purpose of the CLP Regulation is to ensure a high level of protection of health and the environment, as well as the free movement of substances, mixtures and articles. The Regulation is applicable to all industrial sectors. It requires manufacturers, importers or downstream users of substances or mixtures to classify, label and package their hazardous chemicals appropriately before placing them on the market.

c. Dangerous chemicals

Regulation (EU) No 649/2012⁶⁴ was geared to enhancing shared responsibility and cooperation in the international trade of hazardous chemicals. It also served to implement the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. According to the PIC procedure, countries need to exchange information on toxic

⁵⁹ [Regulation \(EU\) 2018/858](#) OJ L 151, 14.6.2018, pp. 1–218.

⁶⁰ [Directive \(EU\) 2016/802](#) OJ L 132, 21.5.2016, pp. 58–78.

⁶¹ [Regulation \(EC\) No 1907/2006](#) OJ L 396, 30.12.2006, pp. 1.

⁶² [Regulation \(EC\) No 1272/2008](#) OJ L 353, 31.12.2008, pp. 1–1355.

⁶³ [COM \(2018\) 0116 final](#) of 5 March 2018.

⁶⁴ [Regulation \(EU\) No 649/2012](#) OJ L 201, 27.7.2012, pp. 60–106.

chemicals and the importing country has to explicitly agree before the product concerned can be exported.

d. Pesticides

The EU adopted a Pesticides Package in 2009, which comprises the following legal acts and contents:

- Directive 2009/128/EC⁶⁵ on the sustainable use of pesticides, targeted towards reducing environmental and health risks while keeping crop productivity constant and enhancing controls on the use and distribution of pesticides. According to the Directive, MSs must adopt national action plans for setting up targets and measures to mitigate the negative implication of applying pesticides for human health and the environment;
- Regulation (EC) No 1107/2009⁶⁶ concerning the placing of plant protection products (PPP) on the market, defining scientific criteria for determining endocrine-disrupting features of biocidal products and plant protection products;
- Regulation (EC) No 1185/2009⁶⁷ concerning statistics on pesticides, defining how information on the annual quantities of pesticides put on the market and deployed in the MSs are to be collected. Discussions about whether to renew the approval of glyphosate have been ongoing since 2015. This prevalent substance is globally used in broad-spectrum herbicides but the International Agency for Research on Cancer (a branch of the World Health Organisation) has suspected it may be carcinogenic to humans. The European Food Safety Authority (EFSA) did not confirm this presumption and the European Commission ultimately re-approved glyphosate in 2017 until 2022.
- Regulation (EU) No 528/2012⁶⁸ on the making available on the market and use of biocidal products (BP) intends to simplify the authorisation of biocides. Authorisation of biocides is limited to specific application areas and is only possible if they are part of a positive list. The most toxic chemicals are prohibited. If a substance is authorised in one Member State, it can be applied EU-wide according to the principle of mutual recognition. The Regulation also foresees a stronger role of the ECHA.

e. Persistent organic pollutants (POPs)

POPs are chemical substances that are resistant to degradation and can negatively affect human health and the environment. Pesticides (such as DDT), industrial chemicals (such as polychlorinated biphenyls or PCBs) and unintentional by-products of industrial processes (such as dioxins and furans) belong to this group of pollutants. The EU has signed the Aarhus POP Protocol to the Geneva Convention on long-range transboundary air pollution and the Stockholm Convention on POPs in order to control the exportation and importation of POPs. Regulation 649/2012 implements requirements regarding the export of POPs.

In 2019, the EU adopted Regulation (EU) 2019/1021 as a recast of a previous POP regulation. The act re-defines obligations for reporting on the production and use of POPs and aligns the rules on POPs with general legislation on chemicals. The Regulation calls upon the Commission to limit the sum of those substances in waste at the same level.

⁶⁵ [Directive 2009/128/EC](#) OJ L 309, 24.11.2009, pp. 71–86.

⁶⁶ [Regulation \(EC\) No 1107/2009](#) OJ L 309, 24.11.2009, pp. 1–50.

⁶⁷ [Regulation \(EC\) No 1185/2009](#) OJ L 324, 10.12.2009, pp. 1–22.

⁶⁸ [Regulation \(EU\) No 528/2012](#) OJ L 167, 27.6.2012, pp. 1–123.

f. Endocrine disruptors

Endocrine Disrupting Chemicals (EDCs) can have harmful effects on the body's endocrine (hormone) system. A Regulation setting criteria for the identification of EDCs in the context of the pesticides legislation was adopted in April 2018. Since June 2018 a guidance document for the identification of substances with endocrine disrupting properties in pesticides and biocides has also been made available by the EFSA and the ECHA. EDCs are also addressed under the REACH Regulation, among others in relation to the criteria for substances of very high concern.

The 7th EAP provided for the harmonisation of hazard-based criteria for the identification of endocrine disruptors. Scientific criteria shall help to identify substances with endocrine-disrupting properties under the PPP Regulation (in force since 10 May 2018) and the Biocidal Products (BP) Regulation (in force since 7 December 2017). If a substance fulfils the criteria, it is considered to have endocrine disruptive properties. The PPP and BP legislations only consider endocrine effects where they may affect humans. The REACH legislation, however, associates endocrine disrupting properties with a potential to generate both human and environment impacts.

On 7 November 2018, the Commission published a communication *"Towards a comprehensive European Union framework on endocrine disruptors"*.⁶⁹ This communication specifies that inter alia others the Commission has taken action over the years *"against endocrine disruptors in line with the different requirements laid down in the relevant legislation"* with specific provisions for addressing endocrine disruptors having been included in the legislation on pesticides and biocides, in the REACH Regulation, and in relation to medical devices and water.

g. Detergents

With regard to detergents, Regulation (EC) No 648/2004⁷⁰ addresses the biodegradability of surfactants, rules on limits to surfactants, information requirements for manufacturers and labelling of ingredients. Regulation (EU) No 259/2012 was the last amendment to the act, introducing new tests on biodegradability and enhancing their scope. As a response to a report by the European Food Safety Authority (EFSA) on the harmful effects of certain neonicotinoid insecticides, Parliament requested the Commission to pursue measures for preserving bee populations.

1.2.6. Biodiversity, land use, forests and natural capital

The Union has agreed to halt biodiversity loss and the degradation of ecosystem services in the Union by 2020, and restore them so far as feasible, while stepping up the Union contribution to averting global biodiversity loss.⁷¹ The 2020 Biodiversity Strategy⁷² adopted in 2011 includes six targets: the full implementation of EU nature legislation to protect biodiversity; better protection of ecosystems and greater use of green infrastructure; more sustainable agriculture and forestry; better management of fish stocks; tighter controls on invasive alien species (IAS); and a bigger EU contribution to averting global biodiversity loss. The strategy also defines a long-term vision. The 2017 Action Plan for nature, people and the economy⁷³ sets out measures for implementing the strategy and enhancing ambition towards meeting the 2020 targets. In the field of natural capital, the Biodiversity Strategy is supported

⁶⁹ [COM/2018/734 final](#) of 7 November 2018.

⁷⁰ [OJ L 104, 8.4.2004, pp. 1–35](#).

⁷¹ European Council conclusions of 25 and 26 March 2010 ([EUCO 7/10](#)), Council conclusions of 15 March 2010 ([7536/10](#)).

⁷² [COM \(2011\) 0244 final](#) of 3 May 2011.

⁷³ [COM/2017/0198 final](#) of 24 April 2017.

by the EU initiative on mapping and assessment of ecosystems and their services (MAES)⁷⁴ and by the development of a natural accounting system for ecosystems and their services.

Furthermore, to protect biodiversity, nature and soil, the EP adopted resolutions in 2016⁷⁵ and 2017⁷⁶ objecting to the authorisation of genetically modified organisms (GMOs) and promoting the prohibition of GMO cultivation by MSs.⁷⁷

a. Conservation of natural habitats and species protection

The Habitats Directive⁷⁸ established a European network of protected areas, Natura 2000, which comprises 'Sites of Community Interest'/'Special Areas of Conservation' designated by MSs, and 'Special Protection Areas' on the conservation of wild birds. With a total area of over 850 000 km², this is the largest coherent network of protected sites in the world. The Habitats Directive aims principally to promote the conservation of biological diversity while taking account of economic, social, cultural and regional requirements. The amended Birds Directive⁷⁹ covers the protection, management and control of (wild) birds, including rules for sustainable hunting. The "Fitness Check" that the Commission published in 2016 to evaluate the EU Birds and Habitats Directives came to the conclusion that both Directives remain highly relevant for the protection of biodiversity and are fit for purpose. The above mentioned 2017 Action Plan for nature, people and the economy aims to address remaining weaknesses in the Directives' implementation.

The Natura 2000 network is complemented by the EU's Green Infrastructure Strategy⁸⁰, which aims to enhance networks of natural and semi-natural areas to deliver a multitude of ecosystem services. The 2019 progress review of the strategy found that only very few MSs have yet adopted national strategies dedicated to Green Infrastructures and maritime spatial plans do not sufficiently account for Green Infrastructures.⁸¹

An EU initiative on to conserve pollinators was adopted in 2018.⁸²

Tighter controls on IAS are one of the six targets of the EU biodiversity strategy. A key instrument to implement this target is the Invasive Alien Species Regulation.⁸³ It provides a set of measures, in particular prevention, early warning and rapid response to be taken across the EU in relation to species included on the list of Union concern to counter the growing threat to Europe's biodiversity, human health and the economy by the introduction and spread of IAS. MSs have to establish surveillance systems and action plans. Figure 5-4 and Figure 5-5 in chapter 5.1.3 illustrate the development of the abundance and diversity of birds as well as the cumulative number of alien species in the EU.

⁷⁴ The MAES initiative provided in 2018 an integrated analytical framework and indicators for mapping and assessment of ecosystem condition in the EU, cf. Maes, J. et. al (2018). [Mapping and Assessment of Ecosystems and their Services: An analytical framework for ecosystem condition](#). Publications office of the European Union, Luxembourg.

⁷⁵ EP resolution of 6 October 2016 [on the draft Commission implementing decision renewing the authorisation for the placing on the market for cultivation of genetically modified maize](#), OJ C 215, 19.6.2018, pp. 76–79.

⁷⁶ EP of 4 October 2017 [on the draft Commission implementing decision authorising the placing on the market of products containing, consisting of, or produced from genetically modified soybean](#) OJ C 346, 27.9.2018, pp. 60–65.

⁷⁷ Council conclusions of 4 December 2008 (16852/08).

⁷⁸ [Council Directive 92/43/EEC](#) OJ L 206, 22.7.1992, pp. 7–50, amended by [Council Directive 97/62/EC](#) OJ L 305, 8.11.1997, pp. 42–65.

⁷⁹ [Directive 2009/147/EC](#) OJ L 20, 26.1.2010, pp. 7–25.

⁸⁰ COM(2013) 249 final.

⁸¹ Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Review of progress on implementation of the EU green infrastructure strategy, COM(2019) 236 final.

⁸² [COM/2018/395 of 1 January 2018](#).

⁸³ [Regulation \(EU\) No 1143/2014](#) OJ L 317, 4.11.2014, pp. 35–55.

b. Land use, soils and forests

As regards land use, the Commission's Roadmap to a Resource Efficient Europe⁸⁴ sets the target of "no net land take by 2050". On improving the state of soils, the Commission withdrew the proposal for a Soil Framework Directive in 2014 that would have implemented its Soil Thematic Strategy⁸⁵, reacting to opposition from some MSs. The 7th EAP requires that by 2020 land is managed sustainably in the Union, soil is adequately protected and the remediation of contaminated sites is well underway. The EU and its MSs are to increase their efforts to reduce soil erosion, increase soil organic matter and remediate contaminated sites.

The EU forest strategy⁸⁶ 2014-2020 has eight priority areas and is supported by a multi-annual implementation plan (Forest MAP). Its priority areas include, among others, the protection of forests in a changing climate, promotion of sustainable forest management to mitigate against climate change, the protection of forests and forest ecosystem services, and the conservation of non-EU forests. The strategy's mid-term review, released in December 2018, concluded that the majority of its actions had been implemented across all priority areas. In April 2019, Commissioner Hogan announced a potential initiative to reward farmers under the CAP with payments for the afforestation of one hectare. The Union also supports the aims of halting global forest cover loss by 2030 at the latest and of reducing gross tropical deforestation by at least 50% by 2020 compared to 2008 levels.⁸⁷

c. Marine biodiversity

To protect and conserve the marine environment, the EU adopted a Marine Strategy Framework Directive (MSFD) in 2008⁸⁸, aiming to protect the resource base for economic and social activities related to the EU's seas and to make sure that EU marine waters have a good environmental status by 2020. The MSFD also requires that by 2020, properties and quantities of marine litter do not cause harm to the coastal and marine environment. The Framework Directive has received some methodological amendments in 2017.⁸⁹

The EU Common Fisheries Policy (CFP)⁹⁰ aims to ensure that fishing and aquaculture are environmentally, economically and socially sustainable. Between 2015 and 2020, catch limits should be set that are sustainable and maintain fish stocks in the long term (i.e., that can achieve maximum sustainable yield). The present CFP took effect in 2014 and runs until 2020. Civil society organisations have assessed the policy as having stopped neither overfishing, nor the negative impact on non-fish marine biodiversity and habitats.⁹¹

The EU's integrated maritime policy includes a framework for maritime spatial planning.⁹² It aims inter alia to protect among others, at protecting the marine environment through early identification of impact and opportunities for multiple use of space. Maritime spatial plans need to be established by 2021.

⁸⁴ [COM/2011/571 final of 20 September 2011.](#)

⁸⁵ [COM/2006/0231 final of 22 September 2006.](#)

⁸⁶ [COM/2013/0659 final of 20 September 2013.](#)

⁸⁷ Council conclusions of 4 December 2008 ([16852/08](#)).

⁸⁸ [Directive 2008/56/EC](#) OJ L 164, 25.6.2008, pp. 19–40.

⁸⁹ [Commission Decision \(EU\) 2017/848](#) OJ L 125, 18.5.2017, pp. 43–74; [Commission Directive \(EU\) 2017/845](#) OJ L 125, 18.5.2017, pp. 27–33.

⁹⁰ [Regulation \(EU\) No 1380/2013](#) OJ L 354, 28.12.2013, pp. 22–61 and [Regulation \(EU\) No 508/2014](#) OJ L 149, 20.5.2014, pp. 1–66.

⁹¹ E.g., Oceana; BirdLife; ClientEarth; [The Fisheries Secretariat; Seas At Risk; WWF \(2019\). EU needs a committed and ambitious leadership to save our ocean.](#) Brussels, 17th May 2019.

⁹² [Directive 2014/89/EU](#) OJ L 257, 28.8.2014, p. 135–145.

1.2.7. Water protection and management, marine environment

The protection of water resources, fresh and seawater ecosystems, and drinking and bathing water is an important component of environmental protection in Europe.

a. Water Framework Directive (WFD) and specific supporting water directives

For all waters, the EU has set the overall objective of fulfilling the good environmental status in the EU **Water Framework Directive**.⁹³ It sets up a framework for protecting and reducing pollution of inland surface waters, transitional waters, coastal waters and groundwater. Additionally, it aims to foster sustainable water use and mitigate the effects of floods and droughts. More specific directives support the implementation of the Water Framework Directive:

- The **Groundwater Directive**⁹⁴ provides criteria for the assessment of good groundwater chemical status and criteria for trends in groundwater pollution. MSs are responsible for setting threshold values for pollutants except for nitrates and pesticides (regulated by EU law).
- The **Drinking Water Directive**⁹⁵ lays down quality standards and monitoring procedures for water that is to be consumed by humans. The Commission started a review of the directive in 2018 which was not yet completed (see section 2.1.7).
- The **Bathing Water Directive**⁹⁶ establishes procedures for the monitoring and classification of bathing water and requires the public to be informed of any monitoring. The Commission and the European Environment Agency annually publish a summary report on the quality of bathing water.
- The **Environmental Quality Standards Directive**⁹⁷ defines maximum values for 33 priority substances that may cause harm to the aquatic environment at EU level and eight other pollutants that could cause risks to surface waters. A review extended the list of the substances included and required the Commission to identify those substances that should be monitored in all MSs for future reviews of the list.
- The **Urban Waste Water Treatment Directive**⁹⁸ amended by Directive 98/15/EC⁹⁹ aims to mitigate environmental negative effects of disposal of urban waste water and discharges from industry. It regulates the treatment of urban waste water and sewage sludge. The Directive is currently under evaluation (see section 2.1.7). Currently, approaches to reuse treated waste water for agricultural irrigation as a means to meet water scarcity needs are being discussed.
- The **Nitrates Directive**¹⁰⁰ has the goal of preventing nitrates applied for agricultural purposes from causing harm to (drinking) waters and of inhibiting damage from eutrophication. It regulates MSs' reporting on nitrates, outlines good agricultural practices, defines nitrate vulnerable zones (NVZ), and provides standards for water monitoring and for the establishment of action programmes.

⁹³ [Directive 2000/60/EC](#) OJ L 327, 22.12.2000, pp. 1–73.

⁹⁴ [Directive 2006/118/EC](#) OJ L 372, 27.12.2006, pp. 19–31.

⁹⁵ [Council Directive 98/83/EC](#) OJ L 330, 5.12.1998, pp. 32–54.

⁹⁶ [Directive 2006/7/EC](#) OJ L 64, 4.3.2006, pp. 37–51.

⁹⁷ [Directive 2013/39/EU](#) OJ L 226, 24.8.2013, pp. 1–17.

⁹⁸ [Council Directive 91/271/EEC](#) OJ L 135, 30.5.1991, pp. 40–52.

⁹⁹ [OJ L 67, 7.3.1998, p. 29–30.](#)

¹⁰⁰ [Council Directive 91/676/EEC](#) OJ L 375, 31.12.1991, pp. 1–8.

- The **EU Floods Directive**¹⁰¹ targets the risks associated with floods with regard to human health, the environment, infrastructure and property. It obliges MSs to undertake assessments for identifying areas at risk as well as to create flood risk maps and management plans related to floods.

b. EU coastal and marine policy

The Marine Strategy Framework Directive aims for the EU's marine waters to reach 'good environmental status' by 2020 based on MSs' strategies, keep up its protection and preservation and to inhibit deterioration. As such, it covers the environmental aspects of the EU's Integrated Maritime Policy (IMP), which aims to promote sustainable economic development of maritime activities while also protecting the marine environment. It establishes European marine regions in line with the geographical boundaries of the existing international Conventions for Regional Seas (see below).

c. International agreements on regional waters

Four Regional Sea Conventions including MSs and neighbouring countries govern the protection of marine waters in Europe: the OSPAR Convention of 1992 for the North-East Atlantic; the Helsinki Convention (HELCOM) of 1992 on the Baltic Sea Area; the Barcelona Convention (UNEP-MAP) of 1995 for the Mediterranean; and the Bucharest Convention of 1992 for the Black Sea. The 1996 Danube River Protection Convention and the 2009 Convention for the Protection of the Rhine address the protection of EU rivers. The 2009 Strategy for the Baltic Sea Region¹⁰², the 2010 Strategy for the Danube Region¹⁰³, and the 2014 Strategy for the Adriatic and Ionian Region¹⁰⁴ define priorities for the development of regions around marine waters or river basis with regard to environmental protection, connectivity and increasing prosperity.

1.2.8. Noise pollution

As part of the effort to tackle noise pollution, the EU has laid down a common approach to preventing or reducing the harmful effects of exposure to environmental noise in a 2002 Directive.¹⁰⁵ This approach builds on using common methods to map noise, on providing information to the public and on adopting and implementing tailor-made action plans at local level. The Directive requires MSs to establish action plans to reduce noise. MSs Action plans for noise managements are still lacking in thirteen MSs¹⁰⁶, and seven countries¹⁰⁷ still need to adopt required noise maps.

Regulation (EU) No 540/2014¹⁰⁸ on the sound level of motor vehicles inter alia sets lower noise limits, sets out a new method for measuring noise emissions. It is complemented by other rules setting limits and reduction pathways on noise levels for mopeds and motorcycles as well rolling tyres.

To reduce aviation noise, Regulation (EU) No 598/2014¹⁰⁹, in line with the 'balanced approach' elaborated by ICAO applies to airports with more than 50 000 civil aircraft movements per year since

¹⁰¹ [Directive 2007/60/EC](#) OJ L 288, 6.11.2007, pp. 27–34.

¹⁰² [COM/2009/0248 final of 10 June 2009.](#)

¹⁰³ [COM/2010/0715 final of 8 December 2010.](#)

¹⁰⁴ [COM/2014/0357 final of 17 June 2016.](#)

¹⁰⁵ [Directive 2002/49/EC](#) OJ L 189, 18.7.2002, pp. 12–25.

¹⁰⁶ Belgium, Cyprus, the Czech Republic, France, Germany, Greece, Italy, Poland, Portugal, Romania, Slovakia, Sweden and Spain.

¹⁰⁷ Belgium, Greece, Italy, Portugal, Romania, Slovakia and Spain.

¹⁰⁸ [OJ L 158, 27.5.2014, pp. 131–195.](#)

¹⁰⁹ [OJ L 173, 12.6.2014, pp. 65–78.](#)

2016. For noise from railway vehicles, the Railway Interoperability Directive¹¹⁰ sets noise limits for new railway vehicles and sets incentives for the retrofitting of freight wagons. The Industrial Emissions Directive¹¹¹ regulates noise from construction plants and recreational craft or equipment for outdoor use. It also provides the possibility for large industrial and agricultural installations to obtain permits based on using the best available techniques.

1.2.9. Environmental finance

Environmental finance in the EU comes from a range of sources:

- LIFE is the only EU financial instrument exclusively dedicated to the environment;
- The mainstreaming of environmental action into other EU spending instruments, such as the European Maritime and Fisheries Fund (EMFF), the European Regional Development Fund (ERDF) and the European Agricultural Fund for Rural Development (EAFRD), provide the vast majority of EU financing available for the protection of the environment, although these instruments are primarily focused on other policy priorities.

In April 2019, the European Parliament agreed with the Council on Horizon Europe, the EU's framework programme for research and innovation for the 2021-2027 period, which will allocate at least 35% of its budget to climate-related research. Climate and environmental research is supposed to receive record funding of EUR 11 billion under the EU's Horizon 2020 programme. The EUR 77 billion 2014-2020 research and innovation funding programme will dedicate EUR 135 million to the EU's plastics strategy, EUR 132 million to the development of the next generation of batteries, and EUR 206 million for the clean energy transition. Low-carbon and climate adaptation projects will be supported by a EUR 3.7 billion budget line for 2018-2020, whilst EUR 1 billion has been earmarked for promoting the EU circular economy.

1.2.10. Sustainable finance

The Commission established a High-Level Expert Group on Sustainable Finance to develop a comprehensive EU strategy on sustainable finance. This expert group published its final report in January 2018. It included eight key recommendations for a sustainable European financial system.¹¹² These recommendations formed the basis for an action plan on sustainable finance adopted by the Commission in March 2018. The action plan sets out a strategy to further link finance with sustainability. Its key actions include:

- establishing a clear and detailed EU classification system – or taxonomy – for what are considered to be sustainable economic activities. This will create common basis for all actors in the financial system;
- establishing EU labels for green financial products. This will help investors to easily identify products that comply with green or low-carbon criteria;
- introducing measures to clarify asset managers' and institutional investors' duties regarding sustainability;

¹¹⁰ [Directive 2008/57/EC](#), OJ L 191, 18.7.2008, pp. 1–45.

¹¹¹ [Directive \(EU\) 2010/75](#) OJ L 334, 17.12.2010, pp. 17–119.

¹¹² High Level Expert Group on Sustainable Finance: [Financing a sustainable European economy](#).

- strengthening the transparency of companies on their environmental, social and governance (ESG) policies;
- introducing a 'green supporting factor' in the EU prudential rules for banks and insurance companies. This means incorporating climate risks into banks' risk management policies and supporting financial institutions that contribute to fund sustainable projects.

In May 2018, the Commission adopted a package of legislative measures implementing several actions announced in its action plan. The package includes:

- A proposal for a regulation on the establishment of a framework to facilitate sustainable investment.¹¹³ This regulation establishes the conditions and the framework for a unified classification system ('taxonomy') on what can be considered an environmentally sustainable economic activity.
- A proposal for a regulation on disclosures relating to sustainable investments and sustainability risks and amending Directive (EU)2016/2341.¹¹⁴ This regulation will introduce disclosure obligations on how institutional investors and asset managers integrate ESG factors in their risk processes.
- A proposal for a regulation amending Regulation (EU) 2016/1011 on low carbon benchmarks and positive carbon impact benchmarks.¹¹⁵ The proposed amendment will create a new category of carbon-related benchmarks, which will provide investors with better information on the carbon footprint of their investments.

The Commission and the EP achieved a political agreement on the regulation on low carbon benchmarks in February 2019 and on the regulation on disclosures in March 2019. In March 2019, the European Parliament also adopted its position on the proposal for a regulation on the establishment of a framework to facilitate sustainable investment with a number of key changes (see chapter on upcoming issues). The review in the Council is ongoing.

1.2.11. Agriculture and environment

The achievement of environment and climate objectives does not solely depend on the implementation of environmental laws, but also requires environmental considerations to be integrated in other policies. This can be illustrated by the Common Agriculture Policy (CAP): given that agricultural land covers approximately half of the Union's surface, the CAP can significantly contribute to environmental and climate objectives such as halting biodiversity loss, reducing land and soil degradation, ensuring water quality, reducing ammonia emissions, and managing and reducing greenhouse gas emissions. Recent reforms of the Common Agriculture Policy have introduced changes to the policy framework in terms of improved coherence with environment and climate objectives. In the 2014/2020 period, the CAP accounted for around 36% of the EU budget.¹¹⁶

¹¹³ [COM/2018/353 final 24 May 2018.](#)

¹¹⁴ [COM/2018/354 final of 24 May 2018.](#)

¹¹⁵ [COM/2018/355 final of 24 May 2018.](#)

¹¹⁶ Massot, Albert, Negre, Francois: [Towards the Common Agricultural Policy beyond 2020: comparing the reform package with the current regulations.](#)

The European Commission has put forward three legislative proposals for the CAP in the 2021-2027¹¹⁷ funding period, with a stated high ambition on environmental change. A key reform proposal is the CAP Strategic Plan. Each Member State will be required to develop such a Plan to achieve common EU objectives on climate change and the environment. The updated bio-economy strategy of 2018 is also an attempt to integrate environmental, social and economic objectives in a coherent manner.¹¹⁸

1.3. Climate Action Policies

1.3.1. International climate policy

The EU ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and the Kyoto Protocol in 1998. Under the Kyoto Protocol the EU adopted the target to reduce emissions by 20% by 2020. In 2015, the European Union ratified the Paris Agreement and communicated a nationally determined contribution (NDC) under the Paris Agreement of at least 40% domestic greenhouse gas emission reductions by 2030 compared to 1990.

1.3.2. 2020 EU climate and energy targets

In 2008, the climate and energy package established binding legislation to ensure the EU meets the following targets by 2020:

- 20% cut in greenhouse gas emissions compared to 1990
- 20% share of renewable energy in gross final energy consumption at EU level;
- 20% improvement in energy efficiency at EU level.

The Effort Sharing Decision¹¹⁹ established binding annual GHG emission targets for MSs for the period of 2013–2020. These targets concern emissions from most sectors not included in the EU Emissions Trading System (EU ETS), such as transport, buildings, agriculture and waste. The national targets will collectively deliver a reduction of around 10% in total EU emissions from the sectors covered by 2020 compared with 2005 levels.

1.3.3. 2030 EU climate and energy framework

In 2018, the EU adopted legislation on the climate and energy framework for the 2021-2030 period implementing the mitigation target of 40%. Key targets for 2030 are:

- At least 40% reduction in greenhouse gas emissions (from 1990 levels). To achieve the target the EU Emissions Trading System (ETS) sectors will have to cut emissions by 43% (compared to 2005). To this end, the ETS has been revised for the period after 2020. The non-ETS sectors will need to cut emissions by 30% (compared to 2005); this has been translated into individual binding targets for MSs as part of the Effort Sharing Regulation¹²⁰;
 - At least 32% share for renewable energy in final energy consumption (binding target);
 - At least 32.5% improvement in energy efficiency.

¹¹⁷ [COM/2018/392 final - 2018/0216 \(COD\) of 1 June 2018](#), [COM/2018/393 final - 2018/0217 \(COD\) of 1 June 2018](#), [COM/2018/394 final/2 of 1 June 2018](#).

¹¹⁸ [COM/2018/673 final of 11 October 2018](#).

¹¹⁹ [Decision No 406/2009/EC](#) OJ L 140, 5.6.2009, pp. 136–148.

¹²⁰ [Regulation \(EU\) 2018/842](#) OJ L 156, 19.6.2018, pp. 26–42.

For the first time, the EU's framework covers both emissions and removals from land use and forests. The LULUCF Regulation¹²¹ sets a binding commitment for each Member State to ensure that accounted emissions from land use and forests are entirely compensated by an equivalent removal of CO₂ from the atmosphere in the sector. This is known as the "no debit" rule.

When the agreed EU legislation for 2030 will be fully implemented, it is estimated that EU emissions will be reduced by approx. 45 % by 2030. This is due to the more ambitious energy targets in the renewables and energy efficiency directives which require deeper emission reductions compared to the climate targets.

The Governance Regulation¹²² implements a transparent governance process to track progress towards the objectives of the Energy Union, including monitoring and reporting rules. The compliance checks for the targets in the non-ETS sectors takes place in 2027/2028 for the 2021-2025 period and in 2032/2033 for the 2026-2030 period. The rules are laid down in the LULUCF Regulation and the Effort Sharing Regulation. MSs are obliged to adopt final integrated National Climate and Energy Plans (NECPs) for the 2021-2040 period. MSs had to submit their draft plans by the end of 2018, which were then assessed by the Commission.¹²³ MSs must submit the final plans by the end of 2019.

Apart from the 32% binding target for renewable energy by 2030, the revised Renewable Energy Directive (RED II)¹²⁴ improves the consumer rights to self-consumption of renewable energy producers, and introduced an indicative annual increase of 1.3% for renewable energy in heating and cooling. Figure 0-1 illustrates progress made towards reaching the EU's 2020 and 2030 targets.

1.3.4. EU Emissions Trading System (EU ETS)

The EU ETS is now in its third phase. It covers 28 EU MSs plus Iceland, Liechtenstein and Norway and limits GHG emissions from more than 11,000 power stations & industrial plants as well as airlines operating between these countries. The EU ETS covers around 45% of the EU's GHG emissions. In the 2013-2020 period, the cap on emissions for ETS installations is reduced by 1.74% every year. The legislative framework of the EU ETS for the 2021-2030 period (phase 4) was revised in early 2018 to enable it to achieve a 43% reduction in ETS emissions by 2030 compared 2005. The revision increased the pace of annual reductions in allowances to 2.2% as of 2021. The cap on aviation emissions has been constant in the past; in phase 4 it will decline at the same pace as the cap for the stationary sector.

In the third phase, auctioning is the default method for allocating allowances. However, the system of free allocation of allowances will be prolonged for another decade and has been revised to focus on industrial sectors at the highest risk of relocating their production outside of the EU. While the number of sectors deemed at risk of carbon leakage has decreased considerably, in terms of emissions over 90% of the industrial sectors will continue to receive 100% of their allocation for free. For less exposed sectors, it is foreseen that free allocation will be phased out after 2026 from a maximum of 30% to zero at the end of phase 4 (2030).

In the earlier ETS phase between 2009 and 2012, the number of available allowances exceeded the demand for allowances (related to total emissions in the EU ETS). A surplus of allowances of 2.1 billion accumulated during this period, which resulted in lower prices for emission allowances and limited

¹²¹ [Regulation \(EU\) 2018/841](#) OJ L 156, 19.6.2018, pp. 1–25.

¹²² [Regulation \(EU\) 2018/1999](#) OJ L 328, 21.12.2018, pp. 1–77.

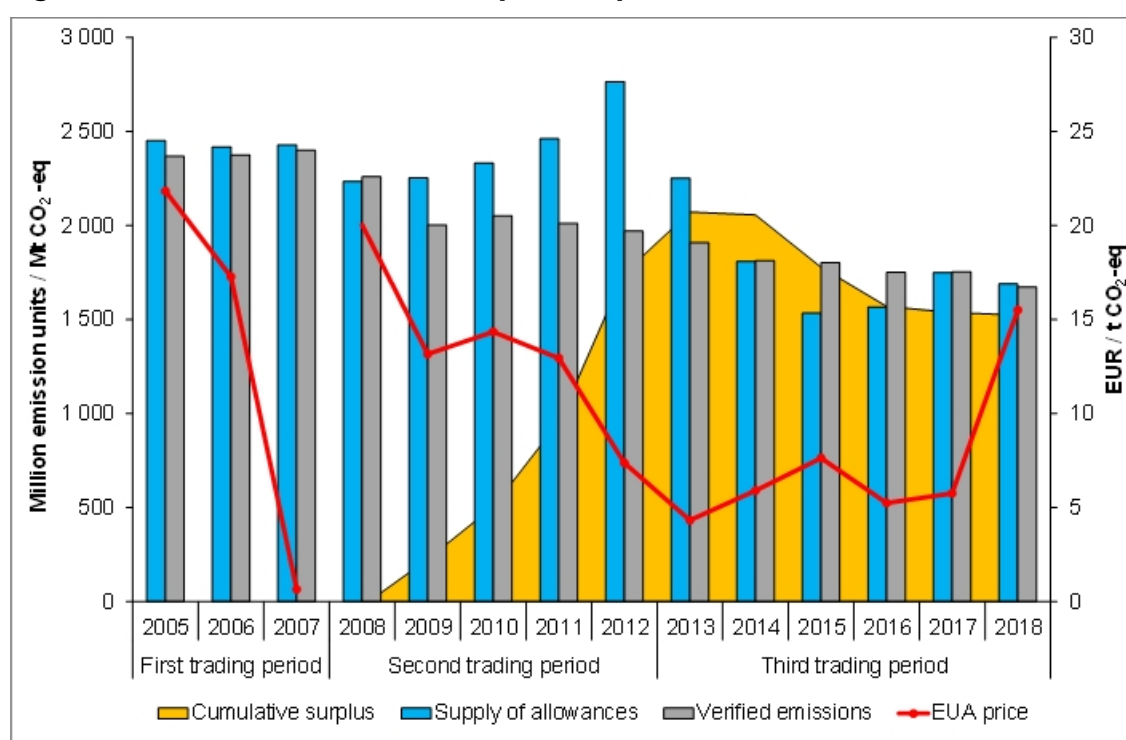
¹²³ [COM/2019/285 final of 18 June 2019](#).

¹²⁴ [Directive \(EU\) 2018/2001](#), OJ L 328, 21.12.2018, pp 82–209.

incentives to invest in clean, low-carbon technologies. In response to this situation, a number of allowances originally planned to be auctioned between 2014 -2016, were held back. This measure called 'backloading' reduced the surplus to around 1.8 billion. As a long-term solution for the surplus, a market stability reserve (MSR) began operating in January 2019 (see Figure 1-1). The MSR function in a way that a proportion of the total allowances are placed into a reserve when the number of allowances in circulation is above a certain threshold in order to reduce the surplus over time. Allowances will be released from the reserve if the indicator of allowances in circulation will be below a determined threshold. From 2023 onwards the number of allowances held in the reserve will be limited to the auction volume of the previous year. Holdings above that amount will lose their validity.

For several years in the past, the price for CO₂ was below EUR 10, but with these reforms brought forward in 2018 the price has started increasing. Since March 2019 the price of ETS allowances has always been higher than EUR 20 and since beginning of July 2019 increased to price levels above EUR 25 per ton CO₂eq (Sandbag Carbon Price tracker) (see Figure 1-1 and chapter 5.2.1 for further information on recent developments in the ETS).

Figure 1-1: Emissions, allowances, surplus and prices in the EU ETS, 2005-2018



Note: The cumulative surplus represents the difference between allowances allocated for free, auctioned or sold plus international credits surrendered or exchanged from 2008 to date minus the cumulative emissions. It also accounts for net demand from aviation during the same time period.

Source: EEA, 2019d

The EU and Switzerland have signed an agreement to link their ETS systems. Switzerland would keep a separate system from the EU ETS, but once the agreement has entered into force, linking would result in the mutual recognition of EU and Swiss emission allowances.

1.3.5. Aviation emissions

In 2017, aviation accounted for 4% of total European GHG emissions, of the aviation emissions 91% are from international flights and 9% from domestic flights¹²⁵ and projections show strongly increasing trends. 1,4% of total aviation emissions were covered by the EU-ETS in 2017 for EU28.¹²⁶ Unlike other sectors, aviation climate impact goes beyond CO₂ from fuel combustion and there are additional net warming feedbacks from emissions at high altitudes due to contrail/cirrus cloud formation, nitrogen oxides (NO_x), water vapour and other substances. The non-CO₂ effects are currently unregulated and not part of GHG inventories. The national total emissions and targets under the UNFCCC only include domestic flights, but not international ones.

The original scope of the EU ETS in phase 2 included CO₂ emissions from all flights entering and/or leaving the EEA. In 2012, this rule was suspended with the 'Stop the clock' proposal and Decision 377/2013/EU¹²⁷ provided for a temporary derogation for flights to or from an aerodrome outside of the EEA area to support the development of a global instrument aimed at reduction of aviation emissions developed by ICAO. Meanwhile the ICAO Assembly decided to develop CORSIA, a policy, which was subsequently adopted in 2016.¹²⁸ Following this decision, the EU has decided to maintain the geographic scope of the EU ETS limited to intra-EEA flights from 2017 onwards and to review EU ETS legislation for aviation based on the operationalisation of CORSIA. In 2019, all countries started monitoring, reporting and verifying emissions. In 2021 CORSIA's first voluntary phase will begin, followed by a second voluntary phase from 2023 and a mandatory phase from 2027, in which only routes to countries with a small share in the global aviation market will be exempted from mitigation requirements. From 2021, airlines must offset emission growth beyond average emission levels in 2019/2020 on all routes between participating states. In the moment of writing it is not decided, how the interlinkage between the EU ETS for aviation and CORSIA will be designed after 2020. In the absence of a new amendment, the EU ETS would revert back to its original full scope from 2024 onwards.

1.3.6. Shipping emissions

Shipping emissions are estimated to amount up to 13% of the overall EU GHGs emissions from the transport sector in 2015 and emissions are projected to increase significantly (Commission 2019b, see also Figure 5-9). A Commission strategy from 2013 comprises three subsequent steps: Firstly, the monitoring, reporting and verification of CO₂ emissions from large ships using EU ports, secondly the establishment of GHG reduction targets for the maritime transport sector and thirdly the implementation of market-based measures in the medium to long term.¹²⁹ Apart from implementing the Monitoring regulation (2015/757)¹³⁰, the EU has so far focused on international action under the IMO without acting at European level despite the promises to introduce emission reduction measures by 2012 in case there is no agreement in IMO.¹³¹

¹²⁵ [EU annual GHG inventory report](#), EEAg.

¹²⁶ 62 146 kt CO₂eq verified emissions from aviation in EU28 as provided by [EU Emissions Trading System data viewer](#) hosted by EEA.

¹²⁷ [Decision No 377/2013/EU](#) OJ L 113, 25.4.2013, pp. 1–4.

¹²⁸ [ICAO Assembly Resolution A39-3](#).

¹²⁹ [COM\(2013\) 479 final](#).

¹³⁰ [Regulation \(EU\) 2015/757](#) OJ L 123, 19.5.2015, pp. 55–76.

¹³¹ The mandate for the Commission to initiate a proposal to include international maritime emissions if IMO has not approved an international agreement by 31 December 2011 is included in Directive 2009/29/EC and Decision No 406/2009/EC.

1.3.7. CO₂ emissions from vehicles

The Fuel Quality Directive¹³² set a target for the reduction of the GHG intensity of transport fuels at a minimum of 6% by 2020 compared to a 2010 baseline. The Fuel Quality Directive applies to petrol, diesel and biofuels used in road transport as well as to gasoil used in non-road-mobile machinery. The Directive also addresses the sustainability of biofuels.

The decarbonisation of emissions from transport fuels after 2020, has been integrated in the revised Renewable Energy Directive¹³³ (RED II), MSs fuel suppliers have to contribute a minimum of 14% of the energy consumed in road and rail transport in the form of renewable energy by 2030. In order to be counted towards the overall 14% target and to be eligible for financial support by public authorities, the revised Renewables Directive (RED II) defines sustainability and GHG emission criteria for bioliquids in transport. Additionally, the Directive sets a target for advanced biofuels: their share in final consumption of energy in the transport sector shall be at least 0.2 % in 2022, at least 1% in 2025 and at least 3.5% in 2030 and 1% of biogas by 2025. The Directive set a 7 % cap on the share of first-generation biofuels in road and rail transport, and plans to phase out the use of palm oil (and other food-crop biofuels that increase CO₂ emissions) by 2030 through a certification scheme. Part A of Annex IX to the Directive lists the feedstocks that qualify for meeting this target.

GHG emissions from passenger cars and light commercial vehicles represent almost three-quarters of all GHG emissions in road transport. Regulation (EC) No 443/2009¹³⁴ established CO₂ emission performance requirements for new passenger cars in 2009. The regulation was amended in 2014¹³⁵ and a phase-in concept was implemented for the period after 2020. The average CO₂ specific emission target was set at 130 g CO₂/km (NEDC) by 2015 and at 95 g CO₂/ km (NEDC) by 2021. Several implementing acts set the rules for transforming the regulation to a new CO₂ certification process (WLTP) after 2020. This has become necessary due to poor real-world CO₂ mitigation performance of the regulation. A similar approach was implemented for new light commercial vehicles in 2011. Regulation (EU) No 510/2011¹³⁶ set the average CO₂ emissions target for vans at 175 g CO₂/km by 2017 and at 147 g CO₂/km by 2020. In April 2019, Regulation (EU) 2019/631¹³⁷ was adopted; it includes CO₂ emission performance requirements for new passenger cars and new light commercial vehicles (vans) in the European Union post-2020. The new targets refer to the manufacturers' average emissions in 2021, which have to be reduced by 15% in 2025 and by 37.5% (cars) / 31% (vans) until 2030 (see also Annex II, chapter 5.2.3).

Regulation (EU) 2019/1242 established CO₂ emission performance targets for new heavy-duty vehicles for the first time in the EU. The reduction target was set to a 15% (2025 onwards) and 30% (2030 onwards) reduction target compared to a 2019 baseline level. Trucks, responsible for around 70% of CO₂ emissions of heavy-duty vehicles, are required to meet these targets.

The Clean Vehicles Directive was also recently revised.¹³⁸ It promotes clean mobility in public procurement tenders (purchase, lease, rent or hire-purchase of road transport vehicles, and public service contracts on public passenger transport by road and rail) and thereby intends to raise the demand for clean vehicles. The Directive includes new definitions of 'clean vehicle', based on CO₂

¹³² [Directive 2009/30/EC](#), OJ L 140, 5.6.2009, pp. 88-113.

¹³³ [Directive \(EU\) 2018/2001](#), OJ L 328, 21.12.2018, pp. 82-209.

¹³⁴ [Regulation \(EC\) No 443/2009](#), OJ L 140, 5.6.2009, pp. 1-15.

¹³⁵ [Regulation \(EU\) No 333/2014](#), OJ L 103, 5.4.2014, pp. 15-21.

¹³⁶ [Regulation \(EU\) No 510/2011](#), OJ L 145, 31.5.2011, pp. 1-18.

¹³⁷ [Regulation \(EU\) 2019/631](#), OJ L 111, 25.4.2019, pp. 13-53.

¹³⁸ [Directive \(EU\) 2019/116](#), OJ L 188, 12.7.2019, pp. 116-130.

emission standards for light-duty vehicles and on the use of alternative fuels for heavy-duty vehicles. It extends the scope of the directive to a broader range of procurement practices.

1.3.8. F-gas regulation

Since 2015, Regulation 517/2014¹³⁹ aims to control emissions from fluorinated GHGs by setting maximum quantities for placing hydrofluorocarbons on the market for the most important F-gases until 2030. The regulation also prohibits the use of F-gases if alternative with less damaging effects are available and it prevents emissions of F-gases from existing products through checks, servicing and recovery of the gases when the products are discarded. The maximum quantity shall be calculated by applying the percentages defined in Annex V of the Regulation to the annual average of the total quantity placed on the market into the Union during the period from 2009 to 2012. From 2018 onwards, the maximum quantity shall be calculated by applying the following percentages to the annual average of the total quantity placed on the market into the Union during period 2009 to 2012, and subsequently subtracting the amounts for exempted uses (Article 15(2)), on the basis of available data. Figure 5-13 in Annex II illustrates the limits set by the regulation as well as the progress made to phase down hydrofluorocarbons in the EU until 2017. At the international level, the phase-down of HFCs has been agreed under the Kigali Amendment to the Montreal Protocol which is starting in 2019. For the EU, the phase-down under the Montreal Protocol is less ambitious than under EU internal legislation, however, so far, EU internal rules only define the process until 2030.

Additionally, the Directive on emissions from mobile air conditioning systems in motor vehicles¹⁴⁰ prohibits F-gases with GWPs of more than 150 times greater than CO₂ to be used in new cars and vans produced from 2017. Figure 5-13 in chapter 0 illustrates the targets set for limiting F-gas emissions and progress made within the EU towards meeting those targets.

1.3.9. Long-term low emission strategy

In November 2018, the Commission presented its 'European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy by 2050'. Under the Governance Regulation MSs are required to develop national long-term strategies by 1 January 2020, and ensure consistency between their National Energy and Climate Plans (NECPs).

The EP's resolution related to the strategy welcomed the inclusion of two pathways aimed at reaching net-zero GHG emissions by 2050 and regretted the fact that no net-zero GHG pathways for before 2050 were considered in the strategy. It expressed concerns that the pathways suggested in the strategy rely on the use of carbon removal technologies, including carbon capture and storage (CCS) or carbon capture and utilisation (CCU) and direct air capture. The Parliament called upon the EU to enhance action towards achieving direct emission reductions and enhancing the EU's natural sinks and reservoirs.

¹³⁹ [OJ L 150, 20.5.2014, pp. 195–230.](#)

¹⁴⁰ [Directive 2006/40/EC](#) OJ L 161, 14.6.2006, pp. 12–18.

2. UPCOMING ISSUES AND CHALLENGES

The upcoming issues and challenges described below list legislative projects that result from planned revision or review processes or were demanded by the EP. In addition, this chapter describes challenges resulting from unmet environmental targets or implementation gaps.

2.1. Environment Policies

2.1.1. 8th Environmental Action Programme (EAP)

The 7th Environmental Action Programme (EAP, cf. Chapter 1.2.1) will guide EU environmental policy until the end of 2020. By 2019, the Commission has to present an overarching Union general action programme for the period after 2020 (as required by Article 192(3) of the TFEU) (potentially it could also be presented under a different title than EAP). The EP already expressed its concerns that it is likely that a number of priority objectives of the 7th EAP will not be met.¹⁴¹ This includes the objectives to protect, conserve and enhance the Union's natural capital, the targets of the EU's 2020 Biodiversity Strategy; and the sub-objective of achieving good quality status of surface water bodies by 2020.

The EP also requested that 'more must be done on resource efficiency using the potentials of the Ecodesign Directive¹⁴² and the Ecolabel Regulation¹⁴³ to improve the environmental performance and resource efficiency of products throughout their lifecycle.' In addition, the EP highlighted that specialised knowledge and scientific evidence are not always appropriately considered in EU policy-making and highlighted the examples of bioenergy, palm oil, plant protection products, endocrine disruptors, food production and consumption, GMOs, urban planning and design, air and noise pollution, and urban food waste.

The lack of integration of environmental concerns into other policy areas is one of the main causes of implementation gaps in environmental legislation and policy according to the EP resolution on the 7th EAP, in particular related to the CAP, the common fisheries policy (CFP), the structural funds and the cohesion policy. A key concern related to the EAP continues to be the lack of implementation and enforcement of EU environmental law in MSs. In this respect, the EP demanded the introduction of environmental inspections at EU level to monitor compliance.¹⁴⁴ The stakeholder consultation carried out to evaluate the 7th EAP found that its accountability could be further enhanced if the programme included more concrete targets and better systems of implementation; that more effective engagement with a diverse variety of EU citizens and the private sector was recommendable; that the focus on funding instruments should be increased and a stronger systemic narrative incorporated into the programme.¹⁴⁵ At the Sibiu summit in May 2019, the Commission recognized the need for a zero-pollution strategy and innovation in cleaner alternatives for air, soil and water.

¹⁴¹ [EP resolution of 16 November 2017](#) OJ C 356, 4.10.2018, pp. 84–88.

¹⁴² [Directive 2009/125/EC](#) OJ L 285, 31.10.2009, pp. 10–35.

¹⁴³ [Regulation \(EC\) No 66/2010](#) OJ L 27, 30.1.2010, pp. 1–19.

¹⁴⁴ EP resolution of 16 November 2017 [on the EU Environmental Implementation Review](#) OJ C 356, 4.10.2018, pp. 84–88.

¹⁴⁵ [Trinomics, Technopolis & Oeko-Institut](#); 2019.

2.1.2. European Green Deal

Commission President-elect von der Leyen proposed a European Green Deal¹⁴⁶ in her first 100 days in office with the following elements:¹⁴⁷

- A new EU climate-neutrality commitment for 2050 and an increased EU 2030 emission reduction target to at least 50% by 2030 (up from the 40% currently);
- The objective of an increased level of ambition of other major emitters by 2021 in international negotiations. Under such condition, the EU should put forward a comprehensive plan to increase the EU's target for 2030 towards 55%. Under the Paris Agreement, 2020 is the year when updated national contributions are expected (and not 2021), but given the US elections in 2020, it may be unlikely that increased ambition in international negotiations can be achieved in 2020;
- A new Just Transition Fund to support industries negatively affected by ambitious climate targets, such as coal and energy intensive regions;
- A Biodiversity Strategy for 2030 that addressed Natura2000, protection of species and habitats, deforestation, land degradation and oceans;
- A zero-pollution ambition policy in relation to air and water quality, hazardous chemicals, pesticides and endocrine disruptors;
- A new Circular Economy Action Plan, including the issue of microplastics;
- A new 'Farm to Fork' strategy for sustainable food. This will cover every step in the food chain from production to consumption, looking at consumer information, food safety, animal and plant health, fisheries and the agri-food sector;
- The reduction of the carbon footprint of the transport sector;
- Tax policies related to climate including a Carbon Border Tax and a review of the Energy Taxation Directive.

2.1.3. Environmental finance

The success and the implementation of a European Green Deal or a new Environmental Action Programme will depend on the availability of financial resources for the implementation. In autumn 2019, the Commission and the Parliament have to finally decide on the priorities of the **MFF for the period 2021–2027**. In June 2019, the Commission released a Communication on a roadmap to an agreement on the Union's budget for 2021-2027.¹⁴⁸ With regard to the future MFF, the EP has highlighted that the post-2020 MFF must be oriented towards sustainable development and mainstreaming of environmental policy in all funding mechanisms and budgetary lines and a compulsory mid-term revision, following a review of the functioning of the MFF.¹⁵⁰

The Commission proposal foresees an increase of the target of EU expenditure contributing to climate objectives from 20% to 25% (2021-2027) (€ 320 billion for EU 27 compared in 2021-2017 compared to

¹⁴⁶ [Von der Leyen 2019a](#).

¹⁴⁷ [Von der Leyen 2019b and 2019c](#).

¹⁴⁸ Communication from the Commission to the European Parliament, the European Council and the Council: [Roadmap to an agreement on the Union's long - term budget for 2021 - 2027 - The European Commission's contribution to the European Council meeting on 20-21 June](#) 2019, 13.6.2019, COM(2019)295 final.

€ 206 billion for EU 28 in existing budget period.¹⁴⁹ An EP resolution on the MFF post-2020 requested that climate-related spending should be significantly increased and 'reach 30% within the MFF as soon as possible and at the latest by 2027'.¹⁵⁰ Another EP resolution on the long term strategy stressed the need for more action towards a clean energy transition in the coal regions and called for a specific allocation of EUR 4.8 billion for a new '**Just Energy Transition Fund**' to be introduced into the MFF 2021-2027. The 'Just Transition Fund' is also part of von der Leyen's European Green Deal. In relation to the European Regional Development Fund and the Cohesion Fund the EP has also voted for the exclusion of eligibility of fossil fuel production or combustion from these funds.¹⁵¹

It is important to acknowledge for the future MFF that the adopted governance procedures related to the implementation of the existing legislation, e.g. related to the climate and energy framework require substantial amounts of resources for the tracking of progress of MSs' activities and the assessment of MSs' reports to the Commission, in particular also for those entities concerned with data compilation and analysis such as Eurostat or the European Environment Agency. This task should be combined with the provision of transparent data and information to the public.

The **LIFE programme** is the only EU fund dedicated specifically to environmental and climate objectives. In 2018, the Commission proposed a regulation establishing a new LIFE programme for 2021-2027 with EUR 5.45 billion (0.43% of total EU spending) covering sub-programmes on nature and biodiversity, circular economy, climate change mitigation and adaptation and clean energy transition.¹⁵² In April 2019, the EP adopted its position and proposed to increase the budget for the new LIFE programme to EUR 7.27 billion.¹⁵³ The sub-programme titles were also modified to cover:

- the shift towards a sustainable, circular, energy-efficient, renewable energy-based, climate-neutral and -resilient economy;
- protect, restore and improve the quality of the environment, including the air, water and soil;
- halt and reverse biodiversity loss and to tackle the degradation of ecosystems.

The funding allocated to environment portfolio would constitute 73.2% of the total LIFE budget. The third trilogue, which took place on 11 March 2019, resulted in a "common understanding". The final agreement on LIFE however depends on the amount of the allocation for the programme negotiated under the MFF 2021-2027, which will be finalised in the upcoming legislative period.

2.1.4. Sustainable development

In January 2019, the Commission published a reflection paper '**Towards a Sustainable Europe in 2030**'.¹⁵⁴ It proposed three scenarios for the future EU policy. The most ambitious scenario proposes a strategic framework to guide all actions of the EU and the MSs by defining specific SDG implementation targets, proposing concrete deliverables for 2030, and establishing a mechanism of reporting and monitoring of SDG progress.

¹⁴⁹ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: [A Modern Budget for a Union that Protects, Empowers and Defends – The Multiannual Financial Framework for 2021-2027](#), 2018, SWD (2018)171.

¹⁵⁰ European Parliament resolution of 14 March 2018 on the next MFF: [Preparing the Parliament's position on the MFF post-2020](#) (2017/2052(INI)).

¹⁵¹ European Parliament legislative resolution of 27 March 2019 [on the proposal for a regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund](#) (COM(2018)0372 – C8-0227/2018 – 2018/0197(COD)).

¹⁵² [COM/2018/385 final of 1 June 2018](#).

¹⁵³ [European Parliament legislative resolution of 17 April 2019](#), P8_TA(2019)0405.

¹⁵⁴ [COM/2019/22 final of 30 January 2019](#).

The second scenario proposed a mainstreaming approach that would ensure the integration by the Commission of the SDG in sectoral policies without enforcing MSs' action. The third scenario prioritises the EU external action, while ensuring continued improvements at EU level. On 14 March 2019, the European Parliament adopted a resolution welcoming the Commission reflection paper and favouring the first scenario, which proposes an overarching strategy for the implementation of the SDGs by the EU and the MSs.¹⁵⁵

The EP resolution related to the 7th EAP¹⁵⁶ requested the Commission to further improve its commitment to **mainstream the SDGs into EU policies** and initiatives. The EP was lacking an integrated and comprehensive EU **SD strategy** with detailed timelines up to 2030, objectives and concrete measures as well as concrete proposals for institutional structures and a governance framework to ensure the mainstreaming of the SDGs into EU policies and legislative proposals. The resolution also called for a Joint Sustainability Declaration of EP, the Commission and the Council to anchor the SDGs in the multiannual interinstitutional priorities of the next legislative period. Specific areas of further work in the area of SD identified by the EP were:

- 'Sustainable global value chains through the introduction of due diligence systems for companies, with a focus on their entire supply chains.'
- 'Sustainability chapters in trade agreements, including climate change chapters and overall compatibility with the Paris Agreement.'
- Sustainable finance (Framework to facilitate sustainable investment, see separate section below).
- Sustainability of goods imported in the EU (palm oil, biofuels, wood but also others that could have an impact on deforestation).
- The development of a sustainable food production and consumption model that protects and removes pressure of food systems, on health and the environment and brings economic benefits to farmers, companies and citizens.

In addition, the EP requested common indicators and benchmarks for systematically monitoring the implementation of a SD strategy as a basis for enforcement. It also asked the Commission 'to establish an in-depth gap analysis of existing policies and their implementation in order to identify critical areas of synergies and incoherencies and to adapt the European Semester process to involve Parliament and include a sustainability check'.

In its evaluation of the **Ecolabel Regulation** in 2017, the Commission found the regulation to be only partly effective because the underlying criteria are not entirely pertinent and some product types hardly apply the label.¹⁵⁷ Furthermore, the Commission's check concluded that the efficiency of the regulation could be improved since the costs associated with compliance may prevent producers to participate. In its resolution of 4 July 2017, the EP called on the Commission to improve product durability information through a revision of the Ecolabel Regulation.¹⁵⁸

¹⁵⁵ EP resolution of 14 March 2019 [on the Annual strategic report on the implementation and delivery of the Sustainable Development Goals \(SDGs\)](#), P8_TA(2019)0220.

¹⁵⁶ European Parliament resolution [of 17 April 2018 on the implementation of the 7th Environment Action Programme](#) P8_TA(2018)0100

¹⁵⁷ [COM/2017/0355 final of 30 June 2017](#).

¹⁵⁸ EP resolution of 4 July 2017 [on a longer lifetime for products: benefits for consumers and companies](#) OJ C 334, 19.9.2018, pp. 60–68.

In June 2017, the EP published a study on **GPP**¹⁵⁹, which examined the current use and opportunities of GPP in the EU.

The study identified environmental benefits for citizens, as well as gains for employment and the overall economy at European level through green procurement. In European countries, the public sector accounts for more than 25% of total employment. Every year, more than 250,000 public authorities in the EU spend around 14% of GDP on the purchase of services, works and supplies. Therefore, this study showed that the potentials for GPP are not yet fully used in the EU.

The Commission's progress report on its **CSR strategy**, while giving an overview of activities carried out on CSR, does not analyse deficits or specify future priority areas for EU action. Such a gap analysis and definition of priority actions in the future are urgently needed to move the CSR and 'business and human rights' agenda forward. While the Commission has so far coordinated Member States' activities developing and implementing National Action Plans (NAPs) on the implementation of the UN Guiding principles on Business and Human Rights, it could take on a more proactive role, starting with a peer review of Member States' NAPs and leading a debate on EU duties for companies' due diligence on human rights and environmental protection. In the past years, a number of Member States have already introduced due diligence obligations with regard to human rights, but also with regard to environmental protection.

2.1.5. Resource efficiency, the circular economy and waste management

Despite the efforts for a circular economy, recycled materials on average only meet less than 12% of the demand for materials in the EU.¹⁶⁰ According to the 2019 Environmental Implementation Review, 14 MSs were at risk of missing the 2020 target of 50% **municipal waste recycling** by 2020.¹⁶¹ 21 MSs need to increase the effectiveness of separate waste collection, which is a prerequisite for improving recycling as regards quantity and/or quality. Another issue is the incineration or landfilling of recyclable waste. Nearly all MSs have to implement new measures that aim to shift reusable and recyclable waste away from incineration and landfilling, and to improve and extend their separate collection systems. The implementation of the Circular Economy strategy should be strengthened and current implementation gaps should be addressed.

Already in December 2015, the Commission announced to extend circular economy aspects in future product requirements under the **Ecodesign Directive**.¹⁶² In its resolution of 9 July 2015 on 'resource efficiency and circular economy', the EP requested the Commission to review the Ecodesign Directive to broaden its scope beyond energy-related products and include resource-efficiency criteria related to reparability, durability, upgradability and recyclability of products.¹⁶³ However, such revision of the Directive has not been implemented yet. Commission President-elect von der Leyen announced a New Circular Economy Action Plan focusing on sustainable resource use, especially in resource-intensive and high-impact sectors such as textiles and construction.¹⁶⁴ Such a new Action Plan could entail, for example, new design requirements that ensure that products are long-lasting, repairable and energy and resource efficient, initiatives to improve the levels of re-use, repair and recycling or initiatives to address barriers for the uptake of secondary raw materials.

¹⁵⁹ Neubauer et al. 2017.

¹⁶⁰ [COM/2019/190 final of 4 March 2019](#) and [SWD/2019/90 final of 4 March 2019](#).

¹⁶¹ [COM/2019/149 final of 4 April 2019](#).

¹⁶² [COM/2015/0614 final of 2 December 2015](#).

¹⁶³ EP resolution of 9 July 2015 [on resource efficiency: moving towards a circular economy](#) (2014/2208(INI)) OJ C 265, 11.8.2017, pp. 65–75.

¹⁶⁴ Von der Leyen, 2019a.

Priority products and sectors identified by the Commission related to a circular economy include packaging, food, electronic and electrical equipment, transport/ mobility, furniture, buildings and construction, apparel and fabrics, cleaning and cosmetics. The Nordic Council of Ministers recently demanded that the electrical and electronic equipment should be the next priority in the establishment of a circular economy.¹⁶⁵ In its latest implementation report, the Commission announced to develop a scoring system on product reparability. Stakeholders have expressed uncertainties that prevent re-use of products resulting from the regulatory framework for second-hand products. The Commission announced that it is currently working on this issue to advance the EU legal framework to ensure equitable remedies, compensation and allocation of responsibilities and legal clarity.

In its resolution on the '**European strategy for plastics in a circular economy**'¹⁶⁶, the EP called upon the Commission to set minimum standards for recycled content for specific plastic products in the EU. It also demanded a single market for recycled plastics, proposed approaches to reduce marine litter, an EU programme for cleaning up plastic waste in the oceans and advocated the prohibition of microplastics in cosmetics and cleaning products by 2020. In order to reduce virgin plastic use and to improve the competitive position of recycled plastic, the Commission proposed in 2018 a national contribution calculated on the amount of non - recycled plastic packaging waste in each Member State, in the context of the Multiannual Financial Framework (MFF).¹⁶⁷

Waste prevention remains an important challenge in all MSs, including those with high recycling rates. The average generation of municipal waste in the EU has increased since 2014: only nine MSs reduced their generation per capita between 2014 and 2016.¹⁶⁸ Progress towards meeting the targets for recycling of municipal waste and of packaging waste is depicted in Annex II in chapter 5.1.1.

Waste prevention is also relevant related to food waste, which is currently at 180 kg per capita a year in the EU. As part of the action plan for the circular economy, the Commission supported the UN SDG for 2030 to 'halve per capita food waste at the retails and consumer levels' and proposed to develop a common methodology and indicators to measure food waste, to explore options for more effective use and understanding of date marking on food, in particular the 'best before' label and to clarify EU legislation to facilitate food donation and utilisation of food waste for animal feed. In its resolution from May 2017¹⁶⁹, the EP stressed the need to reduce food waste and requested the Commission to

- develop a legally binding definition of food waste and to adopt common methodology to measure it;
- to examine, by 2020, the possibility of setting up binding reduction targets;
- to update the list of foods currently exempt from 'best before' labelling in order to prevent food waste; and
- to propose a change in the VAT Directive that would explicitly authorise tax exemptions on food donations.

¹⁶⁵ Raudaskoski et al. 2019.

¹⁶⁶ European Parliament resolution of 13 September 2018 [on a European strategy for plastics in a circular economy](#) (2018/2035(INI)) P8_TA(2018)0352.

¹⁶⁷ [COM/2018/325 final of 2 May 2018](#) and [SWD/2018/172 final of 2 May 2018](#).

¹⁶⁸ Belgium, Bulgaria, Denmark, France, Germany, Luxembourg, Hungary, the Netherlands and Spain.

¹⁶⁹ EP resolution of 16 May 2017 [on initiative on resource efficiency: reducing food waste, improving food safety](#) (2016/2223(INI)) OJ C 307, 30.8.2018, pp. 25–43.

According to the recently amended **Waste Framework Directive**, reporting on **food waste** is obligatory. The first year for reporting is 2020, envisaged date for publication by the EC is 2nd half of 2022. The Commission will examine the reported data on food waste by the end of 2023, with a view to considering the feasibility of establishing a Union-wide food waste reduction target to be met by 2030.¹⁷⁰ Other measures to reduce food waste still need to be implemented.

Furthermore, the Commission has a legal obligation to **review the end-of-life vehicles Directive**, by 31 December 2020, taking account of (its) implementation and giving consideration, inter alia, to the feasibility of setting targets for specific materials contained in the relevant waste streams. During the review the problem of end-of-life vehicles that are currently not accounted for should be considered.

2.1.6. Biodiversity, land use and natural capital

The most comprehensive global biodiversity assessment confirmed in May 2019 that the loss of biodiversity continues at an unprecedented rate at global level, but also in the EU¹⁷¹ (see Figure 5-4 and Figure 5-5 in chapter 5.1.3 for the development of the abundance and diversity of birds as well as the cumulative number of alien species in the EU). Significant gaps in implementation, enforcement, financing and policy integration are threatening efforts to protect European ecosystems. Several pressures – ranging from inappropriate agricultural practices, land abandonment, climate change, infrastructure development, urban sprawl, pollution of air, soil and water, to increasing pressures from invasive alien species – continue to affect marine and land ecosystems as well as soil. Addressing such a wide range of pressures requires, among other things, the effective integration of biodiversity objectives into other policies. Despite some progress since 2017 with the completion and management of Natura 2000, most of the MSs¹⁷² need to speed up efforts for the completion of their networks, especially in the marine environment, and complete the process of designation of Special Areas of Conservation while developing and implementing more effective conservation measures. Every six years, MSs **report on progress made related to the EU 2020 goal of halting and reversing the loss of biodiversity and ecosystem services**. New reports are due in 2019 and the Commission will reflect these in its 2020 State of Nature Report. So far, it is clear that:

- Insufficient data, monitoring and reporting is affecting the evaluation of protective measures for marine areas. Some countries have failed to report on time¹⁷³, while many others¹⁷⁴ need to improve their cooperation and monitoring programmes for marine areas.
- Between 1990 and 2016, there was a 9 % decrease in the index of common birds in the 26 EU MS with bird population monitoring schemes.¹⁷⁵
- The index of grassland butterflies has declined significantly in the 15 EU countries where butterfly monitoring schemes exist. In 2017, the index was 39 % below its 1990 value.¹⁷⁶

¹⁷⁰ [Directive \(EU\) 2018/851](#) OJ L 150, 14.6.2018, pp. 109–140.

¹⁷¹ [IPBES 2019](#).

¹⁷² Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Latvia, Malta, the Netherlands, Poland, Portugal, Romania, Spain, Slovakia, Slovenia, Sweden and the United Kingdom.

¹⁷³ Croatia, Denmark, Estonia, Greece, Lithuania, Romania and Slovenia.

¹⁷⁴ Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Ireland, Italy, Latvia, Malta, the Netherlands, Poland, Portugal, Spain, Sweden and the United Kingdom.

¹⁷⁵ EEA 2019b.

¹⁷⁶ Van Swaay et al. 2019.

The implementation of the CAP after 2020 will play a key role for the future state of biodiversity because agriculture affects habitats, many species as well as agricultural genetic diversity. The role of nature conservation and biodiversity in the budget of the MFF for the 2021 – 2027 period to be adopted in autumn 2019 will be another key element of the biodiversity-related implementation of EU targets.

The failure to adopt a **Soil Framework Directive** in 2014 meant that severe soil degradation threatens the achievement of the EU's domestic and international biodiversity and climate goals. With new evidence on the relevance of healthy soils for food security and the mitigation of climate change¹⁷⁷, a window of opportunity has emerged to reinvigorate European soil policy.

The EU **Timber Regulation** aims to prevent illegal logging, but recent reports on the implementation raised concerns related to the quality of the checks conducted by MSs.¹⁷⁸ The next Commission report on the implementation of the timber regulation is foreseen for October 2020 which may indicate further action should the situation not improve.

A crucial opportunity at international level for further commitment of the EU on biodiversity will be **COP15 under the Convention of Biological Diversity** (CBD) in China in October 2020. COP15 will adopt a global biodiversity framework up to 2030, requiring preparatory action by the EU. Commission President-elect von der Leyen announced that a Biodiversity Strategy for 2030 would be presented to the EU leadership at the 2020 COP of the CBD.¹⁷⁹ This would require urgent work on target(s) for 2030, a framework to evaluate progress to targets and mechanisms and financial resources to deliver on such commitments. The EP resolution related to the 7th EAP emphasised the importance of establishing new financial mechanisms for biodiversity in the next MFF.

2.1.7. Air quality

The European Commission is currently reviewing the EU's **Ambient Air Quality Directive**, the main piece of legislation that applies to air quality in cities, where the bulk of the pollution comes from transport, but also in some areas from district and domestic heating. The results of the fitness check of the two EU Ambient Air Quality (AAQ) Directives (Directives 2008/50/EC and 2004/107/EC) undertaken in 2018-2019 will presumably be published by the end of 2019 and proposals for legislative action are likely to follow after this report.

Despite the legislation on air pollution, the concentrations of certain air pollutants are above EU air quality standards in most MSs. The situation is especially severe in urban areas, where a majority of Europeans live. MSs have started compiling their national air pollution control programmes, which are due in 2019. A recent EEA report confirmed that for 'more than half of the 26 pollutants monitored, emissions increased slightly in 2017 compared to the previous year' and that '[i]n recent years, the rate of emission reductions has stagnated for many pollutants' while 'it has actually slightly increased' for a number of pollutants (e.g. ammonia emissions). The report also highlighted 'the growing importance of the residential stationary combustion sector, which includes the burning of fuels in domestic stoves'. This single source contributed 51% of fine particulate matter (PM_{2.5}) in 2017, 42% of total carbon monoxide, 42% of polycyclic aromatic hydrocarbons, 24% of the dioxin and furan compounds

¹⁷⁷ IPCC (2019). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Geneva.

¹⁷⁸ UNEP-WCMC 2019.

¹⁷⁹ Von der Leyen, 2019a.

and 16% of the heavy metal cadmium.’ In the EU-28, 391,000 premature deaths are attributed to PM_{2.5}, 76,000 to N₂O and 16,400 to O₃ exposure.¹⁸⁰

18 MSs still need to accelerate reductions in nitrogen oxide (NO_x) emissions and nitrogen dioxide (NO₂)¹⁸¹ concentrations by further reducing transport emissions, particularly in urban areas. This may also require restrictions on vehicle access to urban areas and/or fiscal incentives. In July 2019, the Commission was pursuing 30 infringement cases against 20 MSs for persistent breaches of EU limits on nitrogen and sulphur oxides (NO_x and SO_x) and particulate matter. Acceleration of reductions in particulate matter (PM_{2.5} and PM₁₀) is needed in fifteen EU MSs¹⁸², inter alia by promoting cleaner energy production and efficient and clean district heating. In this regard, there are several infringement cases pending. Some of the MSs concerned have been referred to the Court of Justice of the EU over persistently high levels of particulate matter (PM₁₀) and the Court has already ruled in two of these cases. For seven MSs¹⁸³, emissions from the sector of intensive rearing of poultry and pigs represent the largest share of pollutant emissions. The EP implementation report on the 7th EAP proposed a range of additional measures to improve urban air quality.¹⁸⁴ The review of the Ambient Air Quality Directive will be a chance to address the current implementation gaps. Figure 5-3 in chapter 5.1.3 shows the development of the concentration of air pollutants in relation to the limits set for the whole EU.

2.1.8. Water protection and management, marine environment

Much work remains to be done to fully achieve the objectives of the **Water Framework Directive** and other related Directives: less than half of surface water bodies are in good status. Urban wastewater is still not treated as it should be in many MSs¹⁸⁵, which is why most of them are still facing infringement procedures and a few have been subjected to financial penalties. Water pollution from nitrates caused by intensive agricultural practices has decreased in Europe in the last two decades. However, despite this positive overall trend, nitrates pollution and eutrophication continue to cause problems in many MSs¹⁸⁶, as agricultural pressures on water quality are still increasing in some areas. According to the EEA’s indicator assessment the milestone set in the EU resource efficiency roadmap — i.e. a water abstraction should stay below 20% of available renewable water resources in Europe — has not been achieved in 36 river basins corresponding to 19% of Europe’s territory in summer 2015.¹⁸⁷ Around 30% of the total European population was exposed to water scarcity conditions in summer 2015 compared to 20% in 2014, mainly living in densely populated European cities, agriculture-dominated areas of southern Europe and small Mediterranean islands.

In February 2018, the Commission presented a proposal for a revised **Drinking Water Directive**¹⁸⁸. The proposal adds new and emerging substances to the list of criteria determining water safety standards in accordance with the latest recommendations of the World Health Organisation. It also

¹⁸⁰ EEA, 2018j.

¹⁸¹ Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Germany, Greece, France, Hungary, Italy, Ireland, Luxembourg, The Netherlands, Poland, Portugal, Romania, Spain, United Kingdom.

¹⁸² Austria, Bulgaria, Croatia, the Czech Republic, Germany, Greece, France, Hungary, Italy, Poland, Romania, Slovakia Slovenia, Spain and Sweden.

¹⁸³ Cyprus, Estonia, Germany, Hungary, Latvia, the Netherlands and Spain.

¹⁸⁴ European Parliament [report on the implementation of the 7th Environment Action Programme](#) (2017/2030(INI)), 6.3.2018.

¹⁸⁵ Bulgaria, Croatia, Cyprus, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia and Spain.

¹⁸⁶ Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Germany, Greece, Finland, France, Italy, Lithuania, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Sweden, Spain and United Kingdom.

¹⁸⁷ EEA 2018f.

¹⁸⁸ [COM/2017/0753 final of 1 February 2018](#).

enhances transparency for consumers on the quality and supply of drinking water with the intention of reducing the number of plastic bottles. The EP adopted amendments to the Commission's proposal in October 2018 and concluded its first reading in March 2019. The EP supported the strengthening of the maximum limits for certain pollutants such as lead (to be reduced by half), harmful bacteria, and introduced new caps for most polluting substances found in tap water.¹⁸⁹ However, the Council has not reached agreement in time to start negotiations with the EP before the end of the legislative term. This will therefore take place in autumn 2019. In its resolution on the 7th EAP, the EP encouraged the Commission and the MSs to further integrate the EU's water objectives into other sectoral policies under the EAP, in particular the CAP.

Another topic on the agenda in autumn 2019 is the proposal for a **Regulation on Minimum Requirements for the Re-use of Wastewater**.¹⁹⁰ The proposal aims to contribute to reducing water scarcity by ensuring that re-used in agricultural irrigation is safe for its intended use. The EP adopted amendments to the proposal in its first reading in February 2019, which include inter alia:

- the addition of 'Salmonella' to the parameters considered for reclaimed water quality;
- the addition of detection of the presence of microplastics to the list of additional requirements that can be imposed by competent authorities;
- the expansion of the list of preventive measures to limit risks; and
- requiring the Commission to assess, within five years, whether the scope of the regulation can be extended to include further specific uses (i.e. other than agricultural irrigation).

The Council agreed on a general approach in June 2019. Trilogue negotiations are expected to start in autumn 2019.

In 2017, a **fitness check** started to evaluate the **Water Framework Directive (WFD)** (2000/60/EC) which also includes other related Directives (Directive 2006/118/EC on Groundwater, Directive 2008/105/EC on Quality Standards and the Floods Directive (2007/60/EC). The main tools to implement the Directive are the River Basin Management Plans (RBMP) and the Programmes of Measures. A public consultation was conducted from September 2018 to March 2019. A proposal of the Commission is announced for 2021 or early 2022.

This fitness check will be linked to the **review of the Urban Waste Water Treatment Directive**. A public consultation took place in 2018. The stakeholder consultation took place from July to October 2018, followed by public stakeholder conference in November 2018. Issues for improvements raised at the stakeholder conference were energy-efficiency of wastewater treatment plants, water re-use, sludge management and storm water overflows as well as pollutants of emerging concerns (pharmaceuticals, microplastics).¹⁹¹ The evaluation was not completed in the first quarter of 2019 as originally planned and further work will also take place in the new legislative period.

In her mission letter to the Commissioner for Environment and Oceans, president-elect von der Leyen highlighted the implementation and evaluation of the **Common Fisheries Policy** by 2022 related to climate adaptation or clean oceans and the fight against illegal fishing and action at global level such

¹⁸⁹ European Parliament, „[Parliament supports plans to improve quality of tap water and cut plastic litter](#)“, press release, 28.3.2019.

¹⁹⁰ [COM/2018/337 final of 28 May 2018](#).

¹⁹¹ IEEP et al. 2018.

as a **global agreement to ban fisheries subsidies** that contribute to overfishing and improved international ocean governance to be discussed at the UN Ocean Conference in Lisbon in 2020.¹⁹²

2.1.9. Noise pollution

In several resolutions, the EP has repeatedly called for measures to reduce environmental noise such as setting limits to noise around airports, addressing military subsonic jet aircraft, lowering noise limits for cars and introducing labels to increase transparency about noise.¹⁹³ However, the Commission did not start legislative actions following these calls.

2.1.10. Chemicals and pesticides

The Union has agreed to achieve, by 2020, the objective that chemicals are produced and used in ways that lead to the minimisation of significant adverse effects on human health and the environment.¹⁹⁴ In its resolution related to the 7th EAP, the EP regretted ‘the lack of progress on developing a Union **strategy for a non-toxic environment**, the promotion of non-toxic material cycles and reducing exposure to harmful substances including chemicals in products. This would include actions on endocrine disruptors, legislation on impact of pharmaceuticals on the environment, and regulation on authorisation and use of water, plant protection products and low-risk pesticides’. The EP highlighted the need for enhanced efforts ‘to ensure that, by 2020, all relevant substances of very high concern, including substances with endocrine-disrupting properties, are placed on the REACH candidate list’. The EP also requested legislative action ‘to ensure that the combination effects of chemicals are effectively addressed in all relevant Union legislation as soon as possible, with a special emphasis on risks to children arising from exposure to hazardous substances’. The EP also called on the ECHA, the Commission and the MSs to ensure the compliance of registration dossiers with the REACH Regulation, to accelerate substance evaluation and to implement effectively the final conclusions of substance evaluations under REACH.

Since 2016, the Commission has introduced the so-called ‘**innovation principle**’ into the policy-making cycle (agenda-setting, legislation, implementation) as a tool to account for the effect on innovation of new initiatives. In 2018, the Council stressed that this ‘principle’ ‘should be applied, which entails fully assessing the impact of policy and legislation on innovation.’¹⁹⁵ The adoption of an ‘innovation principle’ with a strict focus on jobs, growth and competitiveness was first proposed by the [European Risk Forum](#) in 2013 out of the concern that ‘the necessary balance of precaution and proportion is increasingly being replaced by a simple reliance on the precautionary principle and the avoidance of technological risk’.¹⁹⁶ The ‘innovation principle’ is also included in the proposal for a Horizon Europe regulation.¹⁹⁷ The environmental principles in Article 191 TFEU do not include such ‘innovation principle’ and in its current interpretation, it could have a negative impact on the application of the precautionary principle in EU legislation such as REACH.¹⁹⁸

¹⁹² Von der Leyen, 2019c.

¹⁹³ EP resolution of 11 November 2015 [on aviation](#) (2015/2933(RSP)), OJ C 366, 27.10.2017, pp. 2–6.

¹⁹⁴ [Decision No 1600/2002/EC](#) OJ L 242, 10.9.2002, pp. 1–15 and [Johannesburg Plan of Implementation](#), WSSD 2002.

¹⁹⁵ [COM/2018/306 final of 15 May 2018](#).

¹⁹⁶ European Risk Forum, [Open letter to José Manuel Barroso](#), 2013.

¹⁹⁷ [COM/2018/435 final of 7 June 2018](#).

¹⁹⁸ Garnett et al. 2018.

a. Pesticides

In its resolution related to the 7th EAP, the EP called for 'an improved pesticide authorisation system in the EU, improved standards for the monitoring of pesticides and targets for reducing their use'. Parliament's decision of 6 February 2018 on setting up a special committee on the Union's authorisation procedure for pesticides (PEST) is a response to concerns raised about the risk posed by the herbicide substance glyphosate. In January 2019, the EP adopted the report from the PEST special committee, which concluded, inter alia, the following: the public should be granted access to studies used in the authorisation procedure; the EU's framework should stimulate innovation and promote low-risk pesticides; scientific experts should review studies on carcinogenicity of glyphosate; and data requirements for PPPs should include long-term toxicity.

The EFSA announced in May 2019 a review of guidance on the risk assessment of pesticides, which influenced the European Commission's 2018 decision to a ban three neonicotinoids amid rising public concern over Europe's shrinking bee populations. In July, the European Commission's Standing Committee on Plants, Animals, Food and Feed (SCoPAFF) voted by qualified majority in favour of applying only a few 'revised uniform principles' from the 'Bee Guidance Document' (BGD) drafted by EFSA in 2013. The adoption by the Commission is on the agenda in autumn 2019, with final publication set for March 2021. Environment campaigners criticized the proposal as watering down EFSA's guidelines and were afraid of harmful effects on bees.

b. Microplastics

In the context of the EU Plastics Strategy, ECHA published a restriction dossier under the REACH Regulation targeting intentionally added microplastics in products in January 2019.¹⁹⁹ Targeted compliance checks are regularly carried out by ECHA to bring registration dossiers into compliance with information requirements. However, shortcomings in this process have been identified in the Commission Communication 'Report on the operation of REACH'²⁰⁰, and ECHA has been required to significantly increase the efficiency of the evaluation procedures by 2019 through different actions. While data on the properties of the substances is available at EU level, the above-mentioned Communication has also concluded that 'the enforcement of the obligations on all actors, including registrants, downstream users and in particular importers' has to be strengthened. To coordinate and evaluate harmonised enforcement projects and joint inspections, MSs cooperate in the Forum for Exchange of Information on Enforcement established under REACH. An important future task will be better integration of customs border controls to prevent banned substances from entering the internal market on their own or in manufactured articles.¹⁶¹

The dossier proposes to ban certain consumer and professional uses, while other uses would be subject to labelling/information requirements and annual reporting. Microplastics covered by the dossier have multiple applications, including in agriculture, horticulture, cosmetic products, paints, coatings, detergents, maintenance products, medical and pharmaceutical applications, oil and gas sectors, etc. ECHA has estimated that the emission reduction obtained through the restriction would amount to 400.000 tonnes of microplastics and cost € 9.4 Billion over the next 20 years. A public consultation is open until 20 September 2019. The ECHA has estimated that the emission reduction obtained through the restriction would amount to 400,000 tonnes of microplastics and cost EUR 9.4 billion over the next 20 years. A public consultation is open until 20 September 2019.

¹⁹⁹ ECHA 2019.

²⁰⁰ [COM/2018/0116 final of 5 March 2018](#), p.6 and p.9.

¹⁶¹ [COM/2019/149 final of 4 April 2019](#)

The ECHA Committees will formulate their opinions and send them to the European Commission, expected in spring 2020. It is then up to the European Commission to propose to amend the REACH Regulation if the restriction meets the legal requirements.

c. Endocrine disruptors

After the adoption of a Regulation setting criteria for the identification of EDCs for pesticides and biocides, the Union legislation still lacks specific provisions on EDCs in other sensitive areas, e.g. for cosmetics, toys, or food contact materials. The EP had called on the Commission to make legislative proposals no later than 2020 to amend regulations on cosmetics (Regulation (EC) No 1223/2009), toys (through Directive 2009/48/EC) and food contact materials (Regulation (EC) No 1935/2004). The EP also expressed an urgent need to accelerate test development and validation in order to properly identify EDCs.

2.1.11. Sustainable finance

The EP adopted its position at first reading of the proposal for a regulation on the establishment of a framework to facilitate sustainable investment.²⁰¹ The changes requested by the EP address the following aspects:

- The use of the proposed taxonomy should be extended to a wide range of financial products instead of only defining a specific eco-label for sustainable financial products with the aim of gradually moving to an entire financial system in support of a sustainable economy. To that end, sustainable finance should be brought into the mainstream financial products and services and not be limited to specific green investments.
- The framework should not only define environmentally sustainable economic activities, but also determine the degree of environmental sustainability.
- The framework for promoting sustainable investment should not be limited to defining sustainable investments, but expanded to define criteria for when and how an economic activity has a significant negative impact on sustainability.
- The taxonomy should be based on harmonised, comparable and uniform criteria and indicators, which should be consistent with existing EU legislation and indicators. It should also consider the role of the whole value chain with the unified life cycle assessment methodology and better link to existing legislation in different areas of capital markets and sustainability.
- The criteria for sustainable activities have been further specified, e.g. more specific criteria with regard to biodiversity were proposed.
- The Commission should also take into account transitional measures towards activities that support the transition to a more sustainable, low carbon economy. The technical screening criteria should encourage such transition processes.

The Council still needs to react to the EP's amendments.

2.1.12. Common Agricultural Policy (CAP)

In its 2018 legislative proposal, the Commission put forward nine CAP objectives. The economic objectives are to increase competitiveness, ensure fair income, and rebalance power in the food chain.

²⁰¹ [COM/2018/353 final 24 May 2018](#).

Social objectives are vibrant rural areas and support generational renewal, whereas environmental objectives are climate change action, environmental care, preservation of landscapes and biodiversity and protection of food and health quality. The Commission proposes to introduce a 'new delivery model' by simplifying the CAP and shifting the focus from compliance and rules towards results and performance and enhancing subsidiarity. Central to this reform, is the development of strategic plans by MSs covering all CAP expenditure and defining targets to contribute to the overall objectives. Some other key elements of the Commission's proposal are:

- a higher level of direct support for small and medium-sized farms;
- limit direct payments at EUR 100,000 per farm (with deductible labour costs);
- introduction of a new 'green architecture', where mandatory greening and cross-compliance for farmers are replaced by a new and enhanced conditionality and MSs are obliged to offer new so called eco-schemes, pillar II and AECMs, pillar II;
- the design and management of green architecture by national authorities; and
- support limited to genuine farmers.

The proposal continues the three known measures for CAP expenditure: direct payments (main share of spending), market measures and rural development. It includes a budget reduction by about 5% (current prices) due to Brexit. Proposed budget cuts will significantly affect funding for the European Agricultural Fund for Rural Development, which provides funds inter alia for AECMs and organic farming.²⁰² The legislative framework for the CAP for the period 2021-2027 are included in a set of three legislative proposals:

- the CAP Strategic Plan Regulation (covering direct payments to farmers, rural development support and sectoral support programmes);
- the CAP Horizontal Regulation (on financing, managing and monitoring the CAP);
- the Amending Regulation (amending regulations on the Single Common Market Organisation, on quality schemes for agri-food products and on specific measures for outermost regions and smaller Aegean islands).

In the EP, the Committee on Agriculture and Rural Development (AGRI) is in charge of this dossier. The draft EP report included 109 amendments. In April 2019, the AGRI Committee's position on the proposal was approved. In June 2019, the presidency provided a progress report to the Council.²⁰³

In its 2018 resolution²⁰⁴, the EP emphasized the need for a strong common set of rules, objectives and indicators to complement additional subsidiarity. It considers that the current two-pillared architecture must continue and emphasized that 'the pillars must be coherent and complementary' it stressed that 'direct payments are there to support farmers in food production and the protection of environmental and animal welfare standards' and should 'include a strong common conditionality including environmental deliverables'. It rejected the proposed 25% cut in the rural development budget and suggested that a minimum amount of the total available budget in Pillar II should be allocated to AECMs. In its 2019 opinion on the CAP reform proposal, the European Court of Auditors (ECA) concluded that the Commission 'did not provide robust economic evidence' for a continuation of direct payments and market measures, and that particularly 'direct payments based on given amount of hectares of land owned or used' are not an appropriate instrument 'for addressing many environmental and climate concerns, nor (...) the most efficient way of supporting viable farm

²⁰² Massot & Negre, 2018.

²⁰³ Council of the European Union, 2019.

²⁰⁴ EP resolution of 30 May 2018 [on the future of food and farming](#) (2018/2037(INI)) of 18 May 2018, P8_TA(2018)0224.

income'. It also criticised that despite the aim to shift to a performance based-delivery model, the proposal lacks the necessary elements of an effective performance system (e.g. absence of clear, specific and quantified objectives) and provides weak incentives for performance.²⁰⁵

Over the past years, various EU institutions – including the European Economic and Social Committee²⁰⁶ and the Committee of the Regions²⁰⁷ – have called for complementing the CAP with a common food policy. It would align agricultural policy with policies addressing food processing, distribution and consumption towards more sustainable food systems. This call has recently been supported by IPES-Food.²⁰⁸

2.2. Climate Action

2.2.1. EU climate and energy targets

The Paris Agreement requests an update of nationally determined contributions (NDCs) by 2020 and every five years thereafter. As part of this update, some MSs' leaders, NGOs as well as the EP called for a more ambitious EU target for 2030. The EP requested an update of the EU NDC to a target of 55 % domestic GHG emission reduction by 2030 compared with 1990 levels as well as the adoption of a long-term strategy that delivers net-zero emissions by 2050.²⁰⁹ Commission President-elect von der Leyen announced to increase the 2030 to at least 50% emission reductions and to 55% provided that international negotiations lead to a higher ambition level of other major emitters by 2021.²¹⁰ The EP expected that the EU should send a clear message during the UN Climate Summit in New York in September 2019 at the latest.²¹¹

At the European Council in June, MSs failed to adopt a 2050 carbon neutrality target for the EU. MSs that already adopted climate neutrality targets are Denmark ("climate neutral society" by 2050), Finland (by 2035, coalition agreement), France (by 2050, part of legislation), UK (by 2050, part of legislation, Scotland by 2045), Ireland (by 2050, policy position), Portugal (by 2050, policy position) and Sweden (by 2045, part of legislation). Poland, Hungary and the Czech Republic opposed the target of net zero emissions. Finland is likely to renew efforts to adopt the 2050 carbon neutrality target in the Council. Commission President-elect von der Leyen pledged to propose a European Climate Law to enshrine the 2050 climate-neutrality target into legislation, which may imply additional interim targets for the period 2030-2050. She also announced to create a "just transition" fund.²¹² The EP motion for a resolution on the long-term strategy has stressed the need for more action towards a clean energy transition in the coal regions and called for a specific allocation of EUR 4.8 billion for a new 'Just Energy Transition Fund' to be introduced into the MFF 2021-2027. Von der Leyen also put forward the idea of a new European Climate Pact between regions, local communities, civil society and schools to commit to a set of pledges to change behaviours.²¹⁰

²⁰⁵ [Opinion No 7/2018](#) OJ C 41, 1.2.2019, pp. 1–55.

²⁰⁶ Opinion of the European Economic and Social Committee on '[Civil society's contribution to the development of a comprehensive food policy in the EU](#)' (own-initiative opinion) OJ C 129, 11.4.2018, pp. 18–26, para. 1.5.

²⁰⁷ Opinion of the European Committee of the Regions — [Towards a sustainable EU food policy that creates jobs and growth in Europe's Regions and Cities](#), OJ C 272, 17.8.2017, pp. 14–18.

²⁰⁸ [iPES-Food, 2019](#).

²⁰⁹ European Parliament Motion for a resolution to wind up the debate on the statements by the Council and the Commission pursuant to Rule 123(2) of the Rules of Procedure [on the strategy for a long-term reduction in EU greenhouse gas emissions in accordance with the Paris Agreement](#) (2019/2582(RSP)).

²¹⁰ Von der Leyen, 2019b.

²¹¹ EP resolution of 14 March 2019 [on climate change – a European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement](#) (2019/2582(RSP)), P8_TA(2019)0217.

²¹² Von der Leyen, 2019a.

In autumn 2019, the Commission and the Parliament have to finally decide on the priorities of the MFF for the 2021–2027 period. In June 2019, the Commission released a Communication on a roadmap for agreeing the Union’s budget for 2021–2027.²¹³ The Commission proposal foresees an increase of the target of EU expenditure contributing to climate objectives from 20% to 25% (2021–2027) (EUR 320 billion for EU27 compared in 2021–2027 compared to EUR 206 billion for EU 28 in existing budget period).²¹⁴ An EP resolution on the MFF post-2020 requested that climate-related spending should be significantly increased and ‘reach 30% within the MFF as soon as possible and at the latest by 2027’.²¹⁵

The renewable energy target of at least 32% of gross final energy consumption and the energy efficiency target of 32.5% include a review clause by 2023 for an upward revision of the EU level target. In its climate resolution, the EP requested that ‘the Commission should, during the 2022–2024 reviews of the 2030 climate package and other relevant legislation at the latest, present legislative proposals that raise the level of ambition in line with the updated NDC and the net-zero emissions target’ and called for a further interim emission reduction target by 2040. Finland has made strengthening climate ambition a top priority for its presidency of the European Council.

Between 1990 and 2017, EU emissions decreased by 22% and the EU is on track to achieve its GHG emission reduction target for 2020. In its recent report on GHG emission trends and projections in the EU, the EEA finds that ‘according to MSs’ most recent projections [...], an EU-wide reduction in GHG emissions by 2030 may reach 30% below 1990 levels based on existing mitigation measures, and 32% when additional planned mitigation measures are considered. The projected reductions fall short of the 40% domestic reduction target for 2030.’²¹⁶

Figure 0-1 illustrates the EU’s current and projected progress towards reaching targets for GHG emission reductions, renewable energy and energy efficiency. Figure 5-13 in Annex II (chapter 5.2.4.) illustrates the progress made under the EU-wide hydrofluorocarbon phase-down set out in the F-gas Regulation.

After the submission of draft integrated National Climate and Energy Plans (NECPs) for the period 2021–2040 in 2018, the Commission provided detailed assessments to each MSs, which have to submit a revised NECP by the end of 2019 with improvements addressing the recommendations. The Commission’s assessment of MSs’ NECPs states that, based on the planned measures or stated ambitions for national GHG reductions included in the draft NECPs, and based on conservative assumptions for the countries which have submitted neither of the two, the overall EU GHG reduction is expected to meet the target of reducing GHG emissions by 40% by 2030 compared to 1990²¹⁷ (EC, 2019a). However, the assessment also found that GHG emission reductions in the non-ETS sectors (mainly transport, buildings and agriculture) would fall two points short of the 30% EU reduction target compared to 2005 levels. A considerable number of MSs did not present plans that show how they will meet the national target under the Effort Sharing Regulation.

According to the latest data on the development of the shares of energy from renewable sources, the current pace of renewable energy growth is too low to achieve the 20% target in 2020 (ECA, 2019). In addition, the fourth consecutive increases in EU’s annual primary and final energy consumption also put the EU at risk of missing its 2020 energy efficiency target. The Commission’s assessment of NECPs also reveals that the goal of 32% of renewable energy is likely to be missed by 1.1–1.6 percentage points. In addition to the gap identified for the EU28, the overall level to be achieved in 2030 remains

²¹³ [COM/2019/295 final of 13 June 2016.](#)

²¹⁴ [SWD/2018/171 final of 2 May 2018.](#)

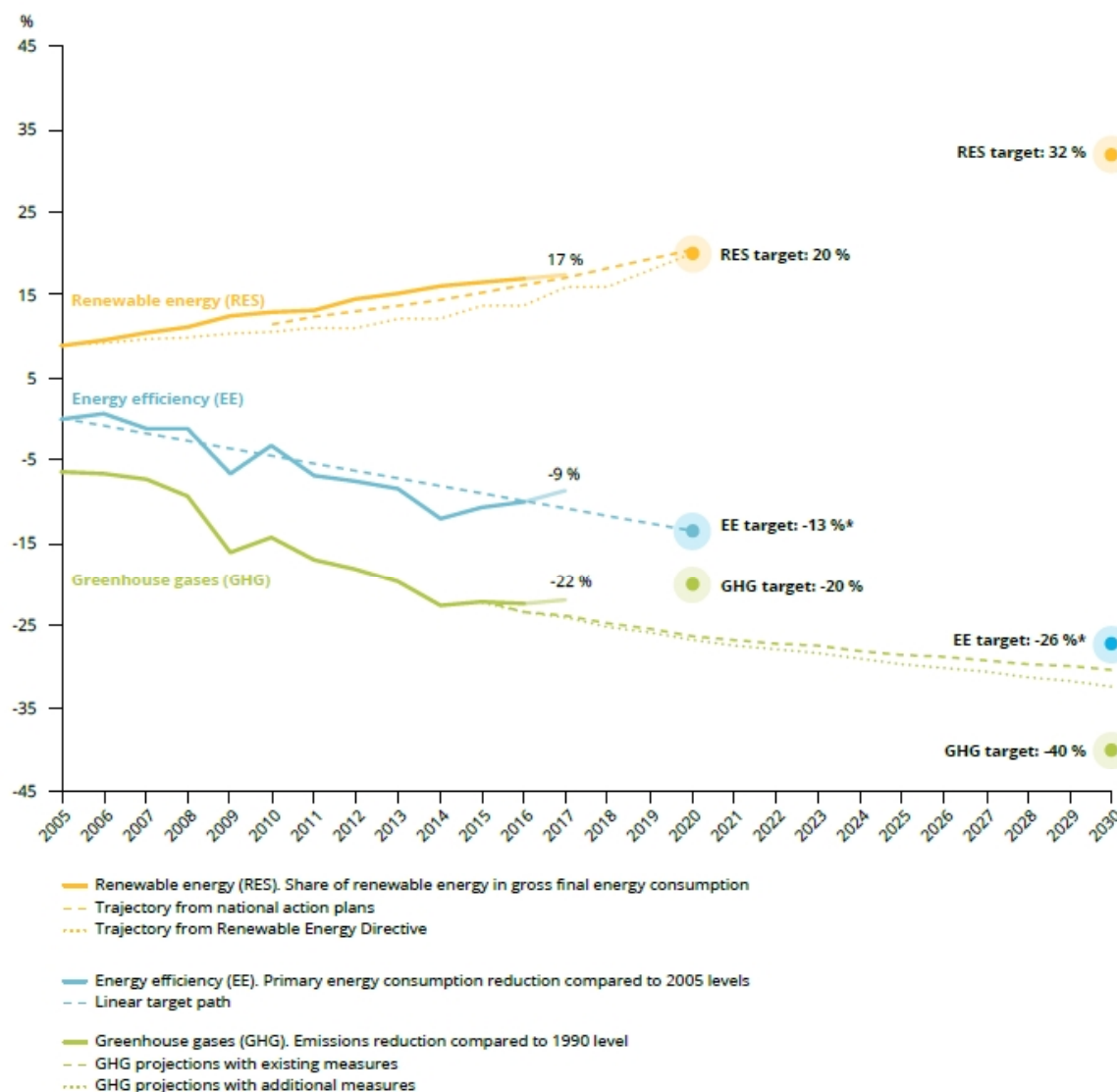
²¹⁵ EP resolution of 14 March 2018 [on the next MFF: Preparing the Parliament’s position on the MFF post-2020](#) (2017/2052(INI)), OJ C 162, 10.5.2019, pp. 51–70.

²¹⁶ [EEA 2018 h.](#)

²¹⁷ [SWD/2019/212 final of 16 June 2019.](#)

highly dependent on the contribution of the ambitious MSs and on the gross final consumption of energy. The shortfall is even higher for the goal of achieving a 32.5% improvement in energy efficiency by 2030 and amounts to 6 - 2 percentage points. Only a few MSs submitted sufficient levels of contributions to the energy efficiency target.

Figure 3-1: EU progress towards 2020 and 2030 targets on climate and energy



Sources: EEA, 2018e

Notes: Projections for GHG emissions show projections with existing measures (dashed green line) and with additional measures (dotted green line). The 'with existing measures' (WEM) scenario reflects existing and adopted policies and measures, whereas the 'with additional measures' (WAM) scenario considers the additional effects of planned measures reported by Member States.

The energy efficiency targets for 2020 and 2030 are defined as absolute targets, set at 20% and 32.5% below the level in primary and final energy consumption projected for 2020 and 2030 in the European Commission's 2007 Energy Baseline Scenario. In this figure, the target is expressed as a relative change compared with 2005 levels of primary energy consumption in the EU to show the required reduction in primary energy consumption over time. The year 2005 was chosen because it is used as a base year for GHG emissions (in the EU ETS and under the Effort Sharing Decision (ESD)) and renewable energy targets; this base year is not set in the energy efficiency legislation. It also corresponds to a peak in energy consumption in the EU.

2.2.2. EU Emissions Trading System (EU ETS)

The revised ETS Directive for the 2021-2030 period was adopted in 2018. The start of operation of the Market Stability Reserve in 2019, and the adoption of the reform of the post-2020 Emissions Trading System in early 2018 already strengthened the carbon price (see Annex II, section 6.2.1). However, a revision of the EU 2030 target as currently discussed in the EU will require additional changes related

to the EU-ETS contribution to a more ambitious EU target. An overall GHG target of 55-60% below 1990 levels requires a reduction of the emissions covered by the EU ETS of 61-65% below 2005.²¹⁸ Such an enhanced ETS target could be implemented through:

- a strengthening of the cap (higher linear reduction factor and a rebasing of it to account for the cap being 205 Mt CO₂ higher than average emissions in the current trading period);
- enhancing the resilience of the system by improving the market stability reserve (MSR);
- boosting unilateral cancellation (due to measures in the electricity sector);
- introducing a carbon price floor (surrender charge, auction reserve price);
- applying a tiered approach to free allocation for industry.

Chapter 5.2.1 provides further information on recent developments in the ETS.

Commission President-elect von der Leyen pledged to extend the EU emissions trading system to cover transport, buildings and the maritime sector and to reduce the free allowances allocated to airlines over time.²¹⁹ From an environmental point of view, the inclusion of additional sectors in the ETS should focus on sectors in which the inclusion leads to emission reductions in the sector itself or in sectors with little or no CO₂ taxation, such as maritime transport. As long as the ETS is struggling to cope with a surplus, the inclusion of additional sectors may generate demand for allowances that otherwise would be invalidated in the MSR or cancelled by MSs. With regard to aviation emissions, the ETS could be strengthened by phasing out allocation free of charge for aviation since aviation is not in the same competitive situation as steel or cement and by the inclusion of non-CO₂ impacts since they now can be reduced due to improved weather forecasts.

The revised ETS Directive establishes a Modernisation Fund for the 2021 to 2030 period to support investments proposed by the beneficiary MSs to modernise energy systems and improve energy efficiency in MSs with a GDP per capita below 60% of the Union average in 2013. The Modernisation Fund shall be financed through the auctioning of allowances. Annual reports will be provided and by December 2024, the Commission shall review how the Modernisation Fund was implemented. The Innovation Fund is also fed by revenues from auctioning of ETS allowances and it supports innovative low-carbon technologies and processes in energy intensive industries, carbon capture and utilisation, carbon capture and storage, innovative renewable energy generation and energy storage.

In the event of closure of electricity generation capacities, Article 12 (4) of the EU ETS Directive addresses the cancellation of allowances in MSs. For an effective contribution to European emission reduction, the coal phase out in several MSs (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, Slovakia, Sweden and the United Kingdom) will require such cancellation of allowances.

The ETS state aid guidelines will expire at the end of 2020 and they are currently being evaluated after the revision of the ETS Directive for the 2021-2030 period; adoption of the revised guidelines is planned for 2020.

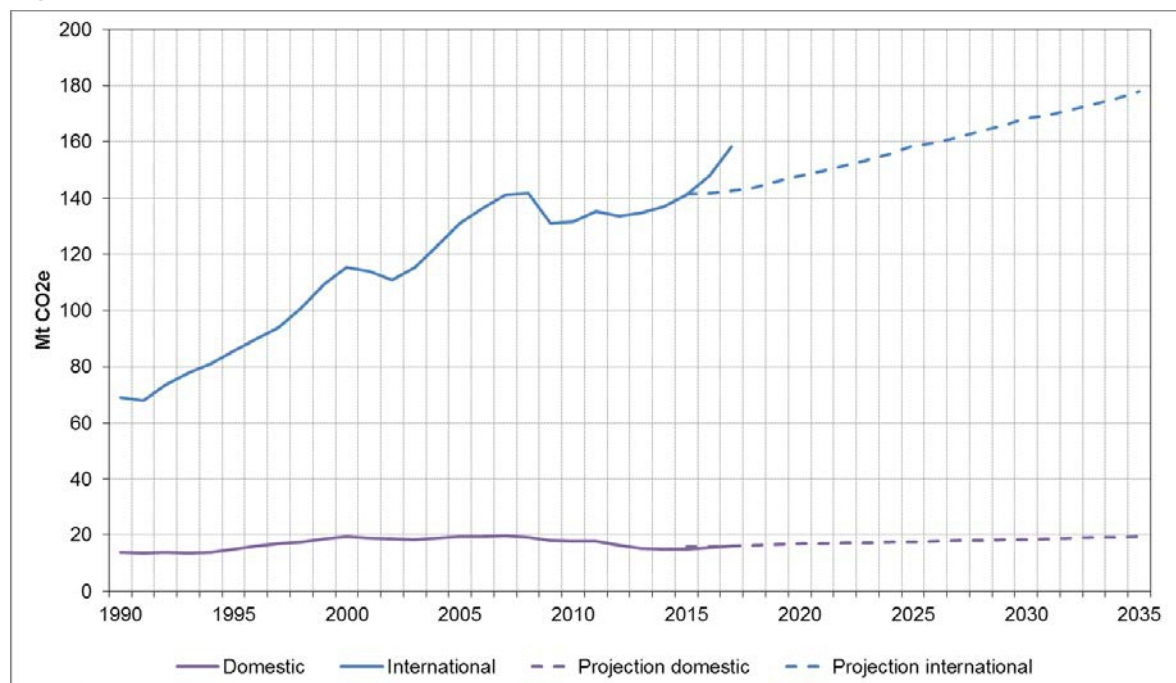
²¹⁸ Graichen et al., forthcoming 2019.

²¹⁹ Von der Leyen, 2019.

2.2.3. Aviation emissions

GHG emissions from aviation are growing at a rate of 4-5%/year despite of efficiency improvements of 1-2%/year.²²⁰ This growth is expected to continue. Figure 0-2 illustrates the growth of EU emissions from aviation which nearly doubled between 1990 and 2017.

Figure 3-2: Emissions from EU aviation (domestic and international)



Sources EEA 2018a, 2018b

Notes: Domestic aviation refers to flights departing and landing in the same EU Member State; international aviation refers to flights departing in an EU Member State and landing in another country.

Meanwhile ICAO has developed the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for offsetting emissions growth beyond 2020 levels. CORSIA is the offsetting component of a “basket of measures” to keep the international aviation sector’s growth carbon neutral from 2020. The other elements are better aircraft technology (more efficient engines, lighter materials, aerodynamic design, etc.), operational improvements (less time idling at gates, more direct routes) and sustainable aviation fuels (increasing non-fossil-fuel component in jet fuel). The EU has to evaluate and decide whether CORSIA is sufficient to address GHG emissions from international aviation or whether the Commission will take additional action. This could mean, among other options, implementing CORSIA in EU law through a revision of the ETS Directive or continuing including international flights in the EU ETS. For CORSIA, ICAO has not yet finally decided what types of units are eligible for offsetting and it is not yet clear how double counting of emission reductions towards CORSIA and NDCs under the UNFCCC will be prevented. The upcoming challenges related to CORSIA are to ensure high environmental integrity of units eligible as offsets, to ensure high environmental standards for sustainable aviation fuels to prevent unintended consequences such as ILUC and to ensure that double counting of GHG mitigation towards CORSIA and NDCs under the UNFCCC is avoided.

²²⁰ [Cames et al. 2015](#).

The Energy Taxation Directive²²¹ sets a minimum tax of 33 cent/litre for kerosene, exempting commercial aviation. MSs are able to levy taxes for domestic flights. An EU-wide approach would require consensus amongst MSs. The Commission proposed this in 2011 but withdrew the proposal in 2015 after it became clear that there was not sufficient support from MSs. Some EU MSs are pushing for an EU-wide aviation tax, which could be based on fuel consumption (energy tax) and/or a departure tax. Several MSs including the Netherlands, France, Sweden, Finland and Belgium as well as most groups in the EP have shown support for an EU wide tax for aviation. MSs could introduce a fuel tax on a bilateral basis, i.e. for flights between participating countries. This would not require legislation on the EU level but could be facilitated by the Commission.

EU guidelines on state aid for airports and airlines are currently under review by the Commission. The current guidelines do not contain substantive rules regarding the environment or GHG emissions. With the current focus on cutting emissions in the aviation sector, state aid received by EU airports that are not profitable has led to more prominent calls to stop the current practice that gave MSs 10 years to wind down operational support to loss-making airports. According to the transport NGO Transport & Environment²²², airports receiving state aid are frequently used by low-cost airlines.

With regard to the use of fuels from renewable sources (e-fuels, power-to-liquid) in aviation, there are challenges in the development of production capacity and infrastructure, the promotion of deployment and market uptake and the assurance of environmental integrity.

2.2.4. Shipping emissions

In April 2018, the IMO agreed an initial GHG emissions reduction strategy with objectives to reduce total annual GHG emissions from shipping by at least 50% by 2050 compared to 2008 levels and to pursue efforts to phase them out as soon as possible in this century. However, short-, mid- and long-term emission reduction measures, as well as research and innovation, necessary to achieve the objectives under the strategy remain to be developed and agreed (see Figure 5-9 for an illustration of IMO projections of CO₂ emissions from international maritime transport and the preliminary IMO target). Short-term measures are to be decided between 2020 and 2023 under the IMO, but no timeline was agreed for mid- and long-term measures. The IMO will revise its strategy in 2023. The revision of the ETS Directive states that the Commission should regularly review IMO action and calls for action to address shipping emissions from the IMO or the EU to start from 2023, including preparatory work and stakeholder consultation. Therefore, the upcoming challenges relate to the inclusion of Maritime Transport in the EU ETS and the further development of the MRV regulation towards a policy for reducing operational GHG emissions of existing ships. Further measures that could be promoted under IMO are slow steaming under the IMO as a short-term policy, which could significantly contribute to the GHG reduction of international maritime transport, and a significant strengthening of the energy efficiency design index. In terms of fuels from renewable sources, the same applies as for the aviation sector. In 2019, The Commission made a proposal to adapt the EU MRV Regulation to the IMO global data collection system.²²³

²²¹ [Council Directive 2003/96/EC](#), OJ 31.10.2003, L 283, pp. 51-70.

²²² Transport & Environment 2019.

²²³ European Commission: Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2015/757 [in order to take appropriate account of the global data collection system for ship fuel oil consumption data](#), ST 6117 2019 INIT.

2.2.5. CO₂ emissions from vehicles

Different to other sectors, the transport sector did not show a decreasing trend in the past. Transport is responsible for 22% of total EU GHG emissions (see Figure 6-10 in Annex II illustrates the development of GHG emissions from transport in the EU).

Despite the updated regulations on emissions from passenger cars, the average CO₂ emissions from new passenger cars registered in the EU in 2018 increased for the second consecutive year, reaching 120.4 grams of CO₂ per kilometre²²⁴ (see also Figure 5-11 in Annex II, chapter 5.2.3). In the EU-28 and Iceland, CO₂ emissions from the new passenger car fleet increased from 118.5 g to 120.4 g between 2017 and 2018. Additional efforts are still required to meet the target of 95g CO₂/km by 2020. Sales of plug-in hybrid electric vehicles (PHEV) and battery-electric vehicles (BEV) continued to go up with an increase of 50% in 2018. However, at 2%, the share of these categories in the new fleet remains low. However, their share is expected to increase in 2020 due to multipliers in average emission calculation for very low emitting vehicles (<50 g CO₂ /km) from 2020 to 2022.

Average annual CO₂ emissions from new light commercial vehicles (vans) increased in 2018 for the first time since Regulation (EU) 510/2011 came in to force. The average van in the EU emitted 158.1 g CO₂ /km in 2018, further efficiency improvements of 7% are needed to reach the EU's target of 147 g CO₂ /km set for 2020 (see also Figure 5-12 in chapter 5.2.3).

A review of the effectiveness of the updated Regulation (EU) 2019/631 is due in 2023. The Commission shall regularly collect data on the real-world CO₂ emissions and fuel or energy consumption of passenger cars and light commercial vehicles, starting with new passenger cars and new light commercial vehicles registered in 2021. Other topics of the review will be the deployment of zero- and low-emission vehicles, the potential contribution of alternative and synthetic fuels to emission reductions, the functioning of the incentive mechanism for zero- and low-emission vehicles as well as the impact on consumers. Until 31 December 2024, the regulation has to be complemented by additional measures corresponding to a reduction of 10 g CO₂/km as part of the Union's integrated approach (Article 1(3) of the regulation). In accordance with Article 7 of the regulation, the Commission has to evaluate the possibility of developing a common Union methodology for the assessment and the consistent data reporting of the full life-cycle CO₂ emissions of passenger cars and light commercial vehicles that are placed on the Union market. The Commission shall transmit to this evaluation to the EP including proposals for follow-up measures.

A review is also foreseen for Regulation (EU) 2019/1242 (CO₂ emission performance of heavy-duty vehicles) in 2022. New heavy-duty vehicle types will be integrated in the Regulation after the review. Other topics will be the potential adjustment of the 2030 target level, the functioning of the incentive mechanism for zero- and low emission vehicles, the integration of synthetic fuels and other alternative fuels and the real-world representativeness of the simulated CO₂ emission values. Similar to the car regulation, the Commission shall evaluate options to integrate full life-cycle emissions into the regulation.

Related to renewable energy used in transport, the EU needs to introduce a GHG reduction threshold and a GHG accounting method for recycled carbon fuels by 2021 as part of the recast of the Renewable Energy Directive (RED II).

Directive 2006/38/EC on the charging of heavy goods vehicles for the use of certain infrastructures ("Eurovignette") as modified by Directive 2006/38/EC and by Directive 2011/76/EU is subject to review in the upcoming years. A public consultation was already conducted in 2016 but no further revision has been adopted yet.

²²⁴ EEA 2019.

In accordance with the Directive, tolls may include an "external cost charge" which reflects the cost of air pollution and of noise pollution provided that the external cost charges respect maximum values defined in the annex of the Directive. One of the issues under discussion is whether CO₂ emissions can be considered as part of external cost charge in addition to air pollution. At the moment, MSs are not allowed to integrate damaging effects and external costs related to GHG emissions into their charging systems for heavy goods vehicles.

2.2.6. Possible carbon border adjustment tax

Commission President-elect von der Leyen announced the plan to introduce a Carbon Border Tax and to start with a number of selected sectors and to gradually extend the tax mechanism.²²⁵ The purpose for adjusting for carbon costs at the border is to prevent the relocation of carbon-intensive production to non-EU countries, also known as "carbon leakage". Border carbon adjustments can take the form of a tax or tariff on imports and/or rebates for exports, but the more common understanding include import taxes that put a price on carbon on goods manufactured in countries that do not have a carbon price equivalent to the EU ETS price. Among European leaders, the French president Emmanuel Macron has supported carbon tax adjustments. Such a border adjustment has also been proposed in the past in the USA. Von der Leyen emphasized that such a measure would need to be aligned with World Trade Organization (WTO) rules; however, the implementation of such a tax in line with trade rules is considered challenging. The EU ETS tackles carbon leakage through free allocation of allowances to carbon-intensive industries. The sectors exposed to carbon leakage are defined in an official list. A new carbon leakage list valid for the 2021-2030 period was adopted in February 2019. Article 10b of the revised ETS Directive establishes a 'carbon leakage indicator', which takes into account the sector's intensity of trade with third countries and its emission intensity. If a product exceeds this indicator threshold of 0.2, the sector is considered to be exposed to carbon leakage. A carbon border tax adjustment in addition to free allocation is unlikely to be in line with WTO rules, which do not allow arbitrary or unjustifiable discrimination. Thus, the implementation of such measure is likely to require changes to the recently adopted revised ETS Directive.

2.2.7. Phasing out European and national fossil fuel subsidies

In 2009, G20 leaders agreed to phase-out fossil fuel subsidies in the medium term. Ten years after this commitment a recent report found that subsidies for the production of coal-fired power have globally increased in recent years from over US\$17.2 billion per year (average for 2013-2014) to nearly US\$47.3 billion per year (average for 2016-2017).²²⁶ In January 2019, the Commission published a new report 'Energy prices and costs in Europe', which also analysed the situation of fossil fuel subsidies in the EU.²²⁷ This report indicated that 'subsidies to fossil fuels remained overall stable between 2008 and 2016 (EUR 54-55 billion). Subsidies did not decrease in spite of the EU international commitments to phase fossil fuels out in the medium term.' Developments differed per sector. The transport sector saw a slight increase over this period (from EUR billion to 12 billion), while in the other sectors, subsidies decreased or remained stable. In 2016, the energy sector represented EUR 16 billion of the total fossil fuel subsidies, followed by transport (EUR 12 billion) and the manufacturing and household sectors (both EUR 8.5 billion). Within the total fossil fuel support, EUR 28 billion could be attributed to petroleum products, EUR 13 billion to natural gas and EUR 7 billion to coal and lignite in the EU in 2016. This still significant public support for fossil fuels in the EU 'continues to distort the energy market, creates economic inefficiency and inhibits investment in the clean energy transition and

²²⁵ Von der Leyen, 2019.

²²⁶ ODI et al, 2019.

²²⁷ [COM/2019/1 final of 1 January 2019.](#)

innovation'. The Market Design Reform is intended to remove priority dispatch for coal, gas and peat and will limit the need for capacity mechanisms which often relied on coal.' The Commission promised to establish regular monitoring of fossil fuel subsidies in the EU and announced that a REFIT evaluation of the EU framework for energy taxation should define possible next steps related to the phase-out of fossil fuel subsidies.²²⁸ In March 2019, the EP voted on the exclusion of spending on production or combustion of fossil fuels from the European Regional Development Fund (EDRF) and the Cohesion Fund.¹⁵¹

²²⁸ [SWD/2019/1 final of 1 January 2019.](#)

¹⁵¹ European Parliament legislative resolution of 27 March 2019 [on the proposal for a regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund](#) (COM(2018)0372 – C8-0227/2018 – 2018/0197(COD)).

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4. ANNEX I: DESCRIPTIVE LIST OF FURTHER UPCOMING ISSUES AND CHALLENGES

The following table lists upcoming issues and challenges for the next parliamentary term described in chapter 2 of the study.

Table 1: Descriptive list of issues (in alphabetical order).

Issue	Description	Way to tackle issue
8th Environmental Action Programme (EAP)	<u>Implementation gap</u> <ul style="list-style-type: none"> 8th EAP has to be presented by new Commission Unmet priority objectives of the 7th EAP on the EU's natural capital, the EU's 2020 Biodiversity Strategy and quality of surface water bodies 	<ul style="list-style-type: none"> Integration of environmental concerns into other policy areas (e.g. CAP and CFP) Appropriate consideration of specialised knowledge and scientific evidence in EU policy making Enhanced action on resource efficiency, by means of the Ecodesign Directive and the Ecolabel Regulation Zero-pollution strategy and innovation in cleaner alternatives for air, soil and water
Air quality	<u>Scheduled for revision</u> <ul style="list-style-type: none"> Concentrations of certain air pollutants, especially in urban areas, are above EU air quality standards in most MSs (e.g. ammonia, carbon monoxide, polycyclic aromatic hydrocarbon, dioxin, NO_x, SO_x) 	<ul style="list-style-type: none"> Review of the EU's Ambient Air Quality Directive to address current implementation gaps Reduction of transport emissions Cleaner energy production Efficient and clean district heating Reduction of emissions from intensive rearing of poultry and pigs in concerned MSs whose emissions lead to breaching of EU limits
Aviation Emissions (EU ETS and CORSIA)	<u>Completion from 2014-2019 legislative period needed</u> <ul style="list-style-type: none"> GHG emissions from aviation are growing at a rate of 4-5 %/year despite of efficiency improvements of 1-2%/year Exclusion of flights to/from airports outside the EEA from the EU ETS in place for the period from 01/01/2013 to 31/12/2023 (reduced scope) ICAO has developed the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) for offsetting emissions 	<ul style="list-style-type: none"> Evaluation and decision whether CORSIA is sufficient to address GHG emissions from international aviation and possible additional action by the Commission Available options: <ul style="list-style-type: none"> Implementation CORSIA in EU law through a revision of the ETS Directive; Continued inclusion of international flights in the EU ETS

Issue	Description	Way to tackle issue
growth beyond 2020 levels.		
Aviation Emissions (taxation)	<u>On Commission agenda</u> <ul style="list-style-type: none"> Lack of EU wide approach for effective taxation of aviation The EU Energy Directive sets a minimum tax of 33 cent/litre for kerosene, exempting commercial aviation. MSs are free to charge the energy tax for domestic flights 	<ul style="list-style-type: none"> Introduce EU-wide aviation tax, as proposed in 2011 by the Commission Tax could be based on fuel consumption (energy tax) and/or a departure tax Alternative: Introduction of fuel tax on bilateral basis, i.e. for flights between participating countries
Biodiversity, land use and natural capital	<u>On Commission agenda</u> <ul style="list-style-type: none"> Unprecedented rate of biodiversity loss at global and EU level and continued pressure on marine and land ecosystems as well as soil Biodiversity strategy post-2020 	<ul style="list-style-type: none"> Effective integration of biodiversity objectives into other policies Completion of Natura 2000 networks by MSs and the designation of special areas of conservation Improve evaluation of protective measures for marine areas Alignment of the Post 2020 CAP with biodiversity concerns Development of a 2030 Biodiversity strategy for the EU with clear targets, a framework to evaluate progress and financial resources to deliver on commitments Preparatory action for the implementation of the 2030 CBD biodiversity framework Establishment of new financial mechanisms for biodiversity in the MFF
Chemicals	<u>Implementation gap</u> <ul style="list-style-type: none"> Lack of progress on developing a Union strategy for a non-toxic environment Chemicals are not produced and used in ways that lead to the minimisation of significant adverse effect on human health and the environment 	<ul style="list-style-type: none"> Development of a Union strategy for a non-toxic environment Promotion of non-toxic material cycles Reduction of exposure to harmful substances (e.g. in chemicals in products) Actions on endocrine disruptors Legislation on impact of pharmaceuticals on the environment Regulation for authorisation and use of water, plant protection products and low-risk pesticides Inclusion of relevant substances of very high concern in the REACH candidate

Issue	Description	Way to tackle issue
		list by 2020
		<ul style="list-style-type: none"> Legislative action to ensure that the combination effects of chemicals are effectively addressed in all relevant Union legislation Enhanced compliance with the REACH Regulation (registration dossiers, accelerate substance evaluation, implementation of final conclusions)
Climate Action	<u>On Commission agenda</u> <ul style="list-style-type: none"> The EU is likely to miss its key 2030 climate and energy targets unless governments implement further action 2020 update of the EU NDC to a proposed target of 55% domestic GHG emission reduction by 2030 and adoption of a EU long-term low greenhouse gas emission development strategy to proposed net-zero emissions by 2050 	<ul style="list-style-type: none"> Commission to present legislative proposals that raise the level of ambition in line with the updated NDC and the net-zero emissions target, at the latest during the 2022-2024 reviews of the 2030 climate package and other relevant legislation (renewable energy target and energy efficiency target) Setting a further interim emission reduction target by 2040
CO₂ emissions from vehicles	<u>Scheduled for revision</u> <ul style="list-style-type: none"> Review of the effectiveness of the updated Regulation (EU) 2019/631 in 2023 Review is also foreseen for Regulation (EU) 2019/1242 (CO₂ emission performance of heavy-duty vehicles) in 2022 Review of Directive 2006/38/EC on the charging of heavy goods vehicles for the use of certain infrastructures („Eurovignette“) as modified by Directive 2006/38/EC and by Directive 2011/76/EU 	No EP resolution published recently
Common Agricultural Policy	<u>Completion from 2014-2019 legislative period needed</u> <ul style="list-style-type: none"> Commission proposal to simplify the CAP and shifting the focus from compliance and rules towards results and performance New ‘green architecture’ with eco-schemes 	<ul style="list-style-type: none"> Need for a strong common set of rules, objectives and indicators Current two-pillared architecture must continue and pillars must be coherent and complementary Direct payments should include a strong common conditionality including environmental deliverables

Issue	Description	Way to tackle issue
	<ul style="list-style-type: none"> Significant budget cuts for Rural Development 	<ul style="list-style-type: none"> Rejection of the proposed 25% cut in the rural development budget A minimum amount of the total available budget in Pillar II should be allocated to AECMs
Endocrine disruptors	<p><u>Scheduled for revision</u></p> <ul style="list-style-type: none"> Lack of specific provisions in EU legislation on EDCs in areas other than pesticides and biocides (e.g. cosmetics, toys, or food contact materials) 	<ul style="list-style-type: none"> Accelerate test development and validation in order to properly identify EDCs Commission to present legislative proposals to amend regulations on cosmetics, toys and food contact materials no later
ETS state Aid rules	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> Results of the Commission's fitness check of the State Aid modernisation package upcoming in the first half of 2020 Adoption of the revised guidelines is planned for 2020 	<ul style="list-style-type: none"> No official recommendations available yet
EU Emissions Trading System	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> A revision of the EU 2030 target as currently discussed in the EU will require additional changes to the EU ETS' contribution to a more ambitious EU target and strengthening of the EU ETS 	<ul style="list-style-type: none"> An overall GHG target of 55-60% below 1990 levels requires a reduction of the emissions covered by the EU ETS of 61-65% below 2005 Enhanced EU ETS target could be implemented through: <ul style="list-style-type: none"> a strengthening of the cap (higher linear reduction factor and a rebasing of it to account for the cap being 205 Mt CO₂ higher than average emissions in the current trading period); enhancing the resilience of the system by improving the market stability reserve (MSR); boosting unilateral cancellation (due to measures in the electricity sector); introducing a carbon price floor (surrender charge, auction reserve price); applying a tiered approach to free allocation for industry Expansion of EU ETS only to sectors where the inclusion leads to emission

Issue	Description	Way to tackle issue
		<p>reductions in the sector itself or in sectors with little or no CO₂ taxation, such as maritime transport</p> <ul style="list-style-type: none"> • Cancellation of allowances (as per Article 12 (4) of the EU ETS Directive) in MSs undergoing a coal phase out to ensure effective contribution to European emission reduction
Fossil fuel subsidies: Phasing out European and national subsidies	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> • In the EU Subsidies for fossil fuels remained stable between 2008 and 2016 (€ 54-55 bn) in spite of the EU's international commitments to phase fossil fuels out in the medium term • This still significant public support for fossil fuels in the EU continues to distort the energy market, creates economic inefficiency and inhibits investment in the clean energy transition and innovation 	<ul style="list-style-type: none"> • Regular monitoring of fossil fuel subsidies in the EU, as promised by the Commission • REFIT evaluation of the EU framework for energy taxation to define next steps for the phase-out of fossil fuel subsidies
Funding for climate action	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> • In autumn 2019, the Commission and the Parliament have to decide on the priorities of the Multiannual Finance Framework (MFF) for the period 2021–2027 • The Commission proposal foresees an increase of the target of EU expenditure contributing to climate objectives from 20% to 25% (2021-2017) (€ 320 billion for EU 27 compared in 2021-2017 compared to € 206 billion for EU 28 in existing budget period) 	<ul style="list-style-type: none"> • Increase climate-related spending within the MFF to 30% as soon as possible and at the latest by 2027 (EP resolution on the MFF post-2020) • Increase action towards a clean energy transition in the coal regions. EP called for a specific allocation of EUR 4,8 billion for a new 'Just Energy Transition Fund' • Orientation of the post-2020 MFF towards sustainable development • Mainstreaming of environmental policy in all funding mechanisms and budgetary lines and a compulsory mid-term revision, following a review of the functioning of the MFF
Marine environment	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> • Need for improved international ocean governance 	<ul style="list-style-type: none"> • Action by the Commission to promote enhanced international efforts to protect marine biodiversity • Reducing pollution and enhancing ecosystem conservation for a sustainable marine economy
Microplastics	<p><u>Scheduled for revision</u></p> <ul style="list-style-type: none"> • Intentionally added microplastics in products, including in 	<ul style="list-style-type: none"> • Significant efficiency increase in evaluation procedures from ECHA • Strengthen enforcement of obligations

Issue	Description	Way to tackle issue
	<p>agriculture, horticulture, cosmetic products, paints, coatings, detergents, maintenance products, medical and pharmaceutical applications, oil and gas sectors</p> <ul style="list-style-type: none"> Shortcomings in the registration process and evaluation procedures under REACH 	<p>on all actors (registrants, downstream users, importers) complementing available information on substances</p> <ul style="list-style-type: none"> Better integration of customs border controls to prevent banned substances from entering the internal market on their own or in manufactured articles If legal requirements are met, Commission to amend the REACH Regulation to ban certain consumer and professional uses of microplastics and subject other uses to labelling/information requirements and annual reporting
Noise pollution	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> High levels of environmental noise 	<ul style="list-style-type: none"> Instating noise limits around airports Addressing military subsonic jet aircraft More stringent noise limits for cars Introduction of labels to enhance transparency about noise
Pesticides	<p><u>Scheduled for revision</u></p> <ul style="list-style-type: none"> Risks posed by pesticides High rates of pesticide use in the EU 	<ul style="list-style-type: none"> Improve the pesticide authorisation system in the EU Improve standard for the monitoring of pesticides Establish targets for reduction of pesticide use Full adoption of the revised uniform principles from EFSA's BGD Public should be granted access to studies used in the authorisation procedure EU's framework should stimulate innovation and promote low-risk pesticides Scientific experts should review studies on carcinogenicity of glyphosate Data requirements for PPPs should include long-term toxicity
Possible Carbon border adjustment mechanism	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> Commission President-elect von der Leyen announced the plan to introduce a Carbon Border Tax to avoid carbon leakage 	<ul style="list-style-type: none"> Border carbon adjustments can take the form of a tax or tariff on imports and/or rebates for exports, but the more common understanding include import taxes that put a price on carbon on goods manufactured in countries that

Issue	Description	Way to tackle issue
	<ul style="list-style-type: none"> Von der Leyen emphasized that such a measure would need to be aligned with World Trade Organization (WTO) rules, which is considered a challenge 	<ul style="list-style-type: none"> do not have a carbon price equivalent to the EU ETS price A carbon border tax adjustment in addition to free allocation is unlikely to be in line with WTO rules. Implementation of such measure is likely to require changes to the recently adopted revised ETS Directive
Resource efficiency, circular economy	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> High waste production (esp. plastic waste) and low resource efficiency in the EU. Von der Leyen proposed a New Circular Economy Action Plan 	<ul style="list-style-type: none"> Strengthen implementation of the Circular Economy strategy Introduce a minimum standards for recycled content for specific plastic products in the EU Create a single market for recycled plastics Reduction of marine litter and cleaning up ocean plastic waste Prohibition of microplastics and cleaning products by 2020
Shipping emissions	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> The IMO will revise its GHG reduction strategy in 2023 Tackle potential inclusion of Maritime Transport into the EU ETS Further development of the MRV regulation towards a policy for reducing operational GHG emissions of existing ships 	<ul style="list-style-type: none"> No resolution published recently According to ETS Directive: <ul style="list-style-type: none"> Commission should regularly review IMO action; Shipping emissions from the IMO or the EU to start from 2023 should be addressed <p>Consider promoting additional measures under IMO e.g. on slow steaming and fuels from renewables</p>
Sustainable Development	<p><u>On Commission agenda</u></p> <ul style="list-style-type: none"> Lack of a comprehensive EU SDG strategy and insufficient mainstreaming of SDGs into EU policies and initiatives 	<ul style="list-style-type: none"> Adoption of an integrated and comprehensive EU SD strategy with detailed timelines up to 2030 Establish institutional structures and a governance framework to mainstream SDGs into EU legislative proposals Anchoring SDGs in the multiannual interinstitutional priorities of the 2019-2025 legislative period Specific work to ensure sustainable global value chains, food production and consumption, trade and finance Systematic monitoring of SDG strategy

Issue	Description	Way to tackle issue
		<p>implementation through common indicators and benchmarks</p> <ul style="list-style-type: none"> • In-depth gap analysis of existing policies and their implementation by the Commission in order to identify critical areas of synergies and incoherencies • European Semester process to involve parliament and include a sustainability check • Completion of EU Ecodesign Directive exploration process by the Commission for new requirements on durability, reparability, disassembly, ease of reuse and recycling in new or revised standards
Sustainable finance	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> • Commission proposal for a regulation on the establishment of a framework to facilitate sustainable investment currently limits sustainable finance to green investments 	<ul style="list-style-type: none"> • Improve proposed framework to facilitate sustainable investment • Expand use of the taxonomy to a wide range of financial products to mainstream sustainable finance into financial products and services not limited to green investment • Framework to determine the degree of environmental sustainability of investments • Framework to define criteria for when and how an economic activity has significant negative impacts on sustainability • Taxonomy based on harmonised, comparable and uniform criteria and indicators, consistent with existing EU legislation, consider the whole value chain and link to existing legislation on capital markets and sustainability • Include specific criteria with regard to biodiversity • Consideration of transitional measures, supported through technical screening criteria
Waste management	<p><u>Implementation gap</u></p> <ul style="list-style-type: none"> • Waste treatment obligations are not fully met and waste 	<ul style="list-style-type: none"> • Enhanced waste prevention • Improve separate waste collection --> recycling

Issue	Description	Way to tackle issue
	prevention in all MSs is deficient	<ul style="list-style-type: none"> • Improve implementation of the Landfill Directive • Improve implementation of End of live vehicles directive • Legislation of food waste (e.g. clarifying definition and setting targets)
Water	<u>Scheduled for revision</u> <ul style="list-style-type: none"> • Less than half of EU surface water bodies are in good status • Inadequate treatment of urban wastewater in many MSs • Nitrates pollution and eutrophication continue to cause problems in many MSs despite recent positive developments in water pollution from intensive agricultural practices 	<ul style="list-style-type: none"> • Revision of the Drinking Water Directive and inclusion of necessary updates • Further integration of EU's water objectives into other sectoral policies under the EAP, in particular the CAP.

5. ANNEX II: INDICATORS RELATED TO PROGRESS TOWARDS ENVIRONMENTAL AND CLIMATE TARGETS

This chapter depicts indicators that support the analysis of challenges and upcoming issues presented in Chapter 2 of this study.

5.1. Environment policies

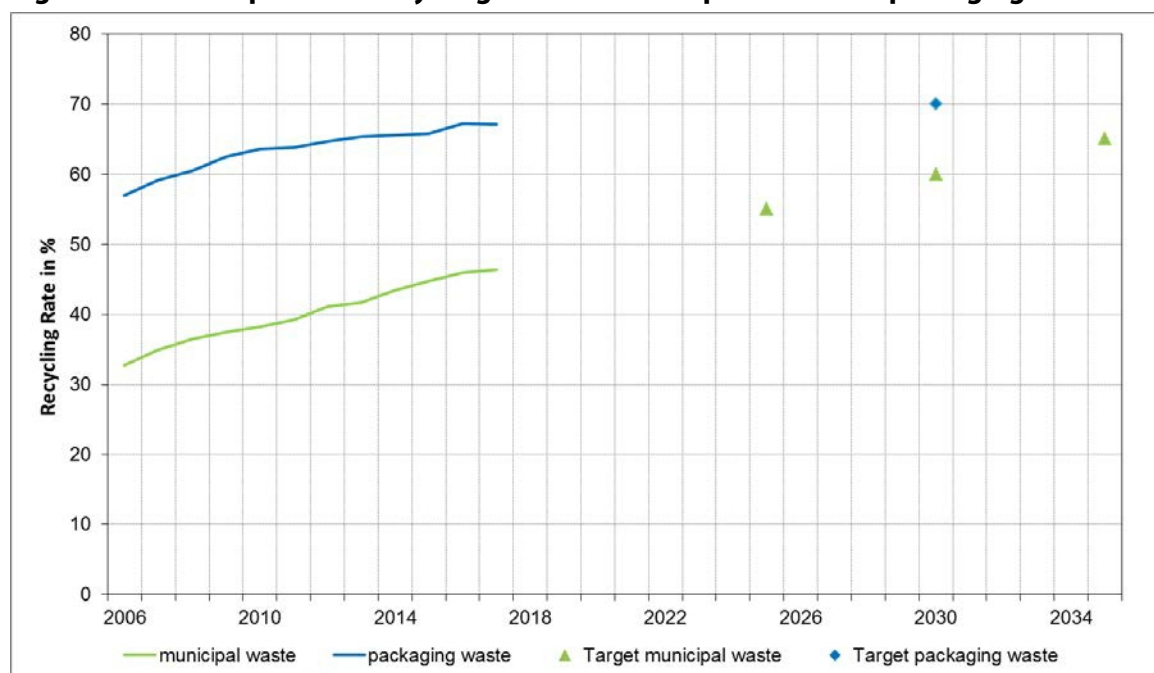
5.1.1. Resource efficiency and waste management

EU targets in the so-called 2018 waste package:

- recycle 55% of municipal waste by 2025, 60% by 2030, 65% by 2035;
- recycle 70% of packaging waste by 2030;
- A binding landfill target to reduce landfill to a maximum of 10% of municipal waste by 2035.

Figure 5-1 illustrates the development of recycling rates for municipal waste and packaging waste.

Figure 5-1: Development of recycling rates for municipal waste and packaging waste



Sources: Eurostat 2019d, 2019e

Notes: From 2020, tighter rules for monitoring municipal waste amounts; therefore methods for accounting progress towards the 2025, 2030 and 2035 targets do not match methods for the collection of data until 2020 that is depicted here.

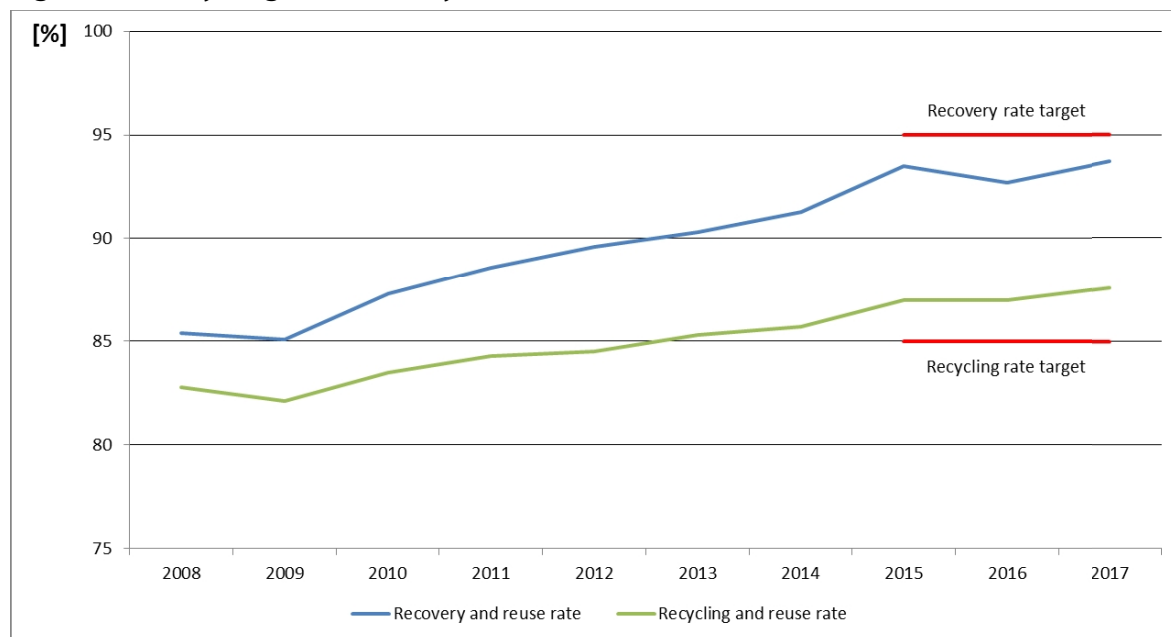
5.1.2. End-of-life vehicles

EU targets:

- Directive 2000/53/EC²²⁹ requires the reuse and recovery rate for all end-of life vehicles to be at least 95% by an average weight per vehicle and car from 2015 onwards. The reuse and recycling shall be increased to a minimum of 85% by an average weight per vehicle and year from 2015 onwards.

Figure 5-2 shows the development of recycling and recovery rates for end-of life vehicles for the whole EU.

Figure 5-2: Recycling and recovery rates for end-of life vehicles



Source: Eurostat 2019b

Notes: Data on reuse and recovery of ELVs only covers those vehicles that are treated at registered recycling facilities. About 4.7 million ELVs are not covered by this reporting.²³⁰

5.1.3. Air quality

EU targets (according to Directive 2008/50/EC):

- reduce sulphur dioxide (SO₂) emissions by 59% in any year between 2020 and 2029 and by 79% from 2030 onwards, compared to 2005 levels (emissions calculated on the basis of fuels sold for road transport);
- reduce nitrogen oxide (NO_x) emissions by 42% in any year between 2020 and 2029 and by 63% from 2030 onwards, compared to 2005 levels (emissions calculated on the basis of fuels sold for road transport);
- reduce non-methane volatile organic compounds (NMVOC) emissions by 28% in any year between 2020 and 2029 and by 40% from 2030 onwards, compared to 2005 levels (emissions calculated on the basis of fuels sold for road transport);

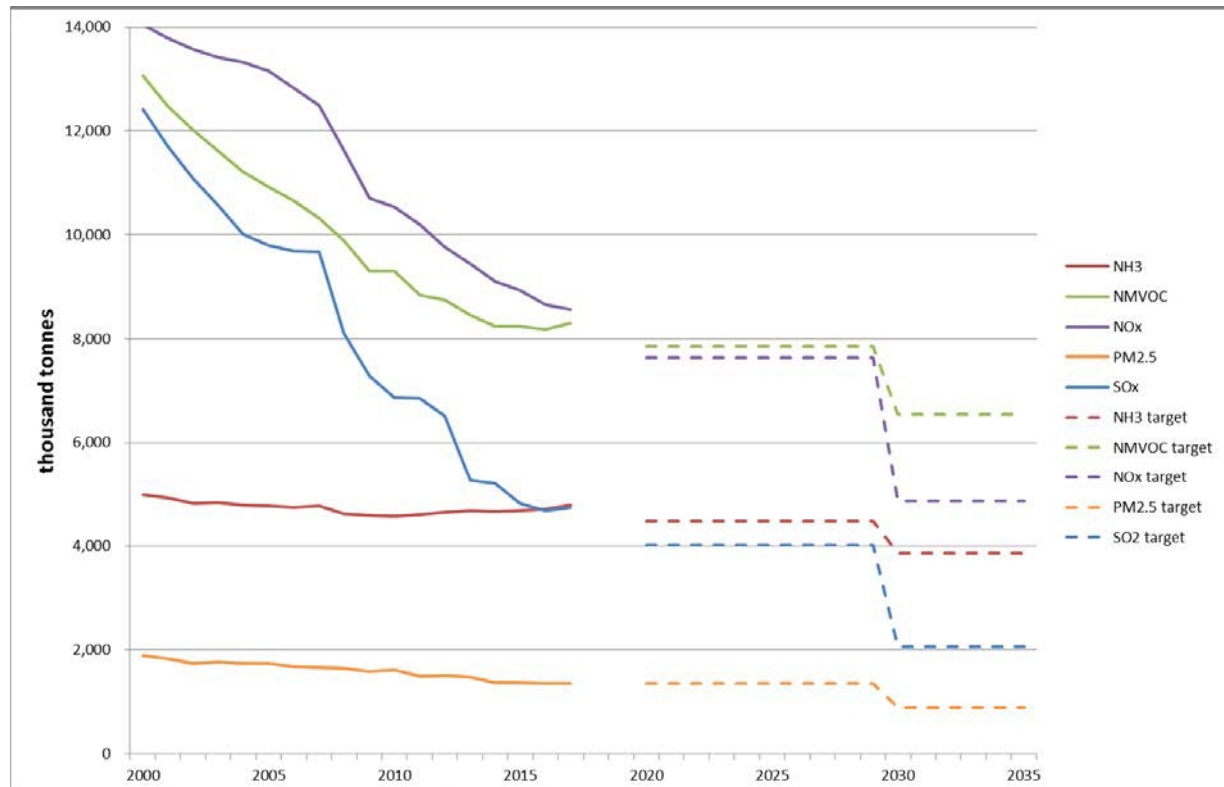
²²⁹ Directive 2000/53/EC OJ L 269, 21.10.2000, pp. 34-43.

²³⁰ Mehlhart et al. 2017.

- reduce ammonia (NH₃) emissions by 6% in any year between 2020 and 2029 and by 19% from 2030 onwards, compared to 2005 levels (emissions calculated on the basis of fuels sold for road transport);
- reduce fine particulate matter (PM_{2.5}) emissions by 22% in any year between 2020 and 2029 and by 49% from 2030 onwards, compared to 2005 levels (emissions calculated on the basis of fuels sold for road transport).

Figure 5-3 shows the development of emissions and target levels of the main air pollutants in the whole EU.

Figure 5-3: Emissions and target levels of the main air pollutants



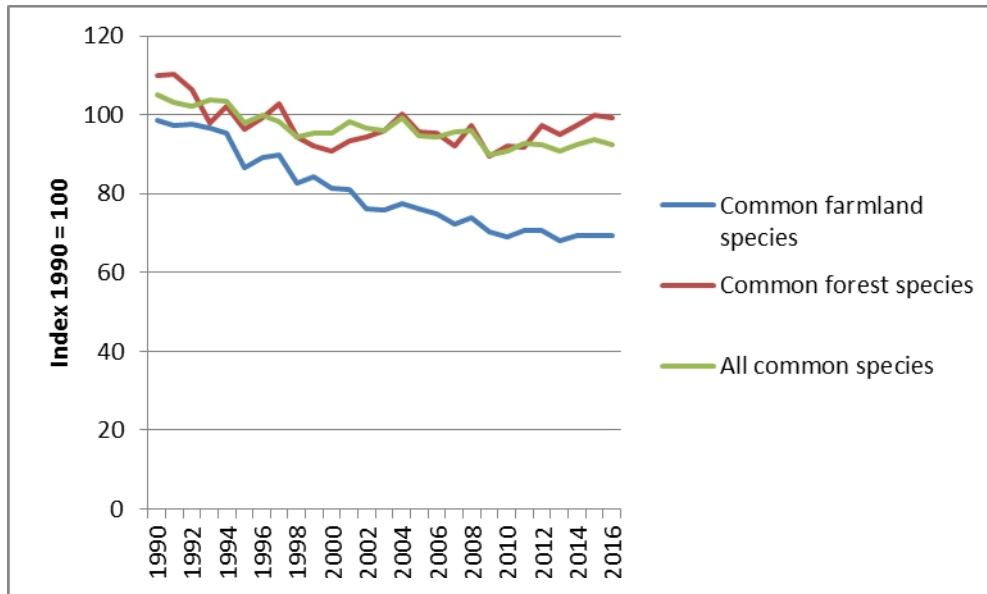
Source: EEA 2019c

5.1.4. Biodiversity, land use and natural capital

EU targets:

- halt the loss of biodiversity and the degradation of ecosystem services in the Union by 2020
- tighter controls on invasive alien species.

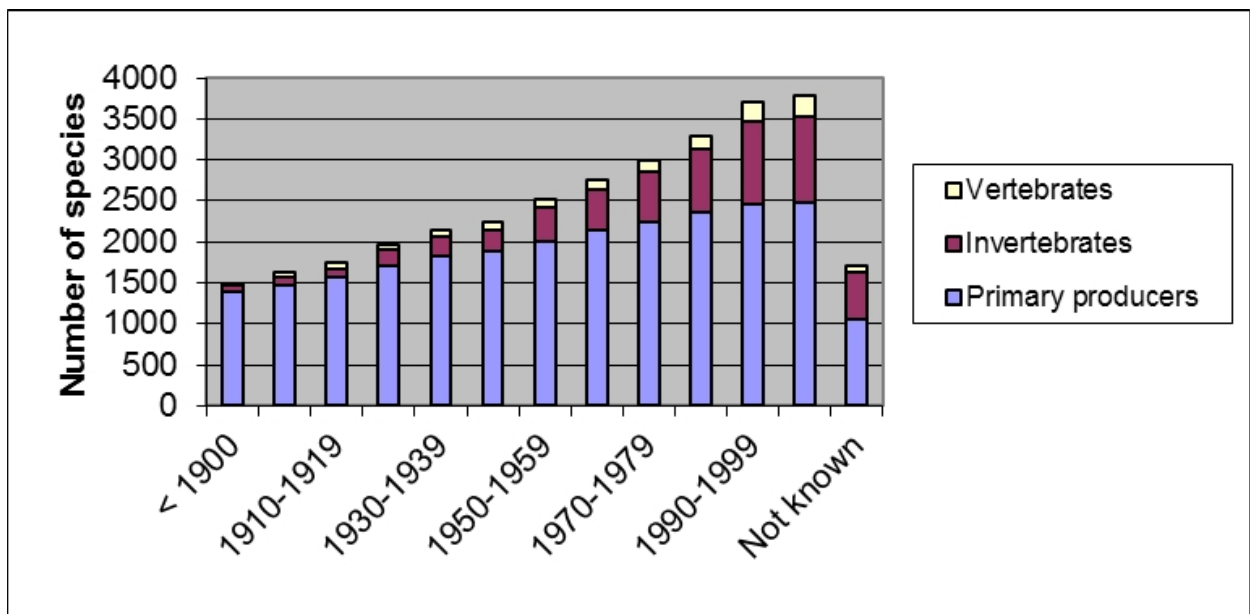
Figure 5-4 illustrates how the abundance and diversity of birds has developed since 1990.

Figure 5-4: Development of abundance and diversity of birds in the EU

Source: Eurostat 2019a

Notes: The Bird index published by Eurostat integrates the population abundance and the diversity of a selection of common bird species associated with specific habitats. Each of the three EU aggregate indices (i.e. common farmland birds, common forest birds and all common birds) is a composite, multispecies index. No rare species are included, although some species common in certain MS may be considered rare in others. The species covered under the common farmland and common forest indices are deemed to be dependent on that particular kind of habitat for feeding and nesting.

Figure 5-5 illustrates the increase of number of alien species in freshwater environments over the last century in eleven European countries.

Figure 5-5: Cumulative number of alien species established in freshwater environment in 11 countries

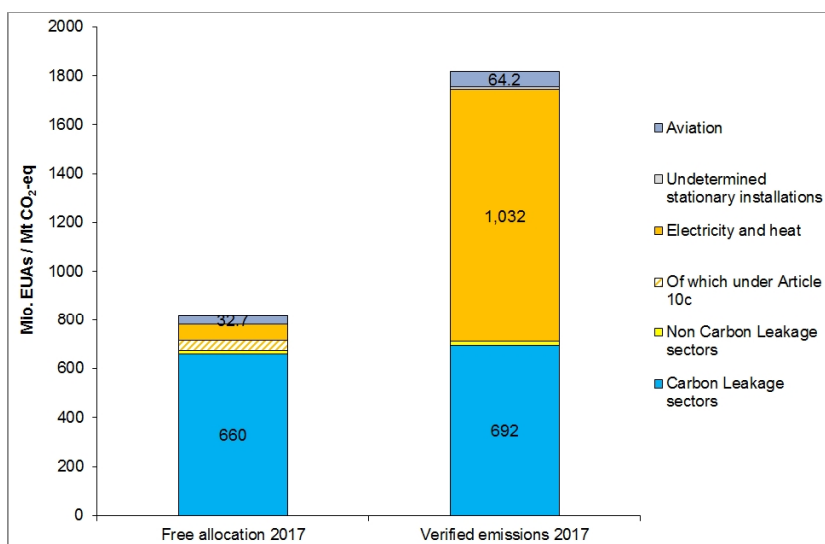
Source: EEA 2010

5.2. Climate Action

5.2.1. EU ETS

The EU ETS covers around 45% of the EU's GHG emissions. With the reforms introduced in 2018, prices for allowances have started increasing significantly. The following figures illustrate recent developments in the EU ETS.

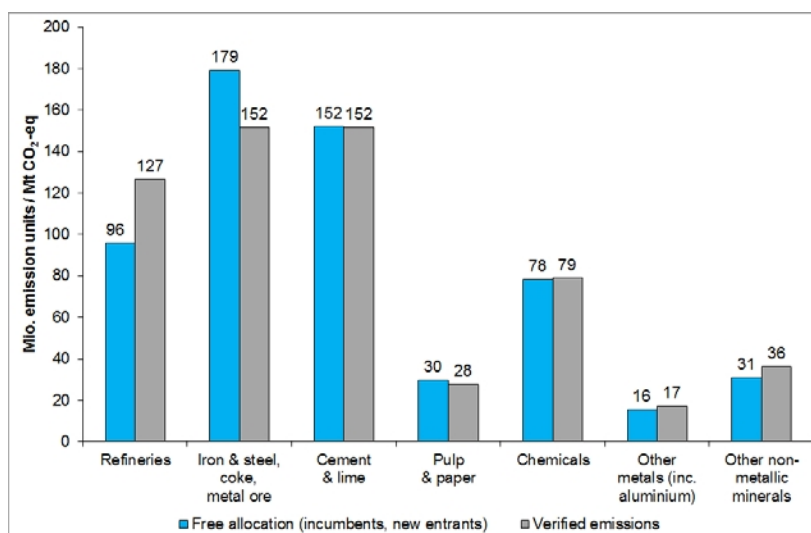
Figure 5-6: Free allocation of allowances compared to verified emissions in 2017, differentiated to allocation rules



Sources: EEA 2018i

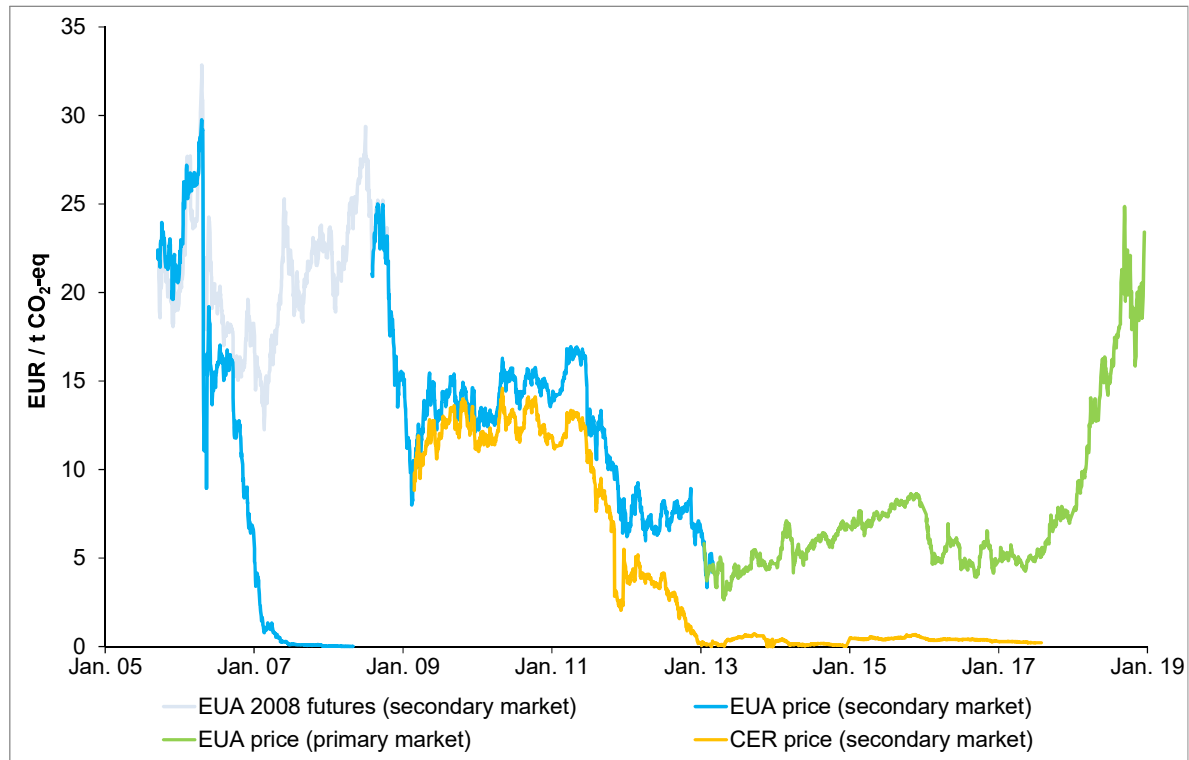
Notes: Electricity and heat refers to electricity generators. Both carbon leakage sectors and non-carbon leakage sectors refer to non-electricity generators (industry installations). Verified emissions data for installations producing electricity and heat are available only at an aggregate level.

Figure 5-7: Balance of free allocations and verified emissions by industrial sector, 2017



Source: EEA 2018i

Note: ETS activity types have been aggregated for certain sectors. The overall allocation presented here for the iron and steel sector includes allowances for emissions that are actually reported under combustion installations, for example if blast furnace gas is burnt in power plants. Likewise, albeit to a lesser extent, the allocations presented for the pulp and paper sector and the chemicals sector include allowances related to emissions reported under combustion installations, for example, if paper production or chemical facilities buy heat from other installations. In other words, allowances are allocated to these sectors, whereas corresponding emissions are reported under combustion.

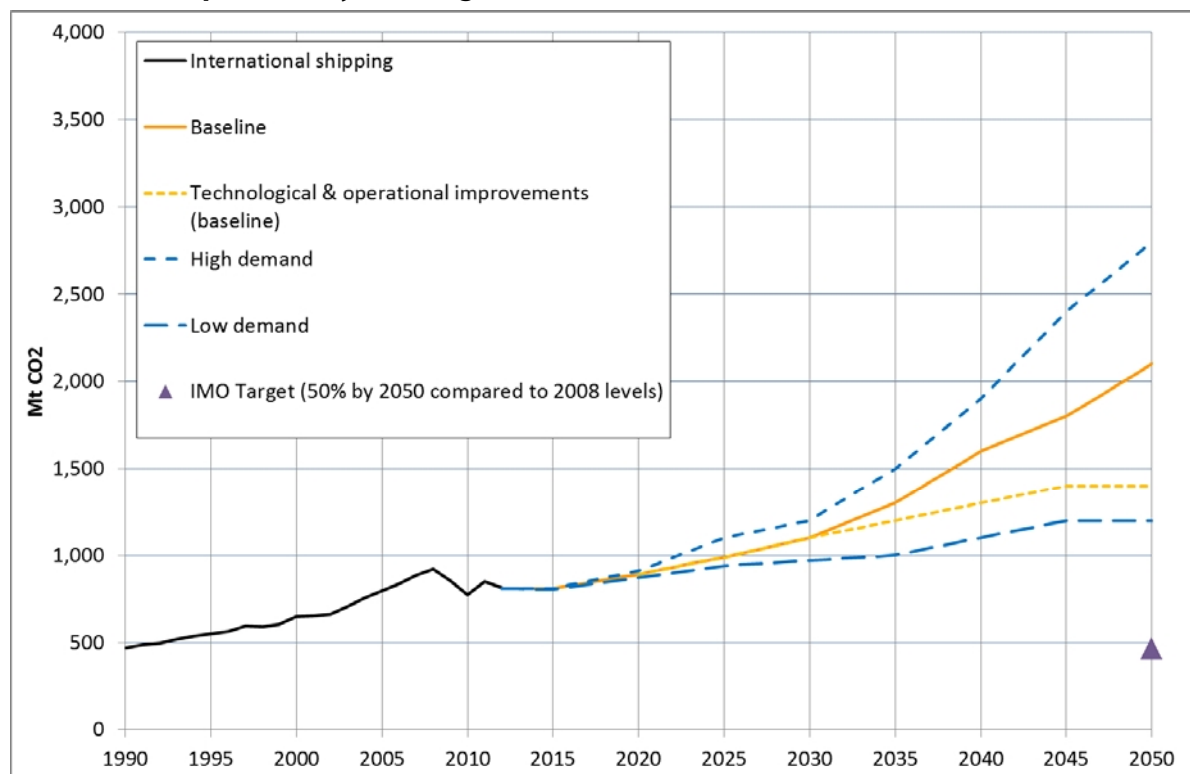
Figure 5-8: Development of the price of allowances in the EU ETS

Sources: Point Carbon 2012; EEX 2018; ICE 2019

5.2.2. Shipping emissions

For the period 2007-2012, CO₂ emissions from shipping accounted for approximately 3.1% of annual global CO₂ emissions (IMO 2014). While the Third IMO GHG Study 2014 projects emissions from international maritime transport to increase considerably until 2050, the IMO's initial GHG emissions reduction strategy agreed in 2018 aims to reduce total annual GHG emissions from shipping by at least 50% by 2050 compared to 2008 levels (IMO 2014, Commission 2019b) (see Figure 5-9). In 2018, around 15% of global CO₂ emissions from international maritime transport were captured under EU Regulation 2015/757 on the monitoring, reporting and verification of CO₂ emissions from maritime transport. In 2018, large ships over 5,000 gross tonnage loading or unloading cargo or passengers at ports in the EEA emitted 138.6 Mt CO₂ according to figures reported under Regulation 2015/757 as amended by Delegated Regulation 2016/2071.

Figure 5-9: IMO projections of CO₂ emissions from international maritime transport and preliminary IMO target for 2050

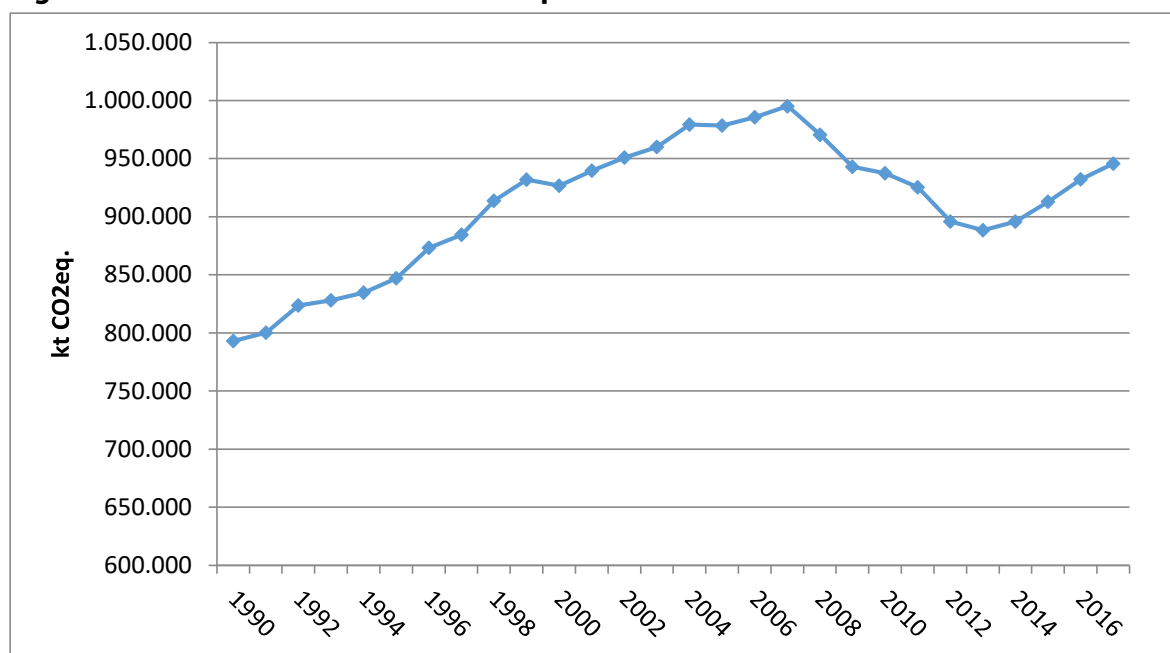


Sources: IEA 2014, IMO 2009, IMO 2014, IMO 2018

5.2.3. CO₂ emissions from vehicles

Figure 5-10 illustrates the development of GHG emissions from transport in the EU.

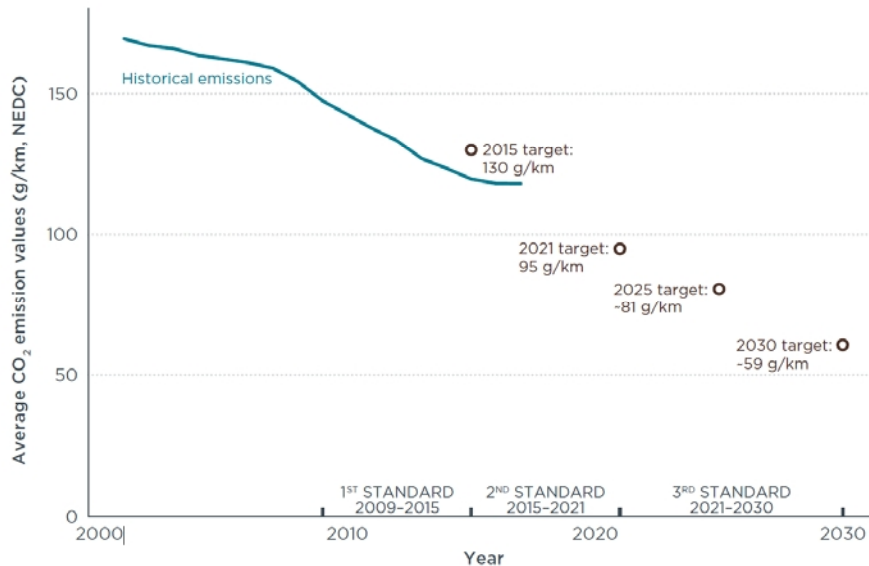
Figure 5-10: GHG emissions from transport



Source: EEA 2019e

Regulation (EC) No 443/2009 sets average CO₂ specific emission targets at 130g CO₂/km by 2015 and 95g CO₂/km by 2021. Additionally, manufacturers' average emissions in 2021 related to new passenger cars have to be reduced by 15% until 2025 and 37.5% by 2030. Figure 5-11 illustrates the development of average historical CO₂ emissions from new cars in relation to the defined targets.

Figure 5-11: Average historical CO₂ emission values and adopted CO₂ standards for new passenger cars in the EU.

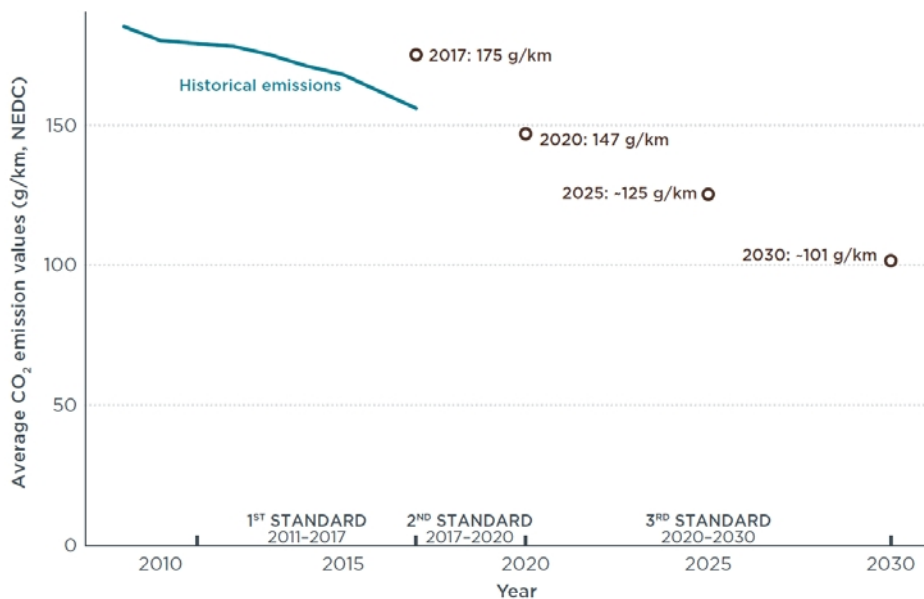


Source: ICCT 2019

Notes: All CO₂ values refer to New European Driving Cycle (NEDC) measurements.

For vans, manufacturers' average emissions in 2021 have to be reduced by 15% until 2025 and by 31% until 2030 (see Figure 5-12). Emissions from heavy-duty vehicles need to be reduced by 15% (2025 onwards) and 30% (2030 onwards) compared to 2019 levels.

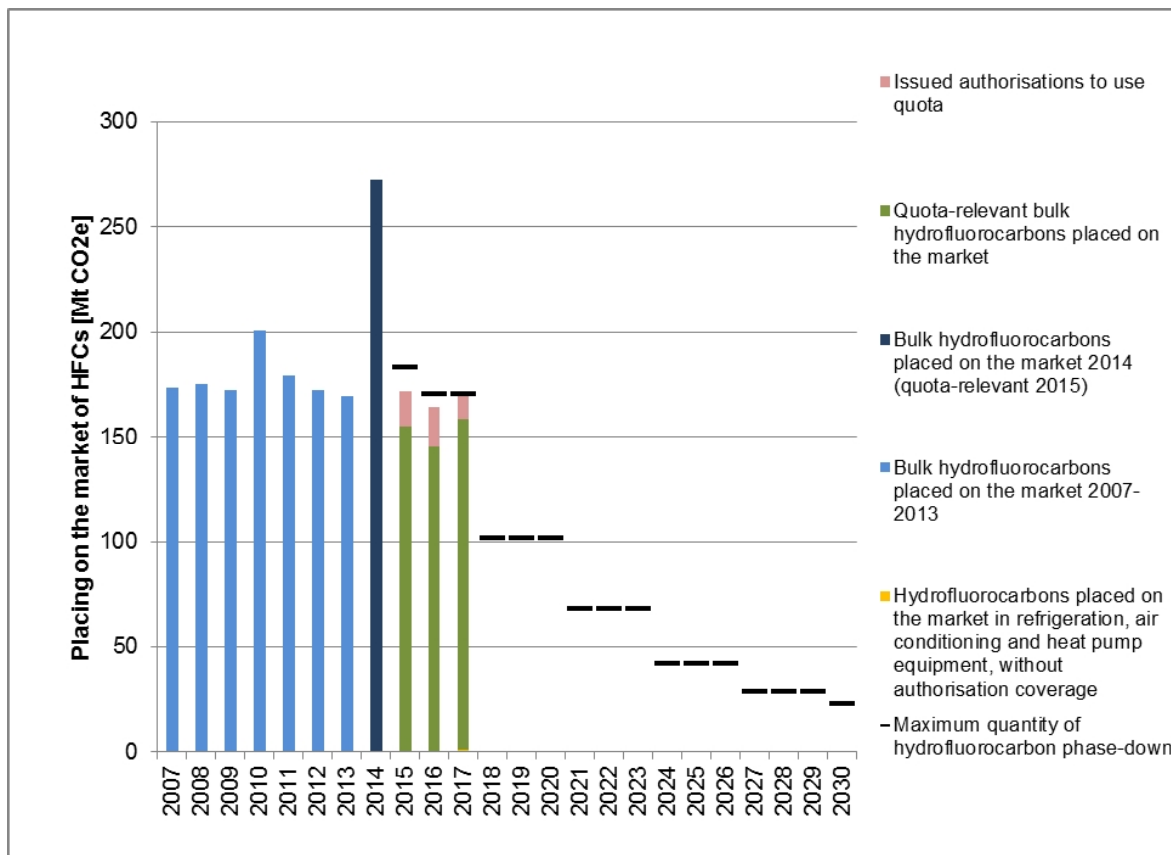
Figure 5-12: Average historical emission values and adopted CO₂ standards for new vans in the EU



Source: ICCT 2019

Notes: All CO₂ values refer to New European Driving Cycle (NEDC) measurements.

5.2.4. F-Gases

Figure 5-13: Progress under the EU-wide hydrofluorocarbon phase-down set out in the F-gas Regulation

Source: EEA 2018c

Notes: Maximum quantities of hydrofluorocarbon phase down are based on EEA calculations applying the percentages in Annex V of Regulation 517/2014 to baseline emission levels.

This study reviews the state of play of on-going EU environmental and climate legislation and pinpoints key challenges for the next five years. Challenges arise from the plans released by the president-elect, such as a new European Green Deal, the completion of work started in the previous term (e.g. the Regulation on a framework for sustainable finance and the completion of the multiannual finance framework), by reviews of legislation foreseen for the next term and the need for action where indicators show that current EU environment targets may not be achieved. This document was provided by Policy Department A at the request of the Committee on the Environment, Public Health and Food Safety of the European Parliament.
