

02.

Europe's policies and sustainability goals





→ Summary

- Recognising persistent environmental and climate challenges at European and global scales, European environmental and climate policymaking is increasingly driven by long-term sustainability goals, as embedded in the EU's Seventh Environment Action Programme (7th EAP) 2050 vision, the 2030 agenda for sustainable development and the Paris Agreement on climate change.
- The current European environmental and climate policy landscape reflects a diversity of approaches and instruments adopted since the 1970s. European policies have evolved from targeted regulatory interventions on specific issues to a stronger focus on integrating the environmental dimension into sectoral policies and, more recently, to macro-integrated policy packages with a broader sustainability perspective.
- EU environmental policies are mainly framed around three 7th EAP policy priorities: (1) to protect, conserve and enhance the EU's natural capital; (2) to turn the EU into a resource-efficient, green and competitive low-carbon economy; and (3) to safeguard the EU's citizens from environment-related pressures and risks to their health and well-being.
- Since *The European environment — state and outlook 2015* (SOER 2015) report was published, significant policy developments have occurred around the low-carbon economy and the circular economy frameworks, in particular with the adoption of the 2030 climate and energy framework and the 2018 circular economy package, and have been complemented by an update of the bioeconomy strategy.
- Environmental and climate action is also pursued through broader institutional arrangements, such as the climate-related expenditure accounting for at least 20 % of the EU's budget for 2014-2020 and the sustainable finance initiative.
- European citizens are highly supportive of environmental protection and climate action, while cities and other local actors are increasingly proactive in launching environmental and climate initiatives that support the achievement of the EU's objectives and targets.

02.

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2.1 Europe's long-term sustainability goals

2.1.1 The 2050 vision of the Seventh Environment Action Programme

Europe has increasingly recognised in its policies the unprecedented pressures caused by human activities on planet Earth and the role played by the European economy in that regard (Chapter 1). In particular, European environmental policy is aimed at 'living well, within the limits of our planet'. In 2013, with the adoption of the Seventh Environment Action Programme (7th EAP), the EU endorsed the above long-term sustainability goal and turned it into a vision with a horizon of 2050 to guide its environmental action:

In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and



EU environment policy aims for a Europe that lives well, within the limits of our planet.

restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society. (EU, 2013a)

The vision reflects a greater recognition that the prosperity, health and well-being of European citizens are intrinsically linked to a resilient and healthy natural environment in Europe and also at a planetary scale, as environmental degradation elsewhere can have negative effects in Europe

in many ways (Chapter 1 and Part 3). It builds on the understanding that how we live, exchange, consume or produce is deeply interconnected with our environment through a complex web of interrelationships, related to what we extract from it (e.g. natural resources, energy), what we release into it (e.g. pollutants, chemicals) or what we disrupt in its functioning (e.g. climate, ecosystems, nutrient cycles). Addressing persistent environmental and climate challenges, such as the loss of biodiversity, climate change, the degradation of ecosystems, the unsustainable management of natural resources or the adverse effects of pollution on human health, will require fundamental changes in our society and economy (EEA, 2015a). By setting a distant time horizon, the vision recognises that important and sustained efforts will be required over several decades.

The 7th EAP 2050 vision is a true sustainability vision, which goes beyond environmental issues per se. It echoes the founding principles of the international Brundtland Commission

European environmental and climate policy is increasingly driven by long-term sustainability goals.

on sustainable development (WCED, 1987), reiterated by former United Nations (UN) Secretary-General Ban Ki-moon: 'At its essence, sustainability means ensuring prosperity and environmental protection without compromising the ability of future generations to meet their needs.' (Ban Ki-moon, 2014). Those principles have long since been at the heart of the European project, with sustainable development included in the Treaty of Amsterdam as an overarching objective of EU policies (EU, 1997). Article 3 of the Treaty on European Union currently in force states that, '[The Union] shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment' (EU, 2007). The 7th EAP is one of the key policy frameworks to achieve this overall goal for the EU. Beyond setting its 2050 vision, it provides a more concrete overarching framework for shorter term objectives and targets the time horizon 2020/2030 (Section 2.3 and Part 2).

Besides, the 7th EAP vision is fully aligned with global objectives, such as the global recognition of the importance of protecting biodiversity and ensuring the provision of the ecosystem services on which human societies depend, as reflected in the 2020 Aichi biodiversity targets of the UN Convention on Biological Diversity. Since *The European environment — state and outlook 2015* report (SOER 2015) was published, two significant,

long-term, global sustainability frameworks have been endorsed by the EU and complement the 7th EAP vision: the 2030 agenda for sustainable development and the Paris Agreement on climate change.

2.1.2 *The 2030 agenda and the Sustainable Development Goals*

In 2015, world leaders adopted the 2030 agenda for sustainable development, along with a set of 17 Sustainable Development Goals (SDGs) and 169 associated targets (UN, 2015b; Figure 2.1). Universal in scope, it applies to all countries at all levels of development, taking into account their 'different capacities and circumstances'. The setting of these goals built on the experience of the Millennium Development Goals (MDGs), which made an 'enormous contribution in raising public awareness, increasing political will and mobilising resources for the fight to end poverty' (EU, 2018g). Following up on the Rio+20 conference in 2012, the 2030 agenda expands the scope of the MDGs to address poverty eradication along with the economic, social and environmental dimensions of sustainability, as well as underlying issues related to institutions, governance, the rule of law, peace and international collaboration. In particular, the UN has stressed that the agenda should be viewed as an indivisible whole, in which all targets — be they of an economic, social or environmental nature — are equally important (Chapter 15).

Many SDGs embed a strong environmental dimension and have dedicated targets to progress on core environmental issues. In particular, SDG 13 promotes climate action, while SDGs 14 and 15 aim to advance the conservation of marine and terrestrial ecosystems and the sustainable use of their resources.

Environmental sustainability is also sought in relation to agriculture (SDG 2), health (SDG 3), water (SDG 6), energy (SDG 7), tourism (SDG 8), infrastructure and industry (SDG 9), cities (SDG 11) and consumption and production patterns (SDG 12). Overall, 41 of the 169 targets address the quality of the physical environment either directly or indirectly.

Instrumental in shaping the 2030 agenda, the EU has expressed its ambition to play, together with its Member States, a leading role in its implementation (EU, 2018g). In 2016, the European Commission outlined its strategic approach and committed itself to integrating the SDGs in both its internal and its external policies (EC, 2016b). The first steps included the mapping of EU policies and actions for each SDG (EC, 2016a), the publication of an annual monitoring report on the EU's progress towards SDGs on the basis of 100 indicators (Eurostat, 2018), and the setting-up of a multi-stakeholder platform to support and advise the European Commission (EC, 2018h). In January 2019, the European Commission adopted the reflection paper 'Towards a sustainable Europe by 2030' to launch a forward-looking debate among EU citizens, Member States and other stakeholders on how to best progress on the SDGs (EC, 2019c).

Apart from the 2030 agenda, the year 2015 gave rise to several other international agreements in the field of sustainability, including the Addis Ababa Action Agenda of the Third International Conference on Financing for Development (UN, 2015c), which provides a global framework for mobilising public and private resources and investments for sustainable development, the Sendai Framework for Disaster Risk Reduction (UN, 2015a), which sets a new global approach to disaster risk management policy and operations, and, above all, the

FIGURE 2.1 The Sustainable Development Goals



Source: UN.

Paris Agreement on climate change (UNFCCC, 2015b).

2.1.3 The Paris Agreement

Only a few months after the adoption of the 2030 agenda, the 21st Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris on 12 December 2015. In total, 196 countries adopted the first-ever universal, legally binding global climate agreement, commonly referred to as the Paris Agreement, with the aim of strengthening the global response to the 'urgent and potentially irreversible threat [of climate change] to human societies

The 2030 Agenda for Sustainable Development and the Paris Agreement are two examples of ambitious, international agreements on sustainability.

and the planet' (UNFCCC, 2015a). This responds in particular to the scientific evidence compiled and reviewed by the Intergovernmental Panel on Climate Change (IPCC) (Chapter 1).

The Paris Agreement sets the ambitious goal to '[hold] the increase in the global

average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels'. Parties also agreed to '[increase] the ability to adapt to the adverse impacts of climate change' (UNFCCC, 2015b). To accomplish these goals, the Parties aim to reach a global peak in greenhouse gas (GHG) emissions as soon as possible and to achieve net zero emissions in the second half of this century.

In contrast to the previous international treaty, the 1997 Kyoto Protocol, which covered only about 12 % of global emissions (UNFCCC, 1997), all major emitters have adopted the legally binding obligations of the Paris Agreement. However, in 2017, the

United States announced its withdrawal from the Paris Agreement, which, in practice, may become effective in late 2021 (UNFCCC, 2017). In Europe, as required by the Agreement, the EU and its Member States have submitted their joint ‘intended nationally determined contributions’, which will be renewed and upgraded every 5 years. In addition to existing policies (Section 2.3), the EU supports Member States efforts through its European strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy (EC, 2018c). The EU played an instrumental role in making the Paris Agreement operational during COP 24 (EC, 2018k).

The 2030 agenda and the Paris Agreement have considerably raised the ambition of international cooperation on sustainable development. The world, not just Europe, has recognised the importance and urgency of addressing a range of persistent environmental and climate challenges in a much more proactive and coordinated way. Although recognising and agreeing on long-term sustainability goals is essential, Parts 2 and 3 will highlight the challenges faced by Europe in delivering on these commitments, as well as the potential opportunities were its responses to the challenges to evolve more fundamentally.

2.2 Europe’s environmental and climate policy

2.2.1 *The evolution of European environmental and climate policy*

While the 7th EAP 2050 vision, the 2030 agenda and the Paris Agreement are today increasingly driving European environmental and climate policymaking, the last dates back far before these long-term sustainability



European environmental and climate policy rests on solid foundations.

goals and frameworks were set up. At first, as reflected in the first two EAPs (1972-1981), European environmental policy consisted mainly of regulatory interventions focusing on specific issues such as water quality, air quality, waste disposal or species protection. The adoption of the Waste Framework Directive (EEC, 1975), the Bathing Water Directive (EEC, 1976) or the Birds Directive (EEC, 1979) represents this approach, based on the premise that targeted environmental legislation could lead to significant improvements in a range of environmental issues with relatively direct, well-identified cause-effect relationships. Since the 1970s, the replication of this intervention model led to a body of some 500 directives, regulations and decisions, which today forms the most comprehensive set of environmental standards in the world, commonly known as the environmental *acquis*. As a result, today European environmental policy rests on solid foundations (Box 2.1).

As documented by the five previous SOERs from 1995 to 2015, this has led over the years to a measurable and substantial improvement in the level of environmental protection in most parts of Europe (EEA, 2015a). Notable achievements include a significant reduction in emissions of pollutants to air, water and soil, the establishment of the world’s largest network of protected areas under Natura 2000 (EEC, 1992), the recovery of many species previously on the brink of extinction, the provision of

safe drinking water, and the reduction of exposure to hazardous chemicals.

However, by the 1980s, it had become increasingly clear that such targeted policies would be insufficient to address environmental problems that result from diffuse pressures from various sources, such as the unsustainable use of natural resources, environmental impacts on human health through pollution or chemical contamination or the loss of biodiversity. At a time when Europe had set itself the goal of creating a single market (EEC, 1987) and when the sustainable development concept began to be influential (UNCED, 1992), integrating environmental concerns into other EU sectoral policies, also known as environmental integration, became increasingly sought after (Table 2.1). A key mechanism for implementation in the 5th EAP (1993-2000), environmental integration was formally established as a requirement under the Treaty of Amsterdam (EU, 1997) following a European Council initiative (known as the Cardiff process). The first five target sectors were those contributing the most to environmental deterioration: (1) industry; (2) energy; (3) transport; (4) agriculture; and (5) tourism. This shift in approach was accompanied by an increasing use of non-legislative instruments, such as financial instruments (e.g. investment funds), economic instruments (i.e. market-based instruments to ‘get the prices right’), horizontal approaches (e.g. information, education, research), and more coordination with stakeholders.

Environmental integration has been pursued to some extent through policy frameworks such as the common agricultural policy (CAP), the common fisheries policy (CFP), the cohesion policy or the EU’s official development assistance, for example. Despite the soundness of this approach, and although some progress has been made (e.g. in the field of energy policy with the 2020 climate and energy package),

BOX 2.1 Fundamentals of European environmental policy

Environmental policy is an area of shared competence between the EU and the Member States, with the principle of subsidiarity determining the most effective level of action. The Treaties of the European Union established that EU environment policy should contribute to pursuing the objectives of ‘preserving, protecting and improving the quality of the environment, protecting human health, [promoting] prudent and rational utilisation of natural resources, [and] promoting measures at international level [...] and [...] combating climate change’ (EU, 2007).

EU environmental policy rests on four principles, as enshrined in the Treaties (EU, 2007):

- the precautionary principle, which is a risk management approach, ‘whereby if there is the possibility that a given policy or action might cause harm to the public or the environment, and if there is still no scientific consensus on the issue, the policy or action in question should not be pursued’ (EU, 2018c);
- the principle that preventive action should be taken, which means that

environmental legislation should be adopted to prevent environmental harm and not as a reaction to environmental harm that has already occurred;

- the principle that environmental damage should as a priority be rectified at source, meaning that pollution, for instance, should be addressed where it occurs, e.g. by setting emission limit values;

- the polluter pays principle, stating that a company causing environmental damage is to be held financially liable for it and must take the necessary preventive or remedial action; this applies to operators of certain activities, such as transporting dangerous substances or managing extractive waste (EU, 2004).

EU environmental regulation also ensures that certain projects likely to have significant effects on the environment, e.g. the construction of a motorway or an airport, are subject to an environmental impact assessment (EIA). Equally, a range of public plans and programmes are subject to a similar process called strategic environmental assessment (SEA).

In addition, environmental policy in the EU is required to respect the Aarhus Convention (UNECE, 1998), which guarantees the right of all European citizens to access public environmental information and to participate in environmental decision-making as well giving them access to justice within the scope of environmental law.

In May 2016, the Commission launched the Environmental Implementation Review, a 2-year cycle of analysis and dialogue with Member States to improve the implementation of existing EU environmental policy and legislation (EC, 2017a, 2019a).

While EU policy frameworks do not necessarily directly apply to the non-EU member countries of the European Environment Agency (Iceland, Liechtenstein, Norway, Switzerland, Turkey) or the cooperating countries (Albania, Bosnia and Herzegovina, Kosovo under United Nations Security Council Resolution 1244/99, Montenegro, North Macedonia, and Serbia), many of these countries have the same or similar environmental and climate policy objectives, and they are included in the assessment as far as possible. ■

TABLE 2.1 The changing understanding of environmental challenges and the evolution of approaches to policy and assessment

Characterisation of key challenges	Key features	In policy since	Policy approaches (examples)	Assessment approaches and tools (examples)
Specific	Linear cause-effect, point source, local	1970s	Targeted policies and single-use instruments	Data sets, indicators
Diffuse	Cumulative causes	1990s	Policy integration, market-based instruments, raising public awareness	Data sets, indicators, environmental accounts, outlooks
Systemic	Systemic causes	2010s	Policy coherence, systemic focus (e.g. mobility system), long-term and multidimensional goals (e.g. SDGs)	Indicators, accounts, practice-based knowledge, systems assessment, stakeholder participation, foresight

Source: EEA.

BOX 2.2 The EU's Seventh Environment Action Programme

Since 1973, the European Commission has issued multiannual environment action programmes (EAPs) setting out forthcoming legislative proposals and goals for EU environment policy. In 2013, the Council and the European Parliament adopted the 7th EAP for the period up to 2020, under the title 'Living well, within the limits of our planet'. Building on a number of strategic initiatives, the programme identified three key thematic objectives:

1. to protect, conserve and enhance the EU's natural capital;

2. to turn the EU into a resource-efficient, green and competitive low-carbon economy;

3. to safeguard the EU's citizens from environment-related pressures and risks to their health and well-being.

Four priority objectives create an enabling framework to help Europe deliver on these goals:

4. better implementation of legislation;

5. better information by improving the knowledge base;

6. more and wiser investment in environmental and climate policy;

7. full integration of environmental requirements and considerations into other policies.

Two further priority objectives focus on meeting local, regional and global challenges:

8. to make the EU's cities more sustainable;

9. to help the EU address international environmental and climate challenges more effectively. ■

Source: Seventh Environment Action Programme (EU, 2013a).

this report indicates that this has led to mixed results, as have previous SOERs. Either environmental considerations have been insufficiently integrated into sectoral policies (e.g. for lack of incentives) or policy instruments have failed to deliver significant effects up to the scale and urgency of the challenges (Chapter 13).

Since the late 1990s, increased attention has been paid to better understanding the systemic interlinkages between the environment, society and the economy and understanding how policies could respond to them. This was reflected in the increasing orientation of the 6th and 7th EAPs (2002-2020) towards sustainability and in the search for more coherence among EU policies. This need has been reinforced with the recognition of the importance of climate change, which became the subject of a specific goal of the EU with the Treaty of Lisbon (EU, 2007).



Environmental integration into EU policy has had mixed results.

2.2.2 The current and developing EU environmental and climate policy landscape

Today, the 7th EAP (2014-2020) plays a central role and offers a coherent framework for EU environmental policies. The programme specifies an ambitious vision for 2050 (Section 2.1), sets out nine priority objectives to move towards this vision (Box 2.2) and defines a number of specific targets to be achieved by 2020 (as

discussed in the chapters in Part 2). This framework builds on a number of strategic initiatives, directives and funding instruments covering almost all environmental thematic areas.

Among them, the EU biodiversity strategy to 2020 aims, through a set of six targets and 20 actions, to '[halt] the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and [restore] them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss' (EC, 2011b). The targets are aligned with the internationally agreed Aichi biodiversity targets of the Convention on Biological Diversity (CBD, 2013). For the marine environment, the ecosystem-based approach to management is further applied through the integrated maritime policy, the CFP and the Marine Strategy Framework Directive. A recent development in the field of nature and biodiversity is the adoption

of the EU's first-ever initiative on pollinators to address their decline in Europe and worldwide.

As regards environment and health, one of the purposes of the REACH Regulation is to ensure a high level of protection of human health and the environment, in particular through better and earlier identification of the intrinsic properties of chemical substances (EU, 2013e). This is done through the registration, evaluation, authorisation and restriction of chemicals (REACH), and the Regulation's provisions, which are underpinned by the precautionary principle.

Environmental integration is still being pursued. For example in the agricultural sector, which is responsible for many environmental pressures (Chapter 13), environmental and climate considerations have been increasingly embedded within the CAP. For the period 2014-2020, this is being implemented through cross-compliance conditions for obtaining full direct payments, greening measures to make farmers deliver environmental and climate benefits beyond cross-compliance and voluntary commitments by farmers to get additional payments under agri-environment schemes (EU, 2013d, 2013e). CAP payments for agricultural development constitute 37.8 % of the EU overall budget in the multiannual financial framework for 2014-2020 (EC, 2013). Under its Pillar 2, supporting rural development programmes, Member States have to spend at least 30 % of the related budget on measures related to the environment and climate change mitigation. This represents almost 1 % of the EU budget, or EUR 25 billion for the period 2014-2020, making it a very important funding instrument, which may potentially influence the trends in environmental pressures from agriculture (Chapter 13).



The 7th EAP establishes a coherent policy framework for EU environmental policies.

Other funding instruments support the implementation of European environmental and climate policy. The LIFE programme is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU (EU, 2013c). Since 1992, the LIFE programme has co-financed almost 5 000 small-scale projects developing innovative approaches for environment and climate action. For the period 2014-2020, the LIFE programme contributes approximately EUR 3.4 billion (EC, 2016c). EU funding instruments such as the European Regional Development Fund (ERDF) and the Cohesion Fund provide funding for the protection of the environment, although these instruments are primarily focused on other policy priorities. The European Maritime and Fisheries Fund has a strong focus on sustainable fish stocks, fuel-efficient fishing and reduced environmental impacts, among other priorities.

More recently, the ambition of the 7th EAP has been supported by a range of policy packages, which are more integrated at the macro-economic level and attempt to better address the long-term, systemic interlinkages between the environment, society and the economy. In particular, since the publication of the previous SOER, significant policy developments have arisen around three frameworks highly relevant for the environment and climate: (1) the low-carbon economy;

(2) the circular economy; and (3) the bioeconomy.

In line with the Paris Agreement, the EU has set for itself ambitious climate- and energy-related targets in order to move towards a low-carbon economy by 2050. The long-term objective proposed by the European Commission is to achieve a reduction in GHG emissions of 80-95 % by 2050 compared with 1990 levels (EC, 2011a). In 2018, the European Commission raised its ambition with the publication of the European strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy for 2050, which shows how Europe could lead the way to climate neutrality while ensuring a socially just transition (EC, 2018c). Building on the '20-20-20 targets' set for 2020, the EU has committed, through its 2030 climate and energy framework, to reduce GHG emissions to at least 40 % below 1990 levels by 2030, while improving energy efficiency by at least 32.5 % and increasing the share of energy from renewable sources to at least 32 % of final consumption (European Council, 2014; EU, 2018a, 2018b).

EU action relies on the EU Emissions Trading System (ETS), a 'cap and trade' mechanism for GHG emissions from nearly 11 000 installations (factories, power stations, etc.) across the EU, on the Effort Sharing Regulation (EU, 2018e), which sets binding annual targets for reducing GHG emissions for 2030 for each Member State in sectors not covered by the ETS (e.g. road transport, waste, agriculture and buildings), and on the LULUCF Regulation (EU, 2018d) committing Member States to ensure that GHG emissions from land use, land use change and forestry (LULUCF) are offset by at least an equivalent removal of CO₂ from the atmosphere in the period 2021-2030. These commitments are to be considered within the broader perspective of the Energy Union Strategy (EC, 2015b), which addresses



environmental and climate dimensions along with issues of security, affordability, market integration, and research, innovation and competitiveness.

The Regulation on the Governance of the Energy Union and Climate Action establishes a unique framework for cooperation between Member States and the EU, building on integrated national energy and climate plans, EU and national long-term strategies, and integrated reporting, monitoring and data publication (EU, 2018f). In addition, these mitigation efforts are complemented by the EU adaptation strategy on climate change (EC, 2013), which aims to make Europe more climate resilient by enhancing the preparedness and capacity to respond to the impacts of climate change (Chapter 7) and which has recently been evaluated positively (EC, 2018i). The online European Climate Adaptation Platform, Climate-ADAPT, plays a central role in improving informed decision-making for climate change adaptation across Europe (EEA and EC, 2019).

The concept of a circular economy has recently gained traction in European policymaking as a solutions-oriented perspective for achieving economic development within increasing environmental constraints (EEA, 2016). A circular economy aims to maximise the value and use of all materials and products, reducing the dependency on primary raw GHG emissions, thus contributing to moving towards a low-carbon economy. In 2015, the European Commission adopted its circular economy package, which includes an EU action plan for the circular economy (EC, 2015a), setting out a number of initiatives aiming at closing the loop of product life cycles, primarily through greater recycling. The package also led to the revision of six waste directives with new waste management targets regarding recycling and preparing for reuse and landfilling (Chapter 9). In 2018, the European Commission adopted complementary

Major policy developments have occurred around the frameworks of the low-carbon economy, the circular economy and the bioeconomy.

measures in its 2018 circular economy package, including a strategy for plastics that sets the goal that 'by 2030, all plastics packaging will have to be reusable or recyclable in an economically viable manner', and sets up a monitoring framework to record progress towards the circular economy at EU and national levels (EC, 2018a, 2018b).

While not being an environmental policy per se, a third framework of particular relevance to the environment and climate has gained momentum during the last decade. The EC (2012) defines the bioeconomy as 'the production of renewable biological resources and the conversion of these resources and waste streams into value added products, such as food, feed, bio-based products and bioenergy' and states that it aims to optimise the use of biological resources for ensuring food security, managing natural resources sustainably, reducing dependence on non-renewable resources, mitigating and adapting to climate change, and creating jobs and maintaining European competitiveness. The EU launched its bioeconomy strategy in 2012 to stimulate knowledge development, research and innovation, bring together stakeholders, create markets, and streamline existing policy approaches in this area (e.g. the CAP, the CFP, Horizon 2020, the Blue Growth initiative). Building on the conclusions of the 2017 review (EC, 2017b), the 2018 update of the bioeconomy strategy aims to accelerate the development of a sustainable circular bioeconomy, through strengthening, scaling up and spreading bio-based innovations across

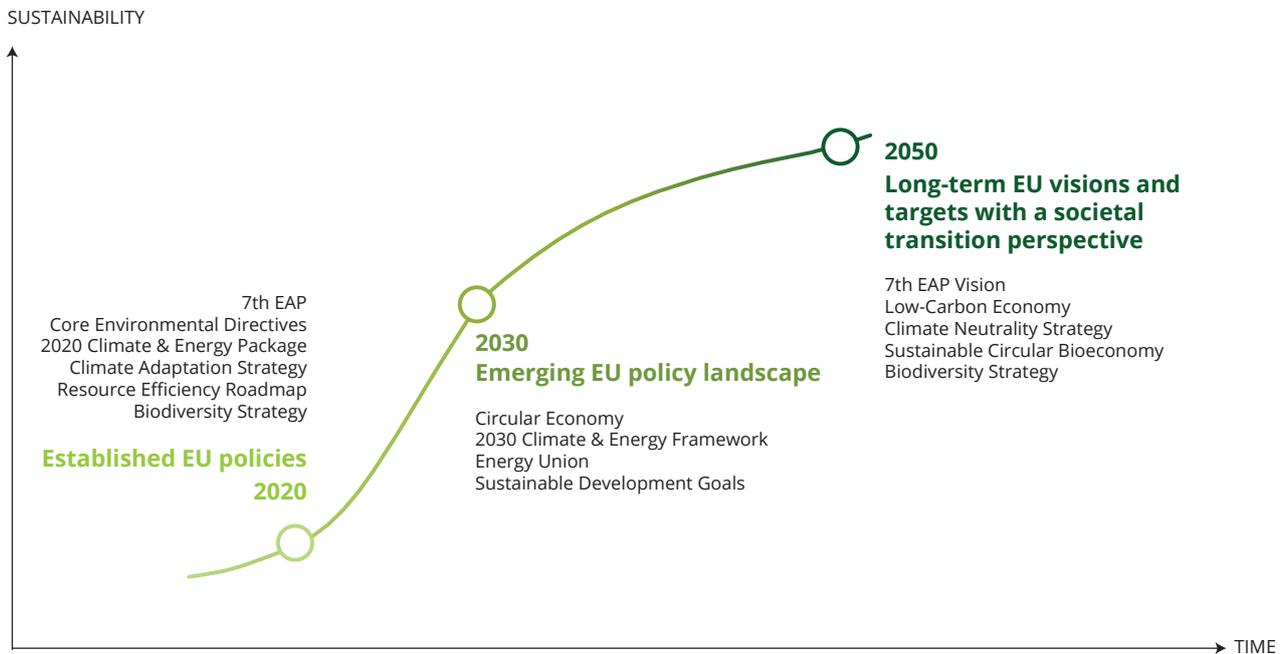
Europe, while paying more attention to ecological limitations (EC, 2018b).

Overall, the EU environmental and climate policy landscape aims to address the short-, medium- and long-term time horizons through a range of policies, strategies and instruments that increasingly connect the environmental, social and economic dimensions of sustainability (Figure 2.2). However, the ambition of the 7th EAP vision and frameworks such as the low-carbon economy, the circular economy and the bioeconomy is such that it implies fundamental societal transitions to transform key production-consumption systems (Part 3). While policy interventions can trigger the change needed, such ambition will ineluctably question our collective ways of living and thinking. One positive sign is the increasing awareness and concern around environmental and climate challenges across society.

2.3 The context of Europe's governance

2.3.1 Environmental and climate mainstreaming in EU institutions

In addition to adopting policies, the EU institutions have started to embed environmental and climate dimensions in a number of ways, which reflects an increasing recognition of sustainability challenges. For instance, the multiannual financial framework, the EU's budget for 2014-2020, had the objective of ensuring that at least 20 % of the EU's budget is allocated to climate-related expenditure (EU and Euratom, 2013). Based on the current trend, climate-related spending is projected to amount to EUR 200 billion or 19.3 % of the EU's operational spending commitments (EC, 2018j), and climate change adaptation and mitigation have been integrated into all major EU spending programmes.

FIGURE 2.2 The emerging EU environmental and climate policy landscape

Source: EEA.

It remains difficult to monitor the EU's budget contribution to other environmental areas due to its degree of dispersion. It is, however, estimated that, for example, 8 % will be allocated to protect biodiversity over the period 2014-2020 (EC, 2018j).

EU regional policy, which is the EU's main investment policy with a budget of EUR 351.8 billion for the period 2014-2020, contributes to improving the environment and moving towards a low-carbon economy in Europe. For instance, EUR 40 billion from the ERDF and the Cohesion Fund are to be invested in the transition to a low-carbon economy in the period 2014-2020, twice the amount spent in the period 2007-2013. From a research and innovation perspective, Horizon 2020 reserves a significant part of its EUR 77 billion of funding available for the 2014-2020 period to tackle a



The ambitious EU vision requires fundamental societal transitions.

number of societal challenges highly related to the environment (EU, 2013b). It has also established climate action and sustainable development as cross-cutting objectives and set expected expenditure levels of at least 35 % for climate action and at least 60 % for sustainable development.

Besides, the European Commission is increasingly looking at how to integrate

sustainability considerations into its financial policy framework, in particular within the context of the Capital Markets Union. Indeed, it estimated that an investment gap of EUR 180 billion per year needs to be filled to achieve the EU's 2030 targets set out in the Paris Agreement (EC, 2017d). Following the recommendations of a high-level expert group, the Commission adopted an action plan on sustainable finance in March 2018, which was followed by the first set of measures to facilitate sustainable investments (EC, 2018d).

An initiative is also ongoing to 'green' the European semester. The European semester is a mechanism to improve the coordination of economic and budgetary policies in EU Member States. While it was created with the aim of monitoring the implementation of the Europe 2020 strategy (EC, 2010), which includes economic, social and

environmental targets, the semester has mainly focused on macro-economic aspects, relying in particular on the GDP (gross domestic product) indicator. Following the integration of key social and employment indicators in the semester scoreboard, the ambition is now to embed environmental indicators to assess the sustainability of the progress made.

The EU has also set in motion Copernicus, its Earth observation programme (EC, 2017d). With seven dedicated satellites in orbit (so far), complemented by contributing missions, *in situ* sensors, numerical models and related services, it aims to provide full, free and open data daily to public and private users to allow a better understanding of and response to environmental and climate challenges. This includes monitoring of the atmosphere, the marine environment, land use and climate change.

2.3.2 *Environmental and climate action across scales of governance*

Environmental and climate action in the EU is not limited to the interventions of EU institutions and Member States. The scale of environmental and climate challenges calls for a whole-of-society approach in which all citizens and scales of governance across the EU have a role to play (EEA and Eionet, 2016). As annual Eurobarometer surveys show, support for environmental protection from European citizens has remained high across all Member States over the years, despite the socio-economic impacts of the 2008 financial crisis, and nearly 9 out of 10 Europeans (87 %) agree that they can play a role in protecting the environment (EC, 2017c). This allows more proactive environmental and climate interventions by EU institutions and Member States and closer engagement

European citizens are highly supportive of environmental protection and climate action.

of citizens and local stakeholders in supporting their actions.

It is increasingly recognised that ‘cities are key players in implementing the EU’s goals in terms of a low-carbon economy ... and resource efficiency. They are crucial in improving waste management, public transport, water management and, through integrated urban planning, the efficient use of land.’ (EEA, 2015b). Acknowledging this key role, the EU is supporting a range of initiatives fostering networking of cities and local authorities, in line with the eighth objective of the 7th EAP. Ten years after its launch in 2008, the Covenant of Mayors for Climate & Energy brings together more than 7 700 local and regional authorities representing more than 250 million citizens across Europe to help meet the EU climate and energy objectives (Covenant of Mayors, 2019). The initiative was embedded in the field of climate change adaptation with the setting up of Mayors Adapt, a subset of the Covenant of Mayors initiative, to engage cities in taking action to adapt to climate change (Mayors Adapt, 2015).

Other urban initiatives supported by the EU are the urban agenda for the EU, which includes the aim of strengthening the resilience of urban settings through preventing disaster and climate-related risks, in line with the UN new urban agenda (EU, 2016); the Reference Framework for European Sustainable Cities, which seeks to give all European cities practical support and a network to share information on moving towards sustainable urban development (RFSC, 2018); and the European Green Capital Award and European Green Leaf

Award, which recognise and reward efforts to improve the environment, the economy and the quality of life in cities (EC, 2018g).

Companies are also increasingly concerned about environmental and climate challenges, because the latter can potentially disrupt their supply and value chains (e.g. through climate-related weather events), their profit margins can increase thanks to resource and energy efficiency, eco-innovation creates new markets or they are simply pushed to be more environmentally-friendly by their customers. Several approaches supported by the European Commission help companies that are willing to further integrate the environmental dimension into their business models. For instance, the EU Eco-Management and Audit Scheme (EMAS) is a management instrument for European companies and other organisations to evaluate, report and improve their environmental performance. As of April 2018, the EMAS Network counted 3 866 organisations and 9 004 sites (EC, 2018f). Through green public procurement, Europe’s public authorities can also strengthen the demand for more sustainable goods and services, and therefore stimulate eco-innovation (EC, 2019b). Besides, corporate social responsibility, which refers to companies taking responsibility for their impact on society, also involves meeting environmental product requirements (EC, 2018e). The UN Global Compact, an initiative asking business to actively address environmental risks and opportunities, has a strong foothold in Europe where it has the largest total number of participants compared with other regions (UN Global Compact, 2018). Businesses, industries and their representatives are also key stakeholders within the Commission-led multi-stakeholder platform on the SDGs, the Circular Economy Stakeholder Platform, or the Bioeconomy Stakeholders Panel.