

# **The European environment — state and outlook 2020**

**Executive summary**



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# **The European environment — state and outlook 2020**

## **Executive summary**



# The defining challenge of this century

**T**he *European environment — state and outlook 2020* (SOER 2020) comes at a crucial time. We face urgent sustainability challenges that require urgent systemic solutions. This is *the* unambiguous message to policymakers in Europe and globally. The overarching challenge of this century is how we achieve development across the world that balances societal, economic and environmental considerations.

This is the 6th SOER published by the European Environment Agency (EEA), and this 2020 edition identifies serious gaps between the state of the environment and existing EU near- and long-term policy targets. Citizens' expectations for living in a healthy environment must be met, and this will require renewed focus on implementation as a cornerstone of EU and national policies.

That being said, we do not only have to do more; we also have to do things differently. Over the next decade, we are going to need very different answers to the world's environmental and climate challenges than the ones we have provided over the past 40 years. This report aims to inform discussions on Europe's 2030 policies, including trajectories to 2050 and beyond.

These future policies must build on existing responses to our environmental and climate challenges — the *acquis* — and they must also respond to the most-up-to-date knowledge, which calls for fundamentally different approaches — both in terms of *what* we need to do, as well as *how* we need to do it.

The message of urgency cannot be overstated. In the last 18 months alone, major global scientific reports from the IPCC, IPBES, IRP and UN Environment <sup>(1)</sup> have been

published, all carrying similar messages: current trajectories are fundamentally unsustainable; these trajectories are interconnected and linked to our main systems of production and consumption; and time is running out to come up with credible responses to bend the trend.

The call for fundamental sustainability transitions in the core systems that shape the European economy and modern social life — especially the energy, mobility, housing and food systems — is not new. Indeed we made such a call in the 2010 and 2015 editions of SOER, and in recent years the EU has embedded this thinking in important policy initiatives such as the circular and bio-economy packages, the climate and energy policies for 2030 and 2050, and its future research and innovation programme. Furthermore, the EU's sustainable finance initiative is the first of its kind to ask serious questions about the role of the financial system in driving the necessary change.

However, it is one thing to change thinking and another to bring about actual change. The focus now must be on scaling up, speeding up, streamlining and implementing the many solutions and innovations — both technological and social — which already exist, while stimulating additional research and development, catalysing behavioural shifts and, vitally, listening to and engaging with citizens.

We cannot underestimate the social dimension. There are loud and understandable calls for a just transition, in which the potential losers from the low-carbon economy are given due care and attention. The unequal distribution of costs and benefits arising from systemic changes is now recognised by policymakers, but require solid understanding, citizen engagement and effective responses.

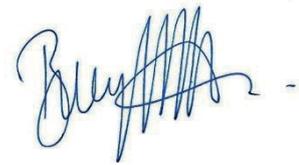
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<sup>(1)</sup> Intergovernmental Panel on Climate Change (IPCC) reports on 1.5 °C Global Warming and Climate Change and Land; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report on Biodiversity and Ecosystem Services; International Resource Panel (IRP) Global Resources Outlook report; UN Environment Global Environment Outlook 6.

Neither should we ignore the young people of Europe. They are increasingly making their voices heard to demand a more ambitious response to climate change and environmental degradation. Unless we manage to change current trends within the next decade, then their sense of fear for the future will prove to be well founded.

SOER 2020 does not provide all the answers to these complex challenges. Nonetheless, it is the EEA's most comprehensive integrated assessment to date, and the first to address rigorously our systemic challenges in the context of the sustainability transitions that we, as a society, must make. It builds on 25 years of experience with data, analysis and EU policy, drawing on the knowledge of our unique network of European member countries (Eionet).

We cannot predict the future, but we can create it. We are convinced that this report constitutes a solid, timely source of knowledge that can guide discussions on future EU environment and climate policies, and help shape European responses to the United Nations Agenda 2030 and Sustainable Development Goals (SDGs). Europe must lead the global transition to a healthy environment in a just and sustainable world. The idea of a European Green Deal — outlined as the number one priority in the Political Guidelines for the next European Commission 2019-2024 — has the potential to provide an excellent framework for action, allowing for the kind of systems-based thinking and innovation needed to achieve this transition and create a future we can all be proud of.

A handwritten signature in blue ink, appearing to read 'Bruyninckx', with a horizontal line extending to the right.

**Hans Bruyninckx**  
Executive Director, European Environment Agency

# SOER 2020 in a nutshell

In 2020, Europe faces environmental challenges of unprecedented scale and urgency. Although EU environment and climate policies have delivered substantial benefits over recent decades, Europe faces persistent problems in areas such as biodiversity loss, resource use, climate change impacts and environmental risks to health and well-being. Global megatrends such as demographic change are intensifying many environmental challenges, while rapid technological change brings new risks and uncertainties.

Recognising these challenges, the EU has committed to a range of long-term sustainability goals with the overall aim of 'living well, within the limits of our planet'. Achieving these goals will not be possible without a rapid and fundamental shift in the character and ambition of Europe's responses. Europe needs to find ways to transform the key societal systems that drive environment and climate pressures and health impacts — rethinking not just technologies and production processes but also consumption patterns and ways of living. This will require immediate and concerted action, engaging diverse policy areas and actors across society in enabling systemic change.

Europe stands at a critical juncture in 2020. Its leaders have opportunities to shape future developments that will not be available to their successors. The coming decade will therefore be of decisive importance in determining Europe's opportunities in the 21st century.

These, in short, are the overarching conclusions of The European environment — state and outlook 2020 (SOER 2020). The report provides a comprehensive assessment of Europe's environment to support governance and inform the public. Like all EEA reports, it is founded on the work of the European Environment Information and Observation Network (Eionet) — a partnership between the EEA and its 33 member countries and six cooperating countries.

Making sense of the European environment's state, trends and prospects requires an integrated approach that acknowledges the complex drivers and implications of environmental

change. SOER 2020 provides just that, presenting the global context that shapes Europe's development (Part 1), European environmental and sectoral trends and outlooks (Part 2) and the factors constraining or enabling transformative change (Part 3). It concludes in Part 4 with reflections on how Europe can shift its trajectory and achieve a sustainable future.

SOER 2020 identifies many challenges and barriers. But it also sees reasons for hope. European citizens are increasingly voicing their frustration with the shortfalls in environment and climate governance. Knowledge about systemic challenges and responses is growing and is increasingly reflected in EU policy frameworks. In parallel, innovations have emerged rapidly in recent years, including new technologies, business models and community initiatives. Some cities and regions are leading the way in terms of ambition and creativity, experimenting with different ways of living and working and sharing ideas across networks.

All of these developments are important because they create space for governments to bring a new scale of ambition to policies, investments and actions. They also help raise awareness, encouraging citizens to rethink behaviours and lifestyles. Europe must seize these opportunities, using every means available to deliver transformative change in the coming decade.

## **Europe's environment in a changing global context**

The environmental and sustainability challenges that Europe faces today are rooted in global developments stretching back over decades. During this period, the 'Great Acceleration' of social and economic activity has transformed humanity's relationship with the environment. Since 1950, the global population has tripled to 7.5 billion; the number of people living in cities has quadrupled to more than 4 billion; economic output has expanded 12-fold, matched by a similar increase in the use of nitrogen, phosphate and potassium fertilisers; and primary energy use has increased five-fold. Looking ahead,

these global developments look set to continue increasing pressures on the environment. The world's population is projected to grow by almost one third to 10 billion by 2050. Globally, resource use could double by 2060, with water demand increasing 55 % by 2050 and energy demand growing 30 % by 2040.

The great acceleration has undoubtedly delivered major benefits, alleviating suffering and enhancing prosperity in many parts of the world. For example, the share of the global population living in extreme poverty has decreased sharply — from 42 % in 1981 to less than 10 % in 2015. Yet the same developments have also caused widespread damage to ecosystems. Globally, about 75 % of the terrestrial environment and 40 % of the marine environment are now severely altered. The Earth is experiencing exceptionally rapid loss of biodiversity, and more species are threatened with extinction now than at any point in human history. Indeed, there is evidence that a sixth mass extinction of biodiversity is under way.

Many of the changes in the global climate system observed since the 1950s are similarly unprecedented over decades to millennia. They largely result from greenhouse gas emissions from human activities, such as burning fossil fuels, agriculture and deforestation.

Both directly and indirectly, these pressures are inflicting tremendous harm on human health and well-being. The global burden of disease and premature death related to environmental pollution is already three times greater than that from AIDS, tuberculosis and malaria combined. But the continuation of the great acceleration could create even more far-reaching threats if pressures trigger the collapse of ecosystems such as the Arctic, coral reefs and the Amazon forest. Sudden and irreversible shifts of this sort could severely disrupt nature's ability to deliver essential services such as supplying food and resources, maintaining clean water and fertile soils, and providing a buffer against natural disasters.

As a pioneer of industrialisation, Europe has played a pivotal role in shaping these global changes. Today, it continues to consume more resources and contribute more to environmental degradation than many other world regions. To meet these high consumption levels, Europe depends on resources extracted or used in other parts of the world, such as water, land, biomass and other materials. As a result, many of the environmental impacts associated with European production and consumption occur outside Europe.

Collectively, these realities add up to a profound challenge for Europe and other world regions. The current trajectories of social and economic development are destroying the

ecosystems that ultimately sustain humanity. Shifting onto sustainable pathways will require rapid and large-scale reductions in environmental pressures, going far beyond the current reductions.

## Europe's environment in 2020

As the character and scale of global environmental and climate challenges has become clearer, policy frameworks have evolved. Europe's environmental policy framework — the environmental *acquis* — is increasingly shaped by ambitious long-term visions and targets. The overarching vision for Europe's environment and society is set out in the Seventh Environment Action Programme (7th EAP), which envisages that by 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 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 environmental policies are guided by three thematic policy priorities in the 7th EAP: (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. In recent years, the EU has also adopted a series of strategic framework policies that focus on transforming the EU economy and particular systems (e.g. energy, mobility) in ways that deliver prosperity and fairness, while also protecting ecosystems. The United Nations (UN) Sustainable Development Goals complement these frameworks, providing a logic for transformative change that acknowledges the interdependence of social, economic and environmental targets.

Viewed against Europe's long-term vision and complementary policy targets, it is clear that Europe is not making enough progress in addressing environmental challenges. The messages from the SOER 2020 assessment of recent trends and outlooks is clear: policies have been more effective in reducing environmental pressures than in protecting biodiversity and ecosystems, and human health and well-being. Despite the successes of European environmental governance, persistent problems remain and the outlook for Europe's environment in the coming decades is discouraging (Table ES.1).

**TABLE ES.1 Summary of past trends, outlooks and prospects of meeting policy objectives/targets**

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets		
	Past trends (10-15 years)	Outlook to 2030	2020	2030	2050
<b>Protecting, conserving and enhancing natural capital</b>					
Terrestrial protected areas			<input checked="" type="checkbox"/>		
Marine protected areas			<input checked="" type="checkbox"/>		
EU protected species and habitats			<input checked="" type="checkbox"/>		
Common species (birds and butterflies)			<input checked="" type="checkbox"/>		
Ecosystem condition and services			<input checked="" type="checkbox"/>		
Water ecosystems and wetlands			<input checked="" type="checkbox"/>		
Hydromorphological pressures			<input checked="" type="checkbox"/>		
State of marine ecosystems and biodiversity			<input checked="" type="checkbox"/>		
Pressures and impacts on marine ecosystems			<input checked="" type="checkbox"/>		
Urbanisation and land use by agriculture and forestry					<input checked="" type="checkbox"/>
Soil condition			<input checked="" type="checkbox"/>		
Air pollution and impacts on ecosystems			<input type="checkbox"/>	<input type="checkbox"/>	
Chemical pollution and impacts on ecosystems			<input checked="" type="checkbox"/>		
Climate change and impacts on ecosystems			<input checked="" type="checkbox"/>		
<b>Resource-efficient, circular and low-carbon economy</b>					
Material resource efficiency			<input checked="" type="checkbox"/>		
Circular use of materials				<input type="checkbox"/>	
Waste generation			<input type="checkbox"/>		
Waste management			<input type="checkbox"/>		
Greenhouse gas emissions and mitigation efforts			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Energy efficiency			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Renewable energy sources			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Emissions of air pollutants			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pollutant emissions from industry			<input type="checkbox"/>		
Clean industrial technologies and processes			<input type="checkbox"/>		
Emissions of chemicals			<input checked="" type="checkbox"/>		
Water abstraction and its pressures on surface and groundwater			<input checked="" type="checkbox"/>		
Sustainable use of the seas			<input type="checkbox"/>		
<b>Safeguarding from environmental risks to health and well-being</b>					
Concentrations of air pollutants			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Air pollution impacts on human health and well-being				<input checked="" type="checkbox"/>	
Population exposure to environmental noise and impacts on human health			<input checked="" type="checkbox"/>		
Preservation of quiet areas			<input checked="" type="checkbox"/>		
Pollution pressures on water and links to human health			<input checked="" type="checkbox"/>		
Chemical pollution and risks to human health and well-being			<input checked="" type="checkbox"/>		
Climate change risks to society			<input type="checkbox"/>		
Climate change adaptation strategies and plans			<input type="checkbox"/>		
<b>Indicative assessment of past trends (10-15 years) and outlook to 2030</b>		<b>Indicative assessment of prospects of meeting selected policy objectives/targets</b>			
	Improving trends/developments dominate	Year	<input checked="" type="checkbox"/>	Largely on track	
	Trends/developments show a mixed picture	Year	<input type="checkbox"/>	Partially on track	
	Deteriorating trends/developments dominate	Year	<input checked="" type="checkbox"/>	Largely not on track	

**Note:** The year for the objectives/targets does not indicate the exact target year but the time frame of the objectives/targets.

It is clear that natural capital is not yet being protected, conserved and enhanced in accordance with the ambitions of the 7th EAP. Small proportions of protected species (23 %) and habitats (16 %) are in favourable conservation status and Europe is not on track to meet its overall target of halting biodiversity loss by 2020. Europe has achieved its targets for designating terrestrial and marine protected areas and some species have recovered, but most other targets are likely to be missed.

Policy measures targeted at natural capital have delivered benefits in some areas, but many problems persist and some are getting worse. For example, reduced pollution has improved water quality, but the EU is far from achieving good ecological status for all water bodies by 2020. Land management has improved, but landscape fragmentation continues to increase, damaging habitats and biodiversity. Air pollution continues to impact biodiversity and ecosystems, and 62 % of Europe's ecosystem area is exposed to excessive nitrogen levels, causing eutrophication. The impacts of climate change on biodiversity and ecosystems are expected to intensify, while activities such as agriculture, fisheries, transport, industry and energy production continue to cause biodiversity loss, resource extraction and harmful emissions.

Europe has made more progress in relation to resource efficiency and the circular economy. Material consumption has declined and resource efficiency improved as gross domestic product has increased. Greenhouse gas emissions declined by 22 % between 1990 and 2017, due to both policy measures and economic factors. The share of renewable energy sources in final energy consumption increased steadily to 17.5 % in 2017. Energy efficiency has improved, and final energy consumption has declined to roughly the level in 1990. Emissions of pollutants to both air and water have been reduced, while total EU water abstraction decreased by 19 % between 1990 and 2015.

More recent trends are less positive, however. For example, final energy demand has actually increased since 2014 and, if that continues, the EU's 2020 target for energy efficiency may not be met. Harmful emissions from transport and agriculture have also risen, and production and consumption of hazardous chemicals have remained stable. The outlook to 2030 suggests that the current rate of progress will not be sufficient to meet 2030 and 2050 climate and energy targets. In addition, addressing environmental pressures from economic sectors through environmental integration has not been successful, as illustrated by agriculture's continued impacts on biodiversity and pollution of air, water and soil.

Europe has achieved some success in protecting Europeans from environmental risks to health and well-being. For

example, drinking and bathing water are generally of high quality throughout Europe. But, again, there are persistent problems in some areas and the outlook is worrying. For example, some persistent and mobile chemicals resist even advanced drinking water treatment. Similarly, although emissions of air pollutants have declined, almost 20 % of the EU's urban population lives in areas with concentrations of air pollutants above at least one EU air quality standard. Exposure to fine particulate matter is responsible for around 400 000 premature deaths in Europe every year, and central and eastern European countries are disproportionately affected.

Human health and well-being are still affected by noise, hazardous chemicals and climate change. Accelerating climate change is likely to bring increased risks, particularly for vulnerable groups. Impacts can arise from heat waves, forest fires, flooding and changing patterns in the prevalence of infectious diseases. In addition, environmental risks to health do not affect everyone in the same way, and there are pronounced local and regional differences across Europe in terms of social vulnerability and exposure to environmental health hazards. In general, the outlook for reducing environmental risks to health and well-being is uncertain. Systemic risks to health are complex and there are important gaps and uncertainties in the knowledge base.

## **Understanding and responding to systemic challenges**

The persistence of major environmental challenges can be explained by a variety of related factors. First, environmental pressures remain substantial despite progress in reducing them. The pace of progress has also slowed in some important areas, such as greenhouse gas emissions, industrial emissions, waste generation, energy efficiency and the share of renewable energy. This implies a need to go beyond incremental efficiency improvements and to strengthen the implementation of environmental policies to achieve their full benefits.

The complexity of environmental systems can also mean that there is a considerable time lag between reducing pressures and seeing improvements in natural capital, and human health and well-being. Environmental outcomes, such as biodiversity loss, are often determined by diverse factors, meaning that the effectiveness of policy measures and local management efforts can be offset by external factors. These include global developments such as growing populations, economic output and resource use, all of which influence the situation in Europe. Looking ahead, concerns are also emerging about drivers of change, such as technological and geopolitical developments that have unclear implications.

Perhaps the most important factor underlying Europe's persistent environmental and sustainability challenges is that they are inextricably linked to economic activities and lifestyles, in particular the societal systems that provide Europeans with necessities such as food, energy and mobility. As a result, society's resource use and pollution are tied in complex ways to jobs and earnings across the value chain; to major investments in infrastructure, machinery, skills and knowledge; to behaviours and ways of living; and to public policies and institutions.

The many interlinkages within and between societal systems mean that there are often major barriers to achieving the rapid and far-reaching change that is needed to achieve Europe's long-term sustainability objectives. For example:

- Production-consumption systems are characterised by lock-ins and path dependency, linked to the fact that system elements — technologies, infrastructures, knowledge and so on — have often developed together over decades. This means that radically altering these systems is likely to disrupt investments, jobs, behaviours and values, provoking resistance from affected industries, regions or consumers.
- Interlinkages and feedbacks within systems mean that change often produces unintended outcomes or surprises. For example, technology-driven gains may be undermined by lifestyle changes, partly because of 'rebound effects' when efficiency improvements result in cost savings that enable increased consumption.
- Production-consumption systems are also linked directly and indirectly, for example through their reliance on a shared natural capital base to provide resources and absorb wastes and emissions. This 'resource nexus' means that addressing problems in one area can produce unintended harm elsewhere, for example deforestation and increases in food prices due to biofuel production.

The systemic character of Europe's environmental challenges helps explain the limitations of established environmental governance approaches in delivering needed change. Although signs of progress have been observed across the food, energy and mobility systems, environmental impacts remain high and current trends are not in accordance with long-term environmental and sustainability goals.

A growing body of research and practice provides insights into how fundamental systemic change can be achieved. Such transitions are long-term processes that depend critically on the emergence and spread of diverse forms of innovation that trigger alternative ways of thinking and living

— new social practices, technologies, business models, nature-based solutions, and so on. It is impossible to know in advance precisely what innovations will emerge, whether or how they will be integrated into lifestyles, and how they will affect sustainability outcomes. Transitions therefore involve numerous uncertainties, conflicts and trade-offs.

This understanding of systemic change has important implications for governance. First, the perceived role of government shifts from acting as a 'pilot', with the knowledge and tools to steer society towards sustainability, to a role as an enabler of society-wide innovation and transformation. Top-down planning still has a role in some contexts. But governments also need to find ways to leverage the powers of citizens, communities and businesses.

Achieving this requires contributions across policy areas and levels of government towards common goals. Environmental policy tools remain essential. But enabling systemic change will require a much broader policy mix to promote innovation and experimentation, to enable new ideas and approaches to spread, and to ensure that structural economic change produces beneficial and fair outcomes. The complexity and uncertainty of transition processes means that governments will also need to find ways to coordinate and steer actions across society towards long-term sustainability goals and to manage the risks and unintended consequences that inevitably accompany systemic change.

### **Where does Europe go from here?**

Taken together, the analysis in Parts 1-3 highlights the persistence, scale and urgency of the challenges facing Europe. Achieving the EU's 2050 sustainability vision is still possible, but it will require a shift in the character and ambition of actions. That means both strengthening established policy tools and building on them with innovative new approaches to governance. Drawing on the insights from across the report, Part 4 identifies a variety of important areas where action is needed to enable transitions.

**Strengthening policy implementation, integration and coherence:** Full implementation of existing policies would take Europe a long way to achieving its environmental goals up to 2030. Achieving full implementation will require increased funding and capacity building; engagement of business and citizens; better coordination of local, regional and national authorities; and a stronger knowledge base. Beyond implementation, Europe needs to address gaps and weaknesses in policy frameworks, for example in relation to land, soil and chemicals. Better integration of environmental

goals into sectoral policy is also essential, as is improved policy coherence.

### **Developing more systemic, long-term policy**

**frameworks and binding targets:** The growing set of strategic policies addressing key systems (e.g. energy and mobility) and promoting the transformation to a low-carbon and circular economy are important tools for stimulating and guiding coherent action across society. But the coverage of long-term policy frameworks needs to be extended to other important systems and issues, such as food, chemicals and land use. Comparable cross-cutting strategies are also needed at other levels of governance — including countries, regions and cities. Engaging stakeholders in developing transformative visions and pathways is important to reflect the diverse realities across Europe and to maximise environmental, social and economic co-benefits.

### **Leading international action towards sustainability:**

Europe cannot achieve its sustainability goals in isolation. Global environmental and sustainability problems require global responses. The EU has significant diplomatic and economic influence, which it can use to promote the adoption of ambitious agreements in areas such as biodiversity and resource use. Full implementation of the UN's 2030 agenda for sustainable development in Europe and active support for implementation in other regions will be essential if Europe is to provide global leadership in achieving sustainability transitions. Using the Sustainable Development Goals as an overarching framework for policy development in the next 10 years could provide an important step towards realising Europe's 2050 vision.

**Fostering innovation throughout society:** Changing trajectory will depend critically on the emergence and spread of diverse forms of innovation that can trigger new ways of thinking and living. The seeds for this shift already exist. More and more businesses, entrepreneurs, researchers, city administrations and local communities are experimenting with different ways of producing and consuming. In practice, however, innovations often encounter major barriers. Public policies and institutions therefore have a vital role in enabling systemic change. Environmental policies remain essential, but system innovation requires coherent contributions from diverse policy areas, ranging from research, innovation, sectoral and industrial policies to education, welfare, trade and employment.

### **Scaling up investments and reorienting finance:**

Although achieving sustainability transitions will require major investments, Europeans stand to gain hugely — both because of avoided harms to nature and society, and because of the economic and social opportunities that they create.

Governments need to make full use of public resources to support experimentation, invest in innovations and nature-based solutions, procure sustainably, and support impacted sectors and regions. They also have an essential role in mobilising and directing private spending by shaping investment and consumption choices, and engaging the financial sector in sustainable investment by implementing and building on the EU's Sustainable Finance Action Plan.

### **Managing risks and ensuring a socially fair transition:**

Successful governance of sustainability transitions will require that societies acknowledge potential risks, opportunities and trade-offs, and devise ways to navigate them. Policies have an essential role in achieving 'just transitions', for example by supporting companies and workers in industries facing phase-out via retraining, subsidies, technical assistance or investments that help negatively affected regions. Early identification of emerging risks and opportunities related to technological and societal developments needs to be combined with adaptive approaches, based on experimentation, monitoring and learning.

**Linking knowledge with action:** Achieving sustainability transitions will require diverse new knowledge, drawing on multiple disciplines and types of knowledge production. This includes evidence about the systems driving environmental pressures, pathways to sustainability, promising initiatives and barriers to change. Foresight methods are an important way of engaging people in participatory processes to explore possible futures, outcomes and risks or opportunities. Generating, sharing and using relevant evidence to the full may require changes in the knowledge system linking science with policy and action, including developing new skills and institutional structures.

## **The next 10 years**

Achieving the goals of the 2030 agenda for sustainable development and the Paris Agreement will require urgent action in each of these areas during the next 10 years. To be clear, Europe will not achieve its sustainability vision of 'living well, within the limits of our planet' simply by promoting economic growth and seeking to manage harmful side-effects with environmental and social policy tools. Instead, sustainability needs to become the guiding principle for ambitious and coherent policies and actions across society. Enabling transformative change will require that all areas and levels of government work together and harness the ambition, creativity and power of citizens, businesses and communities. In 2020, Europe has a unique window of opportunity to lead the global response to sustainability challenges. Now is the time to act.



# About the SOER

The European Environment Agency (EEA) is an EU agency established under Council Regulation (EEC) No 1210/90. The regulation also established the European Environment Information and Observation Network (Eionet) as a partnership network of 33 member countries <sup>(2)</sup> and six cooperating countries <sup>(3)</sup>. The EEA's mandate is to work with Eionet to provide knowledge so that the relevant stakeholders in EU institutions and Eionet countries can make informed decisions about improving Europe's environment and moving towards sustainability.

As part of this mandate, one of the EEA's major tasks is to publish a report on the state of, trends in, and prospects for the environment every 5 years. Such reports have been produced since 1995 and have assessed the state of and outlook for the European environment, and informed EU policy implementation and development. They do so by monitoring past trends, progress towards established future targets and opportunities for EU policy to contribute to achieving long-term objectives.

Like previous reports, The European environment — state and outlook 2020 (SOER 2020) provides relevant, reliable and comparable knowledge and draws on many sources available to the EEA and Eionet. The report's development has been guided by the widespread recognition that environmental issues are interwoven with most aspects of society, which has implications for the overall outlook for achieving sustainability and suggests that stakeholders need new types of knowledge to support their actions.

SOER 2020 builds on the conclusions of its predecessor, published in March 2015. SOER 2015 demonstrated that, while implementing EU policy has resulted in substantial benefits for Europe's environment and human well-being, Europe faces major challenges in addressing persistent environmental problems that are linked in complex ways to systems of production and consumption. The 2015 report argues for fundamental transitions in the production-consumption systems causing environmental degradation, including the food, energy and mobility systems.

The 2020 report comes at a time when society is being challenged by false information and fake news. The report makes every effort to acknowledge this reality by ensuring transparency through comprehensive referencing of scientific findings and an improved approach to appraising and communicating aspects of quality and uncertainty and of knowledge gaps. The report has also been subject to extensive peer review by Eionet, the European Commission, the EEA Scientific Committee and international experts.

Country-level information informs policy implementation and facilitates improved sharing of novel developments and approaches. Acknowledging the challenge of increasing knowledge complexity, the report provides consistent summary assessments across its thematic assessments. Finally, the report addresses the systemic character of today's environmental challenges, including the aforementioned production-consumption systems, as well as insights into how Europe can respond to today's unprecedented environment, climate and sustainability challenges.

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<sup>(2)</sup> The 28 Member States of the EU together with Iceland, Liechtenstein, Norway, Switzerland and Turkey.

<sup>(3)</sup> Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia and Kosovo (under United Nations Security Council Resolution 1244/99 and in accordance with the International Court of Justice Opinion on the Kosovo Declaration of Independence).

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