

# Climate change and climate action

## SUMMARY

The coronavirus crisis presents challenges as well as opportunities for policies to address the issue of climate change. Measures taken in reaction to the pandemic have led to a dramatic fall in economic and social activity, and to a corresponding temporary drop in greenhouse gas emissions. Certain behaviour changes adopted during the crisis, such as teleworking and video-conferences, may persist and lead to permanently reduced emissions related to commuting and business travel. On the other hand, use of private cars may increase if public transport is considered as unsafe. The economic crisis has had a negative impact on household or corporate finances, which may lead to reduction or delay to investment in low-carbon technologies. Recovery packages for restarting the economy offer an opportunity for promoting low-carbon investment, but also bring the risk of financing the continuation of emission-intensive products and activities. The postponement of the COP26 climate change conference by one year slows down international climate action, but also offers the opportunity for the Parties to develop ambitious long-term strategies in the aftermath of the coronavirus crisis.

## Background

Measures taken to contain the coronavirus have led to a drastic reduction in economic and social activity, a drop in greenhouse gas emissions, and falling energy prices. Worldwide [CO<sub>2</sub> emissions](#) fell by up to 17 %, with co-benefits for air quality. While most of the drop in CO<sub>2</sub> emissions is due to a reduction in social and economic activity, a shift in behaviour has also contributed. For example, teleworking has reduced rush hour traffic and videoconferencing has replaced business travel. However, the emission cuts resulting from the pandemic crisis are neither sufficient nor sustainable. They have come at a high cost in terms of welfare, employment and freedom of movement, but fall short of the sustained emission cuts needed to meet the Paris Agreement targets.

Despite the fall in emissions, the price for emission allowances in the EU emission trading system has recovered from its low of March 2020, and has now (19 June 2020) recovered to February 2020 levels – an indication that the Market Stability Reserve performs as intended and that market participants expect emissions to rebound. Reduced energy demand in the crisis has led to a deep fall in oil and gas prices, which may affect the competitiveness of renewable energy sources. In the long-term, the period of low prices may lead to the closure of marginal oil wells and have a negative impact on upstream investments in oil and gas, which may result in reduced supply and higher prices in the longer-term.

The Covid-19 measures have led to the widespread adoption of new behaviours, such as teleworking and video-conferencing in the workplace, and distance learning in schools. If these habits persist, they can lead to a substantial reduction in emissions associated with rush-hour commuting and business travel. Recent [research](#) suggests that 25 to 30 % of all work can be done remotely, 10 % of all commuter traffic can be substituted by teleworking, and 30 % of all business travel replaced by virtual meetings. An increase in walking and bicycling, observed during the pandemic, can help reduce emissions, while taking the private car instead of public transport –

perceived as unsafe – can lead to rising transport emissions. As regards tourism, there may be a shift away from long-distance travel and towards travel by private car, due to the perception of certain destinations and modes of transport as higher risk. However, the lack of income and employment opportunities from tourism in some destinations may lead to increased pressures on the environment, with negative climate impacts, such as a rise in deforestation.

The measures to stop the spread of coronavirus have significantly reduced economic and social activity and led to job losses and financial difficulties for companies and citizens. In consequence, investment in low-carbon technology may be cut or delayed. The [International Energy Agency](#) sees a major threat to the expansion of clean energy technologies.

To prevent a long-lasting economic depression, national governments and the EU have initiated recovery packages amounting to more than [€3 trillion in Europe](#) and over [US\\$10 trillion worldwide](#). The planned '[Next Generation EU](#)' instrument would provide €750 billion in grants and loans complemented by an EU multiannual financial framework for 2021-27 with a budget of almost €1.1 trillion. A focus on the European Green Deal in the EU recovery funds and a similar approach in national recovery packages, presents a unique opportunity to prevent a rebound in emissions, promote low-carbon investment in industry and households, accelerate the transition towards a climate-neutral economy and promote European leadership in key green technologies.

International climate meetings under the United Nations Framework Convention on Climate Change have been cancelled or delayed because of the pandemic. The COP26 climate conference in Glasgow, which should finalise the rulebook for the Paris Agreement and address global ambition, has been postponed by one year, to November 2021. On the one hand, this is one year lost, but on the other, it provides an opportunity for the parties to define ambitious long-term strategies and raise medium-term ambition, taking account of the coronavirus situation and the national recovery packages.

Several analysts and stakeholders have pointed out the need to address the climate crisis with the same vigour as the Covid-19 pandemic. There are parallels between both issues: climate change and the pandemic are global crises that do not stop at national borders. However, the two crises are nevertheless of a quite different nature: In the case of Covid-19, local measures deliver local benefits, but in climate action, only adaptation delivers local benefits, while the carbon emissions or emission cuts affect the whole planet. In the case of infectious diseases, focused international cooperation can accelerate the development of a solution in the form of a cure or a vaccine. Climate change is different, in that a far-reaching transformation of industry and economy is needed, which calls for an overarching approach. Moreover, climate change happens at a much slower pace, so that there is a significant time lag between actions and effects.

## EU climate action policy

The EU is competent to act in most areas of environment and climate policy, although its action is limited by the principle of subsidiarity and the requirement for unanimity in Council on certain topics (such as tax, land use and the energy mix). Although large parts of environmental and climate policy are set at EU level, the main responsibility for implementation lies with Member States, and in some cases with regional and local authorities.

Under Articles 191 to 193 of the Treaty on the Functioning of the European Union, EU environmental policy is designed to provide 'a **high level of protection**' and is based on four principles (precaution; preventive action; rectification of damages at source; and 'the polluter pays').

The majority (52 %) of respondents to the Eurobarometer survey [Parlemeter 2019](#), consider climate change to be the most important environmental issue today, followed by air pollution, marine pollution, deforestation and the growing amount of waste. Nearly six out of ten EU citizens believe that youth-led climate protests have had a direct policy impact both at EU level (59 %) and in Member State politics (58 %).

The EU is party to the Paris Agreement on climate change, which aims to keep global warming well below 2°C, while making efforts not to exceed 1.5°C. The EU's 'nationally determined contribution' to the Paris Agreement, submitted in 2015, aims at a 40 % reduction of greenhouse gas emissions by 2030, compared to 1990 levels. Parties to the Paris Agreement must submit their long-term low-emission strategies and are requested to update their nationally determined contributions by 2020. The EU **long-term strategy**, submitted in March 2020, sets an objective for the EU to become climate-neutral by 2050.

The European Union is a world leader on climate action. It has pursued far-reaching objectives in the lead-up to 2020. As regards **climate change mitigation**, the EU regulatory framework up to 2030 was set during the 8th European Parliament, but may need to be revised in line with the EU's long-term strategy. Parliament and Council have adopted new rules and 2030 emission targets for specific sectors, strengthening and extending previous targets.

- Energy and industry: the EU [emissions trading system](#) (ETS), which covers around 45 % of the EU's greenhouse gas emissions, has been reformed. Emissions covered under the ETS must be reduced by 43 % by 2030 compared with 2005 levels.
- Transport, buildings and agriculture: the [Effort Sharing Regulation](#) requires emissions in these sectors to be cut by 30 % by 2030 compared with 2005 levels. Specifically on transport, revised CO<sub>2</sub> standards for [cars and vans](#) and the first-ever CO<sub>2</sub> standards for [trucks and buses](#) require that the CO<sub>2</sub> emissions of new vehicles do not exceed 30 % of today's levels by 2030.
- Land use and forestry: the [regulation on the land-use sector](#) requires greenhouse gas emissions from land use and forestry to be offset by the removal from the atmosphere of at least an equivalent volume of CO<sub>2</sub> in the period from 2021 to 2030.
- Energy efficiency: a directive adopted in December 2018 sets a binding [energy efficiency](#) target of 32.5 % for 2030.
- Renewable energy: a directive adopted in December 2018 sets a new [renewable energy](#) target of 32 % for 2030.

As regards **funding**, climate action has been integrated into all major EU policies and programmes, in particular: cohesion, agriculture, maritime and fisheries, external aid, energy and transport, and research and innovation policies. Under the 2014-2020 multiannual financial framework (MFF), 20 % of the EU budget is to be spent on climate-related objectives. For the next MFF (2021-2027), the European Commission proposed to raise the share of climate-related expenditure to 25 %.

The Commission communication on the [European Green Deal](#) sets out a vision to make Europe the first climate-neutral continent by 2050, safeguard biodiversity, establish a circular economy and eliminate pollution. It is a cross-cutting project for a transition towards a zero-carbon economy that comprises an industrial strategy, a circular economy strategy, a 'farm to fork' strategy for food and agriculture, a 'renovation wave' for the building sector, and a just transition mechanism to assist people and regions most affected by the transition. A new European Climate Pact should bring together regional and local authorities, civil society, industry and schools to agree on commitments to change behaviour. Tax policies should be reformed in line with climate ambitions, which includes work on a carbon border adjustment and a review of the Energy Taxation Directive. A new circular economy action plan promotes the sustainable use of resources, especially in resource-intensive sectors with high environmental impact, such as textiles and construction. Other European Green Deal objectives include mainstreaming biodiversity across all policy areas on the basis of the new biodiversity strategy adopted in May 2020, and a zero-pollution ambition to safeguard citizens' health. Record amounts of public funds should be invested in advanced research and innovation, complemented by a renewed sustainable finance strategy and a sustainable Europe investment plan that would support €1 trillion of public and private investment over the next decade across the EU. Parts of the European Investment Bank should become Europe's climate bank.

## Boosting climate action in the coronavirus context

Plans and packages for economic recovery from the Covid-19 crisis offer a unique opportunity to accelerate the transition to a climate-neutral economy while creating employment and positioning the EU as a global leader in low-carbon technologies.

A **systemic transition to a low-carbon circular economy** could offer a number of solutions to climate challenges, while turning the EU into a modern and competitive economy. Such a transition is a complex and challenging process, involving a large number of actors and processes, as well as uncertainties and possible unintended consequences. It is critically dependent on shifting financial flows away from unsustainable practices and towards investments that contribute to a climate-neutral circular economy. For this reason, all EU institutions are in favour of coronavirus recovery packages that support the European Green Deal and the climate-neutrality objective. The European Parliament declared a [climate and environment emergency](#) in November 2019 and advocates [more ambitious climate action](#), notably raising the EU's emission reduction target for 2030 from 40 % to 55 % below 1990 levels, and an increase of [climate-related spending](#) towards 30 % of the EU budget.

Policies could be better integrated across the EU, Member State, regional and local levels, a point highlighted by the Committee of the Regions in its resolution on [The Green Deal in partnership with local and regional authorities](#). A European climate pact, part of the European Green Deal, should bring together regional and local authorities, civil society, industry and schools to agree on commitments to change behaviour. To ensure the effectiveness of the climate pact in tackling the climate emergency, it may need an organisational structure to support and coordinate activities of the various actors, monitor progress and facilitate the sharing of best practices. Such a **European climate emergency office** could be established on the basis of the EU treaties, possibly as an EU agency.

### Horizontal measures

Possible horizontal measures supporting a transition can be grouped into a number of areas.

To make an ambitious long-term vision reality, **research and innovation** investments would need to be further increased, as existing technology is [estimated](#) to deliver 75 % of the emissions cuts needed to reach net-zero emissions by 2050. The environment for the **financing of innovation** could be enhanced, for instance by reducing the risk for private and institutional investors and by improving conditions for venture capital financing of high-risk, high-potential, breakthrough projects.

In addition, to support the transition, **enhanced innovation** is needed on citizen engagement and changing behaviour, on skills and in policy development. The European Union could support societal innovation with a view to reducing greenhouse gas emissions from food or mobility systems, for example. Greenhouse gas emissions are shaped to a very large extent by cities, in particular as regards energy and mobility systems.

Since carbon emissions outside the EU are large and still growing, it is essential to take climate action beyond the EU to global level. Under the current Paris Agreement commitments submitted by all Parties, global temperatures are expected to increase by more than 3°C on average, according to the UN [emissions gap report](#). The EU could further strengthen its capacity for **climate diplomacy** and build climate action further into its external action, including in trade and development aid policies. Moreover, the external impacts of EU consumption, imports and policies could be comprehensively assessed and taken into account for future policy-making (as has already been the case for indirect land-use change and palm oil). In this respect, the Commission plans to take measures to avoid the placing of products associated with deforestation or forest degradation on the EU market, and in the European Parliament the Environment, Public Health & Food Safety (ENVI) Committee is preparing a legislative initiative report on EU-driven global deforestation.

According to scientific assessments, it will be necessary to **remove CO<sub>2</sub>** from the atmosphere to keep greenhouse gas concentrations to a limit that makes it possible to respect the Paris Agreement temperature targets. Natural CO<sub>2</sub> removal, through afforestation, reforestation and agricultural practices, and technological approaches for CO<sub>2</sub> removal could be supported by incentives. However, even emission reductions and negative emissions may not be enough to avoid catastrophic climate impacts. The Intergovernmental Panel on Climate Change concludes in its [5th Assessment Report](#) that **solar radiation management** might help to avoid crossing dangerous climate thresholds or tipping points, but that there is insufficient knowledge about the feasibility, effectiveness, cost, risks, ethical and governance aspects of solar radiation management techniques such as cloud brightening or stratospheric aerosols. Research in this area could help establish a knowledge base as a foundation for policy development.

## Measures in specific systems

The **ambition level** of the 2030 mitigation measures should be further **increased** to ensure a smooth and cost-efficient transition towards the long-term climate-neutrality goal, following the ongoing impact analysis and forthcoming EU climate target plan. It is important to ensure that the transition is **as fair as possible** by supporting people, employment and regions affected by the Covid-19 crisis, or at risk of losing out in the shift towards climate neutrality. Measures supporting the transition to achieve the long-term ambition are possible in a number of areas.

As regards **energy** systems, the co-legislators could strengthen the ambition level and/or the binding character of existing policies on energy efficiency, renewables, and the overall reduction of greenhouse gas emissions from energy use. The energy needs for the heating and cooling of buildings could be reduced and met with low-carbon energy sources, with a particular focus on the existing building stock. To fully decarbonise the energy system, sectoral integration would enable the wider use of renewable electricity for sectors such as transport and heating and for the production of renewable gases for industrial applications and long-term storage, potentially using the existing gas infrastructure.

As regards **food and land** systems, the greening of the common agricultural policy could be significantly strengthened. This would be an opportunity to make sure that farmers and foresters benefit economically from climate-friendly practices, through rewards for the public goods they deliver beyond compliance with EU legislation. Cities can also take further measures to promote green infrastructure and improve biodiversity in urban areas, in order to adapt to climate change while improving citizens' quality of life. Afforestation, reforestation and the restoration of wetlands could generate large benefits for the climate and biodiversity.

As regards **mobility** systems, achieving net-zero emissions by 2050 would require strong actions on road, shipping and air transport and provides an opportunity for local and regional authorities to promote more sustainable mobility systems. Due to reduced passenger numbers and revenues during the pandemic, public transport faces particular challenges.

As regards **production** systems, the EU could take further advantage of the synergies with the circular economy agenda by raising this policy's level of ambition, as illustrated by recent work on [building materials](#) by the European Environment Agency. The EU could support infrastructure for the transport, storage and usage of hydrogen and CO<sub>2</sub> and industrial innovation to decarbonise emission-intensive sectors such as steel or cement production.

As regards **digital** systems, they are an enabler for low-carbon transformation, but at the same time are a source of growing energy use, waste and environmental impacts. Digital technologies and services play a strong enabling role in smart energy systems, smart product design and production and a sharing economy. Digital technologies have enabled the widespread adoption of teleworking and videoconferencing during the Covid-19 pandemic, which helps reduce traffic-related CO<sub>2</sub> emissions. Conversely, the energy consumption and environmental impacts of the digital economy

are growing overall, despite efficiency improvements, while the lifetime of digital equipment becomes ever shorter.

## Financing a low-carbon recovery

The transition towards a carbon-neutral economy is expected to require €1 trillion in public and private investment over the next decade, according to the European Green Deal investment plan. While the bulk of this will have to come from the private sector, public financing, including crisis recovery plans, can play a critical role in supporting research and innovation, awareness-raising, enforcement and public goods such as carbon sequestration and biodiversity preservation and restoration.

Possible measures to direct finance flows towards the transition include fiscal policy, the phasing-out of harmful subsidies, a clear regulatory framework for sustainable investment, climate mainstreaming in the EU budget, the Next Generation EU instrument and national recovery programmes, complemented by targeted financing and lending by investment and development banks, including the European Investment Bank.

## Potential initiatives

	Project	Likely lead actor	What should be done?	
1	Sustainable development goals in EU policy	EU	Climate action and decarbonisation could be further integrated in EU policies such as agriculture, cohesion, competitiveness or transport. The United Nations sustainable development goals could provide a holistic framework in which to do so. Better use could be made of synergies with other environmental policies, for instance on air quality, circular economy, nature protection and disaster risk reduction. In parallel, it is also important to anticipate the possible adverse effects of low carbon solutions on the environment, society and the economy.	
2	Sectoral and geographic extension of the EU emissions trading system	EU	The EU emissions trading system (ETS), which covers around 45 % of the EU's greenhouse gas emissions, is based on the 'cap and trade principle'. It is the world's first major carbon market and remains the largest. A key element of the EU's climate policy, it has been reformed a number of times in recent years. The EU emissions trading system could be further expanded to cover other sectors of the economy, such as maritime/road transport and buildings, and also geographically to Energy Community countries and by linking with other carbon trading systems, through the (yet to be agreed) Article 6 mechanisms of the Paris Agreement or bilateral agreements.	
3	Support for pioneering cities	EU	Emissions of greenhouse gases are shaped to a very large extent by cities, in particular as regards energy and mobility systems. The EU could further support climate action by cities to be experimentation spaces and pioneers for radical change, notably through the structural funds, including <a href="#">urban innovative actions</a> , and the proposed <a href="#">European urban initiative</a> . The EU could also promote and help disseminate the use of	

			nature-based solutions in urban contexts, possibly in the framework of the upcoming <a href="#">green city accord</a> .	
4	Support for climate-friendly lifestyles	EU, Member States, local authorities	The rapid adoption of teleworking and videoconferencing during the Covid-19 crisis has shown that rapid behaviour changes are possible and – at least in part – perceived as positive. The EU could further raise awareness and create incentives for climate-friendly lifestyles. These incentives could relate to consumption (including food) and to mobility (for instance increasing the share of walking and cycling as some EU cities have during the pandemic). Individual carbon budgets and personal carbon trading could allow citizens to benefit directly from adopting climate-friendly lifestyles. Restrictions on advertising for products and services with high climate or environmental impacts could also be considered.	
5	Democratic engagement, youth engagement	EU, Member States	The declaration of a climate and environment emergency by some local authorities and the European Parliament raises the question of how to develop an adequate emergency response while preserving and strengthening democracy and resisting tendencies towards green authoritarianism. The European Climate Pact can serve as a basis for models to engage citizens, and especially young people, in the transition. Activities like the European Youth Event organised by the Parliament can serve as a model for boosting young people's participation.	
6	Skills for the climate-neutral circular economy	EU	The transition towards a climate-neutral circular economy can create well-paid, quality jobs, provided that the workforce has the adequate skills. EU action could help to identify the skills needed and promote education and training, especially for workers in the industries and regions most likely to be affected by the transition and those who became unemployed during the coronavirus crisis.	
7	Economic growth with a purpose	EU	The European Environment Agency's latest state of the environment report (SOER 2020) warns that Europe will not achieve its sustainability vision 'simply by promoting economic growth and seeking to manage harmful side-effects with environmental and social policy tools'. However, the Covid-19 lockdown has shown that a drastic reduction in economic activity reduces emissions, but not enough to reach climate objectives. A research programme could be established to analyse how to ensure that economic growth raises societal wellbeing while yielding positive outcomes for climate and environment. This should also consider sustainable pathways for developing countries aiming to catch up with European living standards.	
8	Support and incentives for negative emissions	EU	Meeting a net-zero emissions goal by 2050 would mean relying in part on negative emissions technologies, including reforestation, afforestation, restoration of wetlands, carbon-friendly agriculture, direct air capture, or bioenergy with carbon storage. Although the contribution of these technologies is likely to be limited, the EU could adopt a regulatory	

			framework supporting and incentivising existing and new measures on negative emissions and support research in this field to improve understanding of the potential, limitations and risks of negative emission technologies.	
9	Disruptive green innovation	EU	The European Union could create more protected spaces where innovators can experiment with new technologies or practices, along the lines of innovation deals (voluntary cooperation agreements between the EU, innovators, and national, regional and local authorities tackling regulatory obstacles to innovation in the circular economy). Innovation deals could be extended to sustainability and climate action, broadened to support societal innovation, and possibly coupled with funding.	
10	Climate action in development aid	EU	Climate change is a multiplier of other threats that disproportionately affect developing countries. In this respect, climate mitigation and adaptation could become a stronger feature of development aid. This would also help to prevent migration flows driven by climate impacts ('climate refugees').	
11	Climate action in trade	EU	The EU could build climate action more deeply into its trade policy. The EU could require third countries to take measures, such as implementing the Paris Agreement, as a precondition for future trade agreements. The EU could also introduce or strengthen restrictions on trade in commodities (such as timber, soy, palm oil, beef or cocoa) that put wetlands and forests at risk, in order to prevent deforestation and land use change in third countries.	
12	Support for a fair transition	EU	Beyond existing initiatives, fairness of the transition could be further supported at several levels. First, support for people at risk of energy poverty may be needed. Second, employment and skills could need to be supported, through training and other means, in order to provide quality jobs for workers in sectors that would become obsolete, as well as those most affected by the Covid-19 crisis. Third, additional funding could be channelled to specific regions at risk of losing out, along the lines of the European Commission's platform for coal regions in transition. Measures could also be taken to increase the uptake of EU funding for climate-related projects in Member States where it is lower.	
13	Assess external impacts of EU consumption, imports and policy.	EU	The external impacts of EU consumption, imports and policies could be better assessed and taken into account in future policy-making (as is already the case for indirect land-use change and palm oil).	
14	European Climate Emergency Office	EU	A European climate emergency office could be established on the basis of the EU treaties, possibly as an EU agency, to provide an organisational structure to support and coordinate activities of the various actors, monitor progress and facilitate the sharing of best practices.	
15	Mainstreaming climate in finance	EU, Member States	Based on recently adopted legislation on sustainable finance, the EU could take further steps to mainstream	



			sustainability in finance at every level, for instance by ensuring transparency on climate related opportunities and risks, helping to make climate-friendly investments more bankable. The EU and Member States could also end direct or indirect financial support for fossil fuel projects. Stress tests of financial institutions could include a dimension on climate-related risk. This would enable the EU to take the global lead on sustainable finance and to position itself as the investment destination for low-carbon technologies.	
16	Review subsidies and taxes	EU	The EU could support Member States in reviewing subsidies and tax regimes with a view to favouring very low emission solutions, for instance as regards aviation and road vehicles. Falling energy prices in the context of Covid-19 provide an opportunity to phase out subsidies for fossil fuels. Based on an underused legal basis in the Lisbon Treaty, an EU-wide energy tax could be created to discourage the use of energy sources with high greenhouse gas emissions. Decisions on energy taxation could become subject to qualified majority voting in the Council.	
17	Public procurement to support innovation	EU	Public procurement, which accounts for about 14 % of EU GDP, could be used as a tool to support transition to sustainability through its leverage effect. Although the European Union has launched a few initiatives relating in particular to criteria and guidance on green public procurement and public procurement of innovative products and services and clean vehicles, public procurement could be used more systematically to support sustainability and innovation.	
18	Carbon price on certain imports	EU	The European Union could introduce a carbon price on certain imported products to reflect greenhouse gas emitted during their manufacture and transport. A carbon border adjustment of this kind, which could be based on the price of carbon in the EU emissions trading system, would be levied on goods and services from countries that do not put an equivalent price on carbon emissions.	
19	Energy storage and sectoral integration	EU, Member States	The analysis underlying the Commission's sector integration strategy and other studies have shown that cost-effective decarbonisation can be achieved by coupling the electricity system with the gas system to produce, store and distribute renewable hydrogen and other gases and to achieve inter-seasonal storage of renewable energy. A revision of the EU gas market legislation could provide a supporting framework.	
20	Biodiversity and nature-based solutions to climate change	EU	Climate action and preservation of nature go hand in hand. Natural and managed ecosystems such as oceans, rivers, forests, wetlands and grasslands provide valuable ecosystem services, including carbon sequestration, micro-climate regulation, and flood protection, while they are at the same time a source of food and materials. Action to protect and restore them could therefore yield multiple benefits and prove a cost-effective way to boost climate mitigation and resilience while addressing the biodiversity crisis.	

21	Infrastructure for hydrogen and CO <sub>2</sub> transport, storage and utilisation	EU, Member States	A carbon-neutral economy is expected to make intensive use of emission-free 'green' or 'blue' hydrogen to decarbonise sectors such as road/maritime transport and steel production, and capture CO <sub>2</sub> from industrial processes for permanent storage (CCS), or utilisation as an industrial feedstock (CCU). EU policy and funding, within and beyond the existing EU initiatives could help to set up the necessary transport and storage infrastructure.	
22	Research into solar radiation management		Research regarding the feasibility, effectiveness, cost, risks, ethical and governance aspects of solar radiation management could help establish a solid knowledge base as a foundation for policy development and international governance.	
23	Climate-friendly agriculture	EU	The greening of the common agricultural policy could be significantly strengthened and based on a more robust performance-based approach. Farmers could be encouraged to increase their resilience against climate change impacts, which could deliver co-benefits in terms of climate change mitigation and biodiversity.	
24	Digital technologies for sustainability	EU	The EU could take action to harness the full potential of 'smart' digital technologies for moving towards a carbon-neutral circular economy, and aim to achieve global leadership in this sector of the digital economy. At the same time, the growing climate and environmental impact of digital technologies and services should be addressed through innovation and regulation.	

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