



COMBATING CLIMATE CHANGE

The European Union (EU) is among the leading major economies when it comes to tackling greenhouse gas (GHG) emissions. By 2018, it had cut GHG emissions by 23% compared to 1990 levels, and it is committed to achieving a 40% cut by 2030. In December 2019, the European Commission presented the European Green Deal and is now proposing a package of measures aimed at increasing its GHG emission reduction ambition for 2030 and decarbonising the EU's economy by 2050, in line with the Paris Agreement. In order to put the EU on a balanced pathway towards carbon neutrality by 2050, in September 2020 the Commission proposed to raise the climate ambition of the GHG emission reduction target to 55% by 2030 compared to 1990 levels.

LEGAL BASIS AND OBJECTIVES

Article 191 of the Treaty on the Functioning of the European Union (TFEU) makes combating climate change an explicit objective of EU environmental policy.

GENERAL BACKGROUND

A. Global warming

Without additional emission reduction policies, the average global temperature is projected to increase by between 1.1°C and 6.4°C over the course of this century. Human activities such as the burning of fossil fuels, deforestation and farming lead to the emission of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and fluorocarbons. These GHGs trap heat that is radiated from the earth's surface and prevent it from escaping into space, thereby causing global warming.

B. Impacts of climate change

Global warming has led and will lead to more extreme weather events (such as floods, droughts, heavy rain and heatwaves), forest fires, water scarcity, disappearance of glaciers and rising sea levels, shifts in the distribution, or even extinction, of fauna and flora, plant diseases and pests, food and fresh water shortages, and migration of people fleeing these dangers. Science shows that the risks of irreversible and catastrophic change would greatly increase if global warming exceeded a 2°C – or even 1.5°C – rise above pre-industrial levels.

C. Cost of action versus cost of inaction

Back in 2006, the Stern Review suggested that managing global warming would cost 1% of global GDP every year, while inaction could cost at least 5% and up to 20% of



global GDP in a worst-case scenario. Thus, only a small part of total global GDP would be required for investment in a low-carbon economy, and fighting climate change would in return induce health benefits and greater energy security and reduce other damage.

D. Adaptation to climate change

Adaptation to climate change ranges from soft and inexpensive measures (water conservation, crop rotation, drought-tolerant crops, public planning and awareness-raising) to costly protection and relocation measures (increasing the height of dykes; relocating ports, industry and people away from low-lying coastal areas and flood plains). The [EU Strategy on adaptation to climate change](#) is aimed at making Europe more climate-resilient. It promotes greater coordination and information-sharing between Member States and fosters the mainstreaming of adaptation into all relevant EU policies.

ACHIEVEMENTS

A. International climate policy

In December 2015, after more than two decades of negotiations, governments adopted the first universal agreement to combat climate change, at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris. The [Paris Agreement](#) strives to keep the increase in global average temperature to ‘well below’ 2°C, while trying to maintain it at 1.5°C above pre-industrial levels. To accomplish this goal, Parties aim to reach global peaking of GHG emissions as soon as possible, and to achieve net zero emissions in the second half of this century. Financial flows are to follow these goals. For the first time, all Parties have to make ambitious efforts to reduce GHG emissions, following the principle of ‘common but differentiated responsibilities and respective capabilities’, i.e. in line with their individual situations and the possibilities available to them. Every five years all countries have to renew and upgrade their climate action plans (‘nationally determined contributions’) and communicate them in a transparent way so that the collective progress can be assessed (‘global stocktake’). In particular, the most vulnerable, the Least Developed Countries and Small Island Developing States, will be supported both financially and via capacity-building. Adaptation — mentioned on an equal footing with mitigation — is recognised as a global challenge; so is the importance of addressing ‘loss and damage’ associated with the adverse effects of climate change. The Agreement entered into force in November 2016 after it had been ratified by the threshold number of 55 governments representing at least 55% of total global GHG emissions. All EU countries ratified the Paris Agreement.

B. EU efforts to combat climate change

By means of its 2030 climate and energy framework, which also represents its commitment under the Paris Agreement, the EU has committed itself to the following goals, to be reached by 2030: reducing GHG emissions by at least 40% below 1990 levels, improving energy efficiency by 32.5%, and increasing the share of renewable energy sources to 32% of final consumption. The 2030 framework comes as a follow-up to the ‘20-20-20 targets’ decided on in 2007 by EU leaders for 2020: a 20% reduction in GHG emissions, a 20% increase in the share of renewable energy in final



energy consumption, and a 20% reduction in total EU primary energy consumption (all compared with 1990), all translated into binding legislative measures.

The [EU Emissions Trading System \(ETS\)](#), the first and still the largest international carbon market, is a key EU policy instrument for fighting climate change. It is based on the 'cap and trade' principle: a 'cap' is set on the total amount of GHG emissions that can be emitted by the more than 11 000 installations (factories, power stations, etc.) included in the scheme. Each installation buys or receives 'emission allowances' auctioned by the Member States. These credits — corresponding to one tonne of CO₂ each — can be traded with other installations if unused. Over time, the overall amount of allowances is progressively reduced. Two funds — a modernisation fund and an innovation fund — will help to upgrade energy systems in lower-income Member States and foster innovation by funding renewable energy, carbon capture and storage (CCS) and low-carbon projects. Aviation emissions are also covered by the ETS, although the current [exemption for intercontinental flights](#) has been extended until the end of 2023, when the first phase of the International Civil Aviation Organisation's (ICAO) Carbon Reduction and Offsetting Scheme for International Aviation (CORSA) is set to begin. [Switzerland and the EU have agreed to link their emissions trading systems.](#)

Emissions from sectors not covered by the ETS, such as road transport, waste, agriculture and buildings, are subject to binding annual GHG emission reduction targets for each Member State, laid out in [the Effort Sharing Regulation](#) (ESR). In a recent update, Parliament and the Council agreed on minimum targets for 2021-2030 to help reach the EU's goal of a 30% GHG reduction from these sectors compared to 2005 and to contribute to the achievement of the objectives of the Paris Agreement. Furthermore, for the first time, each Member State will have to ensure that emissions from [land use, land use change and forestry \(LULUCF\)](#) do not exceed removals. In other words, forests, croplands and grasslands will be managed sustainably in order to absorb as much GHG from the atmosphere as possible, and at least as much as the sector emits ('no-debit-rule'), and thus make an important contribution to the fight against climate change.

The [Renewable Energy Directive](#) seeks to ensure that by 2030 renewable energy such as solar power, wind, hydroelectric power and biomass will make up at least 32% of the EU's total energy consumption in terms of electricity generation, transport, heating and cooling. Each Member State adopts its own national renewable energy action plan, including sectoral targets. In order to mainstream the use of renewable energy in the transport sector, Member States must set an obligation on fuel suppliers to ensure that the share of renewable energy within the final energy consumption of the transport sector is at least 14% by 2030.

The revised [Directive on Energy Efficiency](#) sets an energy efficiency target of 32.5% for the EU by 2030, with a clause for upward revision by 2023. It also extends the annual energy saving obligation beyond 2020. In addition, the revised [Directive on Energy Performance in Buildings](#) was adopted in May 2018. This includes measures that will accelerate the rate of building renovation and the move towards more energy-efficient systems, and improve the energy performance of new buildings, with the use of intelligent energy management systems.



Moreover, for the first time, the [Governance Regulation](#) implements a transparent governance process to track progress towards the objectives of the EU Energy Union and Climate Action, including monitoring and reporting rules. Member States are obliged to adopt integrated National Climate and Energy Plans (NECPs) for the 2021-2030 period. In September 2020, the Commission [took stock of the final NECPs](#) and confirmed that they are largely consistent with the Union's 2030 targets with the exemption of energy efficiency, for which an ambition gap for 2030 remains. The governance process also provides an opportunity to update the plans every two years to reflect experience and to take advantage of new opportunities for the remainder of the decade.

[Carbon capture and storage](#) (CCS) technology separates CO₂ from atmospheric emissions (resulting from industrial processes), compresses the CO₂, and transports it to a location where it can be stored. According to the IPCC, CCS could remove 80-90% of CO₂ emissions from fossil fuel-burning power plants. However, the implementation of the envisaged demonstration projects in Europe has proven more difficult than initially foreseen, high costs being one of the main barriers.

New passenger cars registered in the EU have to comply with [CO₂ emissions standards](#). The target to be reached by car fleets is an average of 130g of CO₂/km for 2015 and will be reduced to 95g/km as from 2021. In order to create incentives for industry to invest in new technologies, so-called 'super-credits' can be used, whereby the cleanest cars in each manufacturer's range count as more than one car when calculating the average specific CO₂ emissions. A similar regulation is in place for [vans](#). Parliament and the Council have agreed on a further reduction of EU fleet-wide CO₂ emissions for new cars (37.5%) and new vans (31%) by 2030. In parallel and for the first time, a 30% CO₂ reduction target has been set for new lorries, with an intermediate target of 15% by 2025.

[Fuel quality](#) is also an important element for GHG emission reductions. EU legislation aims to reduce the GHG intensity of fuels by 6% by 2020: this is to be achieved by, among other measures, the use of biofuels, which must, however, meet certain sustainability criteria.

CO₂ emissions from international maritime shipping are significant, and are expected to grow considerably. While pressing for a global approach, the EU has established a Union-wide system for the [monitoring, reporting and verification \(MRV\) of CO₂ emissions from ships](#), as a first step towards cutting them. Large ships have to monitor and annually report their verified CO₂ emissions released on their way to and from EU ports and within those ports, along with other relevant information.

Following bans on chlorofluorocarbons (CFCs) in the 1980s to stop the depletion of the ozone layer, fluorinated gases are today used as substitutes in a range of industrial applications such as air conditioning and refrigeration, since they do not harm the ozone layer. However, they may have a global warming potential of up to 23 000 times that of CO₂. The EU has therefore taken measures to control the use of [fluorinated gases](#) and ban their use in new air conditioning appliances and refrigerators by 2022-2025, thereby setting the pace for a global phase-out.



C. The European Green Deal

On 11 December 2019, the Commission presented the [European Green Deal](#), an ambitious package of intended measures designed to enable the EU to become carbon neutral by 2050. The measures, which are accompanied by an initial roadmap of key policies, range from ambitious cuts to emissions, to investing in cutting-edge research and innovation, to preserving Europe's natural environment. Supported by investments in green technologies, sustainable solutions and new businesses, the Green Deal aims also to be a new EU growth strategy. The involvement and commitment of the public and of all stakeholders is crucial to its success. Above all, the European Green Deal sets a path for a transition that is just and socially fair.

At the European Council of 12 December 2019, all Member States adopted the target of making the EU carbon neutral by 2050 with the exception of Poland which, although supporting the 2050 goal, was unable to commit to implementing the objective.

The European Green Deal provides [an action plan](#) to transform the EU into a sustainable and competitive economy. Among the measures proposed is the [European Climate Law](#) to ensure a climate-neutral EU by 2050. In particular, it makes provision for increasing [the 2030 target](#) to cut GHG emissions to at least 55%. Moreover, the Commission's proposals in 2020 included a communication on the [Sustainable Europe Investment Plan](#), a proposal for a regulation establishing the [Just Transition Fund](#), EU strategies for [energy system integration](#) and for [hydrogen](#), and, in October, a communication on how to [reduce methane emissions](#).

ROLE OF THE EUROPEAN PARLIAMENT

Inter-institutional negotiations in the years to come will determine how these new proposals in the European Green Deal are translated into concrete measures. On climate change issues, Parliament has traditionally participated in such inter-institutional negotiations with positions which add ambition to the EU actions.

In response to the Commission's proposal for a policy framework for 2030 on climate and energy, Parliament gave a strong signal, calling for three binding targets (more ambitious than those finally agreed): a reduction of at least 40% in domestic GHG emissions from 1990 levels; a 35% share for renewable energy sources in final energy consumption; and a 40% increase in energy efficiency.

Prior to the Paris climate conference in 2015, Parliament reiterated the urgent need to 'effectively regulate and cap emissions from international aviation and shipping'. It expressed its disappointment at the fact that the ICAO had not agreed on emission reductions. The introduction of CORSIA focuses instead mainly on offsets, with no guarantee of quality and only having legally binding status from 2027 onward. Major ICAO members are not yet committed to participating in the voluntary phase.

Parliament favours broad-based carbon pricing and advocates the allocation of emissions trading revenues to climate-related investments. It asked for concrete steps, including a timetable, for the phase-out of all fossil fuel subsidies by 2020.



During negotiations with the Council on fluorinated gases, Parliament advocated a complete phase-out of these climate-damaging gases in several new sectors where safe, energy-efficient and cost-effective alternatives are available.

In an earlier update on CO₂ emissions from passenger cars and vans, Parliament insisted on introducing the new UN-defined global test cycle as soon as possible, with a view to reflecting real-world driving conditions when measuring CO₂ emissions.

In view of the climate conference in Katowice (COP24), for the first time, Parliament called in its [October 2018 resolution](#) for an increase of the EU's 2030 GHG emission reduction target of 55%. Moreover, Parliament considered that the profound and most likely irreversible impacts of a 2°C rise in global temperatures might be avoided if the more ambitious Paris target of 1.5°C is pursued, which would require that rising global GHG emissions fall to net-zero by 2050 at the latest. This is why it also called on the Commission to propose a long-term mid-century net-zero GHG emission strategy for the EU.

In July 2018, Parliament adopted a [resolution on EU climate diplomacy](#), in which it emphasised the EU's responsibility to lead on climate action as well as conflict prevention. The report stresses that EU diplomatic capacities should be strengthened in order to promote climate action globally, support the implementation of the Paris Agreement and prevent climate change-related conflict.

On 28 November 2019, Parliament [declared a climate emergency](#) in Europe and urged all EU countries to commit to net-zero GHG emissions by 2050. Parliament also wants the Commission to ensure that all relevant legislative and budgetary proposals are fully aligned with the objective of limiting global warming to under 1.5°C.

On 8 October 2020, Parliament adopted its negotiating mandate on the EU Climate Law, requesting that the 2030 emissions reduction target be increased to 60%. It also wants an interim target for 2040 to be proposed by the Commission following an impact assessment, to ensure the EU is on track to reach its 2050 target. Finally, it requests that the EU and the Member States phase out all direct and indirect fossil fuel subsidies by 31 December 2025 at the latest.

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