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European Commission

Annual Activity Report 2021

DG Climate Action

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Dear reader,

The year 2021 was a major year in EU action to tackle the climate crisis. DG Climate Action presented a significant number of key initiatives to deliver on the commitments made in the European Green Deal. With the entry into force of the Climate Law in July 2021, Europe's goal is to become **climate-neutral by 2050** and to **reduce net greenhouse gas (GHG) emissions by at least 55% by 2030**, compared to 1990 levels.

By reducing greenhouse gas emissions by 31% in 2020 compared to 1990, the EU has substantially exceeded **its 2020 reduction target** of -20%. However, steeper **greenhouse gas emission reductions** will be required to reach our **objectives for 2030 and 2050.**

In 2021, DG Climate Action prepared a package of legislative proposals **to align climate legislation to deliver on the new and more ambitious 2030 target**. It includes the revision of the EU Emission Trading System Directive, the Effort Sharing Regulation, the CO_2 standards for cars and vans; the Land Use, Land Use Change and Forestry Regulation; and the establishment of a Social Climate Fund to accompany a new emissions trading system for fuels in road transport and buildings.

The DG contributed to a **green recovery**, through the **Recovery and Resilience Facility funds (RRF)** and invested in a just transition towards a low-carbon and climate-resilient economy. In particular, for the first time in 2021, innovative projects were selected for funding under the **Innovation Fund** and the first payments reached beneficiary countries under the **Modernisation Fund.** The DG launched the **Horizon Europe mission on adaptation** to climate change, which will be a key vector in the implementation of the new and more ambitious **Adaptation Strategy** adopted in 2021.

The DG engaged with **multilateral and bilateral partners** to convince and support other countries, in particular major emitters, to increase their climate ambition and facilitated a successful outcome of the **26th UN Climate Change Conference (COP26).**

This Annual Activity Report (AAR) provides an outline of our achievements in 2021 in relation to the objectives set in DG Climate Action's Strategic Plan 2020-24 and Annual Management Plan 2021. Part 1 sets out our main policy achievements in the past year. Part 2 provides insights into how we reached them, as well as information about the management of the allocated resources and the internal organisation of the Directorate-General.

For more information on the activities of DG Climate Action, please visit our website: https://ec.europa.eu/clima/index_en.

Mauro Petriccione
Director General of DG Climate Action

THE DG IN BRIEF

The Directorate-General for Climate Action (hereafter 'DG Climate Action') is responsible for EU policy, legislation and action to **tackle climate change**. Under the political guidance of the Executive Vice-President Frans Timmermans, the DG plays a leading role in delivering **the European Green Deal**, the first flagship initiative of this Commission.

In this context, **DG Climate Action** leads the European Commission's efforts to tackle climate change at EU and international levels. Its **mission** is to formulate and implement EU climate policies and strategies, so that the EU can become the **first climate-neutral and climate resilient continent by 2050**.

The DG plays a key role in developing and implementing policies to **reduce greenhouse gas emissions**. It aims at promoting **low-carbon technologies**, maintaining ambitious **global leadership** in climate action, protecting people and the planet against current and future **impacts of climate change**, enabling **changing behaviour**, promoting a **green economic recovery** from the COVID-19 pandemic, greening public and private **finance**, and ensuring the **mainstreaming of climate action** into the EU budget and into EU and Member States' policies.

DG Climate Action had **285 staff members** at the end of 2021, including 34 additional members of staff added in 2021 to address the increased workload following the European Green Deal, with a greater political focus on climate aspects in all EU policies. Close to 90% of staff are active in **policymaking**. Following a major reorganisation in January 2022, the DG is now structured around five directorates and is **led by Director-General Mauro Petriccione**.

DG Climate Action is developing its mission in five complementary ways:

1. By developing cost-efficient **EU climate legislation and other policy tools** to radically accelerate emission reductions and enhance resilience, so as to meet the more ambitious climate targets for 2030 as set out in **the European Climate Law;** and working with Member States to ensure the effective steering of investments, implementation and enforcement of climate legislation and policies.
2. By implementing and developing **the EU Emissions Trading System (EU ETS)**, including the Union Registry (managed in-house and containing sensitive information) and its ongoing revision, as well as existing and future international cooperation on carbon markets and Agreements linking the ETS with other carbon markets in the world.
3. By leading the EU's **international negotiations** on climate change and ozone-depleting substances, working with the international community and key partners to ensure implementation of the Paris Agreement, and building on bilateral relations with third countries to encourage decisive climate action on their part.
4. By **encouraging Member States** to plan, to take measures and to finance the **green transition** through the National Energy and Climate Plans (NECPs), the Recovery and Resilience Facility (RRF) and the European Semester.
5. By investing in a just transition towards a low-carbon and climate-resilient economy, through the **LIFE Programme,** the **Innovation Fund, the Modernisation Fund** and the **Horizon Europe** framework programme. As of 2021, by delegating implementation tasks to the **European Climate, Infrastructure and Environment Executive Agency (CINEA)**, and supervising and contributing to steering its operational, administrative and financial activities. By contributing to the **mainstreaming** of climate action into the EU budget with an increased target of 30% and 37% respectively under the 2021-2027 Multiannual Financial Framework and NextGenerationEU.

EXECUTIVE SUMMARY

This Annual Activity Report is a management report of the Director-General of DG Climate Action to the College of Commissioners. Annual Activity Reports are the main instrument of management accountability within the Commission and constitute the basis on which the College takes political responsibility for the decisions it takes as well as for the coordination, executive and management functions it exercises, as laid down in the Treaties (1).

(1) Article 17(1) of the Treaty on European Union

A. Key results and progress towards achieving the Commission's general objectives and DG's specific objectives (executive summary of section 1)

The Sixth Assessment Report of the IPCC[2] shows the urgency of acting now to tackle the **climate crisis**. The effects of this crisis such as intense heatwaves, heavy rain, agricultural and ecological droughts, etc. are rapidly intensifying, and some trends are now irreversible. At the same time, the **coronavirus pandemic** has affected Europe in an unprecedented way.

With the **European Green Deal**, the European Commission set the goal of making Europe the first climate neutral continent in the world. To emerge stronger from the pandemic, the **EU recovery plan** NextGenerationEU is a unique opportunity for a low-carbon, resilient and sustainable recovery from the COVID-19 pandemic.

By reducing greenhouse gas emissions by 31% in 2020 compared to 1990[3], the EU has substantially exceeded **its 2020 reduction target** of -20%. While a record drop of GHG emissions was observed in 2020 due to the **COVID-19 pandemic**, the achievement only confirms a trend already established before the pandemic of decoupling economic growth from GHG emissions[4].

The EU achieved the specific 2020 targets under both the EU Emissions Trading System (EU ETS) and the Effort Sharing Regulation. Compared to 2019, emissions in sectors covered by the **EU Emissions Trading System** (EU ETS) fell sharply in 2020, by 11.4% from power generation and the bulk of industrial production, and by 63.5% from aviation due to a strong reduction of economic activity in this sector. **Non-ETS emissions**, such as those from non-ETS industry, transport, buildings, agriculture, and waste fell by 6%. However, **transport and agriculture emissions** have remained largely unchanged since 2005, except for the reduction in transport emissions in 2020 due to the COVID-19 pandemic. Furthermore, net **removals from Land Use, Land Use Change and Forestry** have been on a worrying downward trend over the last decade. In addition, steeper **GHG emission reductions** will be required to reach the **updated 2030 targets** and for the EU to become climate-neutral by 2050.

While the economic and social impacts of the **coronavirus crisis** were devastating, the crisis also offered an opportunity to reboot our economy and to foster a **green transition** by supporting the investments and reforms that are essential for a sustainable recovery.

To deliver on the commitments made in the European Green Deal, DG Climate Action's most important achievements in 2021 were as follows:

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[2] IPCC, Sixth Assessment Report

[3] Cf. Key Performance Indicator (KPI) 1 presented in the next section

[4] The 2020 target was reached well before the pandemic.

- Facilitated an agreement between co-legislators on the **European Climate Law**[5]. With its entry into force in July 2021, it writes into law the goal set out in the European Green Deal for Europe's economy and society to become **climate-neutral by 2050** and the intermediate target of **reducing net greenhouse gas emissions by at least 55% by 2030**, compared to 1990 levels;

- Prepared a package of legislative proposals to align climate legislation to deliver the new and more ambitious target to reduce net greenhouse gas emissions by at least 55% by 2030. It includes the revision of the **EU Emissions Trading System Directive**, the **Effort Sharing Regulation**, the **CO_2 standards for cars and vans**, the **Land Use, Land Use Change and Forestry Regulation**, and the establishment of a Social **Climate Fund to accompany a new Emissions Trading System for fuels in road transport and buildings.** The DG also worked closely with other Commission services on the other components of the package[6].

- Prepared a **Communication on Sustainable Carbon cycles,** which sets out an action plan on how to develop sustainable solutions to increase both nature based and industrial carbon removals;

- Contributed to the preparation of the **new EU forest strategy for 2030** to ensure healthy and resilient forests that contribute to climate goals;

- Contributed to Europe's recovery from COVID-19 pandemic, boosting the green transition, by assessing the **national Recovery and Resilience Plans** (22 of them approved), in particular to ensure that at least 37% of the Recovery and Resilience Facility funds (RRF) will be spent directly on climate purposes, and that all measures (investments and reforms) will at least "do no significant harm" to climate and environmental objectives;

- Contributed to the EU's new **'own resources'**, helping to repay the financing of NextGenerationEU and ensuring that the benefits of decarbonisation truly belong to all Europeans. The Commission proposed that **25% of the revenues generated by EU emissions trading** become an 'own resource' for the EU budget.

- Supported the **financing of the green transition**, in particular by investing in innovative low carbon technologies, and mainstreaming climate-related spending in the EU budget. For the first time since its launch in 2020, seven **large-scale innovative projects** were selected for funding under the **Innovation Fund** (total investment: over EUR 1.1 billion). The year 2021 was also the first for the operation of the **Modernisation Fund** (with an investment of around EUR 900 million in eight beneficiary countries) and the adoption of the first **Horizon Europe Work**

[5] COM(2021) 550 final

[6] Initiatives adopted in July 2021 and December 2021, such as the proposal for a recast Energy Efficiency Directive, the revision of the Renewable Energy Directive and the Energy Taxation Directive, the proposal for a carbon border adjustment mechanism, the ReFuelEU Aviation and FuelEU Maritime initiatives, the revision of the Regulation on natural gas transmission networks and the Energy Performance of Buildings Directive, the proposal for an Alternative Fuels Infrastructure Regulation and on methane emissions reduction, etc.

Programme (2021-2022) with promising estimates of the contribution of the programme towards climate action.

- Anchored climate adaptation in the EU legal objectives under the Climate Law, prepared a new, more ambitious **Adaptation Strategy** and started implementing its actions as from 2021, for example with the launch of the **European Climate and Health Observatory;**
- Launched the **Horizon Europe mission on adaptation** to climate change to test and scale up adaptation solutions, with the first call published in December 2021, which will support regions and communities to better understand their climate risks and build their local climate resilience;
- Contributed to the involvement and commitment of the public, regions, local communities and of all other stakeholders, in particular by steering the **European Climate Pact**. More than 600 ambassadors are informing, inspiring and supporting climate action in their communities and more than 25,600 pledges[7], including via the partnership with Count Us In, were registered to take concrete action.
- Engaged with **multilateral and bilateral partners** to convince and support other countries, in particular major emitters, to increase their climate ambition. In 2021, DG Climate Action initiated new climate dialogues with **India** and the **US**, negotiated a Green Alliance with **Japan**, a Partnership with **Morocco** and a Just Energy Transition Partnership to support **South Africa**'s decarbonisation efforts.
- Worked intensively with colleagues from DG Energy, Member States and international partners to secure exceptionally ambitious language on **coal exit in the communiques for both G7 and G20,** sending a strong signal to the international business community and the markets.
- Prepared messages and carried out extensive and assertive **climate diplomacy vis-à-vis third countries** jointly with the EEAS to ramp up international ambition and domestic efforts to deliver on targets.
- Successfully developed and negotiated a **decarbonisation roadmap for the Energy Community** contracting Parties, which was adopted by the Ministerial Council in November 2021.
- Negotiated the Ministerial declaration on Climate and Energy for the Ministerial meeting of the **Union for the Mediterranean (UfM)** ahead of the Ministerial meeting in Cairo, which served to re-establish direct political contacts in the region.
- Facilitated a successful outcome of the **26th UN Climate Change Conference (COP26)** that resulted in the completion of the Paris Agreement rulebook and kept the Paris targets alive, giving the world a chance of limiting global warming to 1.5 degrees Celsius.

[7] Cf. Key Performance Indicator (KPI) 3 presented in the next section

B. Key Performance Indicators (KPIs)

KPI 1 **Greenhouse gas emissions**[8]	☺	**Target**: -20% of greenhouse gas emissions by 2020 compared to 1990 **Result :** In 2020, EU greenhouse gas emissions were 31% lower than in 1990. **Source:** DG Climate Action, Climate Action Progress Report. Approximated EU GHG inventory based on Member States' submissions. Gap filling was done for Bulgaria using data from the EUTL, Eurostat, Eurocontrol, 2021 projections and previous years' data.
KPI 2 **Climate mainstreaming in the European Union budget**[9]	☺	**Target:** At least 30% of EU budget 2021-2027 on climate-relevant expenditure **Result:** Preliminary estimates of the climate contribution of the main programmes in the 2021-2027 period: 32.5% of the EU budget in 2021 (these estimates are still subject to changes). **Source:** Statements of estimates 2022, DG Budget
KPI 3 **Number of Climate Pact pledges**[10]	☺	**Target :** Steady increase in Climate Pact pledges since its launch in 2020 **Result:** 25,600 pledges registered on the EU Climate Pact website, including 24,000 individual pledges partnering with Count Us In and 1,600 organisational pledges. **Source :** DG Climate Action, European Climate Pact website
KPI 4 **Number of Member States with adaptation plans**[11]	☺	**Target:** All EU Member States with adaptation plans by 2024 **Result:** 22 Member States have submitted and received validation of their National Adaptation Plan[12]. **Source:** Climate-ADAPT
KPI 5 **Estimated risk at closure**	☺	**Target**: Residual Error Rate should be lower than 2% **Result**: The detected error rate (DER), based on a conservative approach, was between 0.00% and 0.15% in 2021. The residual error rate (RER) after corrections remains within the range of 0.00% to 0.15%. **Source**: European Commission, DG Climate Action

[8] Cf. Impact indicator 1 in Annex 2 "Performance tables"
[9] Cf. Impact indicator 4 in Annex 2 "Performance tables"
[10] Cf. Result indicator related to specific objective 1.4 in Annex 2 "Performance tables"
[11] Cf. Result indicator related to specific objective 1.5 in Annex 2 "Performance tables"
[12] National Adaptation Plans usually aim to implement National Adaptation Strategies and to organise activities for achieving their objectives.

C. Key conclusions on Financial management and Internal control (executive summary of section 2.1)

In line with the Commission's Internal Control Framework DG Climate Action has assessed its internal control systems during the reporting year and has concluded that it is effective and the components and principles are present and functioning well overall but some improvements are needed as minor deficiencies were identified related to proper filing and documentation of procedures followed. Please refer to AAR section 2.1.3 for further details.

In addition, DG Climate Action has systematically examined the available control results and indicators, including those for supervising entities to which it has entrusted budget implementation tasks, as well as the observations and recommendations issued by the internal auditor and the European Court of Auditors. These elements have been assessed to determine their impact on management's assurance about the achievement of the control objectives. Please refer to Section 2.1 for further details.

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated. The Director-General, in his capacity as Authorising Officer by Delegation has signed the Declaration of Assurance albeit qualified by a reservation concerning the EU Emission Trading IT System.

D. Provision of information to the Commissioner(s)

In the context of the regular meetings during the year between the DG and the Commissioner on management matters, the main elements of this report and assurance declaration, including the reservation to maintain, have been brought to the attention of Executive Vice-President Frans Timmermans, responsible for Climate Action.

1. KEY RESULTS and progress towards achieving the Commission's general objectives and DG's specific objectives

General Objective

As presented in the Strategic plan for 2020-2024, the mission of DG Climate Action is to formulate and implement EU climate policies and strategies; so that the EU can become the **first climate-neutral and climate resilient continent by 2050**.

The DG leads the European Commission's efforts to **fight climate change at EU and international level**. It plays a leading role in developing and facilitating the implementation of cost-efficient policies and legislation to deliver on **the European Green Deal**, the first flagship policy of this Commission.

The DG promotes innovative decarbonisation technologies to tackle global warming. It maintains ambitious global leadership in climate action, protecting the ozone layer, and enhancing the international and domestic carbon market. It contributes to greening finance, facilitating change in behaviour across our society, ensuring the mainstreaming of climate action into the EU budget, and into EU and Member States' policies.

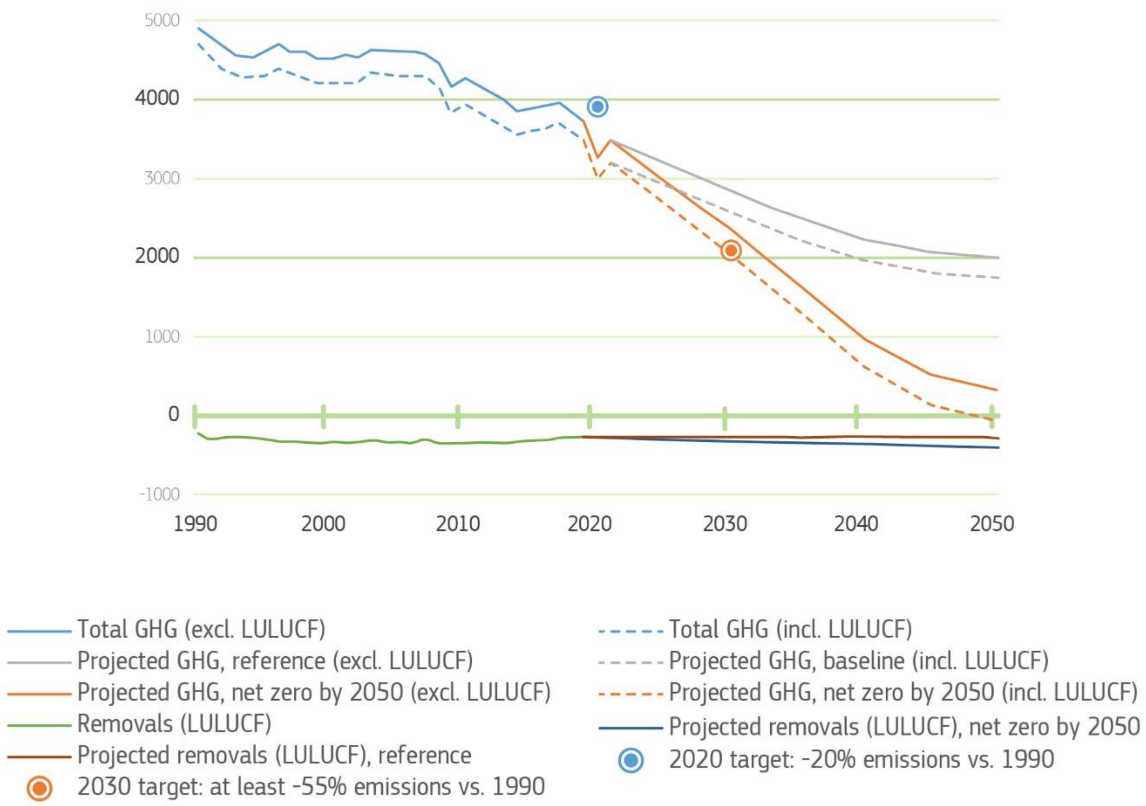
Reduction of greenhouse gas emissions

In 2020, **EU27 domestic greenhouse gas (GHG) emissions**, including international aviation, were **31% lower than in 1990** and reached their lowest level in 30 years. If emissions and removals from the Land Use, Land Use Change and Forestry sector (LULUCF) are included, this results in a net emissions reduction of 34%. Since 1990, the EU's combined GDP has grown by more than 50%, showing that decarbonisation and economic growth can go hand in hand.

The EU **substantially overachieved its 2020 target to reduce greenhouse gas (GHG) emissions by 20%** compared to 1990.

Compared to 2019, GHG emissions **fell by almost 10% in 2020**: an unprecedented temporary fall in emissions **due to the pandemic**. However, as illustrated in figure 1 below, the EU reached its greenhouse gas (GHG) emissions target for 2020 well before the pandemic and its impacts. **The results in 2020 only confirm previous trends and primarily come from sustained decarbonisation efforts over the previous decade**.

Figure 1 - Total EU27 GHG emissions (including international aviation) and removals from 1990 to 2020; and targets, and model-based projected emissions and removals from 2020 to 2050[13].



Sectors covered by the **EU Emissions Trading System (EU ETS)** experienced a sharp decline in emissions of 11.4%. While the pandemic affected this result to some extent, it confirmed a trend established before (in 2019, emissions were 9% lower than in 2018 in these sectors, which was higher than what was legally required by the ETS). Emissions not covered by the ETS (such as emissions from transport, buildings, agriculture and waste) fell by 5.6%. However, this reduction was largely due to the pandemic (and in particular due to the decrease in transport activities). The **aviation sector** was hit significantly by the COVID-19 pandemic, with a record drop in emissions from flights within the EEA (-63.5%) and globally (-54%) from international aviation (while an upward trend was observed in the last few years)[14]. In 2020, traffic in the aviation sector was 55% lower than in 2019[15].

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[13] Source: EU Climate action progress report: Speeding up European climate action towards a green, fair and prosperous future, November 2021

[14] Aviation emissions are covered by the ETS, but currently only for flights within the European Economic Area (EEA).

[15] Source: Eurocontrol

Despite the achievements so far, the figure above also shows that **steeper GHG emission reductions** will be required to reach the **updated 2030 targets** and for the EU to become climate-neutral by 2050. The Commission's assessment of the national energy and climate plans (NECPs)[16] showed that under existing and planned measures, **Member States plan to reduce emissions by 41%** compared to 1990 levels, which is below the new 2030 target.

Member States are due to submit **updates of their NECPs** in June 2023 (in draft form) and 2024 (final plans). In line with the proposed revisions of the ESR and LULUCF, these should reflect the increased ambition in line with the EU target to **reduce net GHG emissions by at least 55% by 2030**, relative to 1990.

Specific objective 1 - MITIGATION: Climate neutrality to be achieved by 2050 through a well-functioning EU carbon market and a fair regulatory framework for the EU and its Member States to reduce emissions.

EU Climate Law

In 2021, DG Climate Action (on behalf of the Commission) facilitated an agreement between co-legislators on the **European Climate Law**. With its entry into force in July 2021[17], both the 2030 and 2050 targets became legally binding in the EU.

The European Climate Law writes into law the goal to become **climate neutral by 2050** and the intermediate target of **reducing net greenhouse gas emissions by at least 55% by 2030**, compared to 1990 levels.

The law limits the contribution that carbon removals can make towards emission reductions in 2030 to ensure that there is sufficient mitigation effort. It establishes a European Scientific Advisory Board on Climate Change, to be supported in its work by a secretariat hosted by the European Environment Agency. The Law provides for a process for setting a 2040 climate target, taking into account an indicative greenhouse gas budget for 2030-2050 to be published by the Commission. It includes stronger provisions on adaptation to climate change. The Law also provides for strong coherence across Union policies with the climate-neutrality objective.

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[16] The assessment of the cumulative impact of the NECPs is presented in (COM(2020) 564 final)

[17] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021.

Legislative package adopted in July 2021 to increase climate ambition

In July 2021, the European Commission adopted **a package of legislative proposals** to implement the EU's increased climate ambition to reduce net greenhouse gas emissions by at least 55% by 2030 (compared to 1990 levels), as laid down in the European Climate Law Regulation. The climate-related proposals contained within the package include a revision of the EU ETS, the Effort Sharing Regulation, and the regulation of emissions and removals in the transport and land use sectors.

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The proposals will support a faster reduction in greenhouse gas emissions over the next decade by:

- increasing the ambition of the existing EU Emissions Trading System (EU ETS)
- making necessary adjustments to the Market Stability Reserve
- extending the EU ETS to the maritime sector
- implementing CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation)
- establishing a new ETS to cover emissions from fuels used in buildings and road transport
- providing dedicated funding to Member States to accompany the new ETS, to help citizens finance investments in energy efficiency, new heating and cooling systems, and cleaner mobility through the Social Climate Fund
- increasing Member State emission reduction targets in a fair and cost-effective way
- introducing new, more ambitious EU fleet-wide CO_2 emission targets for new cars and vans from 2030 onwards
- putting the land sector on track towards climate neutrality

In 2021, DG Climate Action facilitated **discussions with co-legislators** on these proposals (for which it has lead responsibility in the Commission) by explaining and defending the proposals in relevant meetings in the Parliament and Council and by providing expert technical advice and information to key players in both institutions.

DG Climate Action contributed to the **legislative initiatives led by other Commission services** and adopted in July 2021 and December 2021, such as the proposal for a recast Energy Efficiency Directive, the revision of the Renewable Energy Directive and the Energy Taxation Directive, the proposal for a Carbon Border Adjustment Mechanism, the ReFuelEU Aviation and FuelEU Maritime initiatives, the revision of the Regulation on natural gas transmission networks, the Energy Performance of Buildings Directive, the proposal on methane emissions reduction, etc.

GHG emissions reduction under the EU ETS

By 2020, EU ETS emissions from operators were **43% lower** than in 2005, exceeding the target set for that year (i.e. –21% by 2020). The reduction that has already taken place nearly reaches the current 2030 target (-43 %).

Greenhouse gas emissions from operators covered by the EU Emissions Trading System (EU ETS) **were 11.4% lower in 2020 than in 2019**. This reduction resulted from an 11.2% decrease in emissions from stationary installations, and a 64.1% decrease in emissions from aviation. The aviation sector saw the steepest reduction in emissions due to the effects of the pandemic. The power sector witnessed a 14.9% decrease, reflecting both reduced electricity consumption due to the pandemic and previously identified decarbonisation trends. These include both the switch from coal to natural gas-fired power generation, and the replacement of fossil fuels by renewable energy sources. Emissions from industry decreased by an average of 7%, with reductions observed in most sectors, including iron and steel (-11.7%), cement (-5.1%), chemicals (-4%) and refineries (-8.1%).

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In 2021, the **carbon price signal strengthened considerably**, influenced by high gas prices, post-COVID economic recovery and market anticipation of the implications of the increased 2030 climate ambition. Prices in the EU ETS increased from about EUR 30 at the beginning of 2021 to around EUR 80 at the end of the year[18]. The ETS has in-built safeguards designed to address situations of excessive price fluctuations. While the conditions for triggering these measures were not met, the Commission continued to monitor the evolution of the carbon price. It asked the European Securities and Markets Authority to analyse the trading in the market. This was echoed by the European Council[19]. The preliminary analysis published in November 2021, confirms that the EU carbon market functions in an orderly manner, comparable to other financial markets, and that no cases of market manipulation have been detected by the relevant market authorities[20].

The first review of the **Market Stability Reserve[21]**, operational since 2019, showed that it has fulfilled its objective of reducing the historical surplus and stabilising the market, even in the face of reduced emissions due to the COVID-19 pandemic. Namely, it led to an intake (reduced auction volumes) of nearly 1.1 billion allowances so far, and this number is expected to grow in the coming years.

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[18] Source : EEX, Emission Spot Primary Market Auction Report 2021
[19] https://www.consilium.europa.eu/media/52622/20211022-euco-conclusions-en.pdf
[20] https://www.esma.europa.eu/press-news/esma-news/esma-publishes-its-preliminary-report-eu-carbon-market
[21] SWD (2021) 601 final

In July 2021, the Commission proposed a revision of the EU Emissions Trading System (ETS), including:

- A new emissions reduction target of 61% below 2005 levels by 2030 (compared to 43% below 2005 levels currently) for the existing ETS.
- Phasing out free emission allowances for aviation and alignment with the global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
- A separate new Emissions Trading System for fuel distribution for road transport and buildings to address the lack of emissions reduction in these sectors.

In 2021, DG Climate Action updated the **Union Registry IT system** with the new rules for Phase 4, and launched a new auctioning platform contract. The DG also adopted a number of implementing acts and Decisions, such as an Implementing Regulation determining the benchmark values for free allocation in the 2021-2025 period, and a decision on the free allocation of allowances to each installation in that period.

GHG emissions reduction under the Effort Sharing Decision

Emissions that are not covered by the EU ETS, such as those in transport, buildings, agriculture and waste, decreased strongly between 2019 and 2020 (-6%), mainly due to the COVID-19 pandemic and the related decrease in transport emissions.

With a **reduction of 16%** compared to 2005 of EU27 emissions covered by the Effort Sharing Decision in 2020, the EU **overachieved its 2020 target** (– 10%)

Since the effort sharing system was launched in 2013, EU-wide emissions have been below the overall limit each year. EU27 emissions covered by the Effort Sharing Decision (ESD) were almost 11% lower in 2019 than in 2005. Thus, the 2020 target (-10%) had already been achieved and exceeded before the COVID-19 pandemic set in. Twenty-one Member States are expected to have reached their national targets in 2020. The remaining countries[22] will probably need to make use of flexibilities to comply with their legal objectives.

If currently implemented national policies are aggregated, the EU27 would reduce effort sharing emissions by 22% by 2030 compared to 2005. This is well below the current 30% overall emissions reduction target, and also below the more ambitious target of 40% proposed in July 2021 (see box below). Even if all additional policies reported by Member States were to be implemented, the 30% target would barely be met. This underpins the strong and imminent need for Member States to plan and implement additional climate action in the effort sharing sectors.

[22] Bulgaria, Cyprus, Finland, Germany, Ireland and Malta

In July 2021, the Commission proposed a revision of the Effort Sharing Regulation with a new EU27-level target of -40% by 2030 compared to 2005 (the current target is-30%); and national targets ranging from -10% to -50%.

GHG emissions in the road transport sector

CO2 emissions of new cars registered in Europe have **strongly decreased** in 2020 compared to 2019, and the share of **electric cars** has tripled

Provisional data shows that average emissions from **new cars** decreased from 122.3 g CO_2/km in 2019 to 107.8 g CO_2/km in 2020. This is by far the greatest annual decrease since CO_2 standards were introduced in 2010, thanks to the phase-in of a stricter EU fleet-wide CO_2 target in 2020. In addition, it shows the effect of targeted recovery measures put in place by Member States which stimulated the uptake of zero- and low-emission vehicles and investments in recharging infrastructure. In 2020, electric car registrations were three times as high as in 2019 (up from 3.5% to over 11%, of which 6 percentage points are full electric vehicles and 5 are plug-in hybrids). In 2020, average emissions for **new vans** also decreased to 155.7 g CO_2/km, thanks to stricter standards.

In July 2021, the European Commission proposed stronger CO2 emissions standards for cars and vans to accelerate the transition to zero-emission mobility. The Commission proposed to **lower the average emissions of new cars by 55% from 2030, and by 100% from 2035** (compared to 2021 levels).

The European Commission also proposed a revised Alternative Fuels Infrastructure Regulation, requiring Member States to **expand charging capacity in line with zero-emission car sales**, and to install charging and fuelling points at regular intervals on major highways: every 60 kilometres for

In 2021, DG Climate Action prepared several acts to ensure the proper functioning of the CO_2 emission standards framework **for light and heavy-duty vehicles**, such as an implementing act to **collect the real-world fuel and energy consumption** of new cars and vans as of 2021. This data will make it possible to monitor the gap between type approval and actual CO_2 emissions, and provide a better understanding of how vehicles perform under real-world driving conditions.

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Heavy-duty vehicles, such as lorries, heavy vans, buses and coaches, contribute about 30% of road transport's total CO_2 emissions. Existing legislation requires average CO_2 emissions of a manufacturer's fleet of new heavy lorries to be reduced by 15% from 2025 and 30% from 2030 (compared to the 2019 baseline. DG Climate Action will prepare the review of the existing legislation by the end of 2022 in order to contribute to the updated 2030 and 2050 climate objectives, while fostering innovation in zero-emission technologies and providing benefits for citizens, consumers and transport operators.

Further action required to meet 2020 fuel quality targets despite 4.3% drop in greenhouse gas intensity since 2010.

The Fuel Quality Directive requires Member States to reduce the **GHG intensity of transport fuels** by a minimum of 6% by 2020 compared to 2010. The average GHG intensity of fuels supplied in 2019 was 4.3% lower than in 2010. The progress achieved varies greatly across reporting countries and almost all Member States need to swiftly take further action to meet the 2020 target.

In July 2021, the Commission proposed a revision of the Renewable Energy Directive and proposed a GHG intensity reduction target of 13% for all transport fuels by 2030.

Land use, land use change and forestry

The current LULUCF Regulation[23] sets a "no debit rule" for the 2021-2030 period to ensure that accounted emissions from land use are entirely compensated by an equivalent removal of CO_2 from the atmosphere through action in the sector. In 2020, at the EU27 level, **Land Use, Land Use Change and Forestry (LULUCF)** removes more GHG than it emits, resulting in a **net carbon sink**. However, the size of this **sink has been shrinking in recent years**, especially as removals from forestland decline. In 2019, the EU's net carbon sink amounted to about 249 Mt carbon dioxide equivalent (CO_2e), corresponding to about 7% of the EU's total GHG emissions. The net carbon sink is estimated to have remained at a similar level in 2020.

In July 2021, the Commission proposed a revision of the LULUCF Regulation, with the following targets:

- An overall EU target for carbon removals by natural sinks, equivalent to 310 million tonnes of CO2 emissions by 2030.
- By 2035, an EU target of climate neutral land (combining LULUCF and emissions from livestock and fertilisers).

[23] Regulation (EU) 2018/841

Ozone and F-Gas Regulation

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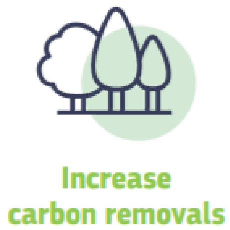
In 2020, the amount of fluorinated gases **(F-gases)** supplied to the EU market was already 40% lower than in 2015, when measured in terms of its potential climate effect. In addition, the EU was well below its 2020 hydrofluorocarbons (HFC) consumption limit under the Montreal Protocol. In 2021, DG Climate Action continued to expand its real-time monitoring system - the EU Single Window Environment for Customs - so as to help Member State competent authorities prevent illegal imports of HFCs not covered by the quota system.

In many cases, F-gases replaced **ozone-depleting substances (ODS)**, which are often also very potent GHG gases. By now, the EU has phased out ODS and has successfully met its obligations under the Montreal Protocol. However, since ODS may still be used for certain exempted activities, it is essential to continue to enforce related policies.

In 2021, DG Climate Action prepared the evaluation and the **review of the fluorinated greenhouse gases (F-gases) Regulation** and the review of the **Ozone Regulation**. The proposals are planned for adoption in the first half of 2022.

Carbon removal certification



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Carbon removals from forests, agricultural practices or engineered solutions will play a crucial role in achieving climate neutrality by 2050 as they will balance emissions from agriculture, aviation or specific industries that are the most difficult to eliminate. As set out in the Circular Economy Action Plan[24], in 2021, DG Climate Action prepared a **Communication on Sustainable Carbon cycles[25]**. This set out how to increase removals of carbon from the atmosphere. The initiative presents a long-term vision for sustainable carbon cycles (including capture, storage, and use of CO_2) in a climate-neutral EU economy, and kick-starts the development of technological and nature-based solutions. As a next step, in 2022, DG Climate Action will prepare an **EU regulatory framework for the certification of carbon removals**.

EU Forest Strategy

DG Climate Action contributed to the preparation of the **New EU forest strategy for 2030[26]**. The strategy sets a vision and concrete actions to improve the quantity and quality of EU forests and strengthen their protection, restoration and resilience. It aims to adapt Europe's forests to the new conditions, weather extremes and high uncertainty brought about by climate change.

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[24] COM(2020)98 final
[25] COM(2021) 800
[26] COM/2021/572 final

Specific objective 2 – MONITORING AND ENFORCEMENT: EU climate legislation is monitored through the Energy Union Governance, is properly applied and enforced, and is mainstreamed in the European Semester process

Since the outbreak of the pandemic in 2020, the European Green Deal has been at the centre of EU efforts when designing the **recovery package** and the EU's long-term budget (2021-2027). Following the endorsement of the European Council, at least 30% of the EUR 1.8 trillion of both the temporary recovery instrument Next Generation EU (NGEU) and the 2021–2027 budget will be used for climate-related policies and programmes. To receive support from the Recovery and Resilience Facility, a centrepiece of Next Generation EU, in 2021 Member States prepared national recovery and resilience plans on how they intend to spend their national allocations.

Together with other Commission services, DG Climate Action assessed the **national Recovery and Resilience Plans** (22 of them approved), in particular to ensure that at least 37% of the Recovery and Resilience Facility funds (RRF) will be spent directly on climate purposes, and that all measures (investment and reforms) under the Recovery and Resilience Facility will at least "do no significant harm" to climate and environmental objectives. In that regard, DG Climate Action contributed to the preparation of the technical guidance[27]. In addition, DG Climate Action ensured that assessed plans addressed the challenges and recommendations identified in the different **National Climate and Energy Plans** and in the **European Semester**. The DG ensured a strong focus on boosting the green transition and on the areas where structural reforms and investments towards a sustainable and climate-neutral economy are most needed. **Member States have allocated almost 40% of the spending in their plans to climate measures**, exceeding the agreed targets of 37%. A number of disbursements has already been made to some Member States[28].

All Parties to the Paris Agreement were invited to communicate, by 2020; their mid-century, long-term low greenhouse gas emission development strategies. Stable **long-term strategies** are crucial to help achieve the economic transformation needed and broader Sustainable Development Goals, as well as to move towards the long-term goal set by the Paris Agreement . By the end of 2021, **22 Member States submitted their long-term strategies[29]** to the EU, but Member States are encouraged to consider to update and, where possible, increase their ambition. The five remaining Member States are urged to submit their long-term strategies as soon as possible, to comply with the Regulation on the Governance of the Energy Union and Climate Action[30].

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[27] C(2021) 1054 final

[28] Recovery and Resilience scoreboard and Report on the implementation of the Recovery and Resilience Facility COM(2022) 75 final

[29] National long term strategies

[30] Obligation under Article 15(1) of Regulation (EU) 2018/1999

Specific objective 3 - FINANCE: Climate-related spending is mainstreamed in the EU budget and in private funds to finance the green and just transition and to invest in particular in low carbon and other climate innovations

To become the first climate-neutral continent in the world by 2050, the EU needs massive investments from both public and private sectors. EU expenditure on climate action, financing of green technologies, and deployment of new solutions increased in 2021, and a further increase is expected in the context of Europe's recovery from COVID-19 pandemic (cf. Specific objective concerning the recovery package).

Revenues from the auctioning of EU ETS allowances

Revenues from the auctioning of allowances on the European carbon market continued to grow in 2021 due to an increasing carbon price. Total revenues generated by Member States, the UK and EEA countries from the auctions between 2012 and 30 June 2021 were close to EUR 83.5 billion. In 2020 alone, the generated total revenues were EUR 16.5 bn (EU27 plus EEA). In the first six months of 2021 revenues (EU27 plus EEA) were close to EUR 14 billion. Based on annual reporting, it is estimated that in 2020, 70% of total revenues were used for climate and energy purposes. In addition, a growing number of EU-funded climate projects are financed through the monetisation of emission allowances via the NER 300 programme, the Innovation Fund and the Modernisation Fund.

With the proposed new 'own resource'[31] adopted in December 2021, the Commission proposed that 25% of the revenues generated by EU emissions trading become an 'own resource' for the EU budget. The new 'own resources' proposed[32] will help to repay the funds raised by the EU to finance the grant component of NextGenerationEU and should also finance the Social Climate Fund.

Innovation Fund

In 2021, and for the first time since the launch of the **Innovation Fund**, the EU is investing over **EUR 1.1 billion into seven large-scale innovative projects**. The grants will support projects aiming to bring breakthrough technologies to the market in energy-intensive industries; hydrogen; carbon capture, use and storage; and renewable energy. The projects are located in Belgium, Italy, Finland, France, the Netherlands, Norway, Spain and Sweden (full list of projects available here). Individual grant agreements are expected to be signed in the first quarter of 2022.

[31] COM(2021) 566

[32] i.e. resources generated from the EU ETS, from the proposed EU carbon border adjustment mechanism, but also from reallocated profits of very large multinational companies

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In addition, the first grant agreements were signed to scale up small clean tech projects demonstrating highly innovative technologies, processes or products. Those projects can now start to be implemented on the ground. By the end of December 2021, **30 selected projects** signed their grant agreements with the European Climate, Infrastructure and Environment Executive Agency (CINEA), the implementing body of the Fund (full list of projects available here). The projects aim at bringing low-carbon technologies to the market in energy-intensive industries, specifically in the sectors of iron and steel, hydrogen, biofuels and biorefineries, pulp and paper, refineries, non-ferrous metals; and glass, ceramics and construction material. They aim to decarbonise the energy sector, through innovative production and renewable energy or storage solutions. Together, these 30 projects, located in **13 Member States**, will benefit from a total grant of **EUR 109 million**.

Seven events were successfully organised in 2021 to **support all types of stakeholders** to better understand the current and potential developments of clean tech solutions in the EU. Those events included knowledge sharing , clean-tech conferences, and webinars related to application support and lessons learned.

In late October 2021, DG CLIMA and CINEA launched the **2nd call for large-scale projects** with a budgetary increase of 50% (total of EUR 1.5 billion). Taking into account the significant oversubscription in the first call and the strong project pipeline, the Commission simplified the application process, which consists of only one stage for this particular call. The call will be concluded and the results communicated in 2022.

Modernisation Fund

In its first year of operation, the **Modernisation Fund** is supporting 26 investment proposals in eight beneficiary countries to modernise their energy systems and improve energy efficiency. Nearly EUR 900 million will be invested in eight beneficiary countries to help modernise their energy systems, reduce greenhouse gas emissions in energy, industry, transport and agriculture; and support them in meeting their 2030 climate and energy targets. Investments were confirmed in Czechia (EUR 320 million), Estonia (EUR 24.59 million), Croatia (EUR 2.15 million), Hungary (EUR 34.28 million), Lithuania (EUR 28 million), Poland (EUR 346.4 million), Romania (EUR 22.99 million), and Slovakia (EUR 120 million).

Some examples of the investment proposals concern the:

- implementation of photovoltaic installations in Czechia;
- development of power grids for future electric car charging stations in Poland;
- modernisation of energy networks in Slovakia;
- improvement of energy efficiency and renewable energy use in Estonia;
- Etc.

In July 2021, the Commission proposed a revision of the EU Emissions Trading System (ETS), including:

- an increase of the size of the Innovation and Modernisation Funds;
- a new Social Climate Fund to provide dedicated funding to Member States to help citizens finance investments in energy efficiency, new heating and cooling systems, and cleaner mobility.

Mainstreaming climate into the EU budget

The EU budget makes a crucial contribution towards the fight against climate change. The Interinstitutional Agreement (IIA)[33] plans for at least 30% of the next long-term budget of the EU (Multiannual Financial Framework and Next Generation EU) to be dedicated to climate action. Preliminary data shows that 32.5% of the 2021 budget was dedicated to climate action.

Over the course of the **2014-2020 Multiannual Financial Framework,** the EU delivered on its ambition of spending **20% of available funds on climate-related measures** (specifically, 20.15% of the EU budget was spent on climate action).

[33] Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new ‘own resources’, including a roadmap towards the introduction of new ‘own resources’.

LIFE Programme

The **LIFE Programme** has been running since 1992 and has co-financed more than 5 500 projects across the EU and beyond. The Commission has increased LIFE Programme funding by almost 60% for the 2021-2027 period and it now stands at EUR 5.4 billion. A selection of projects is presented in the EU Climate action progress report 2021. Many others can be found on the LIFE public database.

In November 2021, the Commission approved an investment package of more than EUR 290 million for 132 new projects under the LIFE Programme to be financed as of next year; earmarking some EUR 223 million to projects on environment and resource efficiency, nature and biodiversity, environmental governance and information. We also invested more than EUR 70 million in projects on climate change mitigation, adaptation, governance, and information. This includes a major transnational project to restore the carbon sink function of degraded peatlands in Belgium, Germany, Ireland, the Netherlands and Poland.

Horizon Europe

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The **first Horizon Europe Work Programme (2021-2022)** was adopted in June 2021. This has resulted in some promising estimates that put the Commission on track to achieve the objective of **35% of Horizon Europe** funding contributing to climate objectives. The work programme of the clusters within Pillar II 'Global Challenges and European Industrial Competitiveness' will contribute EUR 6.72 billion to climate action, representing 48% of the present budget of the clusters (EUR 13.9 billion). On a cluster level, the main contributions to climate action are made by 85% of the budget of the 'Climate, energy, transport' cluster (EUR 3.43 billion), 69% of the 'Agriculture, environment' cluster (EUR 1.48 billion), 32% of the 'Industry and digital technologies' cluster (EUR 1.4 billion) and 13.6% of the 'Health' cluster (EUR 332 million). In addition, Horizon Europe Missions have a clear focus on climate mitigation and adaptation (62%) with a contribution of EUR 747million during this period. These figures refer only to the calls under pillar 2 clusters. The total budget for the first two years of Horizon Europe is EUR 26.7 billion. This also includes bottom-up programmes for which their climate contribution can only be assessed once the results of the call are known.

In June 2021, CINEA launched the **first 2021 calls for Horizon Europe Cluster 5** with a total of EUR 1.2 billion EU funding for Climate, Energy and Mobility topics. At the end of September 2021, the Commission launched **five new EU 'missions': a novelty of Horizon Europe**. These missions aim to tackle big challenges in health, climate and the environment; and to achieve ambitious and inspiring goals in these areas. DG Climate Action is responsible for **the Mission on Adaptation** (cf. Specific objective 5 below).

Sustainable finance

The current COVID-19 pandemic has reinforced the need to redirect money towards sustainable projects and activities. DG Climate Action contributed to the preparation of an ambitious and comprehensive package of measures adopted in April 2021 to help improve the flow of money towards **sustainable activities** across the European Union. This package includes the **EU Taxonomy Climate Delegated Act**, which sets the technical criteria for defining activities that contribute substantially to climate change mitigation and adaptation. In July 2021, another Delegated Act supplemented the EU Taxonomy and established the reporting rules for all enterprises required to report on the taxonomy criteria[34].

In addition, DG CLIMA contributed to the **Renewed Sustainable Finance Strategy**, encompassing a wide range of actions to further reorient capital flows towards sustainable activities. The DG also actively participated in the preparation of specific legislative proposals to that purpose, including on corporate sustainability reporting and on the prudential rules for the banking sector.

Climate proofing of infrastructure

DG Climate Action contributed to the elaboration of the new technical guidance on **climate-proofing of infrastructure projects**[35] for the 2021-2027 period. This guidance, required by the Climate Law, will help mainstream climate considerations in future investment and development of infrastructure projects – from buildings and network infrastructure to a range of built systems and assets. In this way, institutional and private European investors will be able to make informed decisions on projects deemed compatible with the Paris Agreement and EU climate objectives.

Specific objective 4 – COMMUNICATION AND DIALOGUE: A voice and a space is given to citizens, cities, regions and all stakeholders to design and implement climate actions, share information, launch grassroots activities and showcase solutions that others can follow through the Climate Pact and the EU Covenant of Mayors

Executive Vice-President for the European Green Deal Frans **Timmermans** said: "*Despite the pandemic and the economic hardship Europeans are facing, support for climate action remains high. Europeans recognize the long-term risks posed by the climate and biodiversity crises, and expect industry, governments and the European Union to take action (…).*"

[34] Approximately 11 000 companies, expected to become 50 000 companies as per the Commission proposal for a Corporate Sustainability Reporting Directive.
[35] Technical guidance on climate-proofing of infrastructure projects

The climate crisis is real and affects all of us, but everyone can contribute to find solutions. In July 2021, a special Eurobarometer survey[36] showed that European citizens believe **climate change is the single most serious problem** facing the world. In terms of policy response, nine out of ten Europeans (90%) agree that greenhouse gas emissions should be reduced to a minimum while offsetting remaining emissions to make the EU climate-neutral by 2050. A majority (64%) of **EU citizens are already taking individual climate action** and consciously making sustainable choices in their daily lives.

The involvement and commitment of the public, regions, local communities and of all stakeholders is crucial to the success of the European Green Deal. In December 2020, DG Climate Action launched the **European Climate Pact[37]** to give citizens a greater role in designing both mitigation and adaptation actions, and an effective platform to do so. By December 2021, more than 600 ambassadors were informing, inspiring and supporting climate action in their communities and networks. Citizens, organisations and groups registered more than 25 600 pledges on the online platform, in partnership with the Count Us In initiative, committing to take concrete action and sharing these actions with others to inspire them to join.

A recent report commissioned by DG Climate Action[38] shows that **subnational and non-state initiatives** play an important role in climate action, and the number of net-zero emissions pledges is increasing rapidly among subnational and non-state actors. By January 2022, some 10 791 European cities had joined the **EU Covenant of Mayors**[39], with a collective commitment to reducing GHG emissions by 30% by 2020 and by 47% by 2030 (compared with 2005). In 2020, the Covenant of Mayors (CoM) signatories covered 190.4 million people in the EU, representing 42.6% of the EU population.

Under the Horizon Europe programme for research and innovation, in 2021, DG Climate Action also contributed to the launch of the **'climate-neutral and smart cities' mission** for at least 100 cities to become climate-neutral by 2030.

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[36] Special Eurobarometer 513: Climate Change
[37] European Climate Pact website
[38] Subnational and non-state climate action in the EU An overview of the current landscape, emission reduction potential and implementation, NewClimate Institute, December 2020, commissioned by DG Climate Action.
[39] https://www.covenantofmayors.eu/en/

Specific objective 5 – ADAPTATION AND RESILIENCE: EU society (people, nature and welfare) is increasingly climate-resilient, adapted and equipped, protected and insured against the adverse impacts of climate change


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The impacts of climate change are increasingly felt across Europe and in the wider world. The total 30-year moving average shows an almost **steady increase in climate-related economic losses**, from EUR EUR 10 billion in 2012 to EUR 11.9 billion in 2019[40]. Effective adaptation, climate security and disaster risk reduction measures are needed to reduce the economic and social impact of natural disasters.

By 2020, all Member States had put in place a **national adaptation strategy or plan**[41], increasing their ability to adapt to the adverse impacts of climate change. The **Climate-ADAPT platform** has become a reference for adaptation knowledge. Since February 2021, Climate-ADAPT hosts the European Climate and Health Observatory[42], providing access to relevant information and tools related to climate change and health, and fostering cooperation between relevant international, European, national and non-governmental actors.


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The European Commission, under the leadership of DG Climate Action, launched the **Horizon Europe mission on adaptation** to climate change in September 2021. Adaptation solutions will be tested and scaled up by supporting at least 150 regions and communities in their path towards climate resilience and by testing at least 75 deep demonstrations. Horizon Europe missions on soil health, climate-neutral cities, and oceans and inland waters were launched simultaneously in support of the European Green Deal, and are also directly relevant to action on adaptation. The first Adaptation Mission call was published in December 2021, with a budget of approximately EUR 125 million. The focus is on developing a common risk assessment framework to support a first set of regions and communities to better understand their climate risks to build their local climate resilience. The Mission will also fund a few demonstrations of replicable climate resilience solutions in European regions.

To prepare for the unavoidable impacts of climate change and become a climate-resilient society by 2050, the Commission adopted its **new EU strategy on adaptation** to climate change[43] in 2021. It urges smarter, faster and more systematic adaptation to reinforce the adaptive capacity and minimise the vulnerability of Member States and the EU as a whole to climate impacts. It also calls to step up cooperation with partner countries around the world.

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[40] Sustainable development in the European Union, Monitoring report on progress towards the SDGs in an EU context, 2020 edition
Cf. Impact indicator 3 in Annex 2 "Performance tables"
[41] https://climate-adapt.eea.europa.eu/countries-regions/countries
[42] https://climate-adapt.eea.europa.eu/observatory
[43] COM(2021) 82

Specific objective 6 - INTERNATIONAL NEGOTIATIONS: The level of ambition of other GHG emitters is increased thanks to the EU's leading role in climate diplomacy in line with the Paris Agreement and Sustainable Development Goal 13

The EU continued its **international outreach and cooperation on climate issues** throughout 2021. DG Climate Action engaged with multilateral and bilateral partners to promote, convince and support other countries to implement ambitious climate policies across the world. The EU's **climate ambition and leadership** served as an example to incentivise the EU's international partners to step up their Nationally Determined Contributions (NDCs) under the Paris Agreement.

In March 2021, China, the EU and Canada co-convened the **5th Ministerial on Climate Action.** Discussions focused on how to enhance global ambition, while fostering global cooperation and solidarity, and understanding country-specific challenges and opportunities which arise in implementing low-carbon, resilient and sustainable recoveries from the COVID-19 pandemic. Participants included Ministers from G20 countries and other key parties in the UN climate negotiations.

The **26th UN Climate Change Conference of the Parties (COP26)** took place in Glasgow in November 2021. It resulted in the completion of the **Paris Agreement rulebook**, which fixes the transparency and reporting requirements for all Parties to track progress against their emission reduction targets[44], and kept the Paris targets alive, giving the world a chance of limiting global warming to 1.5 degrees Celsius. COP26 also agreed for the first time to accelerate efforts towards the phase-down of unabated coal power and inefficient fossil fuel subsidies, and recognised the need for support towards a just transition. During the conference, DG Climate Action hosted over **150 side events at the EU Pavilion** in Glasgow and online. These events, organised by a variety of countries and organisations from Europe and around the world, addressed a broad range of climate-related issues, such as the energy transition, sustainable finance and research and innovation. Over 20,000 registered to the online platform.

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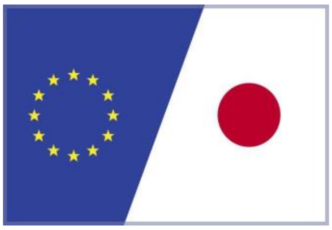
In October 2021, the EU submitted its **EU Adaptation Communication to the UNFCCC**, setting out the EU's ambitions as defined by the EU Adaptation Strategy[45]. The EU recognizes the need to scale up finance to support climate adaptation objectives, particularly in the most vulnerable countries and for the benefit of their most vulnerable populations. While the EU is already the largest provider of **international climate**

[44] The Rulebook also includes the Article 6 mechanisms, which set out the functioning of international carbon markets to support further global cooperation on emission reductions.
[45] https://unfccc.int/documents/307266

finance, the European Commission announced at the COP26 a new pledge of EUR 100 million in finance for the Adaptation Fund.

In 2021, DG Climate Action worked towards strengthening EU engagement with bilateral partners. After the EU, over 50 other countries representing **over half of the world economy have committed to net-zero emissions around mid-century**, including China, the United States and Japan. In 2021, the EU initiated new climate dialogues with **India and the US,** and a **green alliance with Japan.** In particular, in May 2021, leaders from the EU and India met for the virtual **EU-India** Leaders' Meeting, which resulted in a sustainable and comprehensive Connectivity Partnership and a strengthened Strategic Partnership between the two partners. In June 2021, the **EU-US** summit marked the beginning of a renewed transatlantic partnership and established an EU-US High-Level Climate Action Group to provide an effective platform for cooperation to tackle climate change. A second **EU-China** High Level Environment and Climate Dialogue (HECD) took place in September 2021, reaffirming that this platform will continue to be key to enhance actions and bilateral cooperation on environment protection and in the fight against climate change. The European Commission (together with France, Germany, UK and the US) launched a new ambitious, long-term **Just Energy Transition Partnership** to support **South Africa**'s decarbonisation efforts and to move away from coal. The Partnership recognises the importance of supporting South Africa's efforts to lead a 'Just Transition' that supports affected workers and vulnerable communities, especially coal miners, women and youth, as the South African economy changes.



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Finally, during the **EU-Japan** Summit in May 2021, the two parties committed to a new Green Alliance to work towards climate neutrality. This is the EU's first Green Alliance and a true milestone in the EU efforts to create a global coalition for net zero by the middle of the century. **EU-Russia** exchanges on climate change at various levels on a number of mutually agreed technical issues continued, climate policy being one of the so-called areas of selective engagement.

The EU continued to support the development of long-term strategies and monitoring reporting and verification systems to help improve governance and to mobilise resources, both in the **Pre-Accession and the Neighbourhood countries**. An **EU-Turkey** high-level dialogue took place in September 2021, where the climate crisis and future cooperation were discussed. It was followed by Turkey's ratification of the Paris Agreement, ahead of the UN General Assembly and COP26. Good progress in dialogue on climate issues has been made in the framework of the **Union for the Mediterranean**, especially with **Morocco and Jordan**. In June 2021, the EU and the Kingdom of Morocco announced their intention to establish a Green Partnership. In addition, the Ministers from the 42 member countries of the Union for the Mediterranean met in October 2021 for the 2nd Ministerial Conference on environment and climate action, and agreed to work together and strengthen efforts in the Euro-Mediterranean region to tackle its many climate and environmental challenges.

Eastern Partnership countries have confirmed their commitment to step up cooperation and adopted an Economic and Investment Plan in 2021. To align its policies and legislation with the European Green Deal, Ukraine started a dedicated dialogue with the EU. The EU also supported the update of NDCs for Moldova, Georgia and Armenia through the regional project EU4Climate.


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DG Climate Action prepared and organised the **5th Carbon Market Workshop under the Florence Process**, which took place in May 2021. This annual gathering brings together high level policy makers working on emission trading systems from all over the world; such as China, New Zealand and California. The participants shared their experiences on respective carbon markets, identified common challenges and intelligent policy solutions in areas such as carbon leakage, the integration of new technologies, support for innovation, and the social impacts of carbon pricing.

DG Climate Action also participated in negotiations, meetings and technical working groups taking place in the context of the **Montreal Protocol**, the **International Civil Aviation Organisation (ICAO)** and the **International Maritime Organisation (IMO)**.

2. MODERN AND EFFICIENT ADMINISTRATION AND INTERNAL CONTROL

2.1. Financial management and internal control

Assurance is provided on the basis of an objective examination of evidence of the effectiveness of risk management, control and governance processes.

This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. The results are explicitly documented and reported to the Director-General. The following reports have been considered:

- the annual reports and declarations by AOD and AOSDs, in which all financial transactions are verified;
- the reports on control results from entrusted entities in indirect management such as the European Investment Bank (EIB);
- Commission supervisory controls on the activities of the European Climate, Infrastructure and Environment Executive Agency (CINEA)[46] assured by the membership in the steering committee of this body;
- the contribution by the Director in charge of Risk Management and the Internal Control Coordinator, including the results of internal control monitoring at the DG level and IC survey to managers;
- the reports on recorded exceptions, non-compliance events and any cases of 'confirmation of instructions' (Art 92.3 FR);
- the report from DG Budget on the assessment of local systems;
- the conclusion of the Internal Auditor on the state of internal control, and the observations and recommendations reported by the Internal Audit Service (IAS);
- the observations and the recommendations reported by the European Court of Auditors (ECA) both the DAS report on accounting and the special performance reports;
- the annual review report of the DG Climate Action Advisory Committee on public procurement (CPAC report);
- periodic review and reporting of DG Climate Action risk registry embedded in the meeting of senior management on resources;
- periodic report and dashboards to management on resource issues.

These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and ensures a complete coverage of the budget delegated to the Director-General of DG Climate Action.

[46] The European Climate, Infrastructure and Environment Executive Agency (CINEA) is the successor organisation of the Innovation and Networks Executive Agency (INEA), officially established on 15 February 2021, with activities beginning on 1 April 2021.

This section covers the control results and other relevant elements that support management's assurance. It is structured into 2.1.1 Control results, 2.1.2 Audit observations and recommendations, 2.1.3 Effectiveness of internal control systems, and 2.1.4 Conclusions on the assurance.

2.1.1. Control results

This section reports and assesses the elements identified by management which support the assurance on the achievement of the internal control objectives (ICO)[47]. The DG's assurance building and materiality criteria are outlined in AAR Annex 5. The AAR Annex 6 outlines the main risks together with the control processes to mitigate them and the indicators used to measure the performance of the relevant control systems.

Overview of DG Climate Action's budget

DG Climate Action activities are spread over five main areas:

- **LIFE Programme** for the Environment and Climate Action. This is the largest segment in terms of budget implementation of which around 90% relate to procurement contracts. The vast majority of LIFE Programme grant implementation is delegated to CINEA via co-delegation type II[48].

- **External Actions** expenditure for the 'Neighbourhood, Development and International Cooperation Instrument' (NDICI), pilot projects/preparatory actions, and the instrument for pre-accession instrument (IPA). NDICI is the largest part and concerns contribution agreements under indirect management, which are managed directly by DG Climate Action and under cross sub-delegation by the DG for International Partnerships (DG INTPA). It also includes limited procurement and contributions to international conventions – namely for the general UN framework, the Montreal Protocol, the Kyoto protocol, the UNFCCC international transaction log (ITL), and the Vienna convention. The external action segment is the second biggest in terms of budget implementation.

- **Innovation Fund (IF)** which supports innovation in low-carbon technologies and processes under the Emission Trading System (ETS). The in-house budget implementation is mostly composed by contribution agreements and administrative arrangments. The programme grant management is implemented by CINEA via co-delegation type II.

[47] 1) Effectiveness, efficiency and economy of operations; 2) reliability of reporting; 3) safeguarding of assets and information; 4) prevention, detection, correction and follow-up of fraud and irregularities; and 5) adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 36.2). The 2nd and/or 3rd Internal Control Objective(s) (ICO) only when applicable, given the DG's activities.

[48] In 2021 DG Climate Action has awarded and signed only three grant agreements.

In addition, DG Climate Action implements, under indirect management, the monetisation of the allowances set aside for the Innovation Fund as well as the provision of project development assistance. These actions are entrusted to the European Investment Bank.

- Under **Horizon Europe, cluster 5 'Climate, Energy and Mobility'** DG Climate Action implements the part of the staff budget linked to the execution of this programme. This part of the budget is co-delegated type III to HR and PMO for the performance of the payments. In addition, DG Climate Action implements a small amount of appropriations under cross sub-delegation by DG Research and Innovation (DG RTD) for the mission on adaptation under this programme. The grant management is also performed by CINEA via co-delegation type II directly from the lead parent, DG RTD.

- **European Public Administration**, consisting in expenditure related to officials and external staff. This part of the budget is co-delegated type III to HR and PMO for the performance of the payments. Via this segment DG Climate Action finances the administrative support in the "Climate Action" policy area. This is the smallest part of the expenditure.

Details on budget implementation of DG Climate Action together with the detailed financial overview can be found in the figure and table below, as well as in Annex 3.

Figure 2: Commitment 2021 (amounts in EUR million)

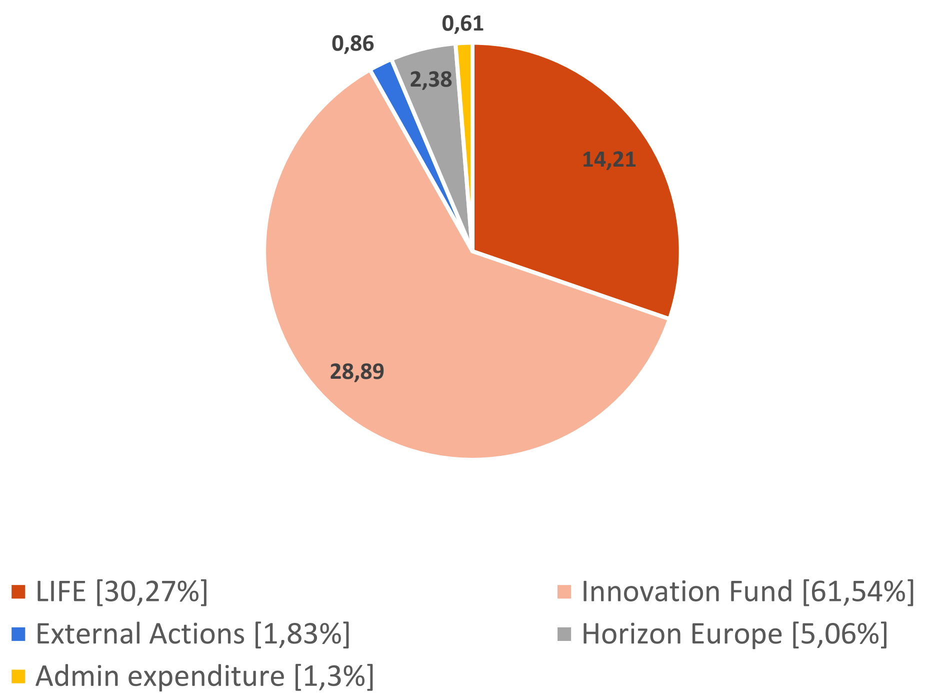


Table 1: Overview table (amounts in EUR million)

Risk-type / Activities	Grants (e.g. actual costs based, or lump sums, or entitlements)	Procurement (e.g. minor or major values)	Shared mngt (MS's OPs, PAs, etc) + EAC (for NAs)	Cross-delegations to other DGs (other AOXDs)	Contributions and/or funds to EE (EU Agency, EA, JU)	Delegation / Contribution agreements with EE (EIB, Int-Org, etc)	Other	*Total Expenditure*	NEI, e.g. Revenues, Assets, OBS ((in)tangible or financial assets & liabilities)
LIFE	1.21	19.44			0.20		3.36[49]	24.21	67.35
External actions	0.10	1.11			4.13	0.35	0.77 [50]	6.46	11.83
Innovation Fund		0.16			0.58		0.80[51]	1.54	4 225.63
Administrative expenditure		0.30						0.30	
Totals (coverage)	**1.31**	**21.01**			**4.91**	**0.35**	**4.93**	**32.51**	**4 304.81**

Legend for the abbreviations: OP=Operational Programme, PA=Paying Agency, NA=National Agency, AOXDs=Authorising Officer by Cross-Delegation, EA=Executive Agency, JU=Joint Undertaking, NEI=Non-Expenditure Item(s), OBS=Off-Balance Sheet, ICO=Internal Control Objective, L&R=Legality and Regularity, SFM=Sound Financial Management, AFS=Anti-Fraud Strategy measures, SAI=Safeguarding Assets and Information, TFV=True and Fair View, RER=Residual Error Rate, CEC=Cost-effectiveness of controls, Mngt =Management

[49] Mainly Administative Arrangments with Joint Research Center
[50] Mainly Administative Arrangments with Joint Research Center
[51] Contributions to International Organisations

In line with the 2018 Financial Regulation's new reporting requirements, in 2021, DG Climate Action did not detect:

- Cases of "confirmation of instructions" (new FR art 92.3)
- Cases of financing not linked to costs (new FR art 125.3)
- Financial Framework Partnerships >4 years (new FR art 130.4)
- Cases of flat-rates >7% for indirect costs (new FR art 181.6)
- Cases of "Derogations from the principle of non-retroactivity of grants pursuant to Article 193 FR" (new Financial Regulation Article 193.2)

1. *Effectiveness of controls*

a) Legality and regularity of the transactions

DG Climate Action uses internal control processes to ensure sound management of risks relating to the legality and regularity of the underlying transactions it is responsible for, taking into account the multiannual character of programmes and the nature of the payments concerned

The control objective is to ensure that the final amount at risk related to payments authorised in 2021 does not exceed the agreed threshold of 2%.

DG Climate Action's relevant expenditure, its estimated overall risk at payment, estimated future corrections and risk at closure are set out in Table X: Estimated risk at payment and at closure.

The estimated overall 'risk at payment' for 2021 expenditure is in the range between EUR 0.00 and EUR 55 858,15 representing between 0.00% and 0.15% of the DG's total relevant expenditure for 2021. This is the AOD's best, conservative estimation of the amount of relevant expenditure during the year not being in conformity with the contractual and regulatory provisions applicable at the time the payment was made.

The major share of DG Climate Action's expenditure concerns procurement (which is not subject to any on the spot ex-post controls) and contributions to pillar-assessed organisations. For all types of expenditure there were no audits carried out in 2021, nor are there audits planned for the near future. As a result, the estimated future corrections are equal to zero.

Hence, the estimated overall risk at closure for the 2021 expenditure ranges from EUR 0.00 to EUR 55 858,15, which is approximately the same range as last year.

There are variations in the underlying assumptions because the level of error is an estimation, which means that for certain categories the calculation of the amount of risk is expressed as a range. The variations in the underlying assumptions are summarised as follows:

1. The error rate for procurement payments is estimated to range from 0% to 0,15%. The risk of error in procurement is minimal; however, a conservative approach in the error rate estimation has been applied.

2. For payments to contribution and delegation agreements as well as administrative arrangements in the area of climate action, the estimated error rate is minimal. A conservative approach was again followed for the 0% to 0,15% estimation of error rate .

3. The grants managed by DG Climate Action are in the vast majority agreements awareded to public and identified beneficiaries. The risk of error is estimated as very low, and an estimation (as no audits have taken place) of 0% to 0,5% was used.

   For an overview at Commission level, the DGs' estimated overall risk at payment, estimated future corrections and risk at closure are consolidated in the AMPR.

Table 2 : Estimated risk at payment and at closure (amounts in EUR million)

DG Climate Action	Relevant expenditure	Estimated risk (error rate %) *at payment*		Estimated future corrections and deductions		Estimated risk (error rate %) *at closure*	
(1)	*(2)*	*(3)*		*(4)*		*(5)*	
	m EUR	*m EUR*	*%*	*m EUR*	*%*	*m EUR*	*%*
Procurement Contracts	21.01	0.00-0.03	0.00%-0.15%	0	0%	0.00-0.03	0.00%-0.15%
Contributions Agreement	4.36	0.00-0.01	0.00%-0.15%	0	0%	0.00-0.01	0.00%-0.15%
Delegation Agreement	5.27	0.00-0.01	0.00%-0.15%	0	0%	0.00-0.01	0.00%-0.15%
Grants	0.50	0.00-0.00	0.00%-0.50%	0	0%	0.00-0.00	0.00%-0.50%
Others[52]	4.93	0.00-0.02	0.00%-0.15%	0	0%	0.00-0.02	0.00%-0.05%
Total DG	**36.07 m EUR**	***0.00-0.06 m EUR***	***0.00-0.15%***	***0 m EUR***	***0%***	***0.00-0.06 m EUR***	***0.00-0.15%***

The full detailed version of the table is provided in Annex 9.

b) Fraud prevention, detection and correction

DG Climate Action has developed and implemented its own anti-fraud strategy since 2013, on the basis of the methodology provided by OLAF. It is updated every 3 to 4 years. It was last updated in July 2021 covering the 2021-2024 period. Until the official adoption of the revised anti-fraud strategy 2021-2024, the 2016 one was still in effect.

All the actions within this strategy relating mostly to fraud prevention (awareness rising about the reporting of irregularity (whistleblowing)), fraud detection (systematic inclusion of red flags in the check-lists) and fraud investigation (introduction of appriopriate anti-fraud clauses in the legal acts) continue to be applied during 2021. The above actions among others

[52] Mainly administative arrangements

contribute to the implementation of the 2019 Commission Anti-Fraud Strategy. The implementation of the new strategy is being monitored and reported to management on an annual basis.

The results achieved during the year thanks to the anti-fraud measures in place can be summarised as follows:

The ex-ante controls performed – did not identify any cases of fraud or potential fraud. There was no significant weakness to be handled and there were no OLAF financial recommendations to be addressed. During 2021, no fraud case in the climate area was reported by either DG Climate Action or OLAF.

On the basis of the available information, DG Climate Action has reasonable assurance that the anti-fraud measures in place are effective.

c) Other control objectives: safeguarding of assets and information, reliability of reporting (if applicable)

DG Climate Action is responsible for safeguarding the accuracy, integrity and reliability of relevant market sensitive data managed by the system as the business owner and manager of the Union Registry.

As a result, DG Climate Action handles EU ETS sensitive information on a daily basis. In order to ensure a coherent protection of this sensitive non-classified (SNC) information, DG Climate Action developed the ETS Classification policy. The markings developed through this policy were adopted in 2014 by DG HR-DS and used until 2019 when the classification levels and markings for SNC data were reviewed by corporate services.

Following this revision, DG Climate Action updated its internal policy for handling SNC documents, covering the use of the new Commission-wide applicable markings (sensitive and special handling). Furthermore, DG Climate Action has organised regular training sessions for its staff on this new policy, has implemented IT security measures and action plans to secure and protect data, and has established an internal advisory group at Director General level for security matters.

No leaks/breaches of confidential data or violations of data integrity were reported in 2021.

As regards the delegation of the implementation of the contribution agreements of the PF4EE financial instrument as well as monetisation of the ETS allowances and the management of the revenues of the Innovation Fund to the European Investment Bank ("indirect management"), DG Climate Action has received reasonable assurance from the EIB that in all material respects, the information set out in the Financial Statements is in accordance with the accounting standards, is complete and accurate, and that the EIB applies a professional degree of care and diligence to the execution of the tasks entrusted to it in the Delegation Agreement.

According to the assessment done during the accounting closure, there was no impairment of intangible assets in DG Climate Action in 2021.

2. *Efficiency of controls*

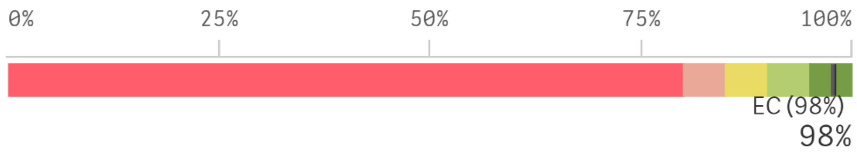
The assessment by management is based on the results of key controls performed in 2021, notably ex-ante controls and controls during implementation. The financial circuits put in place in DG Climate Action are proportionate, based on a thorough risk assessment and reflect the financial environment, the organisational capacity and an analysis of the budget implementation.

Table 3: Key control indicators

Output indicators (controls during project implementation)	2021	2020	2019
Procurement: number of procurement files reviewed by CPAC	5	6	13
Procurement: number of negative opinions by CPAC	0	0	0
Number of exceptions/non-compliance events registered (ICS 8)	1	3	1
Number of European Ombudsman cases	0	0	0
Number of OLAF cases	0	0	0

DG Climate action's **timely payments indicator** (i.e. payment accepted amount on time/ payment accepted amount in EUR), as presented below, shows that the vast majority of payments were made on time. Specifically, 98% of payments were processed in the due time. This value is aligned with the Commission score of 98%.

Figure 3: Timely payments indicator

Timely Payments	CLIMA Score	EC Score
	**98%**	**98%**

In addition, for the grant management, the time-to-inform and time-to-grant indicators were calculated. The time-to-inform was of 119 days and time-to-grant 254 days. It is to be underlined that the above calculation was performed on the only 3 grants signed by DG Climate Action in 2021. The time-to-inform indicator was met, well below the target. The time-to-grant was above the objective. The signature of the grants took considerable time, among others reasons because of the nature of the action, which required extensive guidance to the future beneficiaries. However, it has to be stressed that the delay did not harm the timely grant implementation.

3. *Economy of controls*

Based on an assessment of the most relevant key indicators and control results, DG Climate Action has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion. This section outlines the indicators used to monitor the efficiency of the control systems, including an overall assessment of the costs and benefits of controls (see Annex 7 for details).

Procurement – cost of controls

The overall cost of controls for procurement amounts to EUR 815 025 (3.8% of funds managed, compared to 4.7% in year 2020).

Grants – cost of controls

The overall cost of controls for grants amounts to EUR 57 372 (4,36% of funds managed, compared to 4.1% in year 2020).

Indirect Management and Others[53] (cost of controls)

The overall cost of controls for indirect management amounts to EUR 127 536 (1,25% of funds managed, compared to 1.0% in year 2020).

All amounts above encompass the costs from both the financial and the operational units. For indirect management the cost above does not include the management fees charged by the EIB.

4. *Conclusion on the cost-effectiveness of controls*

Overall, during the reporting year, the controls carried out by DG Climate Action for the management of funds were cost effective, as the cumulative cost of controls (EUR 999 933,00 for procurement, grants, indirect management and administrative arrangements) as a percentage of the budget managed (EUR 32 512 164,70) amounts to 3.08%, which is considered satisfactory as it is lower than in 2020 level of 3.20%.

Based on the most relevant key indicators and control results, DG Climate Action has assessed the effectiveness, efficiency and economy of its control system and reached a positive conclusion on the cost-effectiveness of the controls for which it is responsible.

[53] Mainly Administative Arrangements

2.1.2. Audit observations and recommendations

This section sets out the observations, opinions and conclusions reported by auditors – including the limited conclusion of the Internal Auditor on the state of internal control. Summaries of the management measures taken in response to the audit recommendations are also included, together with an assessment of the likely material impact of the findings on the achievement of the internal control objectives, and therefore on management's assurance.

Internal Audit Service (IAS)

The status of IAS audits in DG Climate Action by the end of 2021 is as follows:

In September 2020, the IAS launched the multi-DG audit on DG ENV and DG CLIMA relations with decentralised agencies; where the adequacy of the working arrangements and the communication channels between DG Climate Action and the European Environment Agency (EEA) was assessed. There were two recommendations issued related to (i) coordination arrangements with the EEA (important), and (ii) the DGs oversight role in relation to the EEA resources (very important)[54]. An action plan has been elaborated in cooperation with DG ENV in order to address both recommendations by the end of 2022.

The Internal Auditor of the Commission has stated in his conclusion on the state of internal control in DG Climate Action in 2021 that, based on the work done and the available information, the internal control systems in place for the audited processes are effective, except for the 'very important' recommendation on the DG's oversight role in relation to the EEA resources (explained in section 2.1.2 above and in Annex 7). A joint-action plan has been agreed with a target for completion by end of 2022.

2.1.3. Assessment of the effectiveness of internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, to ensure the achievement of its policy and management objectives. Compliance with the internal control framework is a compulsory requirement.

DG Climate Action uses the organisational structure and the internal control systems suited to achieving its policy and internal control objectives in accordance with the internal control principles and has due regard to the risks associated with the environment in which it operates.

In 2021, DG Climate Action continued with the efforts made towards improving the performance of internal control principles. The annual assessment of the state of internal control in DG Climate Action was carried out in accordance with the methodology established by DG BUDG in the "Implementation Guide of the Internal Control framework of the Commission". In addition, an internal control survey was launched at the end of 2021, which

[54] See Annex 7 for more details on the IAS recommendation regarding DG CLIMA's oversight role in relation to the EEA resources.

was addressed to the management of the DG. The results of the survey are used for the assessment of the state of Internal Control Framework of the DG.

The assessment of the new Internal Control Framework has not identified any major deficiencies. While there is scope for improvement in some areas, DG Climate Action is confident that its internal control system as a whole, covering both financial and non-financial activities, is effective. DG Climate Action has the necessary procedures, staff skills and experience to identify and manage the main operational, financial and legal/regulatory risks.

DG Climate Action has assessed its internal control system and has concluded that it is effective and the components and principles are present and functioning well overall. Nonetheless, some improvements are needed, as minor deficiencies were identified related to proper filing and documentation of procedures followed.[55]

2.1.4. Conclusions on the assurance

The information reported in Section 2.1 stems from the results of management and auditor monitoring contained in the reports listed above. These reports result from a systematic analysis of the evidence available.

Concerning financial management (mainly procurement), the AOD's assurance relies to a large extent on **the ex-ante verifications performed in 2021**, namely the mandatory controls of all commitments and payments in the financial circuit, the advice by procurement experts in the financial unit, and the reviews performed by the Climate Procurement Advisory Committee **(CPAC).** These controls effectively reduce to an acceptable level the risk of significant errors being undetected. In addition, **the accounting controls performed** by the accounting correspondent in 2021 in the frame of the accounting revision file also mitigate the risk of errors. These results confirm the high level of accounting quality and provide reasonable assurance on the reliability of the financial statements and accounts.

DG Climate Action is satisfied with the close cooperation with the Executive Agency CINEA and with the internal control and risk management in place in the agency. Under the new MFF the agency was entrusted with the implementation of not only the LIFE programme, but also the Innovation Fund and Horizon Europe programme. Following this change the governance structure was updated and the DG has now a seat in the agency's Steering Committee as parent DG. In addition, meetings are held regularly at unit level. DG Climate Action supervises the work externalised through regular reports and ad hoc contacts with the Agency. In addition, in collaboration with other parent DGs, DG Climate Action plays a direct role in the definition of the annual work programme of the agency and/or evaluation of the calls for proposals. Finally, the agency produces and disseminates reports as foreseen in the Memorandum of Understanding. In its own AAR, CINEA has given assurance on the use of the corresponding resources and on the output indicators.

[55] It concerns the Internal Control Principle 13 (uses relevant information), which will be tackled in 2022

This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a comprehensive coverage of the budget delegated to the Director-General of DG Climate Action.

The Director General can therefore provide the reasonable assurance in his Declaration with one reservation related to the security and protection of the emission trading system against cyberattacks. Concerning this reservation, as the situation stands, the residual risks are still unacceptable from a business viewpoint. Since assurance cannot be reasonably provided that the current security measures could successfully prevent a future cyber-attack, the reservation cannot be lifted.

Table 4: Recapitulative Table

Reservation Title	Financial Impact (in m EUR)		Residual error rate 2021*	Evolution
	2020	2021		
Reputational, financial and legal grounds of the EU ETS	-	-	N/A	Maintained

Overall Conclusion

In conclusion, based on the elements reported above, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director General, in his capacity as Authorising Officer by Delegation, has signed the Declaration of Assurance; albeit qualified by a reservation concerning the security of the EU ETS IT system.

2.1.5. Declaration of Assurance and reservations

Declaration of Assurance

I, the undersigned,

Director-General of DG Climate Action

In my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view[56].

That I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

(1) the legality and regularity of the underlying transactions and

(2) the implementation of Article 22(5) of the Regulation on the proportionate reduction of the support under the RRF and recovery of any amount due to the Union budget or the request for early repayment of the loan, in cases of fraud, corruption, and conflicts of interests affecting the financial interests of the Union that have not been corrected by the Member State, or a serious breach of an obligation resulting from the agreements referred to in Article 15(2) and 23(1) of the RRF Regulation.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Service and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the Commission.

However, the following reservations should be noted: Reservation on reputational/legal/financial grounds related to remaining significant security weakness identified in the Union Registry of the Emissions Trading System (EU ETS). More details are provided in Annex 9.

Brussels, date 31 March 2022

(e-signed)

Mauro PETRICCIONE

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[56] True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG.

2.2. Modern and efficient administration – other aspects

2.2.1. Human resource management

The COVID-19 pandemic and the institutionalised teleworking from home persisted in 2021, with only some periods of progressive return to the office. In this context, staff was confronted with an evolving work setting, offering some more possibilities of social contact, but also with a recurrent uncertainty dictated by the national sanitary situation. As in 2020, the DG took an active role in communicating the COVID related information, the specific working arrangements and related actions to its staff.

Tools and methods were adapted and staff got more acquainted with them. Staff and management made extensive use of virtual tools to ensure effective communication and a positive team spirit. An extensive survey on resilience and wellbeing was organised with an external consultant. The conclusions will feed into the local HR Strategy.

In order to better align the structure of the DG with its objectives under the Green Deal , DG Climate Action underwent an **in-depth reorganisation**, which took effect on 16 January 2022. This reorganisation was implemented with existing staff resources, including the very limited reinforcement of 34 additional posts in 2021, implementing all possible efficiency gains[57]. Additionally, DG Climate Action is preparing to move to another EC building in town into dynamic collaborative space (DCS). This move has required an intense preparation in 2021, which continues in 2022.

To ensure transparency and inclusiveness of both these change processes, staff and managers were involved and kept informed in different fora, ranging from brainstorming and information meetings to virtual all staff ("town hall") meetings convened at the initiative of the Director General and the HRBC.

While the reinforcements received in 2021 have started to address a number of urgencies and to mitigate the imbalance between staff and workload, proper staffing remained critical. Consequently, DG Climate Action staff remains strained.

In the field of equal opportunities, DG Climate Action has progressed towards a balance in terms of **women in middle management (i.e. 42%)** and has reached the 2022 target of one additional appointment of a woman to middle management positions. The DG supported talented women for future management posts, for example by encouraging its staff to participate in the Female Talent Development Program or by favouring the appointment of talented women as Deputy Heads of Unit. In 2021, before the reorganisation, women held

[57] E.g. by concentrating in one single unit the supervision of climate-related programmes, such as LIFE, the Innovation Fund and cluster 5 of Horizon Europe ('Climate, energy and mobility'), delegated to the European Climate, Infrastructure and Environment Executive Agency (CINEA).

60% of Senior Management level positions (3 out of 5[58]), and DG Climate Action appointed two women (out of three) as Deputies to the Director.

2.2.2. Digital transformation and information management

As the COVID-19 pandemic continued during 2021, forcing most of DG Climate Action's staff to remain teleworking, the **digital transformation** continued to evolve; digitalising all administrative processes that are now paperless[59]. Internal coordination activities and meetings with external participants took place using corporate video conferencing and collaborative IT tools such as Microsoft Teams, Skype, Webex, Commission Wikis, Sharepoint sites for collaborative editing, etc. For internal management, administrative processes such as financial transactions are fully implemented in electronic workflows.

DG Climate Action develops and operates Information Systems of a sensitive nature. The systems' high confidentiality, integrity and availability requirements limit DG Climate Action's ability to meet, in full, all of the 11 core principles defined by the **EC Digital Strategy**. In 2021, most of the advances relate to "security" and "privacy" principles as a result of the progress in the implementation of the Union Registry security plan that increased the resilience against cyberattacks and enhanced privacy controls on the prime system underpinning the EU Emissions Trading Scheme. Other developments increased our systems' scoring in the "digital by default" principle by enabling the use of Qualified Electronic Signatures (QES) between systems and with Member States. As regards the principle of "data driven", DG Climate Action continued developing its internal capacity for data analytics, adding data warehouse systems to respond to the continued internal and external demand for EU ETS data.

In the field of **data, information and knowledge management**, DG Climate Action progressed in implementing the principles of "Data governance and data policies at the European Commission" to its key data assets. A ninth key data asset, "CO_2 emissions and other compliance data of new heavy duty vehicles" was added to the corporate data inventory. Metadata for other key data assets were also updated based on a clearer scope delineation with Eurostat's inventory of other statistics. Progress is reflected in an increase of the progress indicator to 64%. In view of improving the documentation of data-related processes, several contributions were made to the new corporate guidelines on data quality, also involving the European Environment Agency as key data steward for DG Climate Action.

As for compliance with **Personal Data Protection** rules, 2021 was especially marked by a risk-based in-depth review of all existing processing activities, procedures, and approaches; and the implementation of the complex personal data protection aspects of the Climate Pact; resulting in a dedicated data protection record. In all this, particular attention was given to the correct application of the bases for lawfulness, of data minimisation, storage limitation and

[58] On 31/12/2021, there were 7 management posts, with 5 Senior managers appointed

[59] Including electronic workflows in ARES for financial transactions validated via the Qualified Electronic Signature (QES).

the obligations stemming from the use or processing contractors. In 2021, no data breaches were reported touching on DG Climate Action's processing activities, nor did the stocktaking of data processing agreements involving transfers of personal data to non-EU/EEA countries yield any positive results.

2.2.3. Sound environmental management

DG Climate Action is fully committed to the Commission's objectives to reduce its environmental impact as an institution and as an employer, and to become climate-neutral by 2030. The DG took a **central role in the Commission's "Greening the Commission Focus Group"** that prepared the Commission's climate neutrality action plan (in the form of a "Greening the Commission Communication", planned for adoption in the first quarter of 2022. DG Climate Action contributed with its special expertise in particular on an evidence-based narrative that also acknowledges data gaps, on a corporate policy for procurement of carbon removals, on the comparability of corporate GHG efforts with EU-wide reductions as identified in the 2030 Climate Target Plan, and on the avoidance of "carbon leakage" to home offices.

Because most staff also teleworked in 2021, in line with the COVID-19 measures, and because DG Climate Action will soon move to a new building anyway; EMAS actions and measures at the office workplaces were less pronounced (apart from our participation in the end-of-year energy saving action 'BEST'), but DG Climate Action inspired Commission-wide awareness-raising actions on how to reduce the climate and environmental impact in the home office.

Almost all our meetings and events in 2021 were virtual, thus significantly reducing GHG emissions from business travels. Also, DG Climate Action staff gave priority to travelling by train to the Glasgow climate summit COP26.

Electronically signed on 05/04/2022 12:51 (UTC+02) in accordance with Article 11 of Commission Decision (EU) 2021/2121