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Subject: Submission to the UNFCCC on behalf of the European Union and its Member States on the update of the nationally determined contribution of the European Union and its Member States

Delegations will find in the Annex the Submission on the abovementioned subject, as approved by the Council at its 3782nd meeting held on 17 December 2020.

**SUBMISSION BY GERMANY AND THE EUROPEAN COMMISSION ON BEHALF OF
THE EUROPEAN UNION AND ITS MEMBER STATES**

Berlin, 17 December 2020

Subject: The update of the nationally determined contribution of the European Union and its Member States

This submission consists of three parts: the Introduction, the updated and enhanced Nationally Determined Contribution (NDC) and the Information provided to facilitate clarity, transparency and understanding (ICTU) of the NDC.

I. INTRODUCTION

Background on the development of the EU's enhanced NDC

1. The European Union and its Member States submitted their intended nationally determined contribution (INDC) on 6 March 2015, together with an annex containing quantifiable and qualitative information on the INDC, in line with decisions taken at the 20th session of the Conference of the Parties (COP) in Lima.
2. The EU's INDC became its NDC when the EU ratified the Paris Agreement in October 2016.
3. In December 2019, the European Council (heads of state or government of the EU Member States, the European Council President and the President of the European Commission) endorsed the objective of achieving a climate-neutral EU by 2050, in line with the Paris Agreement¹. On 5 March 2020, the Council of the European Union adopted a long-term low greenhouse gas emission development strategy of the EU and its Member States, reflecting this climate neutrality objective and submitted this to the UNFCCC Secretariat.²

¹ European Council conclusions 12 December, 2019, EUCO 29/19

² The EU long-term strategy, reflecting the climate neutrality objective is available on the UNFCCC website: <https://unfccc.int/process/the-paris-agreement/long-term-strategies>

4. In July 2020, the European Council agreed that "the exceptional nature of the economic and social situation due to the COVID-19 crisis requires exceptional measures to support the recovery and resilience of the economies of the Member States. The plan for European recovery will need massive public and private investment at European level to set the Union firmly on the path to a sustainable and resilient recovery, creating jobs and repairing the immediate damage caused by the COVID-19 pandemic whilst supporting the Union's green and digital priorities."³
5. At the same meeting, EU leaders agreed that the EU budget (the Multiannual Financial Framework for 2021-2027 (MFF)), reinforced by a European Union recovery instrument referred to as the Next Generation EU (NGEU), will be the main European tool for this effort. "Climate action will be mainstreamed in policies and programmes financed under the MFF and NGEU. An overall climate target of 30% will apply to the total amount of expenditure from the MFF and NGEU and be reflected in appropriate targets in sectoral legislation. They shall comply with the objective of EU climate neutrality by 2050 and contribute to achieving the Union's new 2030 climate targets, which will be updated by the end of the year. As a general principle, all EU expenditure should be consistent with Paris Agreement objectives."³
6. EU leaders agreed further that "EU expenditure should be consistent with [...] the "do no harm" principle of the European Green Deal. An effective methodology for monitoring climate-spending and its performance, including reporting and relevant measures in case of insufficient progress, should ensure that the next MFF as a whole contributes to the implementation of the Paris Agreement. The Commission shall report annually on climate expenditure."³

³ European Council conclusions 17-21 July, 2020, EUCO 10/20

7. EU leaders agreed further that “in order to address the social and economic consequences of the objective of reaching climate neutrality by 2050 and the Union's new 2030 climate target, a Just Transition Mechanism, including a Just Transition Fund, will be created.”³
8. In this context, on 11 December 2020 the European Council endorsed a new, significantly more ambitious EU climate target for 2030.
9. Following the Withdrawal Agreement between the EU and the UK, and the Transition Period that will end on 31 December 2020, the United Kingdom will no longer be part of the European Union NDC from that date. Whereas the EU's original NDC submission was applicable also to the United Kingdom, this update is applicable to the EU and its 27 Member States.
10. With this submission, the EU updates and enhances its NDC in good time for COP26, and at the same time it prepares for implementing its *Next Generation EU* plan for sustainable and resilient recovery from the COVID-19 crisis. Ambitious climate action is not just a way to confront the climate crisis and the biodiversity crisis, but is also a growth strategy that is a winning strategy, not just for Europe itself but also globally. As the Council of the European Union has highlighted, nature-based solutions play an important role to solve global challenges such as biodiversity loss and ecosystems degradation, poverty, hunger, health, water scarcity and drought, gender inequality, disaster risk reduction and climate change.⁴

⁴ Council Conclusions 19 December 2019, 15272/19

Information on how the EU has taken action to implement its initial NDC since ratifying the Paris Agreement

11. Since ratifying the Paris Agreement, the EU has enacted an ambitious, binding, legislative framework to deliver on its initial NDC. The combined effect of the EU policies currently in force under this framework will deliver at least the reductions pledged in the EU's initial NDC.
12. The main domestic policies adopted since ratifying the Paris Agreement are summarised in the following paragraphs. Further details on policies relevant to the implementation of the NDC are provided in the ICTU set out in the annex to this submission.
13. These policies will be reviewed in light of the enhanced NDC set out in Section II, and the ICTU will be revised accordingly.
14. Emissions reduction targets under current EU legislation are divided between the sectors covered by the EU Emission Trading System (EU ETS), non-ETS sectors under the Effort Sharing Regulation (ESR), and land-use related emissions and removals addressed by the regulation on emissions and removals from land use, land use change and forestry (LULUCF).
15. The EU ETS, which has been operational since 2005, puts a price on carbon by setting a cap on the maximum number of emission allowances. While the majority of emission allowances are auctioned, sectors at risk of carbon leakage receive a share of their allowances for free, based on benchmarks that reward the most efficient installations in each sector.

16. To deliver on its initial NDC, the EU has reviewed and amended its legislation regarding the EU ETS⁵. This will accelerate the annual decreases in the cap from 1.74 % to 2.2 % from 2021 onwards and will also apply in respect of aviation. A new Market Stability Reserve within the ETS is addressing any build-up of surpluses that would undermine the orderly functioning of the EU ETS market, and allowances held in the reserve above a certain level shall, from 2023, no longer be valid.
17. Under the ESR, the EU has agreed legislation that sets individual binding targets for Member States for greenhouse gas emissions not covered by the EU ETS.⁶ The targets are differentiated in order to address fairness and take into account cost efficiency.
18. Emissions from aviation are currently addressed by EU legislation and will be partially addressed by international measures under ICAO. Emissions from aviation are included in the EU ETS; however, currently, the scope of the EU ETS is limited to flights within the European Economic Area.
19. The EU also adopted a new regulation on greenhouse gas emissions and removals from LULUCF⁷ that sets a binding commitment for each Member State to ensure that accounted emissions from land use are at a minimum compensated by an equivalent accounted removal of CO₂ from the atmosphere through action in the sector.

⁵ Directive (EU) 2018/410 of the European Parliament and of the Council of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814

⁶ Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013

⁷ Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU

20. Furthermore, ambitious targets for improving energy efficiency and for increasing renewables in the EU energy mix have been agreed. The efficiency of the EU's final and primary energy consumption will be improved by at least 32.5% by 2030 as compared to an historic baseline.⁸ A new target for increasing renewable energy in final energy consumption has been set to reach at least 32% by 2030⁹, which will represent almost a doubling from 2017 levels.¹⁰ These targets lead to greater greenhouse gas emissions reductions than previously foreseen.
21. New, binding targets will reduce CO₂ emissions from road transport. CO₂ emissions per kilometre from passenger cars sold in the EU must be reduced, on average by 37.5% from 2021 levels by 2030, and new vans on average by 31% from 2021 levels by 2030.¹¹ CO₂ emissions per kilometre from new large lorries must be reduced on average by 30% from 2019/2020 reference period levels. As part of a mandated review in 2022, targets may be revised and/or extended to smaller lorries, buses, coaches and trailers.¹²

⁸ Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency

⁹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources

¹⁰ In 2017, the EU reached a share of 17.52% of renewable energy as per European Commission Renewable Energy Progress Report 2019 (COM(2019) 225 final)

¹¹ Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO₂ emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011.

¹² Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC

22. Progress has been made in further reducing emissions of non- CO₂ greenhouse gases as well. Waste legislation was reviewed, tightening landfilling and recycling targets and increasing the circularity of the EU economy.¹³ EU fossil fuel production and consumption will continue to decrease, resulting in fewer associated fugitive non-CO₂ emissions.
23. In preparation for the implementation of the Kigali Amendment to the Montreal Protocol on Ozone Depleting Substances, the EU enacted, in 2015, regulations that will reduce emissions from F-gas emissions by 66% by 2030 compared with 2014 levels. This is achieved by limiting the total sales of the most important F-gases, banning the use of F-gases in many new types of equipment, and preventing emissions of F-gases from existing equipment.¹⁴
24. The Regulation on the Governance of the Energy Union and Climate Action¹⁵ improves the governance of EU climate and energy policy by putting in place a reliable EU-wide reporting and monitoring framework for the period 2021 to 2030. Member States have prepared Integrated National Energy and Climate Plans for the period 2021 to 2030 that include their national contributions to achieve the combined energy and climate targets as well as related commitments under the Paris Agreement.

¹³ Directive (EU) 2018/850, Directive (EU) 2018/851, Directive (EU) 2018/852 requiring for instance that by 2030, 70% of all packaging waste and, by 2035, 65% of municipal waste should be recycled, while reducing landfilling of municipal waste to 10%.

¹⁴ Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

¹⁵ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council

25. Combined, these policies will deliver by 2030 an at least 40% reduction in greenhouse gas emissions as compared to 1990 levels.¹⁶
26. The European Council, on 11 December 2020, invited the Commission to assess how all economic sectors can best contribute to the 2030 target and to make the necessary proposals. As part of the European Green Deal, a new EU Strategy on Adaptation to Climate Change will also be presented by the European Commission in 2021.

II. NATIONALLY DETERMINED CONTRIBUTION (NDC)

27. The EU and its Member States wish to communicate the following NDC. The EU and its Member States, acting jointly, are committed to a binding target of a net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990.
This NDC and accompanying information contained in the Annex replaces the 6 March 2015 submission of the EU and its Member States contained in the UNFCCC interim NDC registry and will, as of the date of the receipt of this submission by the Secretariat, be considered to be the current NDC maintained by the EU and its Member States under Article 4 of the Paris Agreement.

III. INFORMATION NECESSARY FOR CLARITY, TRANSPARENCY AND UNDERSTANDING (ICTU) OF THE EU NDC

28. In 2018, in Katowice, at the conclusion of the first session of the COP serving as the meeting of the Parties to the Paris Agreement (CMA1), Parties adopted guidance on information necessary for clarity, transparency and understanding as applicable to their NDCs, and strongly encouraged Parties to provide this information in relation to their first NDC, including when updating or communicating it by 2020.

¹⁶ An EU-wide assessment of National Energy and Climate Plans. European Commission COM(2020) 564

29. The Annex to this submission updates the information provided by the EU and its Member States together with its INDC. It describes EU policies that have been agreed since the EU's ratification of the Paris Agreement and are in force at the time of this submission. This information will be revised in light of the enhanced NDC set out in Section II, and subsequent EU policies adopted to achieve that NDC.
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INFORMATION TO FACILITATE CLARITY, TRANSPARENCY AND UNDERSTANDING OF THE UPDATED NATIONALLY DETERMINED CONTRIBUTION OF THE EUROPEAN UNION AND ITS MEMBER STATES FOR THE TIMEFRAME 2021-2030

Information necessary for clarity, transparency and understanding of the EU NDC

Para Guidance provided by CMA I

ICTU applicable to the EU's NDC

1 Quantifiable information on the reference point (including, as appropriate, a base year):

(a)	Reference year(s), base year(s), reference period(s) or other starting point(s);	1990
(b)	Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year;	Quantification of the reference indicator will be based on national totals reported in the National Inventory Report by the European Union, and may be updated due to methodological improvements to the GHG inventory.
(c)	For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;	Not applicable
(d)	Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;	Economy-wide net domestic reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990.
(e)	Information on sources of data used in quantifying the reference point(s);	Quantification of the reference indicator will be based on data reported in the National Inventory Report by the European Union.
(f)	Information on the circumstances under which the Party may update the values of the reference indicators.	Values may be updated due to methodological improvements to the GHG inventory.

Time frames and/or periods for implementation:

- (a) Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA);

01 January 2021 – 31 December 2030

- (b) Whether it is a single-year or multi-year target, as applicable.

Single year target, 2030

3 Scope and coverage:

- (a) General description of the target;

The target is an economy-wide net reduction from base year emissions, of at least 55% greenhouse gas reductions, without contribution from international credits.

Geographical scope: EU and its Member States (Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden)¹

The following information in this section is subject to revision in light of the enhanced target. Legislation adopted by the EU to date sets out how the EU and its Member States shall be responsible for achieving a greenhouse gas emissions reduction of at least 40% across the different sectors of the economy. This legislation includes:

Directive (EU) 2003/87/EC as last amended by Directive 2018/410 on reductions to be achieved in the sectors covered by the EU emissions trading system;

Regulation (EU) 2018/ 842 regarding individual binding targets for Member States greenhouse gas emissions outside the EU emissions trading system scope;

Regulation (EU) 2018/841 on the inclusion and accounting of greenhouse

¹ Including EU outermost regions (Guadeloupe, French Guiana, Martinique, Mayotte, Reunion, Saint Martin (France), Canary Islands (Spain), Azores and Madeira (Portugal))

gas emissions and removals from land use, land use change and forestry in the EU framework.

Additional legislation and mitigation measures, at EU level and in Member States, contribute to the reductions needed to meet this target. Examples at EU level are given in section 4 a i (domestic institutional arrangements).

(b) Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;

Further details will be provided in accordance with IPCC guidelines in the Biennial Transparency Reports by the European Union,

Sectors covered:
Energy

Under the initial NDC, civil aviation is included, calculated including emissions from outgoing flights that start in the EU, on the basis of fuels sold in the EU. This information is subject to revision in light of the enhanced target.

Under the initial NDC, domestic waterborne navigation is included as in the GHG inventories. This information is subject to revision in light of the enhanced target.

Other energy sub-sectors are covered as in GHG inventories

Industrial processes and product use (as in GHG inventories)

Agriculture (as in GHG inventories)

Waste (as in GHG inventories)

Land Use, Land Use Change and Forestry (LULUCF) (see Section 5e for further information on this sector)

Gases:

Carbon Dioxide (CO₂)

Methane (CH₄)

Nitrous Oxide (N₂O)

Hydrofluorocarbons (HFCs)
 Perfluorocarbons (PFCs)
 Sulphur hexafluoride ((SF₆)
 Nitrogen trifluoride (NF₃)

Since the EU NDC is economy-wide, it complies with this provision.

(c) How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21; (indicating how the Party is striving to include all sources and sinks, and why any categories are excluded)

(d) Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans.

N/A

4 Planning processes:

(a) Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:

(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;

The enhanced target is based on an extensive impact assessment², as well as stakeholder input, collected via public consultation³.

Legislation and institutional arrangements adopted to date by the EU are summarised below. The following information in this section is subject to revision in light of the enhanced target. In keeping with EU legislative procedure, all legislative acts are subject to a public consultation, before adoption by the Council of the European Union and European Parliament.

The governance arrangements, planning and monitoring mechanisms are set out in Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action and the European Climate Law⁴. This includes an enhanced governance system related to integrated planning, reporting and monitoring in climate and energy policy fields, including

² Staff Working Document SWD (2020) 176

³ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12265-2030-Climate-Target-Plan/public-consultation>

⁴ Amended proposal for a Regulation of the European Parliament and of the Council on establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law). COM(2020) 563 (currently undergoing the EU internal legislative process)

with respect to climate and energy targets, policies, measures and projections, and provisions for multi-level public participation as well as public consultations to be held by Member States in the preparation of the integrated national energy and climate plans that implement their policy targets up to 2030.

These legal acts include review clauses in line with the five-year-cycle under the Paris Agreement.

The EU has adopted a comprehensive set of domestic legally-binding legislation implementing all aspects of the EU's initial NDC to achieve at least 40% GHG reduction. The key pieces of legislation are those mentioned in Section 3a concerning the EU emissions trading system, binding targets for Member States and LULUCF.

Other legislation has been revised and strengthened to contribute to the achievement of the initial NDC target including Directives (EU) 2018/2001 and 2018/2002 on renewable energy and energy efficiency, Directive (EU) 2018/844 on energy performance of buildings, Regulations (EU) 2019/631 and (EU) 2019/1242 setting CO₂ emission standards for new passenger cars, light commercial and heavy-duty vehicles, Directive (EU) 2019/1161 on the promotion of clean and energy-efficient road transport vehicles, Directives (EU) 2018/850, 2018/851 and (EU) 2018/852 improving waste management and furthering a more circular economy, and Regulation (EU) No 517/2014 to reduce fluorinated greenhouse gases in the EU.

<p>(ii) Contextual matters, including, inter alia, as appropriate:</p> <p>a National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;</p> <p>b Best practices and experience related to the preparation of the nationally determined contribution;</p> <p>c Other contextual aspirations and priorities acknowledged when joining the Paris Agreement</p>	<p>The EU NDC is prepared in the context of the EU’s commitment to gender equality and cross-cutting priorities, as articulated in commitments such as:</p> <ul style="list-style-type: none"> • the European Pact on Gender Equality⁵; • the commitment to create and maximise synergies between the social, environmental, and economic dimensions of sustainable development⁶; • the EU’s support for adoption of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)⁷; • integrating the dimensions of human rights and gender equality by Member States into their national plans, strategies under the EU Energy Union Governance Regulation⁸.
<p>(b) Specific information applicable to Parties, including regional economic integration organizations and their Member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;</p>	<p>The EU and its Member States hereby notify the secretariat of the intention to act jointly under article 4.2 of the Paris Agreement under the legislation set out in section 3(a) above, which describe how the EU and its Member States shall be responsible for achieving this NDC.</p> <p>The following information in this section is subject to revision in light of the enhanced target.</p> <p>The respective emissions reductions in force at time of this submission are as follows.</p> <ul style="list-style-type: none"> • Under Directive (EU) 2018/410 the EU Emissions Trading System: EU will reduce its emissions from the sectors covered by this legislation by 43% from 2005 levels by 2030; • Under Regulation (EU) 2018/842, each EU Member State will reduce

⁵ Council conclusions of 7 March 2011 on European Pact for Gender Equality (2011-2020)
⁶ Council conclusions of 9 April 2019, *Towards an ever more sustainable Union by 2030*
⁷ Council conclusions of 15 May 2017 on Indigenous Peoples
⁸ Regulation (EU) 2018/1999

its emissions from sectors outside the EU ETS from 2005 levels by 2030 in accordance with the following percentage: Belgium 35%, Bulgaria 0%, Czech Republic 14%, Denmark 39%, Germany 38%, Estonia 13%, Ireland 30%, Greece 16%, Spain 26%, France 37%, Croatia 7%, Italy 33%, Cyprus 24%, Latvia 6%, Lithuania 9%, Luxembourg 40%, Hungary 7%, Malta 19%, Netherlands 36%, Austria 36%, Poland 7%, Portugal 17%, Romania 2%, Slovenia 15%, Slovakia 12%, Finland 39%, Sweden 40%.

- Under Regulation (EU) 2018/841 on the inclusion and accounting of greenhouse gas emissions and removals from land use, land use change and forestry in the EU framework, for the periods from 2021 to 2025 and from 2026 to 2030, each Member State shall ensure that emissions do not exceed removals, calculated as the sum of total emissions and total removals on its territory in all of the land accounting categories combined, as accounted in accordance with this Regulation.

(c) How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;

Not applicable since Global Stocktake has not taken place.

- (d) Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on: Not applicable.
- (i) How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;
- (ii) Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries

5 Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:

- (a) Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA; Current approach is in accordance with methodologies and common metrics assessed by the IPCC (see 5(d), below). It is foreseen that, at the latest by 31 December 2024, the approach will be in accordance with the accounting guidance for NDCs contained in Annex II of decision 4/CMA.1.
- (b) Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution; Not applicable. EU NDC is an absolute, economy-wide reduction in greenhouse gas emissions.
- (c) If applicable, information on how the Party will take into account See 5 (d), below.

existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;

(d)	IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	Methodologies: IPCC Guidelines 2006.	Metrics: Global Warming Potential on a 100 timescale in accordance with IPCC's 5 th Assessment Report.
(e)	Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	Information in Section 5(e)(i-iii) and 5(f)(i) refers to the policy framework in force at the time of this submission. This is subject to revision in light of the enhanced target. The EU's LULUCF policy framework builds on IPCC guidance, TACCC principles and existing accounting rules, updating and improving them for the period from 2021 to 2030. The policy framework identifies net accounted emissions and removals, contributing to the aim of enhancing the EU's net land sinks in the long-term.	
(i)	Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	Member States may use provision for natural disturbances on afforested land and managed forest land as set out in Art 10 and Annex VI of Regulation (EU) 2018/841.	
(ii)	Approach used to account for emissions and removals from harvested wood products;	The EU uses the Production Approach as defined in IPCC Guidelines; see also Art 9 and Annex V of Regulation (EU) 2018/841.	
(iii)	Approach used to address the effects of age-class structure in forests;	Projected reference levels for Managed Forest Land (Forest Land remaining Forest Land) take into consideration age-class structure of forest so that changes in management practices are accounted; see also Art 8 and Annex IV of Regulation (EU) 2018/841.	
(f)	Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:	N/A	

- (i) How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;
- The following information in this section is subject to revision in light of the enhanced target.
- These elements of the EU's approach have been developed in accordance with IPCC 2006 guidelines for GHG inventories; consistent with decision 18/CMA.1
- Accounting for emissions and removals from LULUCF follows specific rules depending on the land accounting category in accordance with Regulation (EU) 2018/841. Afforested Land and Deforested Land use baseline zero (gross-net accounting). Managed Grassland, Managed Cropland and Managed Wetland use as baseline the average emissions between 2005 and 2009 (net-net accounting). Managed Forest Land uses as baseline a Forest Reference Level based on continuation of Forest Management Practices between 2000 and 2009 and taking into account the age-class structure of forests, projected through the compliance period. The mere presence of carbon stocks is excluded from accounting.
- LULUCF Categories:** Emissions and removals occurring on reported categories of forest land, cropland, grassland, and wetland, including land use change between these categories, and between these categories and settlements and other land.
- LULUCF Pools:** Above-ground biomass; Below-ground biomass; Litter; Dead wood; Soil organic carbon; Harvested wood products.

- (ii) For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable;

Not applicable. EU NDC is an absolute, economy-wide reduction in greenhouse gas emissions.

(iii) For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;

Not applicable. EU NDC includes only forcers covered by IPCC guidelines (see Section 3 b).

(iv) Further technical information, as necessary;

Not applicable.

(g) The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.

The EU's at least 55% net reduction target by 2030 is to be achieved through domestic measures only, without contribution from international credits.

Norway, Iceland and Liechtenstein have been participating in the EU ETS since 2008, and an agreement linking the EU and Swiss emissions trading systems entered into force in 2020. The EU is continuing to explore the possibilities to link the EU ETS with other mature and robust emissions trading systems.

The EU will account for its cooperation through the EU ETS with these and any other Parties in a manner consistent with the guidance adopted by CMAI and any further guidance agreed by the CMA.

6 How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:

(a) How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances;

The EU's enhanced NDC represents a significant progression beyond both its current undertaking of a 20% emissions reduction commitment by 2020 compared to 1990, and its NDC submitted at the time of ratifying the Paris Agreement. Both the initial NDC and this update require significantly higher emissions reductions than were projected as business as usual at the time of their adoption.

This will ensure the EU continues to be the most greenhouse gas efficient major economy.

The emissions in the EU Member States peaked in 1979.

By the end of 2019, the EU and its Member States have already reduced their emissions by around 26% on 1990 levels while GDP has grown by more than 64% over the same period.

As a result, average per capita emissions across the EU and its Member States have fallen from 12 tonnes CO₂-eq in 1990 to 8.3 tonnes CO₂-eq. This has also made the EU already today the most greenhouse gas efficient major economy⁹.

(b)	Fairness considerations, including reflecting on equity;	The IPCC Special Report on global warming of 1.5°C shows that pathways limiting warming to 1.5°C typically achieve net zero greenhouse gas emissions at global level in the second half of this century. This enhanced NDC is in line with the EU's agreed objective of achieving a climate-neutral EU by 2050. The EU therefore considers the enhanced NDC to be a fair contribution towards the global temperature goal of the Paris Agreement.†
(c)	How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	With this enhancement, the EU NDC represents a progression of ambition compared to both its 2020 commitment and its initial NDC submission. See 6a
(d)	How the Party has addressed Article 4, paragraph 4, of the Paris Agreement	The EU complies with this provision by having an economy-wide absolute target
(e)	How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	Not applicable, as applicable only to LDCs and Small Island Developing States

⁹ Historical data presented in this section refers to the 28 Member States of the EU up to 1 February 2020. Following the Withdrawal Agreement between the EU and the UK, and the Transition Period that will end on 31 December 2020, the UK contribution to the 2020 target will be reported up to the end of 2020. The most GHG efficient major economy finding is based on findings (for EU28) from den Elzen *et al.* (2019) Are the G20 economies making enough progress to meet their NDC targets? Energy Policy 126 <https://doi.org/10.1016/j.enpol.2018.11.027>.

7 How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:

- (a) How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2; The EU considers its enhanced NDC to be in line with the objective of the UNFCCC and long term goal of the UNFCCC Paris Agreement, as explained in 6a and 6b.
- (b) How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.
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