



**CO₂OL
DOWN**

Co-creating a common EU
vision of carbon removals

PROPOSAL TO REVISE

THE EU CLIMATE LAW

September 2024



TABLE OF CONTENTS

01

Introduction

03

Proposal to amend
the EU Climate Law

15

About the
Co2ol Down project

16

Co-creators
and supporters



INTRODUCTION

The European Union has started the process of establishing the bloc's post-2030 climate policy framework. After launching a [public consultation](#) in June 2023, the European Commission published a [communication](#) on the 2040 target, accompanied by an [impact assessment](#), in February 2024. The communication is the first step towards a legislative proposal in 2025 that will amend the European Climate Law, and to subsequent proposals that will operationalise the 2040 target within key EU climate policies (including the Emission Trading System, Effort Sharing and LULUCF regulations) in 2026.

If amendments to the EU Climate Law are to achieve climate neutrality and net negativity thereafter, then the roles and characteristics of emissions reduction, biogenic sequestration and permanent removals must be clarified.

As stated by the IPCC, rapid, deep and sustained emission reductions are needed for the planet to stay within the 1.5° or 2° temperature thresholds adopted by signatories of the Paris Agreement, including the European Union. As a concurrent measure, scientific analysis indicates that the deployment of carbon dioxide removals will be unavoidable in the pursuit of net negative CO₂ emissions.

In the near term, carbon removals can complement emissions reduction by lowering net emissions and counterbalancing residual emissions. However, the current approach to carbon removal methods inappropriately overlooks their differing characteristics and potentials. Further differentiation has to be made between biogenic sequestration and storage in natural sinks, which is vulnerable to natural and human disturbances and thus only has a temporary effect, and permanent removals, which in contrast can store carbon for at least several centuries.

The European Climate Law, as currently written, requires greenhouse gas emissions to be balanced with carbon dioxide removals by 2050. It explicitly mandates the EU institutions and the member states to “prioritise swift and predictable emissions reductions and, at the same time, enhance removals by natural sinks”. However, not only does the Climate Law not mention the different roles of biogenic sequestration by natural sinks and permanent removals, but it also fails to determine how much or which type of removals should be used to reach the net-zero target by 2050, or how much residual emissions will be allowed at that point.

In addition, with the exception of the LULUCF Regulation, which has set net targets for carbon sequestration in the land sector until 2030, there is currently no policy in place that has interpreted the potential benefits and trade-offs for carbon removal or sequestration. Introducing this approach across the EU’s climate legislation framework is essential to ensuring the bloc keeps on track to realise ambitious targets that drastically reduce emissions, while providing the regulatory space for the sustainable deployment of permanent removals and the protection of natural ecosystems.

The EU must take advantage of this opportunity to revise the European Climate Law to ensure that carbon removals are supplementary to emissions reductions and to clarify the different roles of permanent removals and biogenic sequestration. Accordingly, stakeholders representing academia, civil society and industry established the CO2ol Down project to co-create a proposal for a revision of the European Climate Law that would fulfil these aims.

The co-created proposal below contains textual suggestions to amend Articles 1-11 of the current [EU Climate Law](#). In particular, key amendments refer to:

- In **Article 2**, a clarification that permanent removals are needed to compensate for residual emissions and to reach climate neutrality, and the inclusion of a requirement to set net negativity and separate targets for emissions reduction, biogenic sequestration and permanent removals;
- A **new Article 4a** is suggested, which mandates the protection and enhancement of biogenic sequestration by natural sinks and clarifies its role;
- A **new Article 4b** is suggested, which elaborates on the role and targets for permanent removals.

Amendments to the text are written in bold and green (**new**), and deletions are written in strikethrough and purple (~~deleted~~)

PROPOSAL TO AMEND THE EU CLIMATE LAW

9.7.2021

EN

Official Journal of the European Union

L 243/1

I

(Legislative acts)

REGULATIONS

**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')**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

HAVE ADOPTED THIS REGULATION: [recitals]*

Article 1

Subject matter and scope

This Regulation establishes a framework for the **deep, rapid, sustained and** irreversible ~~and~~ ~~gradual~~ reduction of anthropogenic greenhouse gas emissions by sources **and the anthropogenic** enhancement of removals by sinks regulated in Union law.

This Regulation sets out a binding objective of climate neutrality in the Union **no later than** ~~by~~ 2050 in pursuit of the long-term temperature goal set out in point (a) of article 2(1) of the Paris agreement, and provides a framework for achieving progress in pursuit of the global adaptation goal established in article 7 of the Paris agreement. This Regulation also sets out a binding Union target of a net domestic reduction in greenhouse gas emissions for 2030.

This Regulation applies to anthropogenic emissions by sources and removals by sinks of the greenhouse gases listed in Part 2 of annex V to Regulation (EU) 2018/1999.

JUSTIFICATION

To strengthen the text, in alignment with the language used in IPCC recommendations from the AR6 WGIII report, stressing the need for “deep, rapid and sustained emissions reduction” to stay within the 1.5° or 2° temperature thresholds adopted by parties to the Paris Agreement.

Article 2

Climate-neutrality and net-negativity objectives

1 **Residual** Union-wide **anthropogenic** greenhouse gas emissions and **permanent** removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing **net** emissions to **net-zero** by that date, ~~and the Union shall aim to achieve negative emissions thereafter.~~

By 2030, the Union shall set a net negative emissions target to be reached by 2055 at the latest and lay down a path towards its achievement with intermediate targets in its nationally determined contributions (NDCs) under the Paris Agreement.

2 The relevant Union institutions and the Member States shall take the necessary measures at Union and national level, respectively, to enable the collective achievement of the climate-neutrality and **net-negativity** objectives set out in paragraph 1, taking into account the importance of promoting both fairness and solidarity among Member States and cost-effectiveness in achieving ~~these~~ objectives.

To ensure the transparency and accountability of the Union’s climate policies towards the climate-neutrality and net-negativity objectives set out in paragraph 1, the Union shall separate targets and trajectories for emissions reduction, net biogenic carbon sequestration by natural sinks and permanent carbon removals in every update of its nationally determined contributions.

JUSTIFICATION

To achieve climate neutrality, a drastic cut in emissions is needed. Permanent carbon dioxide removal, as defined in the CRCF, will be needed to compensate for residual emissions that are technically and socially hard to abate.

At the same time, the EU Climate Law should mandate the establishment of a clear pathway for setting the negative emissions target once net zero has been achieved in 2050. The Law should also better clarify the roles of biogenic carbon sequestration by natural sinks, as defined in the LULUCF, and permanent removals in the context of EU climate ambition by mandating the setting of targets and trajectories that are separate from emissions reduction targets in the Union nationally determined contributions under the Paris Agreement.

Article 3

Scientific advice on climate change

1 The European Scientific advisory Board on Climate Change established under article 10a of Regulation (EC) No 401/2009 (the ‘advisory Board’) shall serve as a point of reference for the Union on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise.

2 The tasks of the advisory Board shall include:

- (a) considering the latest scientific findings of the IPCC reports and scientific climate data, in particular with regard to information relevant to the Union;
- (b) delivering detailed 5-year carbon budgets to be set 10 years in advance, distinguishing between gross emissions reductions, net biogenic sequestration from natural sinks and permanent removals and taking account of any potential overshoot;**
- (c) providing scientific advice and issuing reports on existing and proposed Union measures, climate targets and indicative greenhouse gas budgets, and their coherence with the objectives of this Regulation and the Union’s international commitments under the Paris Agreement;
- (d) contributing to the exchange of independent scientific knowledge in the field of modelling, monitoring, promising research and innovation which contribute to reducing emissions or increasing removals;
- (e) identifying actions and opportunities needed to successfully achieve the Union climate targets;
- (f) raising awareness on climate change and its impacts, as well as stimulating dialogue and cooperation between scientific bodies within the Union, complementing existing work and efforts;
- (g) identifying areas in which further learning and research is required in order to achieve the Union’s targets.**

3 The advisory Board shall be guided in its work by the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies. It shall follow a fully transparent process and make its reports publicly available. It may take into account, where available, the work of the national climate advisory bodies referred to in paragraph 4.

4 In the context of enhancing the role of science in the field of climate policy, each Member State is invited to establish a national climate advisory body, responsible for providing expert scientific advice on climate policy to the relevant national authorities as prescribed by the Member State concerned. Where a Member State decides to establish such an advisory body, it shall inform the EEA thereof.

JUSTIFICATION

The ESABCC should suggest a detailed carbon budget every five years, distinguishing between gross emissions reductions, net biogenic sequestration, and permanent removals. This would help the Commission identify a clear trajectory towards climate neutrality and ensure intermediate targets are met.

Article 4

Intermediate Union climate targets

1 In order to reach the climate-neutrality objective set out in article 2(1), the binding Union 2030 climate target shall be a domestic reduction of net greenhouse gas emissions (emissions after deduction of ~~removals~~ **net biogenic sequestration by natural sinks**) by at least 55 % compared to 1990 levels by 2030.

When implementing the target referred to in the first subparagraph, **as well as any subsequent targets**, the relevant Union institutions and the Member States shall prioritise swift and predictable emission reductions and, **in addition at the same time**, enhance **biogenic carbon sequestration by protecting and restoring the Union's natural ecosystems and, at the same time, develop sustainable, permanent** removals. ~~by natural sinks.~~

In order to ensure that sufficient mitigation efforts are deployed up to 2030, for the purpose of this Regulation and without prejudice to the review of Union legislation referred to in paragraph 2, the contribution of net removals to the Union 2030 climate target shall be limited to 225 million tonnes of CO₂ equivalent. ~~In order to enhance the Union's carbon sink in line with the objective of achieving climate neutrality by 2050, the Union shall aim to achieve a higher volume of its net carbon sink in 2030.~~

2 By 30 June 2021, the Commission shall review relevant Union legislation in order to enable the achievement of the target set out in paragraph 1 of this article and the climate-neutrality objective set out in article 2(1) and consider taking the necessary measures, including the adoption of legislative proposals, in accordance with the Treaties.

Within the framework of the review referred to in the first subparagraph and future reviews, the Commission shall assess in particular the availability under Union law of adequate instruments and incentives to mobilise the investments needed, and propose measures as necessary.

From the adoption of the legislative proposals by the Commission, it shall monitor the legislative procedures for the different proposals and may report to the European Parliament and to the Council on whether the foreseen outcome of those legislative procedures, considered together, would achieve the target set out in paragraph 1. If the foreseen outcome would not deliver a result in line with the target set out in paragraph 1, the Commission may take the necessary measures, including the adoption of legislative proposals, in accordance with the Treaties.

3 With a view to achieving the climate-neutrality **and net-negativity** objectives set out in article 2(1) of this Regulation, **the binding** Union-wide climate target for 2040 shall be **a domestic reduction of net greenhouse gas emissions by at least [XX]% compared to 1990 levels by 2040. This net target shall be based on a gross reduction of greenhouse gas emissions of at least [XX]% by 2040, and the contribution of net biogenic sequestration and permanent removals referred to in Article 4a and 4b shall be limited to [XX] and [XX] million tonnes of CO2 equivalent respectively.** ~~set~~

The projected indicative Union greenhouse budget over the period 2030-2050 shall be of [XX-XX] CO2 equivalent.

~~When making its legislative proposal for the Union 2040 climate target as referred to in paragraph 3, the Commission shall, at the same time, publish in a separate report the projected indicative Union greenhouse gas budget for the 2030-2050 period, defined as the indicative total volume of net greenhouse gas emissions (expressed as CO2 equivalent and providing separate information on emissions and removals) that are expected to be emitted in that period without putting at risk the Union's commitments under the Paris agreement. The projected indicative Union greenhouse gas budget shall be based on the best available science, take into account the advice of the advisory Board as well as, where adopted, the relevant Union legislation implementing the Union 2030 climate target. The Commission shall also publish the methodology underlying the projected indicative Union greenhouse gas budget.~~

4 When **implementing** ~~proposing~~ the Union 2040 climate target **as well as any subsequent targets and updates to the European Union's nationally determined contribution under the Paris Agreement** in accordance with paragraph 3, the Commission shall consider the following:

- (a) the best available and most recent scientific evidence, including the latest reports of the IPCC and the advisory Board;
- (b) the Do No Significant Harm principle;**
- (c) the social, economic and environmental impacts, including the costs of inaction; the need to ensure a just and socially fair transition for all;
- (d) cost-effectiveness and economic efficiency;
- (e) competitiveness of the Union's economy, in particular small and medium-sized enterprises and sectors most exposed to carbon leakage;
- (f) best available cost-effective, safe and scalable technologies **and practices;**
- (g) energy efficiency and the 'energy efficiency first' principle, energy affordability and security of supply;
- (h) fairness and solidarity between and within Member States;
- (i) the need to ensure environmental effectiveness and progression over time;
- (j) the need to maintain, manage and enhance natural sinks in the long term, **scale up the restoration of natural sinks currently in state of degradation treating their carbon sequestration**
- (k) investment needs and opportunities;

- (m) international developments and efforts undertaken to achieve the long-term objectives of the Paris agreement and the ultimate objective of the UNFCCC;
- (n) existing information on the projected indicative Union greenhouse gas budget for the 2030-2050 period referred to in paragraph 4.

5 Within six months of the second global stocktake referred to in article 14 of the Paris agreement, the Commission may propose to revise the Union 2040 climate target in accordance with article 11 of this Regulation.

6 The provisions of this article shall be kept under review in light of international developments and efforts undertaken to achieve the long-term objectives of the Paris agreement, including with regard to the outcomes of international discussions on common time frames for nationally determined contributions.

JUSTIFICATION

Article 4 should recognise the different roles of biogenic sequestration by natural sinks and permanent removals. Text referring to the enhancement of natural sinks has been deleted from paragraph (1) of this article to be better elaborated in a separate Article 4a (new). However, additional language has been introduced in paragraph (5) to stress the need to restore degraded natural sinks and look at the different co-benefits they provide.

Paragraph 3, that currently mandates the setting of a 2040 target and the adoption of a report on the Union carbon budget 2030-2050, has been replaced with a proposal for actual language on the 2040 target and the carbon budget. The target should be expressed in both net and gross terms, clarifying the contribution of gross reductions, net biogenic sequestration and permanent removals to achieve it. Alternatively, the gross emissions reduction target could also be expressed in tonnes of residual emissions, in line with the approach used in the Communication on the 2040 target adopted in February 2024.

The specific level of the target and of the biogenic sequestration and permanent removals contribution has been left open as it is not the goal of the CO2ol Down process to agree on a certain amount, which should rather be based on a comprehensive Impact Assessment. The aim of the CO2ol Down process is to avoid mitigation deterrence and ensure action on all fronts to halt the climate crisis.

The Union should also respect the 'Do No Significant Harm' Principle when implementing climate targets.

The aim to set a net-negativity objective should also be outlined.

Article 4a

Role of biogenic sequestration by natural sinks

1 The Union shall protect and restore nature and enhance its ecosystem resilience, and halt losses of natural sinks to achieve a growth every year of its biogenic carbon sequestration, in line with EU climate and biodiversity objectives.

2 EU policy and regulation shall be aligned with the objectives set out in paragraph (1). The relevant Union institutions and the Member States shall implement the necessary instruments at Union and national level, respectively, to ensure consistency among policies and regulations that impact natural sinks and enable the collective achievement of the objectives set out in paragraph (1).

3 EU targets and policies dedicated to the protection of natural sinks and the enhancement of their carbon sequestration, including those set out in Regulation (EU) 2018/841, shall be kept separate from emissions reduction and permanent removals targets for the purpose of achieving the Union climate neutrality obligation set out in Article 2(1) of this Regulation. Because of their temporary nature, biogenic sequestration by natural sinks shall not be used to counterbalance anthropogenic emissions in achieving the Union climate neutrality objective by 2050.

JUSTIFICATION

Natural carbon sinks should be protected and enhanced to restore nature, improve biodiversity and strengthen ecosystem resilience. Biogenic sequestration by natural carbon sinks should be considered temporary due to the inherent vulnerability of natural sinks to anthropogenic and natural disturbances worsened by the impacts of climate change. Carbon sequestered and stored in land and biomass should, therefore, not be used to counterbalance emissions that stay in the atmosphere for millennia. The EU Climate Law should include an article dedicated to the benefits and roles of natural sinks, and mandate their protection.

Article 4b

Role of permanent carbon removals

1 Legally binding targets for permanent removals, as defined in Article 2 (9) of Regulation [insert official CRCF Regulation name], should be set in addition to emissions reductions and biogenic sequestration targets.

2 Following the same standard legislative process for setting emissions reduction targets, targets for permanent removals referred to in paragraph (1) should be set in a transparent way and be regularly reviewed. These targets should reflect best scientific and technological knowledge on permanent carbon removals methods and decreasing residual emissions.

3 Targets referred to in paragraph (1) should be based on the Advisory Board's advice reflecting justice, sustainability and planetary boundaries. They should be expressed both in volume and as a percentage of 1990 emissions. These targets should be set at the EU level and fairly allocated among Member States.

4 In order to ensure that sufficient emissions reductions are deployed up to 2050, the contribution of permanent removals to the Union climate neutrality objective set out in Article 2(1) of this Regulation should be limited to the amount of residual emissions referred to in paragraph (5). Any overachievement of the permanent removal targets referred to in paragraph(1) shall not lead to a decrease in the ambition for reducing emissions

5 For the purposes of this Regulation, what is understood and calculated as residual emissions should be regularly reviewed, at intervals of no greater than 10 years subsequently in consultation with the Advisory Board, taking into account criteria of technological availability and social necessity.

6 By 12 months after entry into force of this Regulation, the European Commission should adopt a dedicated implementing strategy on permanent carbon removals.

JUSTIFICATION

Permanent carbon removals, as defined in the CRCF, are needed to achieve the Union's climate neutrality objective to compensate for residual emissions. The EU Climate Law should clarify their role and mandate the setting of dedicated targets. To avoid mitigation deterrence, such targets should be kept separate from emissions reduction targets.

The European Commission should have a role in evolving the definition of and quantifying residual emissions by 2050, considering criteria of technological availability and social necessity, and in consultation with the Advisory Board. The definition and quantification of residual emissions should be regularly reviewed, in line with Article 11 of this Regulation.

To ensure the deployment of permanent removals at the level and quality required, the Commission should adopt a dedicated strategy for permanent removals.

Article 5

Adaptation to climate change

1 The relevant Union institutions and the Member States shall ensure continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in accordance with article 7 of the Paris agreement.

2 The Commission shall adopt a Union strategy on adaptation to climate change in line with the Paris agreement and shall regularly review it in the context of the review provided for in point (b) of article 6(2) of this Regulation.

3 The relevant Union institutions and the Member States shall also ensure that policies on adaptation in the Union and in Member States are coherent, mutually supportive, provide co-benefits for sectoral policies, and work towards better integration of adaptation to climate change in a consistent manner in all policy areas, including relevant socioeconomic and environmental policies and actions, where appropriate, as well as in the Union's external action. They shall focus, in particular, on the most vulnerable and impacted populations and sectors, and identify shortcomings in this regard in consultation with civil society.

4 Member States shall adopt and implement national adaptation strategies and plans, taking into consideration the Union strategy on adaptation to climate change referred to in paragraph 2 of this article and based on robust climate change and vulnerability analyses, progress assessments and indicators, and guided by the best available and most recent scientific evidence. In their national adaptation strategies, Member States shall take into account the particular vulnerability of the relevant sectors, inter alia, agriculture, and of water and food systems, as well as food security, and promote nature-based solutions and ecosystem-based adaptation. Member States shall regularly update the strategies and include the related updated information in the reports to be submitted under article 19(1) of Regulation (EU) 2018/1999.

5 By 30 July 2022, the Commission shall adopt guidelines setting out common principles and practices for the identification, classification and prudential management of material physical climate risks when planning, developing, executing and monitoring projects and programmes for projects.

Article 6

Assessment of Union progress and measures

1 By 30 September 2023, and every five years thereafter, the Commission shall assess, together with the assessment provided for under article 29(5) of Regulation (EU) 2018/1999:

- (a) the collective progress made by all Member States towards the achievement of the climate-neutrality and net-negativity objectives set out in article 2(1) of this Regulation;
- (b) the collective progress made by all Member States on adaptation as referred to in article 5 of this Regulation.

The Commission shall submit the conclusions of that assessment, together with the State of the Energy Union report prepared in the respective calendar year in accordance with article 35 of Regulation (EU) 2018/1999, to the European Parliament and to the Council.

2 By 30 September 2023, and every five years thereafter, the Commission shall review:

- (a) the consistency of Union measures with the climate-neutrality **and future net-negativity objectives** set out in article 2(1);
- (b) the consistency of Union measures with ensuring progress on adaptation as referred to in article 5.

3 Where, based on the assessments referred to in paragraphs 1 and 2 of this article, the Commission finds that Union measures are inconsistent with the climate-neutrality **and future net-negativity objectives** set out in article 2(1) or inconsistent with ensuring progress on adaptation as referred to in article 5, or that the progress towards that climate-neutrality **and future net-negativity objectives** or on adaptation as referred to in article 5 is insufficient, it shall take the necessary measures in accordance with the Treaties.

4 The Commission shall assess the consistency of any draft measure or legislative proposal, including budgetary proposals, with the climate-neutrality **and future net-negativity objectives** set out in article 2(1) and the Union 2030 and 2040 climate targets before adoption, and include that assessment in any impact assessment accompanying these measures or proposals, and make the result of that assessment publicly available at the time of adoption. The Commission shall also assess whether those draft measures or legislative proposals, including budgetary proposals, are consistent with ensuring progress on adaptation as referred to in article 5. When making its draft measures and legislative proposals, the Commission shall endeavour to align them with the objectives of this Regulation. In any case of non-alignment, the Commission shall provide the reasons as part of the consistency assessment referred to in this paragraph.

JUSTIFICATION

Reaching net negativity is the subsequent target after climate neutrality in 2050. In addition to establishing a pathway for the setting of this target, the law should explicitly include it as the overall goal that follows climate neutrality.

Article 8

Common provisions on Commission assessment

1 The Commission shall base its first and second assessments referred to in articles 6 and 7 on an indicative, linear trajectory which sets out the pathway for the reduction of net emissions at Union level and which links the Union 2030 climate target referred to in article 4(1), the Union 2040 climate target, when adopted, and the climate-neutrality **and future net-negativity** objectives set out in article 2(1).

2 Following the first and second assessments referred to in paragraph 1, the Commission shall base any subsequent assessment on an indicative, linear trajectory linking the Union 2040 climate target, when adopted, and the climate- neutrality **and future net-negativity** objectives set out in article 2(1).

3 In addition to the national measures referred to in point (a) of article 7(1), the Commission shall base its assessments referred to in articles 6 and 7 on at least the following:

- (a) information submitted and reported under Regulation (EU) 2018/1999;
- (b) reports of the EEA, the advisory Board and the Commission's Joint Research Centre;
- (c) European and global statistics and data, including statistics and data from the European Earth Observation Programme Copernicus, data on reported and projected losses from adverse climate impacts and estimates on the costs of inaction or delayed action, where available;
- (d) the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies; and
- (e) any supplementary information on environmentally sustainable investment by the Union or by Member States, including, when available, investment consistent with Regulation (EU) 2020/852.

4 The EEA shall assist the Commission in the preparation of the assessments referred to in articles 6 and 7, in accordance with its annual work programme.

Article 9

Public participation

1 The Commission shall engage with all parts of society to enable and empower them to take action towards a just and socially fair transition to a climate-neutral and climate-resilient society. The Commission shall facilitate an inclusive and accessible process at all levels, including at national, regional and local level and with social partners, academia, the business community, citizens and civil society, for the exchange of best practice and to identify actions to contribute to the achievement of the objectives of this Regulation. The Commission may also draw on the public consultations and on the multilevel climate and energy dialogues as set up by Member States in accordance with articles 10 and 11 of Regulation (EU) 2018/1999.

2 The Commission shall use all appropriate instruments, including the European Climate Pact, to engage citizens, social partners and stakeholders, and foster dialogue and the diffusion of science-based information about climate change and its social and gender equality aspects.

Article 10

Sectoral roadmaps

The Commission shall engage with **all** sectors of the economy within the Union ~~that choose~~ to prepare ~~indicative voluntary~~ roadmaps **in consultation with industry and other stakeholders**, towards achieving the climate-neutrality **and net-negativity** objectives set out in article 2(1). The Commission shall monitor the development of such roadmaps. Its engagement shall involve the facilitation of dialogue at Union level, and the sharing of best practice among relevant stakeholders.

JUSTIFICATION

Preparing sectoral roadmaps for achieving the climate neutrality and net-negativity objectives set out in this Law should be mandatory. Mandatory roadmaps will aid in determining the level of residual emissions that are considered appropriate for each sector.

Article 11

Review

Within six months of each global stocktake referred to in article 14 of the Paris agreement, the Commission shall submit a report to the European Parliament and to the Council, together with the conclusions of the assessments referred to in articles 6 and 7 of this Regulation, on the operation of this Regulation, taking into account:

- (a) the best available and most recent scientific evidence, including the latest reports of the IPCC and the advisory Board;
- (b) international developments and efforts undertaken to achieve the long-term objectives of the Paris agreement.

The Commission's report may be accompanied, where appropriate, by legislative proposals to amend this Regulation.

ABOUT THE PROJECT

CO2ol Down is a project that brings together representatives from civil society, academia and business that share a vision of the need to drastically cut emissions while maximising the potential and minimising the risks of biogenic sequestration and permanent removals in the EU.

Around fifty interested parties met at three workshops (one online and two in Brussels) to co-create proposals for amendments of the EU Climate Law and to devise policy recommendations for EU instruments on carbon removals.



This collaborative effort was inspired by improving the governance of carbon removals in the EU and ensuring action on all fronts: drastically reducing emissions, while protecting and restoring ecosystems and sustainably deploying permanent removals.

This document is therefore rooted in collective progress and mutual benefit, rather than the advancement of individual agendas. The final proposal was assembled by Carbon Market Watch under the guidance of the CO2ol Down editorial group (p.19). The editorial group consisted of a selection of CO2ol Down workshop participants who helped streamline the results of the workshops' discussion and resolve disputes. The group held three virtual meetings, each following a workshop, to discuss the documents. At the end of this process, the proposal was sent to the full group for comments and final signature.

Individuals or entities listed as co-creators are those who want to be acknowledged as having actively contributed to the development and writing of the document. Their input, ideas, and efforts were integral to shaping the content, structure, and overall direction of the document.

Those listed as supporters endorse and back the principles and recommendations presented in the document.

For more information about the history and achievements of the Cool Down project, visit our website: <https://carbonmarketwatch.org/campaigns/co2ol-down/>

Co-creators

- Kate Ervine, Saint Mary's University (*Individual*)
- Martin Cames, Oeko-Institut (*Individual*)
- Aaron Benjamin, Direct Air Capture Coalition (*Individual*)
- Duncan McLaren, UCLA (*Individual*)
- Ingrid Sundvor, Carbon Balance Initiative (*On behalf of their organisation*)
- Navraj Singh Ghaleigh, University of Edinburgh (*Individual*)
- Wijnand Stoefs, Carbon Market Watch (*On behalf of their organisation*)
- Ulriikka Aarnio, CAN Europe (*On behalf of their organisation*)*
- Sofia Ghezzi, WWF EPO (*On behalf of their organisation*)**
- Julia Teppe, WWF Germany (*On behalf of their organisation*)**
- Alice Evatt Research Fellow, School of Geography and the Environment, University of Oxford (*Individual*)
- Mark Preston Aragones, Bellona Foundation (*On behalf of their organisation*)*
- Rodica Avornic, Carbon Gap (*On behalf of their organisation*)*
- Wim Carton, Lund University (*Individual*)

Supporters (as of October 2024)

- Leo Mercer, Grantham Research Institute, London School of Economics (*On behalf of their organisation*)
- Mafalda Antunes, ZERO asts (*On behalf of their organisation*)
- Nils Markusson, Lancaster University (*Individual*)
- Josh Burke, The Grantham Research Institute (*On behalf of their organisation*)
- Duncan Woods, Sandbag Climate Campaign ASBL (*On behalf of their organisation*)

*The organisation does not necessarily align with all the elements included in the documents.

**While the organisation supports most of the principles and recommendations included in the documents, it notes the final findings of the report should suggest an earlier date for reaching climate neutrality and net negativity in the EU, and they diverge from the organisation's positions on role of LULUCF removals towards the climate neutrality target.

Participants

Aaron Benjamin	Direct Air Capture Coalition
Alex Mason	WWF European Policy Office
Alice Evatt	University of Oxford
Anna Stratton	Climateworks
Aymeric Amand	Sandbag
Bella Corpora	Carbon Business Council
Bernardo Galantini	Transport & Environment
Bruno Capuzzi	ApexBrasil
Clemens Kaupa	Vrije Universiteit Amsterdam
Codie Rossi	Clean Air Task Force
David Reiner	University of Cambridge
Despoina Tsimpridou	Carbon Capture and Storage Association (CCSA)
Duncan McLaren	UCLA
Elisabeth Harding	Negative Emissions Platform
Ennio Prizzi	Bioenergy Europe
Erik Tang	Green Transition Denmark
Farid Kreh	OXO Earth
Felix Schenuit	German Institute for International and Security Affairs
Francesca Battersby	Carbon Gap
Gabrielle Walker	Rethinking Removals
Georgia Berry	Patch
Harry Smith	UEA
Janek VahK	ZWE
Josh Burke	Grantham Research Institute (London School of Economics)
Julia Teppe	WWF Germany
Juliette de Grandpre	NewClimate Institute
Julius Lang	Novocarbo
Kasia Wilk	Drax Group
Kate Ervine	Saint Mary's University
Krystyna Springer	Institute for European Environmental Policy
Mafalda Salgueiro Antunes	ZERO asts
Mark Preston	Bellona Europa
Martin Cames	Oeko-Institut
Martin Pigeon	Fern
Moritz Adam	Wetlands International European Association
Navraj S Ghaleigh	University of Edinburgh
Parth Verma	Bakz4ever
Riccardo Nigro	European Environmental Bureau
Sebastian Manhart	Carbonfuture / DVNE
Sofia Ghezzi	WWF European Office
Sofie Defour	Transport & Environment
Thomas Gelin	Greenpeace EU
Ulriikka Aarnio	Climate Action Network Europe
Wijnand Stoefs	Carbon Market Watch
William Druet	CCSA (Carbon Capture & Storage Association)
Wim Carton	Lund University

Participants

Aaron Benjamin	Direct Air Capture Coalition
Alice Evatt	University of Oxford
Allanah Paul	Bellona Europa
Bali Lee	Rethinking Removals
Bernardo Galantini	Transport & Environment
Bojana Bajzelj	Supercritical
Daniel Reinemann	Bioenergy Europe
Despoina Tsimprkidou	Carbon Capture and Storage Association (CCSA)
Duncan McLaren	UCLA
Elisabeth Harding	Negative Emissions Platform
Felix Schenuit	German Institute for International and Security Affairs
Hanna Ojanen	Carbo Culture
Ingrid Sundvor	Carbon Balance Initiative
Isabella Corpora	Carbon Business Council
Joshua Burke	Grantham Research Institute (London School of Economics)
Julia Teppe	WWF Germany
Julius Lang	Novocarbo
Kasia Wilk	Drax Group
Leon Podehl	German Energy Agency (dena)
Mafalda Salgueiro Antunes	ZERO asts
Mark Preston	Bellona Europa
Martin Cames	Oeko-Institut
Martin Pigeon	Fern
Moritz Adam	Wetlands International European Association
Navraj S Ghaleigh	University of Edinburgh
Nicolas Remilien	#SustainablePublicAffairs
Nicole Herold	DVNE
Rachel Ardifff	Oxford Net Zero
Riccardo Nigro	European Environmental Bureau
Rodica Avornic	Carbon Gap
Silvia Pastorelli	Greenpeace EU
Ulriikka Aarnio	Climate Action Network Europe
Wijnand Stoefs	Carbon Market Watch
William Druet	ZEP
Wim Carton	Lund University



Participants

Alex Mason	WWF European Policy Office
Alice Evatt	University of Oxford
Aymeric Amand	Sandbag
Bali Lee	Rethinking Removal
Bernardo Galantini	Transport & Environment
Despoina Tsimpridou	Carbon Capture and Storage Association (CCSA)
Duncan McLaren	UCLA
Eli Mitchell Larson	Carbon Gap
Elisabeth Harding	Negative Emissions Platform
Ennio Prizzi	Bioenergy Europe
Felix Schenuit	German Institute for International and Security Affairs
Ingrid Udd Sundvor	Carbon Balance Initiative
Julia Teppe	WWF Germany
Juliette de Grandpre	NewClimate Institute
Kaisa Kosonen	Greenpeace Nordic, based in Finland
Leo Mercer	Grantham Research Institute, London School of Economics
Leon Podehl	German Energy Agency (dena)
Mafalda Salgueiro Antunes	ZERO asts
Mark Preston	Bellona Europa
Martin Cames	Oeko-Institut
Navraj S Ghaleigh	University of Edinburgh
Rodica Arnovic	Carbon Gap
Sofia Ghezzi	WWF European Policy Office
Ulriikka Aarnio	Climate Action Network Europe
Wijnand Stoefs	Carbon Market Watch
William Druet	CCSA (Carbon Capture & Storage Association)

EDITORIAL GROUP

Felix Schenuit	German Institute for International and Security Affairs
Julia Teppe	WWF Germany
William Druet	CCSA (Carbon Capture & Storage Association)
Mark Preston	Bellona Europa
Elisabeth Harding	Negative Emissions Platform
Ulriikka Aarnio	Climate Action Network Europe
Martin Cames	Oeko-Institut
Duncan McLaren	UCLA
Fabiola De Simone	Carbon Market Watch



COOL DOWN

Co-creating a common EU
vision of carbon removals

Editor

Gavin Mair, Carbon Market Watch

Cover design and layout

Miriam Vicente Marcos, Carbon Market Watch

Photo Credit

© Miriam Vicente Marcos
© Canva Images

This project has received funding from the Milkywire Climate Transformation Fund and ClimateWorks Foundation. Any opinions, findings, conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the view of these funders .