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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

**on the operation of Regulation (EU) 2018/841 ("LULUCF Regulation") pursuant to  
Article 17(2) as amended by Regulation (EU) 2023/839**

## 1. Introduction

The land use, land-use change and forestry ('LULUCF') sector covers soils, plants and other biomass which can be both a CO<sub>2</sub> source (i. e. emitting CO<sub>2</sub> into the atmosphere) and a CO<sub>2</sub> sink (i. e. removing CO<sub>2</sub> from the atmosphere). Emissions and removals by the sector are integrated into the EU's 2030 climate target by means of Regulation (EU) 2018/841<sup>1</sup> ('LULUCF Regulation') which entered into force in 2018.

As part of the European Green Deal<sup>2</sup>, the European Climate Law<sup>3</sup> set out an EU economy-wide net emission reduction target of at least -55% by 2030 as compared to 1990 levels, and a climate neutrality target by 2050 at the latest. With the Fit for 55 climate package<sup>4</sup>, the LULUCF Regulation was amended in 2023<sup>5</sup> to reflect the enhanced ambition. It introduced new targets for the sector for 2030 and simplified the reporting obligations.

The land sector plays a key role in achieving the EU climate neutrality objective. It has the potential to provide long-term climate benefits, both in terms of climate mitigation and adaptation, as well as to contribute to the long-term climate goals of the Paris Agreement<sup>6</sup>. In addition, the sector offers multiple other vital services to society. These include: the production of sustainable biomass that can substitute fossil or carbon-intensive products, materials and energy, also contributing to the transition to a circular and climate-neutral bioeconomy; production of food; biodiversity; and ecosystem services which are of key importance for increasing resilience to the impacts of climate change.

As stipulated in Article 17(2) of the LULUCF Regulation, the Commission is tasked to take stock of the operation of the Regulation within 6 months after the first global stocktake under the Paris Agreement, which was concluded at COP28 in December 2023.

## 2. Assessment of the operation of the LULUCF Regulation

The key revised LULUCF Regulation target is to increase land-based net removals in the EU by an additional -42 million tonnes of CO<sub>2</sub> equivalent (Mt CO<sub>2</sub> -eq) by 2030, as compared to the yearly average over the period 2016-2018. This is expected to result in a total net sink at the Union level of -310 Mt CO<sub>2</sub> -eq. For the period 2021-2025, Member States are to apply specific

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<sup>1</sup> 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, OJ L 156, 19.6.2018, p. 1.

<sup>2</sup> [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

<sup>3</sup> Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality ('European Climate Law'), OJ L 243, 9.7.2021, p. 1.

<sup>4</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality, COM(2021) 550 final.

<sup>5</sup> Regulation (EU) 2023/839 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/841 as regards the scope, simplifying the reporting and compliance rules, and setting out the targets of the Member States for 2030, and Regulation (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of progress and review, OJ L 107, 21.4.2023, p. 1.

<sup>6</sup> [https://unfccc.int/files/meetings/paris\\_nov\\_2015/application/pdf/paris\\_agreement\\_english\\_.pdf](https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf)

accounting rules for different land accounting categories and are to comply with the ‘no-debit’ rule, meaning that accounted emissions must not exceed accounted removals, in line with Articles 7 to 9. For the period 2026-2030, the additional -42 Mt CO<sub>2</sub> -eq target covers all LULUCF reporting categories and is distributed among Member States through individual targets, based on their share of total managed land area. The national 2030 targets require each Member State to increase its climate ambition in the land use policies.

The targets set out for the period 2026-2030 align the Regulation reporting requirements to the reporting rules as required under the greenhouse gas (GHG) inventories submitted to the UNFCCC. This will provide policy makers at both national and EU level with better data to timely plan, prepare and implement additional policies and measures in the sector.

In accordance with Article 17(2) of the LULUCF Regulation, this report includes:

- an assessment of the impacts of the flexibilities;
- an assessment of the contribution of the LULUCF Regulation to the climate neutrality objective and to the goals of the Paris Agreement;
- an assessment of social and labour impacts, including on gender equality;
- an assessment of progress made at international level on the rules governing Article 6(2) and 6(4) of the Paris Agreement;
- the current trends and future projections on emissions and removals of greenhouse gases (GHG) from the land sector and agriculture, as well as regulatory options to ensure consistency of those trends and projections with the objective of achieving long-term GHG emission reductions in all sectors of the economy in line with the EU climate-neutrality objective.

## **2.1. Impact of flexibilities**

To help Member States comply with the targets, they can make use of the flexibility mechanisms, under certain conditions. Achieving the overall EU ‘no-debit’ commitment (for the period 2021-2025) or the overall EU target (for the period 2026-2030) collectively is a prerequisite for making use of these flexibility mechanisms.

Common to both compliance periods, a ‘general flexibility’ will apply whereby a Member State can decide to compensate its deficit under the LULUCF Regulation with a deduction of an equivalent amount of that Member State’s annual emission allocations under the Effort Sharing Regulation (ESR)<sup>7</sup>, provided the Member State has met its ESR target. The same applies in the opposite direction; if a Member State fails to meet its ESR target, the surplus under the LULUCF Regulation, subject to a limitation, can be transferred to the ESR.

In addition, for the period 2021-2025, Member States may use the flexibility for managed forest land due to natural disturbances. For the period 2026-2030, Member States will have access to a new land use flexibility mechanism to address excess net emissions due to natural

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<sup>7</sup> 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, OJ L 156, 19.6.2018, p. 26.

disturbances, long-term impacts of climate change or an exceptionally high proportion of organic soils.

Flexibilities will only be applied for the first time during the compliance check in 2027 against Member States' commitments, based on the GHG inventory data for the period 2021-2025.

## **2.2. LULUCF contribution to the climate neutrality objective**

While the LULUCF sector currently represents a carbon sink, the worrying trend of a declining LULUCF sink of the last decade persists. In 2021, the EU's carbon sink achieved a level of net removals of -230 Mt CO<sub>2</sub> -eq. Cropland, grassland, wetlands and settlements are the main sources of emissions in the sector at the EU level, with managed organic soils generating particularly high emissions in croplands. Forests play a key role as they constitute the vast majority of the total LULUCF sink. The decline of the Union sink is, to a large degree, due to a decrease in net sink in forests, mainly due to an increase in harvesting combined with a stabilisation or slight reduction in forest growth<sup>8</sup>. The drivers behind this development include economic drivers, ageing forests and salvage logging after natural disturbances. The growing frequency and severity of natural disturbances such as wind throw, insect outbreaks, wildfires and droughts, as well as decreasing efforts in afforestation, are increasingly prominent issues for European forests.

Access to high-quality data is a prerequisite for tracking progress, evaluating policies and planning for future measures. This is why under the revised LULUCF Regulation Member States are obliged to gradually achieve better reporting accuracy, in line with more advanced methods of the IPCC guidelines<sup>9</sup>. Improved monitoring, reporting and verification (MRV) in the sector is enabled through both technological advancements and policy. New monitoring solutions are being developed constantly and are becoming widely accessible, in particular air-borne or space-borne remote sensing technologies. These developments offer great opportunities for policy makers to design effective and efficient measures to promote enhanced and resilient land-based carbon removals. To support Member States in this important process, the Commission has, together with the European Environment Agency (EEA), published an updated 'LULUCF Handbook'<sup>10</sup>. Its purpose is to help various stakeholders familiarise themselves with the LULUCF Regulation and to facilitate its implementation on the ground. It aims to disseminate experience and good practices on how improved GHG monitoring in the land sector can support policies. For this purpose, the Commission also regularly organises a technical workshop dedicated to UNFCCC reporting<sup>11</sup>.

Sustainably sourced biomass will play an important role in fostering a climate neutral and sustainable circular EU bioeconomy. The European Biomass Report, recently published by the

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<sup>8</sup> <https://doi.org/10.1186/s13021-023-00234-0>

<sup>9</sup> Improved GHG inventories should be based on more accurate, more detailed, more timely and geographically explicit data as stipulated in Part 3 of Annex V of the Governance Regulation – e. g. through digital databases, geographic information systems (GIS) and remote sensing, including the Copernicus Sentinel satellites and services, or other publicly or commercially available services.

<sup>10</sup> <https://climate-energy.eea.europa.eu/topics/climate-change-mitigation/land-and-forests/reports>

<sup>11</sup> <https://forest.jrc.ec.europa.eu/en/activities/lulucf/workshops/>

EEA, finds that there is strong competition for biomass in the EU due to its multiple end-uses, such as in food, in raw materials, energy, climate mitigation and adaptation, biodiversity, and other ecosystem services<sup>12</sup>. The various end-uses should be carefully balanced through appropriate policies and incentives.

### **2.3. Progress at international level**

Article 2 of the Paris Agreement sets out a long-term goal of limiting the global temperature increase to well below 2 °C above pre-industrial levels and pursuing efforts to keep it to 1.5 °C. It also sets out the objective of increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience.

The EU submitted an updated nationally determined contribution (NDC)<sup>13</sup> in October 2023 in preparation for the conclusion of the first global stocktake<sup>14</sup> which took place at COP28 in December the same year. The updated NDC provides further information on the policies and measures through which the EU will reduce its net GHG emissions by at least 55% by 2030.

In relation to Article 6 of the Paris Agreement, limited progress was made at COP28 on adopting a structured approach for the implementation of Article 6.2 on bilateral trading. Regarding Article 6.4, the Parties failed to adopt the recommendation of the Supervisory Body on methodological guidance and on activities involving removals<sup>15</sup>.

### **2.4. Social and labour impacts and opportunities**

The natural resources of rural areas are key assets on which to build a sustainable and prosperous future, as emphasised by the Commission's Long-term vision for the EU's rural areas<sup>16</sup>. Across the EU there is a gap between male and female employment in rural areas of 13 percentage points (versus 10 percentage points in cities), rising to over 20 in certain Member States. The EU Action Plan for Gender Equality specifically addresses gender disparities in rural areas.

Well-managed rural landscapes help safeguard decent work and livelihoods, ecological systems and biodiversity, and enhance climate and risk resilience. Supporting farmers, foresters and rural entrepreneurs who are the enablers of the transition towards a greener society and economy is essential.

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<sup>12</sup> The European biomass puzzle, EEA Report 8/2023

<sup>13</sup> <https://data.consilium.europa.eu/doc/document/ST-14286-2023-INIT/en/pdf>

<sup>14</sup> The global stocktake established under Article 14 of the Paris Agreement is a process whereby, each 5 years, Parties assess the collective progress towards meeting the objectives of the Agreement, and to identify gaps and solution pathways to 2030 and beyond.

<sup>15</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism>

<sup>16</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A long-term Vision for the EU's Rural Areas - Towards stronger, connected, resilient and prosperous rural areas by 2040, COM(2021) 345 final.

### 3. Trends in the LULUCF and agriculture sectors

The Governance Regulation<sup>17</sup> constitutes the basis for a comprehensive governance system to meet the EU's climate targets and objectives. In 2019, Member States submitted their first national energy and climate plans (NECP), which are the main strategic policy planning tool to pave the way towards achieving climate neutrality and resilience by 2050. In 2023, Member States reviewed and updated their NECPs to reflect the increased climate ambition for 2030 under the European Climate Law and 'Fit for 55' package, including for the LULUCF and agriculture sectors. As part of their GHG inventory reporting, Member States prepare projections of the effects of their existing and additional measures on emissions and removals.

However, the Commission found in its assessment that most draft updated NECPs do not set out sufficient ambition nor sufficient land related climate action<sup>18</sup>. Very few Member States have included a concrete pathway to reaching their national net removal targets, or sufficient action to assist farmers, foresters and other stakeholders in building sustainable business models in line with these targets.

#### 3.1. Trends and projections in the LULUCF sector

With the current LULUCF accounting rules applicable in the period 2021-2025, the provisional 'accounted' balance for 2021 based on the 2023 GHG inventory submission demonstrated a slight credit (i. e. accounted removals slightly exceeded accounted emissions) of -14 Mt CO<sub>2</sub> -eq<sup>19</sup>. As such, the Union collectively meets the 'no-debit' rule of compliance for the first year of the period 2021-2025<sup>20</sup>.

The EU is currently not on track to meet the 2030 net removal target. With existing measures, the total net removals are projected to reach -239 Mt CO<sub>2</sub> -eq in 2030, and -260 Mt CO<sub>2</sub> -eq with additional measures, falling short by around 50-70 Mt CO<sub>2</sub> -eq to the EU target for 2030.

From 2025 onwards, net removals from forest land in the EU are projected to steadily shrink to approximately -310 Mt CO<sub>2</sub> -eq by 2030 with existing measures and to -320 Mt CO<sub>2</sub> -eq with additional measures. Net emissions from cropland, which currently represent roughly 38% of the EU LULUCF emissions, are projected to slightly increase or stagnate until 2025, followed

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<sup>17</sup> 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, OJ L 328, 21.12.2018, p. 1

<sup>18</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU wide assessment of the draft updated National Energy and Climate Plans An important step towards the more ambitious 2030 energy and climate objectives under the European Green Deal and RePowerEU, COM(2023) 796 final.

<sup>19</sup> Due to improvements in GHG inventories, recalculations are still taking place that may affect this result.

<sup>20</sup> Climate Action Progress Report. European Commission, 2023.

by a gradual decrease to reach 32 Mt CO<sub>2</sub> -eq with existing measures and 27 Mt CO<sub>2</sub> -eq with additional measures by 2030. Net emissions from grassland, which currently represent roughly 12% of the EU LULUCF emissions, are projected to stagnate until 2030 with intermediate fluctuations, reaching 12 Mt CO<sub>2</sub> -eq with existing measures and 10 Mt CO<sub>2</sub> -eq in 2030 with additional measures. Net emissions from wetlands are projected to gradually decrease to reach 13 Mt CO<sub>2</sub> -eq with existing measures and 12 Mt CO<sub>2</sub> -eq with additional measures by 2030. Net removals from harvested wood products are projected to steadily increase to reach levels close to -35 Mt CO<sub>2</sub> -eq in a scenario with existing or additional measures<sup>21</sup>.

It is likely that the impact of climate change and the loss of biodiversity will lead to more frequent and more intense natural disturbances. It will be essential to revert this negative trend rapidly to meet the EU climate objectives, while at the same time increasing the resilience of the EU land sector to ensure stable long-term sinks.

### **3.2. Trends and projections in the agriculture sector**

Today, non-CO<sub>2</sub> emissions from agriculture represent around 11% of overall EU GHG emissions, of which roughly two-thirds come from livestock. Since 2005, emissions in the sector have stagnated - inventory data show a slow annual decrease of 0.7 Mt CO<sub>2</sub> -eq between 2005 and 2021. The EEA<sup>22</sup> has estimated that the emission reductions expected between today and 2040 will be insignificant to help achieve the long-term climate neutrality objective. Due to reduced emissions in other sectors and the difficulties in fully abating emissions in agriculture, it is expected that by 2040 agriculture will become the sector with the largest share of GHG emissions, representing roughly half of the total emissions in the EU<sup>23</sup>.

The latest projections from Member States indicate that under existing measures the pace of emissions reductions will not change significantly by 2030 (1% compared to 2021, or an annual average reduction of 0.6 Mt CO<sub>2</sub> -eq). With additional measures considered, aggregated projected emissions from agriculture indicate a decline of around 5% by 2030 (2.2 Mt CO<sub>2</sub> -eq annual average reduction). Further efforts are needed to identify and implement appropriate mitigation measures in the agriculture sector.

### **3.3. Recent policy developments**

In addition to the Fit for 55-package, several other European Green Deal initiatives aim to increase the resilience of the LULUCF sector while protecting and promoting ecosystem services and the transition to a resource efficient circular economy.

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<sup>21</sup> Based on data reported by Member States on projections, 2023 submission (EEA)

<sup>22</sup> EEA, Briefing 17/2022

<sup>23</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society, COM(2024) 63 final.



To increase the level of high-quality carbon removals, the Commission has proposed an EU regulatory framework for the certification of carbon removals<sup>24</sup>, which has recently been adopted by the co-legislators. The framework includes three distinct types of activities: carbon farming, carbon storage products, and permanent removals. In addition, private initiatives linked to voluntary carbon markets can supplement and further promote large-scale deployment of carbon removals. The framework will not only provide land managers with new business opportunities, but also support growth of the sustainable circular bioeconomy by certifying carbon storage products, such as wood-based construction. Ultimately, this can assist Member States in attaining their LULUCF targets. To boost the industrial capture of carbon and its utilisation in bio-based products or storing it permanently, the Commission has recently adopted the Communication on industrial carbon management<sup>25</sup>.

Healthy ecosystems contribute to carbon sequestration and climate resilience and improve the wellbeing of populations. Activities such as the rewetting of peatlands can have a significantly positive impact on biodiversity. The Nature Restoration Law<sup>26</sup>, a key element of the EU biodiversity strategy<sup>27</sup>, calls for binding targets to restore degraded ecosystems, in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters. Meanwhile, the Deforestation Regulation<sup>28</sup> aims to reduce the EU's impact on global deforestation by promoting the use of 'deforestation-free' products.

A number of funding mechanisms are available to upscale carbon removals, through public or private sector sources. The EU provides funding under the common agricultural policy (CAP) – Member States have the opportunity to include carbon farming measures in their updated CAP strategic plans. They can also support the uptake of sustainable management practices under state aid rules, which have been revised and allow for the provision of forest ecosystem services such as climate regulation and biodiversity restoration.

Other available EU funds for increasing carbon removals include LIFE and Horizon Europe programmes, and the cohesion policy funds. Specifically, as healthy soils are one of the key aspects of climate mitigation, adaptation, and agricultural activities, the mission 'A Soil Deal for Europe' has been launched under the Horizon Europe programme<sup>29</sup>. The mission's goal is

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<sup>24</sup> Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals, COM(2022) 672 final.

<sup>25</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Towards an ambitious Industrial Carbon Management for the EU, COM(2024) 62 final.

<sup>26</sup> Proposal for a Regulation of the European Parliament and of the Council on nature restoration, COM(2022) 304 final.

<sup>27</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives, COM(2020) 380 final.

<sup>28</sup> Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010, OJ L 150, 9.6.2023, p. 206.

<sup>29</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Missions two years on: assessment of progress and way forward, COM(2023) 457 final.

to set up 100 living labs to lead the transition towards healthy soils by 2030 by promoting cooperation across sectors to address all land uses.

In the area of monitoring the developments in the LULUCF sector, the proposal for a Forest monitoring framework<sup>30</sup> sets out an EU-wide monitoring framework for forests that will ensure the availability of timely, high-quality data in a standardised format. This will enable Member States to apply efficient and cost-effective measures in a timely manner, thus fostering stronger and more resilient carbon sinks, while supporting a sustainable circular bioeconomy. The Framework is a key deliverable of the EU forest strategy for 2030<sup>31</sup>, recognising the multifunctional role of forests. Similarly, the proposal for a Directive on soil monitoring and resilience<sup>32</sup> will support the achievement of the LULUCF targets. Healthy soils sequester more carbon, while better land and soil monitoring will help target measures that unlock the highest climate benefits.

In 2023, the Commission adopted guidance on EU funding opportunities for healthy soils<sup>33</sup>. The Guidelines on closer-to-nature forest management<sup>34</sup> as well as the Guidance on the development of public and private payment schemes for forest ecosystem services<sup>35</sup> were designed to strengthen forest multifunctionality. To further facilitate the uptake of carbon farming through biodiversity-friendly practices, the Commission published, in 2023, Guidelines on biodiversity-friendly afforestation, reforestation and tree planting<sup>36</sup>, and guidelines on defining, mapping and strictly protecting primary and old-growth forests<sup>37</sup>, which are among the EU's richest ecosystems, storing significant carbon stocks. In November 2023, the revised Renewable Energy Directive<sup>38</sup> entered into force, which recalls obligations to meet the LULUCF criteria when producing fuels from forest biomass.

### **3.4. Regulatory options for land, food, energy and bioeconomy towards climate neutrality**

The recently published Communication on Europe's 2040 climate target and path to climate neutrality presents a 90% net GHG emissions reduction compared to 1990 levels as the

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<sup>30</sup> Proposal for a Regulation of the European Parliament and of the Council on a monitoring framework for resilient European forests, COM(2023) 728 final.

<sup>31</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions New EU Forest Strategy for 2030, COM(2021) 572 final.

<sup>32</sup> Proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law), COM(2023) 416 final.

<sup>33</sup> Commission Staff Working Document Guidance on EU funding opportunities for healthy soils Accompanying the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law), SWD(2023) 423 final.

<sup>34</sup> <https://op.europa.eu/en/publication-detail/-/publication/2d1a6e8f-8cda-11ee-8aa6-01aa75ed71a1>

<sup>35</sup> Commission Staff Working Document Guidance on the Development of Public and Private Payment Schemes for Forest Ecosystem Services, SWD(2023) 285 final.

<sup>36</sup> Commission Staff Working Document Guidelines on Biodiversity-Friendly Afforestation, Reforestation and Tree Planting, SWD(2023) 61 final.

<sup>37</sup> Commission Staff Working Document Commission Guidelines for Defining, Mapping, Monitoring and Strictly Protecting EU Primary and Old-Growth Forests, SWD (2023) 62 final.

<sup>38</sup> 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, OJ L 328, 21.12.2018, p. 82.

recommended target for 2040. In order to reach this target, the impact assessment<sup>39</sup> shows that carbon removals (from the atmosphere through land-based and industrial carbon removals) should reach up to 400 Mt CO<sub>2</sub>-eq. This recommended target corresponds to the advice of the European Scientific Advisory Board on Climate Change ('Advisory Board')<sup>40</sup> and is in line with the provisions of European Climate Law to present a GHG budget in line with the EU commitments under the Paris Agreement.

Like all other sectors, the LULUCF sector plays an important role in achieving the EU 2040 climate ambition, while contributing to EU food sovereignty and to a sustainable circular bioeconomy. With the right policies and measures, it should be possible to reduce non-CO<sub>2</sub> emissions from the agriculture sector<sup>41</sup>, while at the same time increasing the land-based carbon sink by enhancing the capacity of soils and forests to store more carbon. This win-win combination could result in the combined agriculture, land use, and forestry sectors becoming climate neutral.

Land management is closely linked to food production and processing. The Advisory Board notes in its recent report<sup>42</sup> that a whole-system approach enables the identification of cross-sectoral mitigation opportunities, including options for mitigation by producers, consumers and intermediate actors in the food supply chain, and ensures that a coherent approach is taken to balancing the different environmental, economic and social aspects. The report also notes that the introduction of market-based mechanisms in the agriculture and land use sectors could be an effective tool to incentivise actors in the food value chain to shift towards lower-emission processes. It will also enable emission reductions to occur where they are most cost-effective, and could provide substantial incentives for boosting carbon removals in the LULUCF sector. The Advisory Board also finds that a better alignment of the CAP with the EU climate ambitions could play a major role as well.

An integrated policy approach in the food sector would empower land managers to adopt climate mitigation and adaptation practices that are mutually supportive. Biodiversity-friendly land management will increase carbon removals, enhance the resilience of the EU carbon sink and improve soil fertility.

Sustainably sourced long-lived carbon storage products, such as wood used in construction, have the potential to increase carbon removals, as well as to contribute to the decarbonisation of other sectors. By using them, the sustainable circular bioeconomy can provide land managers with new business opportunities as biomass replaces fossil carbon in the EU economy. In addition, new carbon farming approaches are emerging that can increase carbon removals, such as carbon sequestration resulting from sustainable activities in coastal marine ecosystems (blue carbon), which can also contribute to climate mitigation.

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<sup>39</sup> The analysis is based on scenarios that reflect policies and measures until March 2023. Member States will submit their final National Energy and Climate Plans in 2024, which may include additional measures.

<sup>40</sup> ESABCC (2023). DOI: 10.2800/609405

<sup>41</sup> Commission Staff Working Document Impact Assessment Report accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society, SWD(2024) 63 final.

<sup>42</sup> ESABCC (2024). DOI: 10.2800/216446

### 3.5. Conclusion and next steps

While the LULUCF sector remains a carbon sink, the worrying trend of a declining LULUCF sink over the past decade persists. Given the numerous policy developments since the entry into force of the LULUCF Regulation approximately 6 years ago, the Commission will launch an evaluation of the Regulation in parallel with this report. Once the carbon removal certification framework has entered into force, the evaluation will assess the possible benefits and trade-offs of including sustainably sourced long-lived carbon storage products that have a net-positive carbon sequestration effect in the scope of the LULUCF Regulation<sup>43</sup>.

The purpose of the evaluation is also to assess the Regulation against the better regulation principles (effectiveness, efficiency, relevance, coherence, and EU added value) and to explore the potential for simplification and reducing the administrative burden. It will allow the EU to draw lessons from the past to aid future decision-making and to identify areas of improvement in the future policy design post 2030. Ultimately, the aim is to ensure that the policy framework for the land sector remains fit for purpose, and that it is an effective means of delivering the key goal of climate neutrality of the sustainable circular bioeconomy.

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<sup>43</sup> See Article 17(3) of the LULUCF Regulation.