

17. Agroforestry in the revised LULUCF Regulation

EURAF Policy Briefing #17, DRAFT v.4 10.7.24 (v1 Jun 22, v2 Jul 22, v3 Nov 22). Gerry Lawson
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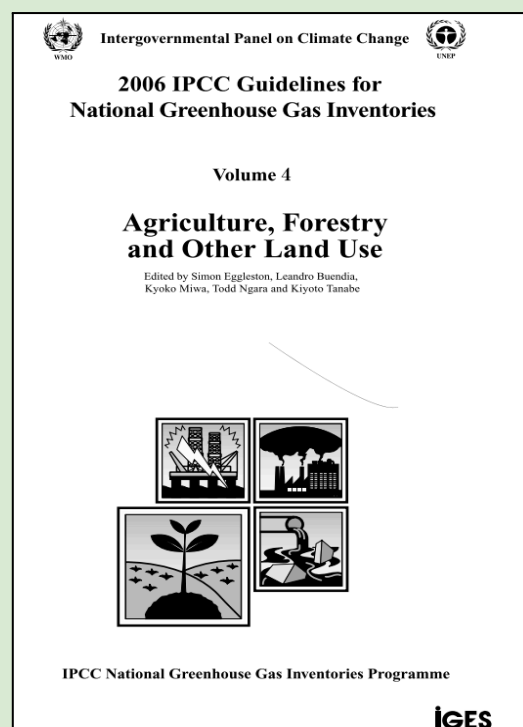


EURAF is an NGO, established in Paris on 16/11/2012, with a French Registration number of [W343014937](https://www.tribunalparis.fr/numeros/343014937) and a Transparency Register ID of [913270437706-82](https://www.transparence.gouv.fr/numeros/913270437706-82). It aims "to promote the adoption of agroforestry practices across Europe by supporting efforts to develop awareness, education, research, policy making and investments which foster the use of trees on farms". It has a network of 31 affiliated entities in 26 countries.

The latest version of this Briefing (v4) considers the effectiveness, efficiency, relevance and coherence of the 2023 LULUCF Regulation and concludes: a) that emissions reporting and targets should be integrated across the land sector in an "Agriculture, Forestry and Other Land Use" metric - as has been recommended by IPCC since 2006, and b) that national AFOLU reporting should be integrated with carbon farming reporting methods using the CAP Land Parcel Information System (LPIS), extended to include forest parcels (as in Spain). Integrating all rural land use data in this way will also facilitate the accurate implementation of the EU Deforestation Regulation in Europe, and could be a precursor to the introduction of an AFOLU-ETS Regulation and expansion of the Carbon Border Adjustment Mechanism for imports of timber and foodstuffs.

1. Introduction

Version 1 of this Briefing (Jun 22 - available on zenodo.org) focused on the need for integrated reporting of CO₂ and non-CO₂ emissions across the entire land sector - called Agriculture Forestry and Other Land Use (AFOLU). This unified approach has been recommended by the IPCC since 2006 and allows non-CO₂ gases from agriculture (currently included in the Effort Sharing Regulation) to be reported in a shared format, and for GHG targets to be integrated. In this respect EURAF disagrees with the position of WWF and other environmental NGOs, who argue for continued separation ([link](#)). EURAF feels that by unified accounting for CO₂ and non-CO₂ greenhouse gases on all types of land the efforts of individual farmers and foresters to reduce emissions can be fully recorded and rewarded. This has been EURAF's position since the Commission's LULUCF consultation in 2015 ([link](#)).



Box 1 - "Agriculture, Forestry and Other Land use (AFOLU)" has been recommended by the IPCC since 2006 to combine CO₂ and non-CO₂ emissions from all types of land for fully-integrated GHG reporting.

Version 2 was circulated to MEPs before the plenary parliamentary session in June 2022 on the revised LULUCF Regulation, and argued that the Commission's commitment to carbon neutrality in the integrated land sector by 2035 should be retained.

Version 3 regretted that Parliament voted to remove the commitment to neutrality by 2035, but welcomed the favourable mentions of agroforestry in the approved text. We provided further evidence of the need for a large programme of planting of Trees outside Forests to help meet the agreed target of -310 M tonnes CO₂e (i.e. CO₂ "equivalent") sequestration by 2030 (Briefing [#26](#)) and adaptation

(Briefing [#27](#)) in the EU. Hence, we were disappointed that early indications that the commitment of neutrality in the land sector by 2035 would be restored in the Commission's 2040 climate targets were not fulfilled (press release - [Feb 24](#)).

Version 4 responds to the Commission's call for evidence on the effectiveness of the current LULUCF regulation ([link](#)), and their report on its effectiveness (15.5.24 - [link](#)). It focuses on the five evaluation criteria set out in the Better Regulation Guidelines: effectiveness, efficiency, relevance, coherence and EU added value.

EURAF is pleased that agroforestry was named as one of the first four types of carbon farming to be implemented in the Carbon Removals Certification Framework CRCF ([link](#)) and that certification will be extended to GHG reductions from soils, and that further inclusion of emissions from slurry and enteric fermentation will be reviewed in 2026. EURAF is developing approaches to MRV of removals/reductions in agroforestry-carbon-farming, and sustainability monitoring. These are reported in several published Policy Briefings - particularly "Carbon Farming" ([#8](#)), and "the Sustainable Finance Initiative" ([#28](#)), plus briefings on mitigation ([#26](#)) and adaption ([#27](#)) and in draft briefings on water resources ([#64](#)), pollution ([#65](#)), biodiversity ([#66](#)) and the circular economy ([#67](#)). Links between agroforestry and these six areas of sustainability were included in the recent Brno Agroforestry Declaration in [English](#) and [French](#) (**German coming**)

2. Effectiveness

EURAF commends the efforts of Directorate-General for Climate Action (DG CLIMA) and the European Economic Area (EEA) to explain the importance of the LULUCF Regulation, and the recent publication of version 2 of the EEA LULUCF Handbook ([link](#)). This focuses on a lay audience, and examines linkages with a wide range of climate, environment and environmental policies and data.

However most Member States are a long way from having **effective roadmaps** to meet the net emissions target of -310 MTCO_{2e} in 2030. The Commission's December 2023 evaluation of progress in the land sector is stark ([link](#)):

The majority of the draft updated NECPs do not show sufficient ambition and action on land. Very few Member States show a concrete pathway to reach their national net removal targets, or sufficient actions to assist farmers, foresters and other stakeholders in building sustainable business models in line with these targets. The aggregation of LULUCF projections shows that the overall net removals would still lead to a gap of around -40 to -50 Mt CO_{2e} compared to the 2030 target of -310 Mt CO₂ eq. Almost all Member States need to improve their monitoring, reporting and verification to ensure the robustness and policy integration enhancements of the revised legislation. Biodiversity, nature restoration and nature-based solutions should be better integrated in the plans, to enhance carbon sinks and resilience.

It is disappointing that only 4 Member States (SE, DK, NL, FI) finalised their National Energy and Climate Plans (NECP) by the due date of 30 June 2024, and that one (AT) has not even submitted its draft NECP, which was due by June 2023.

There is also little evidence that Member States have improved the climate-mitigation focus of measures in their CAP Strategic Plans, and few Member States responded to the requirement in Article 130 of the CAP Strategic Plan (CSP) Regulation that modifications should be introduced to take account of the new emission targets introduced by the LULUCF Regulation in May 2023. This was a lost opportunity when time is short. And the inaction by Member States took place despite guidance from DG CLIMA on making these amendments (Wiltshire et al., 2023), and a succession of studies showing that the previous CAP has had made little or no contribution to climate mitigation (Alliance Environnement, 2019; European Court of Auditors, 2016; Matthews, 2016, 2019; Pe'er et al., 2020). Not only are there no mechanisms in place to quantify the impact of present CAP on climate mitigation or adaptation, but it has

been clear for some time that the available metrics have been used incorrectly in previous estimates of this climate-contribution (EU Court of Auditors, 2022). EURAF is pleased that a new study by DG AGRI and DG CLIMA is underway to rectify this omission, as part of the overall targeted review of the CAP ([link](#)), and in the context of the Council's recent "*Future of Agriculture*" statement which stressed the need for a move to results based payments, and for environmental incentives beyond "*cost incurred and income foregone*" ([link](#)).

The agreement reached on 10.11.22 between Member States on distributing the -310 Mt CO₂e 2030 net emission target ([link](#)) was predicated on emissions in the base years of 2016-2018, and national areas of agricultural and forestry land. Since then, some Member States have significantly changed their methodologies for emission calculation and this in turn has affected their estimates for the base years: meaning that a few countries have already met their targets while others have fallen further behind. **There is therefore a justification for a recalculation of the target distribution using refreshed emission baselines for both forest and agricultural land.**

EURAF believes that Member States are not moving sufficiently quickly to implement higher tier methods of estimating GHG removals and reductions (qv) - particularly in regard to trees in croplands and grasslands. Information from the CAP Land Parcel Information Systems in all member states should be used to record "wall to wall" parcel locations and information about tree and shrub growth in parcels and on sub-parcel boundaries. This would greatly increase the **effectiveness** of national LULUCF reporting and provide a link to carbon farming certification: thereby empowering farmers to tap into a complementary source of income.

3. Efficiency

EURAF has been calling for a **more efficient** integrated land use pillar since our submission to the DG CLIMA LULUCF Consultation in 2015 ([link](#)). Moving from LULUCF to AFOLU has been IPCC policy since publication of the 2006 IPCC Guidelines on National Greenhouse Gas inventories (see Box 1). IPCC advocates this on scientific grounds since carbon and non-carbon emissions take place from all categories of land and AFOLU reporting resolves "*inconsistencies and double counting ... removing the arbitrary distinction between the agriculture and LULUCF categories, and promoting consistent use of data and more reliable treatment of land conversions*" ([link](#)).

The term AFOLU has been suggested in the Commission for a long time and was used in the Joint Research Center (JRC) Report "Mitigation measures in the Agriculture, Forestry and Other Land Use Sector (AFOLU)" (Leip et al., 2017), and in the report on an "Integrated modelling framework for GHG emissions and removals in the AFOLU sector" (Barbosa et al., 2023).

Unfortunately, some major environmental NGOs still reject the IPCC AFOLU option and continue to argue for separation of LULUCF and agricultural non-CO₂ emissions ([link](#)) (Figure 1).

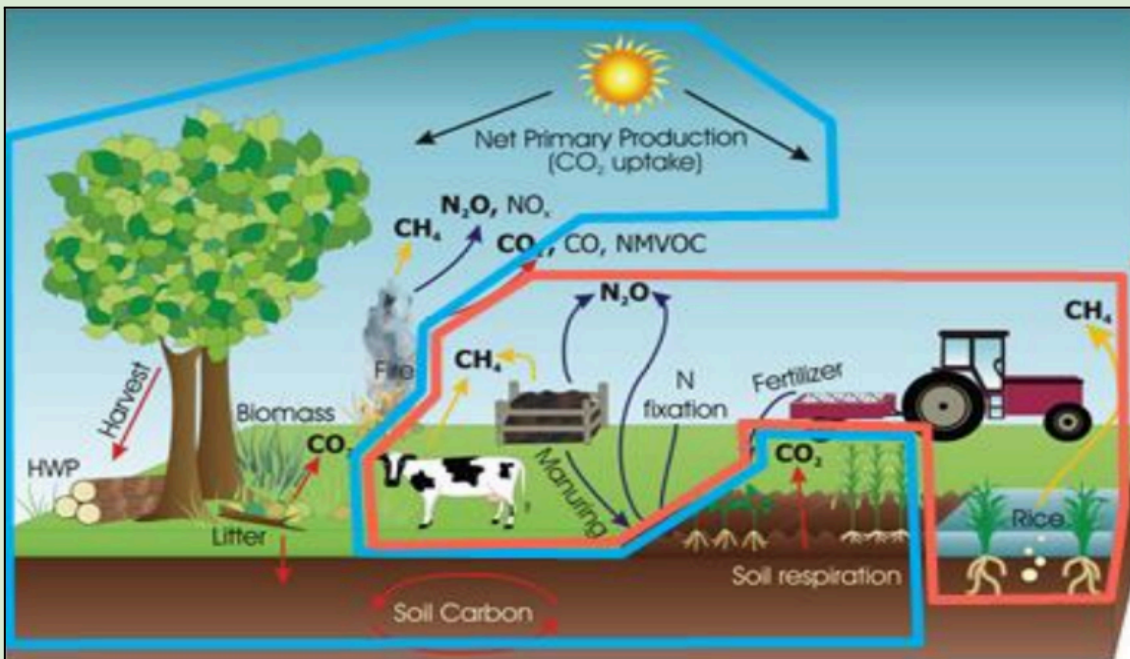


Figure 1: A schema used by the European Commission DG CLIMA (European Commission, 2016) to explain that fluxes of all GH gases from forestry and CO₂ from agriculture are reported through LULUCF (shown in blue), whereas fluxes of non-CO₂ GHG gases are reported through the Emissions Sharing Regulation (shown in red). Since 2006 the IPCC has recommended that a single land use pillar should be used to report on all GHG emissions from “Agriculture, Forestry and Other Land Use (AFOLU)”

	Tier 3		Modelled data combined with LUC matrix (not necessarily spatially dis-aggregated)	Geo-information at high-resolution, detailed time series, country-specific disaggregated data based on inventories and/or models
	High res. data (e.g. model)	Not applicable		
	Tier 2	National area statistics, combined with country-specific values – typical 1 st improvement	Annual LUC stats, combined with country-specific values	Geo-information, time series, country specific values – good coverage, detailed analysis
	Country specific values			
Tier 1	National area statistics, combined with IPCC default values – basic entry level	Annual (or annualised) LUC stats presented as national matrix – applied using default IPCC values	Geo-information, time series, default values – weak, but better than App 1 and 2	
IPCC default values				
	Approach 1	Approach 2	Approach 3	
	National statistics	Land Use Change matrix	Geo-tracked	

Figure 2 The direction of travel in emissions reporting. Both Member States, and carbon farming certification bodies should now be using IPCC Tier 2 or 3 (emissions modelling) and IPCC Approach 3 (GIS based wall-to-wall identification of land parcels - e.g. the CAP LPIS) as a framework for monitoring carbon removals and reductions (European Commission, 2016)

Regarding **efficiency**, there is a need for Member States to move their annual reporting of emissions away from simple IPCC default emission factors or broad national averages, to the highest level of resolution possible (top-right, Figure 2), where farm-level agricultural databases of land use like the CAP-LPIS system can be used as the basis for national calculations. The data used in these calculations should be made available to groups of farmers who are developing Carbon Farming certification proposals. Thus, top-down GHG data from Member States can be made available using GIS Open Data rules (e.g. the Inspire Directive) and used for bottom-up calculations of the impact of sustainable farming

practices - like agroforestry. The granularity - both in space and time - of these approaches is an essential step towards moving to a quantified, certified system where benefits can be attributed to actors on the ground – for example, farmers willing to take up the opportunities offered by agroforestry.

EURAF advocates the principle of collecting data once and using it multiple times. It also argues that remotely sensed data on land-cover should be used to complement existing national datasets of land-use rather than the other way round. **Thus, the CORINE Land Cover Plus (CLC+) "LULUCF Instance" ([link](#)) should be used to check and verify the existing CAP GSAA and LPIS systems - and not replace them for GHG reporting.** There needs to be a two-way link between farmer/forester CRCF carbon-farming data and national inventories of GHG. This is only possible by greater harmonisation in the use of open access but anonymised LPIS/GSAA parcel data by all Member States, hopefully with greater inclusion of forest parcels.

4. Relevance

The LULUCF Regulation is becoming more and more relevant. Compliance with its targets is crucial for the EU and its Member States, and also to satisfy a range of EU Environmental policies (see Policy Briefing [#8](#) and the EEA LULUCF Handbook).

Many farmers are also foresters. If they don't have areas of official "forest land" they will have hedges, copses, field corners and isolated trees and bushes which have great potential to sequester carbon, and which bring a wide-range of environmental benefits. They have emissions of non-carbon greenhouse gases like CH₄ and N₂O, but they also sequester carbon on their land, and the Government records their efforts in its national statistics. It therefore appropriate the wording in the Council position of 29.6.22 ([link](#)) to be revived.

*"Council agreed that the Commission would submit a report within six months of the first global stocktake under the Paris Agreement (to be carried out in 2023), **on including non-CO₂ greenhouse gas emissions from agriculture in the scope of the regulation and the setting of post 2030 targets for the land use sector.***

The Commission's "Sustainable Carbon Cycles" (SCC) communication ([link](#)) makes an important commitment that "**every land manager** should have access to verified emission and removal data by 2028" (Box 2). By definition, this cannot be provided through voluntary CRCF systems, and the assumption seems to have been that that an agri-ETS scheme will be in place by 2028, or that Member States will make more widely available their "wall to wall" geospatial GHG calculations from the land sector. See EURAF Policy Briefing [#24](#) for an analysis of Parliament's response to the SCC communication.

Carbon farming challenge
Carbon farming can support the achievement of the proposed 2030 climate target of net removals of 310 Mt CO ₂ eq in the land sector. To that end:
<ul style="list-style-type: none">• every land manager should have access to verified emission and removal data by 2028 to enable a wide uptake of carbon farming;• carbon farming initiatives should contribute to the increase by 42 Mt CO₂eq of the land sink that is required to meet the objective of 310 Mt CO₂eq net removals by 2030.

*Box 2 Commitments in the Sustainable Carbon Cycles communication
COM(2021) 800 15.12.2021 ([link](#))*

5. Coherence

As indicated above, and in the excellent EEA LULUCF Handbook ([link](#)), the LULUCF Regulation has implications for many EU regulations and directives. We will highlight four necessary changes.

5.1 Modifying the Emission Trading Scheme to include "agri-ETS" aka "AFOLU-ETS"

As mentioned above, the Sustainable Carbon Cycles Communication (SWD -2021-450 final - [link](#)) gave an aspirational target that “by 2028 every land manager should have access to verified emission and removal data”. The CRCF will go only part way to achieving this, since voluntary carbon markets have costs and complications which will restrict their appeal and scope. Giving the prospect of carbon farming to “every land manager” will require implementation of a statutory agricultural Emission Trading Scheme (the “agri-ETS”). A preliminary study on this has already been commissioned and published by DG CLIMA ([link](#)), and a follow-up study is underway. The "agri-ETS" gives an opportunity for "emitting industries", including in the agricultural sector, to buy emission allowances on a regulated carbon market. Integration between farm-scale carbon emissions and national GHG emission reporting could then be possible, but would be predicated on detailed spatial emissions calculation at national level, as discussed above.

5.2 Modifying the EU Carbon Border Adjustment Mechanism to include timber and food products

The Agriculture Committee of the European Parliament suggested in 2022 that the Carbon Border Adjustment Mechanism should be extended to include imports of forestry and agricultural products ([link](#)). This was impossible due to World Trade Organisation rules, since such a change would involve extending the EU ETS rules to cover these products. Several studies have been undertaken at an EU level on avoiding leakage of agriculture emissions by importing from countries where agriculture and forestry does not meet the GHG emission standards of their European equivalents (Devulder & Lisack, 2020; Jansson et al., 2024; Wood et al., 2020). There is considerable interest amongst the EU farming unions, and some political groups, in the implementation of this type of trade measure (Matthews, 2022)

5.3 Modifying the Forest Monitoring Regulation to reflect national definitions of forest

The Forest Monitoring Regulation (FMR), COM/2023/728, ([link](#)) has significant synergy with the LULUCF Regulation and will improve the monitoring of carbon farming schemes based on afforestation and sustainable management. The indicators suggested in Annex I of the FMR are: a) forest area, b) tree cover density, c) forest type, d) forest connectivity, e) defoliation, f) forest fires (events, burnt-areas, severity, post-fire erosion, post-fire recovery), g) wildfire risk assessment, h) tree cover disturbances. In Annex II the indices are: a) forest available for wood supply or not available for wood supply; b) growing stock volume per ha; c) net annual increment per ha; d) stand structure; e) tree species composition and richness; f) European Forest Type; g) removals; h) deadwood; f) location of forest habitats in Natura 2000 sites; j) abundance of common forest birds; k) location of primary and old-growth forests; l) protected forest areas; m) production and trade of wood products; n) forest biomass for bioenergy.

However, a negative aspect of the FMR is that it insists on the FAO definition of forests, which is used in only two EU Member States. It also contradicts the definition thresholds used in Annex II of the LULUCF (see Policy Briefing #25) and in the UNFCCC Marrakesh Accord ([link](#)). The "one-size-fits-all" approach of the Commission will lead to unnecessary confusion - for example in carbon-farming rules. **EURAF recommends that the UNFCCC thresholds, and the forest laws of member states should be given preference in all relevant EU legislation, although the FAO definition should continue to be used by Member States for reporting purposes in FAO quinquennial Forest Resource Assessment.**

5.4 Modifying the EU Deforestation Regulation (EUDR) to reflect national definitions of forest and to include better spatial data on the forest/agriculture boundary globally.

The EUDR was approved on 19.4.23 and comes into force on 31.12.24, although major agricultural and forestry organisations in Europe ([link](#)) and globally ([link](#)) are requesting a delay. Section 5 of a leaked version of the Guidelines says:

*"In the assessment of whether a certain plot of land constitutes forest, the actual forest properties **should prevail over the designation in land registers and cadastral maps**. For demonstrating agricultural use in the past, land registers and cadastral maps can be further elements to complement the satellite data. Furthermore, forest management plans and registers of designated forest areas can be of use when determining whether the area is a forest without current tree cover, particularly in case of the area is temporarily unstocked without tree cover due to forest management practice, natural disaster, or the first years of afforestation".*

The problem with this formulation occurs mainly at the agriculture/forest boundary, and particularly in the case of agroforestry. The JRC has done its best to exclude large areas of agriculture from their forest map ([link](#)), but it is extremely difficult to establish from remote sensing alone whether apparent "forest" areas have "predominant" agricultural use - thereby making them exempt from the provisions of the EUDR. Assuming that remotely sensed data will "**prevail over**" data from forest or agricultural inventories (such as the CAP LPIS system in the EU) may lead to significant errors. **For this reason EURAF is in favour of a delay in the implementation of the EUDR until maps and methodologies can be improved.**

6. EU Added Value

There are perhaps four areas in which the LULUCF regulation has contributed added-value to a pan-European approach.

- **Maintaining a coordinated approach to UNFCCC targets** - where EU Member States are able to trade with each other through the LULUCF or Effort Sharing Regulations.
- **Coordinating LULUCF monitoring methods.** The EU-JRC has convened 22 annual LULUCF technical workshops ([link](#)) to bring together policymakers, experts, and the scientific community to pose methodological questions, share challenges and good practices, discuss the latest scientific achievements and exchange insights on understanding and interpreting technical guidelines and legal requirements. The EEA maintains a database of GHG emissions from Member States ([link](#)) - including for LULUCF ([link](#) - and Figure 3)- and coordinates the collection of remotely-sensed data through its Copernicus programme.
- **Setting an example to other continents.** The European Union has set an important example for the rest of the world, and Europe may be the only continent ([link](#)) which is significantly reducing emissions from the Land Sector. The EU JRC has provided important technical assistance to the UNFCCC Secretariat and supported the global stocktake of emissions undertaken in 2023 ([link](#)).
- **Strengthening the focus on climate mitigation in the CAP.** Although Member States have not yet undertaken evaluations of the climate mitigation impacts of their CAP policies, the LULUCF Regulation means that any Member State which fails to meet its emission targets will eventually be obliged to buy sequestration credits from other countries. This should give a financial incentive to policies which reduce emissions. This reality check is invaluable in view of the low implementation of mitigation measures by Member States. Even the modest agroforestry planting target for agroforestry in the CAP (2015-2020) of 80 kha was greatly under achieved by Member States - with 4 kha planted by the end of 2023. Targets for agroforestry are also low in the current CAP (2023-28) - since only 7 countries and 17 measures specifically mention agroforestry or landscape features from a total of 950 ecoschemes, investment measures or agri-environment-climate schemes ([link](#)).

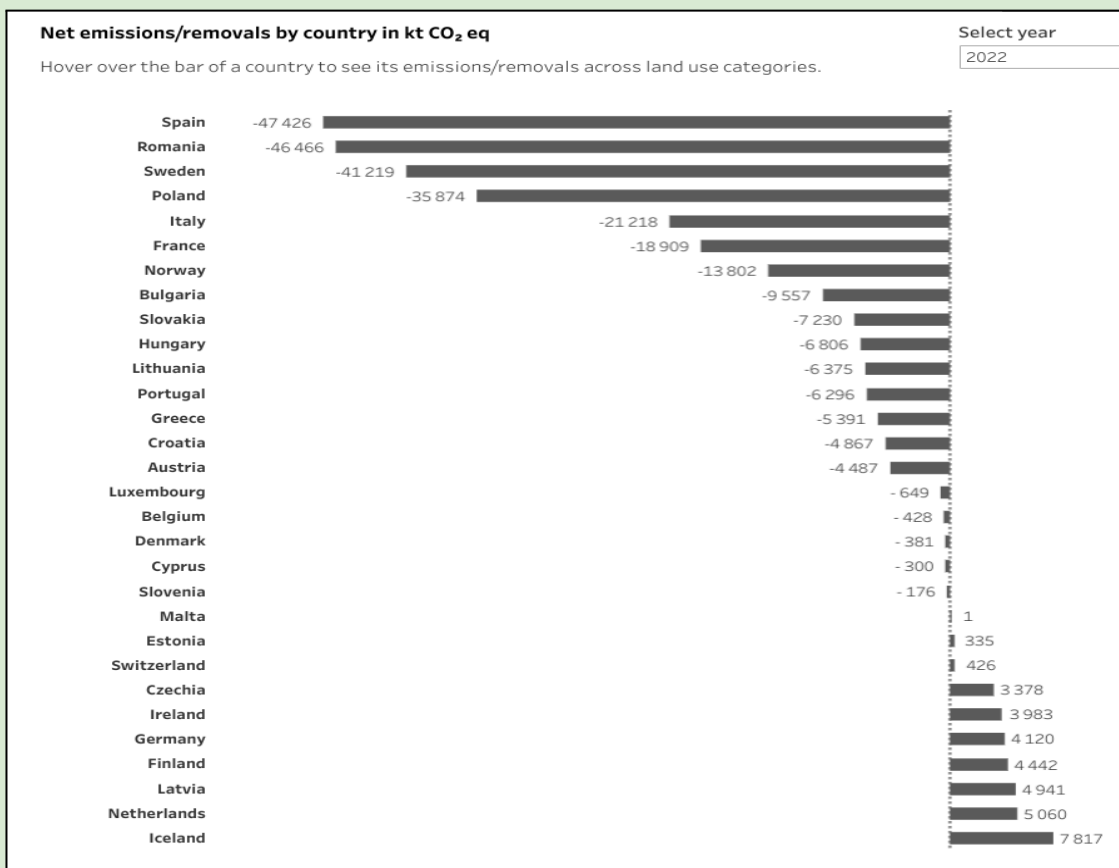


Figure 3. Net LULUCF emissions/removals in Kt CO₂e equivalent in 2022 - an increasing number of Member States have become net emitters, and little change is likely before 2030.

7. Conclusion

The EU LULUCF Regulation (2023) is a crucial stepping-stone to effective monitoring of GHG emissions in Member States and to the collective achievement of the challenging target of -310 MtCO₂e yr⁻¹ net LULUCF emission by Member States in 2030. However, very few Member States have amended their National Energy and Climate Plans or CAP Strategic Plans to help meet their targets; nor have they recognised that the continuing decline of sequestration in Europe's forests means that an urgent planting programme for Trees outside Forests is needed. EURAF suggests that 11.2 million ha of new agroforestry should be planted by 2040, which would generate around 56 MtCO₂e over the life of the plantations. This new agroforestry should be focused in the European regions and counties with fewest trees ([link](#)). EURAF also concludes that: a) combined agricultural and LULUCF emissions have been described by the IPCC since 2008 as "Agriculture, Forestry and Other Land Use" (AFOLU). The term is used by most of the world and should be used by the Commission, and b) AFOLU reporting by Member States should be integrated with carbon farming reporting methods using the CAP Land Parcel Information System (LPIS), extended to include forest parcels (as in Spain). Integrating all rural land-use data in this way will also facilitate the accurate implementation of the EU Deforestation Regulation in Europe, and could be a precursor to the introduction of an AFOLU-ETS Regulation and expansion of the Carbon Border Adjustment Mechanism for imports of timber and foodstuffs.

8 References

- Alliance Environnement. (2019). *Evaluation Study of the Impact of the CAP on Climate Change and Greenhouse Gas Emissions*. IIEP, Oréade Brèche, Ricardo.
https://ec.europa.eu/agriculture/sites/agriculture/files/evaluation/market-and-income-reports/2019/cap-and-climate-evaluation-report_en.pdf
- Barbosa, A. L., Salvucci, R., Rózsai, M., Neuwahl, F., Mubareka, S., Hristov, J., Blujdea, V., Pili, R., Hilferink, M., Witzke, H. P., Kesting, M., Grassi, G., Fiorese, G., & Dominguez, I. P. (2023). *A multi-sectoral integrated modelling framework for assessing greenhouse gas emissions and removals in the European agriculture, forestry and land use sectors* (No. JRC132798). EU Joint Research Centre.
<https://doi.org/10.2760/254322>
- Devulder, A., & Lisack, N. (2020). *Carbon tax in a production network: Propagation and sectoral incidence*.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3571971
- EU Court of Auditors. (2022). *Climate spending in the 2014-2020 EU budget Not as high as reported* (No. Special Report 09).
- European Commission. (2016). *Impact assessment of the LULUCF Regulation* (No. COM(2016) 479 final) SWD(2016) 246 final). EU Commission DG CLIMA. http://ec.europa.eu/clima/news/docs/20160720_lulucf_impact_assessment_4_en.pdf
- European Court of Auditors. (2016). *Spending at least one euro in every five from the EU budget on climate action: ambitious work underway, but at serious risk of falling short* (No. 31). ECA, Luxembourg. www.eca.europa.eu/Lists/ECADocuments/SR16_31/SR_CLIMATE_EN.pdf
- Jansson, T., Malmström, N., Johansson, H., & Choi, H. (2024). Carbon taxes and agriculture: the benefit of a multilateral agreement. *Climate Policy*, 24(1), 13–25.
- Leip, A., Carmona-Garcia, G., & Rossi, S. (2017). Mitigation measures in the Agriculture, Forestry, and Other Land Use (AFOLU) sector. *Quantifying Mitigation Effects at the Farm Level and in National Greenhouse Gas Inventories*. Publication Office of the European Union, Luxembourg. Doi, 10, 51052.
- Matthews, A. (2016, September 23). *Is agriculture off the hook in the EU's 2030 climate policy?* Cap_reform.eu.
<http://capreform.eu/is-agriculture-off-the-hook-in-the-eus-2030-climate-policy/>
- Matthews, A. (2019, May 5). *Climate policy in agriculture and carbon leakage*. Capreform.eu.
- Matthews, A. (2022). *Trade policy approaches to avoid carbon leakage in the agri-food sector*. The Left Group.
<http://old.left.eu/content/uploads/2023/02/GUE-Study-TRADE-Carbon-leakage.pdf>
- Pe'er, G., Bonn, A., Bruelheide, H., Dieker, P., Eisenhauer, N., Feindt, P. H., Hagedorn, G., Hansjürgens, B., Herzon, I., Lomba, Â., Marquard, E., Moreira, F., Nitsch, H., Oppermann, R., Perino, A., Röder, N., Schleyer, C., Schindler, S., Wolf, C., ... Lakner, S. (2020). Action needed for the EU Common Agricultural Policy to address sustainability challenges. *People and Nature (Hoboken, N.J.)*, 2(2), 305–316.
- Wiltshire, J., Avis, K., & Gill, D. (2023). *Guidance to Member States in improving the contribution of land-use, forestry and agriculture to enhance climate, energy and environment ambition* (No. Framework Contract no. CLIMA.A.4/FRA/2019/0011). DG Climate Action.
- Wood, R., Neuhoff, K., Moran, D., Simas, M., Grubb, M., & Stadler, K. (2020). The structure, drivers and policy implications of the European carbon footprint. *Climate Policy*, 20(sup1), S39–S57.



This Policy Briefing is an output from the [DigitAF Project](#) Grant agreement: 101059794. DigitAF is a consortium of 26 European and international partners committed to providing digital tools to boost Agroforestry in Europe to meet climate, biodiversity and sustainable farming goals. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

