



## **AGROFORESTRY: VITAL TO EUROPE'S LAND EMISSIONS NEUTRALITY**

Europe's massive land-sector greenhouse gas emissions gap can only be closed with the large-scale expansion of agroforestry on agricultural lands. This is most urgently needed on mineral soils afflicted by erosion and low soil fertility. Bringing these degraded agricultural lands up to 10% tree cover would close over half the land-sector emissions gap - and boost those farms' resilience and productivity in the process.

[EURAF welcomes](#) many of the commitments in [today's communication from the European Commission](#) on "Securing our future: Europe's 2040 climate target and path to climate neutrality by 2050, building a sustainable, just and prosperous society".

**We regret that the section suggesting that Europe's combined forestry and agriculture sector could be fully climate-neutral by 2035 was cut at the last minute [1]. However, we calculate that neutrality in the land-sector is still possible for the EU by 2040, but only if there is an emergency planting programme of Trees outside the Forest. This should focus on areas where the trees will bring the biggest environmental and carbon-sequestration benefit, and where there is least reduction in agricultural production.**

Non-CO2 greenhouse gas (GHG) emissions from agriculture have been stuck at around +380 MtCO<sub>2</sub>e (equivalent) for many years. Estimates from Member States suggest that negative GHG net-emissions (i.e. "sequestration") from the Land Use, Land Use Change, and Forestry sector (LULUCF) cannot balance this anytime soon. In fact, LULUCF sequestration has dropped dramatically in recent years because of pressure on our forests, and in 2022 was only around -220 MtCO<sub>2</sub>e. The Commission's own estimates show that Member States will collectively achieve only -260 to -270 MtCO<sub>2</sub>e from LULUCF in 2030: compared to a target in the 2023 LULUCF Regulation of -310 MtCO<sub>2</sub>e.

**Thus, the annual gap to neutrality in the land sector by 2030 is likely to be at least 100 MtCO<sub>2</sub>e. We hope that the EU and Member States can close this gap by 2040, at the latest, despite the lack of commitment in today's Communication.**

**Gerry Lawson, EURAF Policy Officer**, argues that "parklands, hedges, tree-lines and copses are needed throughout Europe, and most urgently on mineral soils which are afflicted by erosion and low soil fertility. Agroforestry planting on these lands will provide timber and soil carbon, together with biodiversity and environmental services. EURAF calculates that there are 95.2 million hectares of cropland and pastureland in the EU-27 that are devoid of trees, and 117.9 million hectares with less than 10% tree-crown-cover. Bringing these areas to the 10% tree-crown-cover threshold would mean planting 11.2 million ha of agroforestry"

**Judit Csikvari, President of EURAF**, confirms that “achieving the 10% tree cover target on EU agricultural land by 2040 will require planting an average of 750,000 ha/yr, starting in 2025. That’s ambitious, but the climate payback would be massive: assuming an average sequestration rate of 5 tCO<sub>2</sub>e/yr/ha for agroforestry on mineral soils, including both above and below ground sequestration, 11.2 million ha of agroforestry would give 56 MtCO<sub>2</sub>e over the lifetime of the trees - which is typically 20-40 years”.

But **Patrick Worms, EURAF Vice President**, points out that: “sadly, trees grow slowly, and very slowly initially. They take decades to reach their full sequestration potential. Any delay in getting the campaign to reach 750,000 ha of agroforestry planted every year will result in an almost exponential emissions penalty being paid by 2040”.

**Patrick Worms** adds that “Member States must finalise their National Energy and Climate Plans by June 2024. That offers their last and best chance to revise their tree planting targets for the current CAP period. I hope they recognise that their current plans will bring us nowhere near the much-desired land-sector neutrality by 2040”.

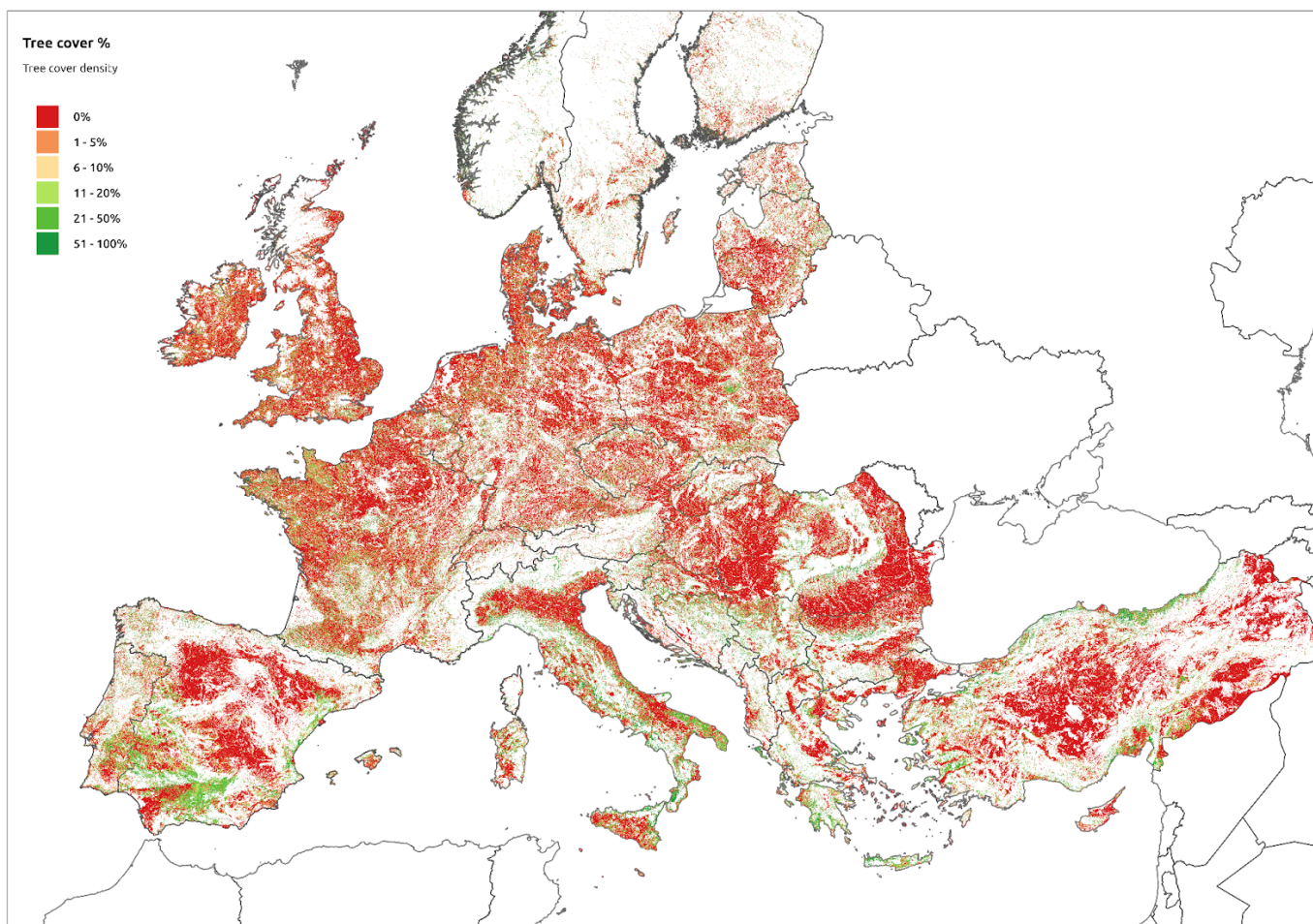
[1]. According to previous drafts of the Communication: “Agricultural activities such as livestock and use of fertilisers will remain one of the core areas to reduce EU GHG emissions by 2040, However, with the right policies and support, it should be possible both to reduce non-CO<sub>2</sub> GHG emissions in the agriculture sector by at least 30% in 2040 compared to 2015 thereby contributing to the 2040 climate target and, at the same time, to enhance the capacity of soils and forests to store more carbon. This would mean that the EU’s combined agriculture and forestry sectors could become climate neutral as early as 2035”.

### **Additional Information**

#### **1. Land availability**

Within the DigitAF European project\*, EURAF has published this map, and accompanying databases, which it hopes Member States will use to prioritise inducements to farmers and landowners to plant trees on agricultural land.

\* **DigitAF ([digitaf.eu](http://digitaf.eu))** (EU Grant Agreement 101059794) is a Horizon Europe project linking 26 European and international partners committed to providing digital tools to boost agroforestry in Europe to meet climate, biodiversity and sustainable farming goals.



**Caption:** Tree-Cover-Density (TCD) on agricultural land in the 39 EEA countries. Areas of white are non-agricultural areas. Red areas are priority planting zones where TCD is particularly low. Source: Copernicus TCD-2018 superimposed on Corine agricultural land for 2018. Each pixel covers 1 ha (100 m x 100 m). The map was produced for the EU DigitAF project by Planet Inc and the European Forest Institute.

## 2. About EURAF

The European Agroforestry Federation ([www.euraf.net](http://www.euraf.net)) is an NGO, established in Paris on 16/11/2012. It aims “to promote the adoption of agroforestry practices across Europe by developing awareness, education, research, policy making and investments which foster the use of trees on farms”. It has a network of 31 affiliated entities in 23 countries.



Meet world-renowned experts at the upcoming [EURAF 2024 conference](#), taking place in Brno, Czechia from May 27th til May 31st. You will have the chance to explore topics ranging from climate change mitigation to sustainable farming practices - while also contributing to conversations on shaping the future of agroforestry in Europe.

Early bird registration is open until 15th March 2024 - so book your seat now!

## 3. Contacts

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To use the map quote: EURAF Policy Briefing [#26](#) Agroforestry and the 2040 AFOLU net-zero target (v1 23.6.23)

## 4. Further explanation of the agroforestry tree planting target.

This is how the 112,154 km<sup>2</sup> (11.21 million ha) planting target for agroforestry was calculated.

Copernicus Tree Cover Density	0%	≤ 1%	≤ 2%	≤ 5%	≤ 10%	Total area
<b>Corine Land Cover Class</b>						
211 Non-irrigated arable land	758,232	791,782	812,884	852,598	890,950	990,603
212 Permanently irrigated land	153,683	172,534	184,559	209,166	235,122	326,880
213 Rice fields	31,763	32,996	33,773	35,178	36,503	39,741
231 Pastures	5,793	5,916	5,987	6,122	6,252	6,569
244 Agroforestry	2,733	3,890	4,795	7,078	10,657	33,085
<b>Total Target Area (cumulative)</b>	<b>952,204</b>	<b>1,007,118</b>	<b>1,041,998</b>	<b>1,110,141</b>	<b>1,179,484</b>	<b>1,396,879</b>
	<b>Area in each tree cover category (not cumulative)</b>					
Total area in each tree cover class	952,204	54,914	34,881	68,143	69,342	1,179,484
Planting to bring to 10% cover (km2)	95,220	5,217	3,139	5,111	3,467	112,154



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