

Carbon Farming

Making agriculture fit for 2030

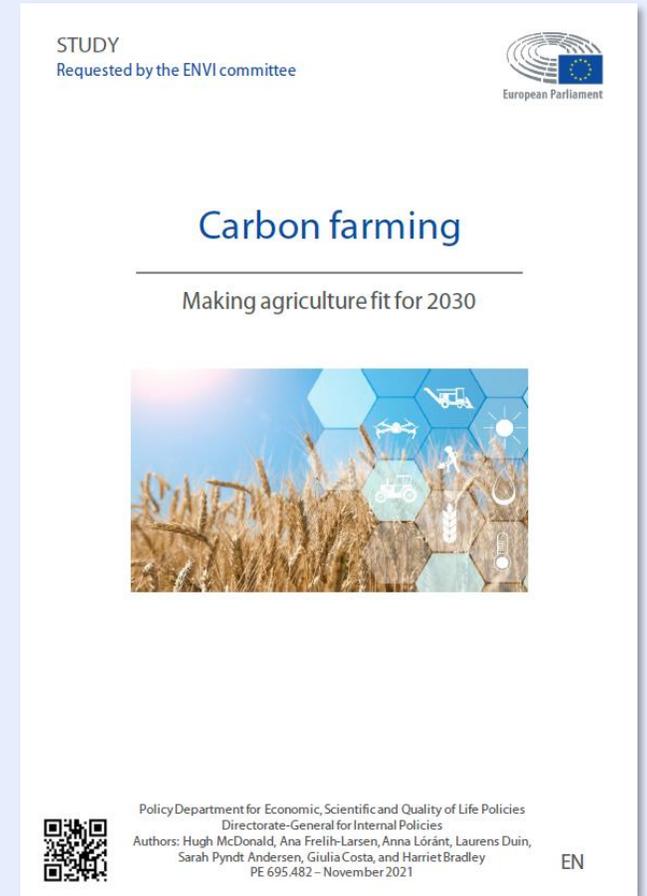
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Scope/ outline

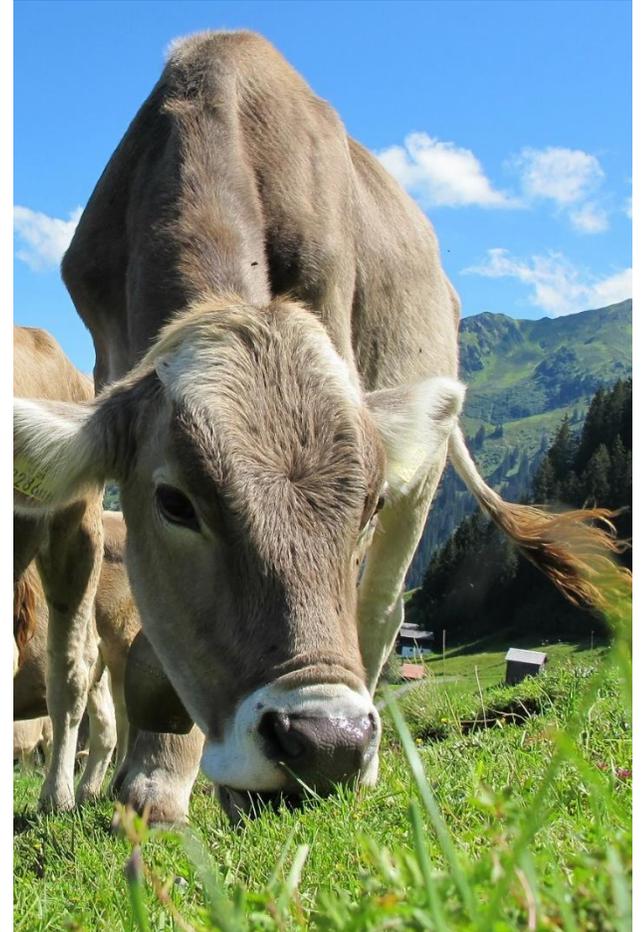
- Greenhouse gas mitigation potential of EU carbon farming
- Carbon farming as a business model
- Upscaling carbon farming – policy opportunities



[https://www.europarl.europa.eu/RegData/etudes/STUD/2021/695482/IPOL_STU\(2021\)695482_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/695482/IPOL_STU(2021)695482_EN.pdf)

Defining carbon farming

1. **Broad definition:** A set of farm management practices that deliver **on-farm climate mitigation**
 - Considers all greenhouse gases on the whole farm
 - Delivers **absolute GHG reductions**
 - Delivers **win-wins:** biodiversity, soil-health co-benefits
2. **Narrow definition:** A **business model** where farmers are paid to mitigate on their farms.



Carbon farming – climate impact

Carbon farming
practices

Managing peatlands

Agroforestry

Soil carbon on
arable/pastoral land

Livestock and
manure
management

Nutrient
management (e.g.
fertiliser)



Carbon farming – climate impact

Carbon farming practices	EU mitigation potential (-2050, Mt-CO ₂ -e/year)*
Managing peatlands	Avoided emissions
Agroforestry	Carbon removal
Soil carbon on arable/pastoral land	Removal and avoided emissions
Livestock and manure management	Emissions reductions
Nutrient management (e.g. fertiliser)	Emissions reductions



Carbon farming – climate impact

Carbon farming practices	EU mitigation potential (-2050, Mt-CO ₂ -e/yr)*
Managing peatlands	51- 54*
Agroforestry	8 – 235*
Soil carbon on arable/pastoral land	9 – 70*
Livestock and manure management	14 – 66*
Nutrient management (e.g. fertiliser)	±19*

- **Significant potential:** equivalent to 3-12% of current EU emissions (or 26+% of current EU agricultural emissions)
- **Potential differs widely across EU**
- *** implies high uncertainty**

Carbon farming – co-benefits, risks

Carbon farming practices	Action	Co-benefits for farmers, for society	Negative impacts for farmers, for society
Soil carbon on arable/pastoral land	Improved crop rotation	Productivity, adaptation, biodiversity, water quality, mitigation	Management costs



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Carbon farming – co-benefits, risks

Carbon farming practices	Action	Co-benefits for farmers, for society	Negative impacts for farmers, for society
Livestock and manure management	Low emission slurry injection	Lower fertiliser costs, water quality, mitigation	Soil compaction, decrease soil health, lower yields



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Upscaling carbon farming: certification challenges

- **Monitoring, reporting and verification:** Accurate quantification of real, additional mitigation from carbon farming is difficult and costly.
- **Non-permanence:** Carbon sequestered and stored in soils and biomass can be released back to the atmosphere, undoing climate mitigation benefits.





Upscaling: Private finance opportunities

- **Supply chain financing:** Agri-food companies pay farmers within their own supply chain to reduce their impact on the climate.
- **Voluntary carbon markets:** Farmers implement carbon farming actions and are paid for measured mitigation impact, financed by private companies/individuals.

Key challenges: Monitoring, reporting, verification; non-permanence; low transparency; risk of undermining mitigation effort in other sectors.



Upscaling: Public financing opportunities

Common Agriculture Policy: Improve effectiveness of €155 billion of „climate“ spending 2023-2028.

Other opportunities:

- CAP Strategic Plans: must be ambitious
- **Carbon removals certification mechanism/Carbon farming initiative:** support piloting, demonstration of carbon farming



Key messages

1. **Significant mitigation potential for carbon farming**
2. Which carbon farming? **Permanent, absolute GHG reductions, biodiversity-friendly**
3. Certification isn't the only answer: **CAP offers best opportunity to finance carbon farming**
 - Must avoid the risk of non-permanent, uncertain agriculture mitigation replacing emissions reductions in other sectors
4. **One part of broader transition to a sustainable food system**



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Thanks! Any more Questions?

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