



# Supporting peatlands as natural carbon sinks with Landcare Europe - Session 3 Corinna Friedrich (DVL)

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# LANDCARE EUROPE e.V.

Founding event: 07.06.23, Brussels

## Members:

- Deutscher Verband für Landschaftspflege e.V. (DVL), Germany
- Agri-Cultura-Natura Transylvaniae Association (ACNT), Romania
- Baltic Environmental Forum (BEF), Lithuania
- BoerenNatuur, The Netherlands
- Brodsko ekološko društvo - BED, Croatia
- Boerennatuur Vlaanderen, Belgium
- Fédération des Conservatoires d'espaces naturels (FCEN), France
- Legambiente Lombardia, Italy
- Sonairte, Ireland
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- Concha Salguero (Spain)
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Landcare Europe Captures Carbon - Supporting natural carbon sinks

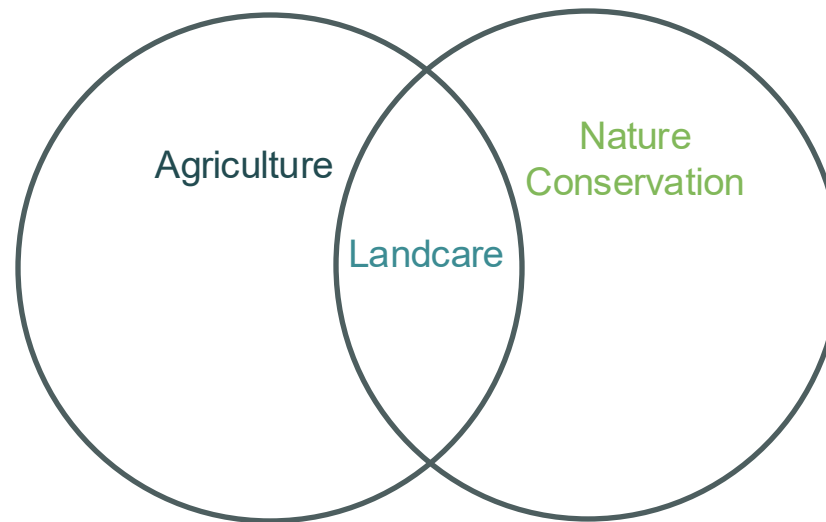
# Goals of Landcare Europe e.V.

- 1) **Knowledge exchange** between regions and countries, especially in the areas of agriculture, nature conservation, administration, politics, research and tourism
- 2) **Political and practical implementation of EU strategies**, e.g. the Common Agricultural Policy (CAP), the Water Framework Directive (WFD) or the "Farm to Fork" strategy
- 3) Support the **foundation of new Landcare organizations** and umbrella associations in the Member States



# How Landcare Associations (LCA) operate

- Cooperatively
- Voluntarily
- Independently
- Regionally
- Interdisciplinary





# The farmers we work with...

- ... > 100,000 in Europe
- ... cultivate grasslands, arable land, wetlands and special crops
- ... in a conventional or non-conventional manner
- ... on farms stretching from <1 ha to >3,000 ha
- ... on private, public and communal land
- ... from family to agri-businesses



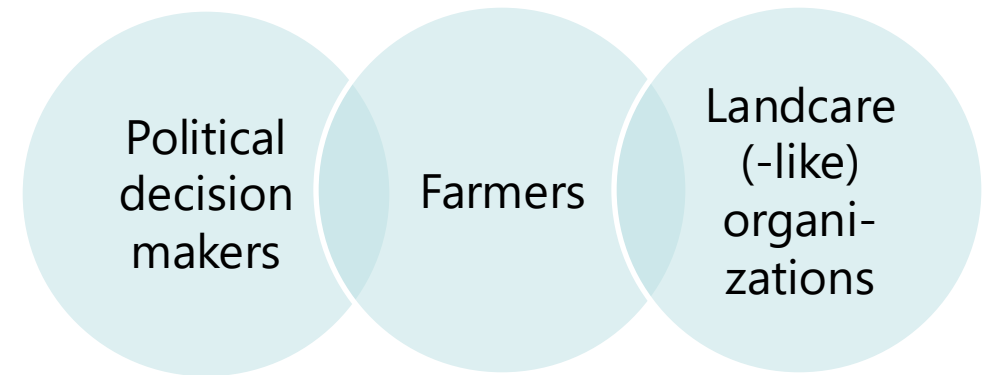
# What is our project goal?

EUKI Project: LANDCARE EUROPE Captures Carbon – Supporting Natural Climate Protection in Agricultural Landscapes (11/2023 – 3/2026)

- **Knowledge** on the political and practical implementation of **natural carbon sinks** in agricultural landscapes has improved in Europe amongst **political decision makers, multipliers and practitioners**.



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# Emissions from agriculture

- EU-28 agriculture: total, 490.6 million tonnes of CO<sub>2</sub>eq (12.4% of total EU emissions)
- 434.9 from methane, nitrous oxide and carbon dioxide from livestock, nitrogen fertilisation and others
- 55.7 million tonnes carbon dioxide from agricultural organic soils and the conversion of permanent grassland to arable land, minus the sink effect of mineral soils.
- sink function of mineral soils: 50 million tonnes of CO<sub>2</sub>.
- The largest source of CO<sub>2</sub> is the use of peat soils.

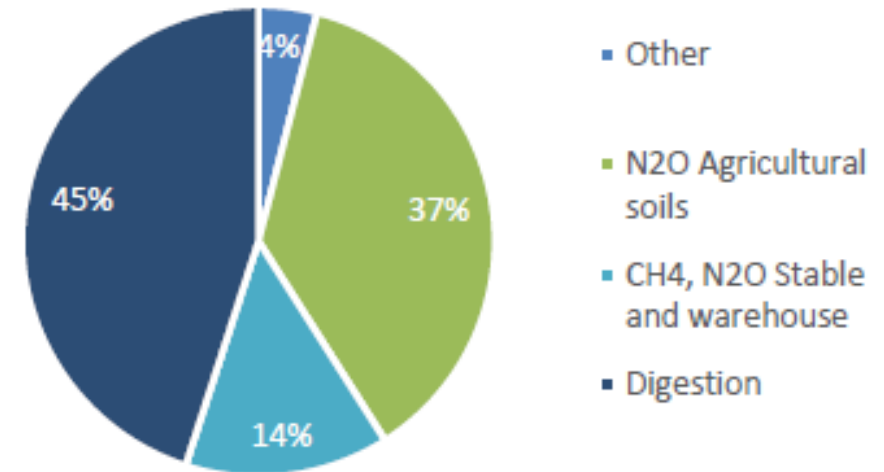


Figure 1 Source: UNFCCC Inventory Submission 2020

Source: “Improving the contribution of the Common Agricultural Policy to climate change mitigation” - Germanwatch - Quantification of greenhouse gas emission reduction potentials of the CAP; conditionality (GAEC standards) for direct payments and possible eco-schemes

# Highest saving potentials

- the **reduction of nitrogen inputs** including the reduction of nitrogen surpluses
- the **land commitment of livestock**, in particular grassland commitment for ruminants
- the **management of organic soils** used for agricultural purposes
- the **expansion of uncultivated land and agroforestry systems**.

Table 3: Overview of the mitigation effects of the CAP

Measures	Reduction (million tonnes of CO <sub>2</sub> eq.)
GAEC standards	-0,3 bis -28,9
Eco-Schemes	-72,1
TOTAL	-72,4 to -101,0
Overall reduction compared to 2018 (490,6 million tonnes of CO <sub>2</sub> eq.)	-14,8% to -20,6%

Source: Own calculations based on UNFCCC 2020 and Eurostat Database 2020



# Workshops

Country	Time	Topic
Croatia	11.-13.06.24	<b>Extensively managed grasslands</b> as natural carbon sinks and requirements for CAP measures <a href="#">Focus paper</a>
Czechia	30.09 – 02.10.24	<b>Soils</b> as natural carbon sinks – Practical implementation of water and soil management and requirements for CAP measures <a href="#">Focus paper</a>
Romania	16.-18.06.25	Traditional & modern <b>agroforestry systems</b> as natural carbon sinks and requirements for CAP measures <a href="#">Focus paper</a>
Lithuania	09.-11.09.25	<b>Peatlands</b> as natural carbon sinks In cooperation with EUKI project „Building the European Peatland Alliance” and „Eurosite Annual meeting”
Online	Feb 26	Conference on Natural Carbon Sinks in Agricultural Landscapes <a href="http://www.landcare-europe.org/events">www.landcare-europe.org/events</a>



# Focus Paper on Peatlands with Paludiculture

# What is paludiculture?



# What is paludiculture?

- **Paludiculture** is the productive land use of wet and rewetted peatlands that preserves the peat soil and thereby minimizes CO<sub>2</sub> emissions and subsidence

(Wetlands International Europe 2021)

- It includes **wetland-adapted crops**, **hay production** and **extensive grazing** with adapted species



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# Which peatlands do we target?

# Definition Peatlands

- **Peatlands:** “a type of wetland with a thick water-logged organic soil layer (peat) made up of dead and decaying plant material” (Ramsar Convention on Wetlands).
  - Target: Fens/degraded bogs that are already in agricultural use
- **Common Agricultural Policy (CAP)** in Regulation (EU) 2021/2115
  - defined according to the Ramsar Convention
  - Each Member State defines and maps those areas individually



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# Benefits for the climate and other public goods

# Peatlands and GHG Storage

- Almost 50% of the European peatland area is degraded, and they are estimated to **emit 600 Mt CO<sub>2</sub> equivalent per year**.
- Drained peatlands represent only 3% of the EU's agricultural land and rewetting them would **avoid up to 25% of the EU's greenhouse gas emissions** from agriculture.



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Source: UNEP (2022). Global Peatlands Assessment – The State of the World's Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands. Summary for Policy Makers. Global Peatlands Initiative. United Nations Environment Programme, Nairobi.



# Further (ecosystem) services

- **Preserving nature and biodiversity** (→ EU Biodiversity Strategy 2030 & Nature Restoration Law)
- **Supporting water purification and water retention** (→ EU Water Framework Directive)
- **Reducing effects of extreme weather situations** (→ EU Climate Adaptation Strategy)
- **Cultural landscapes & Cultural heritage** (→ European Landscape Convention)



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# Key success factors for rewetting

- 1) Central coordination**, e.g. landcare organizations
- 2) Include und support farmers:** fair compensation, incentives, free consultation, support for planning, administration and inclusion in decision-making facilitate the transition.
- 3) Manage water table level consistently**
- 4) Rewetting technique:** Gradual, controlled rewetting is used.
- 5) Individual approach:** local topography & hydrology, soil chemistry, agricultural
- 6) Secure long-term maintenance**



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# Key success factors for farming with paludiculture

1. **Specialized, soil protecting machinery**
2. **Extensive grazing** with robust livestock & seasonal/rotational grazing concept
3. **Use wetland-adopted crops** like Cattail (*Typha*), Reed (*Phragmites*), Sedge (*Carex*), Alder (*Alnus*)
4. **Sell paludiculture biomass & products in regional value chains**
5. **Extensive farming / control of fertilizer**



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# Goals to promote the transition

## 1. Give long term perspective in National Peatland Strategies

- Including an integral vision between sectors, protection of bogs, strengthening regional value chains for paludi products

## 2. Secure the eligibility for direct payments in CAP National Strategic Plans

## 3. Strict implementation of GAEC 2\* “Protection of wetlands and peatlands”

- Including restriction on drainages, tillage, ploughing, extraction/excavation/burning, nutrient input, modifying vegetation, short rotation coppices...



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\*in Regulation (EU) 2021/2115



# Goals to promote the transition

## 4. Fund the transition to farming with high water levels, including

- raising the water table
- drainage management
- planning process
- investments, e.g. machinery, levelling, seeding material, storage and processing technology, water management infrastructure like dams, weirs
- Conversion of arable land to permanent grassland



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# Goals to promote the transition

## 5) Funding schemes for farming with high water levels

- E.g. Keeping a minimum water table level, growing wetland-crops, extensive grazing & Grazing management, permanent plant cover, no use of artificial fertilizer, annual cutting, multiyear grass cultivation

## 6) Offer advice and support on farming on peatlands

- consulting on paludiculture, providing support with rewetting and organizing sales of paludiculture biomass

## 7) Collective approaches

- For hydrological catchment areas



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# Looking forward to the exchange...

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# *Working groups*



# Working groups

## Necessary regulatory framework and CAP measures

- Group 1: Recommendations for the CAP

## Practical implementation of paludiculture

- Group 2: What are key success factors for implementing paludiculture?
  - Model farmers
  - Projects with several farmers/stakeholders
  - What can Landcare Organizations do?