



Carbon Farming

Projects brochure

- 
- 4** Climate-stable forests for the Elbe-Elster region
 - 6** Afforestation of agricultural land in Poland
 - 8** Future-proof peat meadow polder Lange Weide
 - 10** PRATI_CO Parmigiano Reggiano: Agrotecnica organic carbon footprint
 - 12** Re-naturalisation of the Mandlinger Moor
 - 14** Improvement of forest genetic resources in the area managed by Gyulaj Co
 - 16** Nižná Boca - Restoring the production potential of damaged forests
 - 18** Promoting sustainable forest management



Manuscript completed in April 2023 First edition

The opinions expressed are those of the author(s) only and should not be considered as representative of the European Commission's official position.

Luxembourg: Publications Office of the European Union, 2023

© European Union, 2023

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39). For any use or reproduction of photos or other material that is not under the EU copyright, permission must be sought directly from the copyright holder.

Print: ISBN 978-92-76-60444-0, ISSN 2529-4954, doi:10.2762/883561, KF-AP-22-002-EN-C

PDF: ISBN 978-92-76-99036-9, ISSN 2529-5012, doi:10.2762/629295, KF-AP-22-002-EN-N

Managing editor: Antonia Gamez Moreno, Head of Unit,
European Commission Directorate-General for Agriculture and Rural Development.

Editor: Elena Di Federico, Publications Manager, EU CAP Network - Implementation Contact Point

Acknowledgements

Main contributors: Susan Grieve, Kaley Hart, David Lamb, Alex Papakonstantinou.

Layout: Communications and Events Team - EU CAP Network

Pictures: © Adobe Stock (front page, pages 3/4/5/6/7/8/9/10/11/13/14/15/16/17/18/19, back page), Dirk Knoche (page 5), Stichting Rijn & Gouwe Wiericke (page 9), Ewald Garibaldi (page 12), Robert Gombarik (page 17), La Mandriaccia (page 19)

CAP Implementation Contact Point

As an integral part of the EU CAP Network, the CAP Implementation Contact Point supports and coordinates networking activities relating to the design and implementation of the CAP's strategic plans.

We do this by connecting people and encouraging colleagues from across Europe to learn from one another and to exchange their experiences and their inspirations. We help develop knowledge by providing a platform for networking and by engaging with people at the local, national and European level. We share the outcomes of our work with a broad audience through a mixture of different communication products and channels.



[eu-cap-network.ec.europa.eu/support/
cap-implementation-contact-point](https://eu-cap-network.ec.europa.eu/support/cap-implementation-contact-point)

EU CAP Network

The European CAP Network brings together stakeholders from the previous European Network for Rural Development (including the Evaluation Helpdesk) and EIP-AGRI network and welcomes new stakeholders.

The EU CAP Network has been set up by the European Commission in line with the [Regulation](#) of the European Parliament and of the Council to support the design and implementation of CAP strategic plans (CSPs) while optimising the flow of information about agriculture and rural policy within the EU.

The EU CAP Network builds on the work of the previous two networks and merges them to support the achievement of the specific objectives of the new CAP.



eu-cap-network.ec.europa.eu

Introduction

Carbon farming is a green business model that rewards land managers for engaging in land management practices that increase carbon sequestration or maintain carbon stores.¹ Practices to manage carbon can foster long-term resilience to climate change while also providing soil protection, water retention, shelter for livestock and crops, benefits for biodiversity and they can play a role in diversifying land managers' income.

The CAP Strategic Plans will be key to providing incentives for land managers, farmers and foresters to increase carbon removals and protect carbon stocks. These will build on the support provided under the CAP 2014-2020 and can help expand the areas used for agro-forestry and peatland restoration, alongside more widespread support for soil management or maintaining permanent grassland.

This first edition of the EU CAP Network Projects Brochure reviews carbon farming initiatives funded under the CAP 2014-2020, a topic recently covered by the ENRD Thematic Group on Carbon Farming.² Overall, the publication aims to inspire new projects to be funded under the CAP that can deliver on the climate objectives set out in the EU Green Deal.

The CAP-funded projects included in this brochure demonstrate knowledge transfer and activities in forest areas and peatlands, which are all very relevant for carbon sequestration and storage.

¹ COM(2021) 800 final Brussels, 15.12.2021:
climate.ec.europa.eu/eu-action/sustainable-carbon-cycles_en

² enrd.ec.europa.eu/carbon-farming_en

Figures in this publication have been rounded. For the precise figures, please refer to the full description of each project on the EU CAP Network website.



Climate-stable forests for the Elbe-Elster region

Engaging German forest owners to face climate-related challenges

In recent years, extremely dry summers have damaged the forests in the Elbe-Elster region (Brandenburg state, eastern Germany), creating favourable conditions for pests such as bark beetles, which have infested about 15 000 hectares (ha) of forests.

Around 3 300 forest owners in the area are affected by this challenging situation but many of them lack silvicultural knowledge. Forest protection has become a 'hot topic' locally, often provoking nervousness and emotional reactions from the owners.

The Research Institute for Post-Mining Landscapes (FIB) devised a project to engage forest owners, to motivate them to invest in forest protection measures (either expensive interventions or cheaper methods, such as managing forests in line with nature) and to share advice.



37 500 €
TOTAL BUDGET



RDP MEASURE 08

Investments in forest areas



30 000 €
EAFRD FUNDING

PROJECT PERIOD

2020-2021

The FIB developed an online survey through which forest owners shared experiences and opinions, with the results subsequently discussed at three regional conferences on climate impacts and adaptation.

The project increased forest owners' awareness of the problem and made them feel that their voice is heard, which in turn motivated them to act and engage others.



[enrd.ec.europa.eu/projects-practice/
climate-stable-forests-elbe-elster-region_en](https://enrd.ec.europa.eu/projects-practice/climate-stable-forests-elbe-elster-region_en)





Afforestation of agricultural land in Poland

Developing new forest areas on agricultural land affected by low profitability

Mariusz Morawski owns agricultural land in Sanok, south-east Poland. The land is located on difficult mountainous terrain with poor soil fertility that is not suitable for cultivation.

Morawski had already used rural development funding in the period from 2007 until 2013 to carry out afforestation of agricultural land. Based on his previous experience, he decided to invest in a new project of that kind.

The project consisted of planting trees over a surface area of 8 ha of land which was not suitable for cultivation. The aim was to increase the value of the landscape and to produce income for future generations in the form of timber. The beneficiary currently has 22 500 trees on his land and planted an

For this project, financial data refer to the annual support.

3 125 €
TOTAL BUDGET



RDP MEASURE 08

Investments in forest areas



1 900 €
EAFRD FUNDING

PROJECT PERIOD

2015-2020

additional 1 000 trees for each year of the project. Species include firs, beech, oak, black alder, birch and pine. The afforested area is protected from soil erosion and contributes to the absorption of CO₂.

The project is a good example of how to use agricultural land affected by low profitability to develop new forest areas, with benefits for entire rural communities and future generations.



[enrd.ec.europa.eu/projects-practice/
afforestation-agricultural-land-poland_en](https://enrd.ec.europa.eu/projects-practice/afforestation-agricultural-land-poland_en)





Future-proof peat meadow polder Lange Weide

A submerged drainage project to stop land erosion in the Netherlands

In the area of Bodegraven-Reeuwijk (South Holland), ditches have been used for centuries to artificially dry the peat subsoil and allow livestock farming. Consequently, the ground level has dropped steadily, endangering the wooden foundations of houses. In line with a wide future-orientated area strategy, the water management authorities devised a project to reduce soil subsidence and maintain sustainable agriculture around the Lange Weide polder.³

This project built 450 kilometres of drainage across 310 ha of the polder. The system steers groundwater in the agricultural plots, slowing down land erosion, which could be halved in the long term. The submerged drainage - the largest in the Netherlands - helps reduce peat degradation and the subsequent emission of greenhouse gases. Water quality, aquatic biodiversity and habitats

³ An area of low land that was once under the sea but that has been separated from it by dykes (walls or channels built to prevent water covering an area).

1 203 255 €

TOTAL BUDGET

**547 378 €**

EAFRD FUNDING

RDP MEASURE 04

Investments in physical assets



PROJECT PERIOD

2018-2020

for farmland birds are improving. Intensive research is being carried out on water management to improve the nutrient load of surface water bodies.

The project is a good example of networking and the bottom-up approach. It involves 28 local landowners, including 13 farmers and an agricultural nature association, who collaborate with local and regional authorities and knowledge centres.



[enrd.ec.europa.eu/projects-practice/
future-proof-peat-meadow-polder-lange-weide_en](https://enrd.ec.europa.eu/projects-practice/future-proof-peat-meadow-polder-lange-weide_en)





PRATI_CO Parmigiano Reggiano: Agrotecnica organic carbon footprint

Carbon storage and climate smart agricultural practices to mitigate climate change

This EIP-AGRI Operational Group (OG) studied how the production of the Parmigiano-Reggiano cheese can contribute to preserving the agricultural landscape and protect the soil and the environment around Reggio Emilia and Parma (central Italy).

Permanent meadows, which have not been ploughed for many years, provide a wide variety of herbs and aromatic plants and are a precious source of cattle feed.

Importantly, permanent meadows maintain existing carbon stocks in the soil and contribute to carbon sequestration, i.e. capturing carbon dioxide from the atmosphere and storing it in the soil. This, in turn, enriches the soil's organic matter and contribute to its fertility and structure.

The project studied the carbon footprint of the entire milk production process, starting from measuring the content of organic matter in the soil. The OG also

168 284 €

TOTAL BUDGET



RDP MEASURE 16

Cooperation



168 284 €

EAFRD FUNDING

PROJECT PERIOD

2016-2019

offered guidelines and training on soil management and conservation for all the actors in the production chain.

The project was coordinated by a nature cooperative and involved the regional Animal Production Research Centre, five farms and an agricultural consortium. It offered an opportunity for knowledge exchange and synergies between agricultural and environment stakeholders.



enrd.ec.europa.eu/projects-practice/pratico-parmigiano-reggiano-agrotecnica-organic-carbon-footprint_en





Re-naturalisation of the Mandlinger Moor

Planning, implementing and evaluating soil management actions to rewet an Austrian moor

The Mandlinger Moor covers an area of some 27 ha in the Ennstal valley (central Austria). Decades of draining the moor to extract peat for fuel production endangered the moor's ecosystem and caused artesian (confined) groundwater to flow into the adjoining agricultural land.

Peat extraction stopped in 2013 and about 19 ha of the moor were classified as a nature conservation site in 1998. In 2004, the Federal Province of Salzburg launched a long-term re-naturalisation process to improve the hydrology of the moor and to encourage the restoration, growth and propagation of the typical bog vegetation.

The old drainage systems were sealed, so that artesian groundwater could rewet the moor and stop drains from overflowing. Peat-building vegetation, mosses and water-loving plants were able to grow and spread extensively again on the site,



167 000 €
TOTAL BUDGET

37 583 €
EAFRD FUNDING

RDP MEASURE 07
Basic services & village renewal

PROJECT PERIOD
2014-2018

including in areas where the soil was irreversibly compacted, and therefore could not be rewetted. The vegetation and the hydrology of the moor were monitored and assessed throughout the project period, allowing for adjustments when needed. Permanent monitoring areas were also installed to check the development of the vegetation and will allow for further documentation to be produced in the coming years.



[ec.europa.eu/enrd/projects-practice/
re-naturalisation-mandlinger-moor_en](https://ec.europa.eu/enrd/projects-practice/re-naturalisation-mandlinger-moor_en)





Improvement of forest genetic resources in the area managed by Gyulaj Co

Improving forest genetic resources to preserve climate-tolerant tree species

Gyulaj Forestry and Hunting Co. manages nearly 24 000 ha of forests in the Tolna hills (southern Hungary), which are home to climate-tolerant tree species such as downy oak (*Quercus virgiliana*).

Such species are in high demand. However, due to economic reasons or the lack of local material, afforestation often takes place using imported forest reproduction material (FRM).

Gyulaj Co. developed a project to improve the forest genetic resources in Hungary, including FRM, to prevent or mitigate damage to forest vegetation due to climate change while maintaining local tree species. Experienced staff assessed parts of forests and individual trees that are well adapted to changing environmental conditions. They made inventories of individual trees as well

868 815 €

TOTAL BUDGET



RDP MEASURE 15

Forest-environment-climate**738 493 €**

EAFRD FUNDING.....

PROJECT PERIOD

2018-2022

as small, fragmented populations and harvested reproductive material. The project created a gene reserve of nearly 150 ha as well as planting many ha of seeds and propagating thousands of seedlings, with fences erected to protect the seedlings from damage from game.

The project facilitated the preservation of trees that have no economic value as timber but are very important for climate change adaptation.



enrd.ec.europa.eu/projects-practice/improvement-forest-genetic-resources-area-managed-gyulaj-co_en





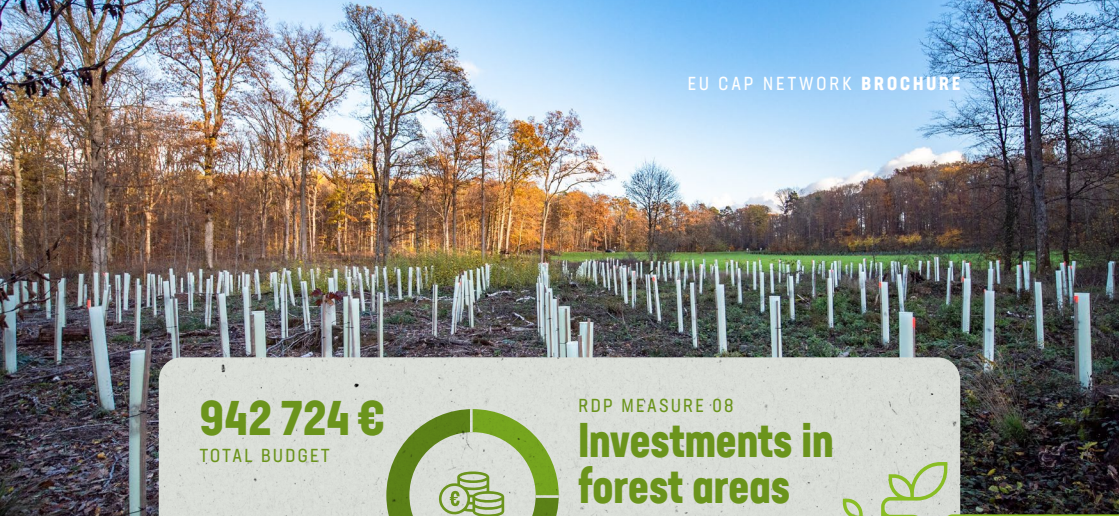
Nižná Boca – Restoring the production potential of damaged forests

Investing in forest areas while also promoting social inclusion

In the 19th and 20th century, non-coniferous timber around Nižná Boca (central Slovakia) were replaced with faster growing Norway spruce (*Picea Abies*) trees to supply the mining and construction industries.

In 2004, severe winds and pests threatened large areas of the spruce forests. The Urban Association of the municipality of Nižná Boca, which brings together the local municipality and the association of mountain meadows, pastures and forests landowners, designed an intervention project.

Actions included clearing, afforestation and preservation activities to increase the resistance of the forest to harmful biotic and abiotic agents, improving the water quality and preventing soil erosion. Over four years, 144.97 ha were afforested with 593 371 seedlings of five tree species. Seedlings were constantly protected against weeds and damage from forest animals.



942 724 €
TOTAL BUDGET



RDP MEASURE 08

Investments in forest areas



707 043 €
EAFRD FUNDING

PROJECT PERIOD

2015-2019

The project led to a more stable and healthier forest, resistant to damage caused by weather and pests. In addition, the project provided employment for 35 local people from marginalised Roma groups, who previously experienced long-term unemployment issues.



enrd.ec.europa.eu/projects-practice/nizna-boca-restoring-production-potential-damaged-forests_en





Promoting sustainable forest management

Matching business needs with forest management, environmental and climate requirements

The 'La Mandriaccia' agricultural company manages 442.02 ha of agricultural and mixed forest land in two municipalities of Sardinia (southern Italy). Parts of these areas are used for grazing cattle and occasionally for cutting firewood, yet there was no forest management plan.

To ensure the safeguarding, enhancement and sustainable management of these forest resources, the company developed a project aimed at improving biodiversity and the genetic diversity of trees, and to define new, sustainable management methods.

The project kicked off with a survey of the forest areas, which established a complete set of maps, defined homogeneous areas and highlighted useful technical data for planning the cutting of trees. Thus, the company was able



48 033 €

TOTAL BUDGET
(Annual support/ha)



RDP MEASURE 15

Forest-environment-climate



23 148 €

ANNUAL EAFRD/HA

PROJECT PERIOD

2016-2021

to quantify the available wood, to standardise its production and to ensure profitability. In addition, the project helped diversify the forest system to achieve a varied forest structure composed of trees at different stages of development. Particular attention was paid to areas of conservation interest or hydrogeological fragility.



[enrd.ec.europa.eu/projects-practice/
promoting-sustainable-forest-management_en](https://enrd.ec.europa.eu/projects-practice/promoting-sustainable-forest-management_en)



Visit EU CAP NETWORK Website

 eu-cap-network.ec.europa.eu

Follow EU CAP NETWORK on social media

 facebook.com/eucapnetwork

 twitter.com/eucapnetwork

 www.youtube.com/@eucapnetwork

 linkedin.com/company/eu-cap-network