

AGROFORESTRY IN EUROPE

- 10:00 Welcome
- 10:15 Presentations
- 11:30 Coffee break
- 12:00 Panel discussion
- 12:30 Networking lunch
- 14:00 Field visit to Quinta Grande
- 17:00 End















• Francisco Silvestre Oliveira

President of Coruche City Council

• António Gonçalves Ferreira

Farmer & President of UNAC

• Saske Hoving, Carla Brites and Anne Cobben RefreSCAR



CCSC – Centro de Competências do Sobreiro e da Cortiça

Cork and Oak Competence Center

RefreSCAR | September 25th | Coruche



AJAP | Associação de Jovens Agricultores de Portugal APCOR | Associação Portuguesa da Cortiça

BIOCANT | Centro de Inovação em Biotecnologia

CEBAL | Centro de Biotecnologia Agrícola e Agro-Alimentar do Alentejo

CL | Companhia das Lezírias CMC | Câmara Municipal de Coruche CTCOR | Centro Tecnológico da Cortica ESAB | Escola Superior Agrária de Beja ESAC | Escola Superior Agrária de Coimbra ESAS | Escola Superior Agrária de Santarém ESB UCP | Escola Superior de Biotecnologia da Univ. Católica do Porto FCUL | Faculdade de Ciências da Universidade de Lisboa FILCORK | Associação Interprofissional da Fileira da Cortiça FORESTIS | Associação Florestal de Portugal **IBET** | Instituto de Biologia Experimental e Tecnológica **ICNF** | Instituto da Conservação da Natureza e das Florestas **INIAV** | Instituto Nacional de Investigação Agrária e Veterinária IPCB | Instituto Politécnico de Castelo Branco ISA/CEF | Instituto Superior de Agronomia/Centro de Estudos Florestais IST | Instituto Superior Técnico ITQB | Instituto de Tecnologia Química e Biológica MA | Ministério da Agricultura **TERRAPRIMA UA** | Universidade de Aveiro **UAlg** | Universidade do Algarve UC | Universidade de Coimbra **UE/ICAAM** | Univ. Évora/Instituto de Ciências Agrárias e Ambientais Mediterrânicas

UNAC | União da Floresta Mediterrânica

UTAD | Universidade de Trás-os-Montes e Alto Douro

ACTIVITIES

• Since 2015

- Create & Implement the CORK RESEARCH AGENDA
- Bring actors to the table & work to improve the communication
- Forster research programs:
 - Pests & Diseases
 - Plant Nutrition
 - Stand management & natural regeneration
 - o Irrigation
- Extension:
 - Maintaining the Digital Documentation Center with updated national and international cork oak publications
 - Website update and dissemination of results in digital media
 - Presence in GT Inovação da Rede Rural Nacional meetings to establish the AGRI-DEM network









Who are in the room?

Go to www.menti.com

Enter the code

3681 1412



Or use QR code



Standing Committee

on Agricultural Research

Provides the European Commission, Member States and Associated Countries with independent policy advice on better cooperation and alignment of research activities in *agriculture, fisheries, food, forestry and the wider bioeconomy* in Europe.

Goals

- Increasing connections between research & innovation
- Removing barriers to innovation
- Stimulating co-creation between public-public & public-private sectors



Who is SCAR?



More than 35 countries:

- EU Member States
 - Delegates of ministries (mainly ministries of agriculture)
 - Organisations such as research councils, research institutes and universities
- Observers
 - Candidate countries
 - Associated countries

European Commission

- Secretariat
- DG RTD Research and Innovation
- DG AGRI Agriculture and Rural Development



Overview SCAR members - update March 2022

Strategic & Collaborative Working Groups (SWGs & CWGs)



- CWG: Focus on thematic coordination. Some became ERA-Nets and COFUNDs.
- SWG: Focus on strategic policy advice. Many previous CWGs are now SWGs.
- Main tasks
 - Strategic R&I policy advice
 - Develop strategic research agendas
 - Highlight priority research topics through portfolio analyses, mapping activities and gap analyses
 - Co-design Horizon Europe partnerships

The SCAR Groups





S

SWG





Bioeconomy Strategic Working Group



SCAR Food Systems





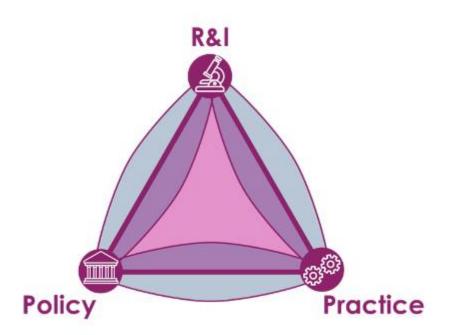


Protein TaskSCAR ForesightForceGroup



OVERALL AIM:

to facilitate improved coordination of national and European bioeconomy research programmes in the European Research Area through strengthened SCAR Working Groups





Presentations







- EU CAP NETWORK
 - Liina UIm (Support Facility for Innovation and Knowledge exchange)
- European Agroforestry Federation
 Gerry Lawson (EURAF)
- GO GEOSUBER

António Gonçalves Ferreira (Farmer & President of UNAC)

- Forest4EU: Connecting forestry and Agroforestry partnerships across Europe Ana Maria Ventura (Solutopus, Lda.)
- AF4EU: Agroforestry Business Model Innovation Network
 Rosa Mosquera Losada (Universidad de Santiago de Compostela)
- Agroforestry Network Netherlands

Anne Cobben (Netherlands Enterprise Agency)





'EIP-AGRI Support Facility and agroforestry

Liina Ulm - EIP-AGRI SF European CAP Network Innovation & Knowledge Exchange I EIP-AGRI

RefreSCAR 25 September 2024

Coruche, Portugal







EIP-AGRI in the new context: Innovation & Knowledge Exchange | EIP-AGRI

- 1. EIP-AGRI Support Facility, part of the EU CAP Network
- 2. EIP-AGRI Agroforestry
- 3. EIP-AGRI Agroforestry Operational Groups
- 4. Horizon projects
- 5. Upcoming events





1. EIP-AGRI Support Facility, part of the EU CAP Network





1. EIP-AGRI Support Facility, part of the EU CAP Network

> Launch event 6 October 2022 in Brussels

EIP-AGRI Network + ENRD = EU CAP Network

For the networking of national networks, organisations, and administrations and other stakeholders in the field of agriculture and rural development











1. European CAP Network (EU CAP Network)

MAIN OBJECTIVES (Regulation (EU) No 2021/2115):

- > Involvement
- > Accompaning
- > Improving
- Informing

Foster innovation in agriculture and rural development, support peer-topeer learning and the inclusion of, and the interaction between, all stakeholders in the knowledge-exchange and knowledge building process

- Monitoring and evaluation
- Dissemination





Innovation & Knowledge exchange – EIP-AGRI

Support Facility for Innovation & Knowledge exchange – EIP-AGRI

Evaluation

Evaluation Helpdesk

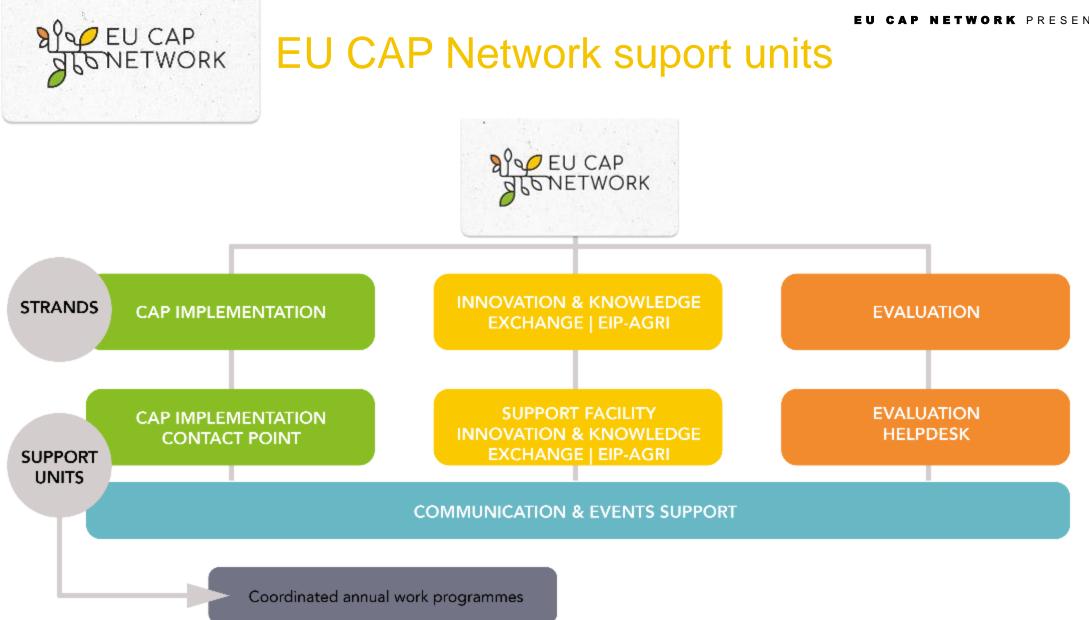
CAP Implementation

JEUCAP

Communication & Event Support

CAP Implementation Contact Point

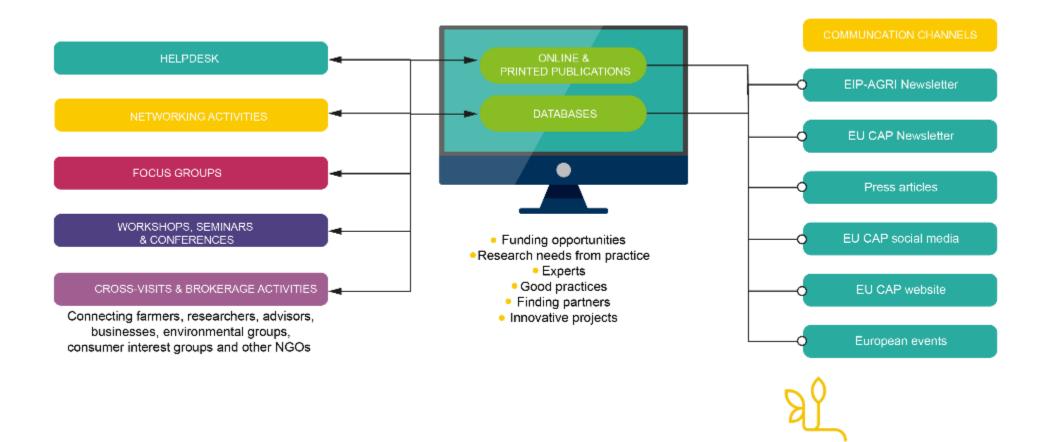








Support Facility Innovation and Knowledge exchange | EIP-AGRI': services







1. EIP-AGRI Support Facility part of the EU CAP Network

Corporate communication

Website: https://eu-cap-network.ec.europa.eu

STONETWORK			English	Search		Search
EU CAP Network $^{\vee}$	News & Events \vee	Networking \vee	Projects and practice \vee	Themes \vee	Resources 🗸	
Home > About >	About the Europea	n CAP Network				



Welcome to the EU CAP Network!



1. EIP-AGRI Support Facility, part of the EU CAP Network

Corporate communication

Social media accounts

- Facebook @EU CAP Network
- > Twitter @eucapnetwork
- LinkedIn @EU CAP Network
- > YouTube EU CAP Network
- Official hashtags
 #EUCAPNetwork
 #BloomTogether







1. EIP-AGRI Support Facility, part of the EU CAP Network

Corporate communication

Monthly <u>newsletters</u>

- Innovation &
 - Knowledge
 - Exchange | EIP-
 - AGRI
- EU CAP Network

Subscribe <u>here</u>



Innovation and knowledge exchange | EIP-AGRI Newsletter September 2024

Inspirational ideas

Improving the viability and competitiveness of high added-value by-products from berries

An Operational Group from Lithuania called InoBerry tested and promoted a model combining technological and commercialisation processes for high added-value by-products from berries. The model is based on sustainable management techniques as well as cooperation, creating links between farmers for more efficient production.



Read more

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EIP-AGRI in a nutshell

- > EIP-AGRI was launched by the European Commission in 2012
- > Aim: to stimulate innovation and improve the exchange of knowledge
- > Approach: closing the innovation gap between research, innovation and practice by using the interactive innovation model
- > EIP-AGRI & the interactive innovation model key principles:
 - > Develop innovative solutions focusing on the needs of farmers, foresters and rural entrepreneurs
 - > Bring together partners with complementary knowledge
 - > Partners co-decide and co-create





EIP Operational Groups

EIP Operational Groups (OGs) form part of the EIP:

- Focusing on farmers' or foresters' needs and tackling the interactions across the supply chain where useful
- bringing together partners with complementary knowledge, co-deciding and cocreating all along the project
- OGs may act at national and transnational level, may be based on traditional practices in a new geographical/environmental context
- > OGs disseminate summaries of plans and results of their projects





EIP-AGRI linking farmers and researchers



Based on the interactive innovation model, EIP-AGRI supports:

- Identification of research needs from practice
- Speeding up knowledge exchange and innovation collaboration between different types of actors to make best use of complementary types of knowledge (scientific, practical, organisational, etc.)
- > Co-creation of solutions that are ready to implement in practice
- > Quicker spreading and uptake of solutions by practice

Operational Group projects (OGs) ≠ research projects







Operational Groups: achievements and plans

2014-2022

- > 26 Member States
- 3400 OG projects running or finished (1 billion EUR)
- Over 200 multi-actor projects under Horizon 2020
- > A growing and thriving **network**

- > 25 Member States
- > Over 6 600 OG projects planned
- EUR 9 billion for multi-actor projects under Horizon Europe Cluster 6

2023-2027

Strengthening of Innovation and Knowledge Exchange of EU CAP Network

September 2024: 3700 OG projects!





OG Conference and Awards ceremony EIP-AGRI Operational Groups: Innovation in practice

- > May 2024 in Estoril
- Organised in collaboration with the Portuguese CAP Network – Rede Nacional PAC
- > More than 500 participants;
- Representatives from all Member States;
- Field visits to 4 locations, 10 OGs;
- Exhibition: 86 stands (among them 73 OG projects, 8 Horizon projects)



https://eu-capnetwork.ec.europa.eu/publications/factsheetconference-eip-agri-operational-groups_en





https://eu-cap-

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Database of projects

groups_en

Groups

Learn and explore

ALE NETWORK What are EIP-AGRI Operational **EN** English Search EU CAP Network ~ News & Events V Networking ~ Projects and practice ^ Themes ~ Resources 😪 × Home > EIP-AGRI Project D. Inspirations and ideas Projects network.ec.europa.eu/operational-Evaluation Knowledge Bank About EIP-AGRI projects EIP-AGRI project database Evaluation practices Operational Groups (OGs) Good practice Horizon Europe PROJECT DATABASE About the EIP-AGRI project database The EIP-AGRI project database features innovative projects from across Europe that boost innovation and knowledge exchange for agriculture, forestry and rural areas. network.ec.europa.eu/projects_en







2. EIP-AGRI and Agroforestry





2. EIP-AGRI and Agroforestry

Focus Group Agroforestry: introducing woody vegetation into specialised crop and livestock systems (2017)

- How to develop agroforestry as a sustainable farming system which can boost agricultural productivity and profitability?
- > Based on practical cases:
- > a) What made it possible for the agroforestry systems to be established?
- > b) What were the main challenges during establishment?
- > c) What other factors are important to secure long term viability?
- d) Is there anything else needed for agroforestry to be economically beneficial?

Results can be found here:

https://ec.europa.eu/eip/agriculture/en/content/agroforestry-introducing-woodyvegetation-specialised-crop-and-livestock-systems.html



EIP-AGRI Focus Group Agroforestry: introducing woody vegetation into specialised crop and livestock systems







2. EIP-AGRI and Agroforestry

A cross-cutting theme

EIP-AGRI Focus Group Mixed farming systems: livestock/cash crops (2017) <u>https://ec.europa.eu/eip/agriculture/en/content/eip-agri-focus-group-mixed-farming-systems-final-report.html</u>

> EIP-AGRI Seminar: Turning forest innovation into practice (2021)

https://ec.europa.eu/eip/agriculture/en/event/eip-agri-seminar-turning-forest-innovation.html

> FG Enhancing the biodiversity on farmland through hight-diversity landscape feature (2023)

https://eu-cap-network.ec.europa.eu/publications/report-eu-cap-network-focus-group-enhancing-biodiversity-farmland-through-high_en#section-resources

FG Competitive and resilient mountain areas (2024)

https://eu-cap-network.ec.europa.eu/publications/eu-cap-network-focus-group-competitive-and-resilient-mountain-areas_en#section--resources_

> FG Regenerative agriculture for soil health (2024)

https://eu-cap-network.ec.europa.eu/focus-group-regenerative-agriculture-soil-health_en

> EU CAP Network workshop 'Promoting pollinator-friendly farming' (2024)

https://eu-cap-network.ec.europa.eu/events/eu-cap-network-workshop-promoting-pollinator-friendly-farming_en





3. Agroforestry EIP-AGRI Operational Groups and Horizon projects







Learn and explore

>	EIP-AGRI Operational Groups
	on agroforestry

Examples :

- Knowledge transfer and implementation of agroforestry systems in Austria
- Experiment Agroforestry Noord-Holland - Netherlands

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Project Type	~	EIP-AGRI OPERATIONAL GROUP ONGOING Agroforestry-Notenpark 't Zand					
 EIP-AGRI Operational (27) 	Group	 Animal husbandry, Animal welfare (+6) Rether and s 					





EU CAP NETWORK PRESENTATION



Learn and explore

Horizon multi-actor projects on Agroforestry

Examples:

- MIXED Multi-actor and transdisciplinary development of efficient and resilient MIXED farming and agroforestrysystems: <u>CORDIS</u>
- DiverIMPACTS Diversification through rotation, intercropping, multiple cropping, promoted with actors and value-chains towards sustainability: <u>CORDIS</u>
- DIVERSify Designing InnoVative plant teams for Ecosystem Resilience and agricultural Sustainability: <u>CORDIS</u>
- H2020 Agromix
- EUFarmbook

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Research and innovation	n (30)	MIXED - Multi-actor and transdisciplinary development of efficient and resilient MIXED farming and agroforestry syst	tem
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EU CAP NETWORK PRESENTATION



Learn and explore

Horizon Thematic Networks on Agroforestry

Examples:

- AF4EU Agroforestry Business Model Innovation Network
- AFINET Agroforestry innovation network
- FOREST4EU European innovation partnership network promoting operational groups dedicated to forestry and agroforestry

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Project Type	^	RESEARCH AND INNOVATION ONGOING	
Research and innovatio	in (30)	MIXED - Multi-actor and transdisciplinary developmen efficient and resilient MIXED farming and agroforestry	
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EIP-AGRI EVENTS 2024-2025

- > Workshop 'National Networking for innovation and Knowledge exchange' January 2025
- Seminar 'Robotics and Artificial Intelligence (AI) in farming and forestry'

February 2025

> Workshop 'Circular Bioeconomy – Valorisation of by-products' March 2025

- > Stand-alone brokerage activity March/April 2025
- > Workshop 'Innovation in logistics to improve the position of farmers in a supply chain' May 2025
- Seminar 'Demonstration farms' June 2025
- > Ad-hoc Experts meeting June 2025

Open calls are published on EU CAP Network webpage and in our newsletters and newsflashes!





OPEN CALLS TO PARTICIPATE IN EIP-AGRI EVENTS

Register to "Innovation & knowledge exchange | EIP-AGRI Newsletter" to be informed of the call for participation

Subscribe here







EU CAP NETWORK PRESENTATION



THANK YOU VERY MUCH !

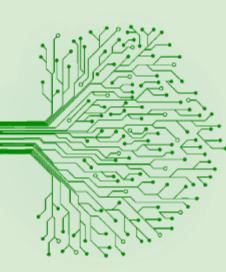
innovation-knowledge@eucapnetwork.eu

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EIP-AGRI Support Facility Koning Albert II laan 15 1210 Brussel Belgium







Agroforestry policies in the EU: general conclusions and examples from 9 Member States

Gerry LAWSON, Policy Officer, European Agroforestry Federation Montpellier & Brussels

1) policy@euraf.net;



DigitAF Project "Digital tools for AgroForestry"

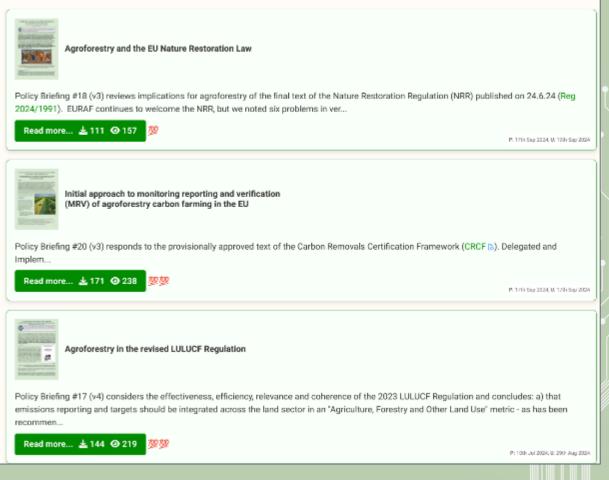
Agroforestry in Europe - RefreSCAR Event

National Policy Briefings are coming .. hold tight ...

- **1. Belgium- Flanders**
- 2. Czechia
- 3. Germany
- 4. Greece
- 5. Spain (published)
- 6. Italy
- 7. Poland
- 8. Portugal
- 9. Slovakia

Policy briefings

As part of an ongoing strategy for embracing FAIR principles, the policy briefings are now being published in the Zenodo repository (EURAF repository) with a permalink and citable DOI. Please find here the updated list of the policy briefs:





EU agroforestry definition in CAP 2017/22

"Land use systems in which trees are grown in combination with agriculture on the same land (Reg 1305/2013)".

Agroforestry trees can be inside parcels or on boundaries (e.g. hedges). Agroforestry can be on forest parcels (e.g. "forest grazing") or agricultural parcels (e.g. "wood pasture")



EURAF Agroforestry Typology (Policy Briefing <u>#1</u>, <u>#22</u>)

Tree	A gue foundation Saustan	Agroforestry Prac	ctice					
location	Agroforestry System	Agricultural Land	Forest Land					
	Silvopastoral	1 Wood pasture	9 Forest grazing					
		2 Tree alley cropping						
	Silvoarable	3 Coppice alley cropping	10 Muiti-layer gardens					
In parcels		4 Multi-layer gardens						
	Permanent crop	5 Orchard intercropping,						
	r ennanent crop	6 Orchard grazing.						
	Agro-silvo-pasture	7 Alternating cropping and grazing						
Between	Landscape Features	8. Hedges, trees in groups, trees in						
parcels	Landscape reatures	lines, individual trees						
Settlements	Urban agroforestry	11 Homegardens, allotr	nents, etc.					



The EU Forest Definition - Procrustes' bed?

Article 4(3) of the CAP Strategic Plan Regulation (2021/2115): Agricultural area shall be determined in such a way as to comprise arable land, permanent crops and permanent grassland, including when they form agroforestry systems on that area. The terms 'arable land', 'permanent crops' and 'permanent grassland' shall be further specified by Member States within their CAP Strategic Plans. (Policy Briefing #22)

Article 6 (3) of the LULUCF Regulation (2018/841) defined Forest Land according to the Thresholds in Annex II (opposite). These are also used in national forest laws, UNFCCC Marrakesh Accords, REDD+, Kyoto Clean Development Mechanism etc. (Policy Briefing #8)

Therefore, the EU Forest Monitoring Regulation should use the UNFCCC and LULUCF forest thresholds and not emulate Procrustes. (Policy Briefing #15)

One Size Fits ALL ??

Procrustes was a Greek blacksmith who either stretched his guests or cut off their legs to fit his one-size-fits all bed.



	Member State	Area (ha)	Tree crown cover (%)	Tree height (m)	Minimum width (m)
	Malta	1,0	30	5	
	Spain	1,0	20	3	25
	Portugal	1,0	10	5	20
	Hungary	0,5	30	5	10
	Estonia	0,5	30	2	
	Belgium	0,5	20	5	
	Netherlands	0,5	20	5	30
Ĩ	Denmark	ALC: N	0	\sim	20
Ĩ	Finland	R			20
Ĩ	France		8		
Ĩ	Italy				
Ĩ	Luxembourg				
Ĩ	Sweden			5	10
	Greece	0,3	25	2	
Ĩ	Slovakia	0,3	20	5	
Ĩ	Cyprus	0,3	10	5	
	Slovenia	0,25	30	2	
	Romania	0,25	10	5	20
	Lithuania	0,1	30	5	10
	Ireland	0,1	20	5	20
	Latvia	0,1	20	5	20
	United Kingdom	0,1	20	2	20
	Bulgaria	0,1	10	5	
	Germany	0,1	10	5	
	Croatia	0,1	10	2	
	Poland	0,1	10	2	10
	Austria	0,05	30	2	10
	Czech Republic	0,05	30	2	20



Agroforestry in Europe - RefreSCAR Event

Tree-Landscape-Features are vital for both climate and biodiversity ...



Woody features: hedgerow or woody strips, trees in groups isolated trees, trees in line, forest edges



Other features: buffer strips, cairns, cultural features, ditches, field margins, small ponds, small wetlands, stone walls, terraces, others ... countries make their own choices



Agroforestry in Europe - RefreSCAR Event Cork Oak and Cork Competence Center, Coruche, Portugal, 25th of September 2024 (10:00 – 17:00) Consistency in tracking Landscape Features in MS is needed .. but some MS don't include in policies



JRC TECHNICAL REPORT

Classification and quantification of landscape features in agricultural land across the EU

> A brief review of existing definitions, typologies, and data sources for quantification

Autores and contribution Balant Cause, Bertine Baruth, Hean Michell Ferner Lower Balling, Anthream Hargen, Vencence Balling, Hennik Mansha, Martin Resec Sata, Renate Roktie, Hearts Resec Sata, Renate Roktie, Hearts Resection 2002



Landscape Features - Biodiversity Strategy (>10%) GAEC-8

Country	AT	BEF	BEW	BG	<u>CY</u>	<u>CZ</u>	DE	<u>DK</u>	EE	EL	<u>ES</u>	<u>FI</u>	FR	HU	HR	<u>IE</u>	IT	LT	LU	LV	MT	NL	<u>PL</u>	PT	RO	<u>SE</u>	<u>SK</u>	<u>SI</u>	Sum
01 Buffer Strips	1	1	1	1				1								1	1			1	1	1			1		1	1	13
02 Cairns	1						1			1	1							1	1	1					1				8
03 Cultural Features	1		5					1	1	1	1			1		1							1						13
04 Ditches			1			1			1	1			1		1	1	1	1		1		3	1	1	1				16
05 Field Margins (# types)		1	3	1	2	7	1	1	1		1		1	2		7	1	1	4	1		4		1	1	2	1		44
06.1 Hedges or woody strips	1	1	1	1			1		1	1	1		1	1	1	1	1	1	1			1		1	1		1	1	20
06.2 Trees in Line		1	1	1		1	1		1	1	1		1		1	1	1		1	1		1	2	1	1		1	1	21
06.3 Trees in Groups/ Copses	1	1	1	1		1	1	1	1	1	1		1	1	1		1	1	1	1		1	2	1	1		1	1	24
06.4 Isolated Trees			1	1	1	1	1			1	1		1	1	1		1	1	1	1		1		1	1		1	1	19
06.5 Forest Edge Strips - non prod		1	1	1					1		1				1	1													~
07 Fallow Land	1	1	2	1	1	1	1	1	2	1	1	1	1	2	1	1	1			2		2	1	2		3			30
07.1 Cover or catch crops (7% option)		-	-			1		-	-	-	-		1	1				-				-		-					3
07.2 N-Fixing Crops (7% option)		-	-			1			1	-	-		1	1				-				-		-			-		4
08 Others			1			2	1	1			2						1	1				4	1	1			-		15
09 Small Ponds	1	1	1							1	1		1	1		1	1	1	1		1	1		1				1	15
10 Small Wetlands						1	1			1									1	1	1	1	1						8
11 Traditional Stone Walls	1						1		1	1	1		1		1	1	1			1	1		1					1	13
12 Streams										1											1	1							3
13 Terraces						1	1			1	1			1			1				1							у	7
Total elements / sub-elements active	8	8	19	8	4	18	11	6	11	13	14	1	11	12	8	16	12	8	11	11	6	21	10	10	8	5	6	7	283
4% Option	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	у	28
3% Option	у		у	у				у	у	у	у		у		у			у	у			у		у					13
7% Option		у	у	у		у			у	у	у		у	у				у				у	у	у	у		у		15
LULUCF Regulation - threshold of "forest land" (ha)	0.05	0.5	0.5	0.1	0.3	0.05	0.1	0.5	0.5	0.3	1	0.5	0.5	0.5	0.1	0.1	0.5	0.1	0.5	0.1	1	0.5	0.1	1	0.25	0.5	0.3	0.25	
Strategic Plan - max LF copse/grove size (ha)	0.1	0.3	0.3	0.3	-	?	0.2	?	?	?	0.3	-	0.5	0.5	?	-	0.3		0.3	0.5	-	1.5	0.5	0.5	0.9	-	?	0.5	
Details of hedge width and permitted gaps?	у	у	у	у			у		у		у		у	у	у		у	у	у			у			у				15
Details of permitted crown size of trees in line?		у	у	у			у		у				у		у		у		у			у	у	у	у			у	14
Details of crown size of isolated trees?			у	у										у	у		у					у	у					у	8
RED shows where the definition of "copse/grove" on agr recognised as Landscape Features	cultura	al land	differs	s from	the n	ationa	l defir	ition t	he mii	nimum	i size	thrsho	old for	a fore	st blo	ck. In	many	count	tries th	ne size	e thres	shold i	is not	given	or cop	oses/g	roves	are no	ot
In many countries no information is given on the types o	f n-fixi	ng cro	p or c	atch/c	over o	crop, e	even u	hen th	ne 7%	optior	n is se	elected	d (sho	wn wit	h a da	ash)													

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Agroforestry in Europe - RefreSCAR Event

See EURAF Policy Briefing #21

"Simplification" of "Good Agricultural and Environmental Conditions"

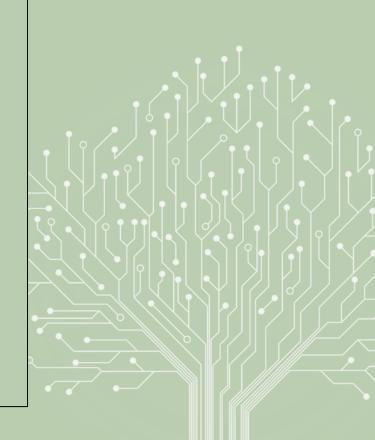
Climate change "Simplification GAEC 1: Maintenance of permanent grassland based on a ration PG/agricultural area (at national, For GAEC-8 regional, sub-regional, holding level) ("greening") "[farmers] ... may GAEC 2: Protection of wetland and peatland (new) choose to keep a GAEC 3: Ban on burning arable stubble, except for plant health reasons (cross-compliance) share of their arable land non-productive - or establish new Water landscape features GAEC 4: Establishment of buffer strips along water courses stubble [minimum width of 3 meters] (such as hedges or trees) - and thereby (cross-compliance) receive additional financial support via Soil an eco-scheme that all Member States GAEC 5: **Tillage management** reducing soil erosion risk with slope consideration (cross-compliance) will have to offer in their CAP Strategic GAEC 6: Minimum soil cover to avoid bare soil in periods that are most sensitive (cross-compliance) **Plans**. All EU farmers GAEC 7: Crop rotation in arable land, except for crops growing under water ("greening") will be incentivised to maintain non-**Biodiversity and landscapes** productive areas beneficial for • GAEC 8: Minimum share of agricultural area [arable land] devoted to non-productive areas or biodiversity without features, retention LF, ban cutting hedges/trees during bird rearing season fearing loss of income". GAEC 9: Ban on converting or ploughing permanent grassland designated as environmentallysio sensitive in Natura 2000 sites ("greening")

In Article 31, the following paragraph 1a is inserted: '1a. As a part of the eco-schemes referred to in paragraph 1, Member States shall establish and provide support for schemes covering practices for the maintenance of nonproductive areas, such as land lying fallow, and for the establishment of new landscape features, on arable land. These schemes shall be voluntary for active farmers and groups of active farmers.';

Past agroforestry policies ...

Agroforestry has been supported since 2007 BUT ...

- Farmers still have limited information and concrete examples (e.g., demonstration farms/areas)
- Farmers report establishment and maintenance rates are not appealing for farmers
- Farmers report tight restrictions concerning tree species selection, or restrictions for combining arable or animal husbandry with short rotation coppices in agroforestry, etc
- Managing authorities lack knowledge and perceive a high administrative burden, uncertainties of eligibility for direct payments, risks concerning audits,
- Auditors have limited knowledge of agroforestry



Pillar I - Ecoschemes (Article 31)

Agricultural practices that could be supported by eco-schemes have to meet the following conditions:

- they should cover activities related to climate, environment, animal welfare and antimicrobial resistance;
- they shall be defined on the basis of the needs and priorities identified at national/regional levels;
- their level of ambition has to go beyond the requirements and obligations established under the baseline (including conditionality);
- they shall contribute to reaching the EU Green Deal targets.

Pillar II - Investment Measures (Article 73)

Paragraph 4... maximum rate may be increased to ... (c) 100% for the following investments (1) afforestation, establishment and regeneration of agro-forestry systems, land consolidation in forestry and nonproductive investments linked to one or more of the specific objectives set out in Article 6(1), points (d), (e) and (f), including non-productive investments aimed at protecting livestock and crops against damage caused by wild animals;

Pillar II - Agri-Environment -Climate (AECM) (Article 70)

- Actions go beyond SMR and GAEC standards
- Commitments for 5-7 years (but may be longer or shorter if a case is made in the CSP)
- Annual payment per hectare or a lump sum
- Payments "basis of the additional costs incurred and income foregone resulting from the commitments made, taking into account the targets set".
- Can take into account "transaction costs"

CAP Agroforestry Support Measures (2023-2028)

MS	Article	Code	O.16 (total)	R.17 (total)	Measure
BE-FL	Art 70	3.7	€281,384		Management of agroforestry systems (boslandbouwsystemen)
CZ	Art 70	26.7	€1,357,200		Caring for an established agroforestry system
CZ	Art 73-74	42.73		€3,917,700	Establishment of an agroforestry system
DE	Art 31	DZ-0403 –			Maintaining agroforestry management on arable land and permanent grassland
EL	Art 31	P1-31.05 –		€66,564,568	Improvement of agroforestry ecosystems, rich in landscape elements
ES	Art 70	6502.2	€27,069,248		Maintenance of Forests and Agroforests
ES	Art 73-74	6881.1		€68,809,809	Non productive investments in aforestation and agroforestry systems
IT	Art 70	SRA28	€66,080,718	€66,080,718	Support for maintenance of forestation/afforestation and agroforestry systems
IT	Art 73/74	SRD05		€47,387,981	Forestation/afforestation and agroforestry systems on agricultural land
PL	Art 70	1.8.8			Afforestation and afforestation premiums and agroforestry schemes
PL	Art 73-74	I 10.13.		€5,998,785	Establishment of agroforestry systems
PT	Art 70	C.1.1.3			Agroforestry Mosaic (Attributed to O.14 and R.14, R31, R.33)
PT	Art 70	D.2.2			Management of the montado (agroforestry) by Results
PT	Art 73-74	C.3.2.2		€3,360,000	Setting up agroforestry systems
PT	Art 73-74	F.2.2		€300,000	Investment in the creation and regeneration of agroforestry systems
SK	Art 70	70.01	€2,932,150	€2,932,150	Protection and maintenance of trees within the established Agroforestry system
SK	Art 73-74	73.01		€2,932,150	Establishing an agroforestry system

ONLY 17 AF measures from a total of 948 in Articles 31 (ECO), 70 (AECM) and 73-74 (INVEST)



1. Belgium- Flanders

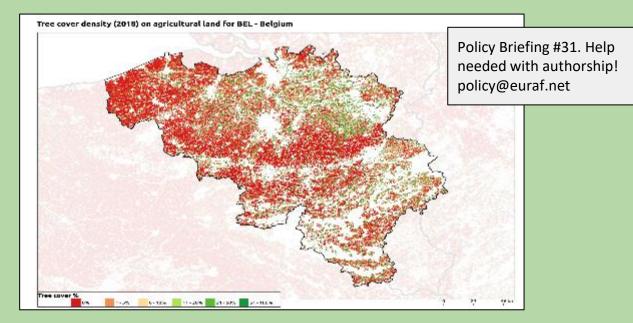
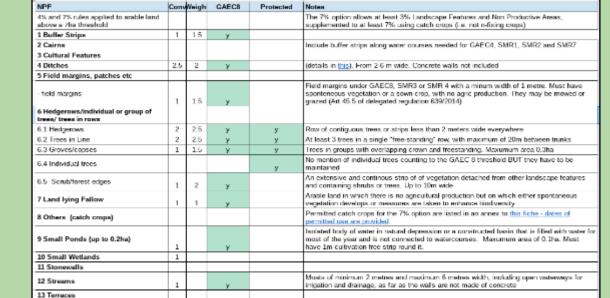


Table 6: Zero-tree-index ranking of EU Member															<u>.</u>	<u> </u>			<u> </u>									<u> </u>
	PT	SE	SI	IE	FI	LV	AT	FR	DE	LU	EE	BE		r	DK	ES	PL	cz	HR	SK	NL	EL	HU	BG	LT	RO	СҮ	MT
TDI	48.0	49.4	53.5	59.1	59.5	61.7	61.9	62.4	64.0	64.9	65.	65.3	6	.3 7	70.1	70.1	70.2	71.2	71.4	71.4	75.2	76.1	77.7	79.3	81.8	82.2	87.9	95.2
#	1	2	3	4	5	6	7	8	9	10	11	12		3	14	15	16	17	18	19	20	21	22	23	24	25	26	27
		РТ	PT SE	PT SE SI	PT SE SI IE	PT SE SI IE FI	PT SE SI IE FI LV	PT SE SI IE FI LV AT TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9	PT SE SI IE FI LV AT FR TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4	PT SE SI IE FI LV AT FR DE TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0	PT SE SI IE FI LV AT FR DE LU TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9	PT SE SI IE FI LV AT FR DE LU EE TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1	PT SE SI IE FI LV AT FR DE LU EE BE TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3	PT SE SI IE FI LV AT FR DE LU EE BE TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6	PT SE SI IE FI LV AT FR DE LU EE BE T TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6 .3	PT SE SI IE FI LV AT FR DE LU EE BE IT DK TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6 7.3 70.1	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6 7.3 70.1 70.1	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6.3 70.1 70.1 70.2	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.2 67.3 70.1 70.2 71.2	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 65.1 65.3 6 70.1 70.2 71.2 71.4	PT SE SI IE FI LV AT FR DE LU EF BE T DK ES PL CZ HR SK TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 6 7.3 70.1 70.2 71.2 71.4 71.4	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.3 67.3 70.1 70.2 71.2 71.4 71.4 75.2	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 65.1 65.3 61.3 70.1 70.2 71.2 71.4 71.4 75.2 76.1	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL HU TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 64.9 65.1 65.3 67.3 70.1 70.2 71.2 71.4 71.4 75.2 76.1 77.7	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL HU BG TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 65.2 65.3 67.3 70.1 70.2 71.2 71.4 71.4 75.2 76.1 77.7 79.3	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL HU BG LT TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 65.1 65.3 67.3 70.1 70.2 71.4 71.4 75.2 76.1 77.7 79.3 81.8	PT SE SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL HU BG LT RO TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 62.4 64.0 65.3 67.3 70.1 70.2 71.2 71.4 71.4 75.2 76.1 77.7 79.3 81.8 82.2	PT SI IE FI LV AT FR DE LU EE BE T DK ES PL CZ HR SK NL EL HU BG LT RO CY # 1 2 3 4 5 6 7 8 9 10 11 12 3 14 15 16 17 18 19 20 21 22 23 24 25 26

"Systems where trees are combined with agriculture on the same land. Arable land, permanent cropland and permanent grassland have the same thresholds: a) minimum of 30 trees/hectare; b) a max of 200 trees/ha; c) homogeneous distribution of trees over the plot. Parcels planted with Pillar II premiums can have higher densities."



14 List of features for retention

		Table 4 Investment Measures in Flanders
Article	Code	Pillar II Measure
	3.2	Innovative investments for further farm sustainability
	3.21	Innovative green investments on farms
	3.22	Productive investments for further sustainability on farms
	3.23	Productive green investments on farms
(73-74)	3.24	Productive investments for animal welfare on farms
(13-14)	3.25	Investments for sustainable processing and marketing of agricultural products
	3.26	Non-productive investments for environmental and climate goals
	3.27	Establishment measures in Natura 2000 and high nature value areas
	3.30	Investments with limited contribution to profitability and focused on environmental and climate goals

Hedges, individual trees or groups of trees, rows of trees

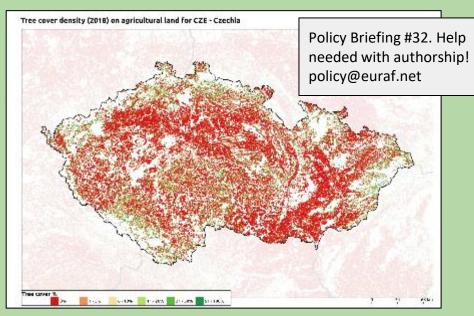
		Table 3 - AECM Measures in Flanders
Article	Code	Pillar II Measure
	3.01	Temporary Pasture to Permanent Pasture
	3.10	Species protection management agreements
	3.11	Reduction in antibiotic use
	3.02	Cultivation of biologically or ecologically-friendly crops
AECM	3.4	Conversion to organic farming
(70)	3.5	Perrenial flower strips in fruit growing
	3.6	Conservation of local breeds of cattle, sheep, goats and pigs
	3.7	Management of agroforestry systems (boslandbouwsystemen)
	3.8	Management agreements for buffering sensitive nature or fragile natural elements or for creating ecological connections
	3.9	Management agreements for the maintenance of woody small landscape elements
		-0

Agroforestry in Europe - RefreSCAR Event

2. Czechia

3 4 5

6



Czeohia	Conv	Weight	LF	Protected?	Notes
Only 4% and 7% rule applied					
1 Buffer Strips					
2 Cairns					
3 Cultural Features					
4 Ditches		2	Y	v	
5 Field margins, patohes eto			У	У	
- Headland		1	У		
- Biodiversity islands		1,5	У		
 Buffer strip for GAEC 5, 7b, 8; strip along water 		1	У	У	
- Greening of track lines		1	У		
- Buffer strips in agroforestry		1	У	У	
- bio-belt		1	У		
- Areas with lapwing nesting		1	У		
6 Hedgerows/tree rows/groups/individuals					
6.1 Hedgerows (m)		2	У	У	
6.2 Trees in Line (m)		2	У	У	no maximum size thresholds
6.3 Groves/copses (m2)		1,5	У	У	no maximum size thresholds
6.4 Individual trees		1,5	Y	Y	no maximum size thresholds
6.5 Scrub and forest edges				У	
7 Land lying Fallow		1	У		
8 Others					
- Grassy fallow land		1,5	У		
- Rock		1.5	У		
- Other non-productive areas/intercrops		0,3	У		
 Nitrogen-fixing crops 		1	У		
9 Small Ponds			n		
10 Small Wetlands		2	У	У	
11 Stonewalls			n		
12 Streams			n		
13 Terraces		1	У	У	
14. List of features for retention				Her strips of all wetlands	and, dilches, lerraces, hedges, individual

Table A Investment measures in Creshie

		1	Table 4 Investment measures in Czechia			
	Article	Code	Measure			
	Art 73-74	33.73	Investments in agricultural holdings			
_	Art 73-74	34.73	Investments in the processing of agricultural products	5		
	Art 73-74	35.73	Technological investments in forestry			
	Art 73-74	36.73	Investments in forestry infrastructure			
	Art 73-74	37.73	Technologies that reduce GHG and NH3 emissions			
	Art 73-74	38.73	Investments in the restoration of disaster areas			
	Art 73-74	39.73	Investments in the protection of afforestation trees	s		
	Art 73-74	40.73	Water management measures in forests			
	Art 73-74	41.73	Afforestation of agricultural land - establishing a s		T	able 3 Agri Environment Climate measures in Czechia
	Art 73-74	42.73	Establishment of an agroforestry system	Article	Code	Measure
	Art 73-74	43.73	Unproductive investments in forests	Art 70	16.7	Arable Fertilisation
	Art 73-74	44.73	Conversion of replacement tree stands	Art 70	17.7	Intercrops
	Art 73-74	45.73	Investment in non-agricultural activities	Art 70	18.7	Extensive grassland management
	Art 73-74	46.73	Landscaping.	Art 70	19.7	Landscaping orchards
				Art 70	20.7	Promoting biodiversity on arable land
				Art 70	21.7	Integrated production
				Art 70	22.7	Restrictions on the use of pesticides in <u>QPVZ</u> on arable land
				Art 70	23.7	Organic farming
				Art 70	25.7	Afforestation of agricultural land - care of established vegetation
				Art 70	26.7	Caring for an established agroforestry system
				Art 70	27.7	Increasing immunity in pig breeding by vaccination
				Art 70	28.7	Animal welfare
				Art 70	29.7	Forest-environment payments - Biodiversity.
+ (:	10:00 - 17:	:00)		Art 70	30.7	Forestry-environment payments - Genofund

Ta	ble (6: Z	ero-	tree	inde	ex ra	anki	ng o	of El	JМе	mb	er S	tates	s (i.e	e. pe	rce	nt of	ag	ricul	tura	l he	ctar	es w	ith 2	zero	tree	es)
	PT	SE	SI	IE	FI	LV	AT	FR	DE	LU	EE	BE	IT	DK	ES	PL	CZ	IR	SK	NL	EL	HU	BG	LT	RO	CY	ΜΤ
TDI	49.0	40.4	525	50.1	50.5	617	61.0	62.4	64.0	64.0	65.1	65.2	67.2	70.1	70.1	70.1	71.2		71.4	75.2	76.1	777	70.2	01.0	022	97.0	05.2

Definition: Slvoarable systems are arable land on which linear tree planting of a maximum of 100 trees/ha. Silvopastoral systems are permanent grassland on which linear, scattered or grouped tree planting occurs with a maximum of 100 trees/ha. Agroforestry systems are not proposed in permanent crops since there will be no additional effect of sustainable management. Agroforestry within permanent crops would also be problematic in terms of administratively and legislatively, especially in relation to the definitions of crops in national legislation. When planting more than 100 permanent crop trees per hectare takes place it is classed as an orchard culture.

Agroforestry in Europe - RefreSCAR Event

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Cork Oak and Cork Competence Center, Coruche, Portugal, 25th of September 2024 (10:00 – 17:00)

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

3. Germany

Tree cover density (2018) on agricultural land for DEU - Germany **Policy** Briefing #36. Help needed with authorship! policy@euraf.net Tree cover % 📕 1-5% 💫 5-10% 🔜 11-20% 🔤 21-50% 🎆 51-100% E 0%

Table 6: Zero-tree-index ranking (EV Member States (i.e. percent of agricultural hectares with zero trees) PT SE SI IE FI LV AT FF DE LU EE BE IT DK ES PL CZ HR SK NL EL HU BG LT RO CY MT TDI 48.0 49.4 53.5 59.1 59.5 61.7 61.9 621 64.0 49 65.1 65.3 67.3 70.1 70.1 70.2 71.2 71.4 71.4 75.2 76.1 77.7 79.3 81.8 82.2 87.9 95.2 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 3 4 2 5

Woody plants of non-excluded species with the primary objective of raw material extraction or food production in accordance with a use concept verified as positive by the competent Länder authority or by an institution recognized by the Länder, in at least two strips covering no more than 40% of the agricultural area or scattered distribution over the area in a minimum number of 50 and no more than 200 such woody plants per hectare. A list of 10 woody-plant species is excluded from new plantings established after 1.1.2022.

Agroforestry in Europe - RefreSCAR Event

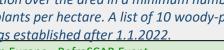
Cork Oak and Cork Competence Center, Coruche, Portugal, 25th of September 2024 (10:00 – 17:00)

Table 1: Conversions, weightings and protected status of GAEC-8 Landscape Features selected by Germany

				-	
Landscape Features and Non-Productive Areas	Convert	Weight	LF	Protected	Notes
Only 4% rule applied					
1 Buffer Strips					
2 Cairns (field stones)			у		piles of stones (caims) > 5m length or natural stone areas with a maximum size not exceeding 2000 m2
3 Cultural Features					
 natural monuments (no size limit) 					
4 Ditches					from 50 m2, length from20m width 2-10m average
5 Field margins, patches etc					
- field margins			У		Long strips, >2m width, between, within or adjacent to agric land
6 Hedgerows/individual or group of trees/ trees in rows					
6.1 Hedgerows and knicks			У	у	linear with shrubs an woodly plants length >10m average width up to 15m. Small unpaved intereruptions are allowed
6.2 Trees in Line			у	у	>5 non-agricultural trees, linearly aligned along at least 50m length (meaning of "non agricultural" is unclear)
6.3 groves/copses			У	у	Woody plants not for agricultural production >50m2, up to max of 0.2ha. Areas assisted with afforestation grants are excluded.
6.4 individual trees			у	у	but only if they are registered as natural monuments (under Federal environmental law)
6.5 scrub or forest margins					
7 Land lying Fallow			у		Fallowed for whole year of application, starting after harvest of main crop in previous year. Areas kept green, self-seeding or active-greening. No agricultural crop species is allowed as a pure crop. Biodiversity effects will be evaluated. After 1.9 seeding or planting is not allowed for harvesting or sheep or goat grazing (with exemptions for some winter crops etc).
8 Others			v		Different Lander can add further landscape elements and exemptions. Schleswig Holstain includes ditches and open water courses up to 6m (with definitions of vegetation). Structural elements connected to the ditches are also protected permanently as biotope connection element. In Meklenburg-Vorpomen biotope establishment can take place even if this means removing some landscape elements.
9 Small Ponds					
10 Small Wetlands			v		up to 0.2ha. Biotopes, dolines, temporary ponds, sink-holes,
11 Stonewalls			, v		>5m length if not part of a terrace
12 Streams			- 1		
13 Terraces			v		Human made linear structures used to change the slope of usable areas.

Table 2: Eco-schemes implemented in Germany

Code	Eco-scheme	Financial %	UAA %
DE	DZ-0401 - Provision of land to improve biodiversity and preserve habitats	32.52	4.24
DE	DZ-0402 - Cultivation of diverse crops with at least five main crop species in arable farming, including		
	legumes with a minimum share of 10%	12.13	16.11
DE	DZ-0403 – Maintaining agroforestry management on arable land and permanent grassland	0.76	0.15
DE	DZ-0404 – Extensification of the entire permanent grassland of the farm	20.64	11.92
DE	DZ-0405 - Outcome-oriented extensive management of permanent grassland areas with proof of at		
DE	least four regional indicator species	14.60	3.86
DE	DZ-0406 - Cultivation of arable or permanent crop areas of the farm without the use of		
DE	chemical-synthetic plant protection products	14.03	7.77
DE	DZ-0407 - Application of land management methods determined by the conservation objectives on		
DE	agricultural areas in Natura 2000 areas	5.32	7.91



4. Greece

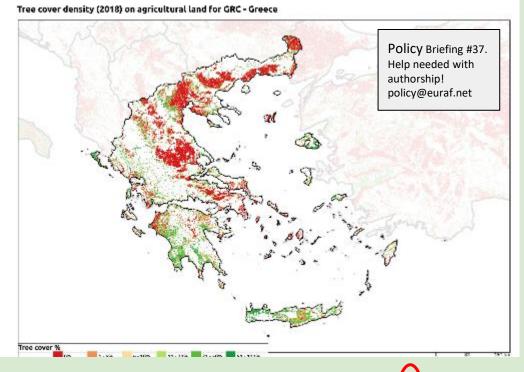


Table 6: Zero-tree-index ranking of EU Member States (i.e. percent of agricultural hertares with zero trees)

		PT	SE	SI	IE	FI	LV	AT	FR	DE	LU	EE	BE	IT	DK	ES	PL	cz	HR	SK	NL	EL	HU	BG	LT	RO	CY	мт
Т	DI	48.0	49.4	53.5	59.1	59.5	61.7	61.9	62.4	64.0	64.9	65.1	65.3	67.3	70.1	70.1	70.2	71.2	71.4	71.4	75.	76.1	7.7	79.3	81.8	82.2	87.9	95.2
	¥	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Definition: systems with scattered trees or trees in rows, or on the margins of plots. They can be either forest trees (oaks, pines, poplars, cypresses) or fruit trees (citrus, apple and stone fruit trees, acacia trees), olives, carob and mastic trees). They can be combined with the cultivation of cereals, horticultural crops, fruit and vegetables and/or grazing. Trees, if planted in rows, should have a minimum distance of 10 metres between rows, the distance between trees in the same row should be greater than 4 metres. Trees may also be present at the boundaries of the field in the form of a living fence to protect the agricultural crop from the wind and to create a zone that will support wildlife. The maximum number of trees is 250 trees per hectare. Agroforestry also includes partially forested areas (sparse forests) of pasture with the tree cover up to 40% and understorey with herbaceous and woody vegetation. In this case the minimum tree density may be 5 trees/ha and the maximum 40 trees/ha depending on the slope, tree species and climatic conditions.

Table 1 Conversions, v	weightings	& protected status o	f GAEC 8 Landscape	e Features selected by	y Greece (<u>link</u>)
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GREECE	Conversion	Weight	GAEC8?	Protect?
4%, 3% and 7% rules applied				
1 Buffer Strips				У
2 Piles of stones as landmarks		1	У	У
3 Cultural Features		1.5	У	У
4 Ditches	3	2	У	У
5 Field margins and patches		1.5	У	У
6 Hedgerows/individual or group of trees/ trees in rows				
6.1 Hedgerows	5	2	У	У
6.2 Trees in Line	5	2	У	У
6.3 Groves/copses	5	2	У	У
6.4 Individual trees	5	2	У	У
6.5 Scrub or forest margins				
7 Land lying Fallow		1	У	
8 Others				
9 Small Ponds		1.5	У	У
10 Small Wetlands		2	У	У
11 Stonewalls		1.5	У	У
12 Streams		1.5	У	У
13 Terraces		2	У	У

Table 2 Eco-schemes selected in Greece

Eco-scheme	Financial %	UAA %
P1-31.01 – Use of resistant and adapted species and varieties.	9.90	1.83
P1-31.02 – Expansion of ecological focus areas	0.98	4.05
P1-31.03 – Implementation of improved plant cover practices, with parallel enhancement of biodiversity	8.25	5.15
P1-31.04 – Applications of circular economy in agriculture	4.35	2.31
P1-31.05 – Improvement of agroforestry ecosystems, rich in landscape elements	3.06	<mark>2.46</mark>
P1-31.06 – Support for producers to implement environmentally friendly management practices, using a		
digital application for managing inputs and monitoring environmental parameters	11.60	3.08
P1-31.07 – Environmental management of livestock farming systems	4.98	7.62
P1-31.08 – Conservation and protection of crops on lands with slopes	1.03	0.85
P1-31.09 – Conservation of methods of organic agriculture and animal husbandry	55.10	10.36
P1-31.10 – Protection of landscapes and environmentally significant agricultural systems agricultural		
systems	0.72	0.57

5. Spain

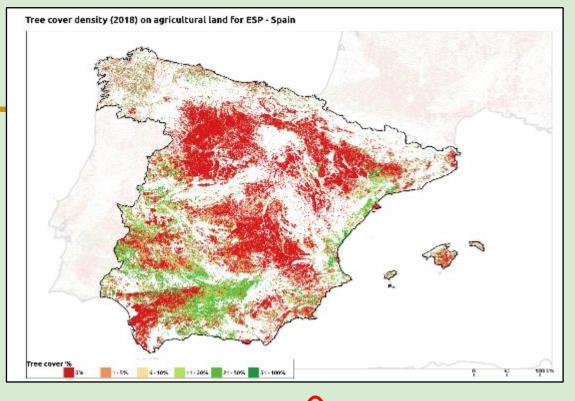


 Table 7: Zero-tree-index ranking of EU Member States (i.e. percent of agricultural hectares with zero trees)

 PT SE SI IE FI LV AT FR DE LU EE BE IT DK ES PL CZ HR SK NL EL HU BG LT RO CY MT

Ŀ	TDI	48.0	49.4	53.5	59.1	59.5	61.7	61.9	62.4	64.0	64.9	65.1	65.3	67.3	70.3	70.1	0.2	71.2	71.4	71.4	75.2	76.1	77.7	79.3	81.8	82.2	87.9	95.2
	#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
-																											_	

Table 1 GAEC 8 Conversions, Weightings, and Protection Status for landscape-features selected by Spain (qv Royal Decree 1049/2022). Protected = cannot be deleted without prior permission

Type of surface and non-productive element	Conversion factor (m/tree to m2)		Including	Protected
1 Buffer strips protection	6	1,5	Y	Y
2 Cairns	2	1	Y	T
3 Cultural elements				
- Small buildings of traditional architecture	1	1	Y	Y
4 Trenches				
5 Field margins			Y	Y
6 Woody elements				
6.1 Hedges or tree-lined strip	5	2	Y	Y
6.2 Trees in a row	5	2	Y	Y
6.3 Tree groups	1	2	Y	Y
6.4 Isolated tree	20	1,5	Y	
6.5 Forest boundaries	6	1,5	Y	
7 Fallow lands				
7.1 Fallow land	1	1	Y	Y
7.2 Fallows for biodiversity, including honey plants	1	1,5	Y	Y
8 Others				
8.1 Islands or enclaves of natural vegetation or rock and mounds	1	1	Y	
9 Ponds, lagoons, ponds and natural watering holes	1	1,5	Y	
10 Small wetlands				
11 Stone walls (m)	1	1	Y	
12 Streams				
13 Terraces (retention terraces, terraces and banks)	2	1	Y	Y

Spanish LPIS (SIGPAC) PA = grassland with trees, PR = grassland with shrubs, PS = grassland

COMP	ARACIÓN S	UPERFICIE	SUBVENC	ONABLE CON C	AP 2015	Y CON CSP 2023	(*)
CCAA	USO SIGPAC	Nº Recintos	Superficie Total (ha)	Superficie Subvencionable CAP 2015 (ha)	%	Superficie Subvencionable CSP 2023 (ha)	%
	PA	665.313	3.537.994	2.388.649	67,51%	2.485.879	70,26%
RECINTOS	PR	3.289.847	5.019.676	3.022.172	60,21%	3.179.297	63,34%
ACTIVOS	PS	2.882.928	2.231.318	1.969.774	88,28%	2.018.215	90,45%
TOTA	LES	6.838.088	10.788.989	7.380.596	68,41%	7.683.391	71,22%

Definition: Land use systems that combine the maintenance of trees with agriculture on the same land". For arable land and permanent crops, the maximum number of trees per hectare should be determined on the basis of "local soil and climatic and environmental conditions, forest species, traditional cultivation practices and the need to ensure sustainable agricultural use of the land in a similar way to that on plots in the same area which do not have trees". At a federal level the number of trees per hectare may not exceed 100, however this limit does not apply to new plantings and the regions may also set a minimum number of trees per hectare for new agroforestry planting or regeneration schemes. Agricultural land falling within the national definition of "forest" shall be eligible for support provided that it can be established that agricultural activity takes place on these hectares and that the agricultural practices do not involve double financing with rural development support for forestry areas.

Agroforestry in Europe - RefreSCAR Event

Spain (2)

Table 5 Activation by Autonomous Community of Agro-environmental and Climate and Investment Measures identified as favourable to agroforestry systems. Adapted

	<i>j. e</i>	2 ann		<i>ui.,</i> 20														
Measure	AN	AR	AS	IB	PV	СВ	СМ	CL	CN	ст	EX	GA	MD	мс	NC	RI	vc	Total
6501.1 Integrated production				х	х				х		х							4
6501.2 Sustainable Crop Commitments	х			х	х		х	х	х	х		х			х	х		10
6501.3 Commitments to promote and sustainably manage pastures	х				х	х		х	х	х		х			х			8
6501.6 Maintenance or improvement of habitats and traditional agricultural activities that preserve biodiversity		х	х			х	х	х		х			х	х	х	х	х	11
6501.8 Practices for soil improvement and combating erosion		х						х	х						х			4
6502.1 Forest management commitments						х		х			х	х						4
6502.2 Forestry and systems maintenance commitments in agroforestry	х	х				х	х	х			х	х		х	х	х		10
6844 Aid for non-productive investments in agricultural holdings linked to mitigation-adaptation to climate change, efficient use of natural resources and biodiversity			x	x			x	x			x	x	x					7
6881.1 Non-productive forest investments in reforestation and agroforestry		х	х			х		х		х	х	х	х	х	х	х		11
6881.2 Non-productive forest investments in prevention of forest damage	х	х	х	х		х	х	х	х	х	х	х	х	х	х	х	х	16
6881.3 Non-productive forest investments in forest damage restoration	х	х	х			х	х	х	х	х	х	х	х	х	х	х	х	15
6881.4 Non-productive forestry investments in forestry actions with environmental objectives	х	х	х			х	х	х	х	х	х	х	х	х	х	х	х	12
6883 Productive forestry investments	х		х		х	х	х	х		х	х	х			х		х	11
TOTAL	7	6	7	4	4	8	8	12	7	8	9	10	6	6	10	6	5	

from Dalmau et al., 2024

AN: Andalusia; AR: Aragon; AS: Asturias; IB: The Balearic Islands; PV: Basque Country; CB: Cantabria; CM: Castile-La Mancha; CL: Castile and Leon; CN: Canaries; CT: Catalonia; EX: Extremature; GA: Galicia; MD: Community of Madrid; MC: Region of Murcia; NC: Foral Community of Navarre; RI: The Rioja; VC: Valencian Community



6. Italy

Tree cover density (2018) on agricultural land for ITA - Italy

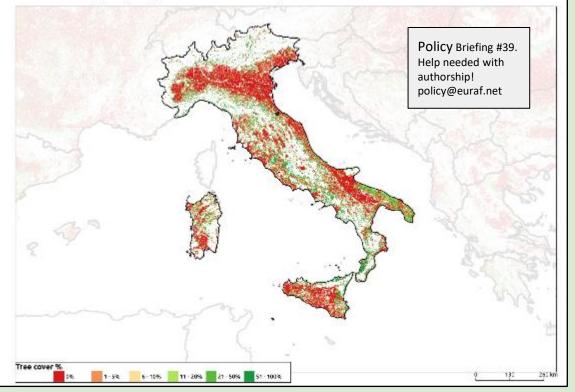


 Table 7: Zeroeveries verse ve

Table 1 Conversions, weightings & protected status of GAEC 8 Landscape Features selected by Italy (data)

ITALY	Convert	Weight	NPF	Protecte d
	Convert	Weight	NPF	a
1 Buffer Strips	1	1,5	у	У
2 Cairns				
3 Cultural Features				
4 Ditches	1	2	У	У
5 Field margins and patches				
5.1 field margins (m)	1	1,5	у	У
6 Hedgerows/individual or group of trees/ trees in rows				
6.1 Hedgerows		2	у	У
6.2 Trees in Line		2	y	y
6.3 groves/copses		1.5	ý	Ŷ
6.4 individual trees		1,5	ý	ý
6.5 scrub				
7 Land lying Fallow	1	1	у	
8 Others			у	У
8.1 Monumental trees		1,5	ý	
9 Small Ponds (a surface area of 3,000 m2 or less)		1,5	ý	У
10 Small Wetlands				
11 Stonewalls		1	У	у
12 Streams				
13 Terraces		1	у	

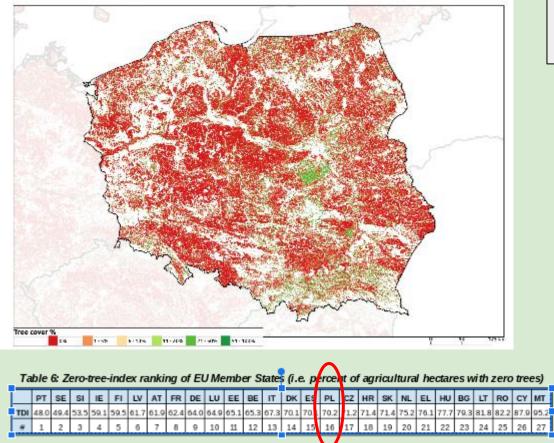
Table 5: Establishment and maintenance payments in Italy using measures <u>SRD05.03</u> and <u>SRA28.03</u> in six Regions (Rosa Rivieccio, Maria Teresa Cappella, Stefano Ordini, Bruno Pennelli, Antonio Pepe, Raul Roman, CREA) (<u>link</u>)

Regioni	Impianti silvoarabili	Impianti silvopastorali	Sostegno annuo per mantenimento di sistemi agroforestali (€/ha)
Piemonte	5.000	4.000	€ 1.500 per 5 anni
Puglia	5.000	4.000	€ 1.500 per 5 anni
Sicilia	5.000	4.000	Non previsto
Toscana	6.500	5.300	€ 800 per 5 anni
Umbria	5.000	4.000	€ 1.500 per 8 anni
Veneto	5.000	4.000	€ 1.500 per 5 anni

Definition: agroforestry systems include all agricultural systems in which the cultivation of species trees or perennial shrubs of forest interest are associated with arable land, with the possible presence of the animal component on the same area, in order to improve the sustainable use of the land on which agricultural activities are practised, with the possibility of diversifying farm production by providing valuable timber, biomass, non-wood secondary products such as truffles, cork, acorns, honey alongside to agricultural and livestock products. In cases where tree and shrub species are present on arable land, the woody perennials "of forest interest" must have a density of no more than **250 plants per hectare.** Provided the land remains in sustainable agricultural use the area of timber-trees should not be subtracted from the total eligible area. These agroforestry systems, which were removed in the recent past by mechanisation and monocultures, have been rediscovered in modern production contexts for the undeniable advantages they offer to farms and the environment, in terms of landscape, synergistic production increases, crop diversification, microclimate improvement, increased biodiversity, control of nutrient leaching and erosion with the improvement of hydraulic regulation and water quality, improvement of other natural resources, with special reference to habitats for wildlife, storage of carbon,

7. Poland

Tree cover density (2018) on agricultural land for POL - Poland



Definition: "an agricultural area, where trees or shrubs are integrated with agricultural crops on the same area of land", established in a manner similar to the two supported agroforestry schemes" Permanent crops are not applicable.



Agroforestry in Europe - RefreSCAR Event

Cork Oak and Cork Competence Center, Coruche, Portugal, 25th of September 2024 (10:00 – 17:00

Policy Briefing #55. Help needed with authorship! policy@euraf.net

An

P	OLAND				Convert F	Conserved					
1	Buffer S	Strips									
2	Cairns										
3	Cultural	l Features	ļ.								
- 4	Ditches	1			5	2	у	у			
5	Field ma	argins and	l pate	ches	6	1,5	y				
		ndscape-fe	<u> </u>				-				
	1 Hedge				5	2	У				
	2 Trees				5	2	y				
					1	1.5	y				
	6.3 Groves/copses			ational annual table	20	1.5	-				
				ational monuments)	20	1,5	У	У			
		or forest n	-	IS							
		ing Fallow						<u> </u>			
				ferous plants		1,5	У				
		fallow land	1			1	У				
-	Others										
Li	and eligi	ible for pay	/ment	ts along the forestedge	6	1,5	У				
9	Small P	onds				1,5	у	у			
				vestment Measures in the Polish C	AP Strategic Pla	n (2022-28)					
Article		Code 110.1.		In a stand state in a spin-struct be left at		iti yana ana ƙasar Iti					
		110.1.		Investments in agricultural holdings to Investments in agricultural holdings to							
	110.10										
	10.11 10.12			Afforestation of agricultural land				·			
		110.13		Establishment of agro-forestry system Enhancing the biodiversity of private			•				
		1.10.13	-								
Invest	Art 73	1.10.2		i Investments to improve the welfare of cattle and pigs On-farm investment in RES and energy efficiency improvements							
& 74		I.10.3		Investments to prevent the spread of a	er						
		1.10.4		Investments contributing to environmental and climate protection							
		I.10.5		Development of small-holdings Value chain cooperation developmen							
	110.6.2.			Development of cooperation within the value chain (Financial instruments) - on farm							
		110.7.		Development of cooperation within th							
	_	110.7.2		Development of cooperation within th							
	_			ironment Climate in the Polish C	AP Strategic Pla	in (2022-28)					
rticle		Code	-	sure							
		1.8.1									
		1.8.10									
		1.8.11	Orga								
		1.8.2	Prote	ection of valuable habitats and enda	00 sites						
		1.8.3	Exte								
		1.8.4	Pres								
		1.8.5 Con:		Conservation of endangered plant genetic resources in agriculture							
ECM - Art 70		1.8.6	Con	servation of endangered animal ger	netic resources in	agriculture					
	1.8.			Biodiversity on arable land							
		1.8.8	Prer	mium for afforestation and agrofor	estry schemes						
		1.8.9.1		environmental and climate commitm age 4 - valuable habitats and enda							
	1	.8.9.2	Agri- Prog	environmental and climate commitm ramme 2014 - 2020. Package 5 - ha	nents implemente abitats outside Na	d under Rural De atura 2000	evelopment	p. 65			
		1.8.9.3	Agri-	environmental and climate commitm ramme 2014 - 2020. Package 1 - Si	nents implemente	d underRural De					

8. Portugal

Tree cover density (2018) on agricultural land for PRT - Portugal

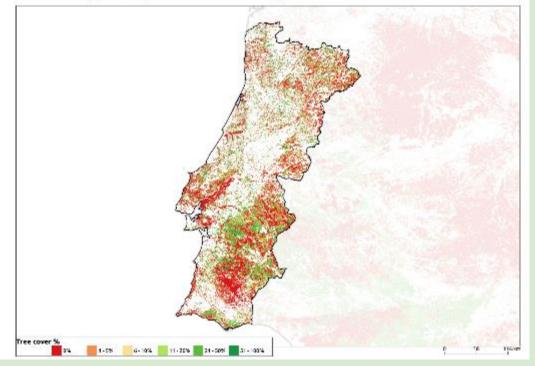


Table 6: Zero-tree-index ranking of EU Member States (i.e. percent of agricultural hectares with zero trees)

	PT	SE	SI	IE	FI	LV	AT	FR	DE	LU	EE	BE	IT	DK	ES	PL	cz	HR	SK	NL	EL	H	BG	LT	RO	CY	мт
TD	48.0	9.4	53.5	59.1	59.5	61.7	61.9	62.4	64.0	64.9	65.1	65.3	67.3	70.1	70.1	70.2	71.2	71.4	71.4	75.2	76.1	77.7	79.3	81.8	82.2	87.9	95.2
#	рт 48.0 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
_		_																									

"Agroforestry systems in Portugal are based on natural regeneration processes, which prevent the alignment of trees, and promote undercover systems with meadows and permanent pastures rather than annual crops. In this sense, (...) due to the difficulty of combining a density of trees with the necessary installation and harvesting of arable crops, it is considered that arable land cannot form agroforestry systems".

Agroforestry in Europe - RefreSCAR Event

Digit

Cork Oak and Cork Competence Center, Coruche, Portugal, 25th of September 2024 (10:00 -

PORTUGAL	LF - Weight	LF - Areas	LF - Protected
1 Buffer Strips		У	
2 Cairns			
3 Cultural Features			У
4 Ditches	2	У	У
5 Field margins and patches			
6 Woody-landscape-features			
6.1 Hedgerows			
6.2 Trees in Line	2	У	У
6.3 Groves/copses	1,5	у	У
6.4 Individual trees	1,5	У	У
6.5 Scrub or forest margins	2	у	
7 Land lying Fallow	0.3	У	
7.1 Fallow land with melliferous plants	1.5		
8 Others			
9 Small Ponds	1,5	у	У
10 Small Wetlands			
11 Stonewalls	1	у	У
12 Streams			
13 Terraces			

Table	3. Agri En	vironment Climate Measures implemented in the Portuguese CSP
Anticle	Code	Measure
	C.1.1.1.1	Soil conservation - Direct seeding
	C.1.1.1.2	Soil conservation - Greening
	C.1.1.1.3	Soil conservation - Biodiverse Pastures
	C.1.1.1.2	Efficient use of water
	C.1.1.2.1	Montados and Lameiros
	C.1.1.2.2	Permanent Crops and Traditional Landscapes
	C.1.1.3	Agroforestry Mosaic
	C.1.1.4	Maintenance of indigenous breeds
	C.1.1.5	Conservation and Improvement of Genetic Resources (animals, plants and foreets)
	C.3.2.8	Allowance for loss of income and maintenance of forestry investments
	D.2.1	Zonal Agri-environmental Flans
	D.2.2	Management of the montado by Results
	D.2.3	Integrated Management in Critical Areas

Table 4 Investment Measures in	plemented in the Portu	guese CAP Strategic Plan
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Policy Briefing #42. Help needed with authorship! policy@euraf.net

rtiicle	Code	e Measure				
	C.2.1.	1 Agricultural Productive Investment - Modernisation				
	C.2.1.	2 Agricultural Investment for the Improvement of Environmental Performance				
	C.2.1	3 Non Productive Investments				
	C.2.2.	2 Productive investment Young Farmens				
	C.3.1.	1 Productive investment Bioeconomy - Modernization				
	C.3.1.	2 Investment in the Bioeconomy to Improve Environmental Performance.				
	C.3.2	1 Afforestation of agricultural and non-agricultural land				
	C.3.2	2 Setting up agroforestry systems				
	C.3.2	Forest prevention against biotic and abiotic agents				
	C 2 2	f				
	F.1.7	Non-productive Investments				
	F.2.1	Investment in afforestation and tree planting				
	F.2.2	Investment in the creation and cegeneration of agroforestry systems				
	F.2.3	Forest prevention against biotic and abiotic agents				

9. Slovakia

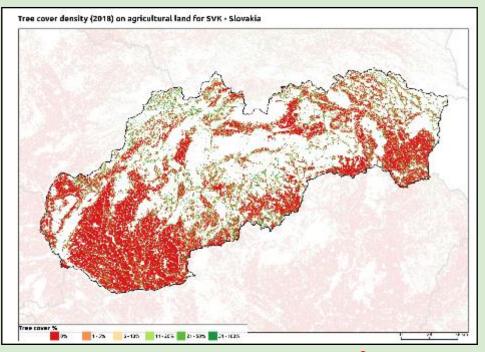


 Table 6: Zero-tree-index ranking of EU Member States (i.e. percent of agric) tural hectares with zero trees)

 PT
 SE
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 FI
 LV
 AT
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 DE
 LU
 EE
 BE
 IT
 DK
 ES
 PL
 CZ
 HR
 SK
 NL
 EL
 HU
 BG
 LT
 RO
 CY
 MT

 TDI
 48.0
 49.4
 53.5
 59.1
 59.5
 61.7
 61.9
 62.4
 64.0
 65.3
 67.3
 70.1
 70.1
 70.2
 71.2
 71.4
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 75.2
 76.1
 77.7
 79.3
 81.8
 82.2
 87.9
 95.2

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On arable land AF is the management and cultivation of trees in linear formations with maximum width of 3m, distance of lines greater than 12m, and distance between trees at least 3m. Conditions: a) agricultural activities can be carried out similarly as on land without trees of the same area, b) number of trees per ha is not greater than 100 trees/ha, c) trees are being properly taken care of including animal protection.

On permanent grassland AF is

<u>On Permanent Grassland</u>: AF is a management/cultivation of a site with permanent grassland with trees in formations: a) tree lines with max width of 3m, min distances of lines of 12m, min distance between trees is 3m, b) Scattered trees with min distance of 8m, c) Woody vegetation groups which do not exceed 20 woody plants and continuous area of 400m2/ha, additionally there can be only one group per ha, also following conditions need to be fulfilled: i) grasses and other fodder crops are still a dominant component, ii) number of trees per ha is not greater than 100 trees/ha, iii) trees are being properly taken care of including animal protection, iv) List of tree species will be specified by legislation of the Slovak Republic.

Table 5. Landscape features selected in the CAP Strategic Plan of Slovakia (2023-27)

	Tuble 51	Landscape reatures selected in the C	Weigh								
SLOVAKIA			t	LF	Retain?	Notes					
1 Buffer Stri	ps		1,5	У							
2 Cairns				n							
3 Cultural F	eatures			n							
4 Ditches	alian and a		1.5	n							
5 Field marg		al or group of trees/ trees in rows	1,5	У	у						
6.1 Hedgerov			2	У	У	No further information					
6.2 Trees in			2	ý	ý	No further information					
6.3 Groves/o			1,5	ý							
6.4 Individua			1,5	У	У	No further information					
6.5 Scrub or											
) Fallow (4	1% of arable land must be set aside)	1	У							
8 Others	tercronoio	g or green cover	0,3	y y							
Nitrogen-fixir		g a gaanaava	0,0	1							
9 Small Por			1,5	У							
10 Small We			1,5	ý	у						
11 Stonewal	ls			n							
12 Streams			2	V.							
13 Terraces			1	V	У						
Article	Code	Measure									
	73.01	Establishing an agroforestry system									
	73.02	Establishment of linear vegetation elements									
	73.03	Afforestation of agricultural land									
	73.04	Productive investment in agricultural holdings									
	73.05	Productive investment in agricultural holdings - Y	-								
	73.06	Investments to improve vertical cooperation bet	ween prim	ary pro	ducers and proc	essors					
		6 Agri Environment Climate and Investn	nent Me	asures	in the Slova	kian CSP					
Article	Code	Measure									
	70.01	Protection and maintenance of trees within th	e establis	hed Ag	oforestry system	n					
	70.02										
	70.03	Protection and maintenance of trees within forested farmland.									
	70.04	Organic Farming									
	70.05	Agro Environmental-Climatic intervention - Pre	cision ferti	lisation	of arable soils -	protection of water resource					
AECM - Art 70	70.06	Agri-environmental-climatic intervention - Sust orchards and vineyards	ainable m	anagem	ent of arable lar	ıd, in					
	70.07	Agro environmental-climatic intervention- Prot	ection and	conser	vation of biodiv	ersity.					
	70.08	Agro Environmental-climatic intervention - Gra	ssing of wa	aterlogg	ed arable land						
	70.09	Breeding and maintenance of endangered lives	tock breed	ls							
	70.10	Forest-environment and climate services and	iorest prot	ection							
	70.11	Promoting animal welfare									

The EU Carbon Removals Certification Framework is coming



- <u>CAP Agroforestry Measures:</u> Greater use is needed of in-field tree measures in Ecoschemes (Article 31), Investment (Article 73) and AgriEnvironment (Article 73), (see <u>Policy Briefing #22</u>)
- <u>CAP Landscape Feature Measures</u> (e.g. hedgerow, lines of trees, small copses and isolated trees) are still part of GAEC-8 (conditionality) and the draft Nature Restoration Regulation (see <u>Policy Briefing #21</u>)
- <u>Carbon Farming "Additionality"</u> solution, "sequential funding" following ecoschemes (planning & baselines, year 0), Investment (planting, year 1), AECM (maintenance, yr 2-5). <u>Policy Briefing #8</u>
- <u>Carbon Farming "Permanence"</u> solution, recording of planted trees as landscape features - giving same felling rules as forests (see <u>Policy Briefing #26</u>)
- <u>Carbon Farming "Leakage"</u> solution, transparent parcel-based registry of certificates in EU and application of the <u>CBAM</u> to agricultural and forest imports and improved international LULUCF Accounting - see <u>Policy Briefing #17</u>
- <u>Carbon Farming MRV</u> IPCC rules, existing certificates, better models - including trees! - see <u>Policy Briefing #20</u>
- <u>Carbon Farming "sustainability"</u> simplified management plans - following the Environment Delegated Act of the Sustainable Finance Initiative - see <u>Policy Briefing #28</u>

This DigitAF project has received funding from the European Union's Horizon Europe research and innovation programme- Grant agreement: 101059794





Barrosa cattle in a

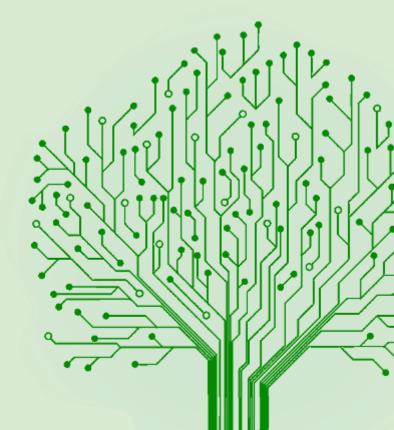
at dawn

DigitAf

Portuguese montado



Co-funded by the European Union



GEOSUBER

CORK OAK VITALITY

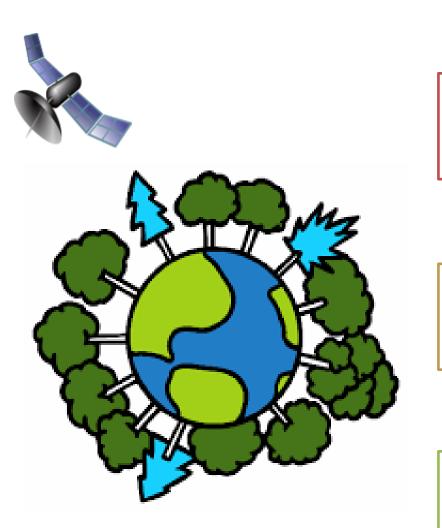
Action 1.1 Operational Group



OPERATIONAL GROUP | GEOSUBER



GEOSUBER



In cork oak woodlands in Portugal, over the last 3 decades, there has been a phenomenon of loss of vigor and decline.

Until now, there is no mechanism for monitoring the cork oak's vitality in a timely manner.

Lack of tools that allow the optimal extraction period definition.

Monitoring the evolution of the cork oak leaf index and its relationship with the beginning of the cork extraction period

Evaluate the possibility of adjusting the extraction season

Establishment of adaptive management recommendations

OSUBER



Make information available directly to the forest owner, on an annual basis

Identify and diagnose stress situations in cork oaks

Facilitate the process of identifying and marking dead cork oaks in the farm

Bureaucracy reduction in the mandatory felling request to ICNF

BER





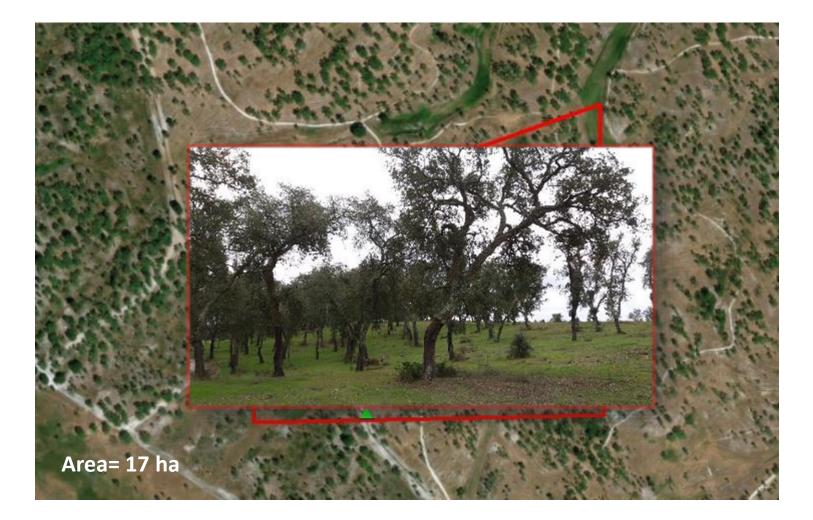
01



VITALITY MONITORING

REFERENCE PLOTS AND EXPLORATORY ANALYSIS







Pleiades Satellite High Resolution (0,5m)



Sentinel 2 Satellite (10 m)

UAV Unmanned aerial vehicle



Information processing to obtain georeferenced data

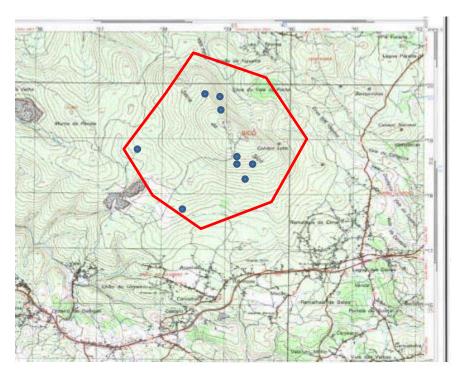
unac

Identification of the spectral signature of cork oak vitality

Make the web platform and application available





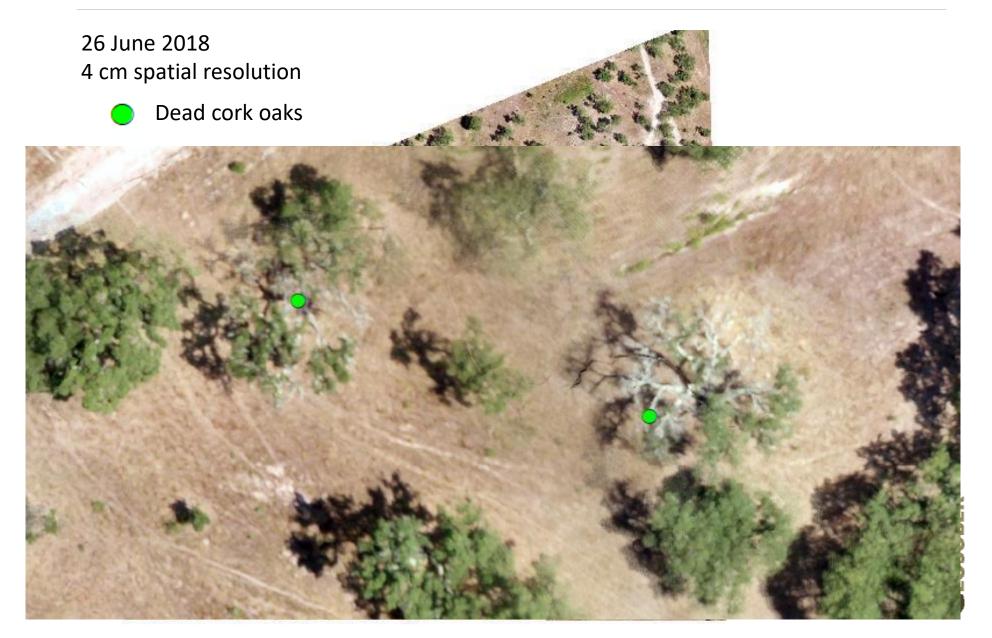




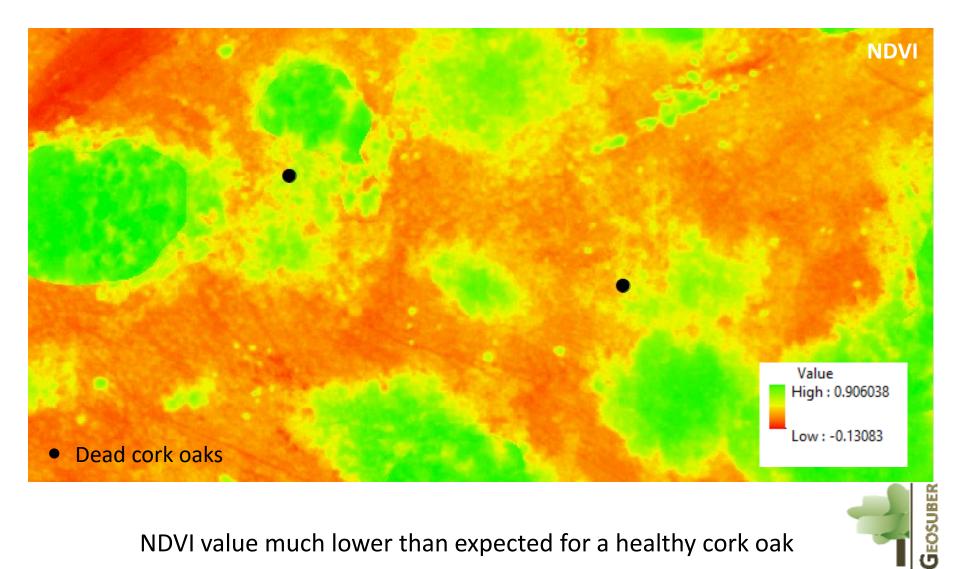


OPERATIONAL GROUP | GEOSUBER









NDVI value much lower than expected for a healthy cork oak



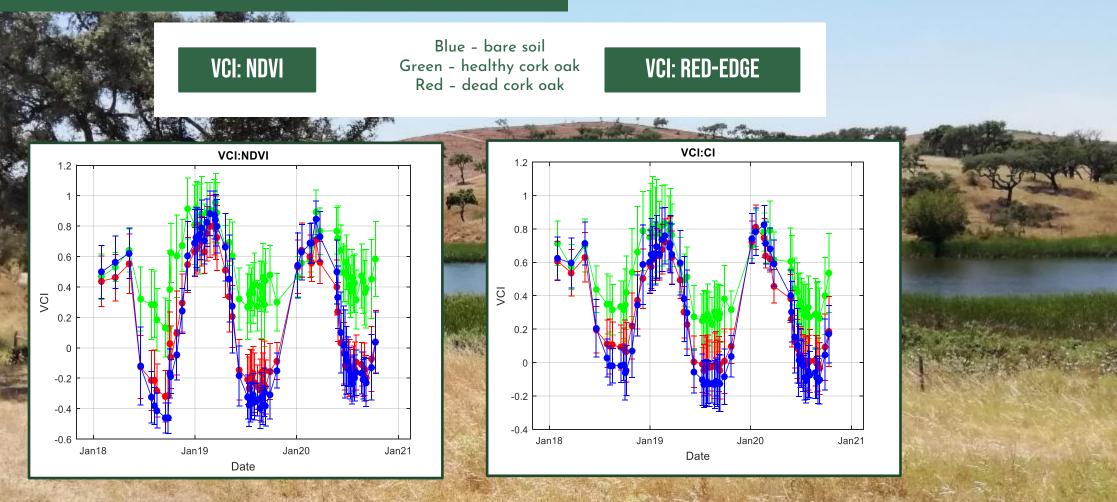


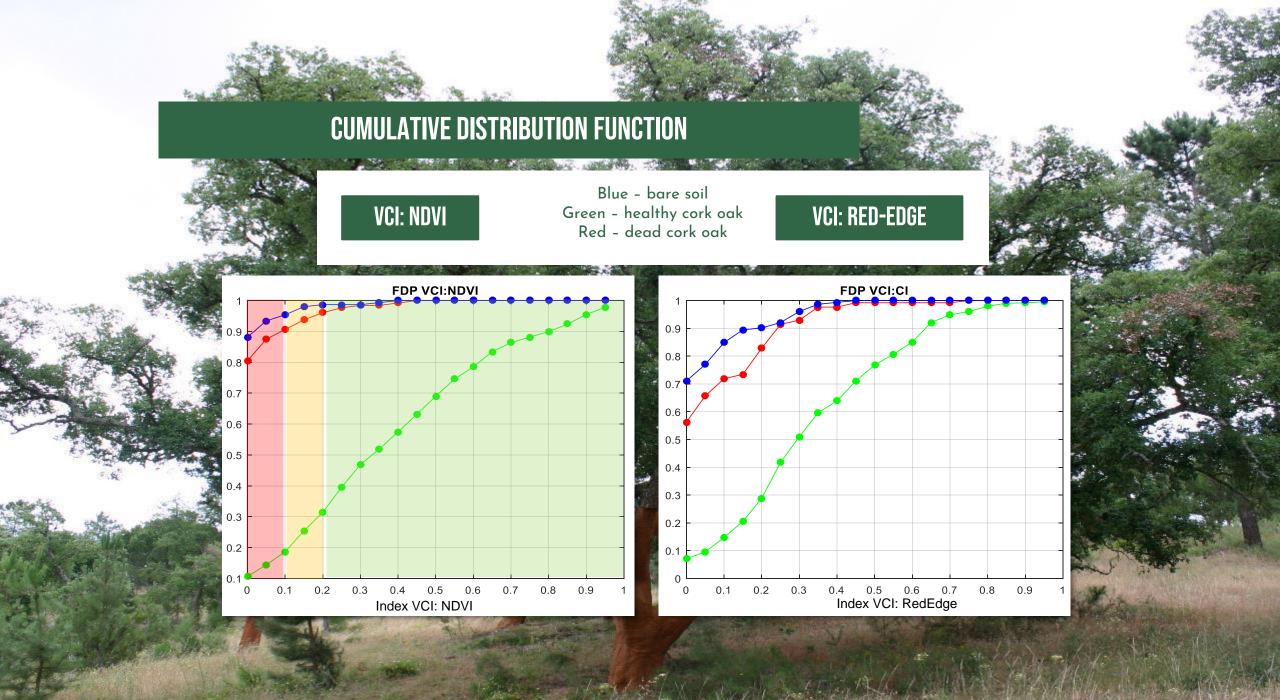
02 MULTITEMPORAL ANALYSIS

SENTINEL 2

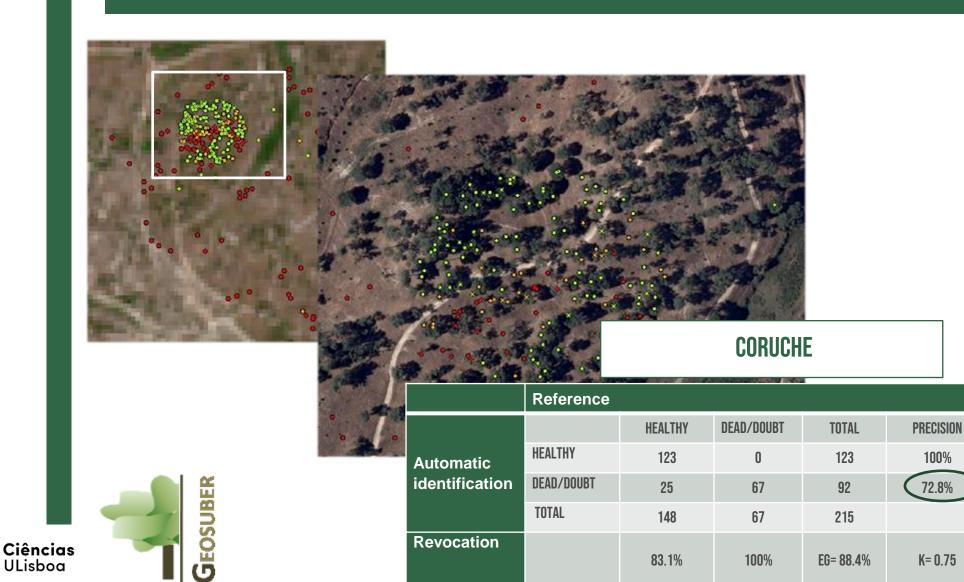
VEGETATION INDEX

VEGETATION CONDITION INDEX - VCI



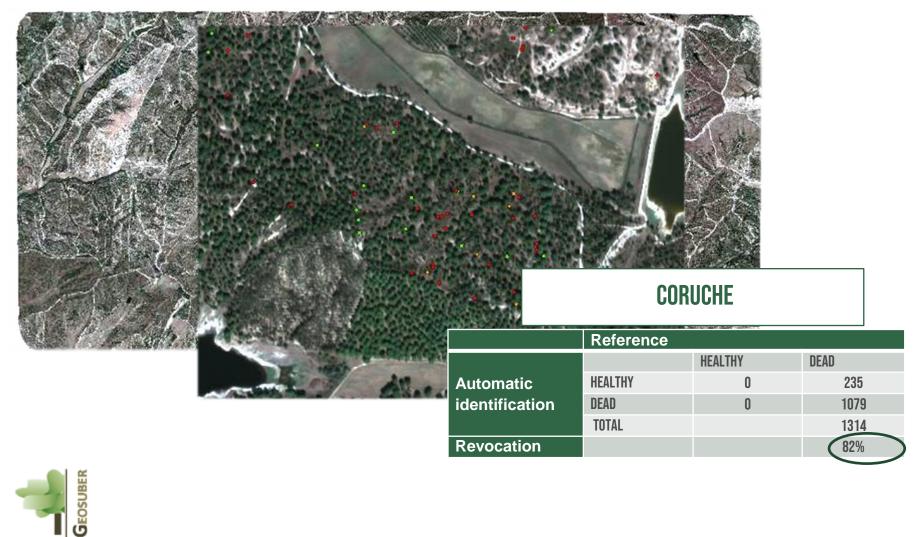


IDENTIFICATION OF TREES WITH REDUCED VEGETATIVE ACTIVITY SENTINEL 2





IDENTIFICATION OF TREES WITH REDUCED VEGETATIVE ACTIVITY **PLEIADES**

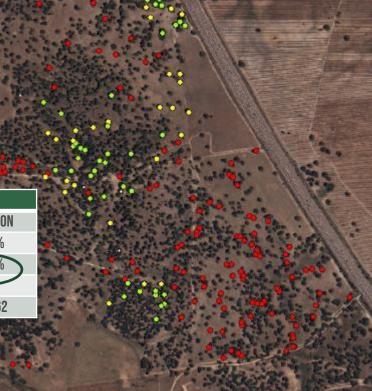




IDENTIFICATION OF TREES WITH REDUCED VEGETATIVE ACTIVITY **SENTINEL 2**

GRÂNDOLA

	Reference				
		HEALTHY	DEAD/DOUBT	TOTAL	PRECISION
Automatic	HEALTHY	41	3	44	93.2 %
identification	DEAD/DOUBT	28	121	149	81.2%
	TOTAL	69	124	193	\smile
Revocation		59.4 %	97.6 %	EG= 83.9 %	K= 0.62





C

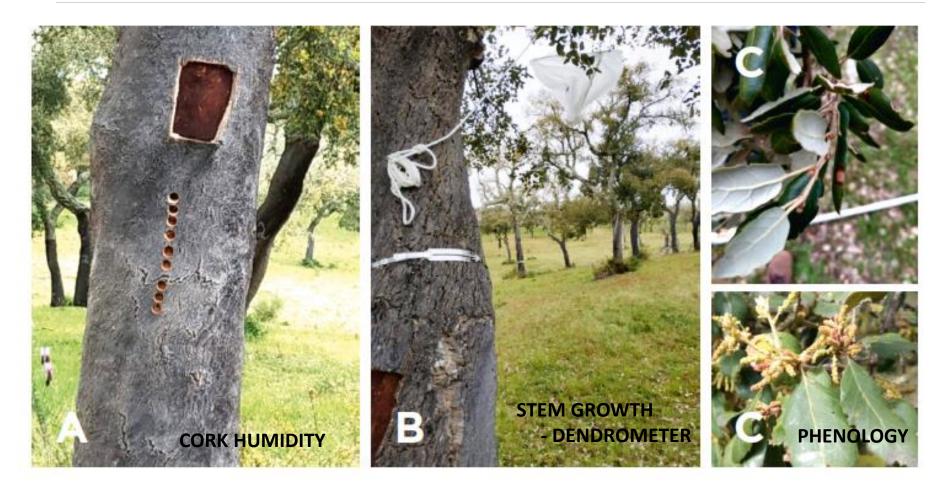








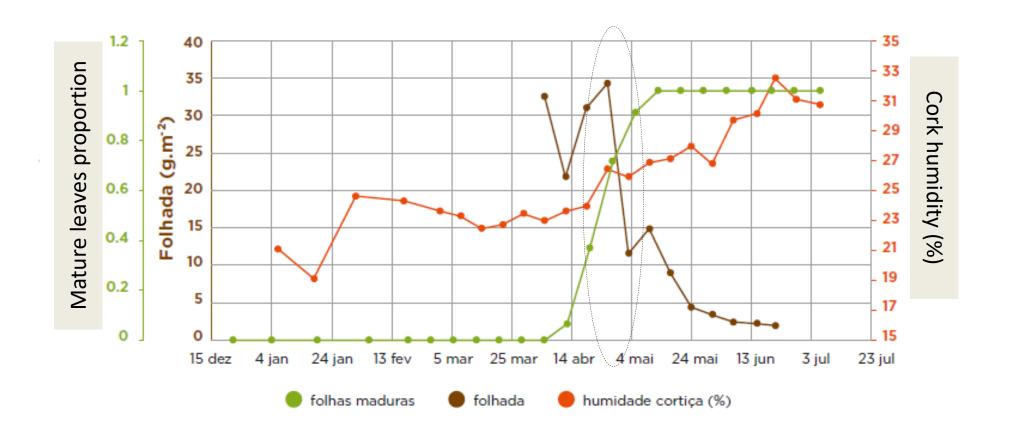




Diameter increase of cork oak stems \rightarrow beginning of the budburst and growth of new leaf.















- 1. GEOSUBER allowed the development of a prototype for mapping dead cork oaks at the property scale, based on multi-temporal analysis of vegetation index;
- 2. The different methods UAV, Sentinel 2 or Pleiades have different and variable levels of accuracy depending on where the algorithm is executed;
- 3. The selection of the method must take into account the objective, the available information, the scale of work and the cork oak characteristics;
- 4. The algorithm acts by default and conservatively when identifying dead trees;

Requires prior georeferencing of all cork oaks After automatic processing, an expert assessment of the quality of the information obtained is still necessary to adjust the parameters.







VITALIDADE DO MONTADO: RECOMENDAÇÕES PARA UMA GÉSTÃO ADAPTATIVA

GEOSUBER

60



INOVAÇÃO E CIÊNCIA

VENCEDOR

UNAC - UNIÃO DA FLORESTA MEDITERRÂNICA

2020



Connecting forestry and agroforestry partnerships across Europe

Advancing innovation and best practices among Operational Groups at the EU level

Ana Maria Ventura



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101086216.







Multi-actor approach for forestry and agroforestry sector

FOREST4EU - European Innovation Partnership Network promoting Operational Groups dedicated to forestry and agroforestry in different European countries in order to foster the transfer of knowledge and good practices between experts in the field.

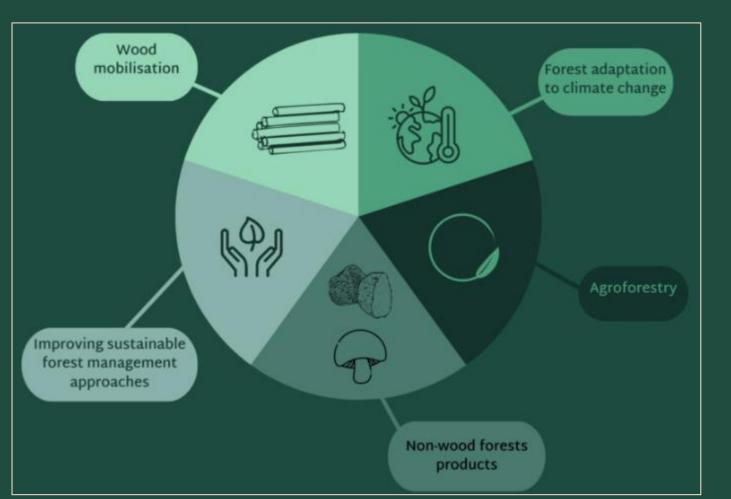


5



Innovation Topic Hubs - ITHubs

FOREST4EU established 5 multi- actor EU cross-countries Innovation Topic Hubs (ITHubs) related to 5 identified topics in forestry and agroforestry sectors.



*Why is it important to participate in OGs? *Why is the multiactor approach a suitable methodology?



Examples of collected innovations which can be disseminated in other countries: **GO ECOMONTADOXX**



Spatio-temporal modelling of pasture quality based on NDVI time series in the Montado ecosystem Technological innovation

(Portugal)

Use of the Keyline system for planting cork and holm oaks in agroforestry systems Process innovation

兆 FOREST4EU



Development of an autonomous and digitised feeding system for Celtic pigs in Atlantic broadleaf forests Technological innovation



LCA in semi-extensive agro-sylvopastoral systems **Process innovation**

Österreich (Austria) GO Agroforst in



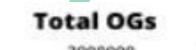
Creation of the multi-actor 'Agroforestry in Austria' network Organisational innovation

GO ARBRE (France)

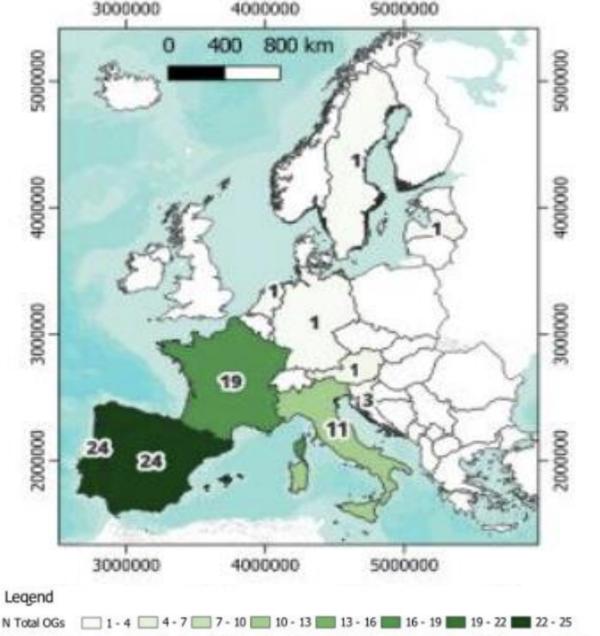


Raising awareness and testing of assisted hedge regeneration Service innovation









Operational Groups in forestry and agroforestry in Europe

A total of **175 innovations** in forestry and agroforestry were collected.

The majority of OGs were/are located in Spain (24 OGs), Portugal (24 OGs), France (19 OGs), and Italy (11 OGs).

OTHER COUNTRIES CAN BENEFICT, AS WELL!

SOLUT



影 FOREST4EU

National Prioritization Workshops: A WAY TO PROMOTE DISCUSSION AND PARTICIPATION OF DISTINCT STAKEHOLDERS

The main aim of FOREST4EU national workshops is to implement an open discussion with national experts and local stakeholders to identify:

- the most relevant selected innovations and good practices for the forestry/agroforestry sector,
- the best channels for disseminating capacity-building material.

They have occurred in all participating countries, with remarkable audience!









業 FOREST4EU PT Workshop -Alc. Sal, 03/2024,





SOLUT®PUS





影 FOREST4EU

Capacity Building Material (1st part):

Reports

Vídeos

Manuscripts / Publications

Practice Abstracts Based on the information collected from Operational Groups, in all countries

- All in English; selection of the most relevant innovations and translation to national languages, according to the prioritization workshops and experts' opinions
- Publication and dissemination in available magazines (e.g., AGROTEC, on OG BioChestNut- IPM), platforms (e.g., Eu- Farm Book) and partners' networks, beyond Forest4Eu own resources



我FOREST4EU

Policy Focus Groups:

four macro-regions: Central Europe, South-East Europe, South-West Europe, and Northern Europe

*webinars

*surveys

*analysis of responses

*Innovation uptake in forests and agroforests: What are the main drivers? Do they substantially differ across EU countries?

Next webinar, including Portugal (South-West Group) at 30/09, 09:30-11:30 PT>>>> register at: https://forms.office.com/Pages/ResponsePage.aspx?id=PNLjMcXkKE25uxEFD5fnqcR5-MYxSk5Liw47hghs6N5UODZJOTIFSIM0TEITMkI3ODBXSUNEVzROTS4u



Stress FOREST4EU Innovate in Forest and Agroforestry... Administrati
veTechnicalBarriersPoliticalClimate
effects and
perceptiongions):Temporal duration
of OG (not adapted
to forest
demonstration)

In South-West Europe (similarities with other regions):

*The innovativeness relates to enhanced management practices and adoption of new technologies

*Sustainability appears related to the economic use of forest resources, allowing for their sustainable exploitation and for environmentally friendly operations.

Resilience!

<u>BUT...</u>

Whereas the innovation drivers are largely the same across Europe, the understanding of what characterizes a forest sector's innovativeness is not!



業 FOREST4EU External drivers for innovation in Europe:

*Climate change is the key driver of innovation, in Central, South-East, and South-West Europe, and a little less strongly in Northern Europe.

*The Loss of biodiversity is a major driver of innovation in Southeast, Southwest, and Northern Europe, but less so in Central Europe.

*There is general agreement that the **bioeconomy** is a driver for innovation in South-West and Northern Europe, whereas the results for Central and South-East Europe are more mixed.

*Markets for forest ecosystem services are perceived as a driver for innovation in all regions, eventually with some scepticism

*Confirmation that Innovation requires **knowledge transfer** from research into practice

*The **evolving societal needs** stand out as a significant innovation driver across the four macroregions.



*The **behavioural** drivers reflect the attitudes to innovation processes in forestry and agroforestry.





Next steps:

Capacity Building Material- 2nd part (including cross-country visits)

Policy Focus Groups (ongoing)

Policy recommendations

Participation in many events around EU (technical and political)

Final event, expected in Brussels, to catch the attention to Forest and Agroforest, through Operational Groups

etc.

Follow us!

www.forest4eu.eu

And all partner's websites, social channels and in-person meetings!





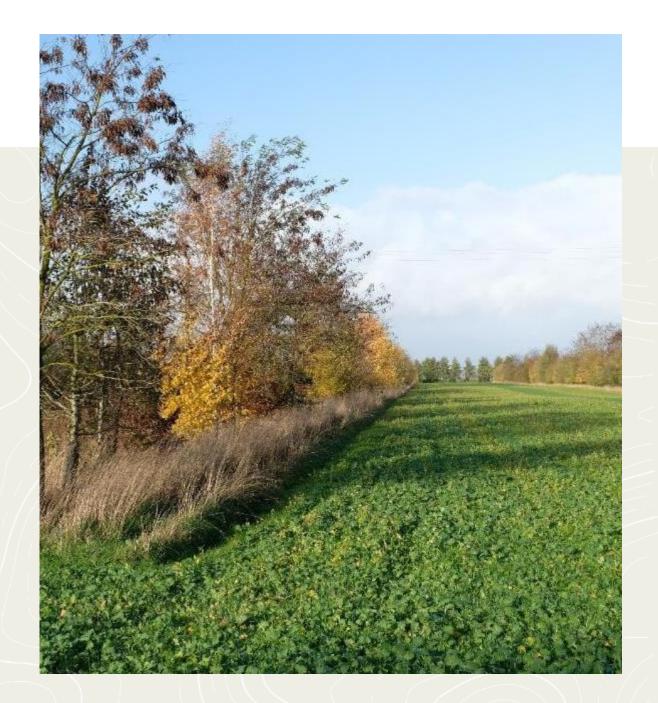






Agroforestry Network Netherlands & other policy instruments

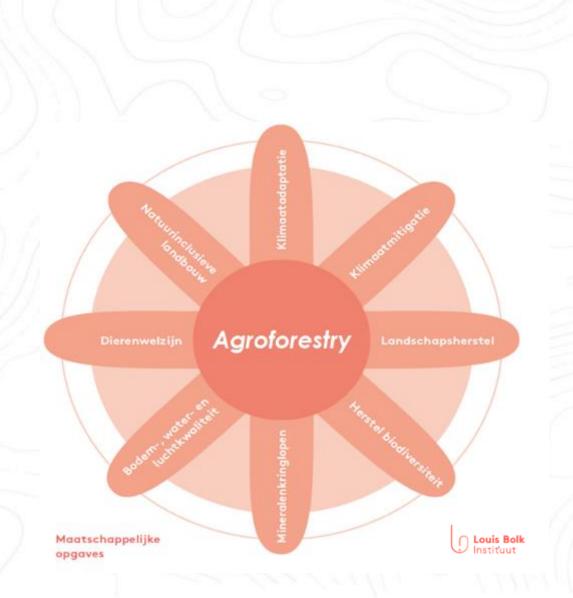
Anne Cobben – Bertani Lopes da Costa Netherlands Enterprise Agency 25 September 2024, Coruche, Portugal





Policy goals

- Climate change mitigation/adaption
- Recovery of landscape
- Biodiversity
- Nutrient cycling
- Soil, water and air quality
- Animal welfare
- Nature inclusive agriculture
- Plant based proteins
- Short supply chain





Agroforestry in the CAP 23-27

A cultivation system whereby **trees and shrubs** are intentionally combined with livestock, arable and/or vegetable cultivation on the same plot.

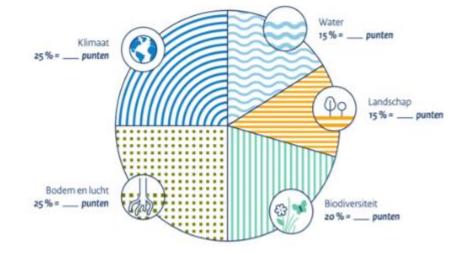
Agroforestry is an umbrella term and has several forms: (1) Trees and shrubs combined with grass or arable land (2) Food forests as permanent crops





Agroforestry in the CAP 23-27

- Agroforestry = agricultural land use
- Payment for "non-productive" landscape features
- Eco-scheme: Strip cropping, woody features, grassland with herbs, food forests (2025)
- Monitoring # hectares agroforestry (<u>unofficial</u> <u>data</u>): 1,500 farmers / 2,000 ha agroforestry





agroforestry netwerk Nederland

Trees and shrubs combined with livestock (silvopasture)





Trees and shrubs combined with arable crops (silvoarable)





agroforestry netwerk Nederland

Food forests





Other policy instruments

- Inclusion in National Climate Agreement and Forest Strategy
- Loans for transitioning to nature inclusive agriculture
- Funding research on agroforestry (Public-Private-Partnerships)
- Subsidy schemes for:
 - Planting material (provinces)
 - Machinery and technological innovations
 - Advice, knowledge, business plan
 - Collaboration and fieldlabs (EIP-AGRI)
 - Maintenance of nature on agricultural land
- Agroforestry Network Netherlands



Farm of the Future (Wageningen University & Research)



"The Agroforestry Network Netherlands stimulates embedding of trees and shrubs on agricultural land."

Goal:	25,000ha agroforestry in 2030
Target groups:	Entrepreneurs with interest in agroforestry
But also:	Policymakers, researchers, advisors, supply chain actors, etc.



Agroforestry Network Netherlands

- Funded by the Ministry of Agriculture, Fishery, Food Security and Nature (LVVN)
- 3 thematic groups
- 2 practice oriented networks
- 12 provincial networks
- International: EURAF, DigitAF, Agromix, ILVO
- Website: <u>Agroforestry Netwerk</u> <u>Nederland</u>
- Policy Research Practice



Research & Education



Laws & Regulations



Markets & Supply chains



Livestock & arable crops



Food forests



Policy & Practice: dialogue sessions with farmers

- Feedback from practice
- Improving policy
- Address laws and regulations that inhibit agroforestry





Research & Practice: making knowledge available



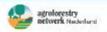
Over deze factsheet

U bent agrarisch endermerner en u bent van plan om met agroforestry te beginnen. Met het aanplanten van bornen op uw bedrijf krijgt u misschien te maken met de meld- en herbeplantingsplicht, beter bekend als de Kernpunten

Less u in over de meld- en herbeplantingsplicht voordat u



Local examples & business models & value chain







Lettek Viu laudschapson/werper usar natuurinclusief boeren, agroforestry op De Melkbrouwerij

Montfoort Zorg voor mens, bodem en koe; Agroforestry bij Bloemenweidemelk



Dartaen

Yogal'arm, een plek waar biodiversiteit

en tijd voor jezelf samenkomen

Uden Boeren in de natuur met agroforestry

A THE REPORT OF



Agroforestry Praktijkvoorbeelden Werkgroepen Kennisbank





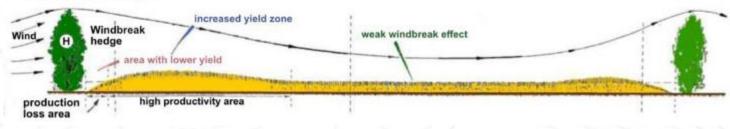
Ambachtelijke walnootolie 200 ml €15.00 Ongepelde walnoten 1000 gr

€5.00



Gepelde walnoten 175 gr €4.50

Effect of hedges





Inspirational movie "Trees in my field"





Thank you for your attention!



Panel discussion





• António Gonçalves Ferreira

Farmer & President of UNAC

• Augusta Costa

Researcher at INIAV and coordinator OG Oak regeneration

• Tiago Fioravanti Zibecchi

Researcher at Euro-Mediterranean Economists Association and partner in the EU project ReForest

Moderated by Ana Maria Ribes (Portuguese National Rural Network)



What questions do you have for the panelists?

Go to www.menti.com

Enter the code

8924 9804



Or use QR code



Coffee break





• António Gonçalves Ferreira

Farmer & President of UNAC

• Augusta Costa

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Instituto Nacional de Investigação Agrária e Veterinária, I.P.

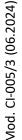
Oak Regeneration

Reassessment of regeneration strategies in the Mediterranean scattered-oak woodlands



RefreSCAR Event Agroforestry in Europe

September 25th, Coruche, Portugal





A AGRICULTURA E PESCAS

Practical problem

Lack of successful long-term natural tree regeneration in Mediterranean evergreen (cork and holm) oak woodlands

Objectives

- Protect oak natural regeneration hotspots still occurring spontaneously in Mediterranean scattered-oak woodlands
- Enable successful long-term natural oak regeneration in set-aside oak woodlands areas, under active management



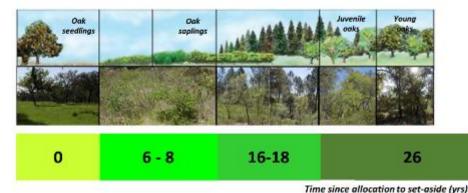
 Promoting secondary forest succession in scattered-oak woodlands set-aside areas, under active management:

REGENERATIO

- i. Understorey clearing techniques
- ii. Reduction/substitution of livestock
- iii. Biological fertilization

Expected Results

- Comprehensive analysis of oak natural regeneration dynamics in Mediterranean (cork and holm) oak woodlands
- Ecological indicators to assess the timeline of setaside schemes
- Planning and managing scattered-oak woodlands to naturally regenerate





Instituto Nacional de Investigação Agrária e Veterinária, I.P.

Project partners

Instituto Nacional de Investigação Agrária e Veterinária, I.P.

Agri association

ANSUB - Associação de Produtores Florestais do Vale do Sado AFLOSOR - Associação de Produtores Agro-Florestais da Região de Ponte de Sor ACHAR - Associação de Agricultores de Charneca ADPM - Associação para o Estudo e Defesa do Património Natural e Cultural do Concelho de Mértola

Agri entreprise

CL - Companhia das Lezírias, S.A EDIA - Empresa de Desenvolvimento e Infraestruturas do Alqueva, S.A. Herdade do Paúl - Sociedade de Gestão Rural, Unipessoal Lda Anta de Cima - Sociedade Agrícola Unipessoal Lda Pedro Sacadura Teixeira Cabral Duarte da Silveira César Sacadura Mexia de Almeida Carlos Frederico Abecassis do Amaral Neto

Sociedade Agrícola do Casal das Pombas, S.A

Project contact

Instituto Nacional de Investigação Agrária e Veterinária, I.P. augusta.costa@iniav.pt

Links

https://www.oakregeneration.pt/en/ https://inovacao.rederural.gov.pt/2/72-oak-egeneration https://ec.europa.eu/eip/agriculture/en/findconnect/projects/oak%C2%AEegeneration https://ec.europa.eu/eip/agriculture/en/news/inspiratio nal-ideas-natural-tree-regeneration-oak





asai das







USIAG ELINOPEIA Pento Extensi Agricela de Deservoirte ente Runi A Europe Minete mes Zonen Rune



RefreSCAR Event

Agroforestry in Europe

September 25th, Coruche, Portugal



WP5 FINANCE AND POLICY

Mapping Policy Report and Application of Sustainable Financing Scheme for Agroforestry in the EU

Tiago Zibecchi – Economist and Researcher at EMEA tiago.zibecchi@euromed-economists.org

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101060635 (REFOREST). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.





Join Our Platform



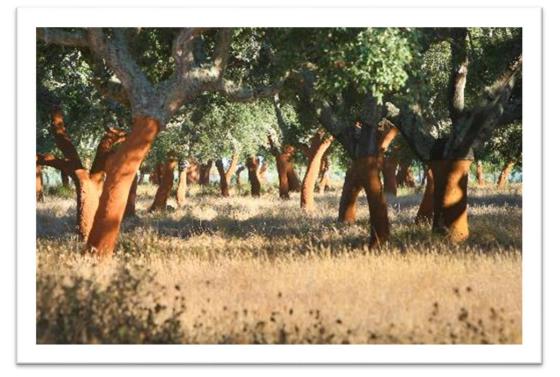
11/10/2024



Quinta Grande

I,300ha of multiple agroforestry systems with cork, livestock, eucalyptus, vineyards and much more.

José Ribeiro da Cunha will give a presentation of the farm after which we'll visit several field plots.





Networking lunch

