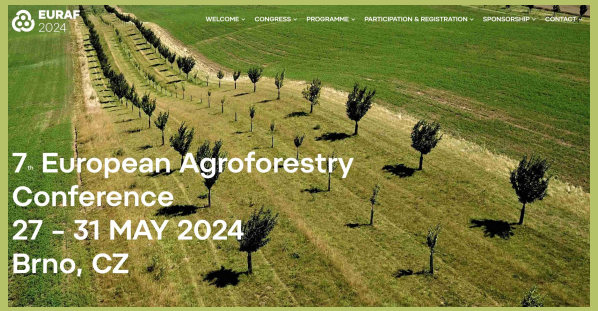
Agroforestry in the EU CAP (2023-27)

Gerry Lawson (Policy Analyst EURAF) Thursday 16th Nov - Bantry, Co Cork



EURAF
European Agroforestry Federation

www.euraf.net

secretariat@euraf.net;
policy@euraf.net

1. What is Agroforestry?

The 27 CAP Strategic Plans give national definitions

CAP SP Regulation 4(3). Déanfar '**limistéar talmhaíochta**' a chinneadh sa chaoi gur talamh arúil, barra buana agus féarthailte buana atá ann, lena n-áirítear nuair a bhunaítear **córais agrafhoraoiseachta** leo ar an limistéar sin.

CAP SP Regulation Art 4(3). "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 EU has a simple 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")

EU Member States now have own definitions of Agroforestry

...

- **Regulation 1305/2013 "Land use systems in which trees are grown in combination with agriculture on the same land "**
- Every **EU Member State** now has its own AF definition (EURAF Policy Briefing #22). These have problems (e.g. definitions of a "tree") - but are a major step forward.
- **Ireland .. Silvoarable** "The combination of arable land and forestry shall be deemed an **agricultural area.** A stocking rate of 400 - 1000 trees per hectare (equal spacing) is acceptable; a tree-to-tree width of 20 metres is required. Acceptable broadleaf species will include oak, sycamore and cherry. Other species, including conifers can be considered on a site-by-site basis. Where a lower stocking density (i.e. <400 trees per hectare) the land will be classified as arable land."
- Separate definitions for **permanent crops** and **permanent pasture**

22. Agroforestry definitions in the new CAP

EURAF Policy Briefing 22 v1, Feb 2023. Gerry Lawson (policy@euraf.net). 10.5281/zenodo.7828435

The European Agroforestry Federation is an NGO (Transparency Register 913270437706-82), which "promotes the adoption of agroforestry practices across Europe by supporting efforts to develop awareness, education, research, policy making and investments which foster the use of trees on farms". It has a network of 31 affiliated entities in 23 countries.

EURAF has collated the definitions of agroforestry included by Member States in their CAP Strategic Plans. Some are detailed and include minimum and maximum numbers of trees per hectare, but usually without a definition of "tree". Few of the definitions can lead to remotely-sensed identification of those parcels which are "agroforestry" and those which have too few trees to be considered as agroforestry. Nevertheless, Member States are progressively adding more detail to their identification of Landscape Features (including individual trees, hedges and trees in groups and lines) and Non Productive Areas (GAEC-8) in their CAP Land Parcel Identification Systems. This detail is also needed to measure compliance with the 10% target in the Biodiversity Strategy and Nature Restoration Law (see Briefings ##18 and #21). It should be possible for Member States to propose a % threshold tree-crown cover (actual or potential) which would be used to distinguish agroforestry parcels in the CAP and also in LULUCF accounting of GHG emissions. Several Member States have taken advantage of the flexibility offered in the Strategic Plan Regulation to define "permanent grassland" to include areas which are predominantly covered by shrubs which can be grazed or cut for fodder. These include areas which could also be considered as agroforestry.

The difference between “Forest Land” and “Agricultural Land” …

…. is in EURAF Typology of Agroforestry Systems … but CADASTRES need linking

Tree Location	AF System	Land Use Classification (e.g. LPIS)	
		Forest Land	Agricultural Land
Trees within parcels	Silvopastoral	Forest Grazing	Wood pasture Orchard grazing
	Silvoarable	Forest Farming	Alley Cropping Alley Coppice Orchard Intercropping
	Agrosilvopastoral	Sequential mixtures of silvoarable and silvopastoral systems	
Trees between parcels	Linear Agroforestry	Forest Strips	Shelterbelt Networks Wooded Hedges Riparian Tree Strips

2. CAP-LPIS high-resolution is vital

Copernicus, Corine and LUCAS don't see tree lines or link to farmers

LPIS Systems - use for CAP, climate and nature targets

Four overlapping layers:

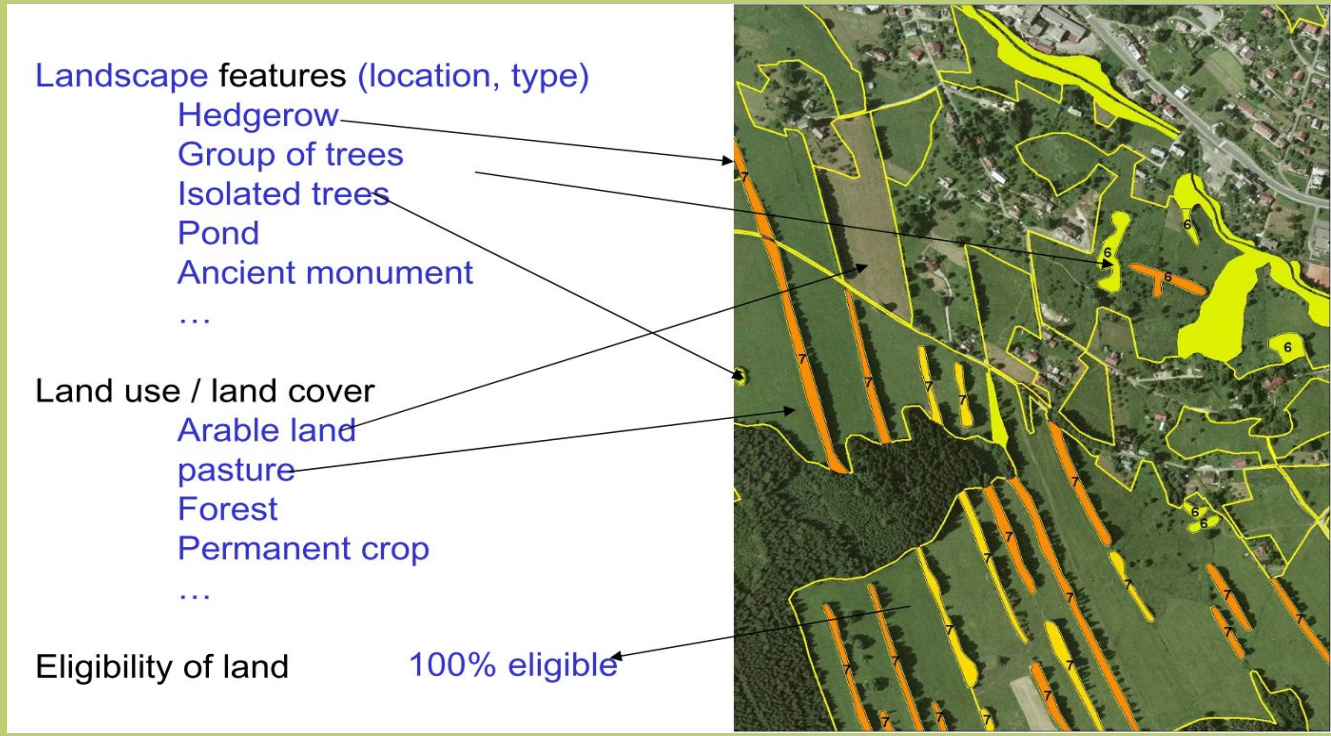
1. Reference Parcels

2. Agricultural Parcels

3. Ecological Focus Areas

4. Landscape Features

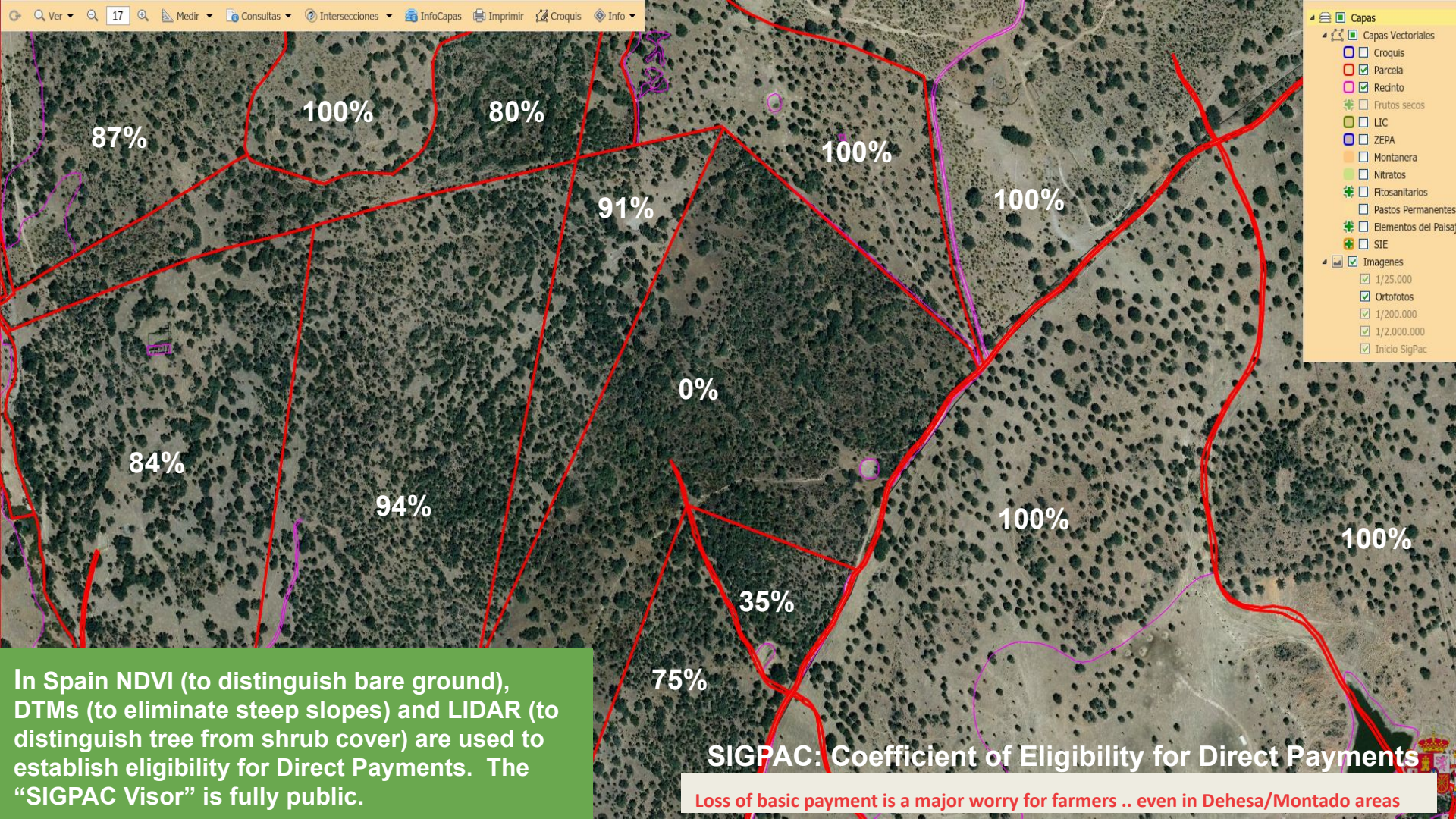
Also info on statutory designations like Nitrate Sensitive Zones and Some Pillar II Grants Information. Need to use for LULUCF Reporting



Land Parcel Identification Systems

- Images are usually available with **pixel resolution of 40-50cm**
- The scale of **1:5000** (pixel size 50 cm) - is specified for **landscape features and carbon farming** (CFCR)
- Data is becoming available now in most countries - but **methods are very different - e.g. "Land-use and crop type"**
- **Data openness is the key of the GreenData4All Initiative (link) (INSPIRE directive)**
- **Detail needed for both carbon-farming and AFOLU reporting integration of the forest cadastre** with the LPIS is needed - links to the **Forest Management Regulation**

GeoEye-1 (0.46m)
GeoEye-2 (0.34m)
WorldView-1 (0.46m)
WorldView-2 (0.46m)
WorldView-3 (0.31m)
Pleiades-1A (0.5m)
Pleiades-1B (0.5m)
KOMPSAT-3A (0.55m)
KOMPSAT-3 (0.7m)
QuickBird (0.65m)
Gaofen-2 (0.8m)
TripleSat (0.8m)
IKONOS (0.82m)
SkySat-1 (0.9m)
SkySat-2 (0.9m)



In Spain NDVI (to distinguish bare ground), DTMs (to eliminate steep slopes) and LIDAR (to distinguish tree from shrub cover) are used to establish eligibility for Direct Payments. The "SIGPAC Visor" is fully public.

SIGPAC: Coefficient of Eligibility for Direct Payments

Loss of basic payment is a major worry for farmers .. even in Dehesa/Montado areas

But, what happened to the GreenData4All Initiative?

- European **Strategy for Data** (2022) announced the development of nine **Common European Data Spaces**… Including:
- **A Common European Green Deal data space,** to use the major potential of data in support of the Green Deal priority actions on climate change, circular economy, zero-pollution, biodiversity, deforestation and compliance assurance. The "GreenData4All" and 'Destination Earth' (digital twin of the Earth) initiatives will cover concrete actions.
- The legislative train for the **'GreenData4All' initiative' foresaw a public consultation in Q2 2022 and adoption of the draft proposal in Q4 2022.** It intended to evaluate, review and update the Directive establishing an Infrastructure for Spatial Information in the EU (INSPIRE Directive 2007/2/EC), and the Access to Environmental Information Directive (Directive 2003/4/EC). **NOT HAPPENED YET!**

Adaptation Plans and Energy-Climate Plans

Table 1: Inclusion of agroforestry (AF) in the Adaptation Strategies/Plans and Energy & Climate Plans of EU Member States					
MS	AD Strategy	AD Plan	AF Mention?	Text relating to agroforestry in adaptation plans	NECP
AT	2017	2017	y	Action Plan says "Landscape elements, such as agroforestry systems or windbreak hedges can change the la	none
BE	2010	2016	n	No mentions of AF	none
BG	2019		y	Agroforestry is defined as an integrated system combining agriculture and forestry to create productive and su	none
CY	2017		n	No mention of AF	2023
CZ	2015	2021	y	Agroforestry mentioned four times in Annex I of Plan (adaptation measures): i) creating facourable conditions	2023
DE	2008	2011	n	No mention of AF	2023
DK	2008	2012	n	Nomention of AF	2023
EE	2017		n	No Mention of AF	2023
EL	2016		y	Single mention of agroforestry iunder "measures for the sustainable management of biodiversity in agricultura	2023
ES		2020	y	Encouragement of agrosilvopastoral systems is mentioned on p130, and recovery of riverine woods on p111	2023
FI	2005	2022	n	No Mention of AF	2023
FR	2007	2017	y	In the Plan one priority (p10) is "development of agricultural and agri-food systems, practices and supply chai	none
HR	2020		n	No Mention of AF	2023
HU	2018		y	Strategy mentions agro-forestry in rural development programmes (2014-20), carbon sequestration in forest e	2023
IE	2018	2023	n	No mention of AF in the Strategy or the Plan, although target afforestation is now 63000ha by 2030.	none
IT	2015	2022	y	No mention of AF in the Strategy. The Plan (which was underdiscussiolin for 4 years) has a category for "fores	2023
LT	2012	2013	y	The strategy recognises that "soil in forests and agroforests is a natural sink for C". The Action Plan doesn't me	2023
LU	2020		y	The combined strategy-plan mentions a that a future agroforestry project will be developed to demonstrate ho	2023
LV		2019	n	No mention of agroforestry	none
MT	2012		n	No mention of agroforestry	2023
NL	2017	2017	n	No mention of agroforestry	2023
PL		2013	n	No mention of agroforestry	none
PT	2015	2019	n	No mention of agroforestry although there is discussion in the Action Plan of rural fire prevention - including w	2023
RO		2018	n	No mention of agroforestry	2023
SE	2018	2022	n	No mention of agroforestry in the Strategy or the 2022 communication	2023
SI	2016		n	No mention of agroforestry in the Strategy	2023
SK	2018		y	Mentions of agroforestry (and landscape features) in the context of reduction of soil erosion and "optimal use	2023
TOTAL			11	**Draft NECP Submitted (should have been by June 2023)**	20

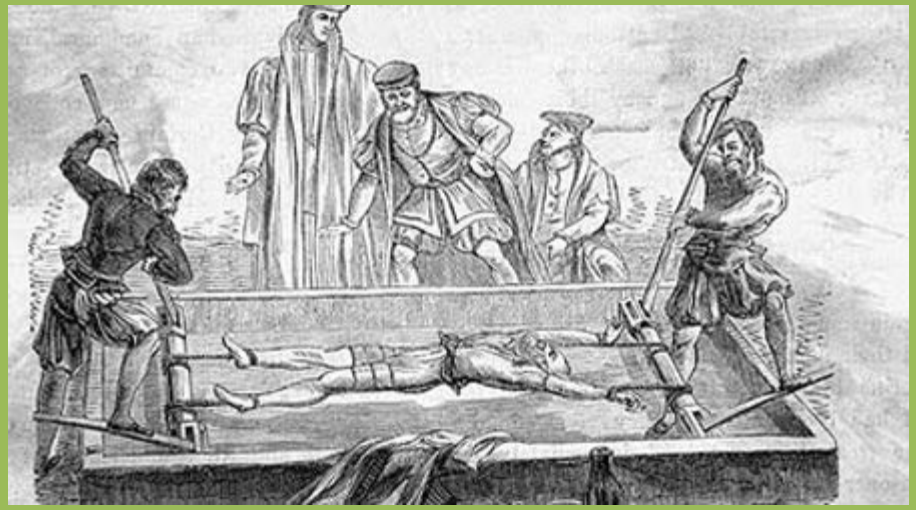
3. Forest Monitoring Regulation

Member States record Trees outside Forests poorly

20%+ of tree cover in the EU is outside forests

Why use the FAO definition for Forests?

Procrustes, in Greek legend, a robber dwelling somewhere in Attica—in some versions, in the neighbourhood of Eleusis. His father was said to be Poseidon. Procrustes had an iron bed (or, according to some accounts, two beds) on which he compelled his victims to lie. Here, if a victim was shorter than the bed, he stretched him by hammering or racking the body to fit. Alternatively, if the victim was longer than the bed, he cut off the legs to make the body fit the bed's length. In either event the victim died. Ultimately Procrustes was slain by his own method by the young Attic hero Theseus,



Use the UNFCCC definition of “Forest”

The EDR should have used UNFCCC (national) definition - not the Procrustean FAO definition

UNFCCC - Marrakesh Accords CCC/CP/2001/13/Add.1

“Forest” is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ…

More detail “*forest may consist either of closed forest formations where trees of various storeys and undergrowth* ***cover a high proportion of the ground or open forest.*** *Young natural stands and all plantations which have yet to reach a* ***crown density of 10-30 per*** *cent or* ***tree height of 2-5 metres*** *are included under forest, as are areas normally forming part of the forest area which* ***are temporarily unstocked*** *as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest*”.

EU Member States defined their forests in the LULUCF Regulation (2018/841)- copses smaller than “forests” are “grassland” or “cropland”. (EURAF Policy Briefing 15)

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
Denmark				20
Finland				20
France				
Italy				
Luxembourg				
Sweden				10
Greece	0,3	25	2	
Slovakia	0,3	20	5	
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

Only six countries use the FAO Thresholds of 0.5, 10% and 5m

Country	Forest Land ('000 ha)	Other Wooded Land ('000 ha)	Other Land with Tree Cover ('000ha)	%Trees outside Forest (OWL+OLTC)
2020 returns ('000 ha)				
Austria	3899.15	130.24	13.08	3.5%
Belgium	689.3	32.9	31.47	8.5%
Bulgaria	3893	24	13.2	0.9%
Croatia	1939.11	618.09	50	25.6%
Czechia	2677.09	0	200.25	7.0%
Cyprus	172.53	213.57	0	55.3%
Denmark	628.44	36.95	2.67	5.9%
Estonia	2438.4	94.44	3.6	3.9%
Finland	22409	746	9	3.3%
France	17253	843	206	5.7%
Germany	11419	0	400	3.4%
Greece	3901.8	2634.72	1000	48.2%
Hungary	2053.01	200	82.24	12.1%
Ireland	782.02	65.74	0.67	7.8%
Italy	9566.13	1865.84	2718.37	32.4%
Latvia	3410.79	107.8	182.61	7.8%
Lithuania	2201	62.1	19.5	3.6%
Luxembourg	88.7	2.7	0	3.0%
Malta	0.46	0.07	4.7	91.2%
Netherlands	369.5	0	21.55	5.5%
Poland	9483	0	0	0.0%
Portugal	3312	1543	0	31.8%
Romania	6929.05	15.57	0	0.2%
Slovakia	1925.9	20.41	0	1.0%
Slovenia	1237.83	27.42	288	20.3%
Spain	18572.17	9381.82	3902.36	41.7%
Sweden	27980	2364	0	7.8%
Total	**159231.4**	**21030.4**	**9149.3**	**15.9%**

MS data for the FAO 5-yearly Forest Resource Assessment. Why so many blanks?

- **Forests** are lands of more than **0.5 ha,** with a tree canopy cover of more than **10 percent,** which are not primarily under agricultural or urban land use.
- **Other Wooded Land (OWL)** is land with a canopy cover of **5-10** percent of trees able to reach a height of 5 m in situ; or a canopy cover of more than **10 percent** when smaller trees, shrubs and bushes are included.
- **Other Land with Tree Cover (OLTC)** - other land in agriculture or settlements spanning more than **0.5 hectares** with a canopy cover of more than **10 percent** of trees able to reach a height of 5 meters at maturity. (Excludes scattered trees with a canopy cover less than 10 percent, small groups of trees covering less than 0.5 hectares and tree lines less than 20 meters wide.
- See EURAF Policy Briefings #15, #19, #25

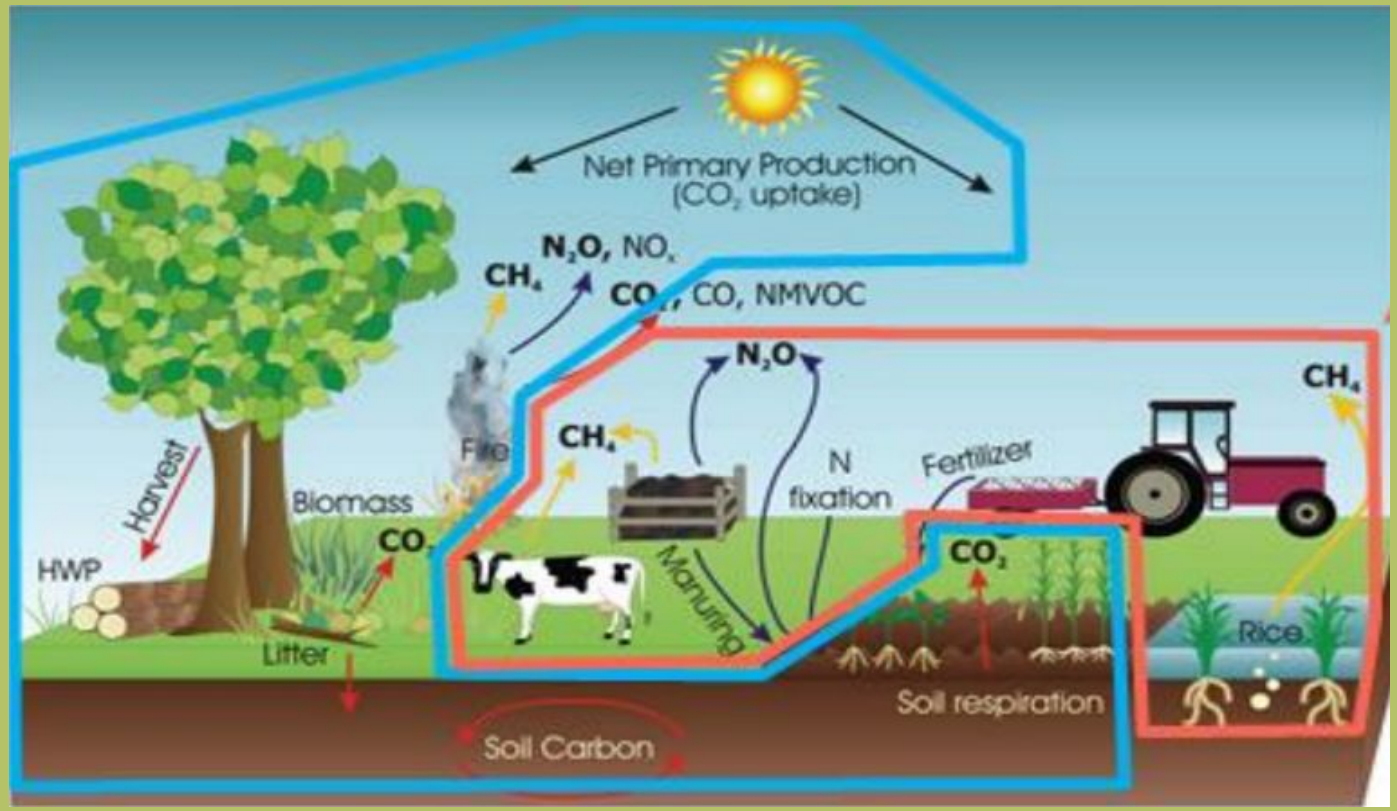
4. LULUCF Regulation and Net-Zero

AFOLU is a game changer for forestry and agriculture!

Trees on all UNFCCC “lands” give carbon benefits ..

Trees are present on five of the six UNFCCC **“Lands”**

LULUCF - The importance of farm-scale AFOLU tracking



IPCC recommend a single integrated Agriculture, Forestry and Other Land Use (AFOLU) pillar to replace LULUCF as far back as 2006 to…….

"*resolve inconsistencies and avoid double counting … removing the arbitrary distinction between the agriculture and LULUCF categories, and promoting consistent use of data and more reliable treatment of land conversions*".

LULUCF: is moving to "wall to wall" parcels of land

Tier 3 **High res. data (e.g. model)**	Not applicable	Modelled data combined with LUC matrix (not necessarily spatially dis-aggregated)	Geo-information at high-resolution, detailed time series, country-specific disaggregated data based on inventories and/or models
Tier 2 **Country specific values**	National area statistics, combined with country-specific values – typical 1st improvement	Annual LUC stats, combined with country-specific values	Geo-information, time series, country specific values – good coverage, detailed analysis
Tier 1 **IPCC default values**	National area statistics, combined with IPCC default values – basic entry level	Annual (or annualised) LUC stats presented as national matrix – applied using default IPCC values	Geo-information, time series, default values – weak, but better than App 1 and 2
	Approach 1 **National statistics**	**Approach 2** **Land Use Change matrix**	**Approach 3** **Geo-tracked**

EU Member States have agreed large increases LULUCF targets for 2030

But most MS (e.g. Spain) will find these very difficult without planting Trees outside Forests - SOON

The 2030 LULUCF target allocation /2

Member State	LULUCF E/R av. 16-18 [Mt]	Man. land area av. 16-18 [km²]	*Man. land area av. 16-18 [%]*	Additional mitigation 2030 [Mt]	Target 2030 [Mt]
Belgium	-1.0	30,528	*0.8*	-0.3	-1.4
Bulgaria	-8.6	111,002	*2.7*	-1.2	-9.7
Czechia	-0.4	78,869	*2.0*	-0.8	-1.2
Denmark	5.8	42,053	*1.0*	-0.4	5.3
Germany	-27.1	357,901	*8.9*	-3.8	-30.8
Estonia	-2.1	41,358	*1.0*	-0.4	-2.5
Ireland	4.4	59,432	*1.5*	-0.6	3.7
Greece	-3.2	110,500	*2.7*	-1.2	-4.4
Spain	-38.3	506,510	*12.5*	-5.3	-43.6
France	-27.4	638,602	*15.8*	-6.7	-34.0
Croatia	-4.9	56,594	*1.4*	-0.6	-5.5
Italy	-32.6	301,336	*7.5*	-3.2	-35.8
Cyprus	-0.3	6,018	*0.1*	-0.1	-0.4
Latvia	0.0	61,059	*1.5*	-0.6	-0.6
Lithuania	-4.0	63,061	*1.6*	-0.7	-4.6
Luxembourg	-0.4	2,586	*0.1*	0.0	-0.4
Hungary	-4.8	89,425	*2.2*	-0.9	-5.7
Malta	0.0	201	*0.0*	0.0	0.0
Netherlands	5.0	41,530	*1.0*	-0.4	4.5
Austria	-4.8	83,870	*2.1*	-0.9	-5.6
Poland	-34.8	312,713	*7.7*	-3.3	-38.1
Portugal	-0.4	92,393	*2.3*	-1.0	-1.4
Romania	-23.3	228,299	*5.7*	-2.4	-25.7
Slovenia	0.1	20,273	*0.5*	-0.2	-0.1
Slovakia	-6.3	48,095	*1.2*	-0.5	-6.8
Finland	-14.9	275,408	*6.8*	-2.9	-17.8
Sweden	-43.4	377,027	*9.3*	-4.0	-47.3
Total	-267.7	4,036,645	*100.0*	-42.3	-310.0

Agroforestry In Adaptation Strategies and NECPs

Table 1: Inclusion of agroforestry (AF) in the Adaptation Strategies/Plans and Energy & Climate Plans of EU Member States

MS	AD Strategy	AD Plan	AF Mention?	Text relating to agroforestry in adaptation plans	NECP
HR	2020		n	No Mention of AF	2023
HU	2018		y	Strategy mentions agro-forestry in rural development programmes (2014-20), carbon sequestration in forest e	2023
IE	2018	2023	n	No mention of AF in the Strategy or the Plan, although target afforestation is now 63000ha by 2030.	none
IT	2015	2022	y	No mention of AF in the Strategy. The Plan (which was under discussion for 4 years) has a category for "fores	2023
LT	2012	2013	y	The strategy recognises that "soil in forests and agroforests is a natural sink for C". The Action Plan doesn't me	2023
LU	2020		y	The combined strategy-plan mentions a that a future agroforestry project will be developed to demonstrate ho	2023
LV		2019	n	No mention of agroforestry	none
MT	2012		n	No mention of agroforestry	2023
NL	2017	2017	n	No mention of agroforestry	2023
PL		2013	n	No mention of agroforestry	none
PT	2015	2019	n	No mention of agroforestry although there is discussion in the Action Plan of rural fire prevention - including w	2023
RO		2018	n	No mention of agroforestry	2023
SE	2018	2022	n	No mention of agroforestry in the Strategy or the 2022 communication	2023
SI	2016		n	No mention of agroforestry in the Strategy	2023
SK	2018		y	Mentions of agroforestry (and landscape features) in the context of reduction of soil erosion and "optimal use	2023
TOTAL			11	**Draft NECP Submitted (should have been by June 2023)**	20

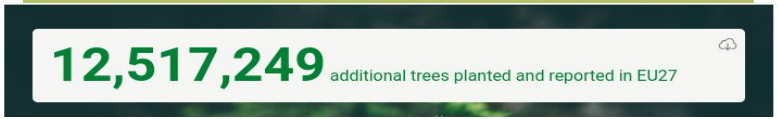
Projections on reported emissions and removals, delivered by Member States in March 2023, have been assessed for progress LULUCF towards the 2030 targets. Projections with existing measures show EU total net removals of -239 MtCO2eq for 2030 and -260 MtCO2eq with additional measures, leaving a gap of between around 50-70 MtCO2e to meet the 2030 target. This means that the EU is not, according to projections, on track to meet the 2030 net removal target of -310 MtCO2eq. For a more detailed assessment see Chapter 4 of the Climate Action Progress Report).

5. Green Deal Targets

10% "Landscape Features" target isn't in the NRL .. but MS are still asked to measure and plan for an increase!

Green Deal Targets

Three billion trees?



Guidance EU countries

European Committee of the Regions

Commission for the Environment, Climate Change and Energy

Implementing the European Green Deal:

LULUCF removal options

5 key LULUCF removal options:	Afforestation & reforestation	Agroforestry	Soil Carbon	Forest management	Biochar
Solution maturity					
Removal potential					
Costs					
Permanence / reversibility risk					
Robust MRV					
Co-benefits potential					
Negative externalities/ leakage risks					

- Key challenges to address:
  - Permanence
  - MRV robustness & cost
  - Additionality
  - Leakage
- EU supply that can be used for an AgETS likely to depend on the rules set by certification mechanisms to ensure real climate benefits
  - Key role for the EU Carbon Removal Certification Framework (CRCF), which is under development

Tree-Landscape-Features are vital for climate and biodiversity …



Consistency in tracking Landscape Features in MS is needed .. but some MS don't include

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




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

New Landscape Features - Biodiversity Strategy (>10%)

GAEC-8

Country	AT	BEF	BEW	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HU	HR	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SK	SI	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													7
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							y	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	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	28
3% Option	y		y	y				y	y	y	y		y		y			y	y			y		y					13
7% Option		y	y	y		y			y	y	y		y	y				y				y	y	y	y		y		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?	y	y	y	y			y		y		y		y	y	y		y	y	y			y			y				15
Details of permitted crown size of trees in line?		y	y	y			y		y				y		y		y		y			y	y	y	y			y	14
Details of crown size of isolated trees?			y	y										y	y		y					y	y					y	8

RED shows where the definition of "copse/grove" on agricultural land differs from the national definition the minimum size thrshold for a forest block. In many countries the size threshold is not given or copses/groves are not recognised as Landscape Features

In many countries no information is given on the types of n-fixing crop or catch/cover crop, even when the 7% option is selected (shown with a dash)

European Agroforestry Federation

See EURAF Policy Briefing #21

Environmentally Sensitive Areas (Greening) 15-23

CAP-M	Country	AT	BEF	BEW	BG	CY	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	LV	LT	LU	HU	MT	NL	PL	PT	RO	SI	SK	FI	SE	UKE	UKN	UKS	UKW	Sum
B151	Fallow Land	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	30
B152	Hedges or woody strips		A	G	A				G	G	G			A	G	G S			S	A			A		A					G	G		A	16
B152	Trees in Line			G	A		G		G	G	G	A G		A	G	G S			S	A	A		A		A		G S							16
B152	Trees in Groups/ Copses		A	G	A		G		G	G	A	A G		A	G	A	A		S	G	A		A		A		G S							18
B152	Isolated Trees			G	A		G		G					A	G	G S			S	A G	A		A G		A		G S							13
B153	Buffer Strips		Y	Y	Y	Y		Y	Y		Y	Y		Y	Y	Y	Y		Y	Y			Y		Y		Y			Y		Y		19
B153	Field Margins		A	G	A G		A		A G					A		A	A		A	A	A	A	A		A		G S		A			A		17
B153	Forest Edge Strips - non prod		Y	Y	Y	Y			Y					Y	Y	Y			Y	Y			Y											11
B154	Ditches	G	A	G	A		G	G	G	G	G	A		A	G	G S				A			A G		A						G			17
B154	Streams																																	0
B155	Ponds	G	A	G	A									A	G	G S	A		S	G			A G		A									12
B155	Small wetlands																																	0
B156	Traditional Stone Walls	G							G	G				A	G	G S														G		A	8
B158	Terraces				Y		Y		Y					Y		Y				Y					Y		Y							8
B160	Other Landscape Features	G					Y	G	G		G					Y	G			G	G			G S				G			G			12
B161	Cover or catch crops	Y	Y	Y	Y		Y	Y	Y		Y			Y	Y		Y		Y	Y		Y	Y		Y	Y	Y		Y	Y		Y		21
B162	N-Fixing Crops	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	31
	x - Afforested areas		Y			Y	Y		Y		Y		Y	Y		Y			Y	Y			Y	Y	Y						Y		Y	15
	x - Forest Edge Strips - producive		Y				Y							Y		Y			Y	Y			Y											7
	x - Hectares of Agroforestry (ha)		YY	Y		Y			Y				YY	YY		YY			Y	YY				YY							YY			11
	x - Short rotation coppice	Y	Y	Y	Y		Y	Y	Y	Y	Y			Y	Y	Y			Y	Y		Y	Y		Y		Y	Y	Y		Y		Y	22
	Total EFA Elements Active	8	14	14	14	6	13	6	17	8	11	6	4	18	13	18	8	2	15	18	7	4	15	5	13	3	10	4	5	5	9	5	6	

G=GAEC7, S = Statutory Requirements 2 and or 3; A = Article 45 of the EFA regulation

YY= Activated as EFA in Pillar I AND Agroforestry used as rural development measure in Pillar II

Landscape Features in Ireland (link)

IRELAND	Conversion F	Weighting F	GAEC-8	Protected
All farmers (not just arable) to use the 4% option (note 1)				
1 Buffer Strips	6	1.5	y	
2 Cairns				
3 Cultural Features				
- archeological features		1	y	y
4 Ditches (m)	5	2	y	y
5 Field margins, patches etc				
5.1 Field margins				
5.2 habitats		1	y	
5.3 designated habitats		1	y	y
5.4 scrub		1	y	
5.5 rock features		1	y	
5.6 winter bird cover		1	y	
5.7 ASSAP Area/Feature	5	2	y	
5.8 Grassland Space for Nature		1	y	
6 Woody Landscape Features				
6.1 Hedgerows (m)	5	2	y	y
6.2 Trees in line (m)	5	2	y	y
6.3 Group of trees/Copse/Woodland		1		y
6.4 individual trees				y
6.5 scrub/forest margins		1	y	
7 Land lying Fallow		1	y	
8 Others				
9 Small Ponds (max area 0.2ha)		1.5	y	y
10 Small Wetlands				
11 Stonewalls (m)	5	5	y	
12 Streams				
13 Terraces				
14 List of features for retention	ditches, field margins, patches, buffer strips, hedgerows, individual or groups of trees, rows, small ponds, cultural features			
Ireland applies the 4% rule to all farmers (not just arable farmers), but expted from this is Commonage, Natura 2000, Forestry, GAEC 2, GAEC 9				

3. Archeological features which enhance the visual landscape
4. Open trench dug to improve draininga containing water permanently or seasonally
5.3 REPS4A habitats
5.4 dominated by scrib/woody plants but may contain grass
5.5 scattered rock within grassland
5.6 area sown to provide feed for wild birds with a diverse flora - no grazing or production
5.7 Agricultural Sustainability Support and Advisory Programme
5.8 Providing space for wildlife - must be fenced off and not used for grazing or production
6.1 no minimum or maximum size given in the CAP SP
6.2 -ditto-
6.3 -ditto- copses are not considered towards the 4%

6. CAP, Biodiversity and Climate Monitoring

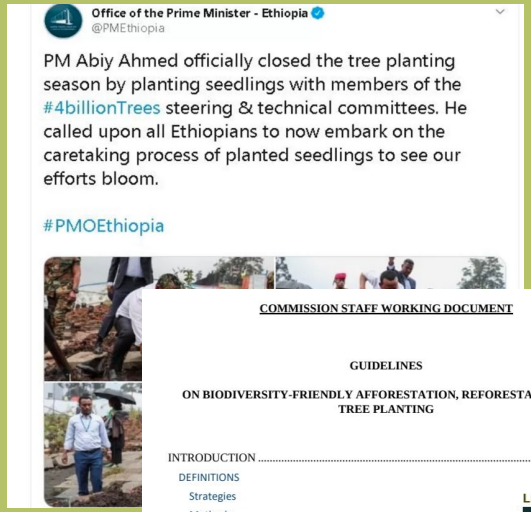
Agroforestry for diversity and adaptation

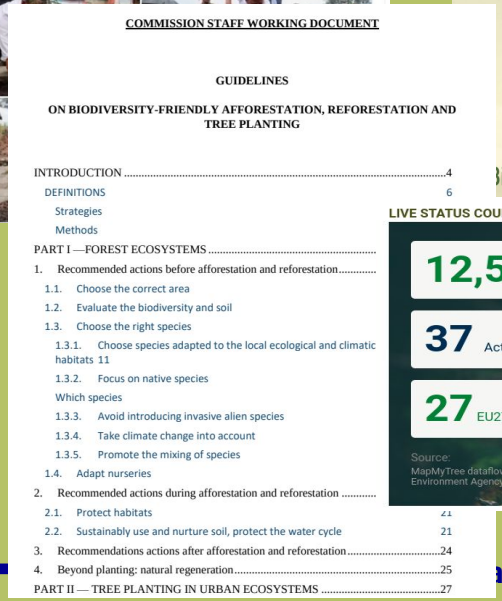
Add some …

7. Conclusions - what is to be done?

"Plant more ToFs" (Trees Outside Forests)

a) New Afforestation & Agroforestation targets - 1 million ha/yr (x10 existing plans)?

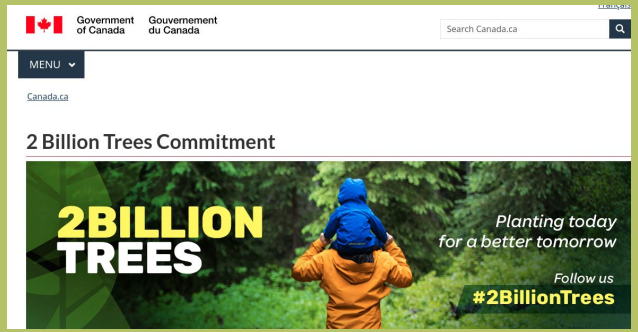


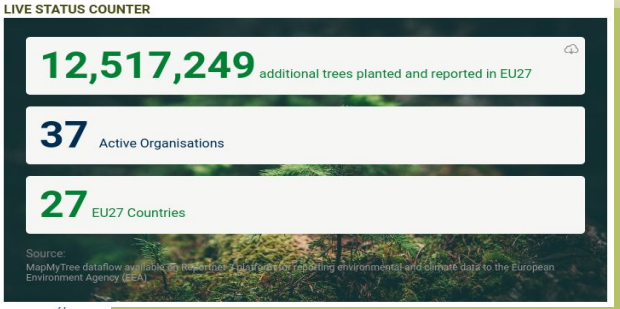


COMMISSION STAFF WORKING DOCUMENT

GUIDELINES

ON BIODIVERSITY-FRIENDLY AFFORESTATION, REFORESTATION AND TREE PLANTING





b) Understand past “failures” and present uncertainties

Country	Ecoschemes	Pillar-II AECMs	Pillar II - INVEST
BE-FL	n	y	y
CZ	n	y	y
DK	n	n	n
FI	n	n	n
FR	(y)	y	y
FI	n	n	n
DE	y	n	(y)
GR	y	n	n
HU	x	x	y
IT	x	x	y
LV	x	x	x
NL	(y)	n	(y)
PT	(y)	y	y
SL	n	n	n
ES	(y)	(y)	y
TOTAL	2	4	7

Member States ... offer low support rates

Farmers ... are scared of complexity and losing BISS payments

Foresters... worry about tree quality and lack of control.

The result... schemes are little advertised and uptake is low …

- **M8.1 (afforestation) planned 641kha, achieved by Feb23 160kha**
- **M8.2 (agroforestation) planned 85kha, achieved by Feb23 4.4kha**

The Commission gives encouragement, but can’t do more …

- **EU Guidelines** clarify that MS can give **100% basic payments to agroforestry** “*when justified based on the local specificities (e.g. density/species/size of the trees and pedo-climatic conditions) and the value added of the presence of trees to ensure sustainable agricultural use of the land. This encompasses all possible agricultural land uses including arable land, permanent grassland and permanent crops.*”

Few if any Member States do this!

AF-CAP 23-27

c). Use new technology to the fullest: linking MS and farmers' data

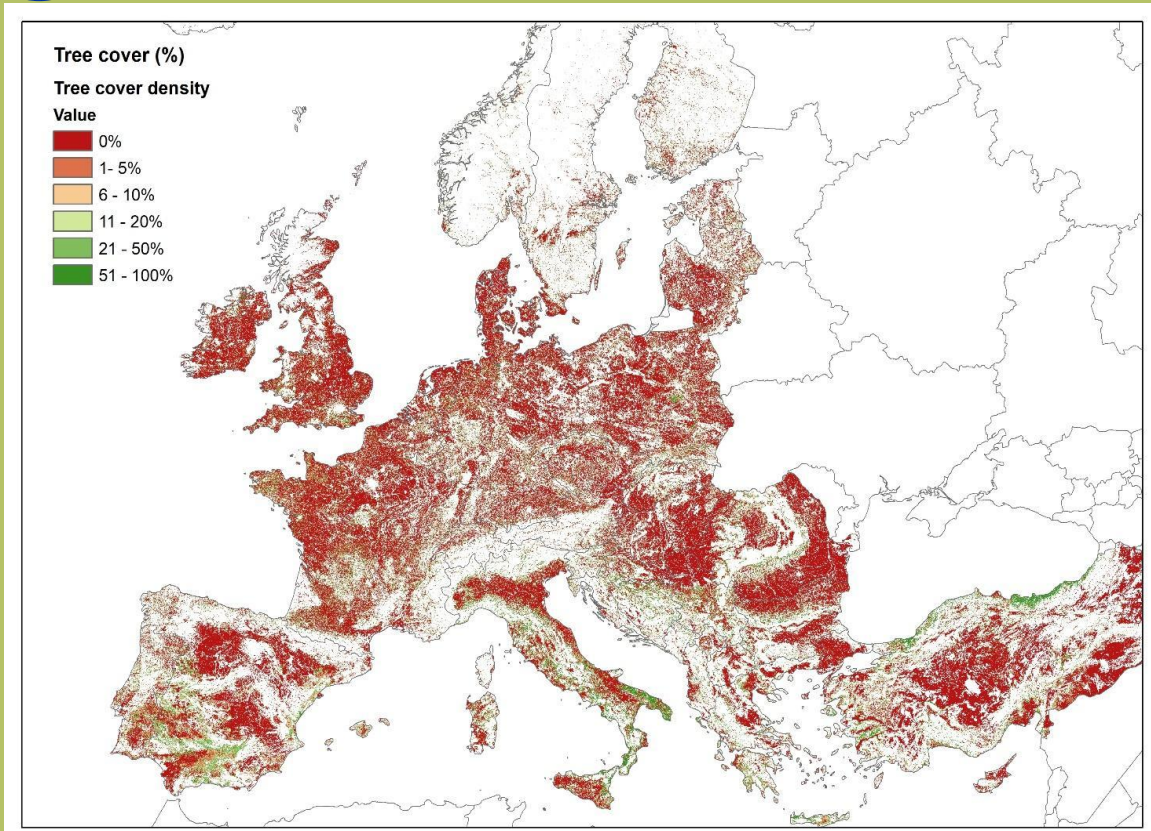
1. **Land Parcel Identification Systems** (LPIS) are held by MS (and the UK) have using orthophotos at 40cm or better pixel resolution - these are available to all farmers - and should be used for farm-scale carbon farming scenario modelling
2. **Landscape Feature** should be carefully mapped and can underpin ecoscheme, environment and carbon payments - i.e. "payments by results"
3. **Agriculture Forestry and Other Land Use** emissions are reported UNFCCC Annex I countries report annually - but these are a black box and the spatial databases could be made available to farmers and foresters?
4. **Environmental metrics** in the EU (and UK) should the highest resolution possible to map environmental indicators and could link to farmer payments - these are usually "dumbed down" and presented only as very broad brush national or regional averages.

d) Aim for Trees Outside Forests and Landscape Green Veins

And refreshing the wood pastures .. for which Romania is known

A ´healthy´ landscape has trees in a patchwork of copses, strips, clumps and lines. ***Isolated trees in fields are particularly valuable. Catch-crops and cover-crops are also needed. LPIS systems can provide farmers with access to annotated orthophotos of their farms, and can be used with models which include soil type and slope to predict runoff and erosion. This will help plan the use of trees in areas subject to erosion (A) or flooding (C). Trees can also be sited along roads (B) and streams (D), with the latter serving as riparian buffers to reduce nitrate and sediment reaching water courses.***

e) Focus new planting on “tree deserts (zero-tree-index)”



Priority planting areas, where tree cover density (% tree cover) on agricultural land is particularly low. Source: Copernicus tree cover density 2015 overlaid on LUCAS agricultural land use.

EURAF Policy Briefing #2

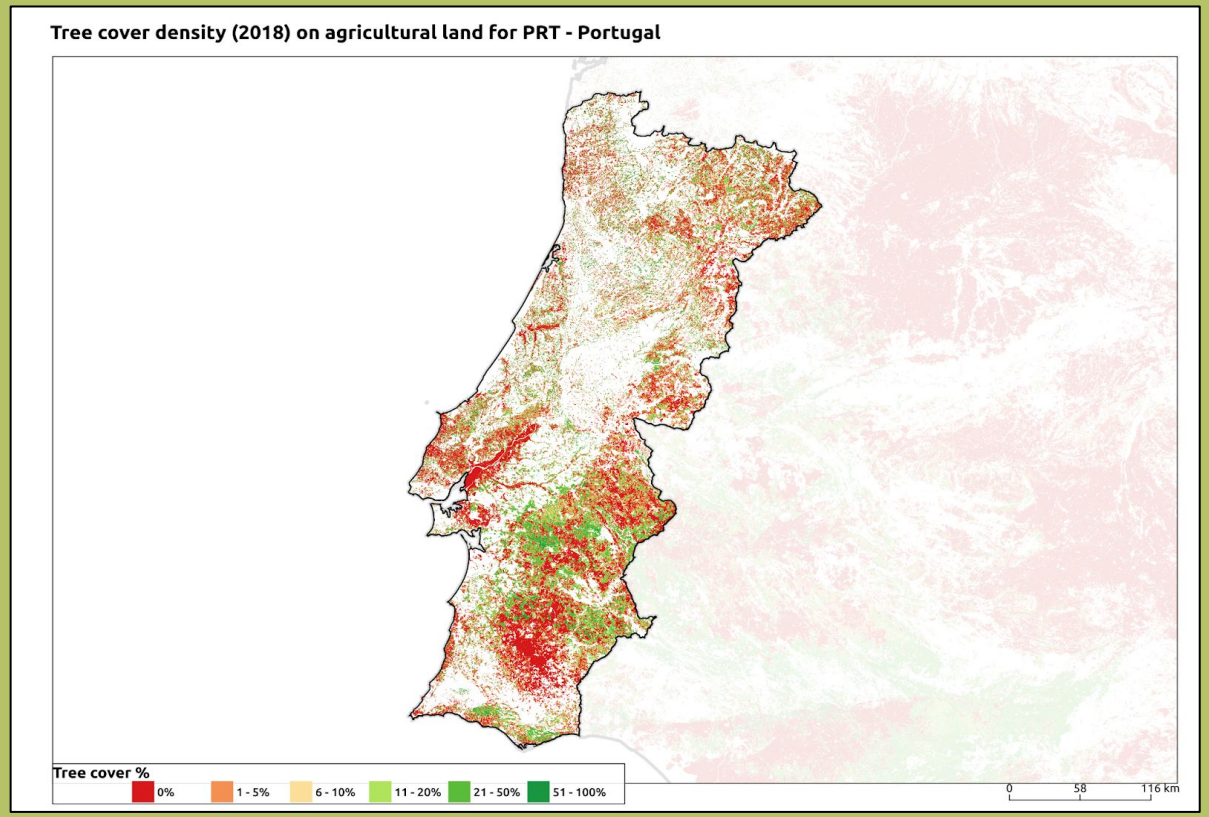
Den Herder et al. (2017) estimate that the total area under agroforestry in the EU 27 is about 15.4 million ha which is equivalent to about 3.6% of the territorial area and 8.8% of the utilised agricultural area.

Den Herder et al (2020) show that 1.69 million km2 of European agricultural land has 0% tree cover. An area of 1.71 million km2 of agricultural land has less than 1% tree cover. These could be priority areas for agroforestry tree planting.

f) Portugal has the BEST agricultural Zero-Tree- Index (ZTI) in the EU

Corine data for agricultural land, overlaid with tree cover density from Copernicus

(48.0%)

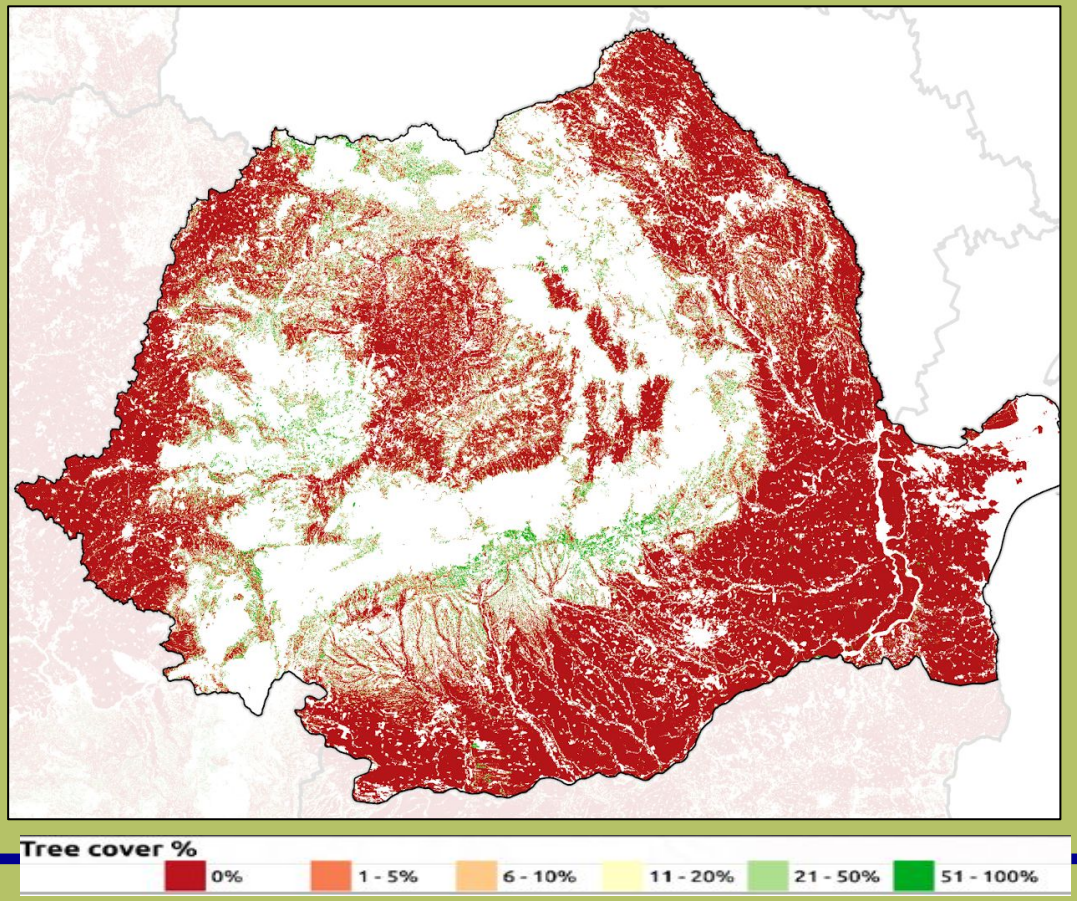


DigitAF Project

g) Romania has the WORST agricultural Zero-Tree-Index (ZTI) in the EU

Corine data for agricultural land, overlaid with tree cover density from Copernicus

(82.5%)



DigitAF Project

h) Ireland - 4th BEST agricultural "Zero-Tree-Index"

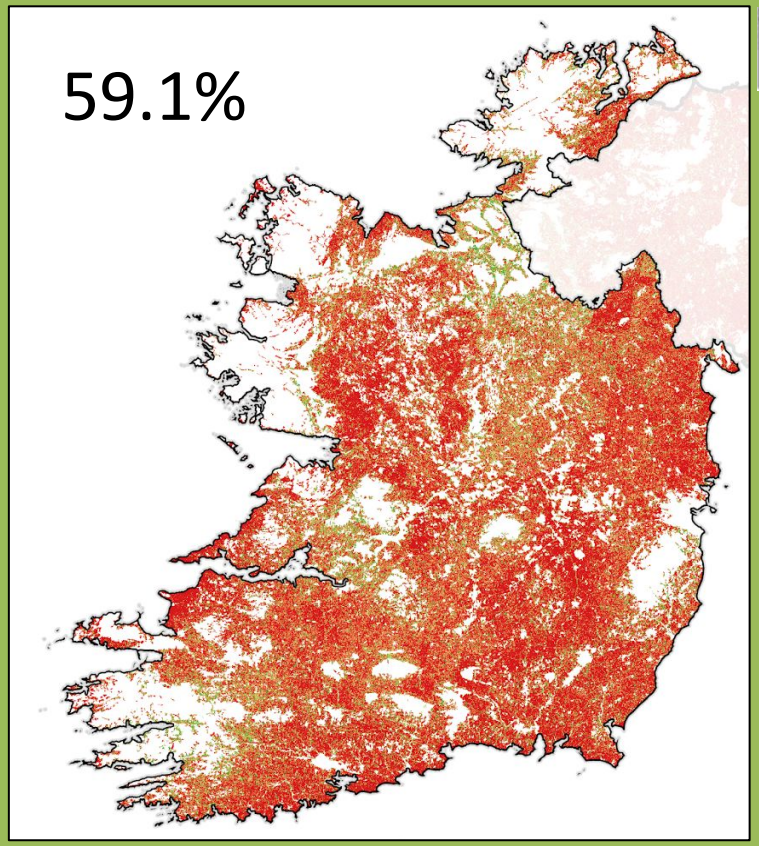


Table 5 Hectares in each of the Copernicus tree crown cover classes and Corine agricultural land categories, including Natura 2000

Corine land cover code	0%	<= 1%	<= 2%	<= 5%	<= 10%	<= 100%
211 - arable	246,775	262,821	271,994	286,904	298,684	319,888
231 - pasture	2,239,611	2,551,483	2,723,976	3,050,460	3,340,090	3,888,844
Sum	*2,486,386*	*2,814,304*	*2,995,970*	*3,337,364*	*3,638,774*	*4,208,732*
%	***59.1%***	*66.9%*	*71.2%*	*79.3%*	*86.5%*	*100.0%*

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	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	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
#	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

[51] Ireland probably has the highest density of hedgerows remaining in Europe. The Teagasc Hedgerow Mapping Project used 20,000 orthophotos from the CAP-LPIS and measured the area of hedgerows wider than 2m, giving a total area of 450,000ha or **6.4% of the country** - including hedgerows, individual trees and copses smaller than the "forest" definition. Some counties like **Monaghan, Cavan and Meath have more than 10% cover of "Trees outside Forests"** (Green 2010). Black et al. (Black et al. 2014) examined the scope for carbon sequestration in this resource and concluded that ToF give a net removal of 0.27–1.4 Mt CO2/year, which would increase the estimate of the Land Use, Land-Use Change and Forestry (LULUCF) sink in Ireland by 8 to 28%.

i) EURAF Recommendations ..

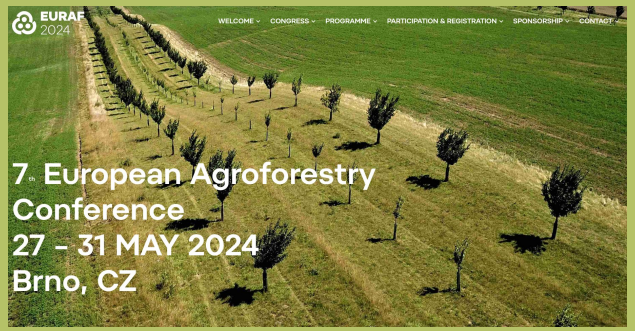
For DGAGRI …

1. Measure ("high diversity") Landscape Features (I.21) **with IACS/LPIS** - not just broad-brush methods like LUCAS (as proposed in the NRL).. linking to farm-data and future "results payments"
2. Move forward with **GreenData4ALL** to give open access to LPIS in INSPIRE portals
3. Resist the "Procrustean Bed" of the FAO forest definition (e.g. in the **Deforestation Regulation**)
4. Use the national UNFCCC and LULUCF Regulation **forest definitions** wherever possible
5. Facilitate a EURAF informal launch of **27 Agroforestry Policy Briefings in Brussels,** in March 24

For Member States …

6. Improve **Trees outside Forests data** in the 2025 Forest Resource Assessment
7. Ensure that all ToF is recorded as either **agroforestry or landscape features** in the LPIS
8. Avoid using simple crown cover % as **reduction factors** for Direct Payments (BISS)
9. Submit more ambitious **NECP-LULUCF roadmaps** by June 2024 (for 2025-2030)
10. Include **more afforestation and agroforestation** in mid-term review CAP Strategic Plans
11. Move towards I**ntegrated Rural Cadastres** in the LPIS for agric & forest land.

Thank you for your attention



ResAlliance DISTENDER DigitAF

Funded by the European Union

EURAF European Agroforestry Federation

secretariat@euraf.net
policy@euraf.net