Overview of 2022 EU LULUCF inventory and closure of KP-CP2

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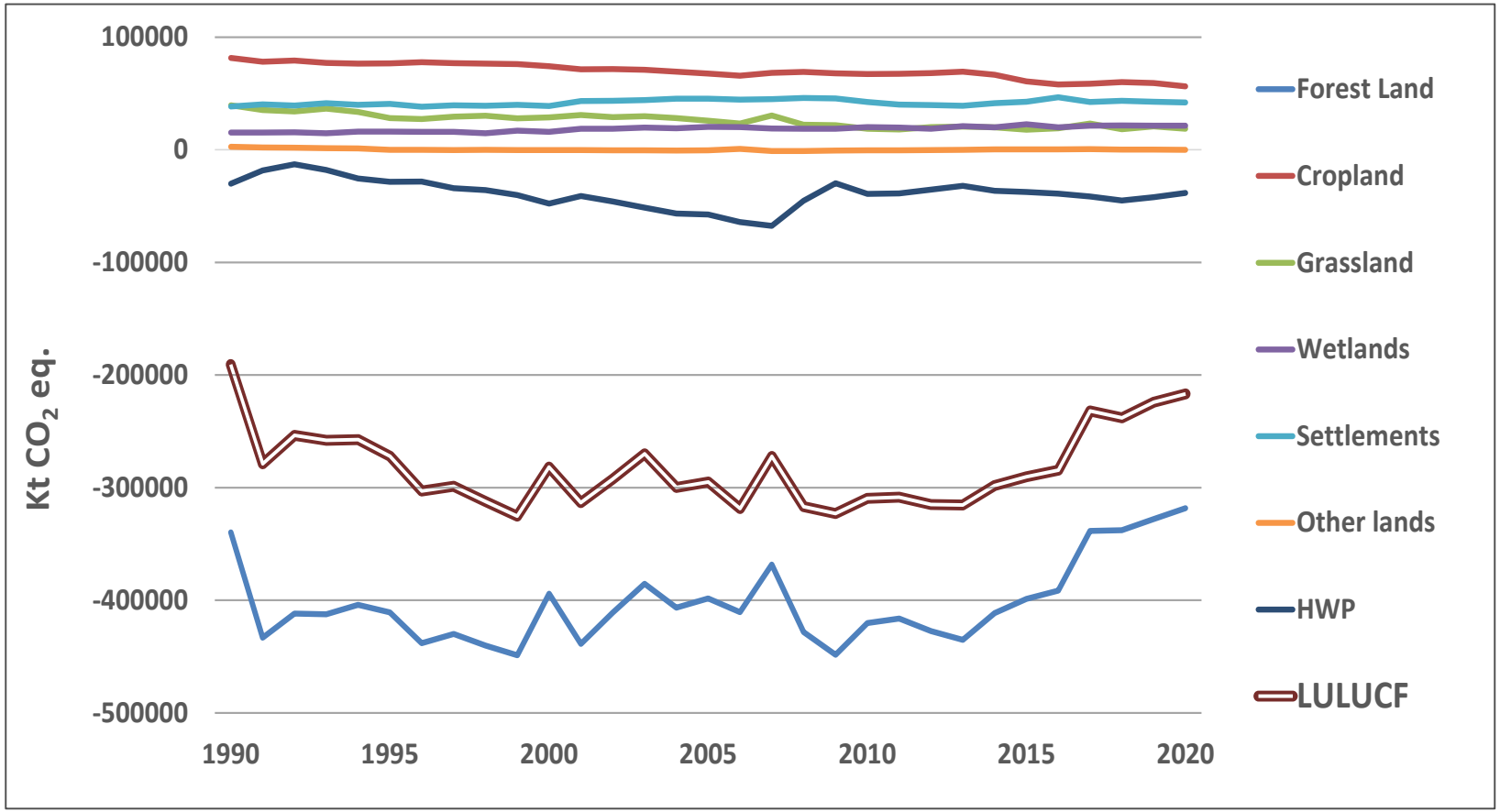
UNFCCC- EU GHGI

Emissions (+) and removals (-) trends: EU27+UK+Iceland



2020 vs 1990

- **FL** < 6% sink
- **CL** < 31% emissions
- **GL** < 53% emissions
- **WL** > 39% emissions
- **SL** > 9% emissions
- **OL** shifted from source to small sink
- **HWP** > 28% sink

In 2020, the LULUCF sector was a net sink of -217 Mt CO2eq, (+ 14% compared to 1990)
Emissions of N_2O and CH_4 represent 14% of the net reported LULUCF sink.

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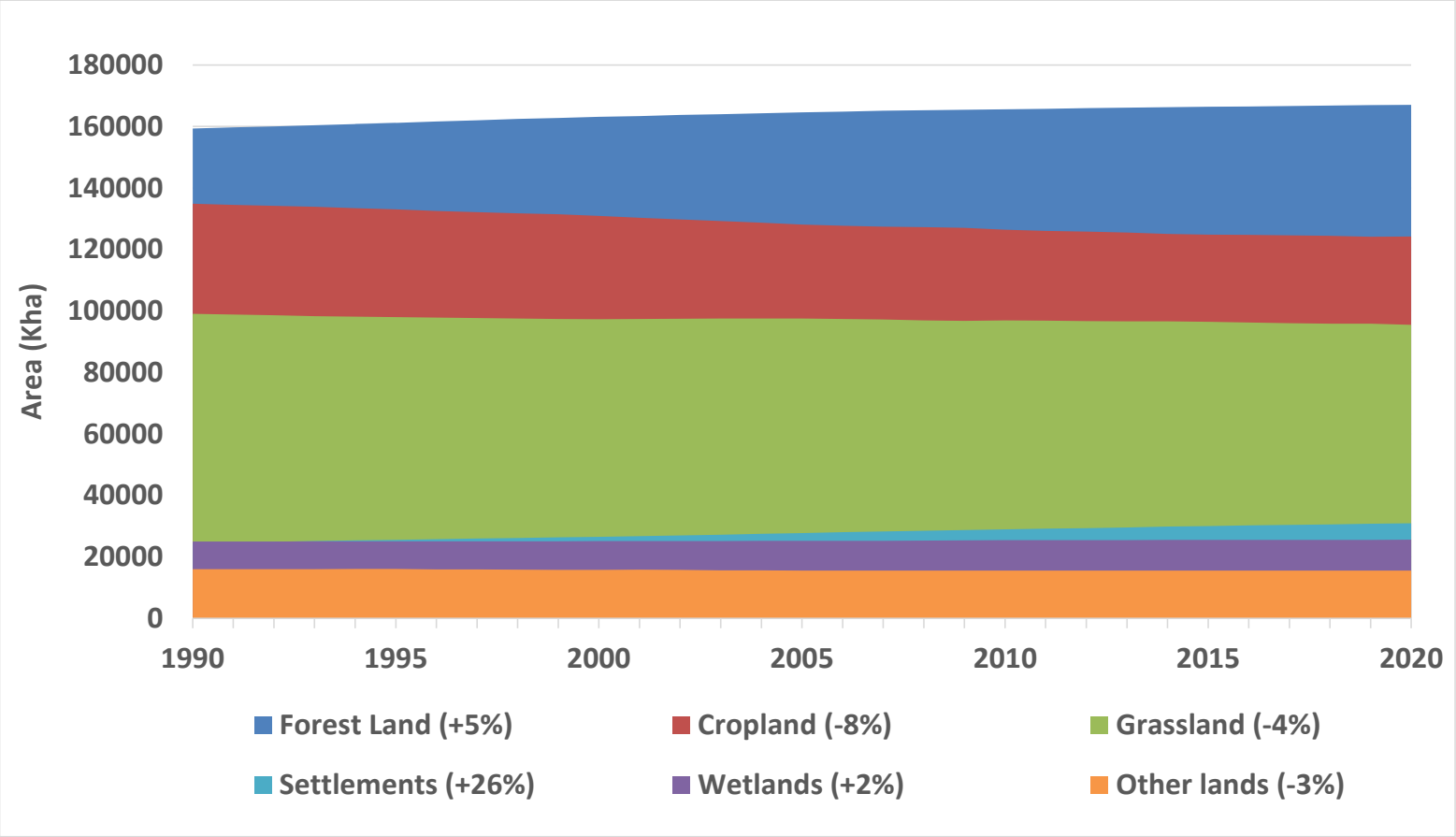
Land use area trends: EU27+UK+Iceland

Trend and area change 2020 vs 1990



Share in the total EU area

- **FL –** 36 %
- **CL –** 27%
- **GL –** 21%
- **WL –** 6%
- **SL –** 7%
- **OL –** 3%

The total area reported summing up all land use categories is ca. 459.000 kha

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Hotspots in the EU LULUCF sector

Land use changes

Land conversions	a) land area (Kha)	b) % of area of the corresponding category[1]	c) emissions (+) and removals (-) (Kt CO2eq.)	d) % of net emissions of the corresponding category[1,2]
4A2. Land converted to Forest Land	6 502	4%	-34 117	10%
4B2. Land converted to Cropland	12 523	10%	41 044	76%
4C2. Land converted to Grassland	16 502	17%	-25 140	186%
4D2. Land converted to Wetlands	1 264	5%	4 340	32%
4E2. Land converted to Settlements	6 296	20%	37 928	91%
4F2. Land converted to Other Land	685	4%	- 195	100%
Total land use changes	**43 772**	**10%**	**23 860**	**29%**

The significance in terms of areas and emissions of LUCs vary among categories, but in overall for the EU LUCs in absolute terms account for **10% of the areas but 29% of carbon stock changes**.

From total area under conversion:
GL - 38% / CL - 29% / FL - 15% / SL -14% Others - 2%

Organic soils

Land use subcategory	Area (Kha)	ICECF (tC/ha)	CO2 emissions (Kt CO2)
4A1	12 554	[-2.65; -0.004]	15 150
4A2	435		2 035
4B1	1 250	[-10.00; -7.90]	29 808
4B2	268		6 079
4C1	5 445	[-7,30; -6,10]	50 098
4C2	335		5 811

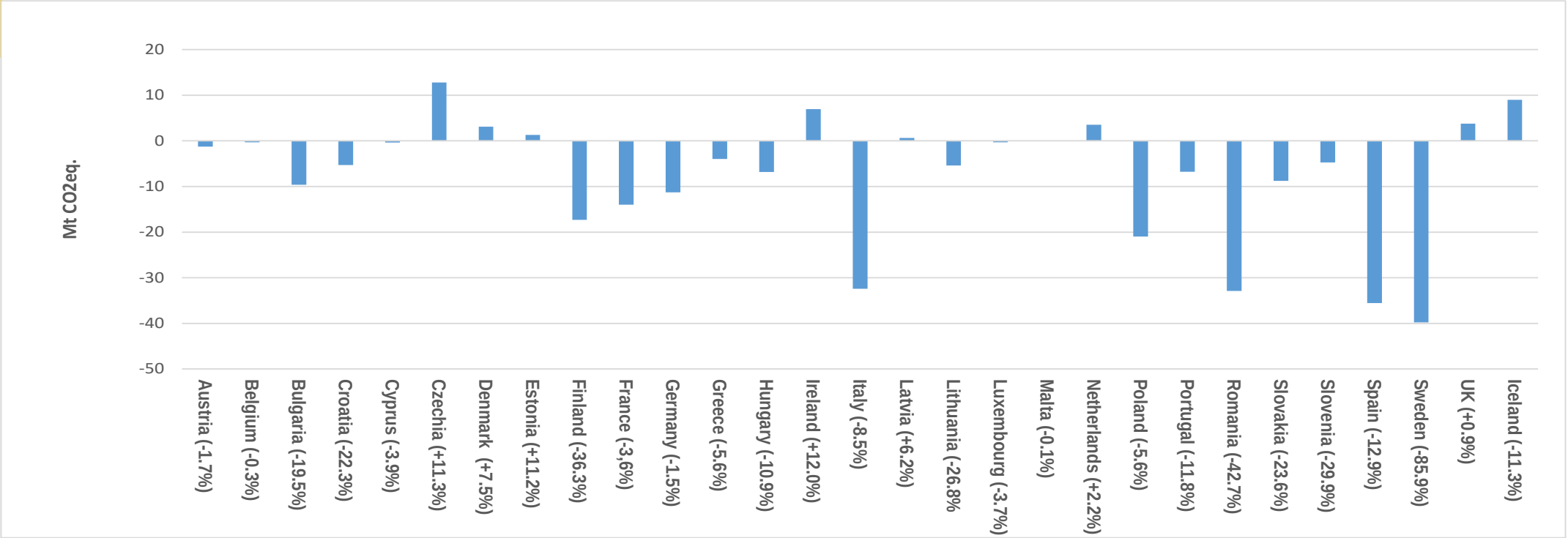
Organic soils in the three main categories cover ca. **20.300 Kha** mainly in northern countries and the associated CO2 emissions represent **40% of the net reported EU LULUCF sink**

Biomass burning and ND

Emissions from **biomass burning** show large inter-annual variability but in exceptional years represents up to **9% of the EU LULUCF sink.**

At country level other ND play even a more significance role in the final LULUCF result.

LULUCF and its contribution to entire GHG inventory (exc. LULUCF)



The LULUCF plays different role within the total national GHG budgets.

While for **SWE** LULUCF offsets **86%** of the emissions from other sectors, for **CZE** and **ISL** LULUCF adds around **11%** to the total emissions.

In 2020 for EU27+UK+ISL, LULUCF offsets 6% of total GHGs (Forest offsets 9%)

Completeness of the EU LULUCF inventory

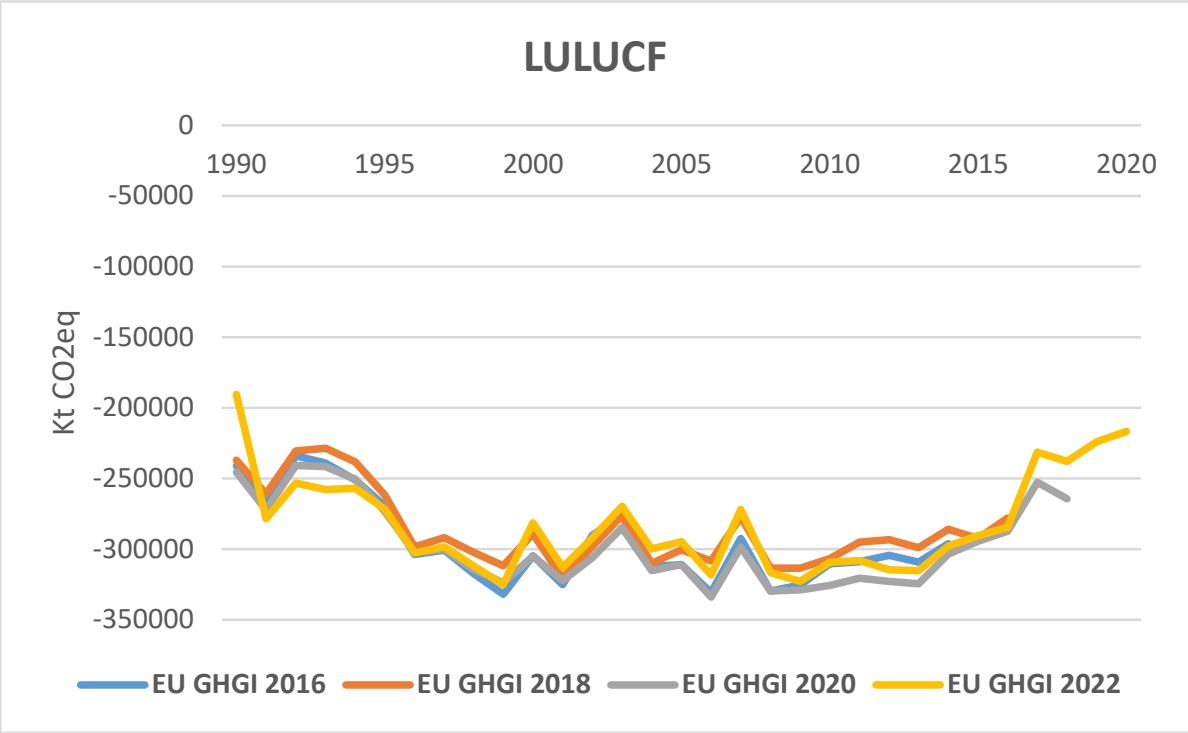
Percentage of MS reporting quantitative estimates

Land Use	Subcategory	Carbon Pool			
		Living biomass	**Dead wood**	**Litter**	**SOC min**
Forest land	FL-FL	100%	62%	31%	31%
	L-FL	97%	69%	69%	83%
Cropland	CL-CL	93%	10%		86%
	L-CL	76%	55%		83%
Grassland	GL-GL	55%	17%		59%
	L-GL	83%	66%		76%
Wetlands	WL-WL	24%	3%		14%
	L-WL	52%	41%		34%

Assumed in balance under T1 or no method available in the 2006 IPCCGL 2006

Completeness: FL > CL > GL > WL
Completeness of conversions > land use remaining the same category

Recalculations of the EU LULUCF sector: 2016-2022



Consistency *applies for all reported years.*

An inventory is consistent if the same ***methodologies and consistent data*** *sets are used to estimate emissions or removals from sources or sinks across the time series.*

Recalculations ensure the consistency and improve accuracy and completeness by adding updated methods and parameters

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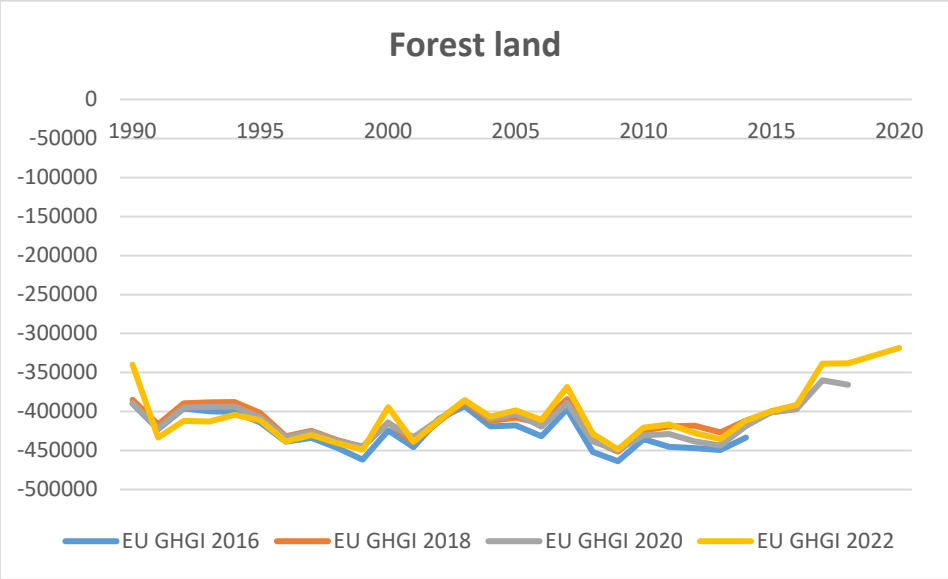
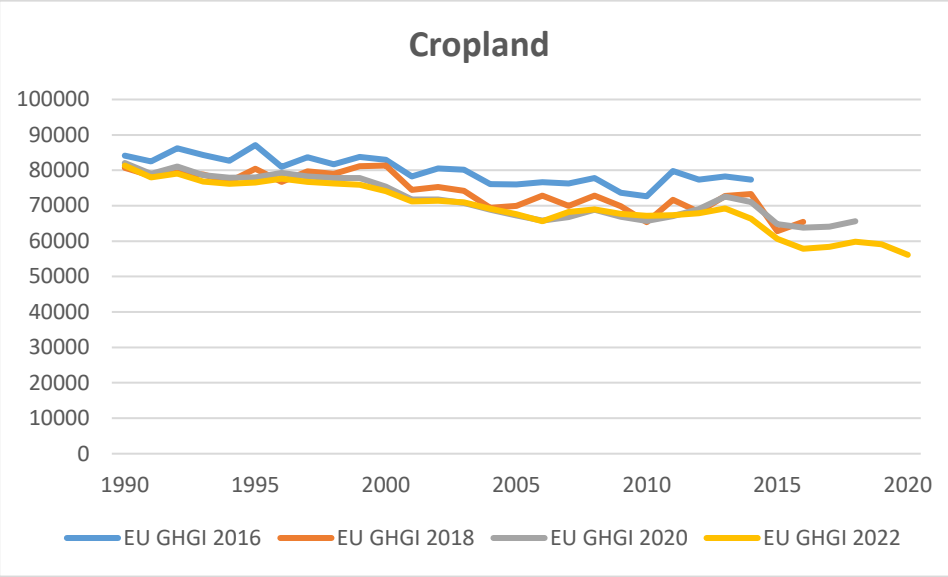
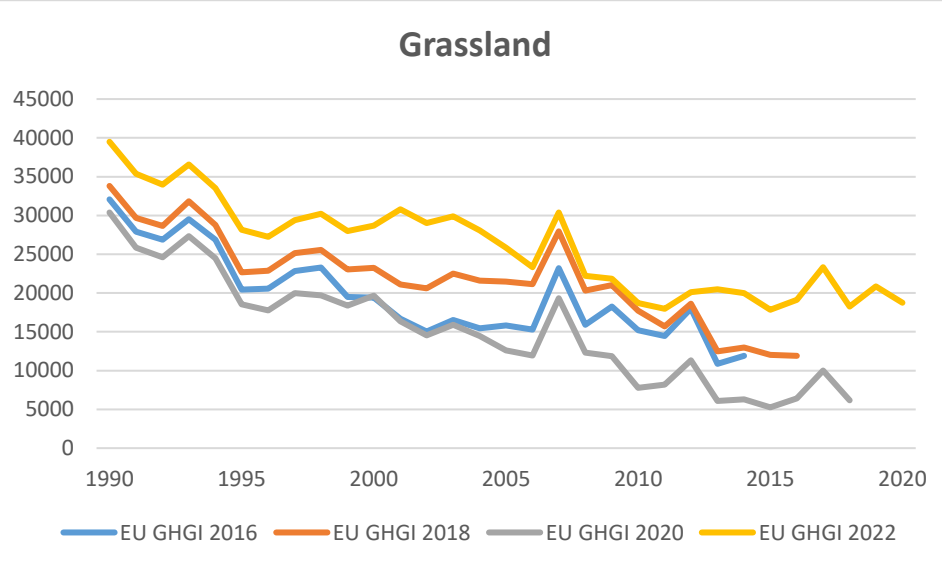
Recalculations in EU GHGI (Kt CO2 eq.) for the main land use categories







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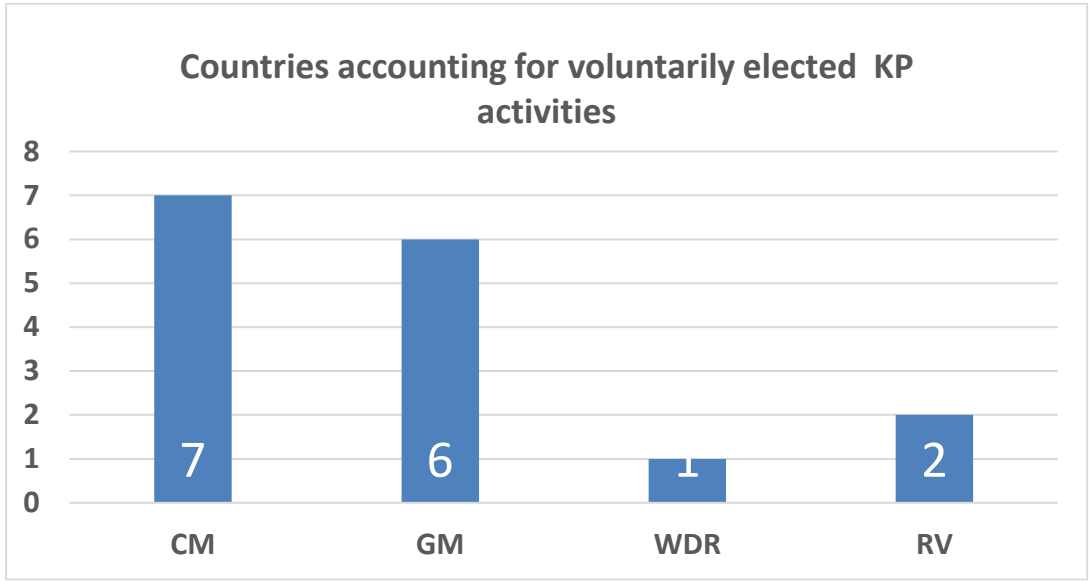
EU GHGI - KP-LULUCF

Voluntarily KP activities covered in the EU KP-LULUCF inventory (EU27+UK+ISL)

Member State	Art 3.4 elected activities [1]	Accounting frequency
Austria	---	end of CP
Belgium	---	end of CP
Bulgaria	---	end of CP
Croatia	---	end of CP
Cyprus	---	end of CP
Czech Republic	---	end of CP
Denmark	CM, GM	annual
Estonia	---	end of CP
Finland	---	end of CP
France	---	end of CP
Germany	CM, GM	end of CP
Greece	---	end of CP
Hungary	---	annual
Ireland	CM,GM	end of CP
Italy	CM, GM	end of CP
Latvia	---	end of CP
Lithuania	---	end of CP
Luxembourg	---	end of CP
Malta	---	end of CP
Netherlands	---	end of CP
Poland	---	end of CP
Portugal	CM, GM	end of CP
Romania	RV	end of CP
Slovakia	---	end of CP
Slovenia	---	end of CP
Spain	CM	end of CP
Sweden	---	end of CP
United Kingdom	CM, GM, WDR	end of CP
Iceland	RV	end of CP

The KP accounting represents a subset of the GHG emissions reported under the Convention



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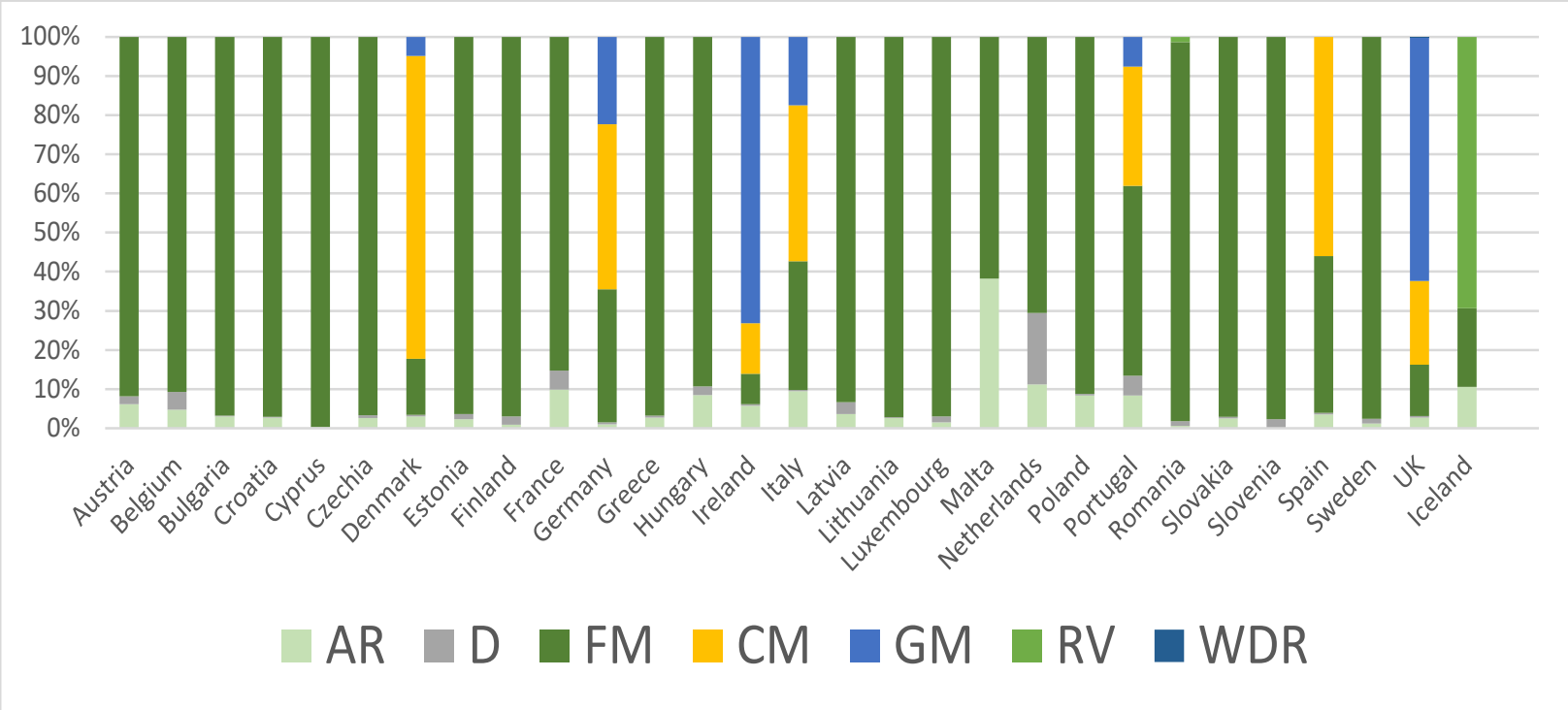
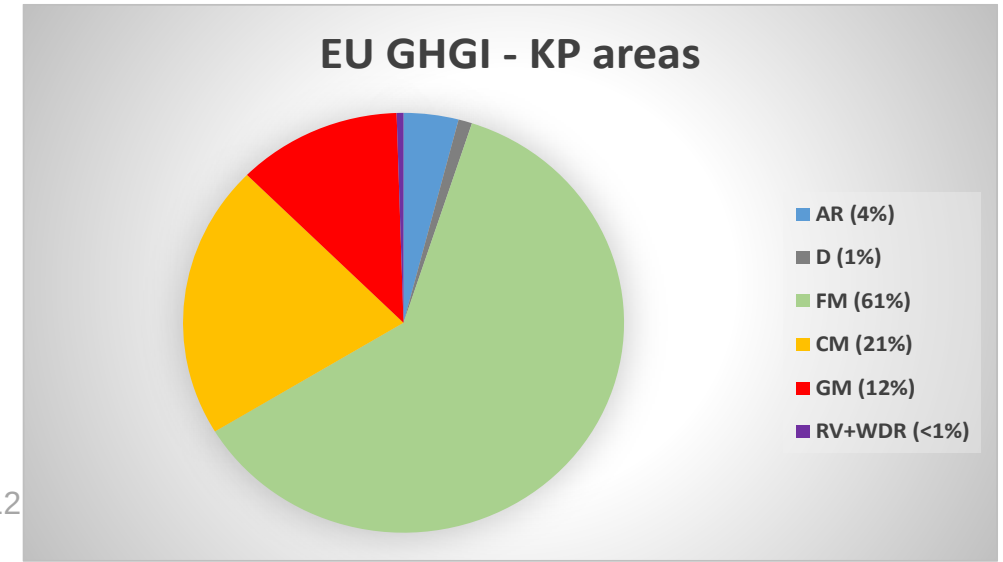
Areas reported under the KP-LULUCF



With the exceptions of Finland, Netherlands, Romania and Sweeden all the countries report areas AR>D

Larger share of KP areas in the EU GHGI are reported:

ESP, DEU, SWE, FRA, FIN, ITA, UK



At EU level:
Total area reported under KP is ca 251000 kha.
This represents 55% of the area under the Convention.

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Accounting quantities, FRML and TC in Kt CO2eq

Member State	Accounting quantity							
	Article 3.3		Article 3.4					accounting amount on LULUCF activities (RMUs)
	AR	D	FM	CM	GM	RV	WDR	
Austria	-16.961,81	4.074,61	-7.175,39					-20.062,58
Belgium	-2.194,62	4.971,52	-2.536,10					240,80
Bulgaria	-8.836,86	1.264,40	16.887,47					9.315,01
Croatia	-1.574,20	236,81	3.036,03					1.698,64
Cyprus	-46,98	1,98	358,30					313,30
Czech Republic	-4.979,89	1.880,70	38.365,28					35.266,09
Denmark	-2.610,01	2.670,97	-23.771,31	-22.053,14	-2.441,75			-48.205,23
Estonia	-1.941,68	4.792,69	-15.176,90					-12.325,88
Finland	-4.404,69	30.268,12	-64.938,69					-39.075,26
France	-110.315,34	95.222,19	92.398,95					77.305,80
Germany	-4.780,25	8.189,90	-372.022,61	27.739,50	-41.986,82			-382.860,28
Greece	-955,04	395,93	-2.908,64					-3.467,76
Hungary	9.615,22	2.673,93	-16.461,70					-4.172,55
Ireland	-26.501,85	4.153,30	795,73	-61,27	-3.247,94			-24.862,02
Italy	-62.942,15	15.784,65	-22.530,59	-45.418,10	-7.104,99			-122.211,17
Latvia	-1.866,87	7.739,90	-10.317,30					-4.444,26
Lithuania	-2.400,42	2.821,18	-8.983,06					-8.562,30
Luxembourg	-241,97	213,87	-28,51					-56,60
Malta	-0,11	NO	-0,05					-0,16
Netherlands	-6.689,98	7.345,62	-1.465,31					-809,67
Poland	-17.688,07	15.998,33	-14.693,00					-16.382,74
Portugal	-23.473,43	16.324,20	-12.530,83	-23.864,94	-12.205,03			-55.750,03
Romania	-5.880,74	9.005,83	-48.290,97			7.730,66		-37.435,23
Slovakia	-4.303,71	446,48	-9.095,96					-12.953,18
Slovenia	NO,NA	2.043,09	21.112,60					23.155,69
Spain	-52.075,47	5.058,26	-12.193,99	-15.084,25				-74.295,45
Sweden	-8.543,38	24.292,42	-94.185,35					-78.436,31
EU	**-362.594,28**	**267.870,88**	**-566.351,88**	**-78.742,20**	**-66.986,53**	**7.730,66**	**0,00**	-799.073,36
United Kingdom	-19.438,33	16.559,99	2.993,91	-6.264,75	-10.482,65		-543,78	-17.175,60
Iceland	-2.095,76	3,22	-9,68			-1.766,44		-3.868,67
EU+UK+Iceland	**-384.128,37**	**284.434,09**	**-563.367,650**	**-85.006,96**	**-77.469,18**	**5.964,21**	**-543,78**	**-820.117,63**

Member State	Value inscribed in the Appendix to the annex to decision 2/CMP.7 (kt CO2 eq/yr)	Technical correction	Model-based projections using JRC approach
Austria	-6516	5774	
Belgium	-2499	1010	X
Bulgaria	-7950	-2942	X
Croatia	-6289	905	
Cyprus	-157	NA	
Czech Republic	-4686	-225	X
Denmark	409	-83	
Estonia	-2741	1819	X
Finland	-20466	-9198	
France	-67410	23318	X
Germany	-22418	6331	
Greece	-1830	210	
Hungary	-1000	-334	X
Ireland	-142	113	
Italy	-22166	-1680	X
Latvia	-16302	14829	X
Lithuania	-4552	-922	X
Luxembourg	-418	56	X
Malta	-49	49	
Netherlands	-1425	337	X
Poland	-27133	-7082	
Portugal	-6830	3369	
Romania	-15793	-6168	X
Slovakia	-1084	-3723	X
Slovenia	-3171	-161	
Spain	-23100	-4261	X
Sweden	-41336	8943	
UK	-8268	-9333	
Iceland	-154	-21	

The final KP accounting is still subject to modifications that could be raised during the UN review.
In addition, the information added in this tables should be considered preliminary because is based on the submissions by MS to the EU but some MS have submitted updated data to the UN which is not considered here

Natural disturbances under AR and FM

- **13 MS, UK & ISL** have stated the intention to exclude emissions resulting from Natural disturbances affecting **AR** during CP2.

- **18 MS, UK & ISL** have stated the intention to exclude emissions resulting from Natural disturbances affecting **FM** during CP2.

None of the individual inventories have implemented the provision of excluding emissions from ND

The reasons provided :

- ✓ *They did not exceed the BGL + margin,*
- ✓ *The areas were subject to salvage logging,*
- ✓ *Or the requirements for excluding emissions from ND were not fulfilled,*
- ✓ *The efforts do not compensate the benefits. The extra credits are not needed to fulfil commitments.*
- ✓ *The "accounted credits" from other years and activities offset those extra emissions*
- ✓ *It is not really needed additional "credits" for compliance (and there is no financial benefit in accumulating more)*
- ✓ *Implementing the ND provision would imply substantial changes to the reporting system and*

Thank you!

This presentation is based on information included in the EU GHGI submission 2020.
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