



Overview of the EU 2016 submissions under UNFCCC

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Joint
Research
Centre

OUTLINE

Status of reporting

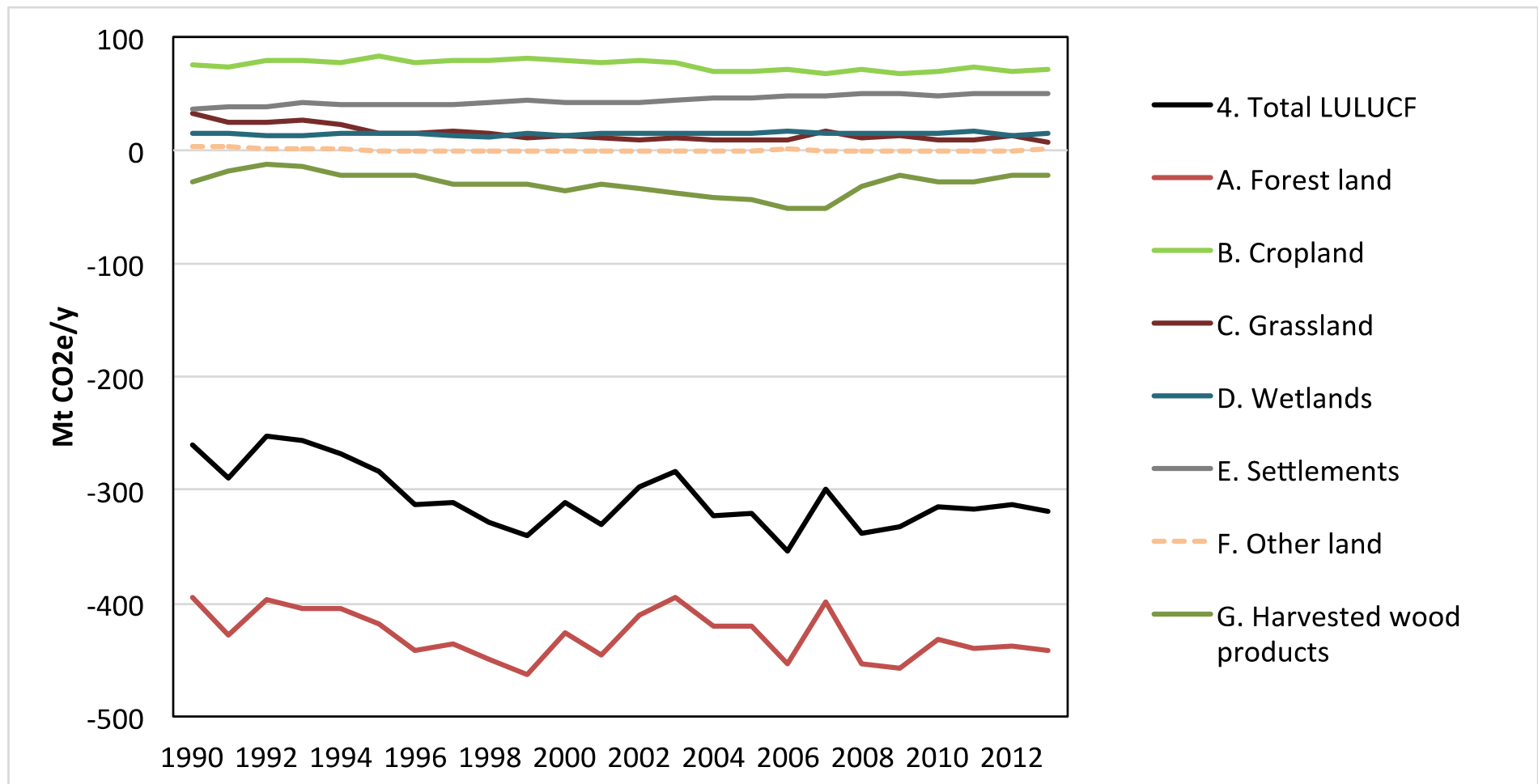
Overview of reporting under UNFCCC

Next steps

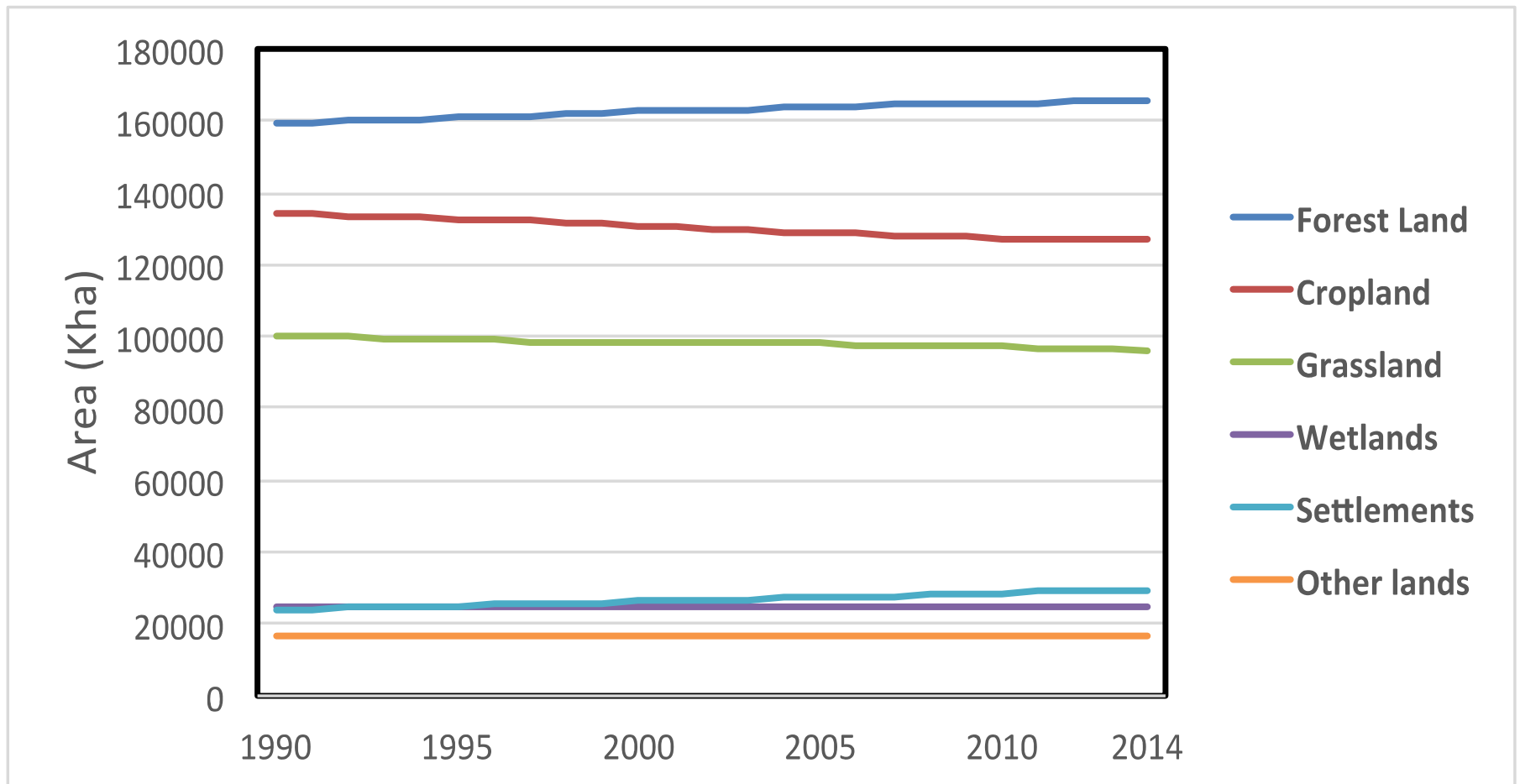
STATUS OF REPORTING (as of 29 April 2016)

MS	NIR	CRF_Convention	CRF_KP	Information_Dec_529	CRF tables_Dec_529	Observations
Austria	x	x	x	x	x	NIR 15 April Sub./Convention tables/ KP tables not public available/Dec_529 data sub. in January using xls. files from JRC
Belgium	x	x		x	x	NIR 15 April Sub./Convention tables/ NO KP tables
Bulgaria	x	x		x		NIR 15 April Sub./Convention tables/ NO KP tables
Croatia	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables empty
Cyprus	x	x	x	x	x	NIR 15 April Sub./Convention tables with most of cells empty/ KP tables with most of cells empty
Czech Republic	x	x		x	x	NIR 15 April Sub./Convention tables/NO KP tables/BY table for 529 KP missing
Denmark	x	x		x	x	NIR 15 April Sub./Convention tables/ NO KP tables
Estonia	x	x		x	x	NIR 15 April Sub./Convention tables/NO KP tables/2013 table for 529 KP missing
Finland	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables
France	x	x				NIR 15 April Sub./Convention tables/ NO KP tables/NO 529 data
Germany	x	x	x	x	x	NIR 15 April Sub./Convention tables /KP tables/Information and data for 529 Dec. included in the NIR and KP CRF tables
Greece	x	x	x	x		NIR 15 April Sub./Convention tables/KP tables/ NO 529 data
Hungary	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables
Ireland					x	NO NIR 15 April Sub./ NO Convention tables/ NO KP tables/data for 529 Dec. in CRF KP tables
Italy	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty/data for 529 Dec. in CRF KP tables
Latvia	x	x		x	x	NIR 15 April Sub./Convention tables/NO KP tables
Lithuania	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty
Luxembourg	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables
Malta	x	x		x		NIR 15 April Sub./Convention tables with few cells empty/NO KP tables
Netherlands	x	x	x		x	NIR 15 April Sub./Convention tables/ KP tables with a lot of tables empty
Poland	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty
Portugal	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty/data for 529 Dec. in CRF KP tables
Romania	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty
Slovakia	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty
Slovenia	x	x			x	NIR 15 April Sub./Convention tables/NO KP tables
Spain	x	x		x	x	NIR 15 April Sub./Convention tables/NO KP tables
Sweden	x	x		x	x	NIR 15 April Sub./Convention tables/NO KP tables
UK	x	x	x	x	x	NIR 15 April Sub./Convention tables/KP tables with some cells empty/data for 529 Dec. in CRF KP tables
Total EU	27	27	16	24	24	
Iceland	x	x	x			NIR 15 April Sub./Convention tables/KP tables with some cells empty/NO 529 data

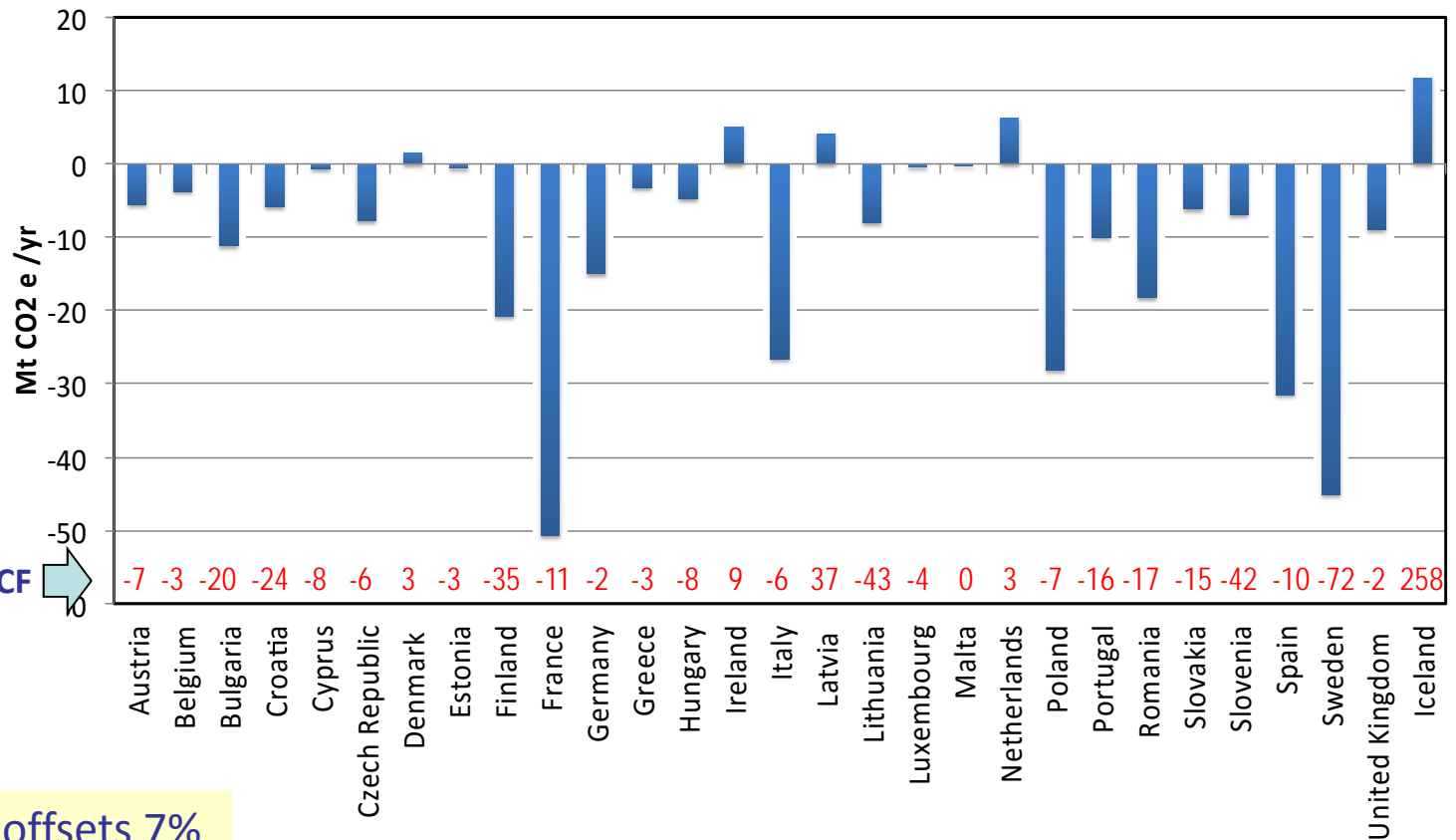
Emission (+) and removals (-) trends: EU28 + ISL



Area trends: EU28 + ISL



Emissions/removals from LULUCF in EU MS (year 2014)



% contribution of LULUCF to total GHG emissions (without LULUCF)

In EU28, LULUCF offsets 7% of total GHGs (Forest offsets 10%)

The LULUCF “hotspots”

Land use changes represent 9% of EU area but account for > 20% of absolute emissions/removals of respective subcategories

The sink from conversions to FL (-54 MtCO₂/yr) and GL (-26 MtCO₂/yr) compensated by emissions from conversions to CL (45 MtCO₂/yr) and SL (47 MtCO₂/yr).

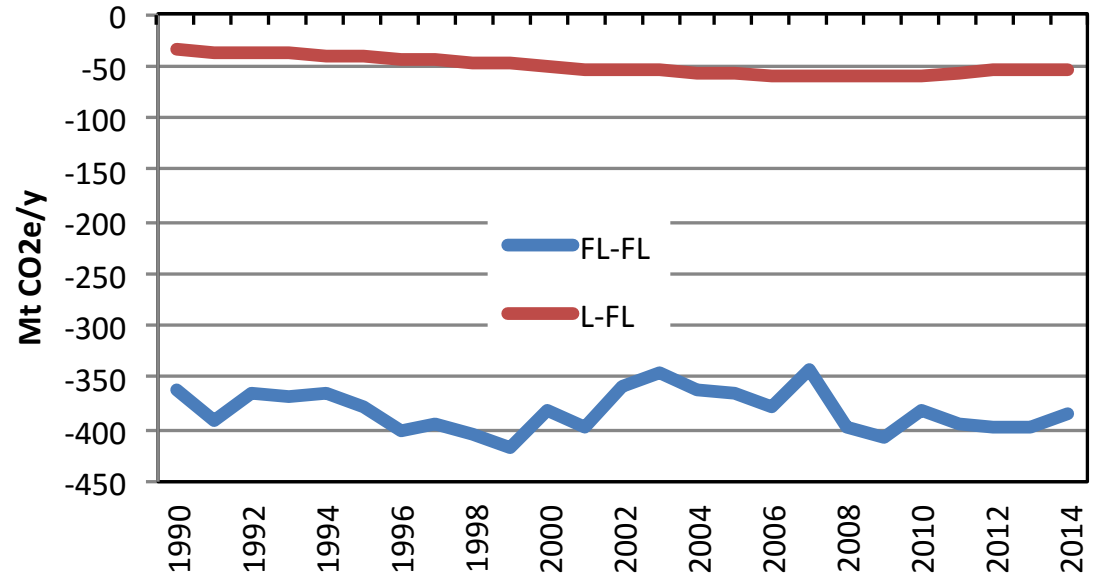
Area of **organic soils** (19 Mha: 13 in FL, 2 in CL, 4 in GL) represents about 5% of the total area of FL + CL + GL in the EU, but their emissions (97 MtCO₂/y: 20 in FL, 31 in CL and 46 in GL) account for 30% of net total LULUCF removals.

Biomass burning: about 6-7 MtCO₂/yr (3-30, depending on the year)

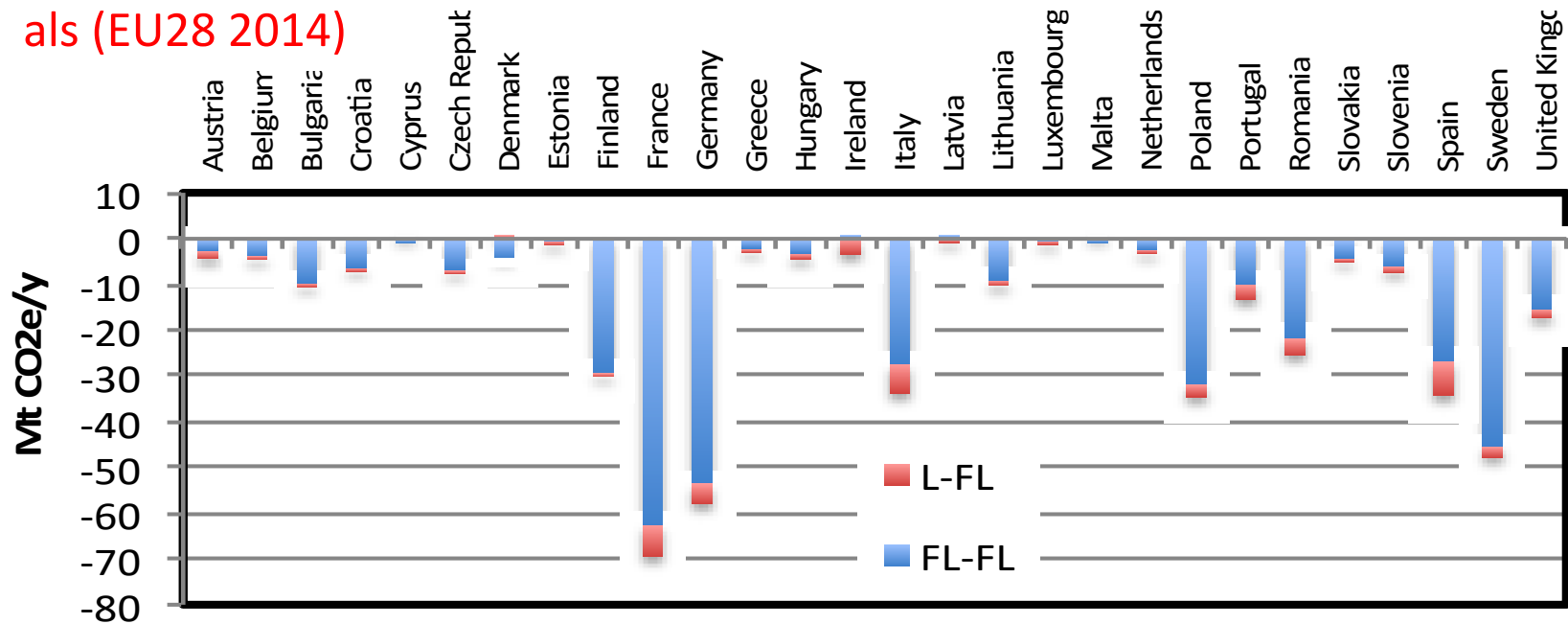


Forest land

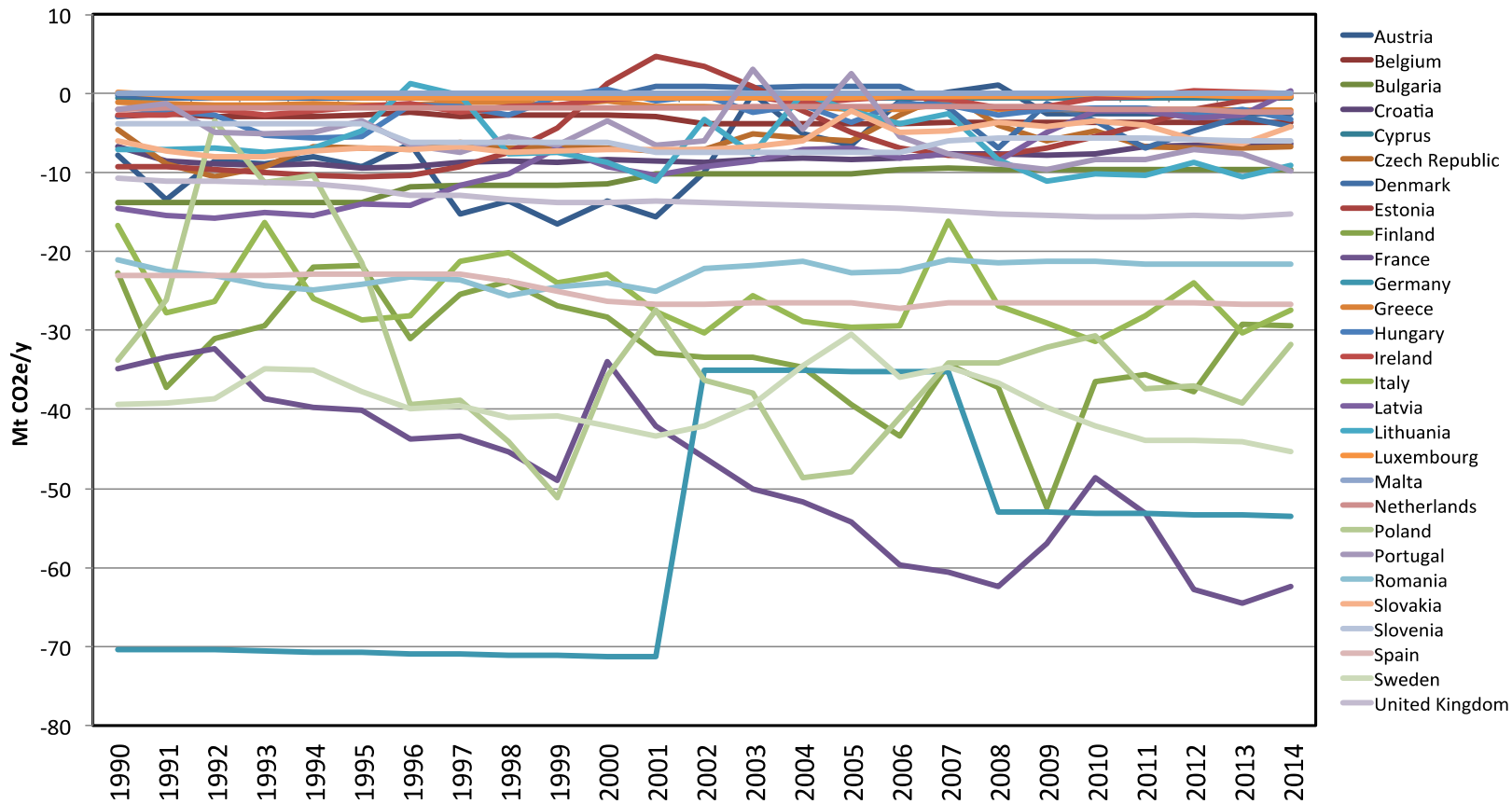
Trends of emissions/removals (EU28)



MS emissions/removals (EU28 2014)



MS trends of emissions/removals in FL-FL



Absolute levels and long-term trend affected by harvest, increments, age structure. Levels *partially* affected also by methods/definitions

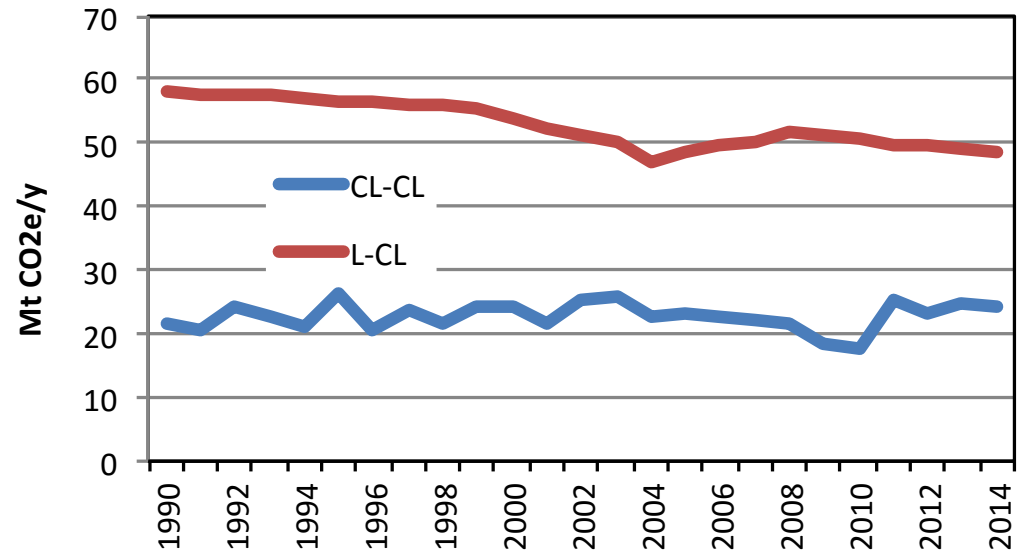
Interannual variability affected by natural disturbances (fires, storms) and harvest

Short-term trend also affected by the method (i.e. stock-change vs. gain-loss)

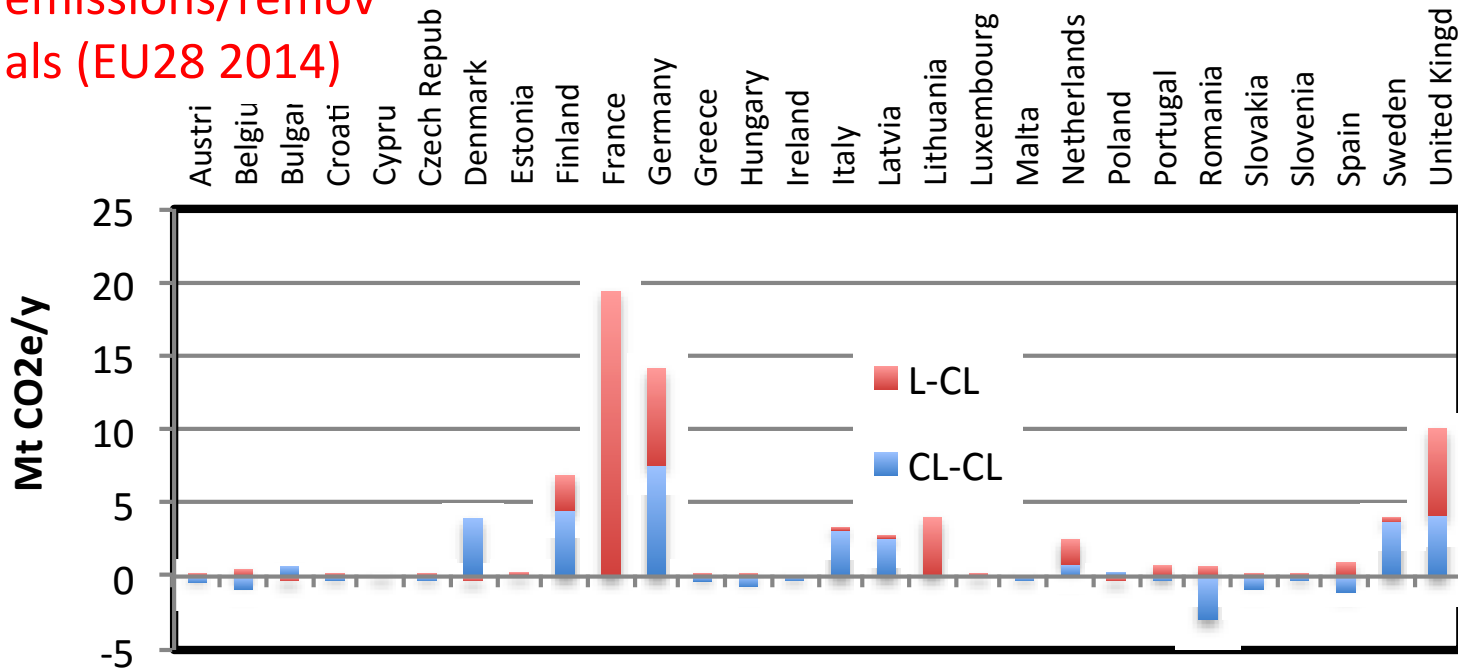


Cropland

Trends of emissions/removals (EU28)



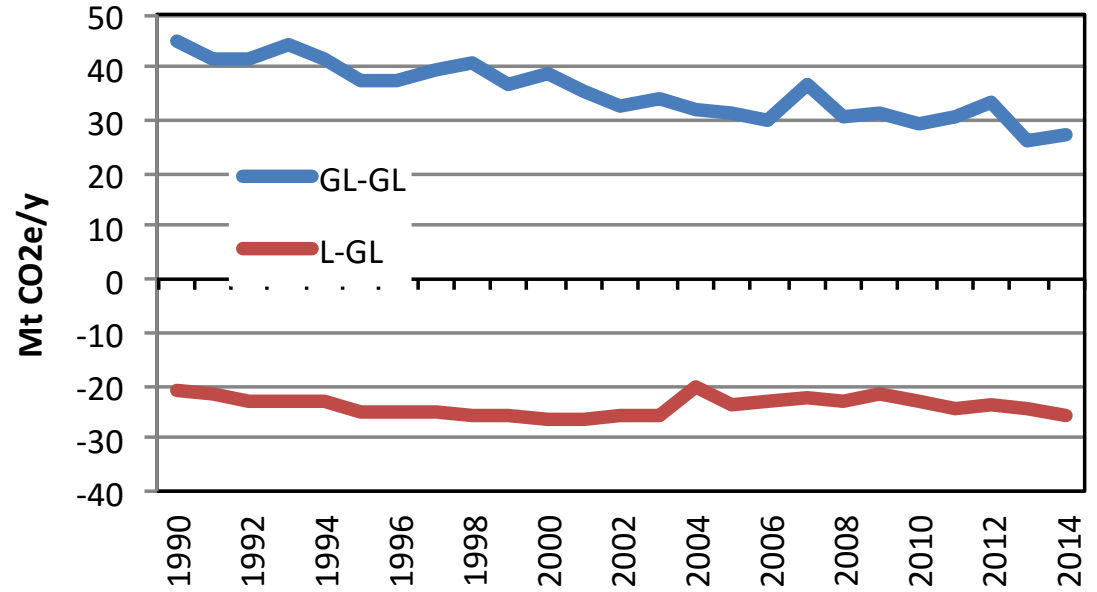
MS emissions/removals (EU28 2014)



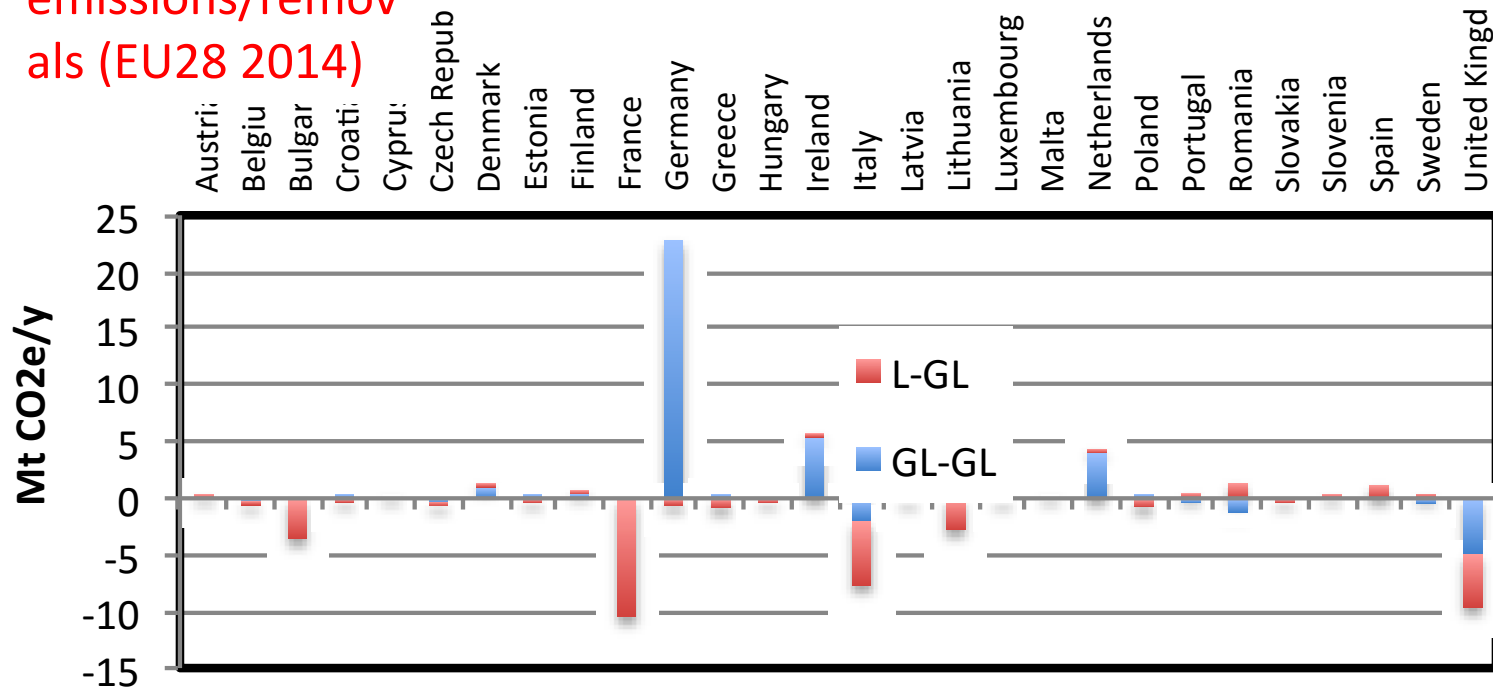


Grassland

Trends of emissions/removals (EU28)



MS emissions/removals (EU28 2014)



Are LULUCF estimates complete?

Completeness of reporting of land uses (UNFCCC)

Land Use	Subcategory	Carbon pool		
		Living biomass	Dead organic matter	SOC mineral
Forest Land	FL-FL	100%	52%	31%
	L-FL	93%	66%	79%
Cropland	CL-CL	83%	10%	69%
	L-CL	83%	66%	90%
Grassland	GL-GL	38%	17%	41%
	L-GL	90%	69%	90%
Wetlands	WL-WL	17%	3%	38%
	L-WL	83%	62%	86%

 = estimate not mandatory under tier 1

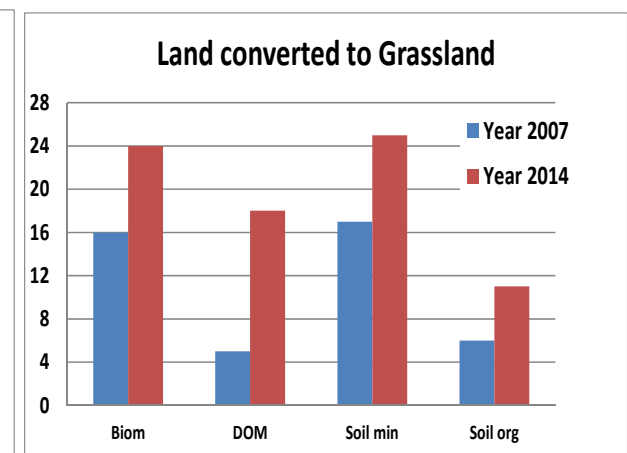
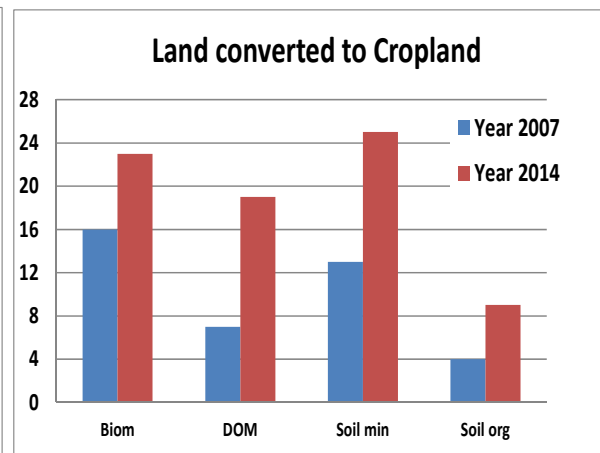
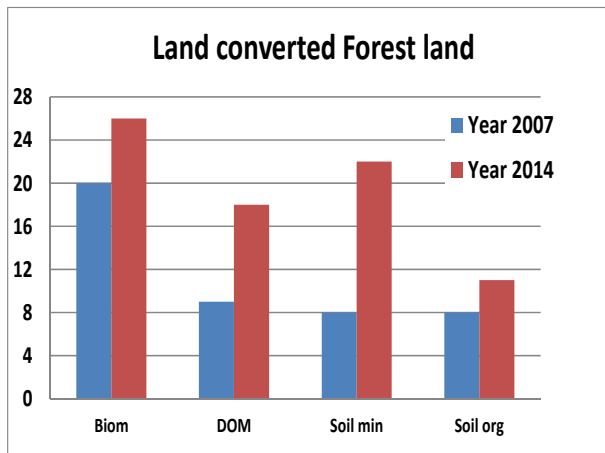
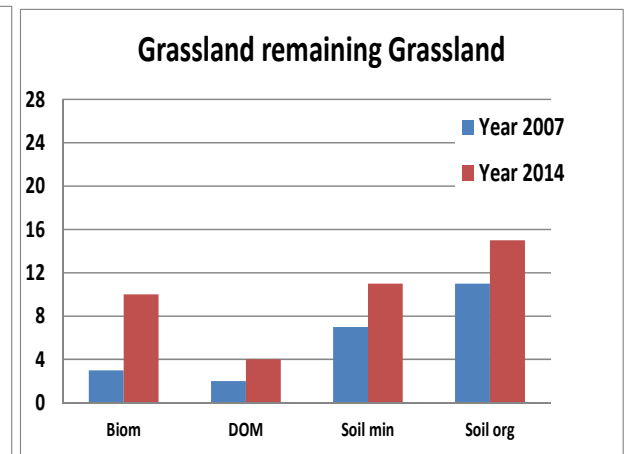
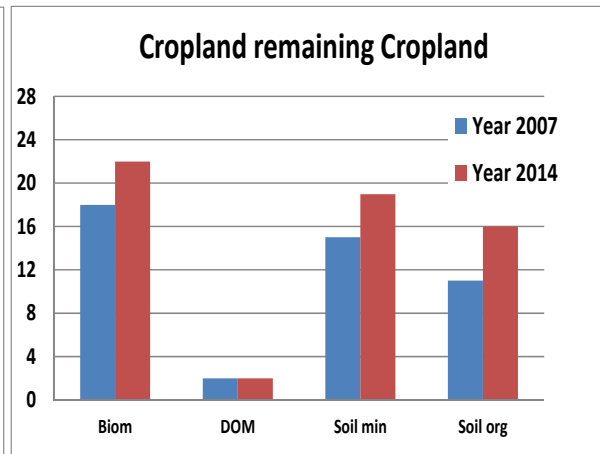
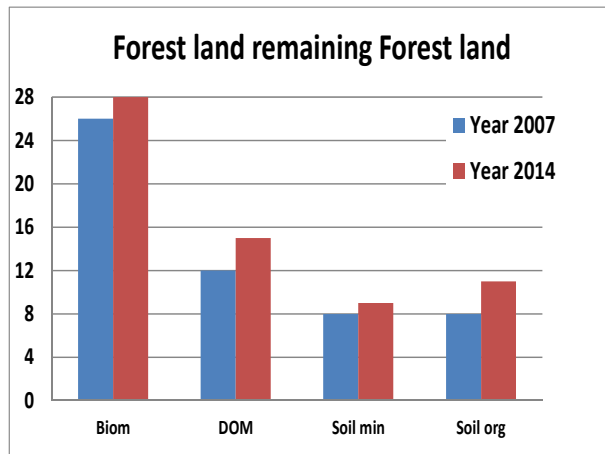
Completeness: FL > CL > GL > WL

Completeness of land use conversions > land use remaining the same

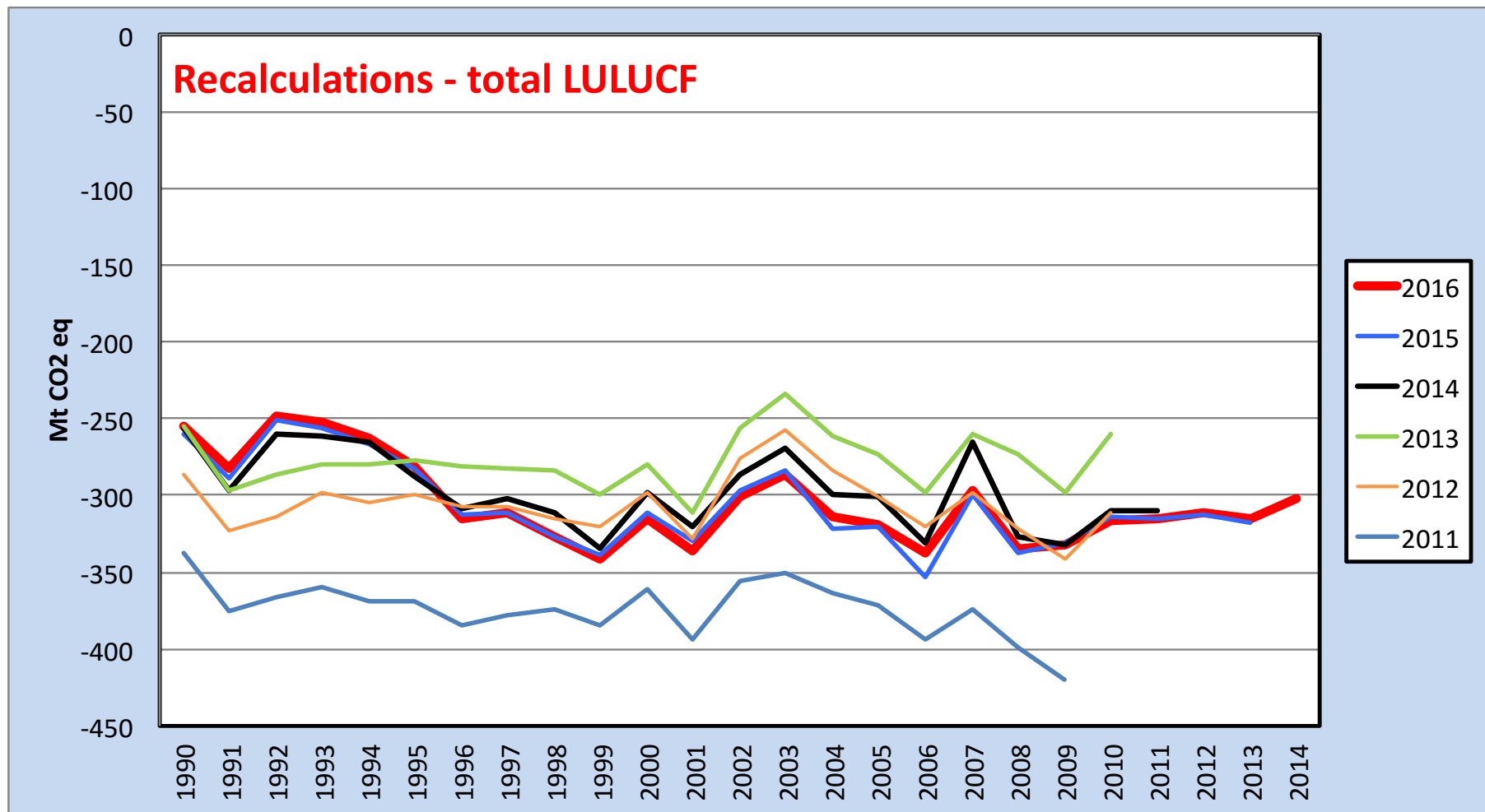
Improvement in completeness

Coverage of reporting of lands by C pool, from 2009 GHGI to 2016 GHGI

Number of MS reporting



Are LULUCF estimates accurate?



Uncertainties at MS level

Forest land: 10-70% for biomass (EU28 average $\approx 35\%$), 20-100% for dead organic matter ($\approx 60\%$), 15-70% for mineral soils ($\approx 60\%$) and 35-150% for organic soils ($\approx 90\%$).

FM: $\approx 35\%$, Forest conversions (AR/D) $\approx 50-60\%$

Cropland & Grassland: high uncertainties (50-100%), especially for mineral/organic soils
Largest uncertainties shown in land conversions.

Verification of GHG estimates

IPCC: verification of national GHG inventories useful to improve scientific understanding and build confidence on estimates and trends, e.g.

- Comparison with partially independent information (scientific studies, international datasets, forest Carbon Budget Model applied by JRC, etc.)
- Applying different methods (Lower tiers, higher tiers, direct measurement of GHG emissions and removals, etc.)

Comparing different data/methods *does not mean expecting full match*. However, in principle trends could be expected to be the same.



WAY FORWARD FOR 2016 SUBMISSIONS

(outcomes of WG-I meeting 17th March 2016)

- 3rd May: release of the software – to be tested if it can allow the submissions under KP by 15th June
- 16th May: Cut-off day for submission to the EU
- 15th June: inventory submissions under KP (assumes in principle that the CRF is functional)
- **Initial reports** to be submitted by 15th June, together with KP submission



INITIAL REPORTS

Decision 2/CMP.8

- Each Party with a GHG target in CP2 shall submit [by 15 April 2015], a report to facilitate the calculation of its assigned amount and to demonstrate its capacity to account for its emissions.
- This report shall include the following LULUCF-related information:
 - **Forest definition and threshold parameters**, in accordance with 16/CMP.1 and 2/CMP.7. If the Party selected its forest definition for CP1, the definition for CP2 shall be the same.
 - The identification of its **election of activities under Article 3.4** of the KP, together with information on how its national system will identify the associated land areas
 - Whether it intends to **account annually or for the entire commitment period**;
 - The **FMRL inscribed in decision 2/CMP.7 and technical corrections for the 1st year of CP2***
 - Information on how **emissions from HWP** originating from forests prior to the start of the CP2 have been calculated in the FMRL in accordance with decision 2/CMP6;
 - **Whether it intends to exclude emissions from Natural Disturbances**, including information on background level and the margin (if any);
- Parties shall include the FMRL submission and the corresponding technical assessment report as annexes to the report. Any technical corrections resulting from recommendations in the technical assessment report shall be reported in the inventory submission for the first year of the CP2.



Decision 2/CMP.8 (continued)

- Additionally, the report shall include the following information for Art. 3.3 (ARD), FM, elected Art. 3.4 activities (CM, GM, RV, WDR):
 - 1) Estimates of anthropogenic GHG emissions / removals
 - 2) General information including:
 - Information already included in past NIR under KP, i.e. information showing how estimates follow relevant IPCC guidelines; Information showing that lands are identifiable and traceable; The spatial assessment unit used for ARD; Demonstration that the unaccounted C pools were not a net source of emissions; Factoring out removals from elevated CO₂, indirect N deposition, effects of age structure; Information on how harvesting or forest disturbance that is followed by the re-establishment of a forest is distinguished from deforestation; Information showing that ARD activities and are directly human-induced.
 - NEW information: Emissions from the conversion of natural forests to planted forests; Information showing methodological consistency between the FMRL and reporting for FM + any technical corrections to FMRL; Information on how emissions and removals in Harvested Wood Products (HWP) are accounted in accordance with decision 2/CMP.7; When a Party applies the provisions for Natural Disturbances (ND), information demonstrating accordance with decision 2/CMP.7;



Thank you !