



Overview of information submitted by MS on Decision 529/2013/EU in the Land Use, Land Use Change and Forestry (LULUCF) sector in 2016

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Decision No 529/2013/EU on accounting rules on GHG emissions and removals resulting from activities relating to LULUCF and on information concerning actions relating to those activities (Art. 3 and 4)

For each accounting period specified in Annex I (years), Member States (MS) shall prepare and maintain accounts of all emissions and removals resulting from the following activities:

Afforestation (ARF), reforestation (REF), deforestation (DEF), forest management (FM)

MS shall, prior to 1 January 2022, provide and submit to the Commission by 15 March each year initial, preliminary and non-binding annual estimates of emissions and removals from cropland management (CM), grazing land management (GLM)

For each accounting period, MS may also prepare and maintain accounts of emissions and removals resulting from revegetation (RV) and wetland drainage and rewetting (WDR)

From 2016 to 2018, MS shall report to the Commission by 15 March each year on the systems in place and being developed to estimate emissions and removals from CM and GLM

The accounts referred to all activities shall cover emissions and removals of the carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O)

and any changes in the carbon stock of the following carbon pools:

above-ground biomass, below-ground biomass, litter, dead wood, soil organic carbon, harvested wood products



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Activities accounting for base year (BY)

Cropland management (CM) and Grazing land management (GLM)

- *submitted by **21 MS** (23 MS in 2015)*
- *non submitted by **7 MS** (BLG, CYP, CZE, FRA, GRC, MLT, UK)*

*the most used **notation keys** for CM and GLM:*

R - reported and NO – not occurring

*the most reported **carbon pools** for CM and GLM:*

above ground biomass (19/15 MS), mineral soil (19/18 MS)

*the most reported **GHG sources** CM:*

nitrogen mineralization of the soils - N_2O (7 MS)

*the most reported **GHG sources** GLM:*

biomass burning - CH_4 , N_2O (10/10 MS)

Note: Submitted = number or notation key, non submitted = empty cells

Cropland management	CHANGE IN CARBON POOL REPORTED ⁽¹⁾							GREENHOUSE GAS SOURCES REPORTED ⁽²⁾								
	Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾			Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
					Mineral	Organic			N ₂ O	CH ₄	N ₂ O			N ₂ O	N ₂ O	CO ₂
R	19	14	3	4	19	14			5		7		4	5	5	
NO	1	1	12	14	1	6			9		7		14	13	13	
NA	1	1	2	1	1	1			2		2		2	2	2	
NE	0	0	0	0	0	0			5		0		0	0	0	
NR	0	2	2	2	0	0			0		0		0	0	0	
IE	0	3	2	0	0	0			0		5		1	1	1	

CM – base year, number of MS submitted individual notation keys, carbon polls and GHG sources

Grazing land management	CHANGE IN CARBON POOL REPORTED ⁽¹⁾							GREENHOUSE GAS SOURCES REPORTED ⁽²⁾								
	Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾			Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
					Mineral	Organic			N ₂ O	CH ₄	N ₂ O			N ₂ O	N ₂ O	CO ₂
R	15	10	3	3	18	14			6		5		4	10	10	
NO	2	2	13	14	1	6			8		9		8	5	5	
NA	1	1	1	1	1	1			2		2		3	2	2	
NE	2	2	0	1	1	0			5		1		2	2	2	
NR	1	3	2	2	0	0			0		0		0	0	0	
IE	0	3	2	0	0	0			0		4		4	2	2	

GLM – base year, number of MS submitted individual notation keys, carbon polls and GHG sources



Overview of information submitted by MS on Decision 529/2013/EU in the LULUCF sector

Activities accounting for reporting year 2014 (submitted in 2016):

Cropland management (CM) and Grazing land management (GLM)

- *submitted by **23 MS** (24 MS in 2015)*
- *non submitted by **5 MS** (BEL, BLG, FRA, GRC, MLT)*

*the most used **notation keys** for CM, GLM:*

- *R - reported and NO – not occurring*

*the most reported **carbon pools** for CM and GLM:*

- *above ground biomass (19/16 MS), mineral soil (23/19 MS)*

*the most reported **GHG sources** for CM*

- *nitrogen mineralization of the soils - N_2O (7 MS)*

*the most reported **GHG sources** for GLM:*

- *biomass burning - CH_4 , N_2O (10/10 MS)*

Cropland management		CHANGE IN CARBON POOL REPORTED ⁽¹⁾						GREENHOUSE GAS SOURCES REPORTED ⁽²⁾								
		Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾		Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
						Mineral	Organic ⁽³⁾			N ₂ O	CH ₄ ⁽⁷⁾			N ₂ O	N ₂ O	N ₂ O
R	19	12	2	3	23	13			4		7		4	6	6	
NO	0	0	15	17	0	7			12		5		9	7	7	
NA	2	2	2	1	0	2			2		4		4	3	3	
NE	0	0	0	0	0	0			5		2		3	3	3	
NR	2	4	2	2	1	2			0		0		0	0	0	
IE	0	5	2	0	0	0			0		5		3	4	4	

CM – 2014, number of MS submitted individual notation keys, carbon pools and GHG sources

Grazing land management		CHANGE IN CARBON POOL REPORTED ⁽¹⁾						GREENHOUSE GAS SOURCES REPORTED ⁽²⁾								
		Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾		Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
						Mineral	Organic ⁽³⁾			N ₂ O	CH ₄ ⁽⁷⁾			N ₂ O	N ₂ O	N ₂ O
R	16	10	3	3	19	14			4		6		8	10	10	
NO	1	1	11	12	1	8			9		8		5	6	6	
NA	2	2	2	2	2	2			5		4		4	4	4	
NE	2	2	2	1	1	0			5		2		3	3	3	
NR	2	5	3	4	1	0			0		0		0	0	0	
IE	0	3	2	1	0	0			0		3		3	0	0	

GLM – 2014, number of MS submitted individual notation keys, carbon pools and GHG sources



Overview of information submitted by MS on Decision 529/2013/EU in the LULUCF sector

*Activities accounting for reporting year 2014 (submitted in 2016):
Afforestation/Reforestation (ARF), Deforestation (D)*

- *submitted by **20 MS** (22 MS in 2015)*
- *non submitted by **8 MS** (BEL, BLG, CYP, FRA, GRC, LIT, MLT, NLD)*

*the most used **notation keys** for ARF and D:*

- *R - reported and NO – not occurring*

*the most reported **carbon pools** for ARF and D:*

- *above ground biomass (19/19 MS), mineral soil (18/19 MS)*

*the most reported **GHG sources** for ARF:*

- *biomass burning CH₄, N₂O (10 MS)*

*the most reported **GHG sources** for D:*

- *nitrogen mineralization of the soils - N₂O (11 MS)*

Afforestation and reforestation	CHANGE IN CARBON POOL REPORTED ⁽¹⁾							GREENHOUSE GAS SOURCES REPORTED ⁽²⁾							
	Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾		Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
					Mineral	Organic ⁽³⁾			N ₂ O	CH ₄ ⁽⁷⁾			N ₂ O	N ₂ O	N ₂ O
R	19	15	15	12	18	10	9	2	5	6	7	6	8	10	10
NO	1	1	1	4	1	10	5	13	15	14	13	11	6	7	7
NA	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
IO	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NR	0	0	2	2	1	0	2	0	0	0	0	0	0	0	0
IE	0	4	2	2	0	0	2	5	0	0	0	3	5	2	2

ARF – 2014, number of MS submitted individual notation keys, carbon polls and GHG sources

Deforestation	CHANGE IN CARBON POOL REPORTED ⁽¹⁾							GREENHOUSE GAS SOURCES REPORTED ⁽²⁾							
	Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾		Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾		
					Mineral	Organic ⁽³⁾			N ₂ O	CH ₄ ⁽⁷⁾			N ₂ O	N ₂ O	N ₂ O
R	19	17	17	15	19	10	7	0	5	5	11	2	8	5	5
NO	0	0	0	0	0	9	3	15	15	15	7	11	9	14	14
NA	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
IO/NR	1	1	1	1	1	0	8	0	0	0	0	0	0	0	0
IE	0	2	2	4	0	1	1	5	0	0	1	7	3	1	1

D – 2014, number of MS submitted individual notation keys, carbon polls and GHG sources



Overview of information submitted by MS on Decision 529/2013/EU in the LULUCF sector

Activities accounting for reporting year 2014:

Forest management (FM)

- *submitted by **20 MS** (22 MS in 2015)*
- *non submitted by **8 MS** (BEL, BLG, CYP, FRA, GRC, LIT, MLT, NLD)*

*the most used **notation keys** for FM:*

- *R - reported and NO – not occurring*

*the most reported **carbon pools** for FM:*

- *above ground biomass (19 MS), harvested wood products (18 MS)*

*the most reported **GHG sources** for FM:*

- *biomass burning CO₂, CH₄, N₂O (11/15/15 MS)*

Forest management	CHANGE IN CARBON POOL REPORTED ⁽¹⁾							GREENHOUSE GAS SOURCES REPORTED ⁽²⁾								
	Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil		HWP ⁽⁴⁾	Fertilization ⁽⁵⁾	Drained, rewetted and other soils ⁽⁶⁾		Nitrogen mineralization in mineral soils ⁽⁸⁾	Indirect N ₂ O emissions from managed soil ⁽⁵⁾	Biomass burning ⁽⁹⁾			
					Mineral	Organic ⁽³⁾			N ₂ O	CH ₄ ⁽⁷⁾			N ₂ O	N ₂ O	N ₂ O	CO ₂ ⁽¹⁰⁾
R	19	17	11	13	11	12	18	2	6	5	6	3	11	15	15	
NO	0	0	3	2	4	7	0	13	13	15	13	13	0	4	4	
NA	0	0	0	0	1	0	0	0	0	0	0	0	2	1	1	
NE	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
IO/NR	1	1	3	2	4	1	2	0	0	0	0	0	0	0	0	
IE	0	2	3	3	0	0	0	5	0	0	0	4	7	0	0	

FM – 2014, number of MS submitted individual notation keys, carbon polls and GHG sources

Another accounting activities for reporting year 2014:

Revegetation and Wetland drainage and rewetting

- *submitted by 12 MS, but only 1 MS (ROM) used the numbers, the rest of MS used the notation keys: NA – not applicable (10 MS) or NR – not reported (2 MS)*

Natural disturbances for FM

- *submitted by 8 MS, 3 MS calculated the background level and the margins*
- Natural disturbances for ARF and DEF not submitted*

Overview of information submitted by MS on Decision 529/2013/EU in the LULUCF sector

Information relating on Systems in place and being developed to estimate emissions and removals from CL and GLM, for the purpose of reporting under Art.3.2(a) of Decision 529/2013/EU

*Submitted by **22 MS***

Explanatory information on methodologies and data used for initial, preliminary and non-binding annual estimates of emissions and removals as required in the national inventory report in accordance with Decision 2/CMP.8 under the Kyoto Protocol and its Annex II and pursuant art 40 (b) of Commission Implementing Regulation (EU) No 749/2014

*Submitted by **14 MS***

JRC implemented QA/QC checks of CM and GLM data submitted by 15 January on a voluntary basis for 2 MS (FI and SW) without any specific findings

