

The European Commission's science and knowledge service

Joint Research Centre



Overview of 2019 QA/QC checks on LULUCF/KP-LULUCF

-Focus on resolving UNFCCC ARR recommendations-

JRC LULUCF technical workshop 2019

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Summary

1. Overview of the QA/QC checks 2019

2. Overview of the UNFCCC EU ARR 2018

3. Issues affecting TACCC of the LULUCF/KP data

Overview of QA/QC checks 2019

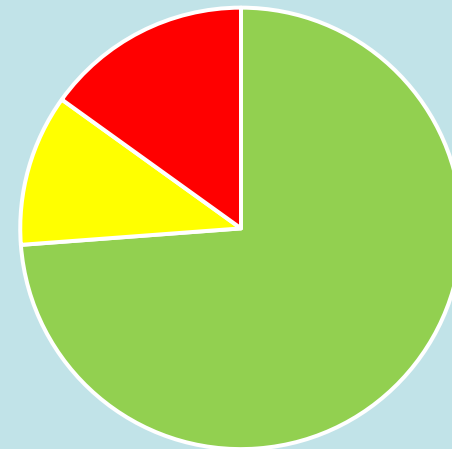
➤ 126 issues uploaded into the EEA EMRT

- 57 issues related to *KP*
- 69 issues related to *Convention*

➤ Final conclusion by 17th April 2019

- 93 issues **Resolved**
- 14 issues **Partly Resolved**
- 19 issues **Unresolved**

TOTAL



■ Resolved ■ Partly Resolved ■ Unresolved

Overview of the UNFCCC ARR 2018

Status of implementation of issues raised in previous ARRs

Convention- LULUCF		KP-LULUCF	
Addressing	9 (4*)	Addressing	8 (6*)
Resolved	7 (12*)	Resolved	10 (12*)
Unresolved	1	Unresolved	1

(*)Some of the issues marked as Addressing have been resolved in the EU GHGI submission 2019

Issues identified in three consecutive reviews

Convention- LULUCF	KP-LULUCF
4 reiterated issues (2*)	No such issues identified

Additional findings during the 2018 review

Convention- LULUCF	KP-LULUCF
No such issues identified	1 Issue identified

Issues affecting TACCC of the LULUCF/KP data

The ERT recommends that the EU corrects the inconsistencies in the reported areas in CRF tables 4.1, 4.A–4.F and NIR-2 and 4(KP-I)A.1 - 4(KP-I)B.5

- Inconsistencies are reported between areas in table 4.1 and areas in tables 4.A – 4.F, and between areas in NIR-2 and 4(KP-I)A.1 - 4(KP-I)B.5
- Inconsistencies in the time series between “initial area” for the year (t) and “final areas” reported for the year (t-1) in table 4.1 or in NIR-2

Issues affecting TACCC of the LULUCF/KP data

TABLE 4.D SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FOREST
Wetlands
 (Sheet 1 of 1)

Table 4.1
Areas and

Inventory 2017
 Submission 2019 v2
 EUROPEAN UNION (KP)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA									
Land-use category	Subdivision ⁽¹⁾	Total area ⁽²⁾ (kha)	Area of mineral soil (kha)	Area of organic carbon (kha)	Area of peat (kha)	Area of flooded land (kha)	Area of other wetlands (kha)	Area of other wetlands (kha)	Area of other wetlands (kha)	Area of other wetlands (kha)	Area of other wetlands (kha)
D. Total wetlands		24932.93	7376.53								
1. Wetlands remaining wetlands		23730.25	6563.83								
Grassland 1.1 Peat extraction remaining peat extraction		262.07	IE,NO	262.07							
Grassland 1.2 Flooded land remaining flooded land		3737.95	3078.95	659.01	NA,NO	0.00	0.01	IE,NA,NO		471.37	
Wetlands 1.3 Other wetlands remaining other wetlands ⁽⁷⁾		19730.23	3484.88	16245.34	6.28	23.01	4.01	IE,NA,NO		7847.98	
Wetlands 2. Land converted to wetlands ⁽⁸⁾		1202.68	812.70	389.98	7386.63	27.80	0.77	IE,NA,NO		17424.43	
Settlement 2.1 Land converted to peat extraction		3.93	IE,NO	3.93	0.84	29296.27	62.01	IE,NA,NO		29511.95	
Other land 2.2 Land converted to flooded land		311.75	300.89	10.86	1.48	37.22	17931.38	IE,NA,NO		18297.51	
Other land 2.3 Land converted to other wetlands		887.00	511.81	375.19				IE,NA,NO			
Total unmanaged land ⁽³⁾	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	322.35	322.35
Final area	164086.17	2947.73	127003.52	91371.68	471.16	7882.77	17439.43	29933.11	18065.50	322.35	459523.35
Net change ⁽⁴⁾	738.36	3.88	-721.87	-259.04	-0.27	34.79	15.00	421.15	-232.01	0.00	0.00

Which is the true WL area at EU level?

≠ 400 Kha.

TABLE 4(KP-1)A.1. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES

Article 3.3 activities: Afforestation and reforestation⁽¹⁾

**Which is the true AR area at EU level?
≠ 90 Kha.**

Table NIR 2. LAND Areas and changes in

GEOGRAPHIC LOCATION ⁽²⁾	ACTIVITY DATA					ACTIVITIES				Total area at the end of the previous inventory year ⁽⁷⁾
	Identification code	Subdivision ⁽³⁾	Area subject to the activity	Area of mineral soils	Area of organic soils ⁽⁴⁾	Land use change (if elected)	Revegetation (if elected)	Wetland drainage and rewetting (if elected)	Other ⁽⁶⁾	
Article 3.3 activities	Total for activity A.1⁽¹¹⁾									
Afforestation and reforestation			9489.34	9072.08	417.26					9329.15
Deforestation			9489.34	9072.08	417.26					3613.15
		3613.15								
Article 3.4 activities										
Forest management		104.16	154158.69							154262.84
Cropland management ⁽³⁾ (if elected)		8.89	NA,NE,NO	54896.55	129.09	NA,NE,NO	NA,NE,NO			55034.53
Grazing land management ⁽³⁾ (if elected)		22.76	NA,NE,NO	111.49	26555.15	NA,NE,NO	NA,NE,NO			26689.40
Revegetation ⁽³⁾ (if elected)		NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	393.59	NA,NE,NO			393.59
Wetland drainage and rewetting ⁽³⁾ (if elected)		NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO			NO,NE,NA
Other ⁽⁴⁾		219.73	0.20	23.28	31.31	54.55	7.83	NA,NE,NO	195134.25	195471.14
Total area at the end of the current inventory year		9578.17	3719.86	154181.96	55039.36	26738.78	401.42	NO,NE,NA	195134.25	444793.80

Table 4.1 LAND TRANSITION MATRIX

Areas and changes in areas between the previous and the current inventory year⁽¹⁾

Inventory 2017
Submission 2019 v2
EUROPEAN UNION (KP)

TO:\nFROM:	Forest land (managed)	Forest land (unmanaged)	Cropland	Grassland (managed)	Grassland (unmanaged)	Wetlands (managed)	Wetlands (unmanaged)	Settlements	Other land	Total unmanaged land	Initial area				
	(kha)											Settlements	Other land	Total unmanaged land	Initial area
Forest land (managed) ⁽²⁾	163224.29	NA,NO	19.62	31.06	IE,NA,NO	3.64	3.38	61.47	4.34	IE,NA,NO	163347.80				
Forest land (unmanaged) ⁽²⁾	NA,NO	2943.71	0.00	0.01	NA,NO	NA,NO	NA,NO	0.07	0.06	IE,NA,NO	2943.85				
Cropland ⁽²⁾	517.24	NA,NO	126150.02	723.92	IE,NA,NO	2.68	8.84	302.64	20.04	IE,NA,NO	127725.39				
Grassland (managed) ⁽²⁾	307.01	4.02	471.25	90511.34	IE,NA,NO	77.64	31.97	184.62	42.87	IE,NA,NO	91636.72				
Grassland (unmanaged) ⁽²⁾	IE,NA,NO	NA,NO	0.14	IE,NA,NO	471.10	0.12	IE,NA,NO	0.00	0.01	IE,NA,NO	471.37				
Wetlands (managed) ⁽²⁾	6.33	NA,NO	1.50	11.95	IE,NA,NO	7794.89	6.28	23.01	4.01	IE,NA,NO	7847.98				
Wetlands (unmanaged) ⁽²⁾	1.93	IE,NA,NO	4.18	3.12	IE,NA,NO	IE,NA,NO	17386.63	27.80	0.77	IE,NA,NO	17424.43				
Settlements ⁽²⁾	9.62	NA,NO	82.82	57.16	IE,NA,NO	3.24	0.84	29296.27	62.01	IE,NA,NO	29511.95				
Other land ⁽²⁾	19.76	NA,NO	273.99	33.13	NA,NO	0.55	1.48	37.22	17931.38	IE,NA,NO	18297.51				
Total	127003.52	91371.68	471.10	7882.77	17439.43	29933.11	18065.50	322.35	459523.35	76	62.51	4.34	IE,NA,NO	163210.59	
Change	-721.87	-259.04	-0.27	34.79	15.00	421.15	-232.01	0.00	0.00	0	0.14	0.06	IE,NA,NO	2939.97	
				503.79	NA,NO	126390.03	607.63	IE,NA,NO	2.73	8.84	293.76	33.56	IE,NA,NO	127840.33	
				299.55	4.09	435.64	90777.42	IE,NA,NO	76.75	28.75	179.98	43.23	IE,NA,NO	91845.40	
				IE,NA,NO	NA,NO	0.14	IE,NA,NO	471.37	0.12	IE,NA,NO	0.00	0.01	IE,NA,NO	471.64	
				4.76	NA,NO	1.51	14.02	IE,NA,NO	7790.46	0.90	23.15	4.02	IE,NA,NO	7838.81	
				2.42	IE,NA,NO	4.37	3.12	IE,NA,NO	0.66	17379.83	22.15	0.77	IE,NA,NO	17413.32	
				8.88	NA,NO	83.61	59.01	IE,NA,NO	3.26	0.84	29110.72	58.11	IE,NA,NO	29324.44	
				15.79	NA,NO	273.51	44.68	NA,NO	0.56	1.48	37.30	17955.17	IE,NA,NO	18328.49	
				IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	322.35	322.35	
				163919.58	2943.85	127208.96	91538.15	471.37	7877.72	17424.40	29729.70	18099.28	322.35	459535.34	
				708.99	3.88	-631.38	-307.25	-0.27	38.90	11.07	405.26	-229.22	0.00	0.00	

Which is the reason for this discontinuity? ...does this kind of discontinuities lead to over, or underestimation of emissions? #500 Kha.

Issues affecting TACCC of the LULUCF/KP data

Work with MS to improve consistency in the use of NK

- Historically reiterated issue while at the same time seems difficult to implement.
- Efforts are needed. Often a MS used different NK for the same assumption.
- Please check Decision 24/CP.19 “Revision of the UNFCCC reporting Guidelines”
- **Recommended by the ERT to use the NK “NA” where net carbon is considered in equilibrium (Tier 1)**

Work with MS to ensure that HWP from D events are accounted for on the basis of “Instantaneous Oxidation”

- When quantitative estimates are reported, provide explicit information on the origin of these HWP. i.e. HWP from trees growing in previously deforested areas.
- Harvest originating from deforestation events need to be accounted for in the basis of “instantaneous oxidation”. A way to probe that you use the correct approach is to fill in the information item in the CRF table 4(KP-DC) on quantities for “Harvest originating from deforestation events” Or explicit mention that none HWP are generated from deforestation events.

Issues affecting TACCC of the LULUCF/KP data

TABLE 4(KP-1)C. SUPPLEMENTARY BACKGROUND FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL
Carbon stock changes in the harvested wood products (HWP) pool(1)

ORIGIN OF WOOD	PRODUCT TYPE	PRODUCT TYPE	Harvest(2)		HWP categories(3)		Subcategories(4)		PARAMETERS		as/removals		
									Half-life(5)	Initial stock(6)			
									(yrs)	(kt C)			
TOTAL									883265.74		-37639.11		
Article 3.3 activity	From land subject to afforestation/reforestation	Total for HWPAR							2315.99	204.64	-60.83	143.81	-527.31
		Total for category							2315.99	204.64	-60.83	143.81	-527.31
	From land subject to Deforestation (8)	Total for HWPD							546.43	1.48	-3.08	-1.60	5.86
		Total for category							546.43	1.48	-3.08	-1.60	5.86
Article 3.4 activity	From land subject to forest management	Total for HWPFM							880403.33	52680.28	-42557.28	10123.00	-37117.66
		Total for category							880403.33	52680.28	-42557.28	10123.00	-37117.66
Information items													
Harvest originating from deforestation events(8)													
Harvest from remaining lands(9)													

Clear separation between HWP from Deforestation, that enter into the accounting (explain why), and those accounted as "IO"

Issues affecting TACCC of the LULUCF/KP data

Continue efforts to improve the completeness of the reporting of emissions from all mandatory source categories in the LULUCF sector

- Available IPCC Tier 1 methods should, in principle, enable the reporting of all mandatory categories.
- Provide information on planned improvements for omitted source of emissions.

Issues affecting TACCC of the LULUCF/KP data

- Provide transparent information on methodological inconsistencies that trigger the need of Technical Correction in FMRL, or on the plan for future implementation.
- Ensure that FMRL included in CRF table 4(KP-1)B.1.1 matches the number in Dec. 2.cmp/7 (use the one under First Order Decay functions for HWP when available)
- Provide clear information on the BGL and Margin used for the implementation of the ND provision and ensure the consistency among the information provided in the CRF tables and in the NIR. If needed explain recalculations to maintain methodological consistency with the reported emissions and the FMRL.

Thank You!



Any questions?

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