



KP LULUCF in Slovakia – basic facts, results, problems and planed improvements

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Basic facts of KP LULUCF reporting

Slovak threshold values for the forest definition:

- minimum area for forest is 0.3 ha
- minimum tree crown cover of 20 %
- minimum height of trees 5 m in situ
- linear formations, a minimum width of 20 m
- temporarily unstocked areas are included (forest regeneration areas)

Slovakia has chosen to account activities under Article 3.3 (afforestation, reforestation and deforestation) for the whole commitment period.

Basic facts of KP LULUCF reporting

- AR activities represent the conversion of CL, GL and OL to FL
- D activity represents the conversion of FL to CL, GL, S, OL
- ARD areas are based on the data from Geodesy, Cartography and Cadastre Authority of the Slovak Republic (GCCA)
- annually updated cadastral information not only of land use areas but also the information about the areas which were afforested/reforested and deforested
- the Cadastre information are completed by data from The National programme: "Afforestation of the land unavailable for agricultural production". This programme was running from 1995 to 1999
- all land use changes from and to forests are considered to be human induced in Slovakia
- AR activities have been reported together

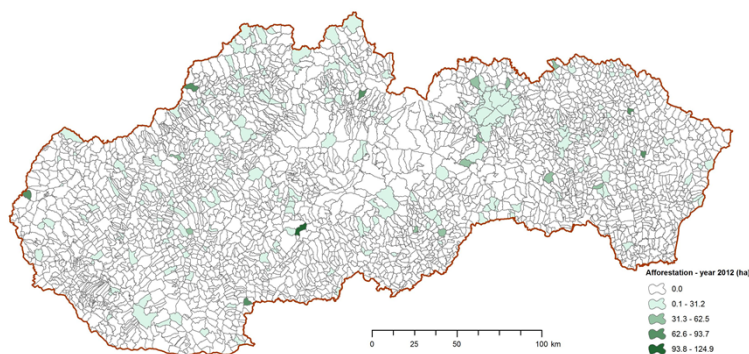
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The identified land-use change from Cropland (C), Grassland (G), and Other land (OL) to Forest Land (FL), categorized as AR (kha/year) and land use change from FL to land use categories C, G, S and OL represented D (kha/year).

Year	Afforestation/Reforestation (AR, kha/year)				Deforestation (D, kha/year)				Total	Difference
	C to FL	G to FL	OL to FL	Total	FL to C	FL to G	FL to S	FL to OL		
1990	0.088	2.266	1.416	3.770	0.010	0.353	0.028	0.418	0.809	2.961
1991	0.012	0.325	1.626	1.963	0.045	0.678	0.075	0.190	0.988	0.975
1992	0.202	0.196	1.069	1.467	0.002	0.146	0.063	0.113	0.324	1.143
1993	0.220	0.135	0.367	0.722	0.002	0.175	0.071	0.118	0.366	0.356
1994	0.019	0.308	0.232	0.559	0.014	0.186	0.025	0.126	0.351	0.208
1995	0.028	0.556	0.137	0.721	0.002	0.063	0.023	0.047	0.135	0.586
1996	0.107	1.113	0.357	1.577	0.098	0.280	0.032	0.058	0.468	1.109
1997	0.130	0.311	2.954	3.395	0.026	0.203	0.065	0.094	0.388	3.007
1998	0.067	0.845	1.376	2.288	0.004	0.294	0.000	0.080	0.378	1.910
1999	0.067	0.831	1.204	2.102	0.009	0.086	0.029	0.173	0.297	1.805
2000	0.096	0.693	0.503	1.292	0.005	0.023	0.008	0.091	0.127	1.165
2001	0.013	0.422	0.743	1.178	0.039	0.101	0.040	0.122	0.302	0.876
2002	0.008	0.509	0.276	0.793	0.006	0.064	0.021	0.058	0.149	0.644
2003	0.050	1.110	0.488	1.648	0.009	0.185	0.065	0.062	0.321	1.327
2004	0.086	0.765	0.000	0.851	0.005	0.020	0.000	0.000	0.025	0.826
2005	0.023	0.455	0.364	0.842	0.015	0.219	0.038	0.262	0.534	0.308
2006	0.044	0.504	1.397	1.945	0.000	0.109	0.024	0.106	0.239	1.706
2007	0.065	0.365	0.226	0.656	0.068	0.144	0.047	0.195	0.454	0.202
2008	0.084	0.847	0.507	1.438	0.010	0.119	0.058	0.136	0.323	1.115
2009	0.044	0.472	0.532	1.048	0.014	0.050	0.262	0.136	0.462	0.586
2010	0.035	1.218	1.479	2.732	0.022	0.156	0.066	0.082	0.326	2.406
2011	0.115	0.933	0.128	1.174	0.000	0.013	0.023	0.051	0.087	1.087
2012	0.274	1.044	0.527	1.845	0.002	0.011	0.037	0.072	0.122	1.723
Total 90-12	1.877	16.223	17.906	36.006	0.407	3.678	1.100	2.790	7.975	28.031
Average 90-12	0.082	0.705	0.779	1.565	0.018	0.160	0.048	0.121	0.347	1.219

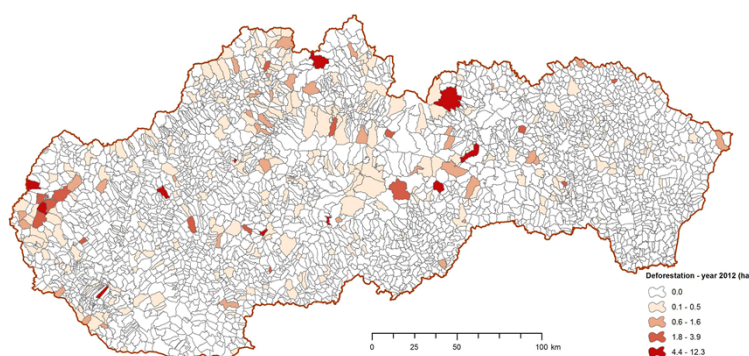
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The cadastral units with afforestation/reforestation activity in Slovakia (2012)



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The cadastral units with deforestation activity in Slovakia (2012)



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Reporting and accounting amounts of net emissions/removals for ARD in Slovakia 2011

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	BY(S)	Net emissions/removals(1)					Accounting Parameters ⁽⁷⁾	Accounting Quantity ⁽⁸⁾
		2008	2009	2010	2011	Total ⁽⁶⁾		
		(Gg CO ₂ equivalent)						
A. Article 3.3 activities								
A.1. Afforestation and Reforestation							-1 963.56	
A.1.1. Units of land not harvested since the beginning of the commitment period ⁽²⁾		-453.55	-469.73	-512.43	-527.85	-1 963.56	-1 963.56	
A.1.2. Units of land harvested since the beginning of the commitment period ⁽²⁾								
A.2. Deforestation		134.80	212.34	141.19	38.53	526.86	526.86	

- The estimated removals from afforestation/reforestation activities represented 527.85 Gg CO₂ in 2011. Deforestation showed emissions 50.01 Gg CO₂ in 2011.

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Problems identified by ERT in “Saturday papers” concerning KP in Slovakia

- last „Saturday paper“ with LULUCF/KP LULUCF potential problems obtained after review in 2011

Potential problems

- significantly high (2.7 Mg C/ha) implied carbon stock change factor per area for net carbon stock changes in soils is as compared to the value of the Czech Republic (0.16 Mg C/ha) (table 5(KP-I)A.1.1). The ERT notes that using such high value could lead to overestimation of removals from afforestation and reforestation activities.
- litter is included in the estimate for mineral soil and use the notation key “IE” for afforestation/reforestation in Table 5KP-I(A.1.1) and Deforestation in Table 5KP-I(A.2). However, Slovakia did not provide clear documentation in the NIR to prove that this carbon pool is included in the calculations of carbon stock change in mineral soils.

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ERT conclusions focused on KP LULUCF from FCCC/ARR/2012/SVK

Conclusions focused on KP LULUCF

- in the NIR Slovakia state that land areas subject to afforestation and reforestation under Article 3, paragraph 3 are identified using reporting method 1. During the review further clarifications were given and it is the understanding of the ERT that reporting method 2 is used for lands subject to activities under Article 3, paragraph 3 of the Kyoto Protocol.
- the Party has made recalculations for the KP-LULUCF activities between the 2011 and 2012 submissions following changes in EFs. The impact of these recalculations on each KP-LULUCF activity for 2009 is as follows:
 - (a) CO₂ removals from AR decreased 0.07 Gg CO₂ eq (0.01 per cent);
 - (b) CO₂ emissions from D increased by 2.11 Gg CO₂ eq (0.75 per cent).

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ERT recommendations focused on KP LULUCF from FCCC/ARR/2012/SVK

General

- assess which is the method used for lands subject to activities under Article 3, paragraph 3, of the Kyoto Protocol and improve transparency regarding this issue.
- further increase transparency by documenting both the internal audit and verification methods put in place by the Geodesy, Cartography and Cadastre Authority (GCCA) to ensure that activities are neither over nor underestimated, and the national system's plans to perform QC checks on the largest or most changing parcels.
- include in the NIR the explanations provided to the ERT during the review regarding dead wood for afforestation and reforestation activities.
- change the notation key from "NA" to "NO" or provide an estimate for the categories under afforestation and reforestation (AR) reported as "NA".

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ERT recommendations - focused on KP LULUCF from FCCC/ARR/2012/SVK

Afforestation and reforestation – CO₂ CH₄, and N₂O

- provide an estimate of losses from wildfires and cleanings on AR lands
- provide an estimate of emissions from wildfire on AR land

Deforestation – CO₂

- improve the accuracy of reporting by taking into account the observed bias of forest management plans data
- provide an estimation of CO₂ emissions from agricultural lime application and N₂O emissions following disturbance,

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Improvements planned in 2014 submission

- the more accurate estimation of the soil carbon stocks and their changes for ARD activities,
- increasing the transparency of the uncertainty analysis by providing documentation on the derivation of the uncertainty values and using consistent wording in accordance with used methods,
- estimation for N₂O emissions from disturbance associated with deforestation (FL to CL)
- estimation of emissions from liming associated with deforestation
- the performance of a key category analysis at the land-use subcategory level, with the aim of further evaluating the significance of the subcategories in order to select appropriate methods and prioritize resources.

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